ATS-08-478

OCD-HOBBS

Form 3160-3
(April 2004)

Split Estate

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NM-014812

6. If Indian, Allotee or Tribe Name

1a. Type of work: [X] DRILL [ ] REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

8. Lease Name and Well No. 30 2384
WERTA FEDERAL # 2

2. Name of Operator 873
APACHE CORPORATION
Lea County Controlled Water Basin
(LANA WILLIAMS 918-491-4980)

9. API Well No.
30-025- 39074

3a. Address TWO WARREN PLACE SUITE 1500
6120 SOUTH YALE, TULSA, OKLAHOMA 74136-4224

3b. Phone No. (include area code)
(PH-918-491-4980)

10. Field and Pool, or Exploratory
HOUSE - ABO 33210

4. Location of Well (Report location clearly and in accordance with any State requirements.*) O
At surface UNIT "O" 105' FSL & 2050' FEL SEC. 35 T19S-R38E
At proposed prod. zone UNIT "O" 990' FSL & 1650' FEL SEC. 35 T19S-R38E

11. Sec., T. R. M. or Blk. and Survey or Area
SECTION 35 T19S-R38E

14. Distance in miles and direction from nearest town or post office*
Approximately 8 miles South of Hobbs, New Mexico

12. County or Parish
LEA CO.

13. State
NEW MEXICO

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 105'

16. No. of acres in lease
1109

17. Spacing Unit dedicated to this well
40

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 300'

19. Proposed Depth
7300' TVD
7417 MD

20. BLM/BIA Bond No. on file
BLM-CO-1463 NATION WIDE

Elevations (Show whether DF, KDB, RT, GL, etc.)
3578' GL

22. Approximate date work will start*
WHEN APPROVED

23. Estimated duration
30 days

24. Attachments

e following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

Well plat certified by a registered surveyor.
A Drilling Plan.
A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer

Signature	Name (Printed/Typed)	Date
Joe T Janica	Joe T. Janica	04/14/08
Agent		

Approved by (Signature)	Name (Printed/Typed)	Date
/s/ James Stovall	/s/ James Stovall	JUL 22 2008
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

RECEIVED

18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

JUL 25 2008

HOBBS OCD

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

FORM APPROVED

APD

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

5. Lease Serial No.
NM-014812

6. If Indian, Allottee or Tribe Name
---

7. If Unit or CA/Agreement, Name and/or No.
---

1. Type of Well
[XX] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
WERTA FEDERAL # 2

2. Name of Operator
APACHE CORPORATION

9. API Well No.

3a. Address
6120 SOUTH YALE SUITE 1500
TULSA, OKLAHOMA 74136-4224

3b. Phone No. *(include area code)*
918-491-4980

10. Field and Pool, or Exploratory Area
HOUSE-ABO

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Surface: 105' FSL & 2050' FEL SECTION 35 T19S-R38E

BH Location 990' FSL & 1650' FEL SEC. 35 T19S-R38E

11. County or Parish, State
LEA CO. NEW MEXICO

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[XX] Notice of Intent	[ ] Acidize	[X] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
[ ] Subsequent Report	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Final Abandonment Notice	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[XX] Other Change test pressure on B.O.P.
	[ ] Change Plans	[ ] Plug and Abandon	[ ] Temporarily Abandon	
	[ ] Convert to Injection	[ ] Plug Back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

1. APACHE CORPORATION requests the approval to change the testing pressure on their B.O.P's from 3000PSI to 2000 PSI. The testing to be conducted by a third party.

Not Acceptable,
Well requires 3M.
per Wesley Ingram
6-28-08

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Joe T. Janica

Title Permit Engineer

Signature Joe T. Janica

Date 06/25/08

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice 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.	Office	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

SURFACE DAMAGE RELEASE

STATE OF NEW MEXICO §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF LEA §

THAT, KEVIN LOVE, whose address is 2412 SW Ave. E Seminole, TX 79360 (hereinafter referred to as "LESSEE"), is the current surface owner of the PRIVATELY OWNED lands herein described below which are located in the Lea County, New Mexico. For and in consideration of the sum of Seven Thousand Dollars and no/100 ($7000.00) of the Subject Well described below, to be paid by APACHE CORPORATION of 6120 Yale St. # Two Warren Place, Suite 1500,Tulsa Ok. 74136 (hereinafter referred to as "OPERATOR"), the receipt and sufficiency of which are hereby acknowledged, LESSEE does hereby RELEASE and DISCHARGE OPERATOR, its employees, agents, contractors, successors and assigns, from any and all claims, demands and causes of action for detriment, injuries, damages and losses of whatsoever nature that have been caused or will be caused to the surface of the Subject Property (provided that such future damages are of a typical nature caused by normal operations of the Subject Wells) in any way arising from, incident to or in connection with the drilling or operation of the following well (hereinafter called "Subject Well").

Werta Federal # 2
105' FSL & 2050' FEL
Section 35-T19S-R38E
Lea County New Mexico

Also listed below is the agreed upon damage rate schedule.

1. Flow Line:	$10.00 per rod
2. New road construction	$ 25.00 per rod
3. Power Line:	$12.00 per rod
4. Power Poles	Included in Power Line
5. Caliche (Price per yard if available)	$3.00 per yard
6. Injection line (Buried)	$20.00 per rod
7. Tank Battery pad not on wellsite	$.10 cents per square foot

It is understood that the consideration for this release does not cover damages for the laying of flowlines or powerlines over the Subject Property.

This Release is intended to cover all disruption of ranch operations due to surface disruption, including but not limited to, all crops, timber and grass damaged or destroyed in connection with the above described activities.

OPERATOR shall conduct all operations in a good and workman like manner and shall use all precautions to prevent any damages to said land over and above the damages contemplated herein. In the event that the well proves to be non-productive and has to be plugged and abandoned OPERATOR agrees to restore the surface as close as reasonably possible to its condition prior to commencement of drilling operations.

LESSEE agrees to account to any other party (including the surface tenant) who may be entitled to receive any portion of the aforementioned sum, and to indemnify and hold harmless OPERATOR, its successors and assigns from any claim by any other party for damages to the above described lands and improvements, crops or other things situated thereon. LESSEE agrees to keep all of the terms and conditions of this damage settlement confidential.

OWNER, FOR ITSELF, ITS SUCCESSORS, ASSIGNS, EMPLOYEES, AGENTS, PRINCIPLES, SERVANTS, HEIRS, EXECUTORS, PERSONAL REPRESENTATIVES

AND ADMINISTRATORS, HEREBY RELEASES AND FOREVER DISCHARGES APACHE AND ALL WORKING INTEREST OWNERS AND THEIR RESPECTIVE PARENT CORPORATIONS, SUBSIDIARY CORPORATIONS, ASSOCIATED AND AFFILIATED CORPORATIONS AND/OR ENTITIES, AND ALL OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, PRINCILPALS, SERVANTS, SUCCESSORS, ASSIGNS, HEIRS, ATTORNEYS, EXECUTORS AND ADMINISTRATORS FROM EVERY CLAIM, DAMAGE, ATTORNEYS FEES, EXPENSES, COSTS, DEMANDS, RIGHTS, AND/OR CAUSE OF ACTION OF ANY KIND FOR SURFACE DAMAGES RELATING TO THE DRILLING AND COMPLETION OF THE SUBJECT WELLS ON THE SUBJECT PROPERTY.

This agreement shall be binding upon the parties hereto and their respective heirs, successors and assigns.

AGREED TO AND ACCEPTED this 11th day of June, 2008

APACHE CORPORATION

By: Harold Stanier

KEVIN LOVE

State of New Mexico
Energy, Minerals and Natural Resources Department

DISTRICT I
625 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
30-025-39074	33210	HOUSE-ABO

Property Code	Property Name	Well Number
302384	WERTA FEDERAL	2

OGRID No.	Operator Name	Elevation
873	APACHE CORPORATION	3578'

Surface Location

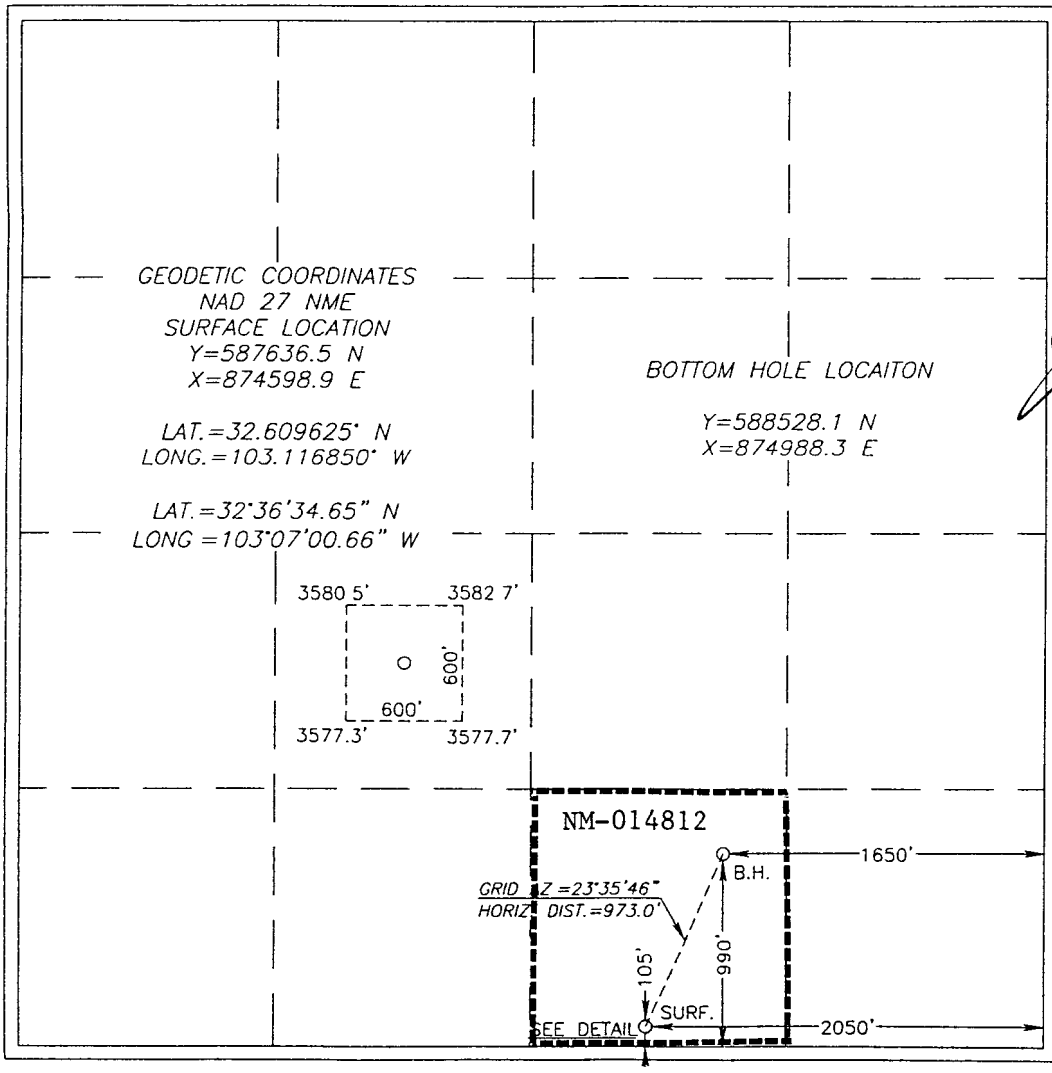
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	35	19-S	38-E		105	SOUTH	2050	EAST	LEA

