RECEIVED

APR 17 2009

HOBBSOCD

OCD-HOBBS

ATS-09-660

Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Split Estate

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. <35023>
EBDU # 106

2. Name of Operator
Apache Corporation <873>

9. API Well No.
30-025- 39391

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
~~East Blinebry Drinkard~~ Eunice Tubb North

4. Location of Well *(Report location clearly and in accordance with any State requirements.**
At surface 50' FSL & 1650' FEL Unit O
At proposed prod. zone Same as above - Vertical hole

11. Sec., T. R. M. or Blk. and Survey or Area
Section 1-O, T.21 S., R. 37 E.

14. Distance in miles and direction from nearest town or post office*
Approximatley 5.0 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)
50 ft North of NMLC 0322086B

16. No. of acres in lease
2,128.48

17. Spacing Unit dedicated to this well
40 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
610 ft SE of the EBDU #4 POW

19. Proposed Depth
7150 '

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3415' GL Operator

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
Date 2-1-2008

Title
AGENT (PLEASE CONTACT AGENT FOR ANY PERTINENT ADMENDMENTS CONCERNING THIS APD AT (575) 420-0355)

Approved by *(Signature)* /s/ Don Peterson
Name *(Printed/Typed)* /s/ Don Peterson
Date APR 10 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

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SEE ATTACHED FOR CONDITIONS OF APPROVAL

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications.
Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

RECEIVED
APR 17 2009
HOBBSOCD

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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
30-025-39391	22900	Eunice Blinebry-Tubb-Drinkard N

Property Code	Property Name	Well Number
35023	EAST BLINEBRY DRINKARD UNIT	106

OGRID No.	Operator Name	Elevation
873	APACHE CORPORATION	3415'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	1	21-S	37-E		50	SOUTH	1650	EAST	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			

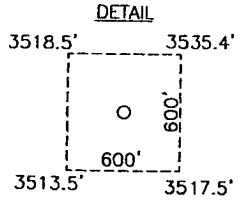
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

GEODETIC COORDINATES
NAD 27 NME

Y=548044.0 N
X=876242.2 E

LAT.=32.500764° N
LONG.=103.112988° W
LAT. = 32°30'02.75" N
LONG. = 103°06'46.76" W

DETAIL



LOT 4	LOT 3	LOT 2	LOT 1
37.10 AC	37.11 AC	37.11 AC	37.12 AC
LOT 5	LOT 6	LOT 7	LOT 8
40 AC	40 AC	40 AC	40 AC
LOT 12	LOT 11	LOT 10	LOT 9
40 AC	40 AC	40 AC	40 AC
LOT 13	LOT 14	LOT 15	LOT 16
40 AC	40 AC	40 AC	40 AC

SEE DETAIL

1650'

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.

Vernon D Dyer 2-1-2009
Signature Date

VERNON D. DYER
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.

