Operator Copy

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
NMLC-0029395B

6 If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No

1b. Type of Well. ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8 Lease Name and Well No.
LEE FEDERAL #041 < 308720 >

2 Name of Operator
APACHE CORPORATION (873)

9 API Well No.
30- 015 - 39611

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
CEDAR LAKE; GLORIETA-YESO (96831)

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **1700' FNL & 460' FWL**
At proposed prod zone **SAME**

11. Sec , T. R M or Blk. and Survey or Area
UL: E SEC: 20 T17S R31E

14 Distance in miles and direction from nearest town or post office*
APPROX 5 MILES EAST OF LOCO HILLS, NM

12 County or Parish
EDDY

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg. unit line, if any)	16 No of acres in lease	17 Spacing Unit dedicated to this well
460'	**1786.15**	**40 ACRES**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth	20 BLM/BIA Bond No on file
	6500'	**BLM - CO - 1463 NATIONWIDE**
21 Elevations (Show whether DF, KDB, RT, GL, etc)	22. Approximate date work will start*	23. Estimated duration
3631'	**03/01/2011**	**14 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)*	Date
Sorina L Flores	**SORINA L. FLORES**	**01/28/2011**

Title
DRILLING TECH

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
		7/12/11
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 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

(Instructions on page 2)

RECEIVED
NOV -7 2011
NMOCD ARTESIA

Roswell Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410

DISTRICT IV
1880 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1880 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-015- 39611	96831	Cedar Lake; Glorieta-Yeso

Property Code	Property Name	Well Number
308720	LEE FEDERAL	41

OGRID No.	Operator Name	Elevation
873	APACHE CORPORATION	3631'

Surface Location

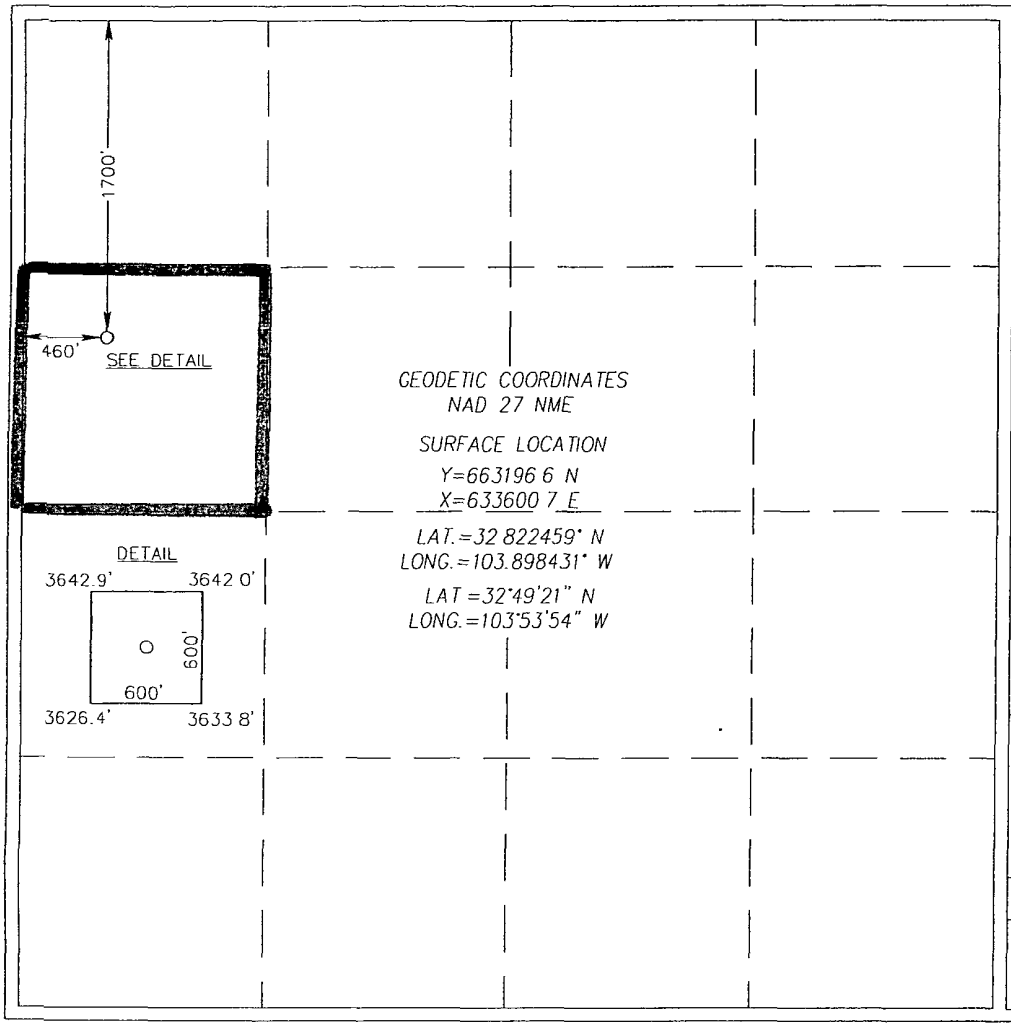
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	20	17-S	31-E		1700	NORTH	460	WEST	EDDY