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
O	35	19-S	38-E		990	SOUTH	1650	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

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

Joe T. Janica

Signature Date

Joe T. Janica 04/14/08

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
REGISTERED PROFESSIONAL SURVEYOR

DECEMBER 18, 2007

Date Surveyed AR

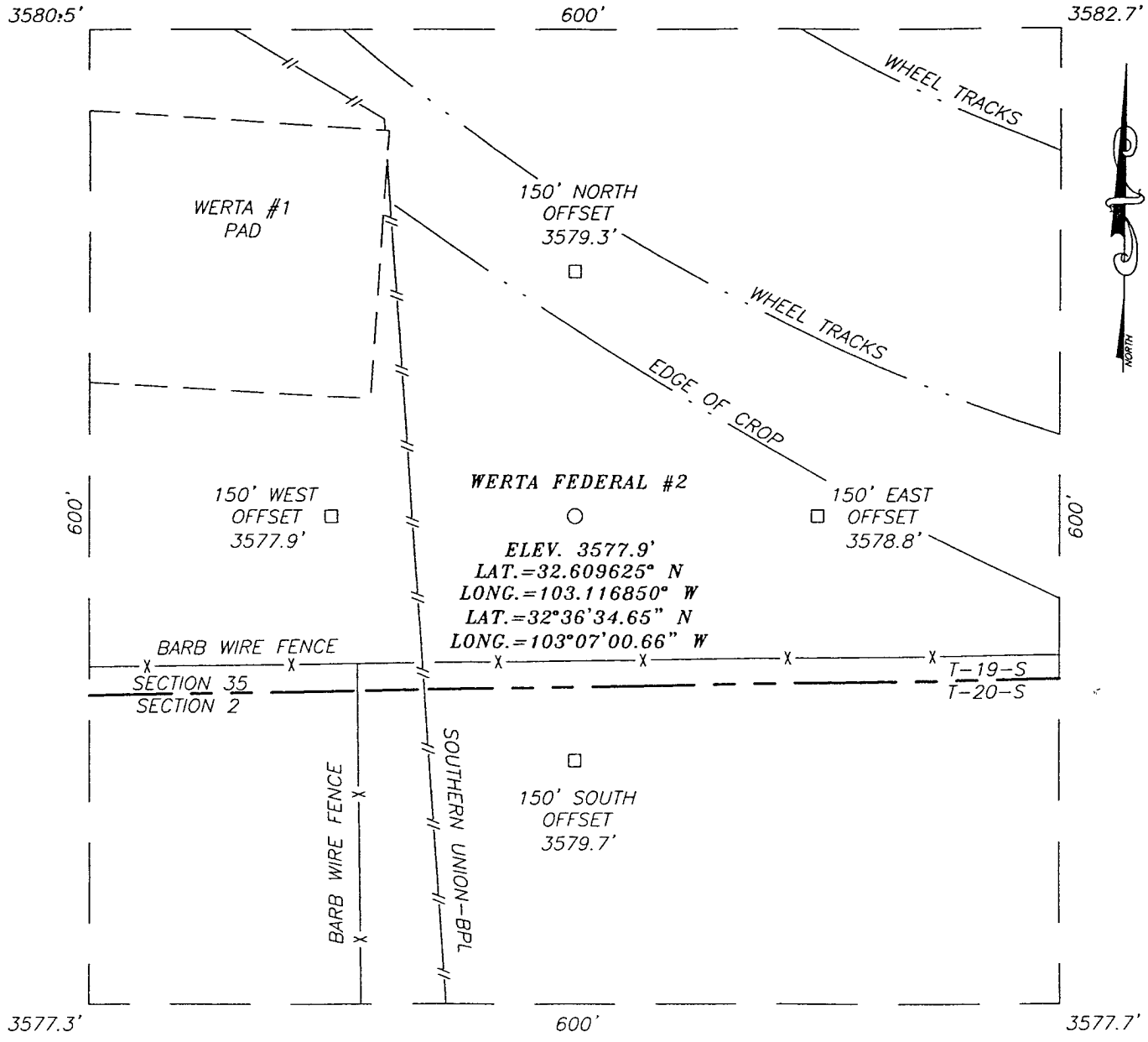
Signature & Seal of Professional Surveyor

Ronald J. Eidson 04/07/08

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

SECTION 35, TOWNSHIP 19 SOUTH, RANGE 38 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #18 AND CO. RD. #H56 (TIPTON RD.), GO EAST ON CO. RD. #H56 APPROX. 0.5 MILES. TURN LEFT AND GO NORTHEAST APPROX. 0.1 MILE ON CALICHE ROAD TO EXISTING WERTA #1 WELL. THIS LOCATION IS APPROX. 400 FEET SOUTHEAST.

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

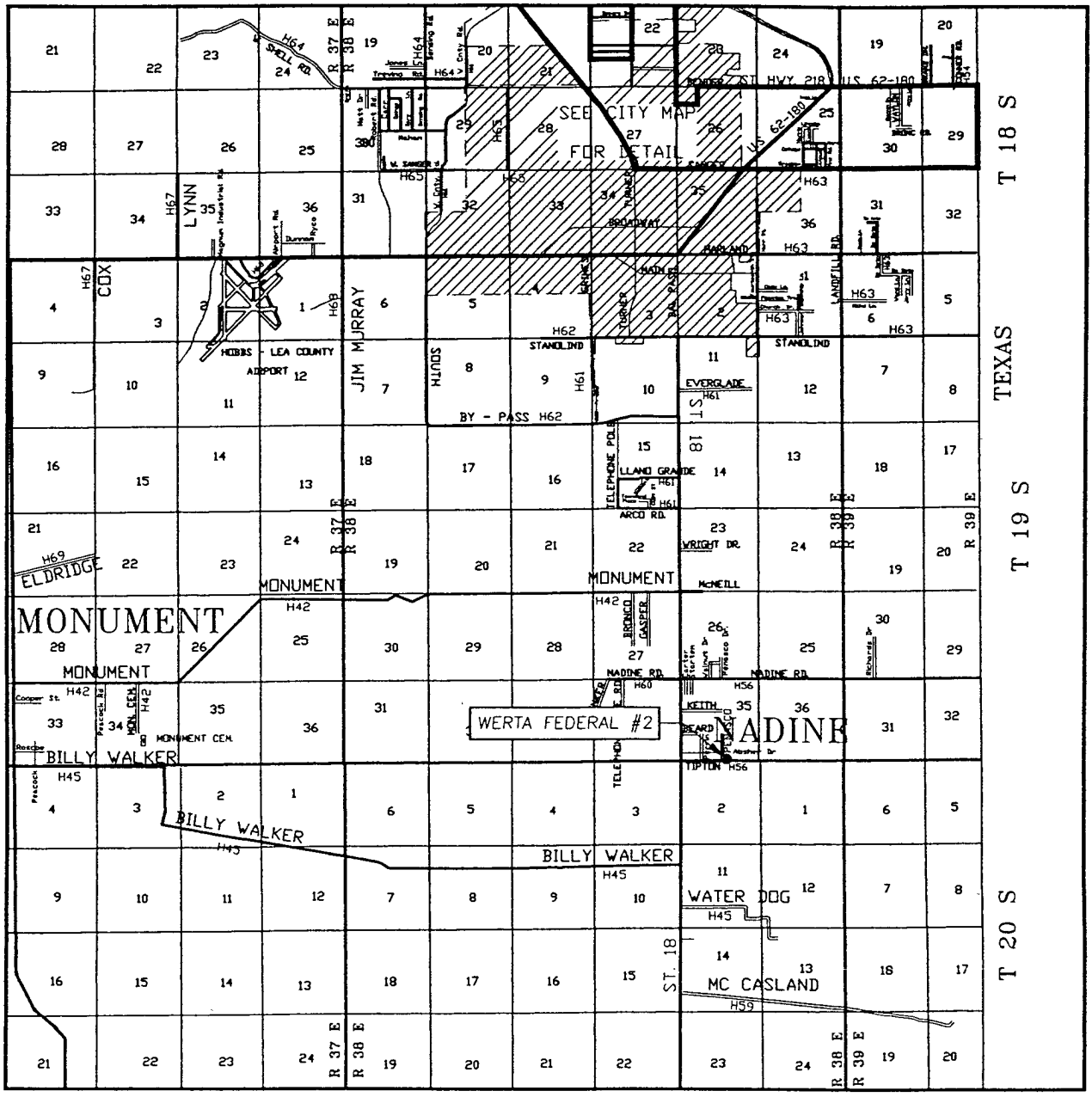
(505) 393-3117

APACHE CORPORATION

WERTA FEDERAL #2 WELL
LOCATED 105 FEET FROM THE SOUTH LINE
AND 2050 FEET FROM THE EAST LINE OF SECTION 35,
TOWNSHIP 19 SOUTH, RANGE 38 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 12/18/07	Sheet 1 of 1 Sheets		
W.O. Number: 07.11.1879	Dr By: AR		Rev 1: N/A
Date: 01/04/07	Disk:	07111879	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 35 TWP. 19-S RGE. 38-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 105' FSL & 2050' FEL

