8063 NM III

OCD-ARTESIA

ATS-08-336

Form 3160-3
(April 2004)

HIGH CAVEKARST

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

968
SEP 19 2008
OCD-ARTESIA

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: [XX] DRILL [ ] REENTER	5. Lease Serial No. NM-04686
1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone	6. If Indian, Allotee or Tribe Name ----------
2. Name of Operator APACHE CORPORATION (LANA WILLIAMS 918-491-4980)	7. If Unit or CA Agreement, Name and No. ----------
3a. Address TWO WARREN PLACE SUITE 1500 6120 SOUTH YALE, TULSA, OKLAHOMA 74136-4224	3b. Phone No. (include area code) (PH-918-491-4980)
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 460'' FSL & 660' FWL SECTION 21 T21S-R23E EDDY CO. NM At proposed prod. zone 660' FSL & 660' FWL SECTION 21 T21S-R23E	8. Lease Name and Well No. BRIGHT FEDERAL # 5
	9. API Well No. 30-015-36652
	10. Field and Pool, or Exploratory INDIAN BASIN-UPPER MORROW Penn
	11. Sec., T. R. M. or Blk. and Survey or Area SECTION 21 T21S-R23E
14. Distance in miles and direction from nearest town or post office* Approximately 25 miles Northwest of Carlsbad New Mexico	12. County or Parish EDDY 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) 660'	16. No. of acres in lease 280 / 17. Spacing Unit dedicated to this well 640
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1980'±	19. Proposed Depth 7800'± / 20. BLM/BIA Bond No. on file BLM-CO-1463 NATION WIDE
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4000' GL	22. Approximate date work will start* WHEN APPROVED / 23. Estimated duration 30 days

24. Attachments

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

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

25. Signature Joe T. Janica	Name (Printed/Typed) Joe T. Janica	Date 05/08/08
Title Agent		
Approved by (Signature) /s/Dorothy M. Morgan	Name (Printed/Typed) /s/Dorothy M. Morgan	Date SEP 12 2008
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
10-2-08

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)

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Roswell Controlled Water Basin

ENTERED AFMSS
ENTERED RBMS

Approval Subject to General Requirements & Special Stipulations Attached

Form 3160-5
(April 2004)

APD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

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-04686

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.
BRIGHT FEDERAL # 5

2. Name of Operator
APACHE CORPORATION

9. API Well No.
30-015-36652

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
INDIAN BASIN -UPPER PENN

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SURFACE: 460' FSL & 660' FWL SEC. 21 T21S-R23E EDDY CO.
BHL 660' FSL & 660' FWL SEC. 21 T21S-R23E EDDY CO.

11. County or Parish, State
EDDY 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	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
[ ] Subsequent Report	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Final Abandonment Notice	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[X] 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 reduce the test pressure on their B.O.P. from 3000 PSI to 2000 PSI. The testing is to be done by a third party.

2m is not Adequate
For well depth.
3m is Required. WWI 9/1/08

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	

WITHDRAWN, REJECTED, OR DENIED.

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)

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
30-015-36652	79040	INDIAN BASIN-UPPER PENN (PRO GAS)

Property Code	Property Name	Well Number
303580	BRIGHT FEDERAL	5

OGRID No.	Operator Name	Elevation
873	APACHE CORPORATION	4000'