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	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Sorina L Flores 1/25/11
Signature Date

Sorina L. Flores
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

DECEMBER 22, 2010
Date Surveyed LA

Signature & Seal of Professional Surveyor

Ronald J. Eidson 01/05/2011

10 11.1834

Certificate No. GARY L. EIDSON 12641
RONALD J. EIDSON 3239

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

APACHE CORPORATION (OGRID: 873) LEE FEDERAL #41

Lease #: NMLC-0029395B Projected TD: 6500' GL: 3631'
1700' FNL & 460' FWL, UL: E SEC: 20 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	233'	
Salt Top	495'	
Salt Bottom	1252'	
Yates	1421'	
Seven Rivers	1416'	Oil
Queen	2316'	Oil
Grayburg	2656'	Oil
San Andres	3025'	Oil
Glorieta	4537'	
Yeso	4624'	Oil
Blinebry	5159'	
Tubb	6144'	
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 @ ~~275'~~ 310' & 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 COA

HOLE SIZE	DEPTH	OD CSG	WEIGHT	COLLAR	GRADE	COLLAPSE	BURST	TENSION
17-1/2"	0' – ~~260'~~ 310'	13-3/8"	48#	STC	H-40	1.125	1.0	1.8
11"	~~260'~~-1450'	8-5/8"	24#	STC	J-55	1.125	1.0	1.8
7-7/8"	1450'-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 ~~260'~~. Cmt with:
Lead: 300 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 1450'. Cmt with:
Lead: 170 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 psi*** *– 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' ~~260'~~ 310	8.4	29	NC	Fresh Water
260' to 1450'	9.8 – 10.0	29	NC	Brine
1450' – 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

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 no 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: 2662 psi and estimated BHT : 115°.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

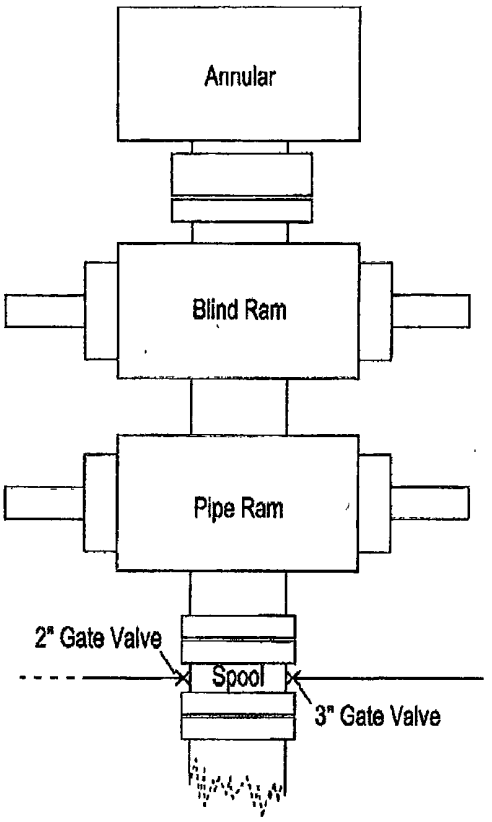
Road and location construction will begin after Santa Fe & BLM has approved APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as rig will be available. Move in operations and drilling is expected to take 10 days. If production casing is run then an additional 90 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