RONALD J. EIDSON
NEW MEXICO
3239

OCTOBER 07, 2008
Date Surveyed

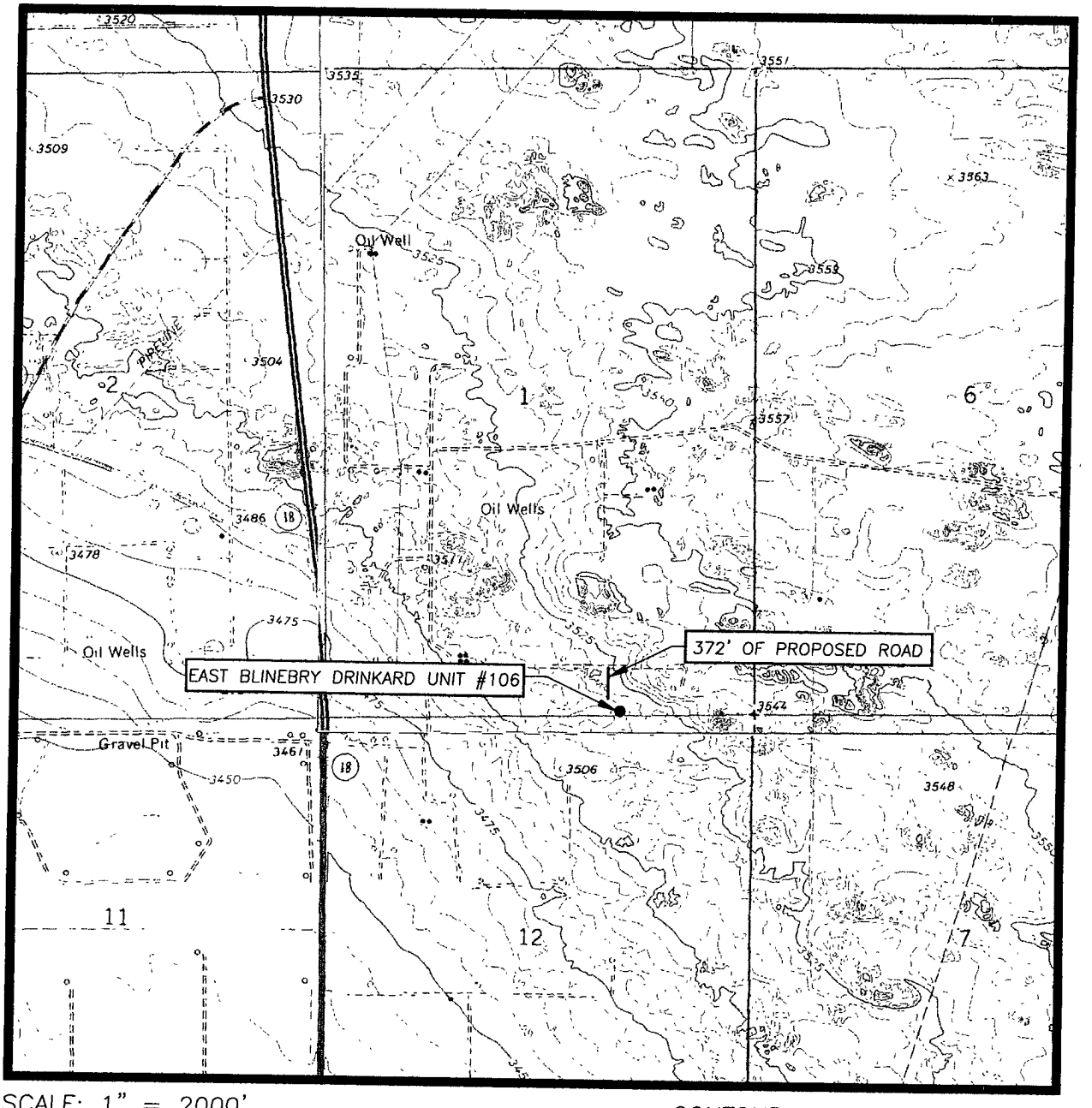
Signature & Seal of Professional Surveyor

Ronald J. Eidson 10/17/08

08.11.1561

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

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 50' FSL & 1650' FEL

ELEVATION 3515'

