AFS-09-65

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Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NMLC 065525

6. If Indian, Allotee or Tribe Name N/A

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No. East Blinebry Drinkard Unit 112723X

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

8. Lease Name and Well No. EBDU # 108 (35023)

2. Name of Operator APACHE CORPORATION (873)

9. API Well No. 30-025- 39392

3a. Address Suite 1500, Two Warren Place, 1620 S. Yale Avenue, Tulsa, OK 74136

3b. Phone No. (include area code) 1 (918) 491-4972

10. Field and Pool or Exploratory Eunice; Tubb North / East Blinebry Drinkard

4. Location of Well (Report location clearly and in accordance with any State requirements *)

At surface 3750' FSL & 1110'FWL Lot 13

At proposed prod. zone Same as Above

11. Sec., T. R. M. or Blk. and Survey or Area Section 01, Lot 13, T 21 S., R 37 E

14. Distance in miles and direction from nearest town or post office* Approximatley 6.25 miles NE of Eunice, NM

12. County or Parish Lea

13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approximatley 4170 Ft. West of Range 37 East boundary line.

16. No. of acres in lease 2128.480

17. Spacing Unit dedicated to this well 40 00

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1335 Ft. NE of the Dauron No.01 , Sec. 01-F- T21S-R37E

19. Proposed Depth 7100 Ft.

20. BLM/BIA Bond No. on file CO 1463 nationwide

21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3518 Ft.

22. Approximate date work will start* 03/01/2009

23. Estimated duration 5 to 14 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:

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 must 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 BLM.

25. Signature Vernon D Dyer — Name (Printed/Typed) Vernon D. Dyer (575) 420-0355 — Date 1-22-2009

Title Agent

Approved by (Signature) /s/ Don Peterson — Name (Printed/Typed) — Date APR 9 2009

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.

(Continued on page 2)

*(Instructions on page 2)

Capitan Controlled Water Basin

KZ

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

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APR 17 2009

HOBBSOCD

State of New Mexico
Energy, Minerals and Natural Resources Department

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
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

OIL CONSERVATION DIVISION
1220 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
30-025-39392	22900	Eunice Blinebry-Tubb-Drinkard N

Property Code	Property Name	Well Number
35023	EAST BLINEBRY DRINKARD UNIT	108

OGRID No.	Operator Name	Elevation
873	APACHE CORPORATION	3518'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
13	1	21-S	37-E		3750	SOUTH	1110	WEST	LEA

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			

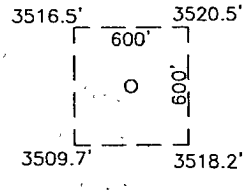
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

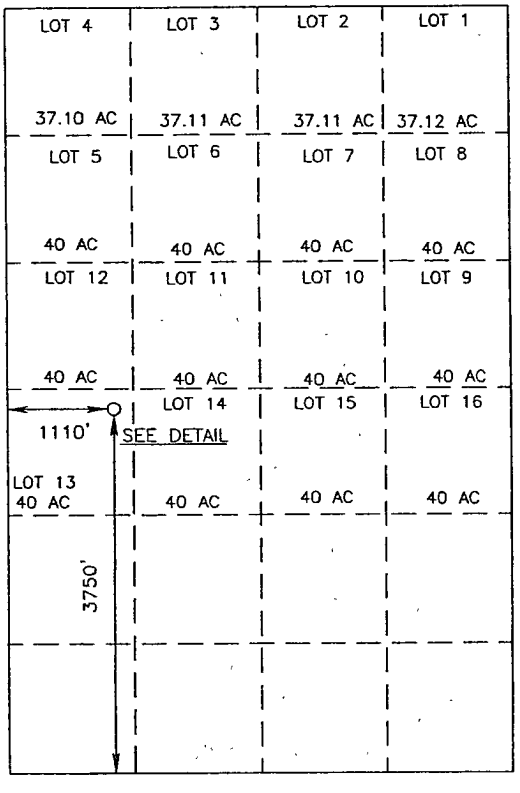
GEODETIC COORDINATES
NAD 27 NME

Y=551714.1 N
X=873677.5 E

LAT.=32.510931° N
LONG.=103.121170° W
LAT. = 32°30'39.35" N
LONG. = 103°07'16.21" W

DETAIL





SCALE: 1" = 2000'

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.

Signature — Date: 2/3/09

Sam Hampton
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.

