OCD-ARTESIA

J-AKILOUA

Form 3160-3 (April 2004)				FORM APF OMB No 10 Expires Marc	004-0137
UNITED STATE: DEPARTMENT OF THE BUREAU OF LAND MAN	5 Lease Serial No NMLC-029435B	TC.			
APPLICATION FOR PERMIT TO		REENTER		6 If Indian, Allotee or	Tribe Name
la Type of work DRILL REENT	7 If Unit or CA Agreem	ent, Name and No			
1b. Type of Weil Oil Well Gas Well Other	✓ Sim	gle ZoneMulti	ole Zone	8. Lease Name and Wel	11 No. #14 <u> </u>
2 Name of Operator APACHE CORPORATION		<873	' >	9. API Well No. 30-015-	0549
3a Address 303 VETERANS AIRPARK LN #3000 MIDLAND, TX 79705	3b Phone No 432-818	(ınclude area code) 3-1167		10 Field and Pool, or Exp CEDAR LAKE;	oloratory (96831) GLORIETA-YESO
4. Location of Well (Report location clearly and in accordance with a	ny State requireme	ents *)		11 Sec, TRM or Blk	and Survey or Area
At surface 1030' FNL & 380' FWL At proposed prod zone SAME				UL: 4 SEC: 6	T17S R31E
14 Distance in miles and direction from nearest town or post office* Approx 1.9 miles North east of	if laca H	HIS. NM		12 County or Parish EDDY	13 State NM
15. Distance from proposed* location to nearest property or lease line, fi (Also to nearest drig unit line, if any) 380	16 No of ac	cres in lease		g Unit dedicated to this well	<u>'</u>
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed 6500'			/BIA Bond No on file 4 - CO - 1463 NATIONWIDE	
21 Elevations (Show whether DF, KDB, RT, GL, etc.)		nate date work will sta		23 Estimated duration ~ 10 DAYS	
	24 Attac	hments	٠		
The following, completed in accordance with the requirements of Onsho	ore Oil and Gas	Order No 1, shall be a	ttached to th	ıs form	
 Well plat certified by a registered surveyor A Drilling Plan A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office) 	ı Lands, the	Item 20 above) 5 Operator certific	cation	ns unless covered by an exportance or and/or plans as manufacture or and/or plans as manufact	
4		authorized offic	er		
25 Signature Sorina P. Hore	li i	(Printed/Typed) SORINA L. FLORI	ES	Da	ste 5/9/12
Title SUPV OF DRILLING SERVICES					
Approved by (Signature) /s/ James A. Amos	Name	(Printed/Typed)		D	JUL 2 4 2012
Title FIELD MANAGER	Office			CARLSBAD FIELD	
Application approval does not warrant or certify that the applicant hol conduct operations thereon	ds legal or equit	able title to those righ	ts in the sub	gect lease which would entil	le the applicant to
Conditions of approval, if any, are attached.				PPROVAL FO	R TWO YEARS
Title 18 USC Section 1001 and Title 43 USC Section 1212, make it a States any false, fictitious or fraudulent statements or representations as	crime for any pe	rson knowingly and v	villfully to n	nake to any department or a	gency of the United

*(Instructions on page 2)

Roswell Controlled Water Basin



Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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 $\underline{\mathcal{G}}$	day of M	1ay	2012			
Well: <u>NFE FEDERAL #1</u>	.4					
Operator Name:	APACHE CORP	ORAT	ION	. 1/2		
Signature:	د د		Printed Name:	BARRY GREEN		
Title: Drilling Engineer			Date:			
Email (optional):	barry.green@	apache	ecorp.com			
Street or Box:	303 Veterans	<u> Airpar</u>	k Ln., Ste. 3000			
City, State, Zip Code:	Midland, TX	7970	5			
Telephone:	432-	818-1	059			
Field Representative (if not above signatory):						
Address (if different from above):						
Telephone (if different from above):						
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.

DISTRICT I 1625 N French Dr., Hobbs, NM 88240 Phone (575) 393-6161 Fax (575) 393-0720 DISTRICT II 811 S First St , Artesia, NM 88210 Phone (575) 748-1283 Fax (575) 748-9720 DISTRICT III 1000 Rio Brazos Road, Aztec, NM 87410 Phone (505) 334-6178 Fax (505) 334-6170 DISTRICT IV 1220 S St. Francis Dr., Santa Fe, NM 87505 Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

□ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

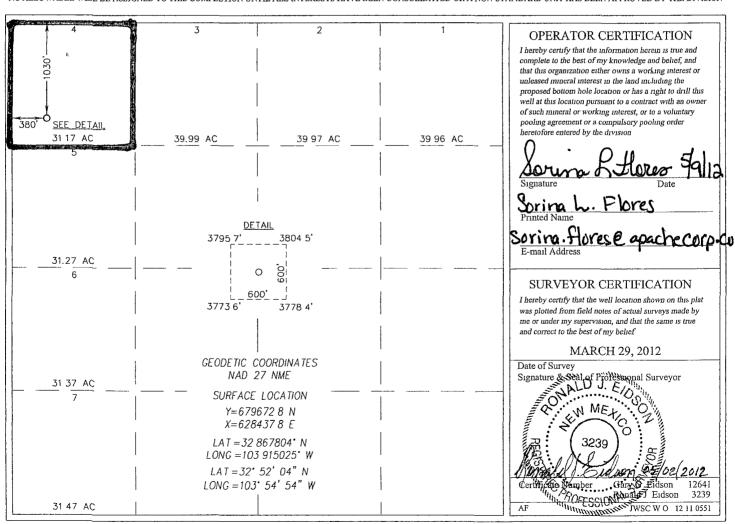
30-015- 4K49	96831	Cedar Lake: 6 lorie ta	-Yeso			
Property Code	Property Name Well Number					
308724	NFE FEDERAL 14					
OGRID No.	Operator Name Elevation					
873	APACHE CORPORATION 3793'					
Surface Location						

UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	6	17-S	31-E		1030	NORTH	380	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or	Infill C	onsolidation C	ode Ord	er No				
31.17								6500	7/04

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



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: <u>APACHE CORPORATION</u>					
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-029435B NFE FEDERAL #14					
Legal Description of Land: 1030' FNL & 380' FWL					
UL: 4 Section: 6 Township: 175 Range: 31E					
County: <u>EDDY</u> State: NM					
Bond Coverage: \$150,000					
Statewide Oil and Gas Surety Bond, APACHE CORPORATION.					
BLM Bond File No.: BLM-CO-1463 NATIONWIDE					
Signature: Bobby L Smith Printed Name: BOBBY L. SMITH					
Title: DRILLING MANAGER, PERMIAN REGION					
Date: 5/9/12					
Apache Corporation Responsibility Letter					

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

APACHE CORPORATION (OGRID: 873) NFE FEDERAL #14

Lease #: NMLC-029435B Projected TD: 6500' GL: 3793' 1030' FNL & 380' FWL UL: 4 SEC: 6 T17S R31E EDDY COUNTY, NM

1. GEOLOGIC NAME OF SURFACE FORMATION: Eolian/Piedmond Alluvial Deposits

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Eolian/Predmont Alluvials	Surface	Queen	2327'
Rustler	307'	Grayburg	2746' (Oil)
Salt Top	841'	San Andres	3063' (Oil)
Salt Bottom	1244'	Glorieta	4517' (Oil)
Yates	1456'	Yeso	4581' (Oil)
Seven Rivers	1728'	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: All casing is new & API approved



HOLE SIZE	DEPTH	OD CSG	WEIGHT	COLLAR	GRADE	COLLAPSE	BURST	TENSION
17-1/2"	0'-325'455	13-3/8"	48#	STC	H-40	1 125	10	18
11"	0'-3500'	8-5/8"	32#	STC	J-55	1.125	1.0	1.8
7-7/8"	0'-6500'	5-1/2"	17#	LTC	J-55	1 125	10	1.8

4. CEMENT PROGRAM:

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

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

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

<u>Lead</u>: 720 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

<u>Tail:</u> 225 sx Class C w/0.25% R38 (14.8 wt, 1.34 yld)

Compressive Strengths: 12 hr – 813 psi 24 hr – 1205 psi

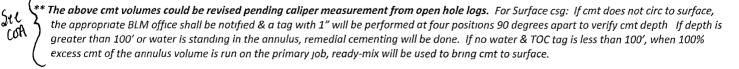
C. 5-1/2" Production (TOC ~ 500' from surface / 35% excess cmt):

<u>Lead</u>: 300 sx (35:65) Poz C w/ 5% Salt + 0.25% R38 + 6% Bentonite (12.4 wt, 2.1 yld)

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

Tail 700 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



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 head 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 problems.