OPERATOR APACHE CORPORATION

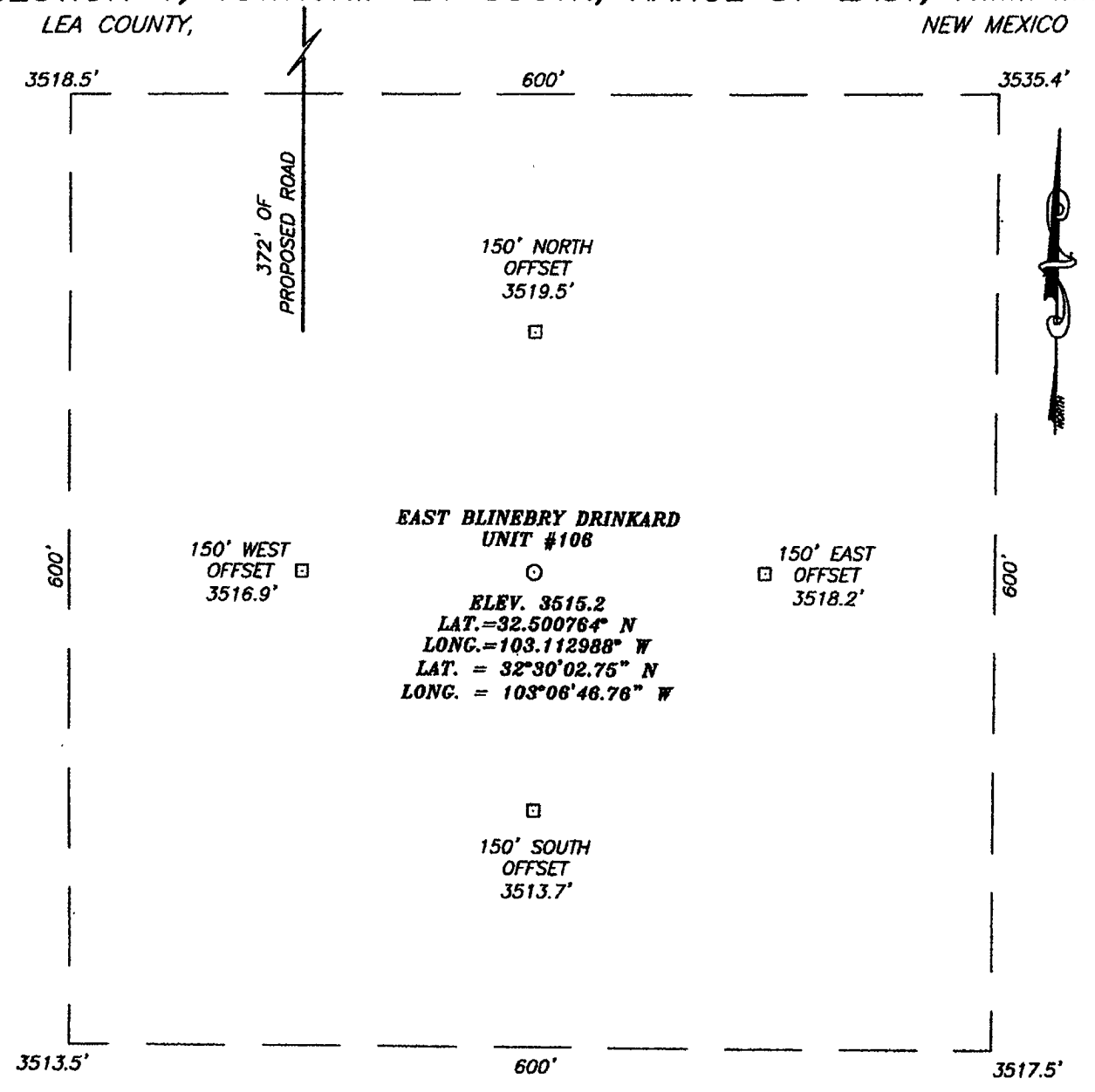
LEASE EAST BLINEBY DRINKARD UNIT

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

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. 0.7 MILES TO A PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY SOUTH 372 FEET TO THIS LOCATION.

100 0 100 200 Feet

Scale:1"=100'

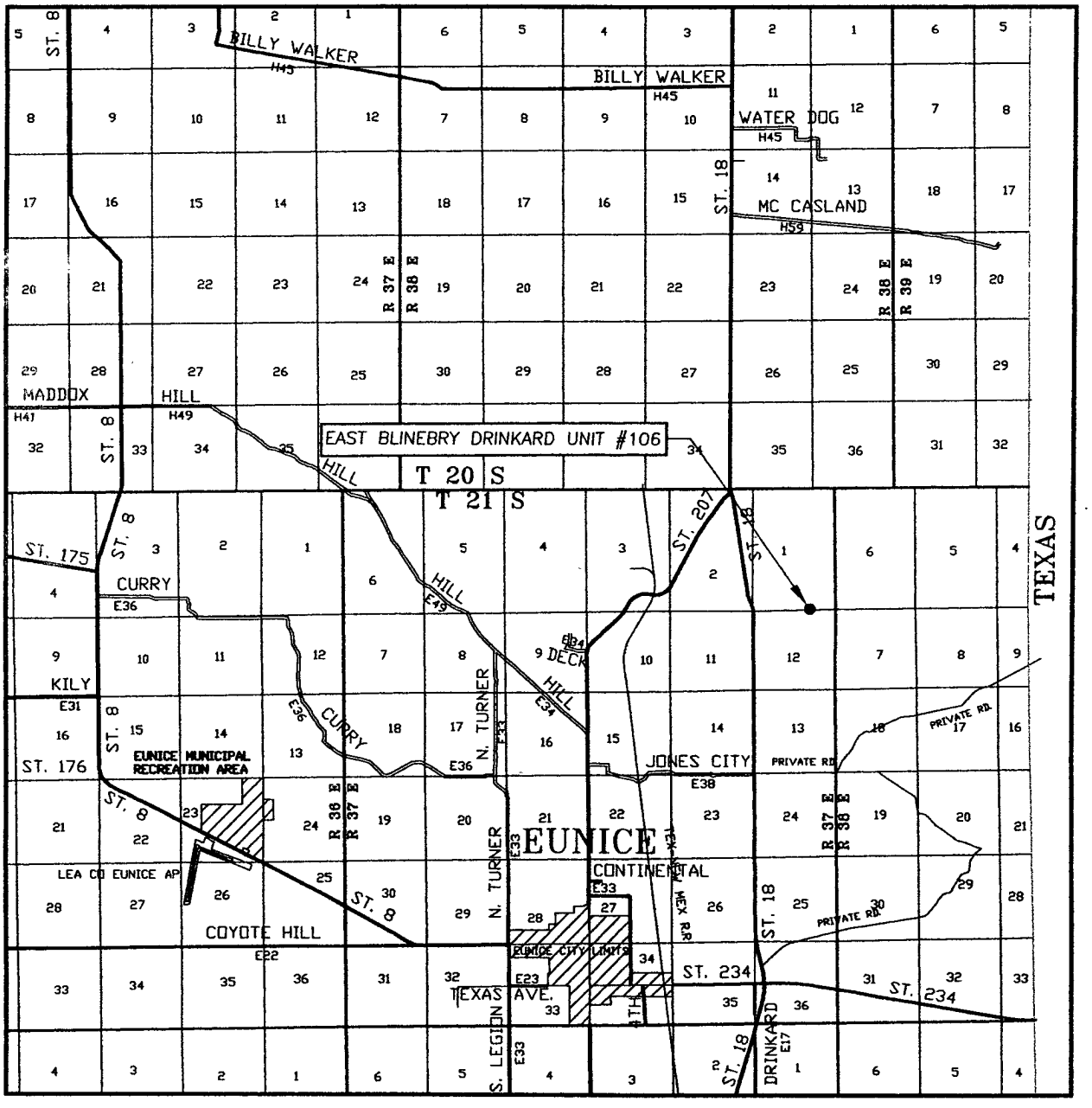
PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