OCTOBER 07, 2008
Date Surveyed JC

Signature & Seal of Professional Surveyor

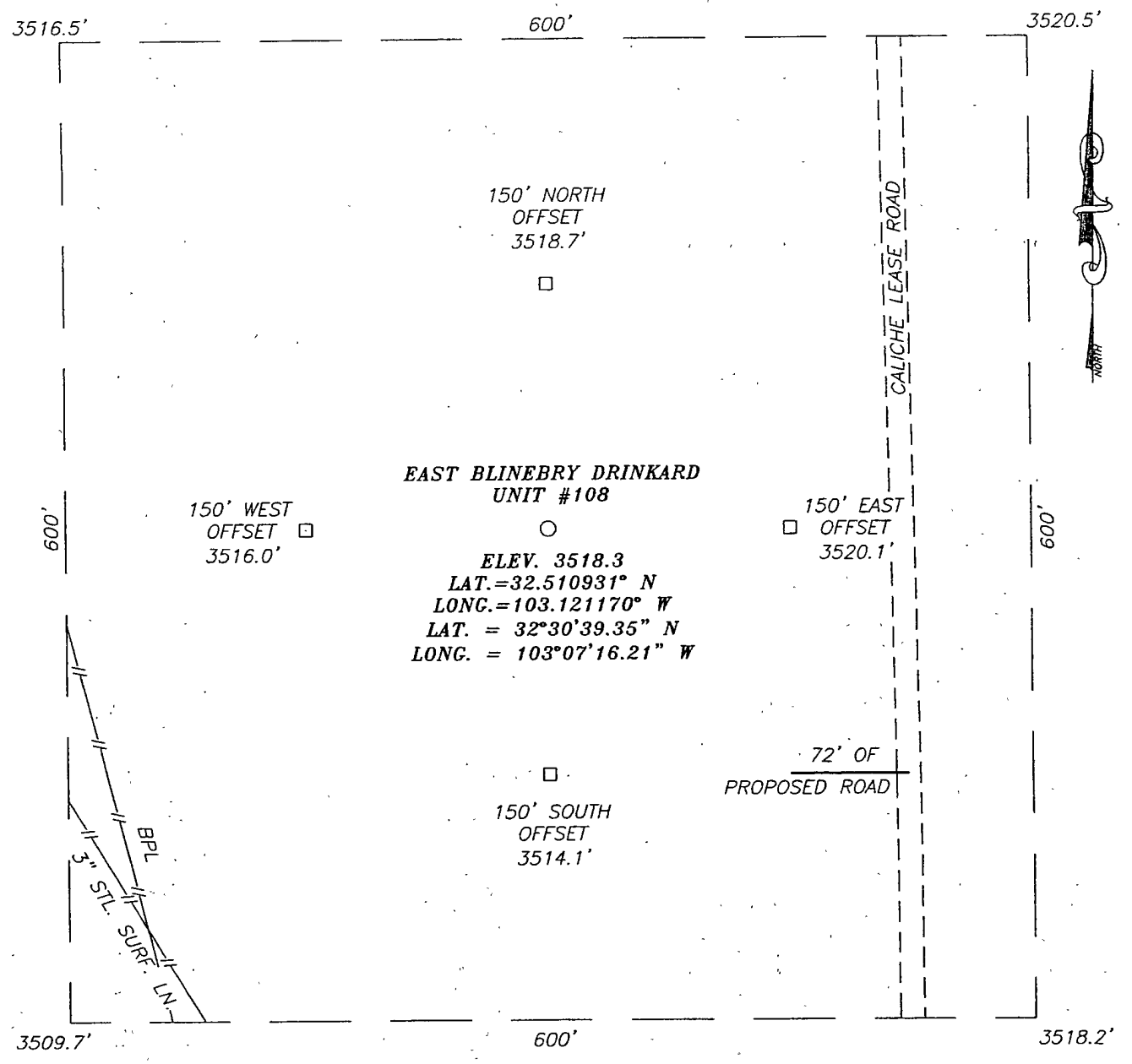
RONALD J. EIDSON
NEW MEXICO
3239
REGISTERED PROFESSIONAL SURVEYOR

Ronald J. Eidson 10/17/08
08.11.1562

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

SECTION 1, TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HWY. #18 AND STATE HWY. #207, GO SOUTH ON HWY. #18 APPROX. 0.9 MILES, TURN LEFT AND GO EAST APPROX. 0.3 MILES, TURN LEFT AND GO NORTH APPROX. 0.6 MILES TO A PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY WEST 72 FEET TO THIS LOCATION.

100 0 100 200 Feet

Scale:1"=100'

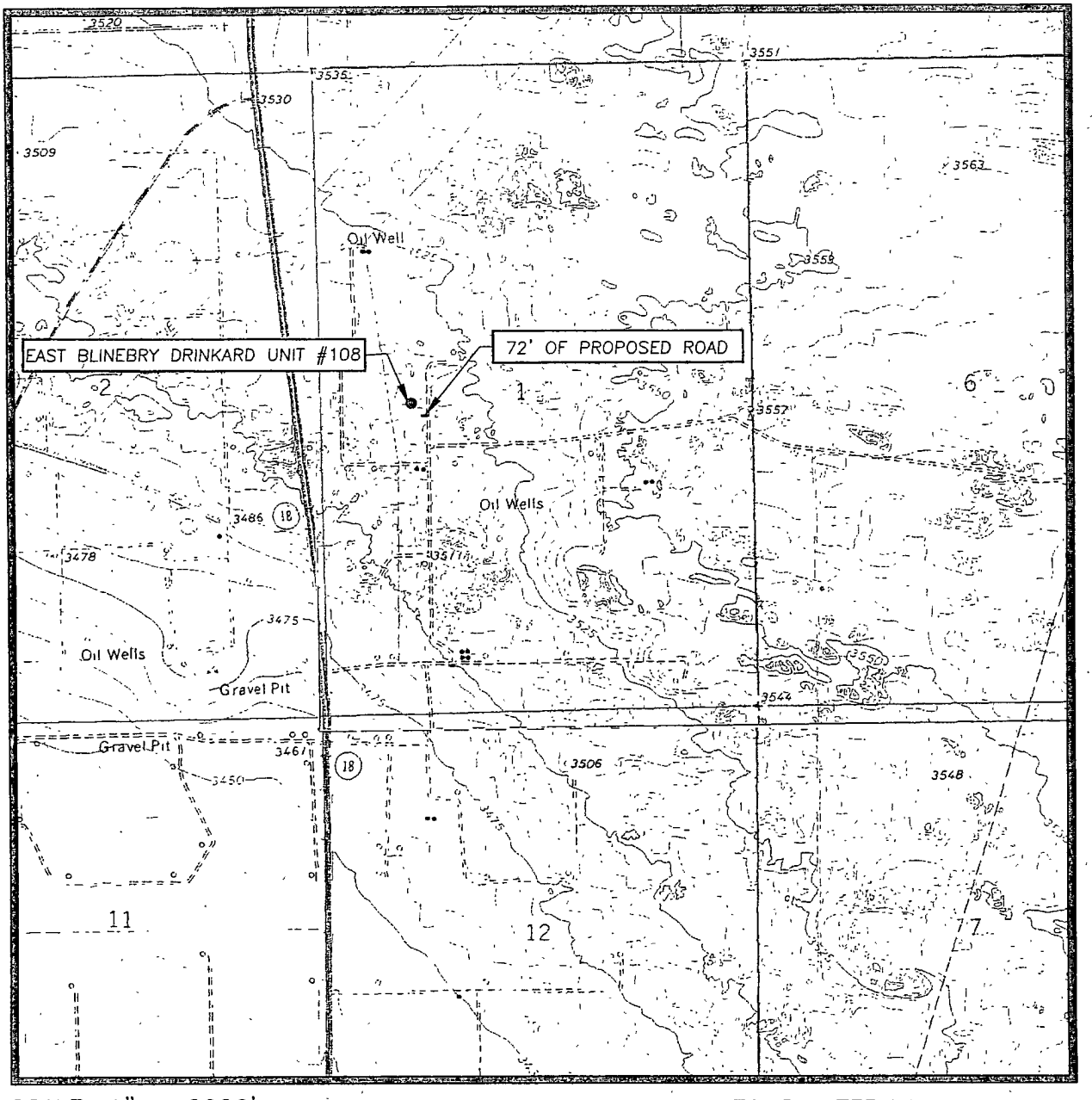
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

APACHE CORPORATION

EAST BLINEBRY DRINKARD UNIT #108 WELL
LOCATED 3750 FEET FROM THE SOUTH LINE
AND 1110 FEET FROM THE WEST LINE OF SECTION 1,
TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 10/07/08	Sheet 1 of 1 Sheets		
W.O. Number: 08.11.1562	Dr By: JC	Rev 1:N/A	
Date: 10/17/08		08111562	Scale:1"=100'

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
HOBBS SE, N.M. – 5'
EUNICE, N.M. – 10'
HOBBS SW, N.M. – 5'
EUNICE NE, N.M. – 5'

SEC. 1 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 3750' FSL & 1110' FWL

ELEVATION 3518'