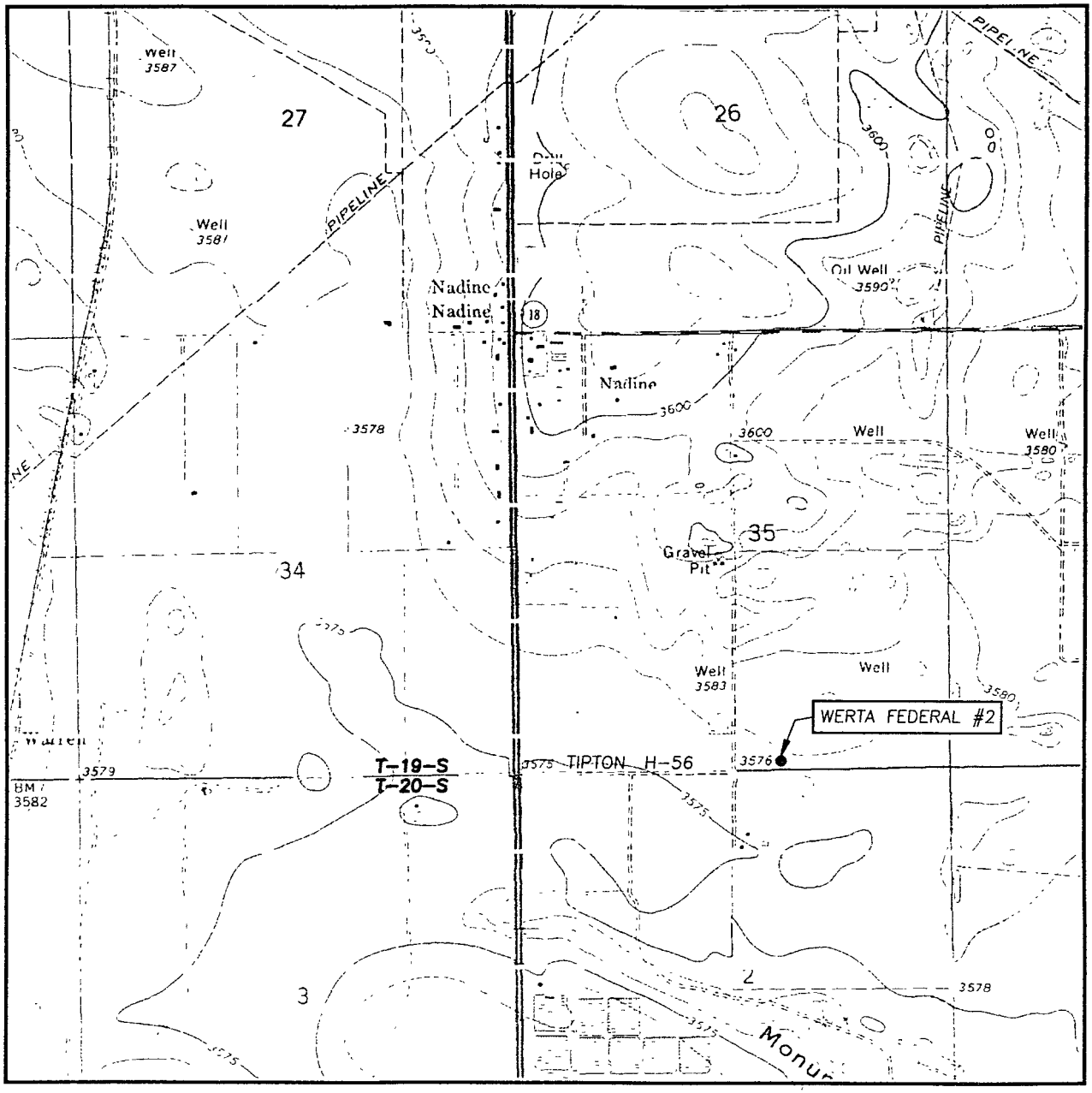
ELEVATION 3578'

OPERATOR APACHE CORPORATION

LEASE WERTA FEDERAL

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 SW, N.M. – 5'
HOBBS SE, N.M. – 5'
HOBBS WEST, N.M. – 5'
HOBBS EAST, N.M. – 5'

SEC. 35 TWP. 19-S RGE. 38-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 105' FSL & 2050' FEL

ELEVATION 3578'

OPERATOR APACHE CORPORATION

LEASE WERTA FEDERAL

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

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

APPLICATION TO DRILL

APACHE CORPORATION
WERTA FEDERAL #2
UNIT "O" SECTION 35
T19S-R38E LEA CO. NM

In response to questions asked under Section II of Bulliten NTL-6, the following information on the above will be provided.

1. LOCATION: 105' FSL & 2050' FEL SECTION 35 T19S-R38E LEA CO. NM

2. ELEVATION ABOVE SEA LEVEL: 3578' GL.

3. GEOLOGICAL NAME OF SURFACE FORMATION: Quaternery Aeolian Deposits.

4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.

5. PROPOSED DRILLING DEPTH: 7300'

6. ESTIMATED TOPS OF GEOLOGICAL FORMATIONS:

Rustler Anhydrite	1588'	Glorietta	5588'
Yates	2898'	Blinebry	6036'
Seven Rivers	3118'	Tubb	6558'
Queen	3688'	Drinkard	6903'
San Andres	4318'	Abo	7146'
		TD	7300'

7. POSSIBLE MINERAL BEARING FORMATIONS:

Blinebry	Oil	Drinkard	Oil
Tubb	Oil	Abo	Oil

8. CASING PROGRAM:

HOLE SIZE	INTERVAL	OD OF CASING	WEIGHT	THREAD	COLLAR	GRADE	CONDITION
26"	0-40	20"	NA	NA	NA	CONDUCTOR	New
12¼"	0-1600'	8 5/8"	24#	8-R	ST&C	J-55	New
7 7/8"	0-7300'	5½"	17#	8-R	LT&C	L-80 J-55	New

Casing design factors: Collapse 1.125 Burst 1.1 Body yield 1.5 Joint strength
8-R 1.8
Buttress 1.6

Attached drilling program gives more detail

APPLICATION TO DRILL

APACHE CORPORATION
WERTA FEDERAL #2
UNIT "O" SECTION 35
T19S-R38E LEA CO. NM

9. CASING SETTING DEPTHS AND CEMENTING:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
8 5/8"	Surface	Run and set 1600' of 8 5/8" 24# J-55 ST&C casing. Cement with 600 Sx. of 35/65 Class "C" POZ + 6% Bentonite, + 2% CaCl, + .25# Flocele/Sx. Yield 1.8, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + .125# Flocele/Sx.Yield 1.3, circulate cement to surface.
5½"	Production	Run and set 7300' of 5½" casing as follows: 6300' of 5½" 17# J-55 LT&C, 1000' of 5½" 17# L-80 LT&C casing. Cement with 750 Sx. of 50/50 Class "C" POZ (Fly Ash) + 5% NaCl, + .125#/Sx celoflakes, + .5% FL-52A, + 10% Bentoniteyield 2.4, tail in with 400 Sx. of 50/50 Class "C" POZ (Fly Ash) + 5% NaCl, + .6% FL-25, yield 1.0 . Circulate cement to surface.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 series 3000 PSI working pressure B.O.P.. Consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams, This B. O. P. will be nippled up on the 8 5/8" surface casing and tested to API specifications by a third party before drilling out from under the surface casing. The B. O. P. will be operated at least once in each 24 hour period and the blind rams will be operated when the drill pipe is out of the hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. Exhibit "E" also shows a 3" 3000 PSI choke manifold with dual adjustiable chokes with a 3" blow down line. No abnormal pressures or abnormal temperatures are expected while drilling this well.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE SYSTEM
40-1600'	8.6-9.2	28-34	NC	Fresh water Spud mud add paper to control seepage, use high viscoaity sweeps to clean hole.
1600-6700'	10.0-10.2	28-32	NC	Brine water use paper to control seepage, Lime to control pH use high viscosity sweeps to clean hole.
6700-TD	10.0-10.2	36-42	8-10 cc or less	Same as above with the change to control pH use Caustic Soda, use starch to control water loss and use high viscosity sweeps to clean hole.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run logs, DST's and casing water loss/viscosity may have to be altered or adjusted in order to meet these needs.

APPLICATION TO DRILL

APACHE CORPORATION
WERTA FEDERAL #2
UNIT "O" SECTION 35
T19S-R38E LEA CO., NM

12. LOGGING, CORING, AND TESTING PROGRAM:

A. Open hole logs: Dual Laterolog, CNL, LDT, MSFL, Sonic, Gamma Ray, Caliper from TD back to 8 5/8" casing shoe.

B. Cased hole: CNL, Gamma Ray from 8 5/8" casing shoe back to surface.

C. Mud logger on hole at 2800' to TD

D. No DST's or cores are planned at this time.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H^2S in this area. If H^2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 2200 PSI, and Estimated BHT 120°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 12± days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Abo-Drinkard formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an oil well.

WERTA FEDERAL # 2

DRILLING PROGRAM

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

Formatted: Bullets and Numbering

Estimated Tops of Geological Markers:

FORMATION	DEPTH
Quaternary alluvials	Surface
Rustler	1588'
Yates	2898'
Seven Rivers	3118'
Queen	3688'
San Andres	4318'
Glorieta	5588'
Blinebry	6036'
Tubb	6558'
Drinkard	6903'
Abo	7146'
TD	7300'

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

SUBSTANCE	DEPTH
Oil	Blinebry @ 6036' Tubb @ 6558' Drinkard @ 6903' Abo @ 7146
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.

Proposed Casing Program:

HOLE SIZE	CASING SIZE OD / ID	GRADE	WEIGHT PER FOOT	DEPTH	SACKS CEMENT	ESTIMATED TOC - REMARKS
12 ¼"	8 5/8" 8.097"	J55 STC	24#	1600'	800	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#	1,000'	1,150	TOC – Surface Float Collar set @ 6855"/ 10.10 ppg Brine Mud; 141 ° F Est. Static Temp; 117 ° F Est. Circ. Temp.
	5 ½" 4.892"	J55 LTC	17#	1,000' – 7,300'		

Proposed Cement Program:

CASING	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
8 5/8"	600 sacks 35:65 Poz:Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 6% bwoc Bentonite gel 1,222 Vol. Cu Ft 1.8 Vol. Factor Slurry Weight (ppg) 12.7 Slurry Yield (cf/sack) 1.88 Amount of Mix Water (gps) 10.7; Estimated Pumping Time – 70 BC (HH:MM)-5:00;	200 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water 270 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)-3:15;	99.4 bbls Fresh Water @ 8.33 ppg

8 5/8" Casing: Volume Calculations:

1,600 ft	x	0.4127 cf/ft	with	100% excess	=	1320.6 cf
40 ft	x	0.3576 cf/ft	with	0% excess	=	14.3 cf (inside pipe)
		TOTAL SLURRY VOLUME			=	1334.9 cf
					=	237.7 bbls

Spacer 20.0 bbls Water @ 8.33 ppg

CASING	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
5 ½"	750 sacks (50:50) Poz (Fly Ash): Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.5% bwoc FL-52A + 10% bwoc Bentonite 1,905 Vol. Cu Ft 2.4 Vol. Factor Slurry Weight (ppg) 11.8 Slurry Yield (cf/sack) 2.45 Amount of Mix Water (gps) 14.07; Estimated Pumping Time – 70 BC (HH:MM)-4:30;	400 sacks (50:50) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride +0.6% bwoc FL-25 + 2% bwoc Bentonite 540 Vol. Cu Ft 1. Vol. Factor Slurry Weight (ppg) 14.2 Slurry Yield (cf/sack) 1.35 Amount of Mix Water (gps) 5.91; Estimated Pumping Time – 70 BC (HH:MM)-4:00;	168.7 bbls 2% Kcl Water @ 8.43 ppg

5 ½" Casing: Volume Calculations:

1600 ft	x	0.1926 cf/ft	with	0% excess	=	308.2 cf
3988 ft	x	0.1733 cf/ft	with	120% excess	=	1,519.3 cf
1712 ft	x	0.1733 cf/ft	with	80% excess	=	533.6 cf
40 ft	x	0.1305 cf/ft	with	0% excess	=	5.2 cf(inside pipe)
		TOTAL SLURRY VOLUME			=	2,366.3 cf
					=	421.4 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.

Proposed Mud Program

DEPTH	MUD PROPERTIES	REMARKS
0 – 1,600'	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.
1600' – 6700'	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
6700' – TD	Weight: 10.0 – 10.2 ppg Viscosity: 36 – 42 sec/qt pH: 9.5 -10 Filtrate: 8-10 cm/30 min	From 6700' 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'.