APACHE CORPORATION

EAST BLINEBRY DRINKARD UNIT #106 WELL
LOCATED 50 FEET FROM THE SOUTH LINE
AND 1650 FEET FROM THE EAST 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: 08.11.1561	Dr By: JC	Rev 1:N/A
Date: 10/17/08	08111561	Scale:1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 12 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

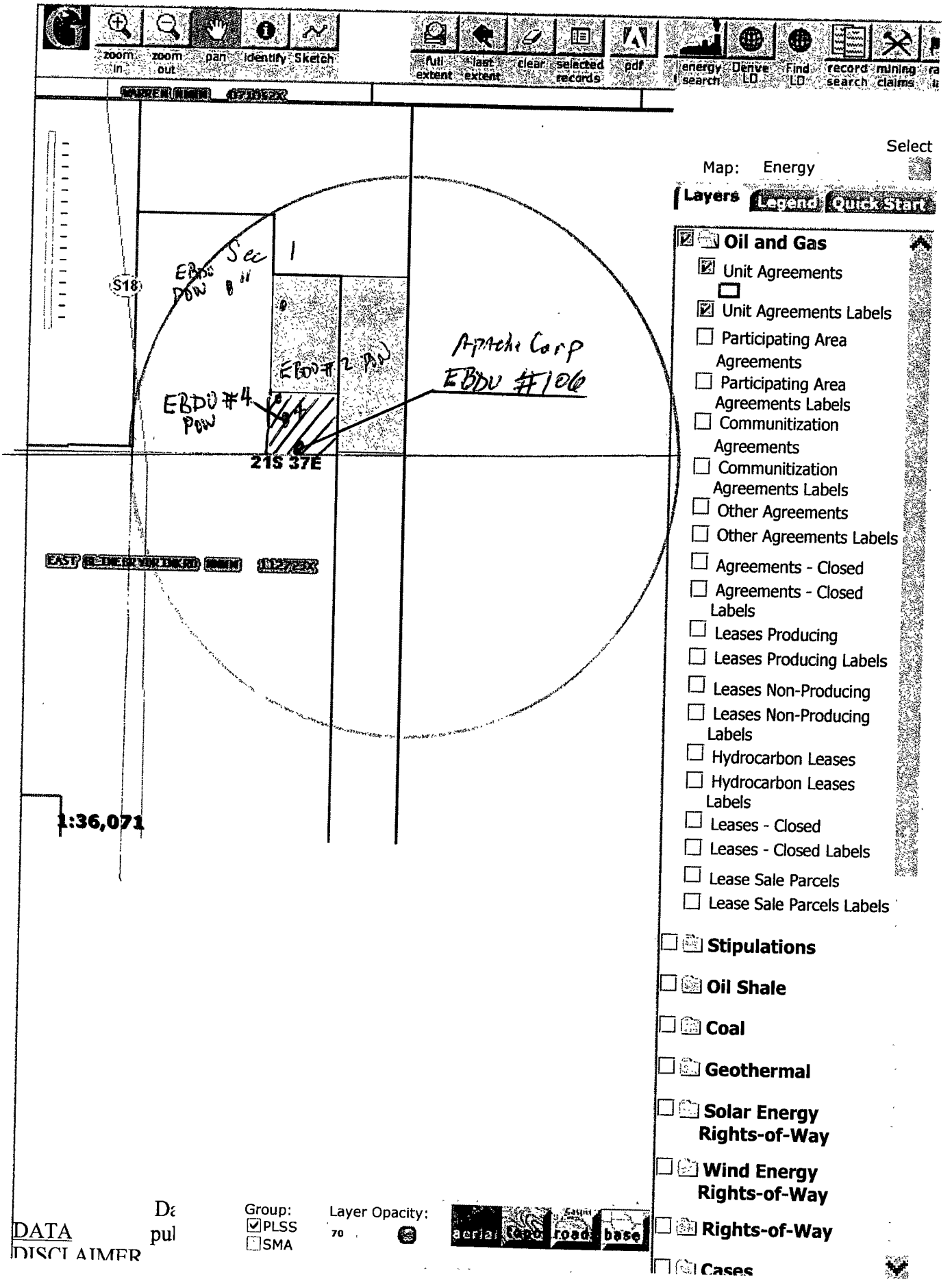
DESCRIPTION 50' FSL & 1650' FEL

ELEVATION 3515'

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


zoom in
zoom out
pan
identify
Sketch
full extent
last extent
clear
selected records
pdf
energy search
Derive LD
Find LD
record search
mining claims
Select
Map: Energy
Layers
Legend
Quick Start
Oil and Gas
Unit Agreements
Unit Agreements Labels
Participating Area Agreements
Participating Area Agreements Labels
Communitization Agreements
Communitization Agreements Labels
Other Agreements
Other Agreements Labels
Agreements - Closed
Agreements - Closed Labels
Leases Producing
Leases Producing Labels
Leases Non-Producing
Leases Non-Producing Labels
Hydrocarbon Leases
Hydrocarbon Leases Labels
Leases - Closed
Leases - Closed Labels
Lease Sale Parcels
Lease Sale Parcels Labels
Stipulations
Oil Shale
Coal
Geothermal
Solar Energy Rights-of-Way
Wind Energy Rights-of-Way
Rights-of-Way
Cases
Sec 1
EBDU #4 POW
Apache Corp EBDU #106
21S 37E
S18
1:36,071
Group:
PLSS
SMA
Layer Opacity:
70
aerial
topo
road
base
DATA
DISCLAIMER

EAST BLINEBRY DRINKARD UNIT # 106
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	1556'
Yates	2848'
Seven Rivers	3091'
Queen	3652'
Grayburg	3998'
San Andres	4250'
Glorieta	5479'
Blinebry Marker	5913'
Tubb	6406'
Drinkard	6729'
Abo	6978'
TD	7150'

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

SUBSTANCE	DEPTH
Oil	Blinebry @ 5913' Tubb @ 6406' Drinkard @ 6729'
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 Program:**

HOLE SIZE	CASING SIZE OD / ID	GRADE	WEIGHT PER FOOT	DEPTH LENGTH	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 Water-based Mud; 89 ° F Est. Static Temp; 83 ° F Est. Circ. Temp.