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

INTERVAL	MW (ppg)	VISC (sec/qt)	FLUID LOSS (cc)	MUD TYPE
0'-225'455	8.4	29	NC	Fresh Water
325' to 3500'	98-100	29	NC	Brine
3500' 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 (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: See COA

- 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:

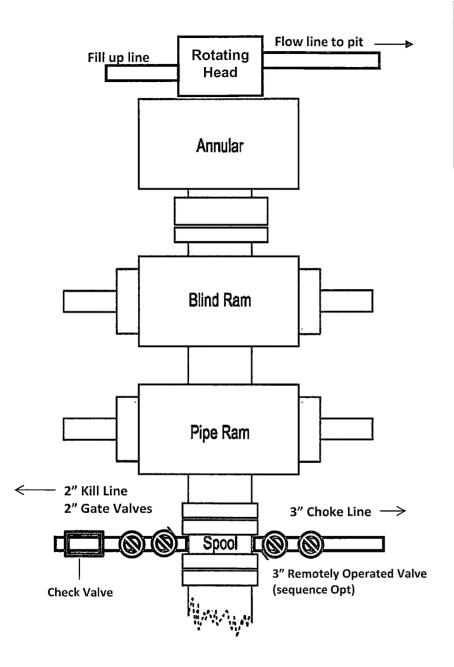
No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. There is known presence of H_2S in this area. If H_2S is encountered the operator will comply with the provisions of *Onshore Oil & Gas Order No. 6.* 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 2860 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.

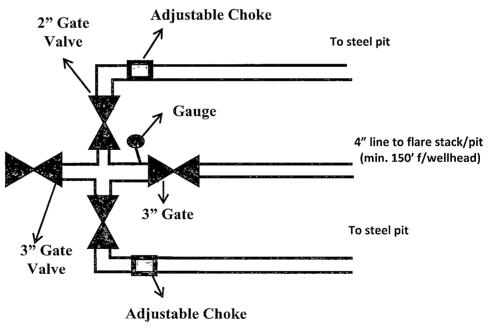
11. OTHER FACETS OF OPERATION: .

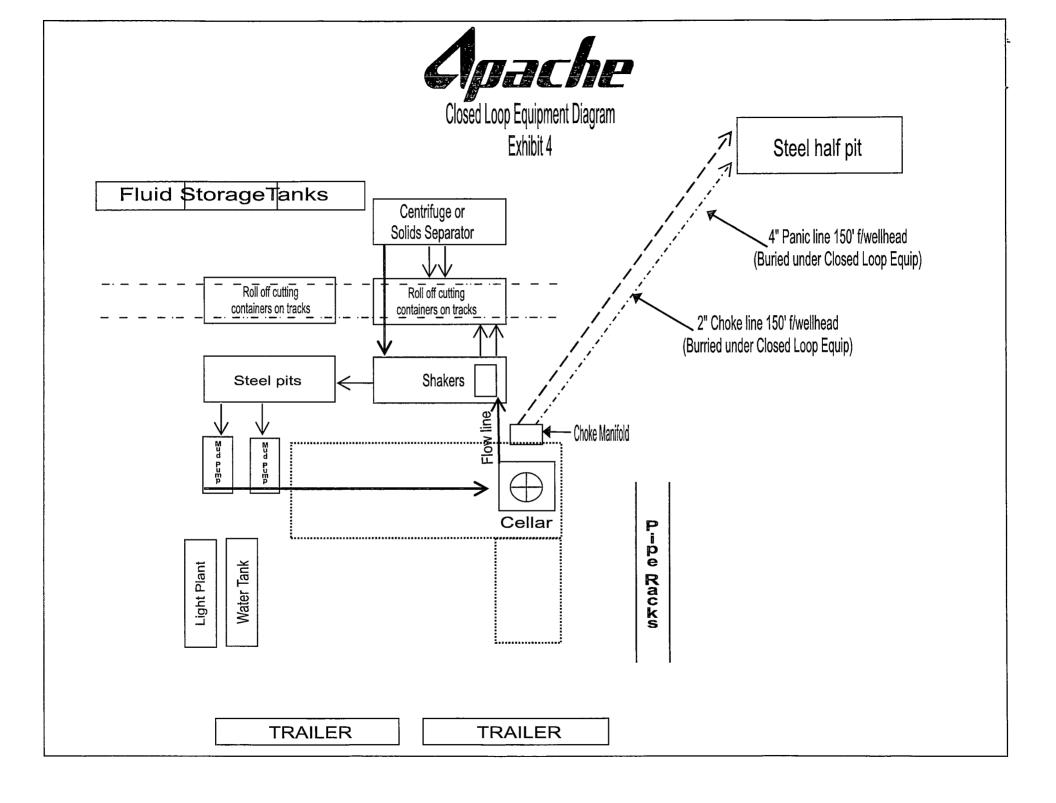
After running csg, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Cedar Lake; Glorieta-Yeso formation will be perforated and stimulated in order to establish production. The well will be swab tested & potentialed as an oil well.