Proposed Control Equipment:

Will install on the 8 5/8" surface casing a 9" x 3000 psi WP Double Ram BOP and will test using a 3rd party tester before drilling out of surface casing.

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

Logging Program:

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The following logs may be run:
CNL, LDT, GR, CAL, DLL, MSFL, NGT, Sonic from TD-1300'
CNL, GR from TD-Surface

Mudlogging Program:

It is planned to utilize a mud logger taking samples from 2,800' to TD.

Formatted: Bullets and Numbering

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 2,200 psi.

Bottom Hole Pressure Calculations
Since January 1, 2003, Apache has drilled more than 120 Blinebry, Tubb, Drinkard wells in the Eunice Area. Data gained from those wells have demonstrated that:

1. The environment of deposition of the reservoir carbonate facies was extremely variable. Compartmentalized reservoirs are expected. Every wellbore will contain some pay zones that are at, or near, original pressure and some that are drawn down to various extents.
2. Pressures obtained from wireline tests conducted in wells drilled in 2003 and 2004 were not as expected. Pay zones expected to be drawn down often were not and those expected to be at original pressure often were not.
3. Continuity of pay zones determined from log analysis and correlation of those pay zones is much less than 50%.

Apache estimated bottom hole pressure by multiplying the median depth of perforations in the Blinebry, Tubb, and Drinkard by 0.44, then subtracting a few hundred pounds based upon number of and cumulative production from nearby offsets.

For example:

Hawk B-1 #61

Expected median depth of perforations:	6150*0.44=2706
Reduction due to offset production:	500
Expected bottom hole pressure:	2200

Hydrogen Sulfide Drilling Operations Plan

No H_2S is anticipated.

Surface Location

SE ¼ of Section 35, Township 19 South, Range 38 East, N.M.P.M.
Lea County, New Mexico
105' FSL, 2050' FEL, Unit O

Bottom Hole Location

SE ¼ of Section 35, Township 19 South, Range 38 East, N.M.P.M.
Lea County, New Mexico
990' FSL, 1650' FEL, Unit O

Directional Drilling Plan

The well will be directionally drilled for a total lateral displacement from surface location to bottom hole location of 973' in a NNE direction. The directional drilling plan is to kick off at approximately 1,700' TVD, building angle at a rate of 3°/100' to an angle of 14°. This angle will be maintained to a TVD of 5,600' at which time the angle will be dropped to vertical at a rate of 3°/100'. The well will be drilled approximately vertically from a TVD of 6,100' to a TVD of 7,300' (approx. 7,416' TMD).

Leases Issued: NM-14812

Operating Rights:

Apache Corporation	33.33%

Acres in Lease:

Township 19 South, Range 38 East, NMPM

SEC	21	W2;
SEC	22	SWSW;
SEC	27	W2NW;
SEC	34	E2SE;
SEC	35	SE;

Apache Corporation

Lea County, NM (NAD27 NME)
Werta Federal #2
Werta Federal #2
OH

Plan: Plan #2 - 7 7/8" Hole

Standard Planning Report

09 June, 2008

Scientific Drilling
Directional Drilling Operations

Database:	EDM 2003 16 Single User Db	**Local Co-ordinate Reference:**	Well Werta Federal #2
Company:	Apache Corporation	**TVD Reference:**	Ground Elev @ 3578 00ft (Rig #8)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	Ground Elev @ 3578.00ft (Rig #8)
Site:	Werta Federal #2	**North Reference:**	Grid
Well:	Werta Federal #2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7 7/8" Hole		

Project Lea County, NM (NAD27 NME)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Werta Federal #2

Site Position:		**Northing:**	587,636 500 ft	**Latitude:**	32° 36' 34 651 N
From:	Map	**Easting:**	874,598 900 ft	**Longitude:**	103° 7' 0 661 W
Position Uncertainty:	0 00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.66 °

Well Werta Federal #2

Well Position	**+N/-S**	0 00 ft	**Northing:**	587,636 500 ft	**Latitude:**	32° 36' 34 651 N
	+E/-W	0 00 ft	**Easting:**	874,598 900 ft	**Longitude:**	103° 7' 0 661 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,578 00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/9/2008	7 75	60 71	49,226

Design Plan #2 - 7 7/8" Hole

Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0 00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0.00	0 00	23 59

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
1,700 00	0 00	0 00	1,700 00	0 00	0 00	0 00	0 00	0.00	0 00	
2,176.13	14 28	23 59	2,171 22	54 11	23 63	3 00	3 00	0.00	23 59	
5,640 81	14 28	23 59	5,528 78	837 49	365 77	0.00	0 00	0.00	0 00	
6,116 95	0 00	0 00	6,000 00	891.60	389 40	3 00	-3 00	0 00	180 00	
7,416 95	0 00	0 00	7,300 00	891 60	389 40	0 00	0 00	0.00	0 00	PBHL-Werta Federal

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Werta Federal #2
Company:	Apache Corporation	**TVD Reference:**	Ground Elev @ 3578 00ft (Rig #8)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	Ground Elev @ 3578.00ft (Rig #8)
Site:	Werta Federal #2	**North Reference:**	Grid
Well:	Werta Federal #2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7 7/8" Hole		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0.00
1,700.00	0 00	0.00	1,700 00	0 00	0 00	0.00	0 00	0 00	0 00
KOP Start Build 3.00°/100'									
1,800 00	3 00	23 59	1,799.95	2 40	1 05	2.62	3 00	3 00	0 00
1,900 00	6 00	23 59	1,899.63	9 59	4 19	10 46	3 00	3 00	0 00
2,000 00	9 00	23 59	1,998 77	21 55	9.41	23 51	3 00	3 00	0 00
2,100 00	12 00	23 59	2,097 08	38 25	16 70	41 74	3 00	3 00	0.00
2,176 13	14 28	23 59	2,171 22	54 11	23 63	59 04	3 00	3 00	0 00
EOC hold 14.28°									
2,200 00	14 28	23 59	2,194 35	59 50	25 99	64.93	0 00	0.00	0 00
2,300 00	14 28	23 59	2,291 25	82 12	35 86	89 61	0 00	0 00	0 00
2,400 00	14 28	23 59	2,388 16	104 73	45 74	114 28	0 00	0 00	0 00
2,500 00	14.28	23 59	2,485 07	127 34	55 61	138 95	0.00	0.00	0 00
2,600 00	14 28	23 59	2,581 98	149 95	65.49	163 62	0.00	0.00	0 00
2,700 00	14 28	23.59	2,678 89	172 56	75.36	188 30	0 00	0 00	0.00
2,800 00	14 28	23 59	2,775.80	195.17	85.24	212.97	0.00	0 00	0.00
2,900 00	14 28	23 59	2,872 70	217.78	95 11	237.64	0 00	0.00	0 00
3,000 00	14 28	23 59	2,969 61	240 39	104 99	262 32	0.00	0 00	0 00
3,100 00	14 28	23 59	3,066 52	263.00	114 86	286 99	0 00	0 00	0 00
3,200 00	14 28	23 59	3,163 43	285 61	124 74	311 66	0 00	0 00	0 00
3,300 00	14 28	23 59	3,260 34	308 22	134 61	336 33	0.00	0 00	0 00
3,400 00	14 28	23 59	3,357 25	330 83	144 49	361 01	0 00	0 00	0 00
3,500 00	14 28	23 59	3,454 16	353 44	154 36	385 68	0 00	0 00	0.00
3,600 00	14.28	23.59	3,551 06	376 05	164 24	410.35	0.00	0 00	0 00
3,700.00	14 28	23.59	3,647 97	398 66	174 11	435 03	0 00	0 00	0 00
3,800 00	14 28	23 59	3,744 88	421 27	183.99	459.70	0 00	0 00	0 00
3,900 00	14 28	23.59	3,841 79	443 88	193 86	484 37	0.00	0 00	0 00
4,000 00	14 28	23 59	3,938 70	466 49	203.74	509 04	0 00	0 00	0 00
4,100 00	14 28	23.59	4,035 61	489 11	213.61	533.72	0.00	0.00	0.00
4,200 00	14 28	23 59	4,132 51	511 72	223 49	558 39	0 00	0 00	0 00
4,300.00	14 28	23 59	4,229 42	534 33	233 36	583 06	0 00	0 00	0 00
4,400 00	14 28	23 59	4,326 33	556 94	243 24	607 74	0 00	0 00	0.00
4,500 00	14 28	23 59	4,423 24	579 55	253 11	632 41	0 00	0 00	0 00
4,600 00	14 28	23.59	4,520 15	602 16	262 99	657 08	0 00	0 00	0 00
4,700 00	14 28	23 59	4,617 06	624.77	272 86	681.76	0 00	0 00	0 00
4,800 00	14 28	23 59	4,713 97	647.38	282 74	706 43	0 00	0 00	0 00
4,900 00	14 28	23.59	4,810.87	669 99	292.61	731.10	0 00	0.00	0 00
5,000.00	14 28	23 59	4,907 78	692 60	302 49	755 77	0 00	0 00	0 00
5,100 00	14 28	23 59	5,004.69	715.21	312.36	780 45	0 00	0 00	0 00
5,200 00	14 28	23.59	5,101.60	737 82	322 24	805 12	0 00	0 00	0 00
5,300 00	14 28	23 59	5,198.51	760.43	332.11	829 79	0 00	0.00	0 00
5,400 00	14 28	23 59	5,295 42	783 04	341 99	854 47	0 00	0 00	0 00
5,500.00	14 28	23 59	5,392 32	805 65	351 86	879 14	0 00	0 00	0 00
5,600 00	14 28	23 59	5,489 23	828 26	361 74	903 81	0 00	0 00	0 00
5,640 81	14 28	23 59	5,528 78	837 49	365 77	913 88	0 00	0 00	0 00
Start Drop 3.00°/100'									
5,700 00	12 51	23 59	5,586 36	850 06	371 26	927 59	3 00	-3 00	0 00
5,800 00	9 51	23 59	5,684 51	867 55	378 90	946 69	3 00	-3 00	0 00
5,900 00	6 51	23 59	5,783 52	880.32	384 47	960 62	3 00	-3.00	0 00
6,000 00	3 51	23 59	5,883 13	888 32	387 97	969 35	3 00	-3 00	0 00
6,100 00	0 51	23 59	5,983 05	891 53	389 37	972 85	3 00	-3 00	0 00
6,116 95	0.00	0.00	6,000.00	891 60	389 40	972 92	3 00	-3.00	-139 23
EOC hold 0.00° - PP-Werta Federal #2									

Database:	EDM 2003 16 Single User Db	**Local Co-ordinate Reference:**	Well Werta Federal #2
Company:	Apache Corporation	**TVD Reference:**	Ground Elev @ 3578 00ft (Rig #8)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	Ground Elev @ 3578.00ft (Rig #8)
Site:	Werta Federal #2	**North Reference:**	Grid
Well:	Werta Federal #2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7 7/8" Hole		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,416 95	0 00	0 00	7,300 00	891.60	389 40	972 92	0 00	0 00	0 00
PBHL-Werta Federal #2									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PP-Werta Federal #2 - plan hits target - Point	0 00	0 00	6,000.00	891 60	389 40	588,528.100	874,988 300	32° 36' 43 428 N	103° 6' 55 990 W
PBHL-Werta Federal #2 - plan hits target - Circle (radius 25 00)	0 00	0 00	7,300 00	891 60	389 40	588,528 100	874,988 300	32° 36' 43 428 N	103° 6' 55.990 W