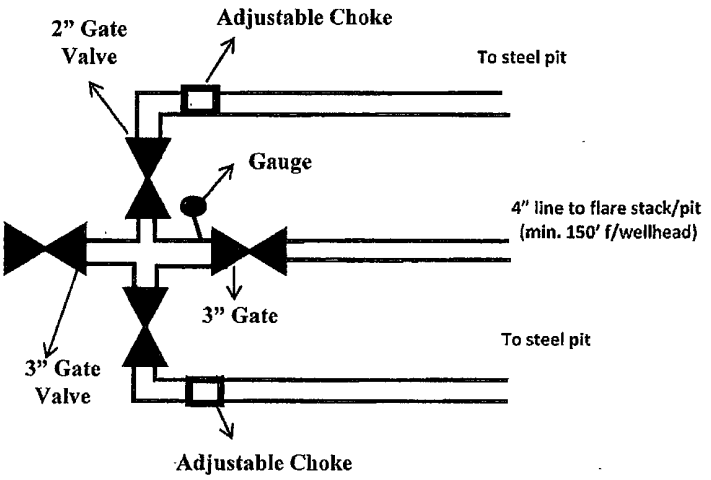
11. OTHER FACETS OF OPERATION:

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 & potentialed as an oil well.

3M psi BOPE & Choke Manifold

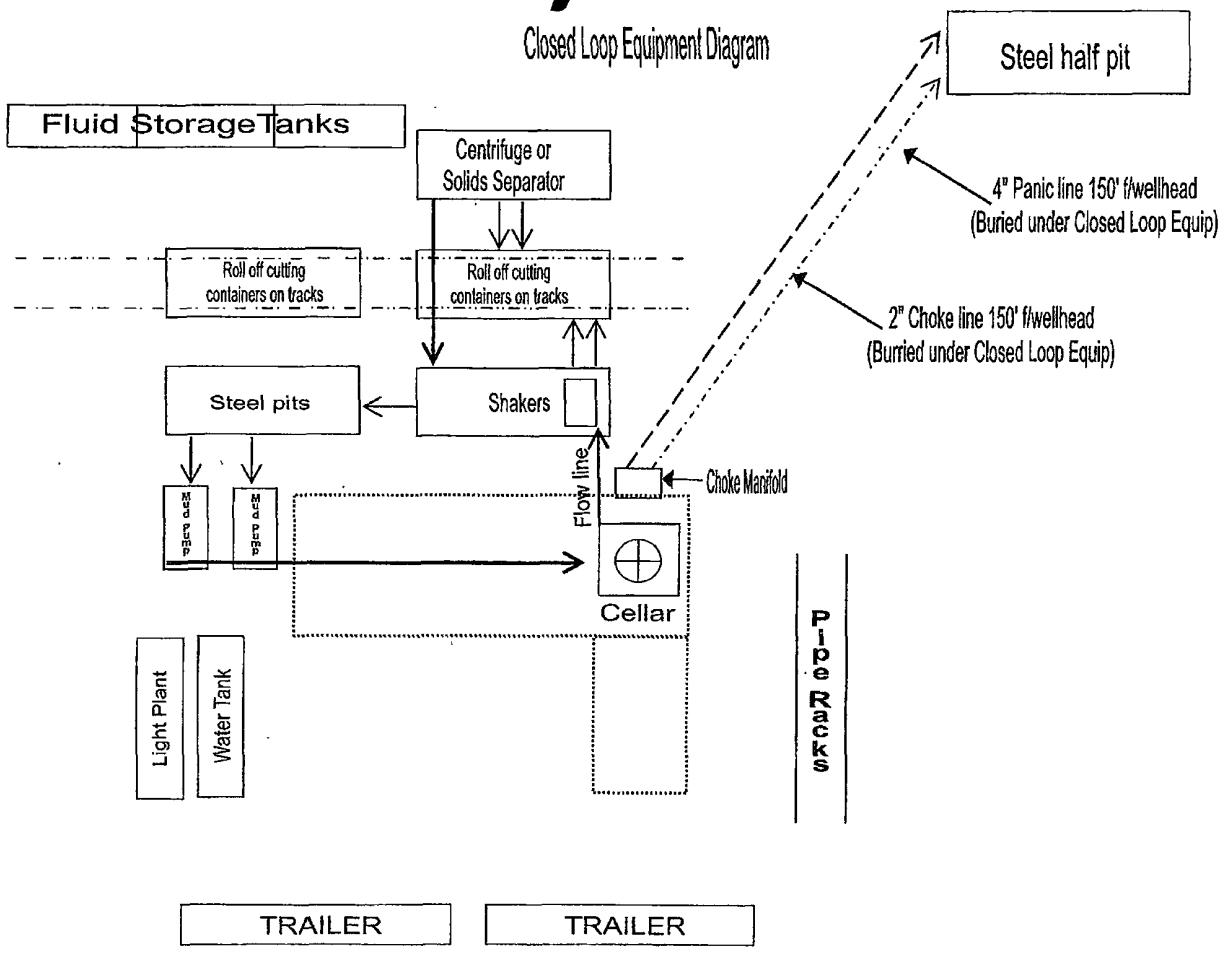
All valve & lines on choke manifold are 2" unless noted.
Exact manifold configuration may vary