7 7/8"	5 ½" 4.892"	L80 LTC	17#	0-1000'	1,250	TOC – Surface Float Collar set @ 6931'/ 10.10 ppg Brine Mud; 141° F Est. Static Temp; 117° F Est. Circ. Temp.
7 7/8''	5 ½ " 4.892"	J55 LTC	17#	1,000-7,150'		10.10 ppg Brine Mud 125° F Est. Static Temp 115 F Est. Circ.Temp

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

CASING	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
8 5/8"	500 sacks Premium Class C Cmt + 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 13.5 ppg Slurry yield 1.77 cf/sack Amount of Water mix 9.02 gps Estimated Pumping Time – 70 BC (HH:MM) 4:18	225 sacks 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 Estimated Pumping Time – 70 BC (HH:MM)-2:33	99.3 bbls Fresh Water @ 8.33 ppg

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
					=	208.4 bbls

Spacer 20.0 bbls Water @ 8.33 ppg

CASING	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 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/sk Cello Flake + 3 lbs/sk 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;	165.2 bbls 2% Kcl Water @ 8.43 ppg

5 ½" Casing: Volume Calculations:

1,600 ft	x	0.1926 cf/ft	with	0% excess	=	308.0 cf
3,800 ft	x	0.1733 cf/ft	with	110% excess	=	1,381.9 cf
1,750 ft	x	0.1733 cf/ft	with	50% excess	=	454.6 cf
40 ft	x	0.1305 cf/ft	with	0% excess	=	5.2 cf (inside pipe)
		TOTAL SLURRY VOLUME			=	2,149.6 cf
		Total Volume in BBLS:			=	382.6 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 # 106 the maximum anticipated bottom hole pressure is 7150' x 0.44 psi/ft. = 3,146 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 3,146 psi – (3,146 psi/2) = 1,573psi

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.
1,400'-6,500'	Weight: 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.
6,500' – TD	Weight: 10.0 – 10.2 ppg Viscosity: 36 – 42 sec/qt pH: 9-10 Filtrate: 8-10 cc/30 min	From 6,500' 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'.

