ATS-13-144

		ATS-13-144
Form 3160 - 3 (April 2004) UNITED STAT	ES	FORM APPROVED OMB No. 1004-0137 Expires March 31, 2007
DEPARTMENT OF THI BUREAU OF LAND M		5. Lease Serial No. NMLC-029548A
APPLICATION FOR PERMIT T		6. If Indian, Allotee or Tribe Name 705
la. Type of work: 🔽 DRILL	NTER	7. If Unit or CA Agreement, Name and No.
Ib. Type of Well: 🔽 Oil Well 🔲 Gas Well 🗌 Other	Single Zone Multiple Zone	8: Lease Name and Well No. COFFEE FEDERAL #20 <308710>
2. Name of Operator APACHE CORPORATION	< 8737	9. API Well No. 30-015- 4//545
3a. Address 303 VETERANS AIRPARK LN #3000 MIDLAND, TX 79705	3b. Phone No. (include area code) 432-818-1167	10. Field and Pool, or Exploratory (9683) CEDAR LAKE; GLORIETA-YES
<ul> <li>Location of Well (Report location clearly and in accordance will At surface 2370' FNL &amp; 1525' FWL At proposed prod. zone SAME</li> </ul>	h arty State requirements.*)	<ul> <li>11. Sec., T. R. M. or Blk. and Survey or Area</li> <li>UL: F SEC: 18 T17S R31E</li> </ul>
14. Distance in miles and direction from nearest town or post office* APPROX 5.5 MILES EAST OF LOCO HILLS, NM		12. County or Parish     13. State       EDDY     NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)	16. No. of acres in lease         17. Spac           224.09         17. Spac	ing Unit dedicated to this well 40 ACRES
<ul> <li>18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.</li> </ul>		//BIA Bond No. on file A -CO -1463 NATIONWIDE / NMB-000736
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3764'	22. Approximate date work will start* AS Soon As Approved	23. Estimated duration ~10 DAYS
The following, completed in accordance with the requirements of On	24. Attachments	this form:
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	em Lands, the 5. Operator certification	ons unless covered by an existing bond on file (see formation and/or plans as may be required by the
25. Signature Jorina A. Hore	Name (Printed/Typed) SORINA L. FLORES	Date 11 13 12
Title SUPV OF DRILLING SERVICES		•
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don	Peterson JAN 2 7 2013
Title FIELD MANAGER	Office CARL	SBAD FIELD OFFICE
Application approval does not warrant or certify that the applicant l conduct operations thereon. Conditions of approval, if any, are attached.		ubject lease which would entitle the applicant to OVAL FOR TWO YEARS
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it States any false, fictitious or fraudulent statements or representations	a crime for any person knowingly and willfully to a sto any matter within its jurisdiction.	make to any department or agency of the United
*(Instructions on page 2) NSL		Approval Subject to General Requirement & Special Stipulations Attached
<b>Roswell Controlled Water Basin</b>		
•		TTACHED FOR ITIONS OF APPROVAL