Surface Location

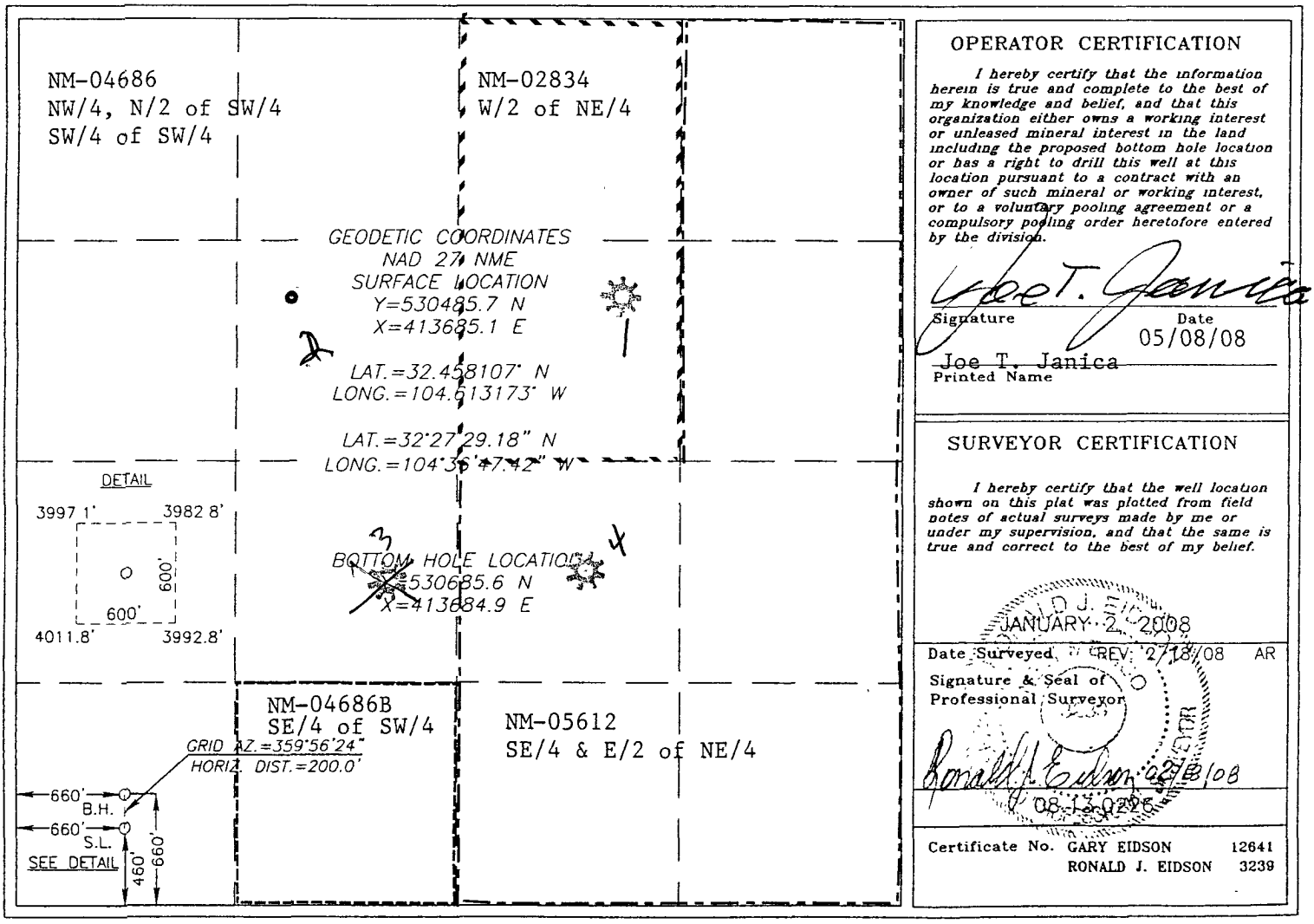
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	21	21-S	23-E		460	SOUTH	660	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	21	21-S	23-E		660	SOUTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
640			

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

05/08/08
Date

Joe T. Janica
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.