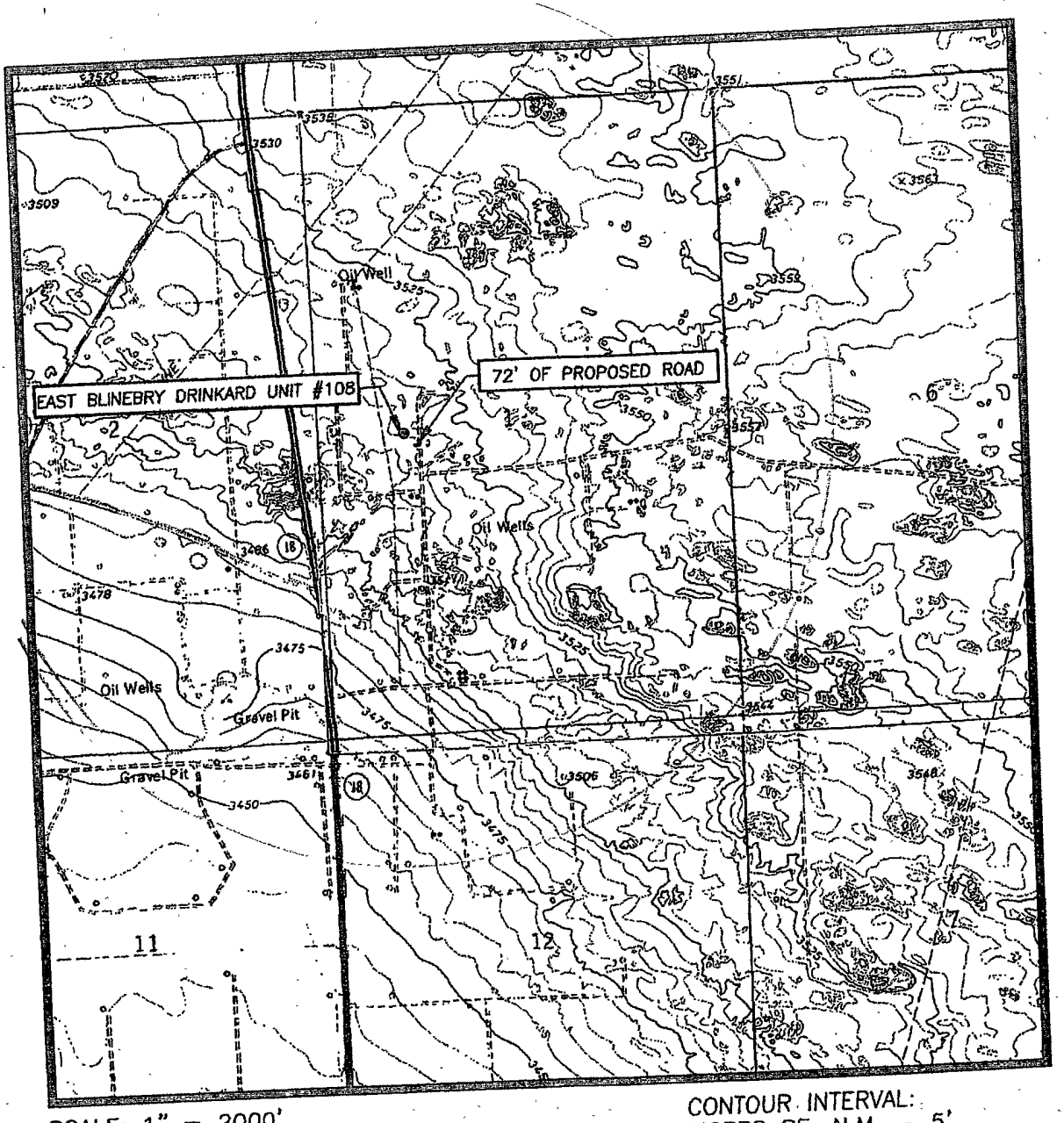
OPERATOR APACHE CORPORATION

LEASE EAST BLINEBY DRINKARD UNIT

U.S.G.S. TOPOGRAPHIC MAP
HOBBS SE, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
HOBBS SE, N.M. – 5'
EUNICE, N.M. – 10'
HOBBS SW, N.M. – 5'
EUNICE NE, N.M. – 5'

SEC. 1 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 3750' FSL & 1110' FWL

ELEVATION 3518'

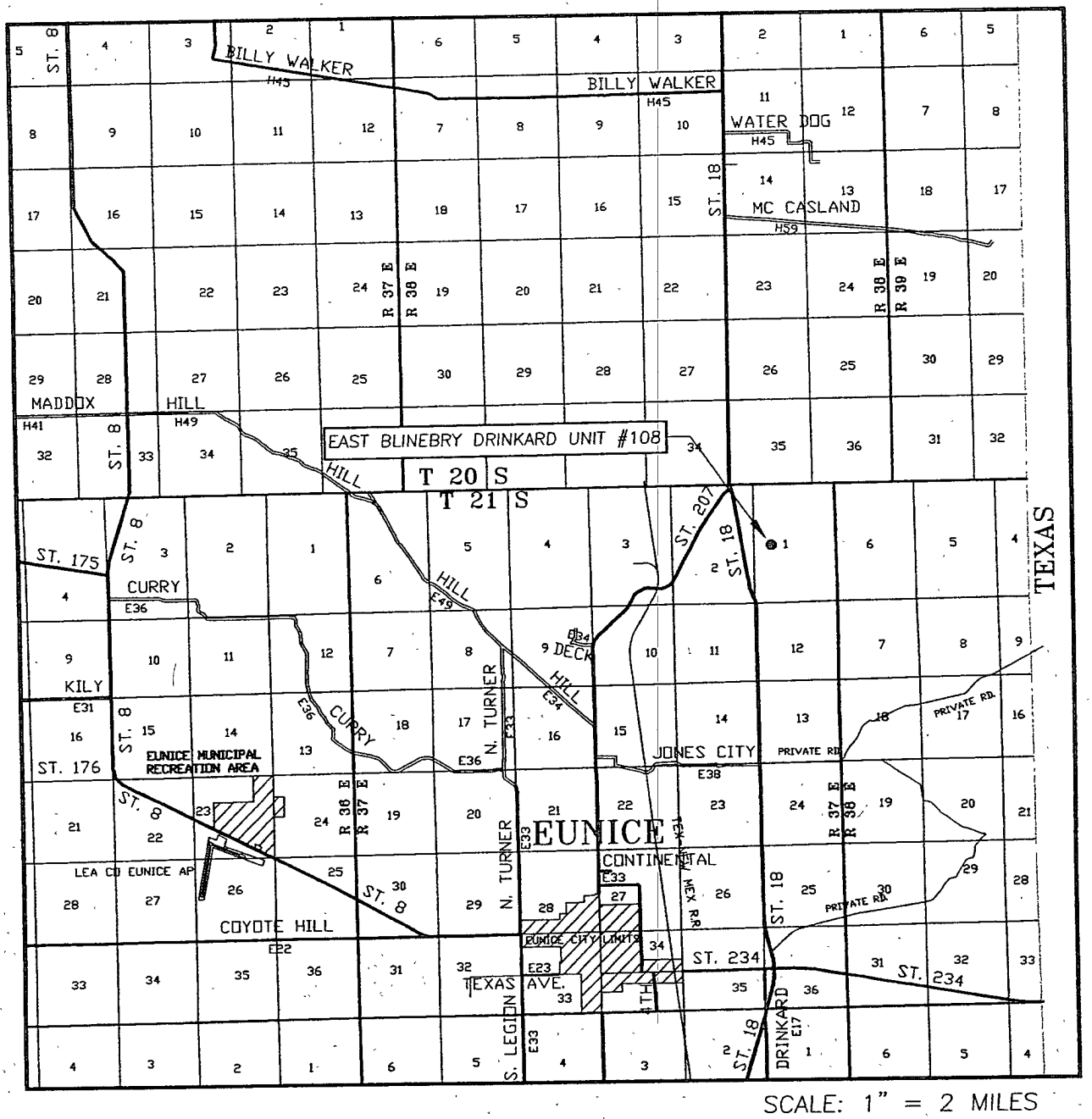
OPERATOR APACHE CORPORATION

LEASE EAST BLINEBY DRINKARD UNIT

U.S.G.S. TOPOGRAPHIC MAP
HOBBS SE, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 1 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 3750' FSL & 1110' FWL

ELEVATION 3518'

OPERATOR APACHE CORPORATION

LEASE NORTHEAST DRINKARD UNIT

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

![Apache Corporation]

VERTICAL GEOLOGIC WELL PROGNOSIS

[X] NEW WELL FOR ECONOMICS
[ ] DEEPENING

WELL NAME & NUMBER	OPERATOR	PROSPECT NAME
East Blinebry Drinkard Unit #108	APACHE CORPORATION	DRINKARD, NE PROSPECT (NM5514)