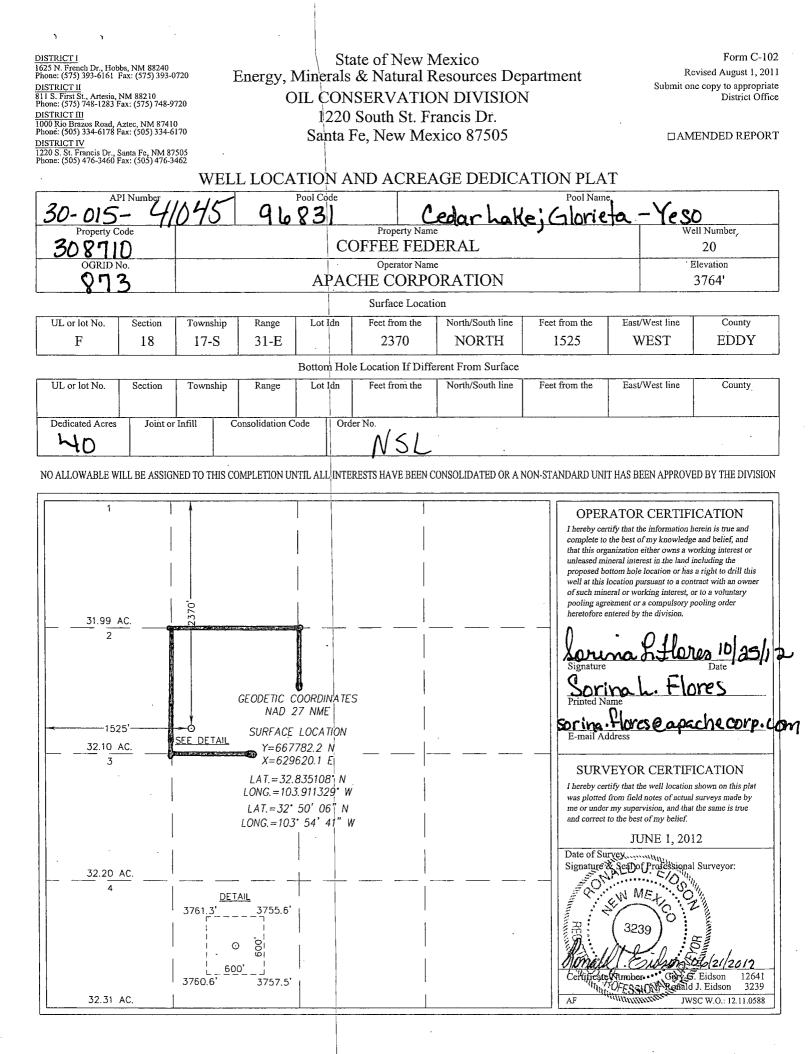
# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE 620 E. GREENE STREET CARLSBAD, NM 88220

#### STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Operator Name:	APACHE CORPORATION	
Street or Box:	303 VETERANS AIRPARK LANE, STE. 3000	
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:	NMLC	-029548	BA	COFFE	E FEDERA	L #20	
Legal Desc	ription of l	and: _	2370	' FNL & 15	525' FWL	•	
UL: <b>F</b>	Section:	18	_ T	ownship:	<u>175</u>	Range:	_ <u>31E</u>
County:	EDDY	State:	NIV	]			. ·
Bond Cove	rage:	\$150,0	000				
Statewide	Oil and Ga	s Surety	/ Bond	APACHE	CORPORA	ATION.	
BLM Bond	File No.:		BLM-	CO-1463	NATION	WIDE / NMB	000736
Signature:	Bol	by L	- Si	with	Pr	inted Name:	BOBBY L. SMITH
Title:	DRILLI	NG MA	NAGE	R, PERMIA	N REGIO	N	·
Date:		14/12					
Apache Corpo Responsibility		·					



# 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 November 2012

Well: <u>COFFEE FEDERAL #20</u>						
Operator Name:						
Signature: Printed Name: BARRY GREEN						
Title: Drilling Engineer Date: 11/13/2012						
Email (optional): barry.green@apachecorp.com						
Street or Box: 303 Veterans Airpark Ln., Ste. 3000						
City, State, Zip Code:						
Telephone: 432-818-1059						
Field Representative (if not above signatory <u>):</u> Address (if different from above): Telephone (if different from above <u>):</u>						
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.

# DRILLING PLAN: BLM COMPLIANCE

(Supplement to BLM 3160-3)

#### APACHE CORPORATION (OGRID: 873) COFFEE FEDERAL #20

Lease #: NMLC-029548A Projected TD: 6500' GL: 3764' 2370' FNL & 1525' FWL UL: F Sec: 18 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:

Quaternary Aeolian	Surface	Queen	2377' (Oil)
Rustler	267'	Grayburg	2762′ (Oil)
Salt Top	549'	San Andres	3101' (Oil)
Salt Bottom	1323′	Glorieta	4580'
Yates	1461′	Yeso	4656' (Oil)
Seven Rivers	1770' (Oil)	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 @ 325' & 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: Albcasing is new & API approved

	/(	~	1					
HOLE SIZE	DEPTH	OD CSG	WEIGHT	COLLAR	GRADE	COLLAPSE	BURST	TENSION
17-1/2"	0' - 325'3 <b>85</b>	13-3/8"	48¦#	STC	H-40	1.125	1.0	1.8
11"	0'-3500'	8-5/8"	32/#	STC	J-55	1.125	1.0	1.8
7-7/8"	0'-6500'	5-1/2"	17ॄ#	LTC	J-55	1.125	1.0	1.8