JANUARY 2, 2008
Date Surveyed

REV: 2/18/08 AR

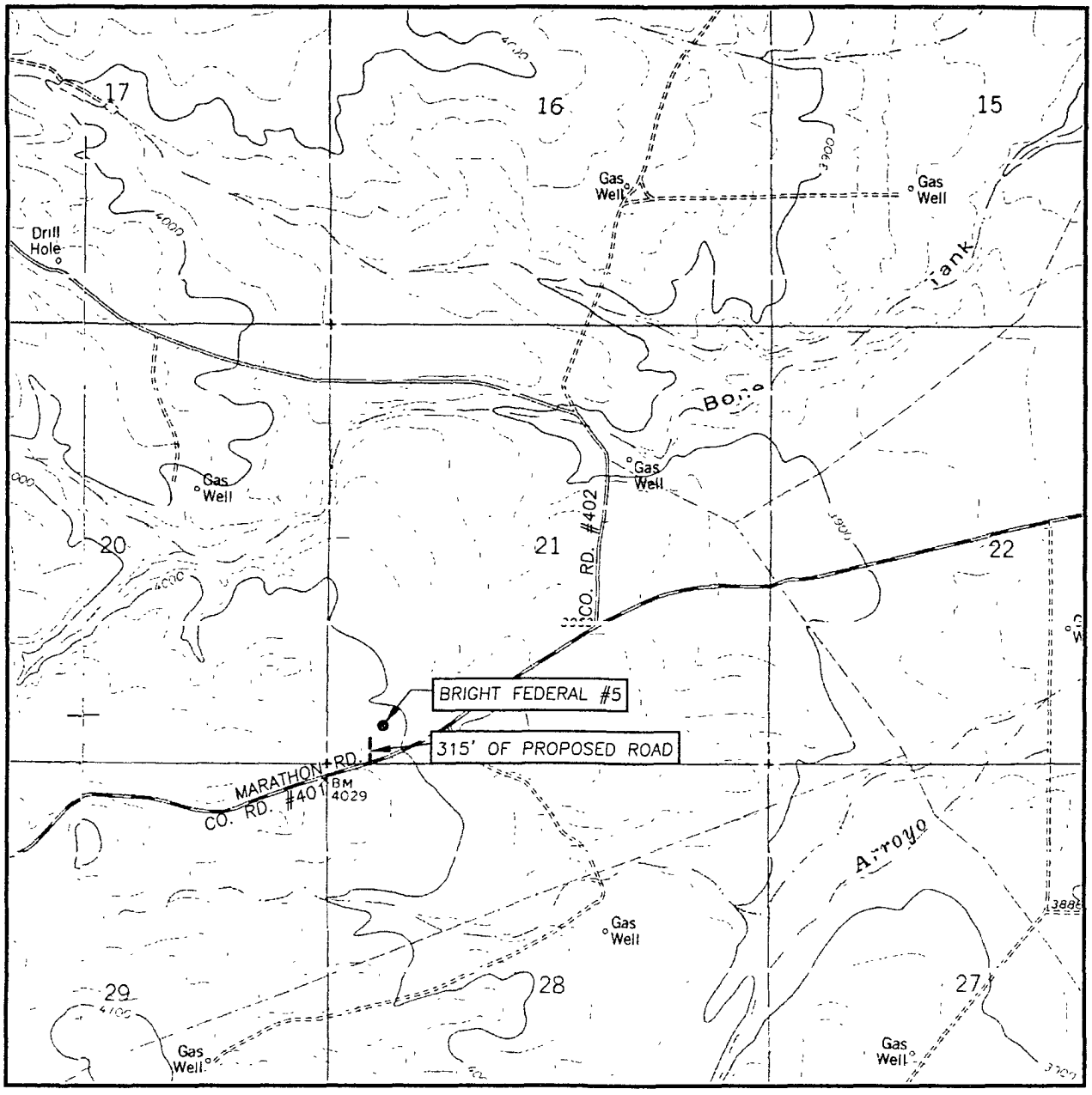
Signature & Seal of Professional Surveyor

Ronald J. Eidson 2/18/08

08-13-0295

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
MARTHA CREEK, N.M. – 20'
CAWLEY DRAW, N.M. – 20'

SEC. 21 TWP. 21-S RGE. 23-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 460' FSL & 660' FWL

ELEVATION 4000'