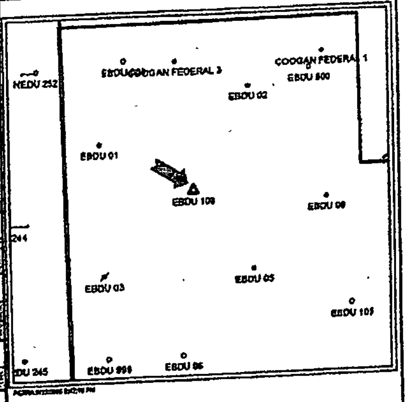
LOCATION (Footage, Sec, T & R, Survey, Block, Section)		COUNTY	STATE
3750 FSL & 1110 FWL Section 01, T21S-R37E		LEA	NM

DEEPEST OBJECTIVE	ESTIMATED PRIMARY PAY THICKNESS	TYPE COMPLETION	TOTAL DEPTH
Drinkard	275	Oil & Gas - Pumping	7175

SPACING	WI	NRI	COMMENCED DATE	
40	69.0000%	56.0600%		

LOCATION OF NEAREST HORIZONTAL OR VERTICAL PRODUCTION FROM OBJECTIVE HORIZON

Operator	Well Name	Sec	County	State
Apache Corporation	*E Blinebry Drinkard U*	*5*	*Lea*	*NM*



FORMATION TOPS

EST ELEV: 3524 REFERENCE: KB

FORMATION	TOPS Estimated	TOPS Actual	SUBSEA ELEV Estimated	SUBSEA ELEV Actual	STRUCTURAL COMPARISON Estimated	STRUCTURAL COMPARISON Actual
Rustler	1529		1995		18	
Yates	2827		697		18	
Seven Rivers	3074		450		16	
Queen	3624		-100		27	
Grayburg	3967		-443		26	
San Andres	4248		-724		12	
Glorieta	5462		-1938		6	
Blinebry Marker	5893		-2369		26	
Tubb	6356		-2832		42	
Drinkard	6704		-3180		4	
Abo	6977		-3453		0	

CORRELATION WELL

OPERATOR	Apache Corp	
Well Name & No	E Blinebry Drinkard Unit 06	
LOCATION	COUNTY	STATE
4195 FNL & 2310 FWL Section 01, T21S-R37E	Lea	NM
ELEV: 3546	REFERENCE: KB	

ELECTRIC LOG	SUBSEA
1569	1977
2867	679
3112	434
3673	-127
4015	-469
4282	-736
5490	-1944
5941	-2395
6420	-2874
6730	-3184
6999	-3453

INSTALL ZONES CAPABLE OF PRODUCING HYDROCARBONS

ZONE	TOPS Est.	TOPS Actual	TYPE OBJECTIVE Primary	TYPE OBJECTIVE Secondary	DEPLETED (BHP)	GEO PRESSURED (BHP)	THICKNESS Gross	THICKNESS Net	CORE/DST
Blinebry	5893		Acid & Frac		1800		620	155	
Tubb	6356		Acid & Frac		1900		345	50	
Drinkard	6704		Acid & Frac		2000		265	70	

ANALOGOUS COMPLETIONS

Apache EBDU #72

MUD LOGGER

UNIT ON BY:
SAMPLES FROM: TO: TD
SAMPLE INTERVAL (FT.):

APACHE CONTACTS

		NAME	ADDRESS	A/C	HOME	CELL	OFFICE
GEOL		Bob Curtis	APACHE CORPORATION 6120 S. Yale, Ste 1500 Tulsa, Oklahoma 74136	918	252-3911	906-5342	491-4924
GEOPHY						230-7809	491-4838
LAND		Michelle Hanson		918		557-8888	491-4919
ENGINEER	RES	Keevin Barnes		918		978-0121	491-4954
	DLG	Sam Hampton		918	493-1623	619-3135	491-4842
	PROD	Darren Steed		918			

REMARKS

E-Log Program:	Spectral Gamma Ray, Spectral Density/Compensated Neutron, Dual Laterolog/MSFL, Sonic	Cost: $15,000
Mud Log Program:		Cost:

COMMENTS

FED Lease
North Eunice Blinebry, Tubb, Drinkard Pool (40 A)
Expect gas inflow at top Seven Rivers. Weatherford will be logging contractor because they can log through drillpipe.

GEOLOGIST: Robert E Curtis/hej DATE: 10/7/2008

AUTHORIZED BY: (Explor Mgr) David M Allard DATE:

EAST BLINEBRY DRINKARD UNIT # 108
DRILLING PROGRAM

1. The **geological surface formation** is recent Permian with quaternary alluvium and other surficial deposits.

2. **Estimated Tops of Geological Markers:**

FORMATION	DEPTH
Quaternary alluvials	Surface
Rustler	1529'
Yates	2827'
Seven Rivers	3074'
Queen	3624'
Grayburg	3967'
San Andres	4248'
Glorieta	5462'
Blinebry Marker	5893'
Tubb	6356'
Drinkard	6704'
Abo	6977'
TD	7175'

Estimated depths at which water, oil, gas, or other mineral-bearing formations are expected to be encountered:

SUBSTANCE	DEPTH
Oil	Blinebry@ 5893'
	Tubb@ 6356'
	Drinkard@ 6704'
Gas	None anticipated
Fresh Water	None anticipated

All fresh water and prospectively valuable minerals (as described by BLM) encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows within zones of correlative rights will be tested to determine commercial potential.

3. **Proposed Casing Design:**

HOLE SIZE	CASING SIZE OD / ID	GRADE	WEIGHT PERFOOT	DEPTH	SACKS CEMENT	ESTIMATED TOC - REMARKS
12 ¼"	8 5/8" 8.097"	J55 STC	24#	~~1,600'~~ See COA	725	TOC – Surface 8.9 ppg Waterbased Mud; 89 ° F Est. Static Temp; 83 ° F Estimate Circ. Temp.
7 7/8"	5 ½" 4.892"	L80 LTC	17#	0 – 1,000'	1,250	TOC – Surface Float Collar set @ 7,130' 10.10 ppg Brine Mud; 126 ° F Estimated Static Temp; 115 ° F Estimated Circ. Temp.
	5 ½" 4.892"	J55 LTC	17#	1,000 – 7,175'		

4. **Proposed Cement Program:** ← See COA

CASING SIZE	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
8 5/8"	500 sacks Prem. Plus Class C Cement + 3% bwoc Sodium Chloride + 0.25 lbs/sack Cello Flake + 3 lbs/sack LCM-1 + 0.005 gps FP-6L + 4% bwoc Bentonite gel 885 Vol. Cu Ft 1.7 Vol. Factor Slurry Weight (ppg) 13.5 Slurry Yield (cf/sack) 1.77	225 sacks Prem. Plus Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.005 gps FP-L6 + 56.3% Fresh Water 304 Vol. Cu Ft 1.3 Vol. Factor Slurry Weight (ppg) 14.8 Slurry Yield (cf/sack) 1.35 Amount of Mix Water (gps)6.35	99.3 bbls Fresh Water @ 8.33 ppg
	(Con't) Amount of Mix Water (gps) 9.02; Estimated Pumping Time 70 BC (HH:MM)-4:18;	Estimated Pumping Time – 70 BC (HH:MM)-2:33;	

8 5/8" Casing: Volume Calculations:

1,600 ft	x	0.4127 cf/ft	with 75% excess	=	1,155.0 cf
42 ft	x	0.3576 cf/ft	with 0% excess	=	15.0 cf (inside pipe)
		TOTAL SLURRY VOLUME		=	1,170.1 cf
		TOTAL SLURRY VOLUME		=	208.4 bbls

Spacer 20.0 bbls Water @ 8.33 ppg

CASING SIZE	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
5 ½"	900 sacks (35:65) Poz (Fly Ash): Class C Cement + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 0.005 gps FP-L6 + 0.5% bwoc FL-52A + 0.5% bwoc BA-10A + 3 lb/sack LCM-1 + 6% bwoc Bentonite 1,710 Vol. Cu Ft 1.9 Vol. Factor Slurry Weight (ppg) 12.8 Slurry Yield (cf/sack) 1.9 Amount of Mix Water (gps) 9.82; Estimated Pumping Time – 70 BC (HH:MM)-4:00;	350 sacks (50:50) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride +0.2% bwoc FL-25 + 0.25 lb/sack Cello Flake + 3 lb/sack LCM-1 + 0.6% bwoc FL-25 + 0.005 gps FP-L6 + 2% bwoc Bentonite 455 Vol. Cu Ft 1.3 Vol. Factor Slurry Weight (ppg) 14.2 Slurry Yield (cf/sack) 1.30 Amount of Mix Water (gps) 5.55; Estimated Pumping Time – 70 BC (HH:MM)-4:12;	165.8 bbls 2% Kcl Water @ 8.43 ppg

5 ½" Casing: Volume Calculations:

1600 ft	x 0.1926 cf/ft	with	0% excess	=	308.0 cf
3800 ft	x 0.1733 cf/ft	with	100% excess	=	1,381.9 cf
1775 ft	x 0.1733 cf/ft	with	50% excess	=	461.1 cf
40 ft	x 0.1305 cf/ft	with	0% excess	=	5.2 cf (inside pipe)
	TOTAL SLURRY VOLUME (cf)			=	2,156.1 cf
	TOTAL SLURRY VOLUME (bbls)			=	384.0 bbls

All slurries will be tested prior to loading to confirm thickening times and a lab report furnished to Apache. Fluid loss will be tested and reported on slurries with fluid loss additives. Lab test report will be furnished prior to pumping cement.

5. **Proposed Pressure Control Equipment:**

Will install on the 8 5/8" surface casing a 9" x 3000 psi WP Double Ram BOP with Annular, and will test using a 3rd party tester before drilling out of surface casing. **As maximum anticipated surface pressures do not exceed 2,000 psi, we will test the BOPE as a 2,000 psi system.** Bottom hole pressure calculations are included below. See 3,000 psi BOPE attached.

Bottom Hole Pressure Calculations

The maximum anticipated bottom hole pressure is calculated y multiplying the depth of the well by 0.44. The maximum anticipated surface pressure is calculated assuming one half of the hole is evacuated of the drilling fluid required to control the maximum anticipated bottom hole pressure.

For the West Blinebry Drinkard Unit # 73 the maximum anticipated bottom hole pressure is 6,975' x 0.44 psi/ft. = 3,069 psi.

The maximum anticipated surface pressure assuming a hole where one half of the mud required to contain the bottom hole pressure has been evacuated is 3,069 psi – (3,069 psi/2) = 1,535 psi.

6. Proposed Mud Program

DEPTH	MUD PROPERTIES	REMARKS
0 – 1,400'	Weight: 8.6 – 9.2 ppg Viscosity: 28 – 34 sec/qt pH: 9.0 – 9.5 Filtrate: NC	Spud with a Conventional Gel/Lime "Spud mud". Use gel and native solids to maintain a sufficient viscosity to keep the hole clean. Mix Paper one-two sacks every 100 feet drilled to minimize wall cake build up on water sands and to control seepage loss. Every 500' sweep the hole with 50 bbls of pre-mixed freshwater, gel and lime having a viscosity of 45-50 sec/qt.
1400' – 6500'	Weight: 10 10.0 – 10.2 ppg Viscosity: 28 – 32 sec/qt pH: 9.5 -10 Filtrate: NC	Drill out from under the surface casing with Brine Water. Paper should be added at 2 bags after every 100' drilled to control seepage losses. Use Lime to maintain pH at 9-10. Mix one gallon of Anco Drill N at flowline every 250 feet drilled to promote solids settling
6500' – TD	Weight: 10.0 – 10.2 ppg Viscosity: 36 – 42 sec/qt pH: 9.5 -10 Filtrate: 8-10 cm/30 min	From 6500' to Total Depth, it is recommended the system be restricted to the working pits. Adjust and maintain pH with Caustic Soda. Treat system with WT-22 @ 0.1 ppb. Mix Starch (yellow) to control API filtrate at 8-10 cc. Sweep hole with Anco Drill N every 100'.

See COA

7. Auxiliary Equipment:

9" x 3000 psi double BOP/blind & pipe ram
41/2" x 3000 psi Kelly valve
9" x 3000 psi mud cross – H_2S detector on production hole
Gate-type safety valve 3" choke line from BOP to manifold
2" adjustable chokes – 3" blowdown line

8. Logging Program

The following logs may be run:

CNL, Litho Density, GR, CAL, Dual Laterolog/MSFL, Sonic from TD-1600'

CNL, GR from TD-Surface

Mudlogging Program:

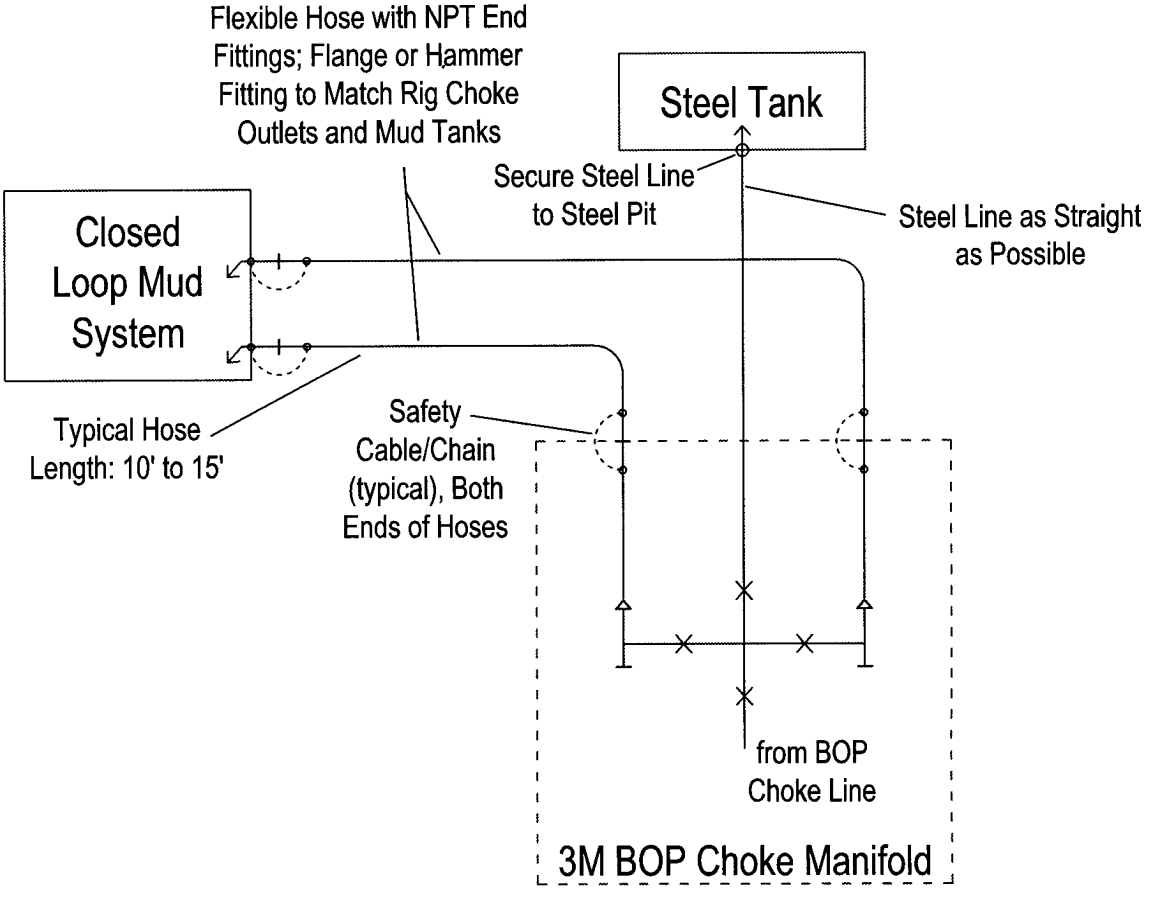
There are no plans to utilize a mud logging service on this well.