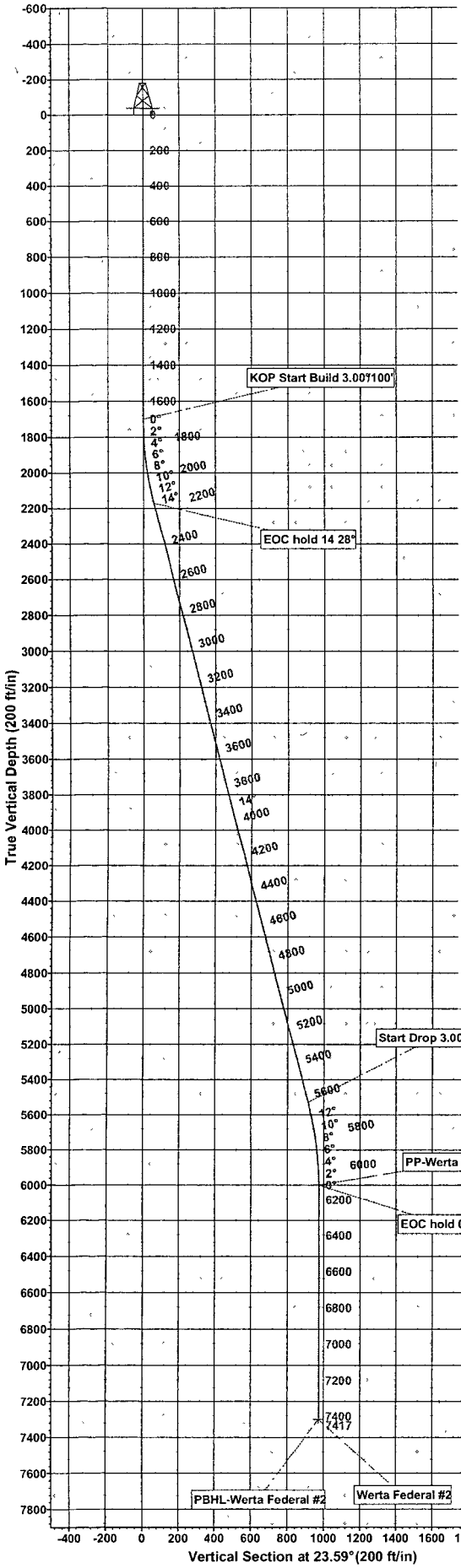
Plan Annotations

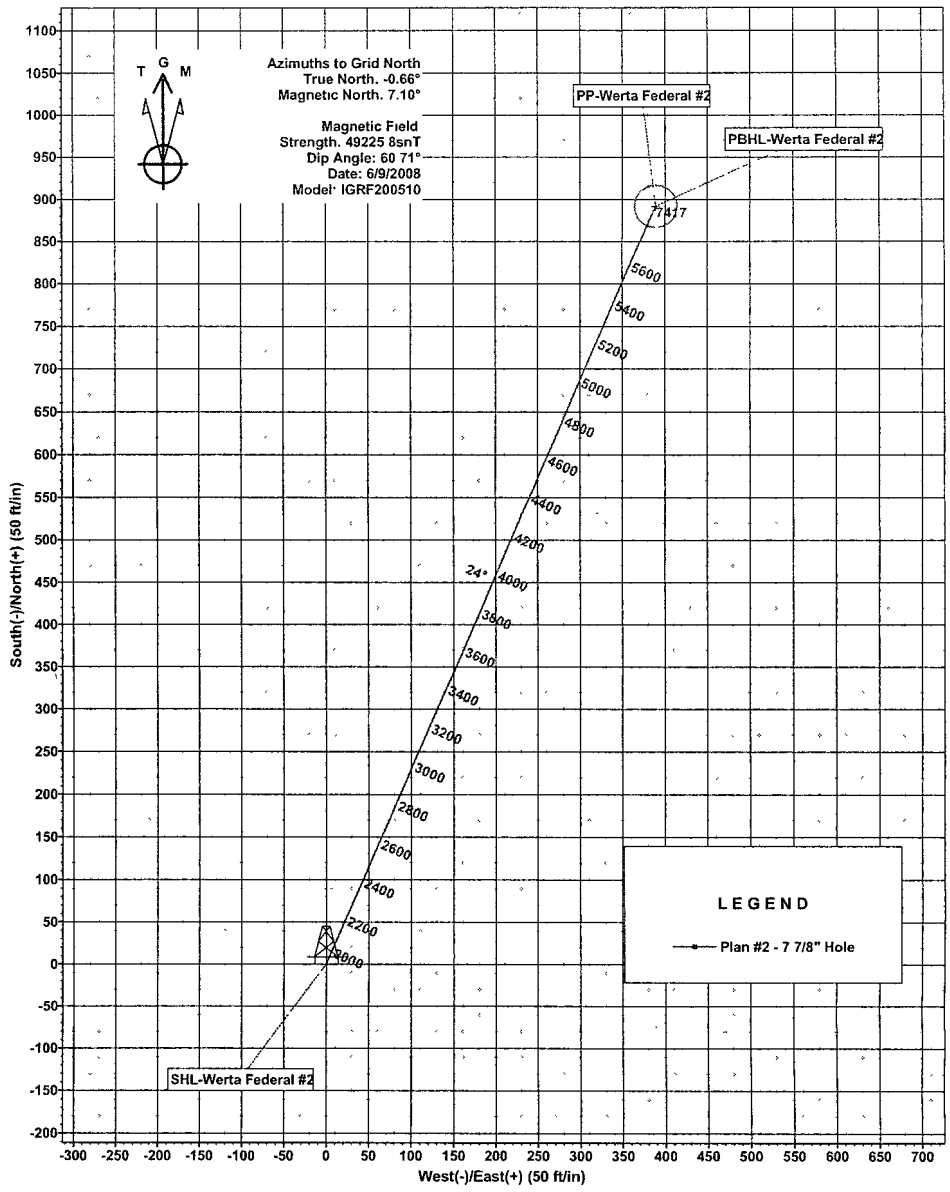
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
1,700 00	1,700.00	0 00	0.00	KOP Start Build 3.00°/100'
2,176 13	2,171.22	54 11	23 63	EOC hold 14 28°
5,640 81	5,528 78	837 49	365 77	Start Drop 3 00°/100'
6,116 95	6,000 00	891.60	389.40	EOC hold 0 00°

Apache Corporation

Scientific Drilling for Apache Corporation
Site: Lea County, NM (NAD27 NME)
Well: Werta Federal #2
Wellbore: OH
Design: Plan #2 - 7 7/8" Hole

Scientific Drilling
Directional Drilling Operations





AZIMUTH CORRECTIONS
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 7.10°
To convert a True Direction to a Grid Direction, Subtract 0.66°

WELL DETAILS: Werta Federal #2

Ground Level: 3578.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	587636.500	874598.900	32°36' 34.651 N	103°7' 0.661 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00	
3	2176.13	14.28	23.59	2171.22	54.11	23.63	3.00	23.59	59.04	
4	5640.81	14.28	23.59	5528.78	837.49	365.77	0.00	0.00	913.88	
5	6116.95	0.00	0.00	6000.00	891.60	389.40	3.00	180.00	972.92	
6	7416.95	0.00	0 00	7300.00	891.60	389.40	0.00	0.00	972.92	PBHL-Werta Federal #2

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PP-Werta Federal #2	6000.00	891.60	389.40	588528.100	874988.300	Point
PBHL-Werta Federal #2	7300.00	891.60	389.40	588528.100	874988.300	Circle (Radius: 25.00)

PROJECT DETAILS Lea County, NM (NAD27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

Plan: Plan #2 - 7 7/8" Hole (Werta Federal #2/OH)

Created By: Julio Pina Date: 09-Jun-08
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date _____

Apache Corporation
Werta Federal #2 - Plan #2 - 7 7/8" Hole

Lea County, NM (NAD27 NME)
Werta Federal #2
Your Ref:

Measured Depth (ft)	Incl.	Azim.	Sub-Sea Vertical Depth (ft)	Vertical Dogleg Depth Rate (°/100ft)	Local Coordinates Northings (ft)	Local Coordinates Eastings (ft)	UTM Coordinates Northings (ft)	UTM Coordinates Eastings (ft)
0.00	0.00	0.00	-3578.00	0.00	0.00 N	0.00 E	587636.500 N	874598.900 E
1700.00	0.00	0.00	-1878.00	1700.00	0.00 N	0.00 E	587636.500 N	874598.900 E
KOP Start Build 3.00°/100' - Keeper (1)								
1800.00	3.00	23.59	-1778.05	1799.95	2.40 N	1.05 E	587638.899 N	874599.948 E
1900.00	6.00	23.59	-1678.37	1899.63	9.59 N	4.19 E	587646.088 N	874603.087 E
MWD (2)								
2000.00	9.00	23.59	-1579.23	1998.77	21.55 N	9.41 E	587658.048 N	874608.311 E
2100.00	12.00	23.59	-1480.92	2097.08	38.25 N	16.70 E	587674.746 N	874615.604 E
2176.13	14.28	23.59	-1406.78	2171.22	54.11 N	23.63 E	587690.609 N	874622.532 E
EOC hold 14.28°								
2200.00	14.28	23.59	-1383.65	2194.35	59.50 N	25.99 E	587696.005 N	874624.888 E
2300.00	14.28	23.59	-1286.75	2291.25	82.12 N	35.86 E	587718.615 N	874634.763 E
2400.00	14.28	23.59	-1189.84	2388.16	104.73 N	45.74 E	587741.226 N	874644.638 E
2500.00	14.28	23.59	-1092.93	2485.07	127.34 N	55.61 E	587763.837 N	874654.513 E
2600.00	14.28	23.59	-996.02	2581.98	149.95 N	65.49 E	587786.447 N	874664.388 E
2700.00	14.28	23.59	-899.11	2678.89	172.56 N	75.36 E	587809.058 N	874674.263 E
2800.00	14.28	23.59	-802.20	2775.80	195.17 N	85.24 E	587831.668 N	874684.138 E
2900.00	14.28	23.59	-705.30	2872.70	217.78 N	95.11 E	587854.279 N	874694.013 E
3000.00	14.28	23.59	-608.39	2969.61	240.39 N	104.99 E	587876.889 N	874703.888 E
3100.00	14.28	23.59	-511.48	3066.52	263.00 N	114.86 E	587899.500 N	874713.763 E
3200.00	14.28	23.59	-414.57	3163.43	285.61 N	124.74 E	587922.110 N	874723.638 E
3300.00	14.28	23.59	-317.66	3260.34	308.22 N	134.61 E	587944.721 N	874733.513 E
3400.00	14.28	23.59	-220.75	3357.25	330.83 N	144.49 E	587967.331 N	874743.388 E
3500.00	14.28	23.59	-123.84	3454.16	353.44 N	154.36 E	587989.942 N	874753.263 E
3600.00	14.28	23.59	-26.94	3551.06	376.05 N	164.24 E	588012.553 N	874763.138 E
3700.00	14.28	23.59	69.97	3647.97	398.66 N	174.11 E	588035.163 N	874773.013 E