#### 4. CEMENT PROGRAM:

#### A. <u>13-3/8"</u> Surface (100% excess cmt to surf):

Lead: 390 sx Class C w/ 1% CaCl2 + 0.25% R38 (14.8 wt, 1.34 yld) Comp Strengths : 12 hr - 813 psi 24 hr - 1205 psi

#### 8-5/8" Intermediate (100% excess cmt to surface): Β.

Lead: 800 sx (35:65) Poz C w/ 6% Bentonite + 5% Salt + 0.25% R38 (12.4wt, 2.1 yld) Compressive Strengths: 12 hr – 589 psi 24 hr – 947 psi

Tail: 210 sx Class C w/0.25% R38 (14.8 wt, 1.34 yld) Compressive Strengths: 12 hr – 813 psi 24 hr – 1205 psi

#### С. 5-1/2" Production (TOC ~ 500' from surface / 30% excess cmt):

Lead: 330 sx (35:65) Poz C w/ 5% Salt + 0.25% R38 + 6% Bentonite (12.4 wt, 2.1 yld) Compressive Strengths: 12 hr – 58'9 psi 24 hr – 947 psi

Tail: 540 sx (50:50) Poz C w/ 5% Salt + 0.25% R38 + 2% Bentonite (14.2 wt, 1.28 yld) Compressive Strengths: 12 hr – 1379 psi 24 psi – 2332 psi

and the state of the state

\*\* The above cmt volumes could be revised pending caliper measurement from open hole logs. . For Surface csq: If cmt does not circ to surface, the appropriate BLM office shall be notified, TOC shall be determined by running a temperature log, operator will propose a remediation method & request BLM approval.

\*\*\* Known water flow in the area. If water flow is encountered, Apache may 2-stage Intermediate csg. A DVT may be used in the 8-5/8" Intermediate csg. An ECP may be placed below DVT. TD of the 11" hole at +/- 3500'. Assuming DVT set at +/- 1800', the following cmt will be used: Cmt 1<sup>st</sup> Stage w/ +/- 670 sx CI C (14.8#, 1.33 yld) Cmt 2<sup>nd</sup> Stage w/ +/- 800sx CI C (14.8#, 1.33 yld)

If DVT is set at a different depth, cmt volumes will be adjusted accordingly.

#### 5. PROPOSED CONTROL EQUIPMENT

*"EXHIBIT 3"* shows an 11" 3M psi WP BOP consisting of an annular bag type preventer, middle blind rams, bottom pipe rams. The BOP will be nippled up on the 13-3/8" surface csg and tested to 70% of casing burst. After intermediate casing is set & cemented an 11" 3M spool & BOP will be installed on the 8 5/8" casing & utilized continuously until TD 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 2860 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 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. PROPOSED MUD CIRCULATION SYSTEM: (Closed Loop System)

۲ [	INTERVAL	MW (ppg)	VISC (sec/qt)	FLUID LOSS (cc)	MUD TYPE
	0'-325' 38'	8.4	29	NC	Fresh Water
	225' to 3500'	9.8 - 10.0	29	NC	Brine
ſ	3500' - 6500'	8.9 - 9.0	29	NC	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 have to be altered to meet these needs.

### 7. 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

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

Fill up line as per Onshore Order 2

#### 8. LOGGING, CORING & TESTING PROGRAM:

- A. OH logs: Dual Laterolog, MSFL, CNL, Litho-Density, 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, DST's or mud logger are planned at this time.
- **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:

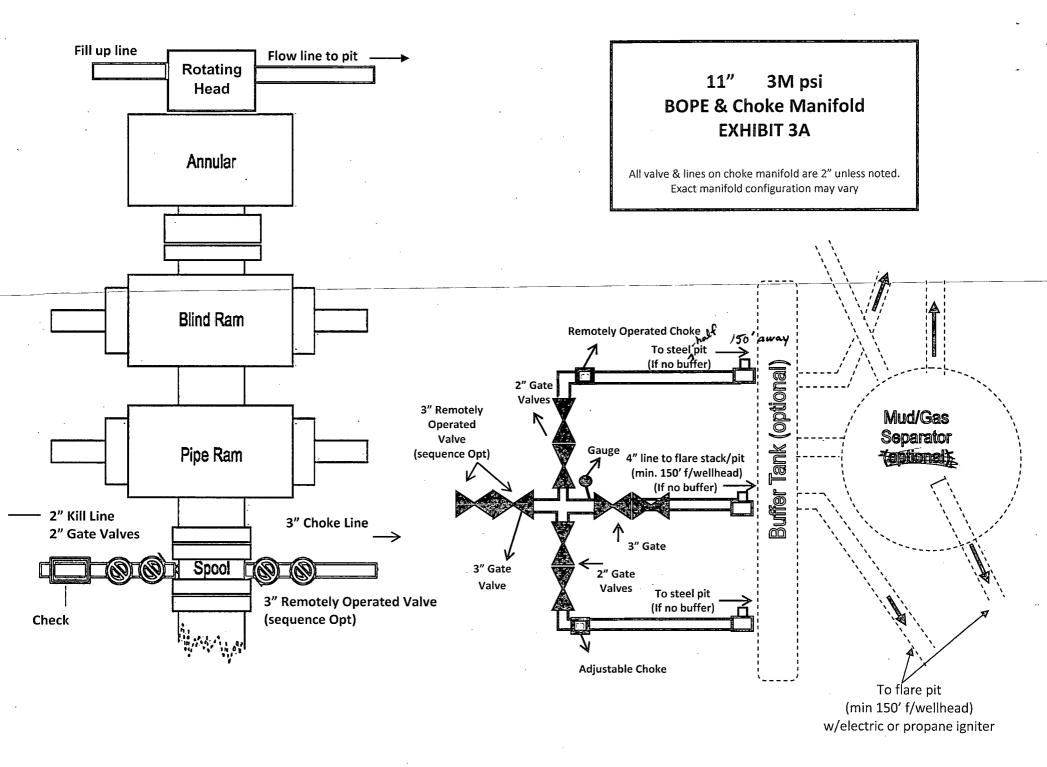
No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. There is known presence of  $H_2S$  in this area. If  $H_2S$  is encountered the operator will comply with the provisions 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 <u>BHP: 2860 psi</u> and estimated <u>BHT: 115°.</u>

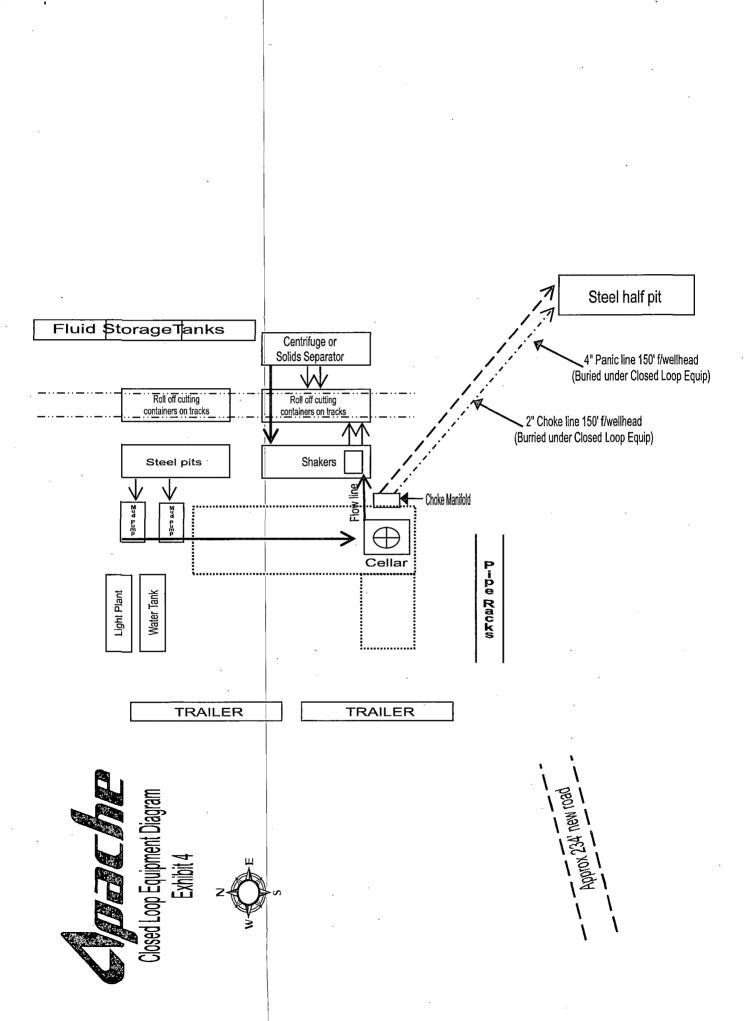
#### **10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:**