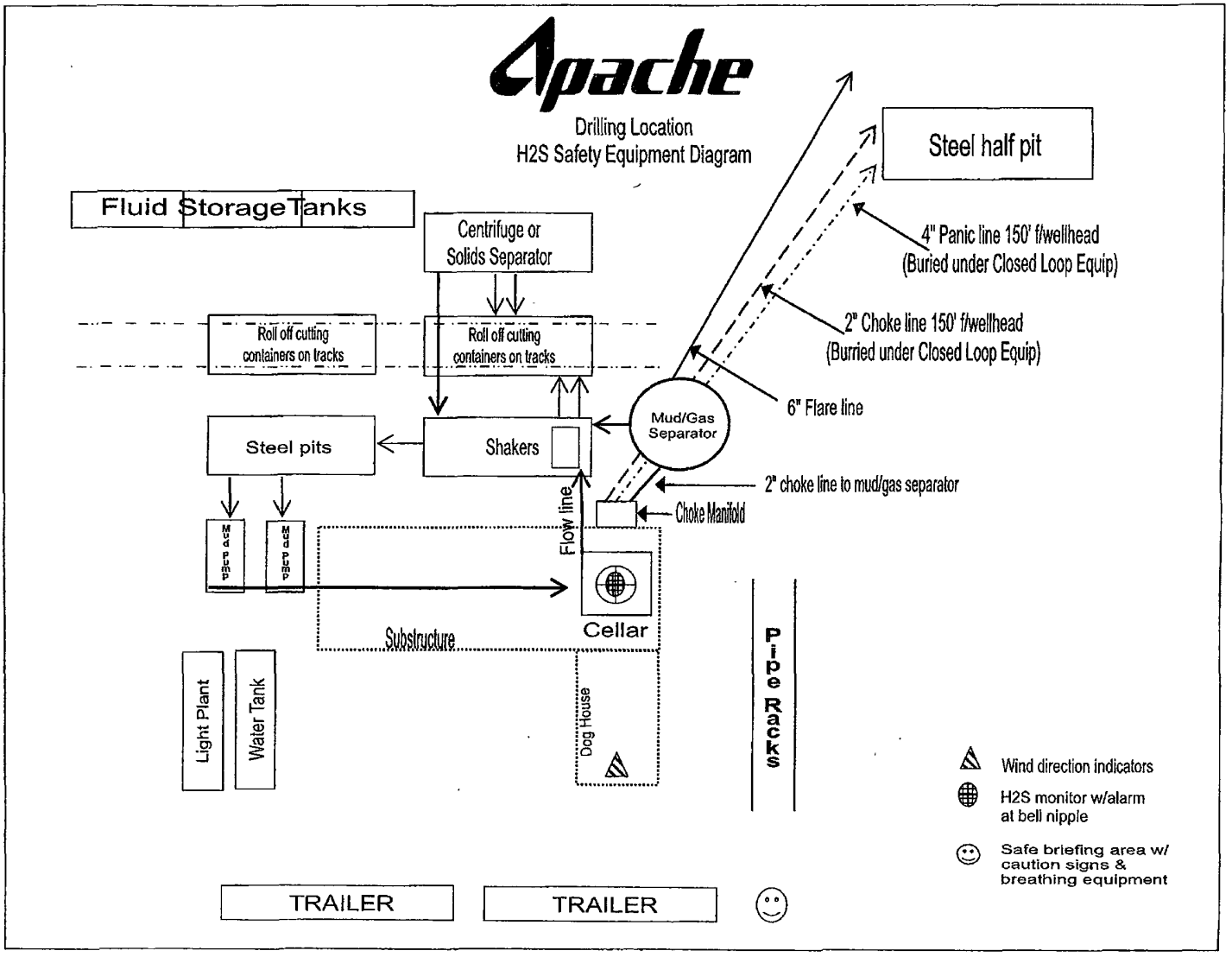


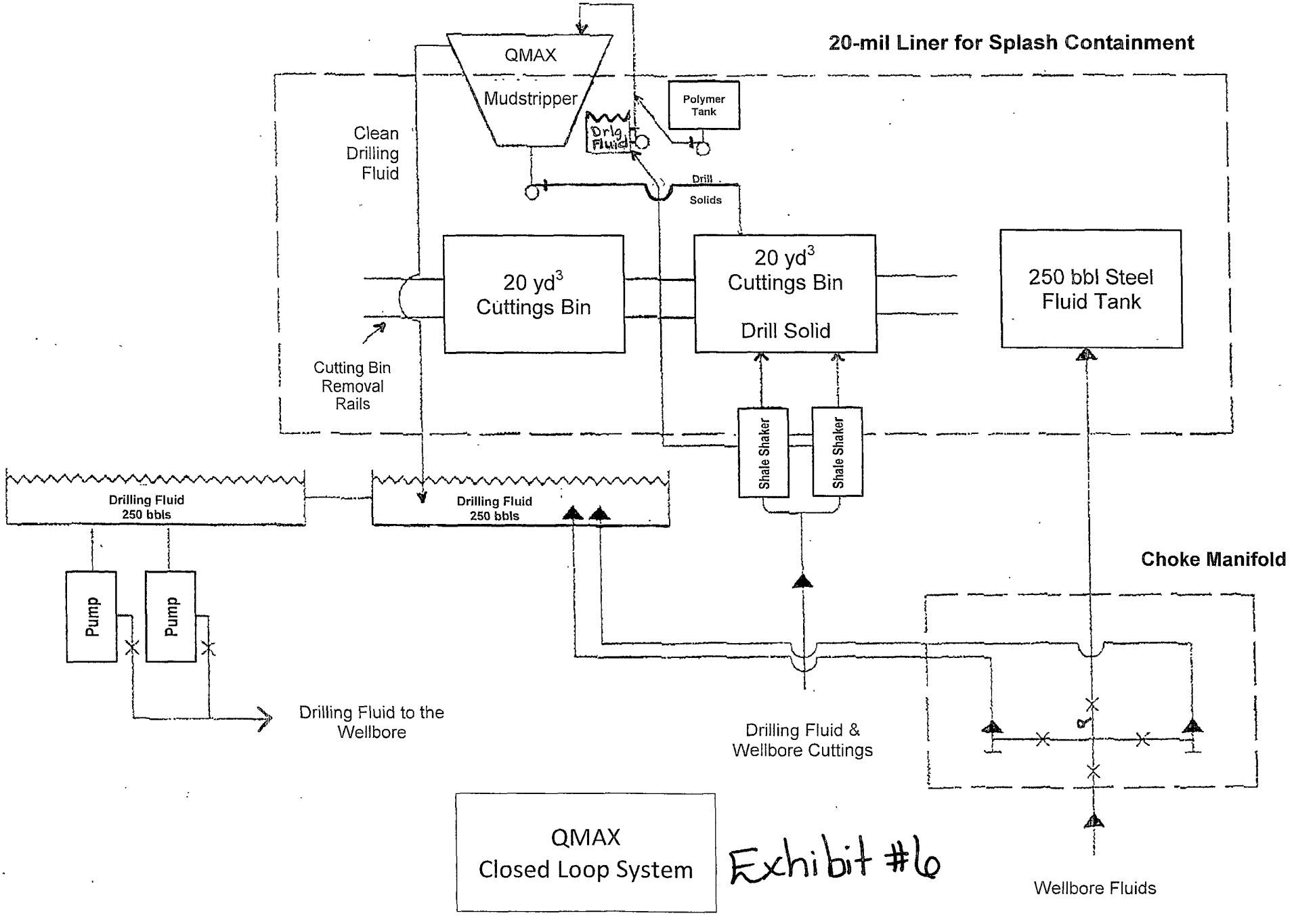


Apache

Closed Loop Equipment Diagram




Apache
Drilling Location
H2S Safety Equipment Diagram
Steel half pit
Fluid Storage Tanks
Centrifuge or
Solids Separator
4" Panic line 150' f/wellhead
(Buried under Closed Loop Equip)
Roll off cutting
containers on tracks
Roll off cutting
containers on tracks
2" Choke line 150' f/wellhead
(Burried under Closed Loop Equip)
Mud/Gas
Separator
6" Flare line
Steel pits
Shakers
2" choke line to mud/gas separator
Choke Manifold
Flow line
Substructure
Cellar
Light Plant
Water Tank
Dog House
Pipe Racks
Wind direction indicators