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.
The estimated maximum bottom hole pressure is 2,000 psi., estimated BHT is 115°F.
No H_2S is anticipated.

10. Anticipated Starting Date

When drilling rig becomes available.



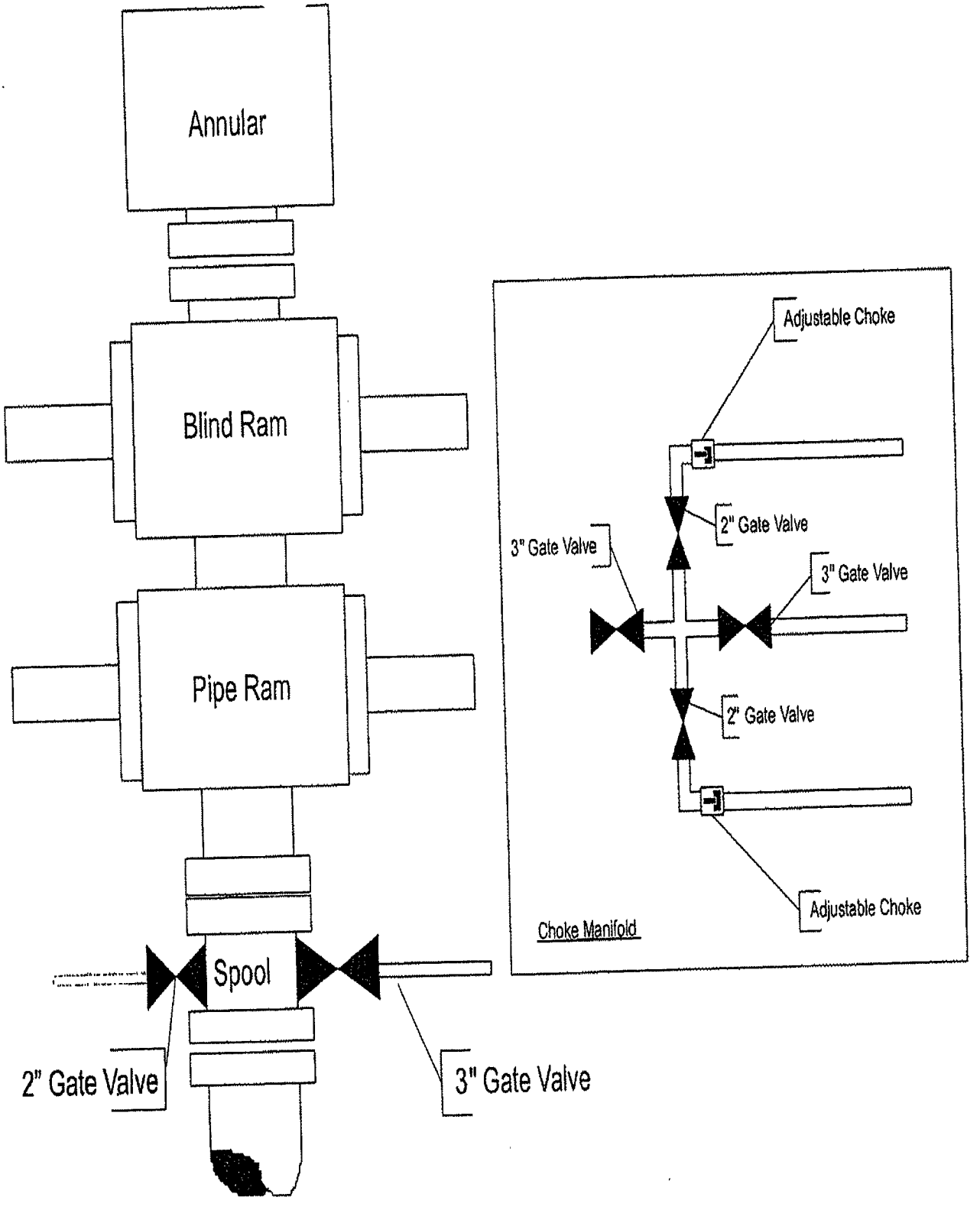
Apache Corporation
TWO WARREN PLACE, SUITE 1500
6120 SOUTH YALE
TULSA, OKLAHOMA 74136-4224

Typical Choke Manifold Schematic for Closed-Loop Mud System

POC: SAM HAMPTON | SCALE: NTS | DATE: 2 MARCH 2009

FILE: N:\Tulsa\Dept\Land\Private\AUTOCAD\2MARCH2009-CHOKE-MANIFOLD-HAMPTON.dwg

Apache Corporation, EBDU # 108,
Lea County, NM



3 M (3,000 PSI) BOPE Diagram

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) 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 the proper training.

II. H_2S Safety Equipment and Systems

1. Well Control Equipment that will be available and installed if H2S is encountered:
   - A. Flare line with electronic igniter or continuous pilot.
   - B. Choke manifold with a minimum of one remote choke.
   - C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
   - D. Auxiliary equipment to include annular preventer, mud-gas separator, rotating head, and flare gun with flares.
2. Protective equipment for essential personnel:
   - A. Mark II Surviveair 30-minute units located in the dog house and at briefing areas.
3. H_2S detection and monitoring equipment:
   - A. Two portable H_2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.
   - B. One portable S02 monitor positioned near flare line.
4. Visual warning systems:
   - A. Wind direction indicators.
   - B. 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.
5. Mud program:
   - A. The mud program has been designed to minimize the volume of H_2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H_2S scavengers will minimize hazards when penetrating H_2S-bearing zones.
   - B. A mud-gas separator and an H_2S gas buster will be utilized if H2S is encountered.
6. Metallurgy:
   - A. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.
   - B. All elastomers used for packing and seals shall be H_2S trim.
7. Communication:
   - A. Radio communications in company vehicles including cellular telephone and 2-way radio

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 an 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 and 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 event of an emergency the Drilling Foreman or Tool-pusher will immediately contact only one of the following starting with the first name listed.