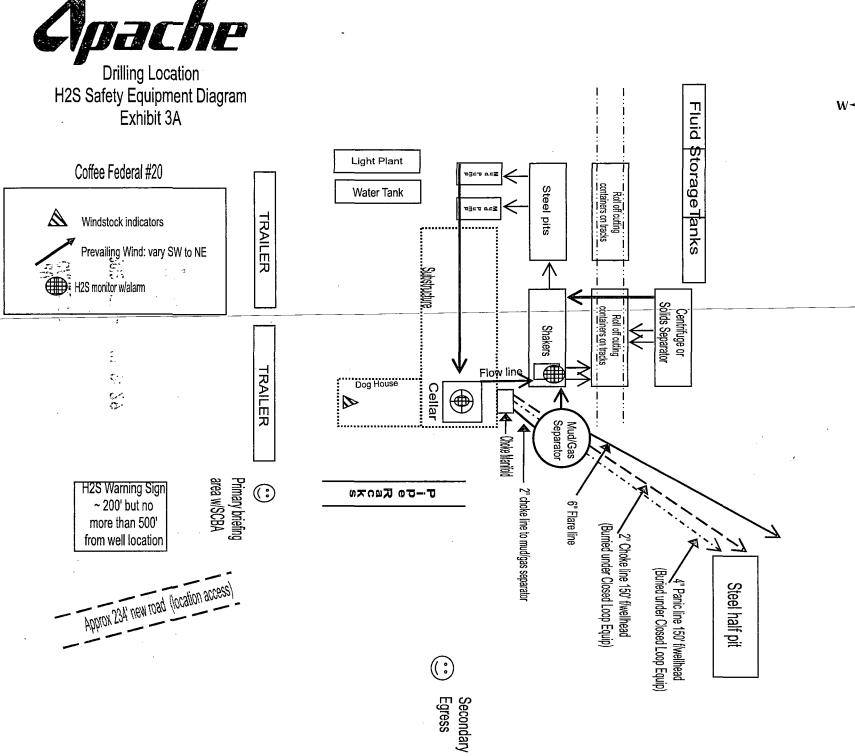
Road and location construction will begin after BLM has approved APD. Anticipated spud date will be as soon after BLM approval and as soon as rig will be available. Move in operations and drilling is expected to take approx <u>10 days</u>. If production casing is run then an additional 90 days will be 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 & potentialed as an oil well.







N

# HYDROGEN SULFIDE (H2S) DRILLING OPERATIONS PLAN

#### Hydrogen Sulfide Training:

<u>All regularly assigned personnel, contracted or employed by Apache Corporation</u> will receive training from qualified instructor(s) in the following areas prior to commencing drilling possible hydrogen sulfide bearing formations in this well:

- The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing area, evacuation procedures & prevailing winds.
- The proper techniques for first aid and rescue procedures.

#### Supervisory personnel will be trained in the following areas:

- The effects of H<sub>2</sub>S on metal components. If high tensile tubulars are to be utilized, personnel will be trained in their special maintenance requirements.
- Corrective action & shut-in procedures when drilling or reworking a well & blowout prevention / well control procedures.
- The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan

There will be an initial training session just prior to encountering a known or probable  $H_2S$  zone (within 3 days or 500') and weekly  $H_2S$  and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific  $H_2S$  Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received proper training.

## H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS:

#### Well Control Equipment that will be available & installed if H<sub>2</sub>S is encountered:

- Flare Line with electronic igniter or continuous pilot.
- Choke manifold with a minimum of one remote choke.
- Blind rams & pipe rams to accommodate all pipe sizes with properly sized closing unit.
- Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head & flare gun with flares

#### **Protective Equipment for Essential Personnel:**

• Mark II Survive-air 30 minute units located in dog house & at briefing areas, as indicated on wellsite diagram.