H2S monitor w/alarm
at bell nipple
Safe briefing area w/
caution signs &
breathing equipment
TRAILER
TRAILER


20-mil Liner for Splash Containment
QMAX
Mudstripper
Polymer Tank
Drlg Fluid
Clean Drilling Fluid
Drill Solids
20 yd3 Cuttings Bin
20 yd3 Cuttings Bin
Drill Solid
250 bbl Steel Fluid Tank
Cutting Bin Removal Rails
Shale Shaker
Shale Shaker
Drilling Fluid 250 bbls
Drilling Fluid 250 bbls
Choke Manifold
Pump
Pump
Drilling Fluid to the Wellbore
Drilling Fluid & Wellbore Cuttings
Wellbore Fluids
QMAX Closed Loop System
Exhibit #6

DESIGN PLAN, OPERATING & MAINTENANCE PLAN, & CLOSURE PLAN
FOR OCD FOR C-144

LEE FEDERAL #41

DESIGN PLAN

Fluid & cuttings coming from drilling operations will pass over the Shale Shaker with the cuttings going to the Sundance Inc / CRI haul off bin and the cleaned fluid returning to the working steel pits.

Equipment includes:

2 – 500 bbl steel frac tanks (fresh water for drilling)
2 – 180 bbl steel working pits
3 – 75 bbl steel haul off bins
2 – Pumps (6-1/2" x 10" PZ 10 or equivalent)
1 – Shale shaker
1 – Mud cleaner – QMAX MudStripper

OPERATING AND MAINTENANCE PLAN

Inspection to occur every tour for proper operation of system and individual components. If any problems are found they will be repaired and/or corrected immediately.