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-1300'
CNL, GR from TD-Surface

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

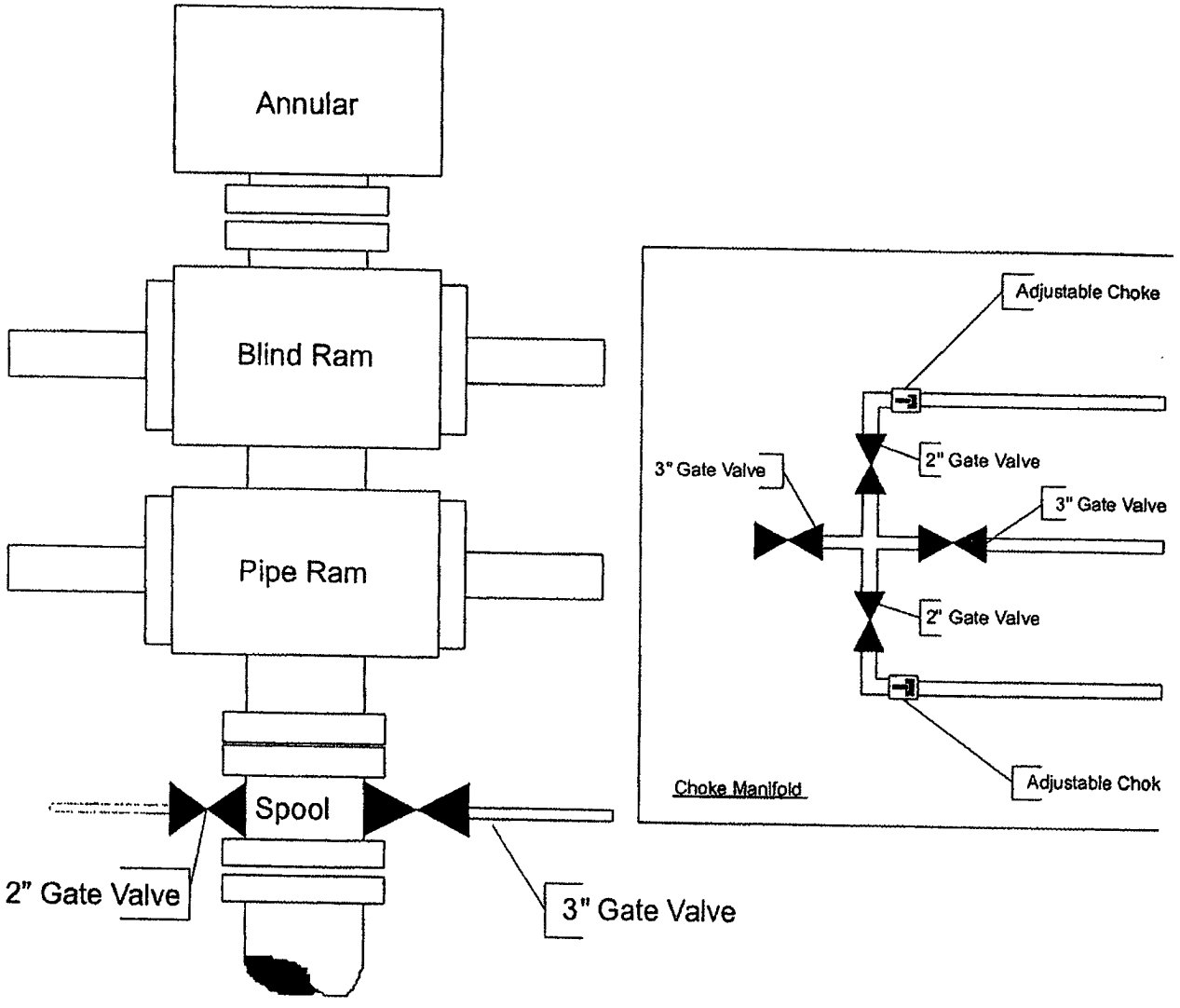
9. Potential Hazards:

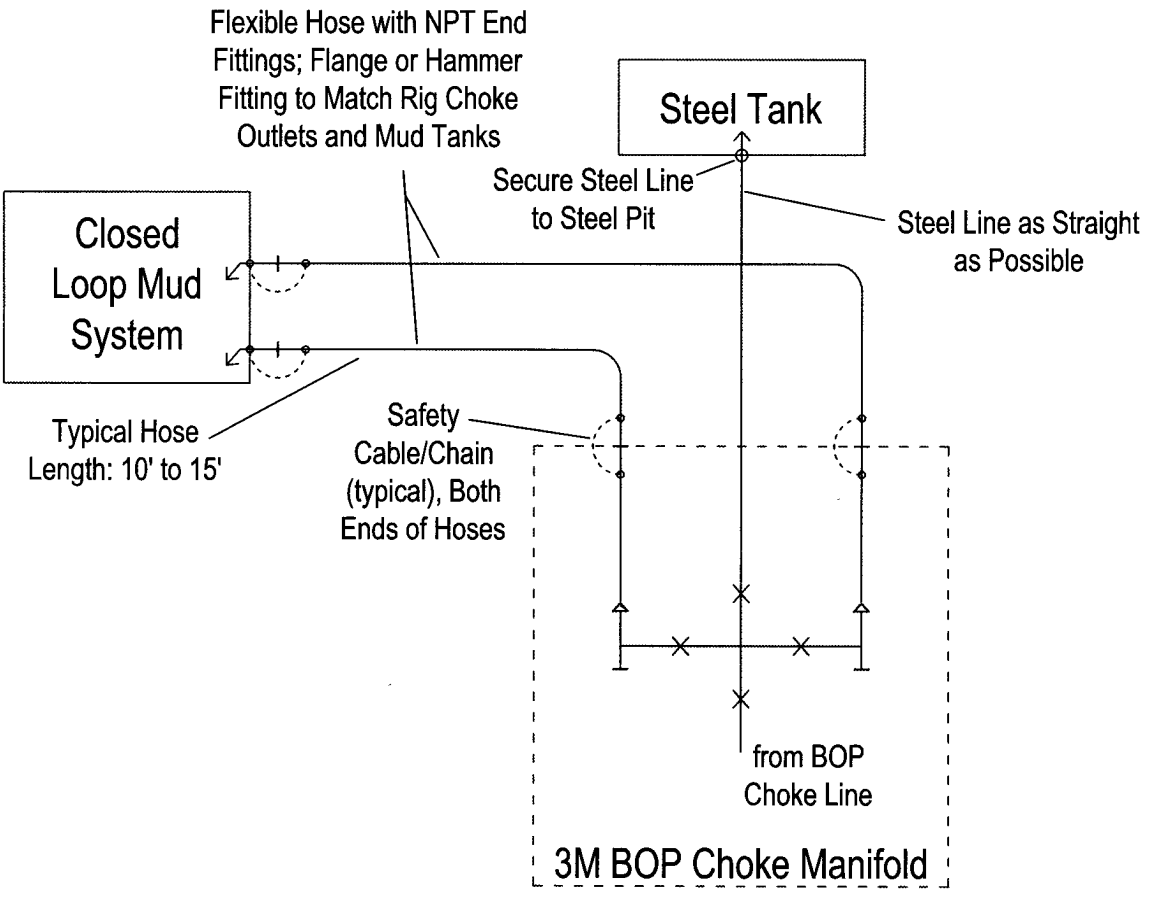
No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. The estimated maximum bottom hole pressure is 2,000 psi., estimated BHT is 115°F.
No H_2S is anticipated.

10. Anticipated Starting Date:

March 1st, 2009 or when drilling rig becomes available.

3000psi -
BOPE





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 # 106,
Lea County, NM

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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Apache Corp
LEASE NO.:	LC 065525
WELL NAME & NO.:	106 East Blinebry Drinkard Unit
SURFACE HOLE FOOTAGE:	50' FSL & 1650' FEL
BOTTOM HOLE FOOTAGE	' F L & ' F L
LOCATION:	Section 1, T. 21 S., R 37 E., NMPM
COUNTY:	Lea 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.

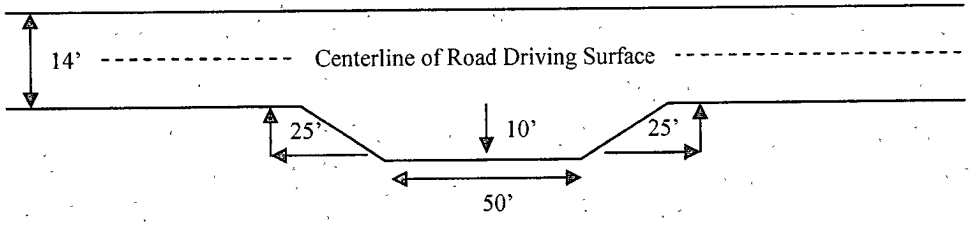
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