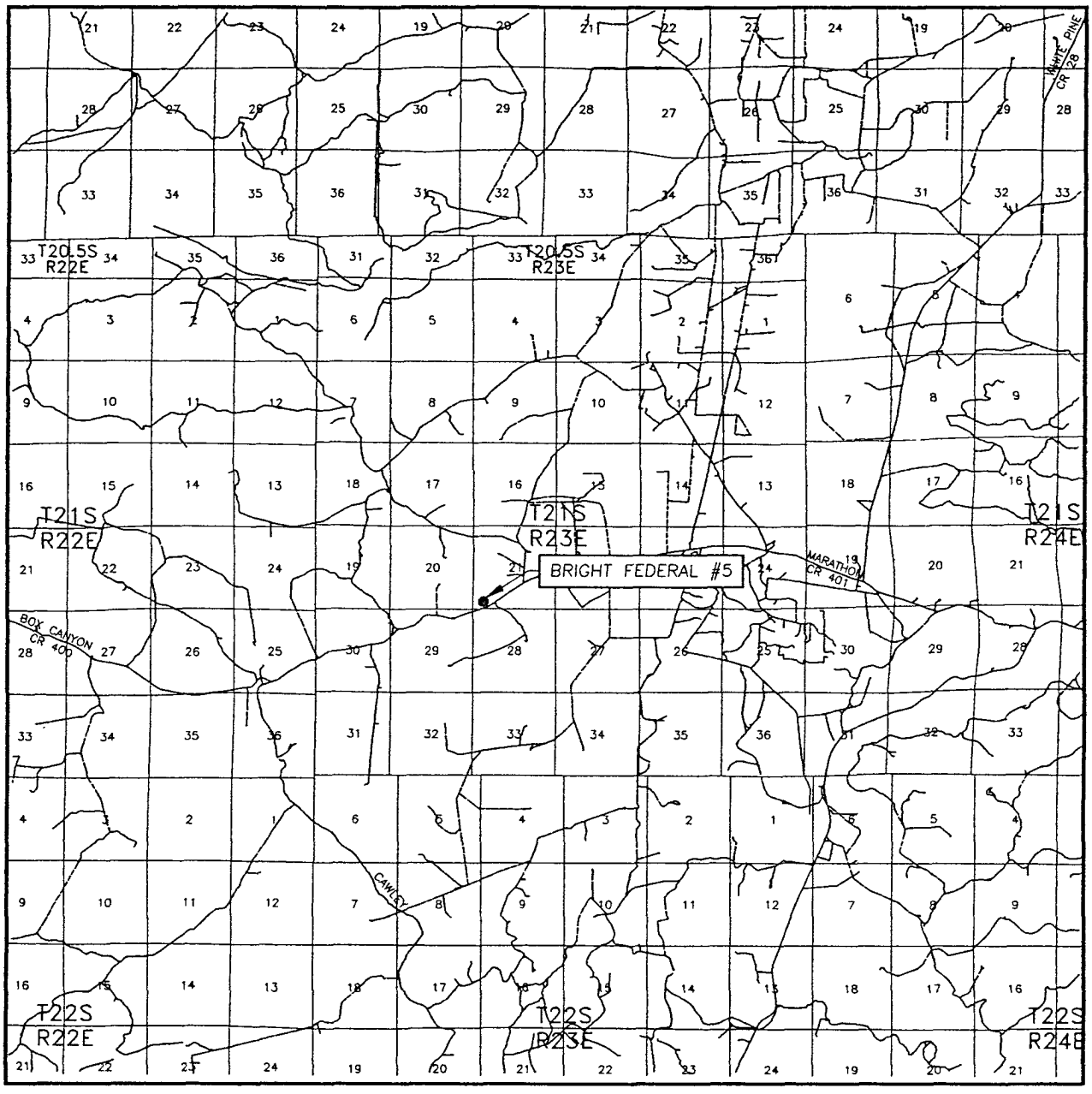
OPERATOR APACHE CORPORATION

LEASE BRIGHT FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
MARTHA CREEK, N.M.

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

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 21 TWP. 21-S RGE. 23-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 460' FSL & 660' FWL

ELEVATION 4000'