3800.00	14.28	23.59	166.88	3744.88	421.27 N	183.99 E
588057.774 N	874782.888 E		459.70	0.00		
3900.00	14.28	23.59	263.79	3841.79	443.88 N	193.86 E
588080.384 N	874792.763 E		484.37	0.00		
4000.00	14.28	23.59	360.70	3938.70	466.49 N	203.74 E
588102.995 N	874802.638 E		509.04	0.00		
4100.00	14.28	23.59	457.61	4035.61	489.11 N	213.61 E
588125.605 N	874812.513 E		533.72	0.00		
4200.00	14.28	23.59	554.51	4132.51	511.72 N	223.49 E
588148.216 N	874822.388 E		558.39	0.00		
4300.00	14.28	23.59	651.42	4229.42	534.33 N	233.36 E
588170.826 N	874832.263 E		583.06	0.00		
4400.00	14.28	23.59	748.33	4326.33	556.94 N	243.24 E
588193.437 N	874842.138 E		607.74	0.00		
4500.00	14.28	23.59	845.24	4423.24	579.55 N	253.11 E
588216.047 N	874852.013 E		632.41	0.00		
4600.00	14.28	23.59	942.15	4520.15	602.16 N	262.99 E
588238.658 N	874861.888 E		657.08	0.00		
4700.00	14.28	23.59	1039.06	4617.06	624.77 N	272.86 E
588261.269 N	874871.763 E		681.76	0.00		
4800.00	14.28	23.59	1135.97	4713.97	647.38 N	282.74 E
588283.879 N	874881.638 E		706.43	0.00		
4900.00	14.28	23.59	1232.87	4810.87	669.99 N	292.61 E
588306.490 N	874891.513 E		731.10	0.00		
5000.00	14.28	23.59	1329.78	4907.78	692.60 N	302.49 E
588329.100 N	874901.388 E		755.77	0.00		
5100.00	14.28	23.59	1426.69	5004.69	715.21 N	312.36 E
588351.711 N	874911.263 E		780.45	0.00		
5200.00	14.28	23.59	1523.60	5101.60	737.82 N	322.24 E
588374.321 N	874921.138 E		805.12	0.00		
5300.00	14.28	23.59	1620.51	5198.51	760.43 N	332.11 E
588396.932 N	874931.013 E		829.79	0.00		
5400.00	14.28	23.59	1717.42	5295.42	783.04 N	341.99 E
588419.542 N	874940.888 E		854.47	0.00		
5500.00	14.28	23.59	1814.32	5392.32	805.65 N	351.86 E
588442.153 N	874950.763 E		879.14	0.00		
5600.00	14.28	23.59	1911.23	5489.23	828.26 N	361.74 E
588464.763 N	874960.638 E		903.81	0.00		
5640.81	14.28	23.59	1950.78	5528.78	837.49 N	365.77 E
588473.991 N	874964.668 E		913.88	0.00	Start Drop 3.00°/100'	
5700.00	12.51	23.59	2008.36	5586.36	850.06 N	371.26 E
588486.557 N	874970.157 E		927.59	3.00		
5800.00	9.51	23.59	2106.51	5684.51	867.55 N	378.90 E
588504.055 N	874977.798 E		946.69	3.00		
5900.00	6.51	23.59	2205.52	5783.52	880.32 N	384.47 E
588516.820 N	874983.374 E		960.62	3.00		
6000.00	3.51	23.59	2305.13	5883.13	888.32 N	387.97 E
588524.820 N	874986.867 E		969.35	3.00		
6100.00	0.51	23.59	2405.05	5983.05	891.53 N	389.37 E
588528.031 N	874988.270 E		972.85	3.00		
6116.95	0.00	0.00	2422.00	6000.00	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	3.00	EOC hold 0.00° - PP-Werta Federal #2	
6200.00	0.00	0.00	2505.05	6083.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
6300.00	0.00	0.00	2605.05	6183.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
6400.00	0.00	0.00	2705.05	6283.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
6500.00	0.00	0.00	2805.05	6383.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
6600.00	0.00	0.00	2905.05	6483.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		

6700.00	0.00	0.00	3005.05	6583.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
6800.00	0.00	0.00	3105.05	6683.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
6900.00	0.00	0.00	3205.05	6783.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
7000.00	0.00	0.00	3305.05	6883.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
7100.00	0.00	0.00	3405.05	6983.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
7200.00	0.00	0.00	3505.05	7083.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
7300.00	0.00	0.00	3605.05	7183.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
7400.00	0.00	0.00	3705.05	7283.05	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00		
7416.95	0.00	0.00	3722.00	7300.00	891.60 N	389.40 E
588528.100 N	874988.300 E		972.92	0.00	PBHL-Werta Federal #2	

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to Ground Elev. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Slot and calculated along an Azimuth of 23.593° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001.
Grid Convergence at Surface is 0.656°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 7416.95ft., the Bottom Hole Displacement is 972.92ft., in the Direction of 23.593° (Grid).

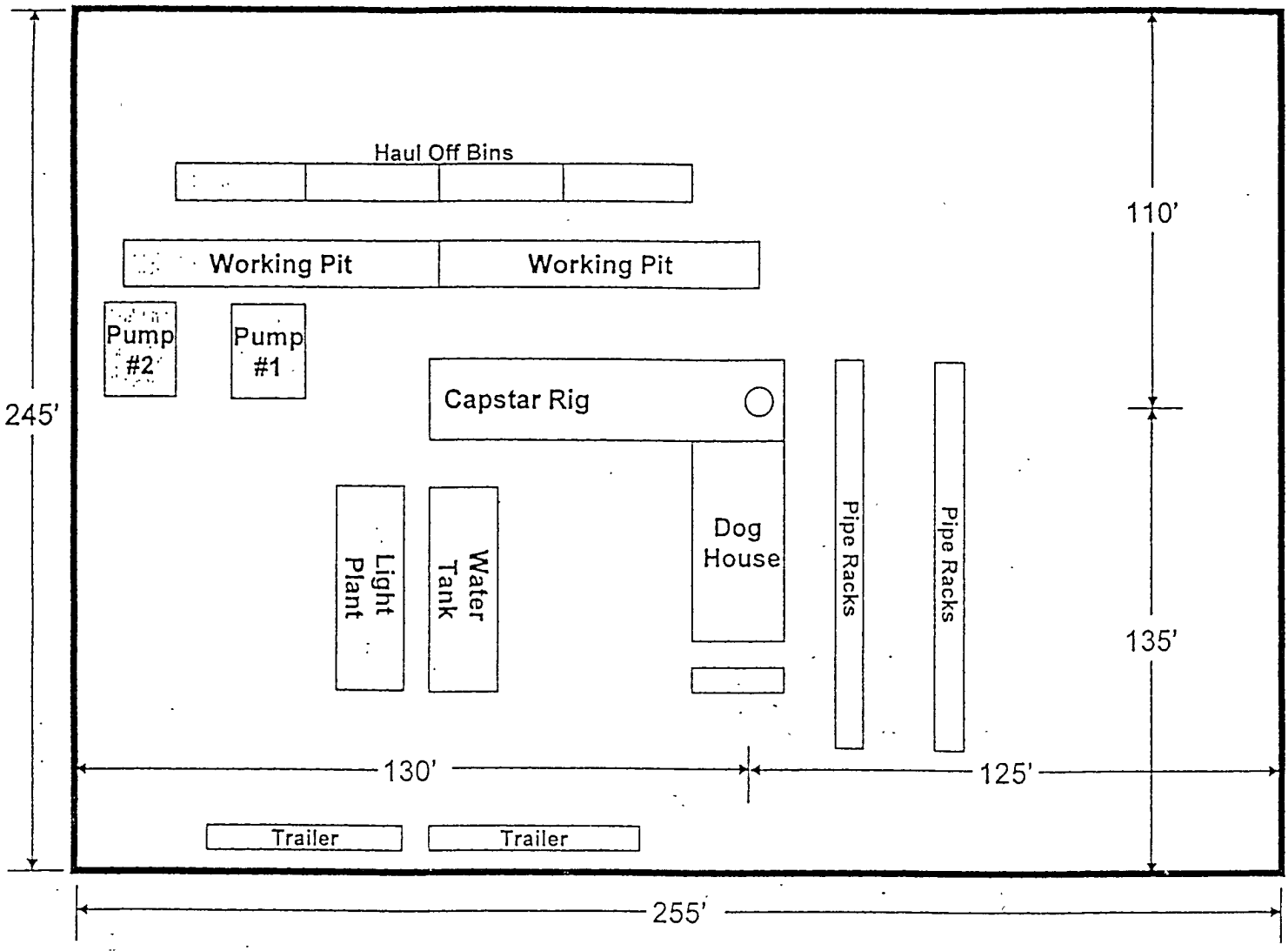
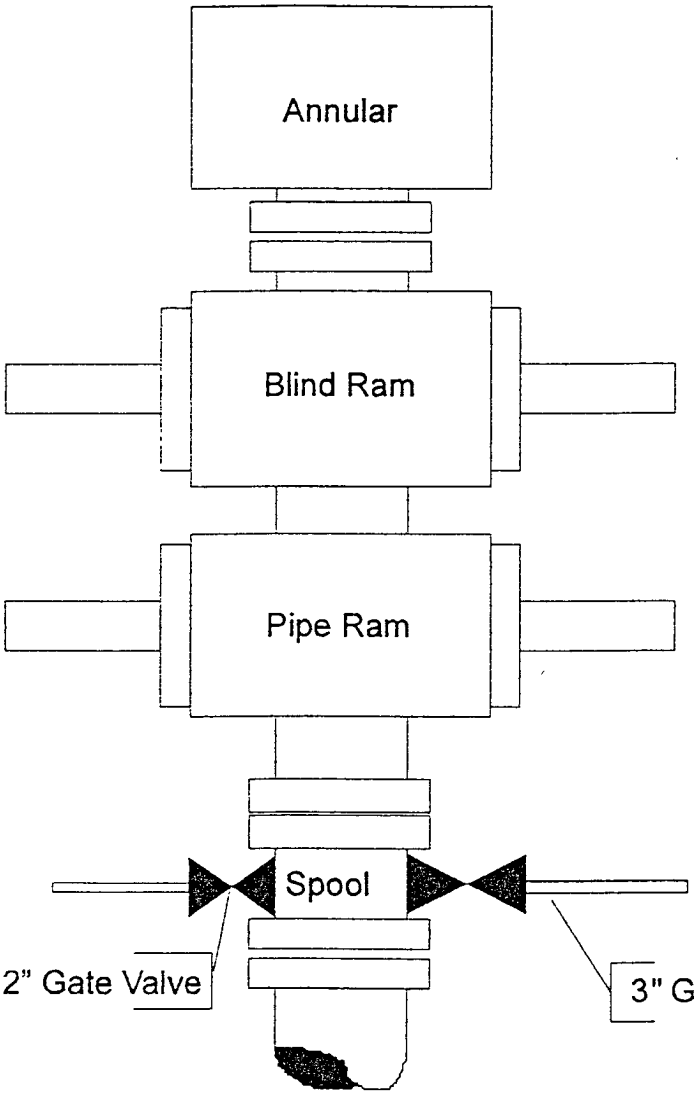