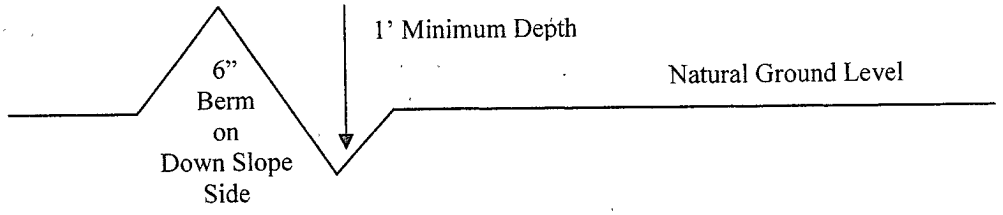
Standard Turnout – Plan View



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:

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

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.

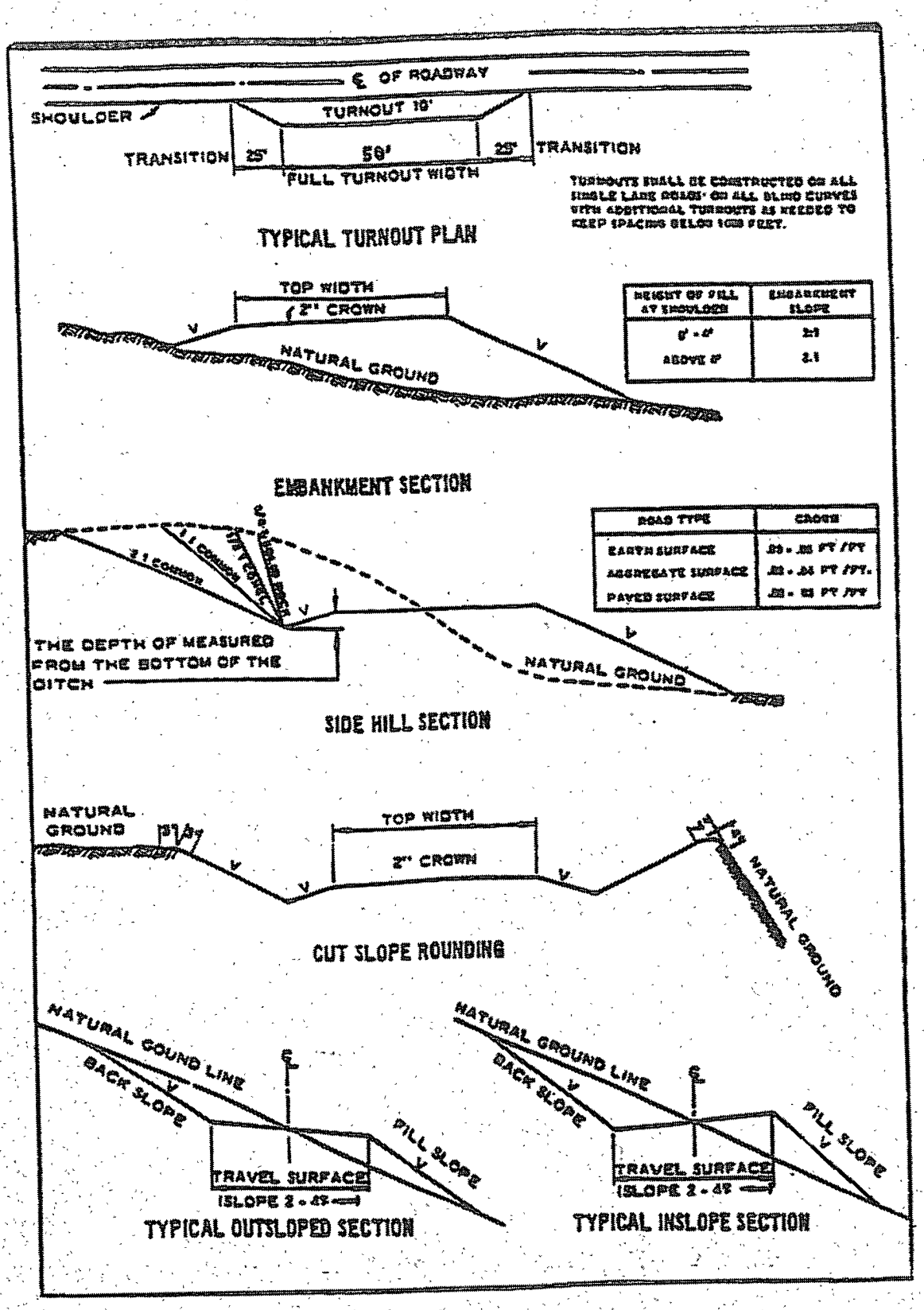
Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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.