	Office	Home	Mobile
Danny Chaney	(405) 222-5040		(405)574-2107
Ross Murphy	(918) 491-4834	(918) 749-9454	(918) 691-9493
Tom Voytovich	(918) 491-4901	(918) 299-8820	(918) 381-0882

Emergency Telephone Conference Room: (888) 896-4185 and input code: 344855

This one phone call will free the Drilling Foreman to devote his full time to securing the safety of personnel and 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 use by the Mid-Continent 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 Ross Murphy is out of contact, Tom Voytovich 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.

Hydrogen Sulfide Contingency Plan
For Drilling/Workover/Facility

If at this time the supervising person determines the release of H2S cannot be contained to the site location and the general public is in harms way he will take the necessary steps to protect the workers and the public.
EMERGENCY CALL LIST: (Start and continue until ONE of these people has been contacted)

	OFFICE	MOBILE	HOME
Harold Swain	432-527-3311	575-390-4368	
Danny Chaney	405-574-4249		
Sam Hampton	918-491-4954	918-978-0121	

EMERGENCY RESPONSE NUMBERS:

State Police	Eddy County		575 -748-9718
State Police	Lea County		575-392-5588
Sheriff	Eddy County		575-746-2701
Sheriff	Lea County		
Emergency Medical Service (Ambulance)	Eddy County		911 or 505-746-2701
	Lea County	Eunice	911 or 505-394-3258
Emergency Response	Eddy County SERC		575-476-9620
	Lea County		
Artesia Police Dept			575-746-5001
Artesia Fire Dept			575-746-5001
Carlsbad Police Dept			575-885-2111
Carlsbad Fire Dept			575-885-3125

EMERGENCY CALL LIST (CONT.)

Loco Hills Police Dept		575- 677-2349
Jal Police Dept		575--395-2501
Jal Fire Dept		575--395-2221
Jal Ambulance		575--395-2221
Eunice Police Dept		575- 394-0112
Eunice Fire Dept		575--394-3258
Eunice Ambulance		575--394-3258
Hobbs Police Dept		575- 397-3365
Hobbs Fire Dept		575--397-9308
NMOCD	District 1 (Lea, Roosevelt, Curry)	575- 393-6161
	District 2 (Eddy, Chavez)	575--748-1283
Lea County Information		575--393-8203
Callaway Safety	Eddy/Lea Counties	575--392-2973
BJ Services	Artesia	575--746-3140
	Hobbs	575--392-5556
Halliburton	Artesia	1-800-523-2482
	Hobbs	1-800-523-2482
Wild Well Control	Midland	432-550-6202
	Mobile	432-553-1166

CONTACTING AUTHORITIES
FOR EMERGENCY SITUATIONS

APACHE 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 possible but no later than 4 hours. **Agencies will ask for information about the release such as: Type, Volume, Wind Direction, Location, etc. Be prepared with all information available.** The following call list of essential and potential responders has been prepared for use during a release. This response plan must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

LOCATION	ENTITY	PHONE NUMBER:
Ambulance	**Ambulance**	**911**
Eunice, NM	**Apache Corporation**	**(575) 394-1503**
	OR	
Eunice, NM	**Apache Corporation**	**(575) 394-2743**
Eunice, NM	**Sheriff's Office**	**(575) 394-2020**
Hobbs, NM	**State Police**	**(575) 392-5588**
Carlsbad, NM	**Bureau of Land Management**	**(575) 887-6544**
Eunice, NM	**Fire Department**	**(575) 394-3258**
Hobbs, NM	**Fire Department**	**(575) 397-9308**
Hobbs, NM	**Local Emergency Mgmt. Safety**	**(575) 397-9231**
Hobbs, NM	**BBC International**	**(575) 393-6186**
Hobbs, NM	**Schumbeager Technology**	**(575) 393-6186**
Hobbs, NM	**Deliverance Protection**	**(575) 492-1234**

Representative and Emergency Contacts

Senior Representative (Manager, Engineering & Production):

Ross Murphy
Apache Corporation
6120 South Yale Avenue
Suite 1500
Tulsa, Oklahoma 74136
(918) 491-4834

Project (Operations Engineer):

Kevin Mayes
Apache Corporation
6120 South Yale Avenue
Suite 1500
Tulsa, Oklahoma 74136
(918) 491-4972

Drilling Operations (Operations Engineer):

Sam Hampton
Apache Corporation
6120 South Yale Avenue
Suite 1500
Tulsa, Oklahoma 74136
(918) 491-4954

Surface Use Plan

1. **Existing Roads:**

   The NMOCD C-102, Well Location and Acreage Dedication Plat, shows the proposed well site as staked. The Topo/Location Map is a reproduction of Lea County, New Mexico, General Highway map and shows the area of existing highways and roads. Directions to the well location are listed on the 600' x 600' Survey Map described below.

   A 600' x 600' Well Pad Survey Map, indicates 72' of proposed road going off of an existing caliche lease road. Detailed directions to the location are as follows: From the intersection of State Highway #18 and State Hwy. # 207, go south on Hwy. # 18 approx. 0.9 miles, turn left and go east approx. 0.3 miles, turn left and go north approx. 0.6 miles to proposed road survey. Follow road survey west 72 feet to this location.

   The Location / Vicinity Map, showing area townships and ranges, indicates the location of the EBDU # 108 and the 72' of proposed road.

2. **Planned Access Roads:** 72 Feet of proposed road is planned. It will stem off of an existing caliche lease road which falls within the 600' x 600' well location survey.

3. **Locations of Existing Wells in a One-mile radius**

   1. Water Wells – None known
   2. Disposal wells – None known
   3. Drilling wells – None known
   4. Producing wells- As shown on Location Map
   5. Abandoned wells – None Known

4. **If a completion on this well is a producer,** Apache Corporation will furnish maps and / or plats showing on site facilities or off site facilities if needed. This will be accompanied by a Sundry Notice.

5. **Location and Type of Water Supply:**
   Apache Corporation plans to drill the proposed well with fresh and brine water which will be transported by truck over the proposed and existing roads.

6. **Source of Construction Material:**
   If possible, construction will be obtained from excavation of drill site. If additional material is needed, it will be purchased from a local source. Material will be transported over the access route as described in No.1 Existing Roads and No.2 Planned Access Roads above.

7. **Methods of Handling Waste Material:**

A. Drill cuttings will be separated by a series of solids removal equipment and stored in steel containment pits and then hauled to a state-approved disposal facility.

B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.

C. Salts remaining after completion of well will be picked up by supplier including broken sacks.

D. Sewage from any living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.

E. Drilling fluids will be contained in the steel pits in a closed circulating system. Fluids will be cleaned and reused Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8. **Ancillary Facilities:**

A. No camps or airstrips to be constructed.

9. **Well Site Layout:**

A. The NMOCD C- 102 Well Location and Acreage Dedication Plat shows proposed well site location as staked. The `600' x 600' Survey` shows the well pad offsets, proposed access road, existing roads and pipelines. Details directions to the location are given. A rig layout schematic is included with the drilling plan.

B. Mud pits in the closed circulating system will be steel pits and the cuttings will be stored in steel containment pits.

C. Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility

D. If the well is a producer, those areas of the location not essential top production facilities will be reclaimed and seeded per BLM requirements.

10. **Plans for Restoration of Surface**:

Rehabilitation of the location will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be notified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be loamed over the disturbed area to the extent possible. Re-vegetation. Procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be re-contoured to match the existing terrain. Topsoil will be spread to the extent possible. Re-vegetation will comply with BLMM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required form production facilities.

11. Other Information:

A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly Yucca, Mesquite and Shin Oak.