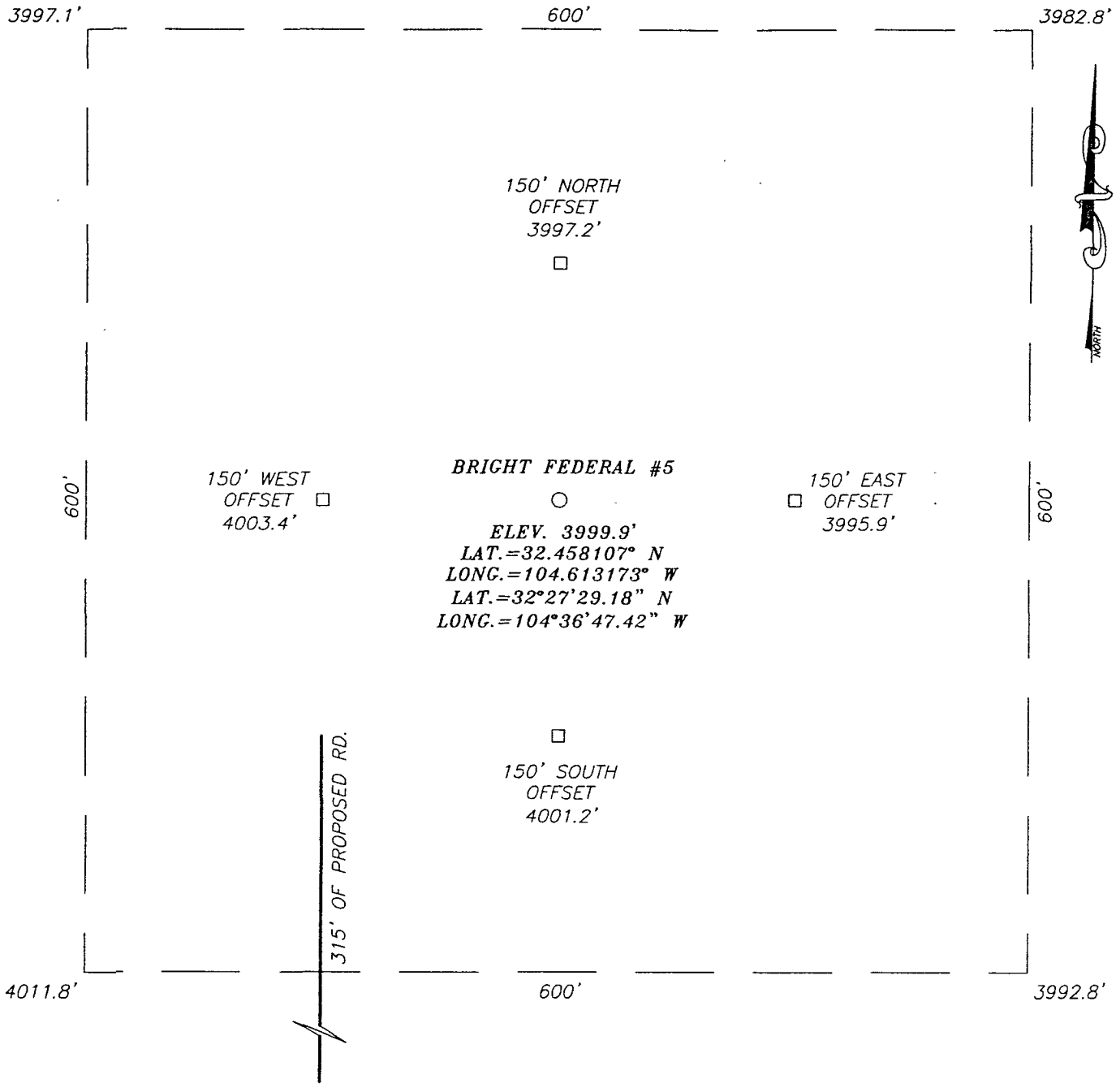
OPERATOR APACHE CORPORATION

LEASE BRIGHT FEDERAL

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

SECTION 21, TOWNSHIP 21 SOUTH, RANGE 23 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. #401 AND CO. RD. #402, GO WEST ON CO. RD. #401 APPROX. 0.6 MILES. THIS LOCATION IS APPROX. 500 FEET NORTH.

100 0 100 200 Feet

Scale: 1"=100'

APACHE CORPORATION

BRIGHT FEDERAL #5 WELL
LOCATED 460 FEET FROM THE SOUTH LINE
AND 660 FEET FROM THE WEST LINE OF SECTION 21,
TOWNSHIP 21 SOUTH, RANGE 23 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

Survey Date: 1/02/08	Sheet 1 of 1 Sheets		
W.O. Number: 07.11.1813	Dr By: AR		Rev 1: N/A
Date: 1/05/08	Disk:	07111813	Scale: 1"=100'