#### **H2S Dection and Monitoring Equipment:**

- Two portable H<sub>2</sub>S monitors positioned on location for best coverage & response. These units have warning lights & audible sirens when H<sub>2</sub>S levels of 20 ppm are reached.
- One portable H<sub>2</sub>S monitor positioned near flare line.

#### H2S Visual Warning Systems:

- Wind direction indicators are shown on wellsite diagram.
- Caution / Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate. *"EXHIBIT 7"*

#### Mud Program:

- The Mud Program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface. Proper mud weights, safe drilling practices & the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.
- A mud-gas separator and H<sub>2</sub>S gas buster will be utilized as needed.

#### Metallurgy:

- All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold & lines, & valves will be suitable for H<sub>2</sub>S service.
- All elastomers used for packing & seals shall be H<sub>2</sub>S trim.

#### **Communication:**

• Cellular telephone and 2-way radio communications in company vehicles, rig floor and mud logging trailer.

# HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN

### Assumed 100 ppm ROE = 3000'

100 ppm  $H_2S$  concentration shall trigger activation of this plan.

#### **Emergency Procedures**

In the event of a release of gas containing  $H_2S$ , the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operators and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the :
  - o Detection of H<sub>2</sub>S, and
  - o Measures for protection against the gas,
  - Equipment used for protection and emergency response.

#### Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide  $(SO_2)$ . Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air ≒ !	2 ppm	N/A	1000 ppm

#### Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

## **Contacting Authorities**

Apache Corporation personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Apache's response must be in coordination with the State of New Mexico's *"Hazardous Materials Emergency Response Plan" (HMER)*.

# WELL CONTROL EMERGENCY RESPONSE PLAN

#### I. <u>GENERAL PHILOSOPHY</u>

Our objective is to ensure that during an emergency, a predetermined procedure is followed so that prompt decisions can be made based on accurate information.

The best way to handle and emergency is with an experienced organization set up for the sole purpose of solving the problem. The *Well Control Emergency Response Team* was organized to handle dangerous & expensive well control problems. The *Team* is structured such that each individual can contribute the most from his area of expertise. Key decision-makers are determined prior to an emergency to avoid confusion about who is in charge.

If the well is flowing uncontrolled at the surface or subsurface, *The Emergency Response Team* will be mobilized. The *Team* is customized for the people currently on the Apache staff. Staff changes may require a change in the plan.

#### II. EMERGENCY PROCEDURE ON DRILLING OR COMPLETION OPERATIONS

A. In the event of an emergency the *Drilling Foreman or Tool-Pusher* will immediately contact only one of the following starting with the first name listed:

Name	Office	Mobile	Home
Danny Laman – Drlg Superintendent	432-818-1022	432-634-0288	432-520-3528
Barry Green – Drilling Engineer	432-818-1059	214-923-2528	
Bobby Smith – Drilling Manager	432-818-1020	432-556-7701	
Jeff Burt – EH&S Coordinator		432-631-9081	

\*\*This one phone call will free the Drilling Foreman to devote his full time to securing the safety of personnel & equipment. This call will initiate the process to mobilize the Well Control Emergency Response Team. Apache maintains an Emergency Telephone Conference Room in the Houston office. This room is available for us by the Permian Region. The room has 50 separate telephone lines.

- **B.** The Apache employee contacted by the Drilling Foreman will begin contacting the rest of the *Team*. If **Danny** Laman is out of contact, **Terry West** will be notified.
- **C.** If a member of the *Emergency Response Team* is away from the job, he must be available for call back. Telephone numbers should be left with secretaries or a key decision-maker.
- **D.** Apache's reporting procedure for spills or releases of oil or hazardous materials will be implemented when spills or releases have occurred or are probable.

SHERIFF DEPARTMENT	
Eddy County	575-887-7551
Lea County	575-396-3611
FIRE DEPARTMENT	. 911
Artesia	575-746-5050
Carlsbad	575-885-2111
Eunice	575-394-2111
Hobbs	575-397-9308
Jal	575-395-2221
Lovington	575-396-2359
HOSPITALS	911
Artesia Medical Emergency	575-746-5050
Carlsbad Medical Emergency	575-885-2111
Eunice Medical Emergency	575-394-2112
Hobbs Medical Emergency	575-397-9308
Jal Medical Emergency	575-395-2221
Lovington Medical Emergency	575-396-2359
AGENT NOTIFICATIONS	
Bureau of Land Management	575-393-3612
New Mexico Oil Conservation Division	575-393-6161