EXHIBIT "G"
RIG LAY OUT PLAT

APACHE CORPORATION
WERTA FEDERAL #2
UNIT "O" SECTION 35
T19S-R38E LEA CO. NM

3000psi -
BOPE



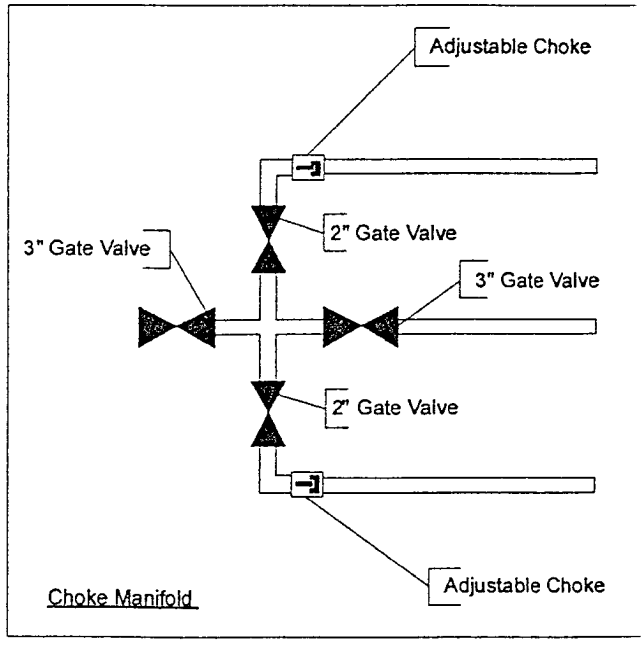


EXHIBIT "E"
BOP & CHOKE MANIFOLD
TO BE USED ON

APACHE CORPORATION
WERTA FEDERAL #2
UNIT "O" SECTION 35
T19S-R38E LEA CO. 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.

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

EMERGENCY RESPONSE NUMBERS:

State Police	Eddy County		505-748-9718
State Police	Lea County		505-392-5588
Sheriff	Eddy County		505-746-2701
Sheriff	Lea County		575-393-2515
Emergency Medical	Eddy County		911 or 505-746-2701
Service (Ambulance)	Lea County	Eunice	911 or 505-394-3258
Emergency Response	Eddy County SERC		505-476-9620
	Lea County		
Artesia Police Dept			505-746-5001
Artesia Fire Dept			505-746-5001
Carlsbad Police Dept			505-885-2111
Carlsbad Fire Dept			505-885-3125

EMERGENCY CALL LIST (CONT.)

Loco Hills Police Dept		505-677-2349
Jal Police Dept		505-395-2501
Jal Fire Dept		505-395-2221
Jal Ambulance		505-395-2221
Eunice Police Dept		505-394-0112
Eunice Fire Dept		505-394-3258
Eunice Ambulance		505-394-3258
Hobbs Police Dept		505-397-33[illegible]5
Hobbs Fire Dept		505-397-9308
NMOCD	District 1 (Lea, Roosevelt, Curry)	505-393-6161
	District 2 (Eddy, Chavez)	505-748-1283
Lea County Information		505-393-8203
Callaway Safety	Eddy/Lea Counties	505-392-2973
BJ Services	Artesia	505-746-3140
	Hobbs	505-392-5556
Halliburton	Artesia	1-800-523-2482
	Hobbs	1-800-523-2482
Wild Well Control	Midland	432-550-6202
	Mobile	432-553-1166

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.

SURFACE USE PLAN

APACHE CORPORATION
WERTA FEDERAL #2
UNIT O"O" SECTION 35
T19S-R38E LEA CO. NM

1. EXISTING AND PROPOSED ROADS:

A. Exhibit "B" is a reporduction of a County General Hi-way map showing existing roads. Exhibit "C" is a reproduction of a USGS topographic map showing existing roads and and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. All new roads will be constructed to BLM specifications.

B. Exhibit "A" shows the proposed well site as staked.

C. Directions to location: From Hobbs New Mexico take State Hi-way 18 South 8± miles (1 mile past Nadine) to Tipton Road, turn Left (East) go .5 miles to location of Werta #1 and location of # 2 is approximately 300' Southeast.

D. Exhibit "C" is a topographic map showing roads and proposed flowline route. Flowline will be connected to the tank battery located approximately 300' Northwest to well #1.

2. PLANNED ACCESS ROADS: No new road will be required to access this location.

A. The access roads will be crowned and sitched to a 14' wide travel surface, within a 30' R-O-W.

B. Gradient of all roads will be less than 5%.

C. Turn-outs will be constructed where necessary.

D. If require new access roads will be surface with a minimum of 4-6" of caliche. this material will be obtained from a local source.

E. Center line for new roads will be flagged, road construction will be done as field conditions require.

F. Culverts will be placed in the access road as drainage conditions require. Roads will be constructed to use low water crossings for drainage as required by the topographic conditions.

3. LOCATION OF EXISTING WELLS WITHIN A ONE MILE RADIUS: EXHIBIT "A-1"

A. Water wells - Several wells in the near vicinity of the location.

B. Disposal wells - None known

C. Drilling wells - None known

D. Producing wells - As shown on Exhibit "F"

E. Abandoned wells - As shown on Exhibit "F"

Township 19 South, Range 39 East, NMPM

SEC	5	LOTS 1, 4-6;
SEC	8	LOTS 1-4;
SEC	17	LOTS 1-4;
SEC	20	LOTS 1-4;

Total Acres 1109.460

Acres Dedicated to Well:

There are 20.00 acres dedicated to this well, which takes in the UL O of Section 35, Township 19 South, Range 38 East, N.M.P.M., Lea County, New Mexico.

Driving Directions

From the intersection of State Highway # 18 and County Road # H56 (Tipton Road), go East on County Road # H56 approximately 0.1 miles on Caliche Road to Existing Werta # 1 well. This location is approximately 400' Southeast.

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 proposed and existing access roads.

Method of Handling Waste Material

We will be utilizing a closed-loop mud system, all drill cuttings and fluids will be hauled off to a licensed disposal location.
Water produced during operations will be collected in tanks until hauled to an approved disposal system.
Oil produced during operation will be stored in tanks until sold.
Apache Corporation will comply with current laws and regulations pertaining to the disposal of human waste.
All waste materials will be contained to prevent scattering by the wind and will be removed from the well site within 30 days after drilling and/or completion operations are finished.

Formatted: Bullets and Numbering

Surface Ownership

The surface is owned by Kevin Love, 2412 SW Avenue E, Seminole, TX 79360. The minerals are owned by The U S Department of Interior and is administered by The Bureau of Land Management.

Archaeological, Historical, and Other Cultural Sites

Don Clifton, Archaeological Consultant, of Pep, 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.

I. Senior Representative (Manager, Engineering & Production):

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

Project (Operations Engineer):

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

Drilling Operations (Operations Engineer):

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

CERTIFICATION

I HEREBY CERTIFY THAT I OR PERSONS UNDER MY SUPERVISION HAVE INSPECTED THE PROPOSED DRILL SITE AND THE ACCESS ROAD ROUTES, THAT I AM FAMILIAR WITH THE CONDITIONS THAT CURRENTLY EXIST, AND THAT THE STATEMENTS MADE IN THIS PLAN ARE TO THE BEST OF MY KNOWLEDGE ARE TRUE AND CORRECT, AND THAT THE WORK ASSOCIATED WITH THE OPERATIONS PROPOSED HEREIN WILL BE PERFORMED BY APACHE CORPORATION ITS CONTRACTORS OR ITS SUB-CONTRACTORS IS IN CONFORMANCE WITH THIS PLAN AND THE TERMS AND THE CONDITIONS UNDER WHICH IT IS APPROVED. THIS STATEMENT IS SUBJECT TO THE PROVISIONS OF U.S.C. 1001 FOR THE FILING OF A FALSE STATEMENT.