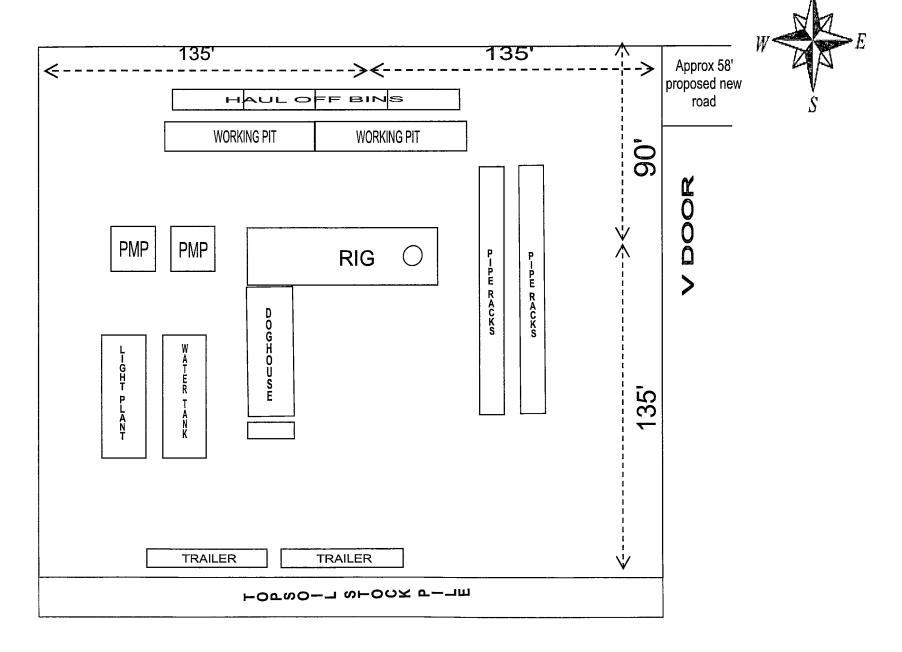
3M psi BOPE & Choke Manifold Exhibit 3

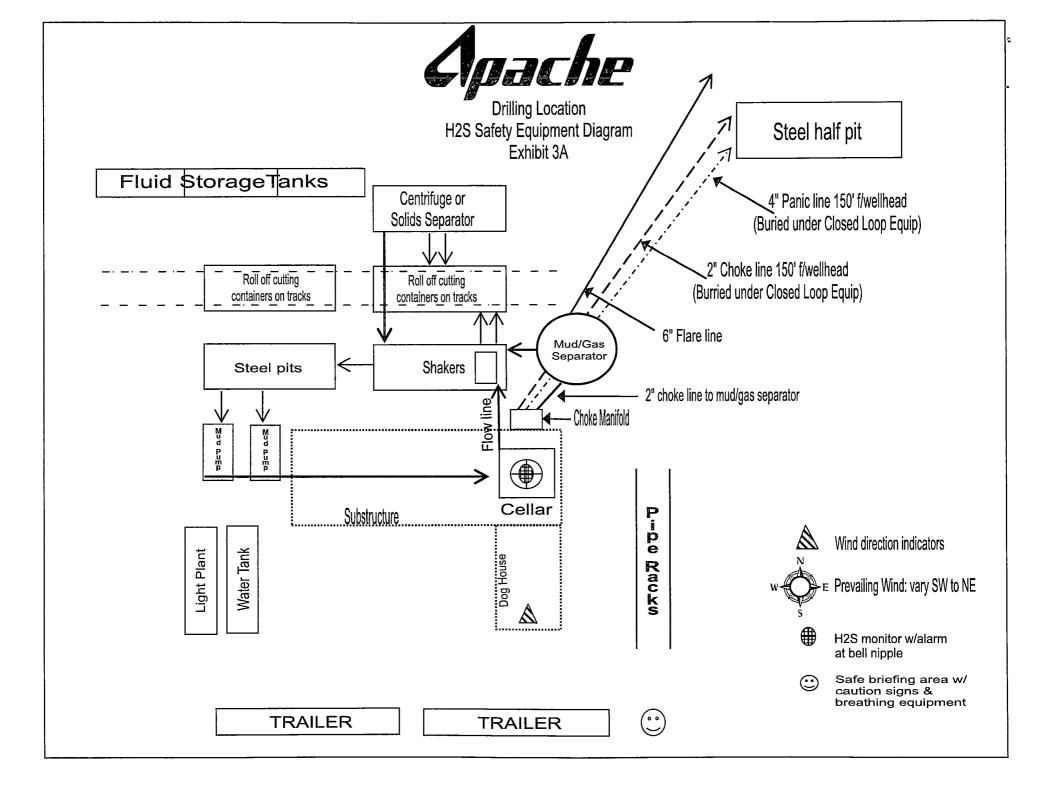
All valve & lines on choke manifold are 2" unless noted Exact manifold configuration may vary





RIG ORIENTATION & LAYOUT NFE FEDERAL #14 EXHIBIT 5





HYDROGEN SULFIDE (H2S) DRILLING OPERATIONS PLAN

Hydrogen Sulfide Training:

All regularly assigned personnel, contracted or employed by Apache Corporation 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 (H₂S)
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H₂S 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 H₂S 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 H₂S 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.