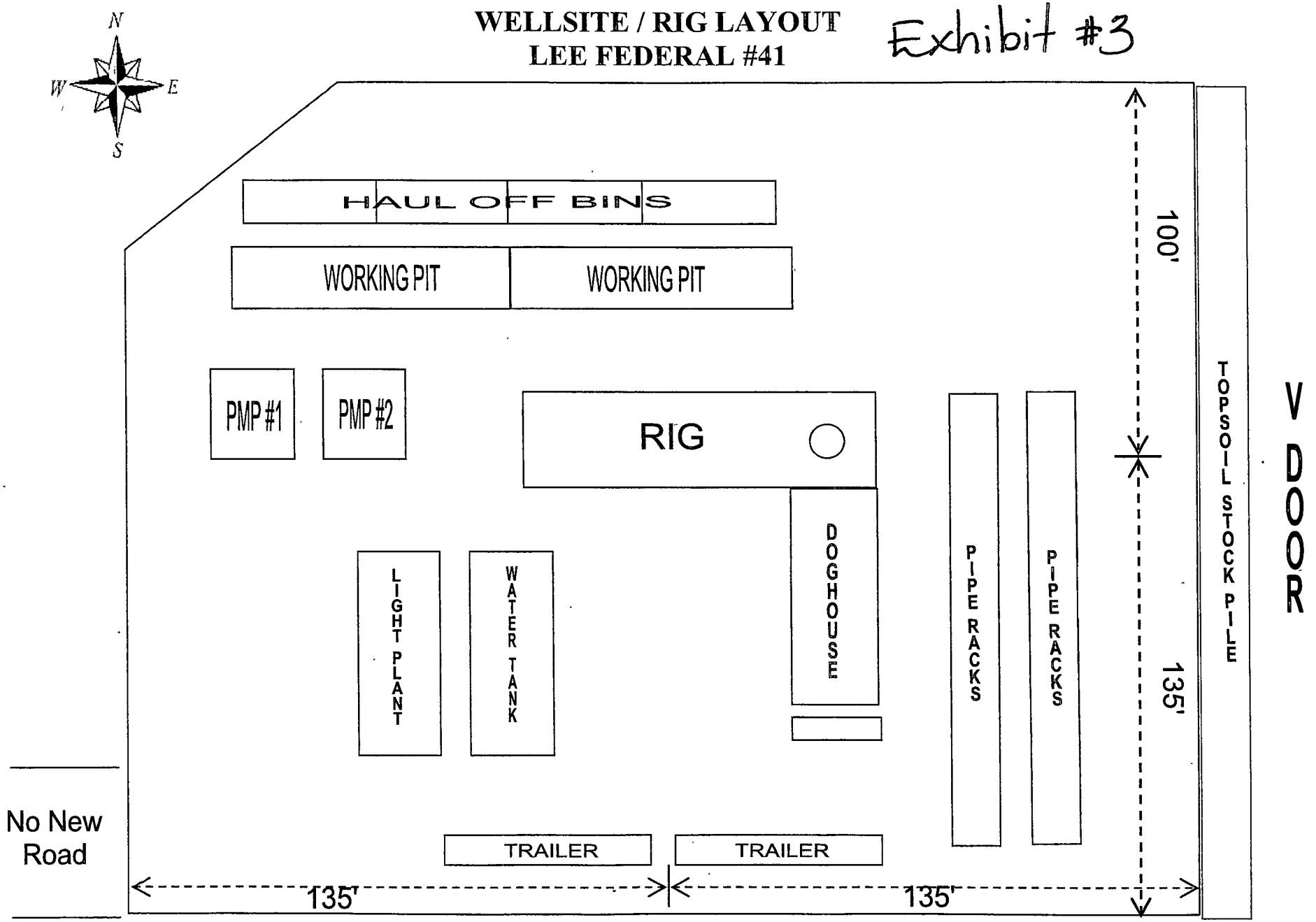
CLOSURE PLAN

All haul bins containing cuttings will be removed from location and hauled to Sundance Incorporated (NM-01-0003) disposal site located 3 miles East of Eunice, NM on the Texas border / Controlled Recovery, Inc's (NM-01-0006) disposal site located near mile marker 66 on Highway 62/180.