OPERATORS REPRESENTATIVES

BEFORE CONSTRUCTION

JOE T. JANICA

TIERRA EXPLORATION, INC.
P. O. BOX 2188
HOBBS, NEW MEXICO 88241
- PHONE 505-391-8503
CELL 505-390-1598

DURING AND AFTER CONSTRUCTION

HAROLD SWAIN

APACHE CORPORATION.
6120 SOUTH YALE
TULSA, OKLAHOMA
PHONE 432-527-3311
CELL 505-930-4368

NAME: JOE T. JANICA Joe T Janica

DATE: 04/14/08

TITLE: AGENT

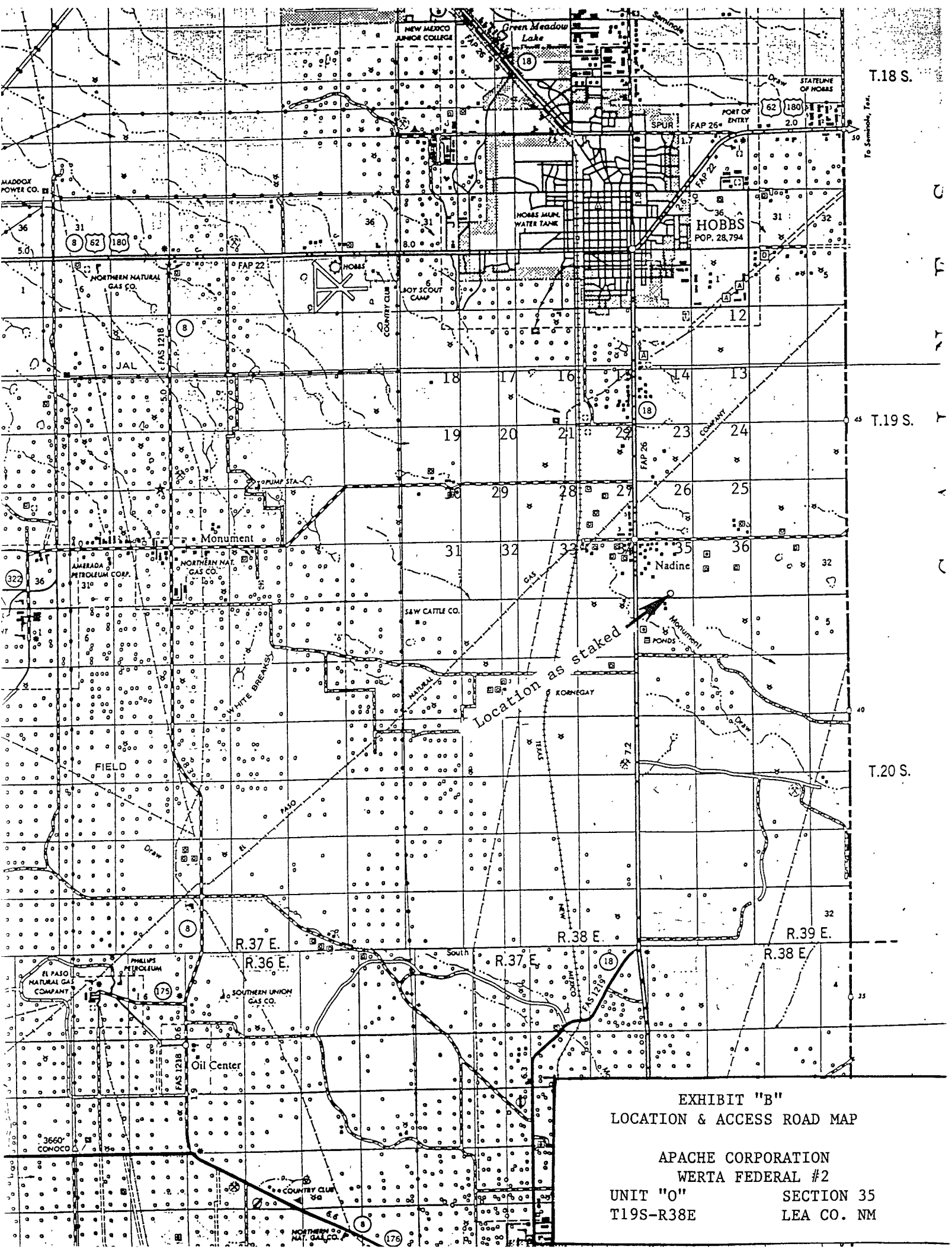


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

APACHE CORPORATION
WERTA FEDERAL #2
UNIT "O" SECTION 35
T19S-R38E LEA CO. NM

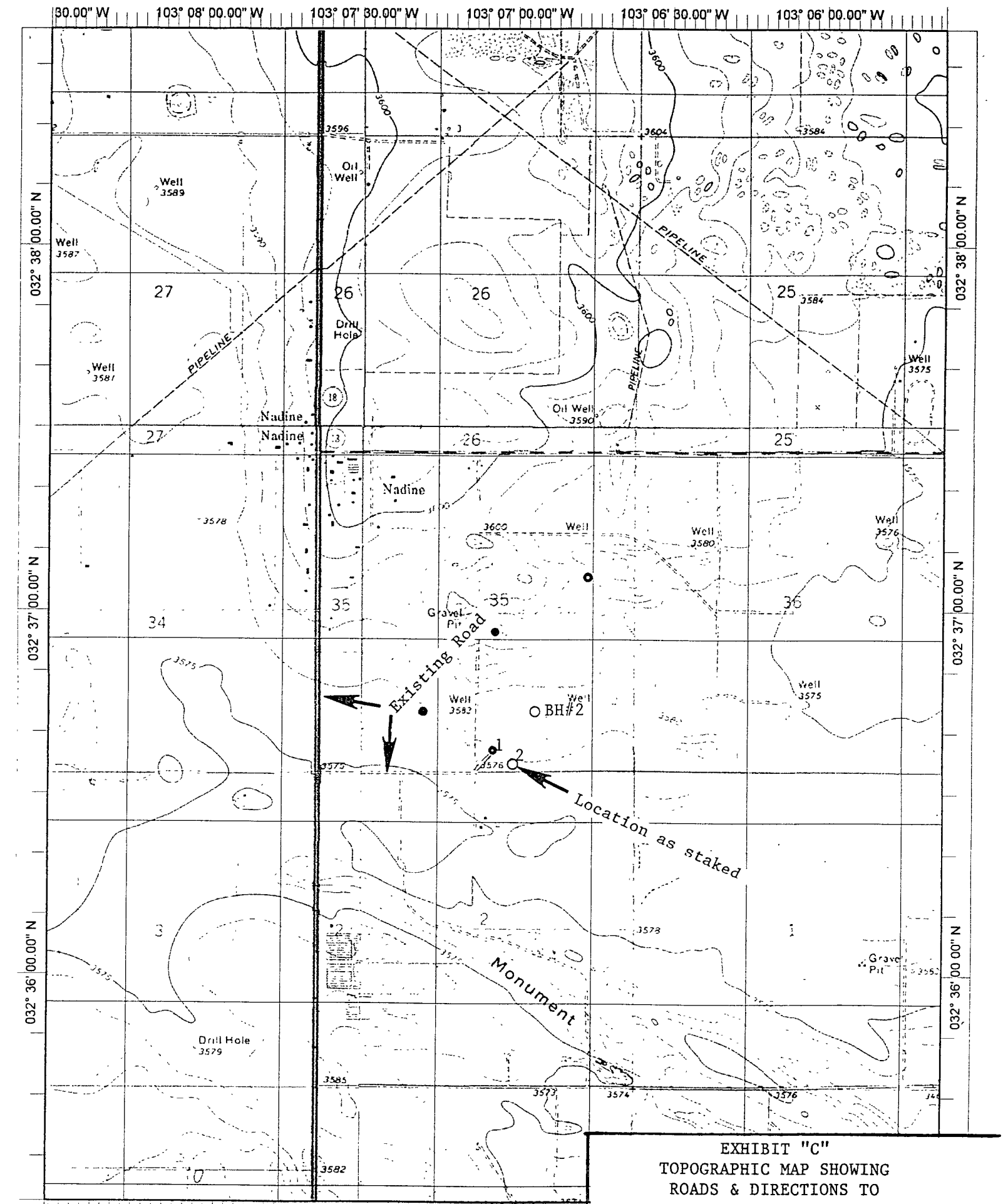


EXHIBIT "C"
TOPOGRAPHIC MAP SHOWING
ROADS & DIRECTIONS TO

APACHE CORPORATION
WERTA FEDERAL #2
UNIT "O" SECTION 35
T19S-R38E LEA CO. NM

Datum: NAD27

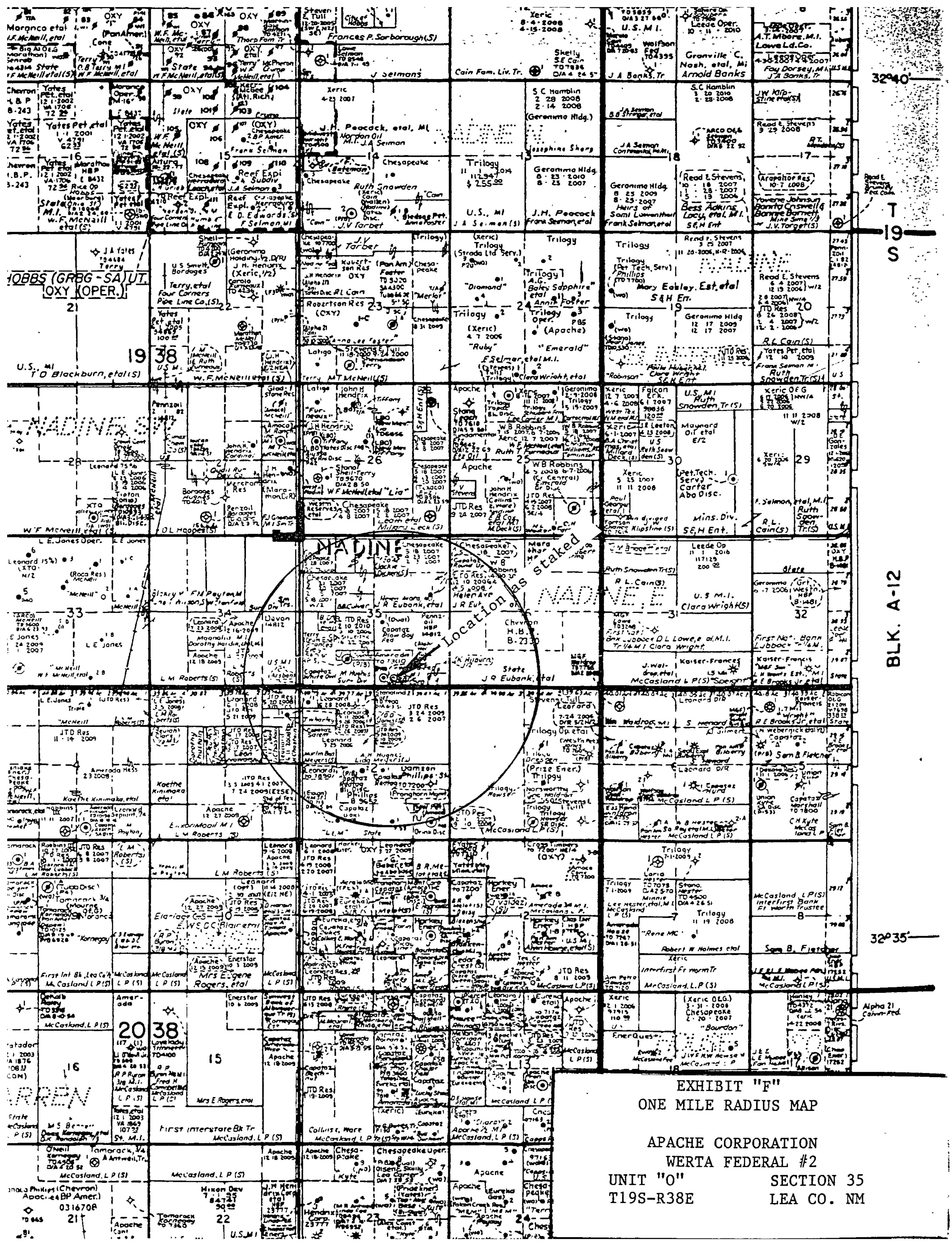


EXHIBIT "F"
ONE MILE RADIUS MAP

APACHE CORPORATION
WERTA FEDERAL #2
UNIT "O" SECTION 35
T19S-R38E LEA CO. NM

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Apache Corp.
LEASE NO.:	NM-14812
WELL NAME & NO.:	2-Werta Federal
SURFACE HOLE FOOTAGE:	105' FSL & 2050' FEL
BOTTOM HOLE FOOTAGE	990' FSL & 1650' FEL
LOCATION:	Section 35, T. 19 S., R 38 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. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (505) 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 (505) 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.

VI. 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. BOP/BOPE tests

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

1. **Hydrogen Sulfide has been reported in the section, but no measurements have been recorded. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. 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.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

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 as per Onshore Order 2.III.B.1.f

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.

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

Possible lost circulation in Glorieta Formation

1. The **8-5/8** inch surface casing shall be set at **approximately 1600 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **If salt is penetrated, set surface casing at least 25 feet above the top of the salt.**

    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 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 will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

    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, remedial cementing will be done prior to drilling out that string.

Appropriate centralizers required in directional portion of hole to improve cement bond.

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

    ☒ Cement should tie-back at least **200** feet into previous casing string. **Operator shall provide method of verification.**

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.

2. 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.

LB 6/6/08

VII. 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

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the

Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **25** feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object)

discovered by the holder, or any person working on his hehalf, on public or Federal land shall be immediately reported to the authorized officer. Holder 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 will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

(March 1989)

VIII. 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 1, for Loamy 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 bye the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper 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 (small/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 lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent gemination = 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.