### **EMERGENCY RESPONSE NUMBERS:**



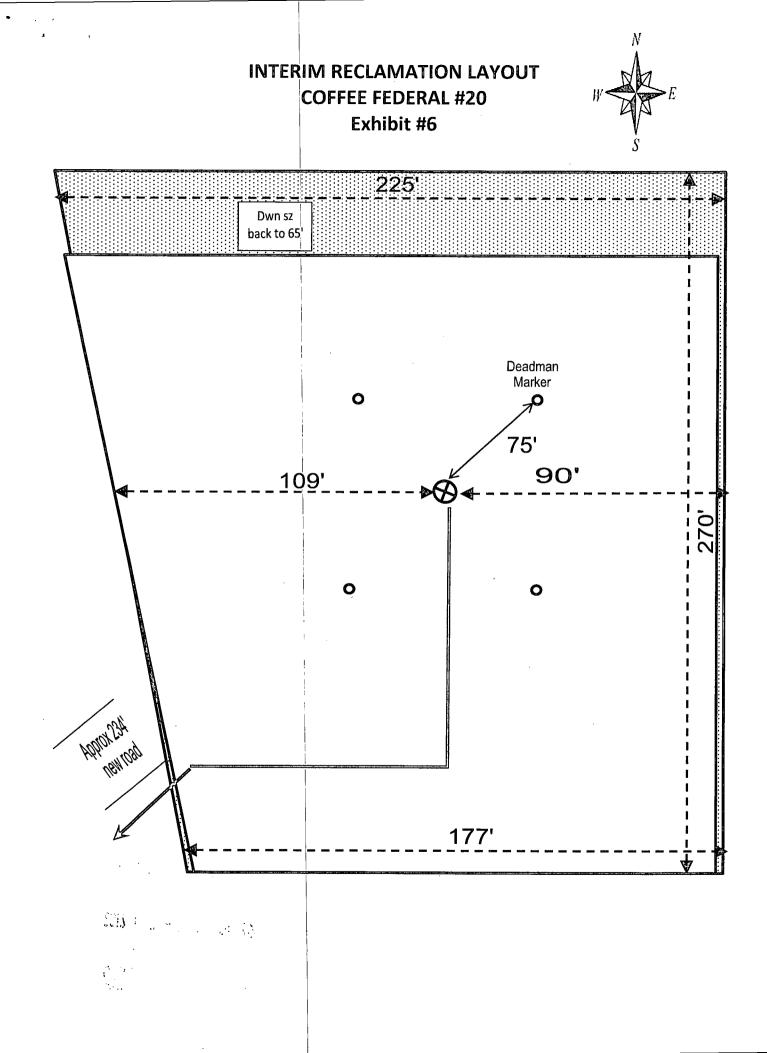
# WARNING

# YOU ARE ENTERING AN H2S AREA AUTHORIZED PERSONNEL ONLY

**1. BEARDS OR CONTACT LENSES NOT ALLOWED** 

- 2. HARD HATS REQUIRED
- **3. SMOKING DESIGNATED AREAS ONLY**
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CHECK WITH APACHE CORPORATION

APACHE CORPORATION 1-888-257-6840

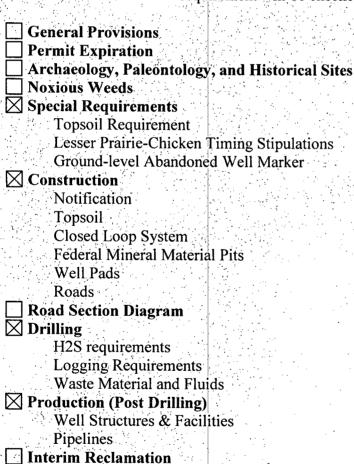


# PECOS DISTRICT CONDITIONS OF APPROVAL

	<b>OPERATOR'S NAME:</b>	APACHE CORPORATION
1	LEASE NO.:	LC-029548A
	WELL NAME & NO.:	
	SURFACE HOLE FOOTAGE:	2370' FNL & 1525' FWL
	LOCATION:	Section 18, T. 17 S., R 31 E., NMPM
	<b>COUNTY:</b>	Eddy County, New Mexico

# TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.



Final Abandonment & Reclamation