Sorina L. Flores
Drilling Tech

WELLSITE / RIG LAYOUT
LEE FEDERAL #41

Exhibit #3



Apache

1/28/2011

Sorina Flores
Apache Corporation
303 Veterans Airpark Ln., Ste. 3000
Midland, TX 79705

Bureau of Land Management
620 E. Greene
Carlsbad, NM 88220
575-887-6544

Dear Sirs:

Apache Corporation does not anticipate encountering H2S while drilling the Lee Federal #41 located in UL: E Sec: 20, T17S, R31E, in Eddy County, New Mexico. As a precaution, I have attached an *H_2S Drilling Operations Plan*, *H_2S Contingency Plan* and *Well Control Emergency Response Plan*. If you need anything further, please contact me at the telephone number or email listed above.

Thank you,

Sorina L Flores

Sorina Flores
Drilling Tech

HYDROGEN SULFIDE (H_2S) 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 (H_2S)
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H_2S 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_2S 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_2S 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_2S SAFETY EQUIPMENT AND SYSTEMS:

Well Control Equipment that will be available & installed if H_2S 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_2S monitors positioned on location for best coverage & response. These units have warning lights & audible sirens when H_2S levels of 20 ppm are reached.
- One portable H_2S 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 H_2S circulated to the surface. Proper mud weights, safe drilling practices & the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.
- A mud-gas separator and H_2S 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_2S service.
- All elastomers used for packing & seals shall be H_2S trim.

Communication:

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

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator Apache OGRID # 873

Well Name & # Cee Federal 041 Surface Type (F) (S) (P)

Location: UL E, Sect 20 Twnship 17 s, RNG 31 e, Sub-surface Type (F) (S) (P)

A. Date C101 rec'd 11 / 07 / 2011 C101 reviewed 11 / 10 / 2011

B. 1. Check mark, Information is OK on Forms:
OGRID ✓, BONDING ✓, PROP CODE ✓, WELL # 041, SIGNATURE ✓

2.. Inactive Well list as of : 11 / 08 / 2011 # wells 2617, # Inactive wells 0 4

a. District Grant APD but see number of inactive wells: 2615
No letter required ___; Sent Letter to Operator ____, to Santa Fe ____

3. Additional Bonding as of: 11 / 08 / 2011

a. District Denial because operator needs addition bonding:
No Letter required ___; Sent Letter to Operator ____, To Santa Fe____

b. District Denial because of Inactive well list and Financial Assurance:
No Letter required ____; Sent Letter to Operator ____, To Santa Fe ___

C. C102 YES ✓, NO ___ Signature ✓

1. Pool Cedar Lake; Glorieta-Yeso, Code 96831 ✓

a. Dedicated acreage 40 ✓, What Units E

b. SUR. Location Standard ✓: Non-Standard Location_____

c. Well shares acres: Yes ✓, No ___, #of wells 40 plus this well # 41

2. 2nd. Operator in same acreage, Yes ✓, No ____ 4
Agreement Letter ____, Disagreement letter____

3. Intent to Directional Drill Yes ____, No ✓

a. Dedicated acreage _____, What Units _____

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

4. Downhole Commingle: Yes_____, No_____

a. Pool #2_____,Code_____, Acres_____
Pool #3_____, Code _____, Acres _____
Pool #4_____, Code_____, Acres_____

5. POTASH Area Yes _____, No ✓,

D. Blowout Preventer Yes ✓, No _____,

E. H2S Yes ✓, No _____,

F. C144 Pit Registration Yes ✓, No _____,

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes _____, No ✓, NSL #_____

2. Non-Standard Proration: Yes_____, No ✓, NSP # _____

3. Simultaneous Dedication: Yes _____, No ✓, SD # _____
Number of wells _____ Plus #_____

4. Injection order Yes _____, No ✓; PMX #_____ or WFX #_____

5. SWD order Yes _____, NO ✓; SWD # _____

6. DHC from SF_____; DHC-HOB_____; Holding_____

7. OCD Approval Date 11 / 10 / 2011 API #30-0 15 - 39611

8. Reviewers JCS

Compliance Barber Gas Com #4 Removed 11/10/2011

Financial Assurance Report. J.R. Phillips Gas Com #3 plugged

Call Sonia.