B. The well site is on the surface owned by McNeill Ranch Incorporated. The land is used mainly for cattle ranching, and oil and gas production.

C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.

D. There are no known dwellings within 1 ½ miles of this location.

12. Surface and Mineral Ownership: The surface land is owned by McNeill Ranch Incorporated, % Paige McNeill, P.O. Box 1058, Hobbs, NM 88241, and a surface land use agreement has been made with the McNeill Ranch Incorporated. The sub surface minerals are owned by USA Department of Interior.

Acres Dedicated to Well

There are 40.00 acres dedicated to this well, which takes in the Lot # 13, Section 1, Township 21 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

Leases Issued LC-065525

Operating Rights

Elliott Hall Co Ut LP	50%
Elliott Industries Co LP	50%

Archaeological, Historical, and Other Cultural Sites

Boone Archeological Services, LLC, Carlsbad, New Mexico will be conducting an archaeological survey of the proposed well which covers the drilling location, production facilities, and access road, including a corridor along said access road for power and flow lines. His report will be filed under separate cover.

Lessee's or Operator's Representative and Certification.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by APACHE CORPORATION and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date 1-22-2009

Name and Title Vernon D. Dyer, Agent

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Apache Corporation
LEASE NO.:	LC-065525
WELL NAME & NO.:	EBDU #108
SURFACE HOLE FOOTAGE:	3750' FSL & 110' FWL
BOTTOM HOLE FOOTAGE	' F L & ' F L
LOCATION:	Section 01, T. 21 S., R 37 E., NMPM
COUNTY:	Les 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.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (575) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The operator has applied for a closed-loop system. The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

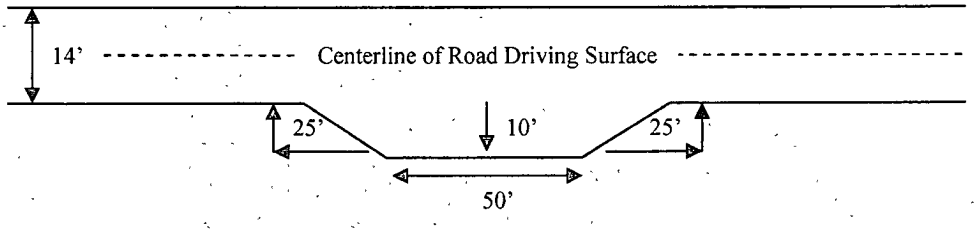
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

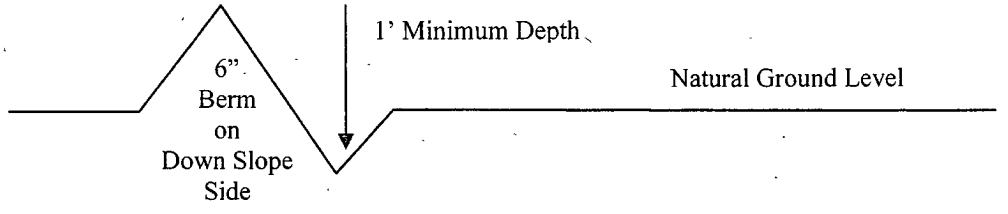
Standard Turnout – Plan View



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

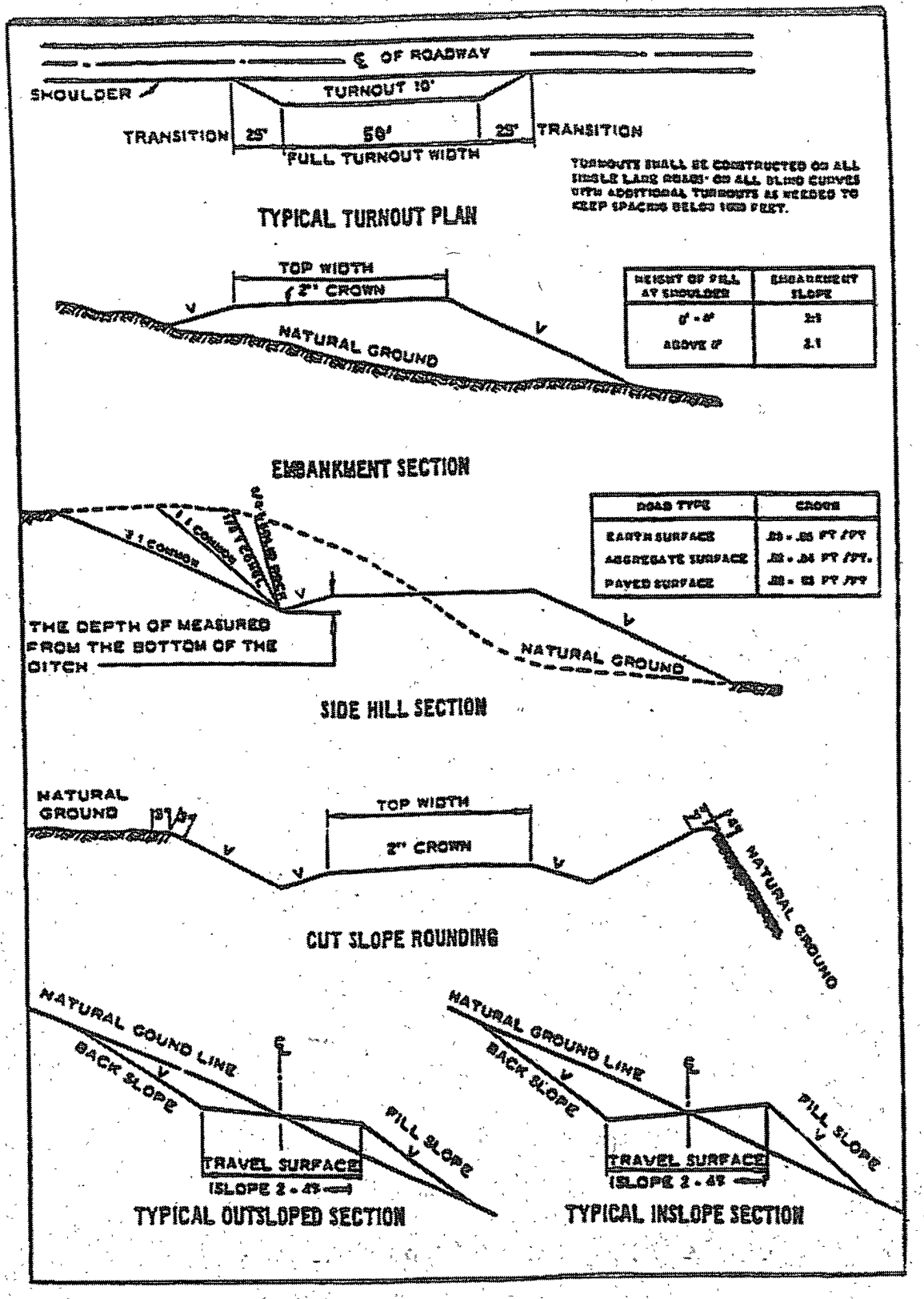
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Blinebry** formation. **If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Glorietta formation.

1. The **8-5/8** inch surface casing shall be **set at approximately 1630 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water mud to be used to setting depth.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, a remedial cement job will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17. **If a flare line is installed, it must meet Onshore Order 2 requirements. Steel tank and choke line hoses must be sufficient distance from rig equipment to prevent ignition of gas vapors that may be released.**

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi. **Operator is installing a 3M system and testing as a 2M based on bottom hole pressure gradient. 2M system approved.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 031309

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.