H₂S SAFETY EQUIPMENT AND SYSTEMS:

Well Control Equipment that will be available & installed if H₂S 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 H₂S monitors positioned on location for best coverage & response. These units have warning lights & audible sirens when H₂S levels of 20 ppm are reached.
- One portable H₂S 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.

Mud Program:

- The Mud Program has been designed to minimize the volume of H₂S circulated to the surface. Proper mud weights, safe
 drilling practices & the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.
- A mud-gas separator and H₂S 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 H₂S service.
- All elastomers used for packing & seals shall be H₂S trim.

Communication:

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

HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, 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 H₂S 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 H₂S, and
 - o Measures for protection against the gas,
 - o 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 (SO₂). 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.

Characteristics of H₂S and SO₂

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

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. GENERAL PHILOSOPHY

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	

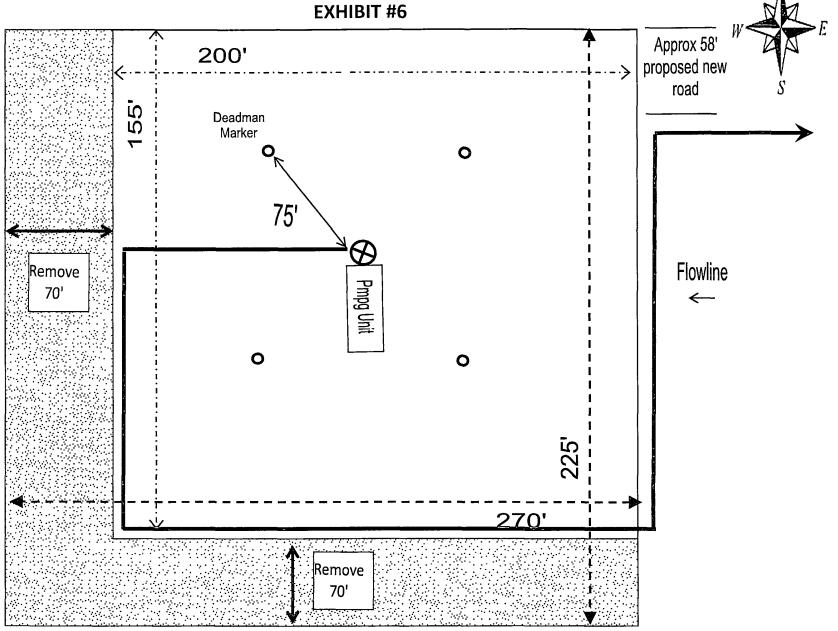
^{**}This one phone call will free the Drilling Foreman to devote his full time to securing the safety of personnel & equipment. This call will initiate the process to mobilize the Well Control Emergency Response Team. Apache maintains an Emergency Telephone Conference Room in the Houston office This 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, **Barry Green** 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.

EMERGENCY RESPONSE NUMBERS:

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		

NFE FEDERAL #14



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME: Apache Corp
LEASE NO.: LC029435B
WELL NAME & NO.: 14 NFE Federal
SURFACE HOLE FOOTAGE: 1030' FNL & 380' FWL
BOTTOM HOLE FOOTAGE 'FL & 'FL
LOCATION: Section 6, T.17 S., R.31 E., NMPM
COUNTY: 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.

☐ General Provisions
Permit Expiration
Archaeology, Paleontology, and Historical Sites
Noxious Weeds
Special Requirements
Pipeline Placement
Lesser Prairie-Chicken Timing Stipulations
Ground-level Abandoned Well Marker
⊠ Construction
Notification
Topsoil
Closed Loop System
Federal Mineral Material Pits
Well Pads
Roads
☐ Road Section Diagram
Drilling
H ₂ S Requirements-Onshore Order #6
Logging Requirements
Waste Material and Fluids
☐ Production (Post Drilling)
Well Structures & Facilities
Pipelines
Interim Reclamation
Kinal Ahandonment & Reclamation