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

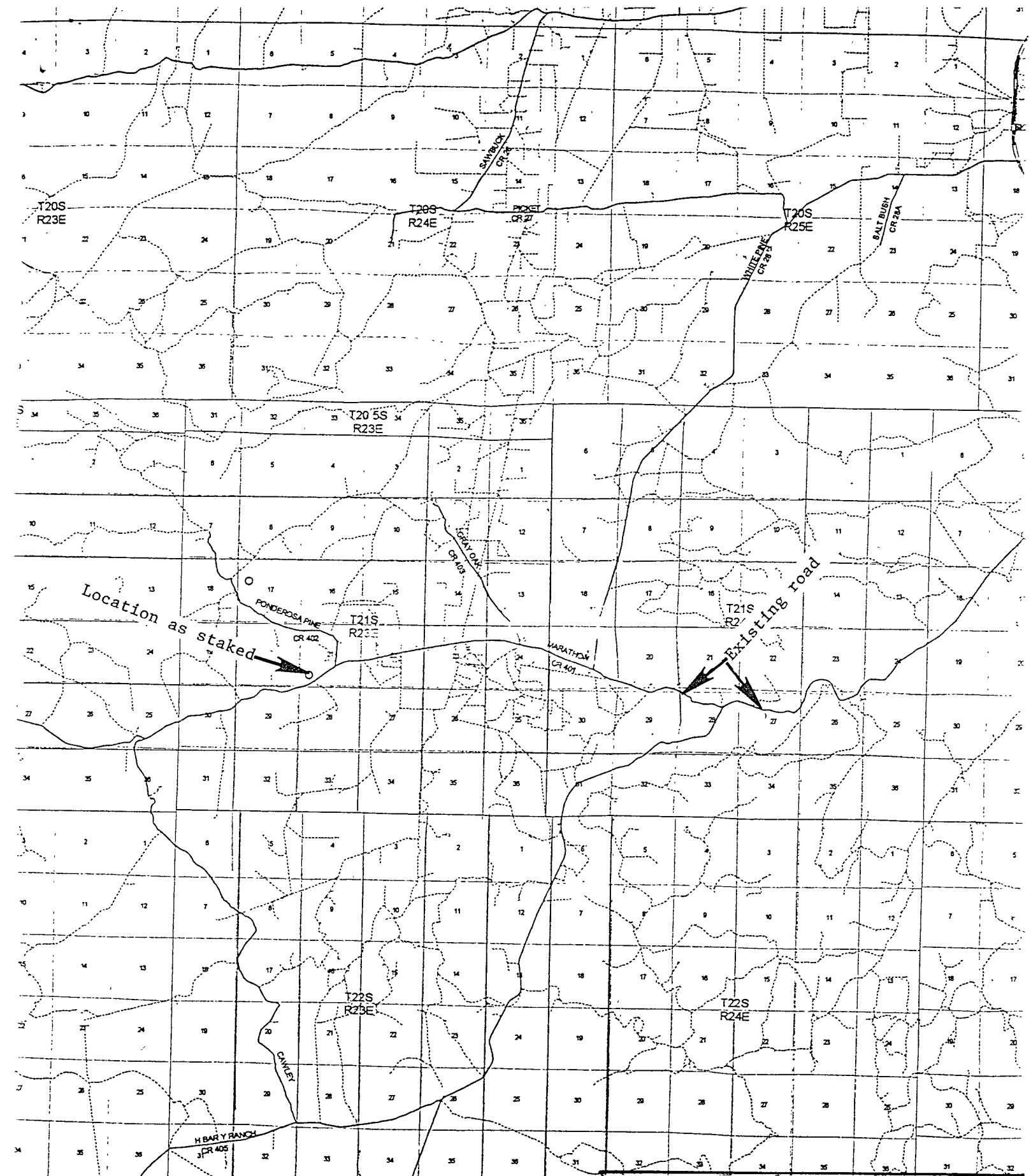


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

APACHE CORPORATION
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY CO. NM

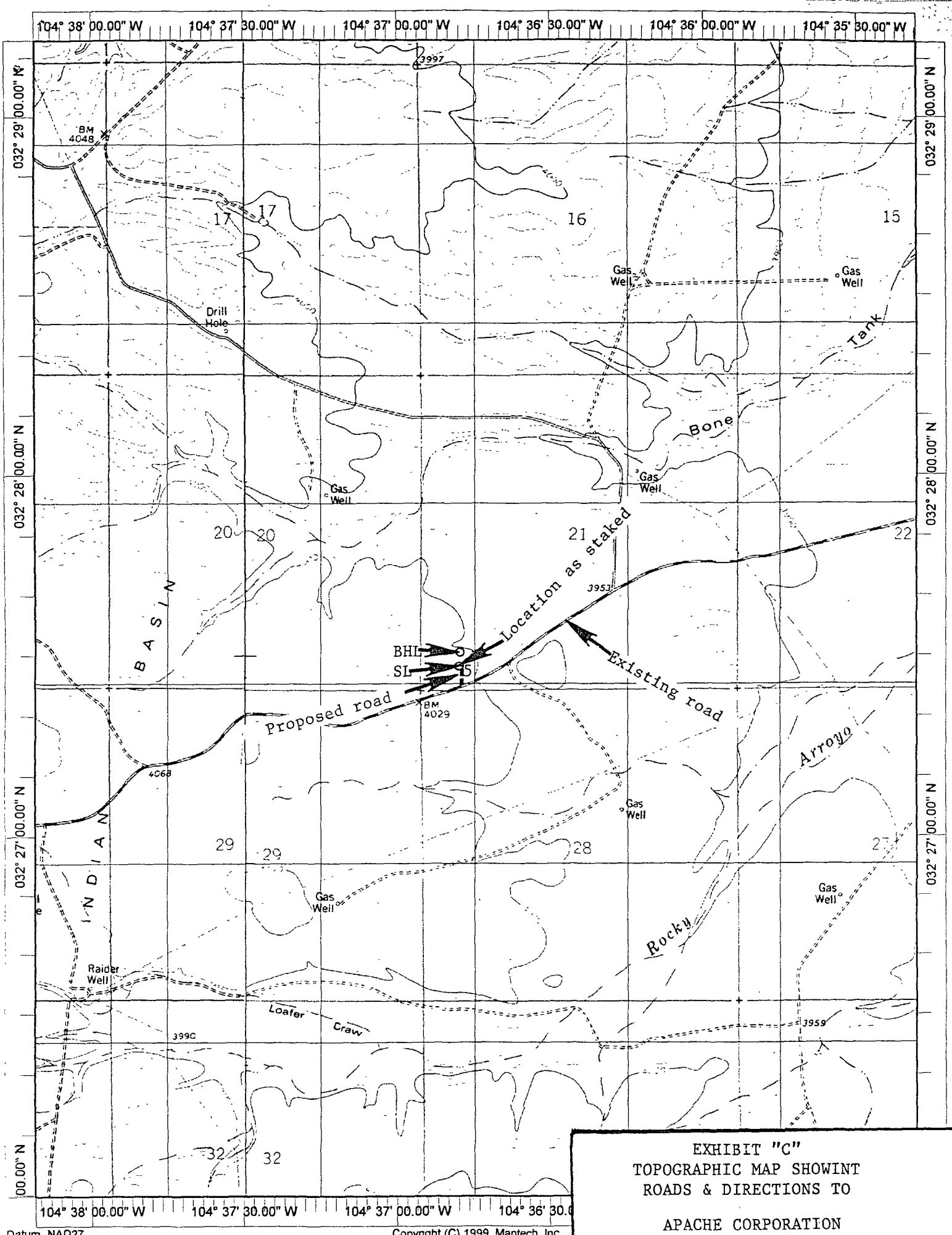


EXHIBIT "C"
TOPOGRAPHIC MAP SHOWINT
ROADS & DIRECTIONS TO

APACHE CORPORATION
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY CO. NM

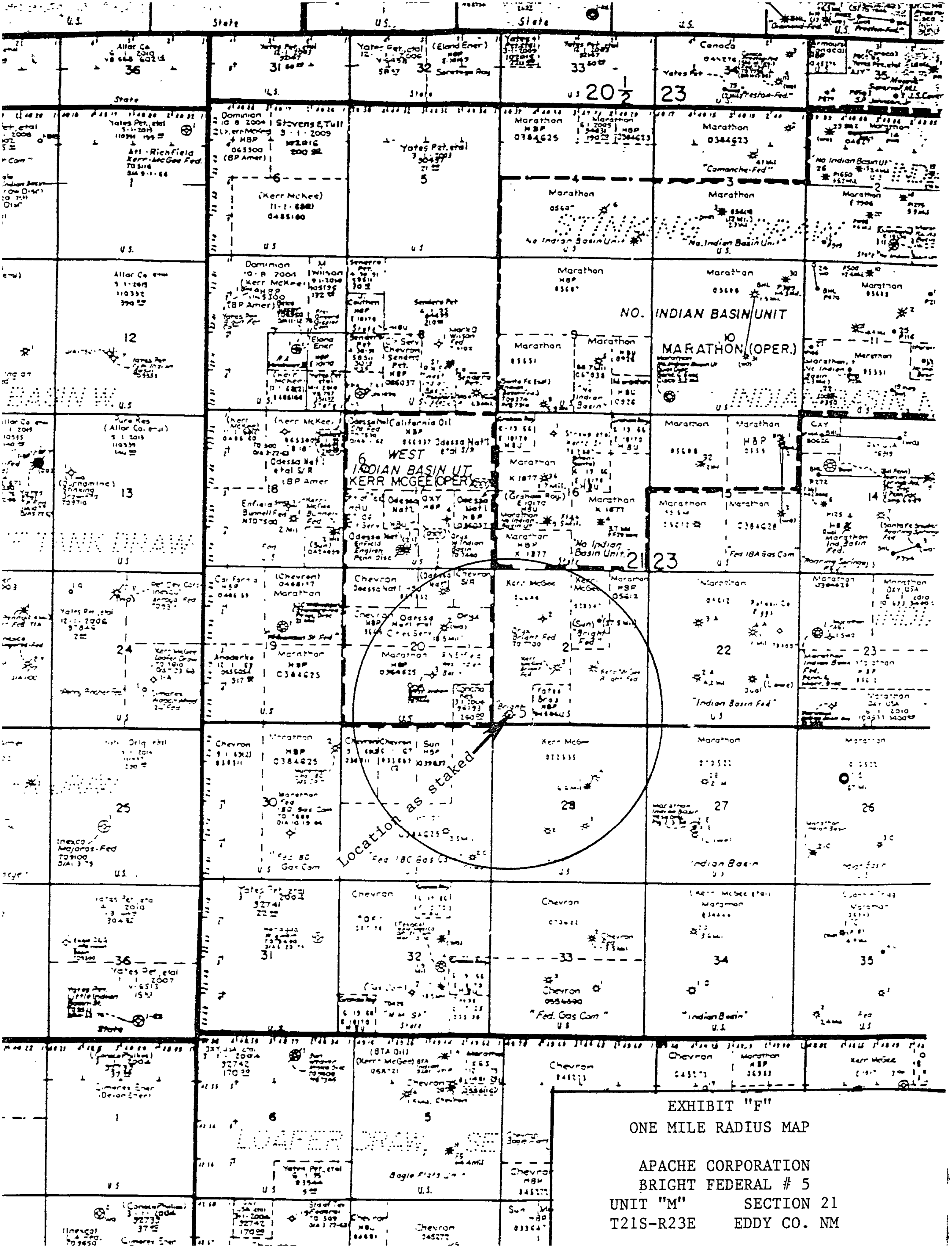


EXHIBIT "F"
ONE MILE RADIUS MAP

APACHE CORPORATION
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY CO. NM

APPLICATION TO DRILL

APACHE CORPORATION
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY 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: 460' FSL & 660' FWL SECTION 21 T21S-R23E EDDY CO. NM

2. ELEVATION ABOVE SEA LEVEL: 4000' 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: 7800'

6. ESTIMATED TOPS OF GEOLOGICAL FORMATIONS:

San Andres	405'	Cisco	5857'
Glorieta	1891'	Upper Penn Carb.	7073'
Bone Spring	3183'	Upper Penn Shale	7466'
Wolfcamp	5752'	TD	7800'

7. POSSIBLE MINERAL BEARING FORMATIONS:

Upper Penn Carbonate	Gas
Upper Penn Shale	Gas

8. CASING PROGRAM:

HOLE SIZE	INTERVAL	OD OF CASING	WEIGHT	THREAD	COLLAR	GRADE	CONDITION
26"	0-40	20"	NA	NA	NA	Conductor	New
17½"	0-300'	13 3/8"	48#	8-R	ST&C	H-40	New
12¼"	0-2300'	9 5/8"	40#	8-R	LT&C	K-55	New
8 3/4"	0-7800'	7"	26#	8-R	LT&C	L-80HC	New

Design Factors: Collapse 1.125 Burst 1.0 Body Yield 1.5 Joint Strength
Buttress 1.6
8-R 1.8

SEE ATTACHED DETAIL DRILLING PROGRAM

APPLICATION TO DRILL

APACHE CORPORATION
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY CO. NM

9. CASING CEMENTING & SETTING DEPTHS: See COA

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Set 300' of 13 3/8" 48# H-40 ST&C casing. Cement with 300 Sx. of Class "C" cement + 2% CaCl, yield 1.3. Circulate cement to surface.
9 5/8"	Intermediate	Set 2300' of 9 5/8" 40# K-55 LT&C casing. Cement with 500 Sx. of 35/65 Class "C" POZ + 1% CaCl, + ¼# Cello Flakes/ Sx. + 6% Bentonite, yield 1.9, tail in with 250 Sx. of Class "C" cement + 2% CaCl, yield 1.3, circulate cement to surface.
7"	Production	Set 7800' of 7" 26# L-80HC LT&C casing. Cement with 700 Sx. of 50/50 POZ (Fly Ash) Class "C" cement + 5% Salt, + 5#/Sx LCM-1 + .4% FL-52, + 10% Bentonite, yield 2.4, tail in with 250 Sx. of 50/50 POZ (Fly Ash) Class "C" cement + 2% CaCl, yield 1.3 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 13 3/8" 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
40-300'	8.4-8.6	36-40	NC	Fresh water Spud Mud add paper to control seepage.
300-2300'	10.0-10.2 See COA	38-42	NC Fresh water	Brine water Pre-mix Anco Salt Gel, add paper to control seepage, use Lime to control pH @ 10-10.5.
2300-6000'	10.0-10.2	38-42	NC	SAME AS ABOVE.
6000-7800'	10.0-10.2	38-42	10 cc or less	Brine water use salt Gel to control viscosity , Caustic Soda to control pH, use starch to control water loss, and high viscosity sweeps to clean hole.

Sufficient mud materials will be kept on location at all tines 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
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY 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 9 5/8" casing shoe.

B. Cased hole logs: Gamma Ray, CNL FROM 9 5/8" casing shoe back to surface.

C. Rig up mud logger on hole at 3500'± and keep on hole 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 500 PSI, and Estimated BHT 145°.

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 30 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:

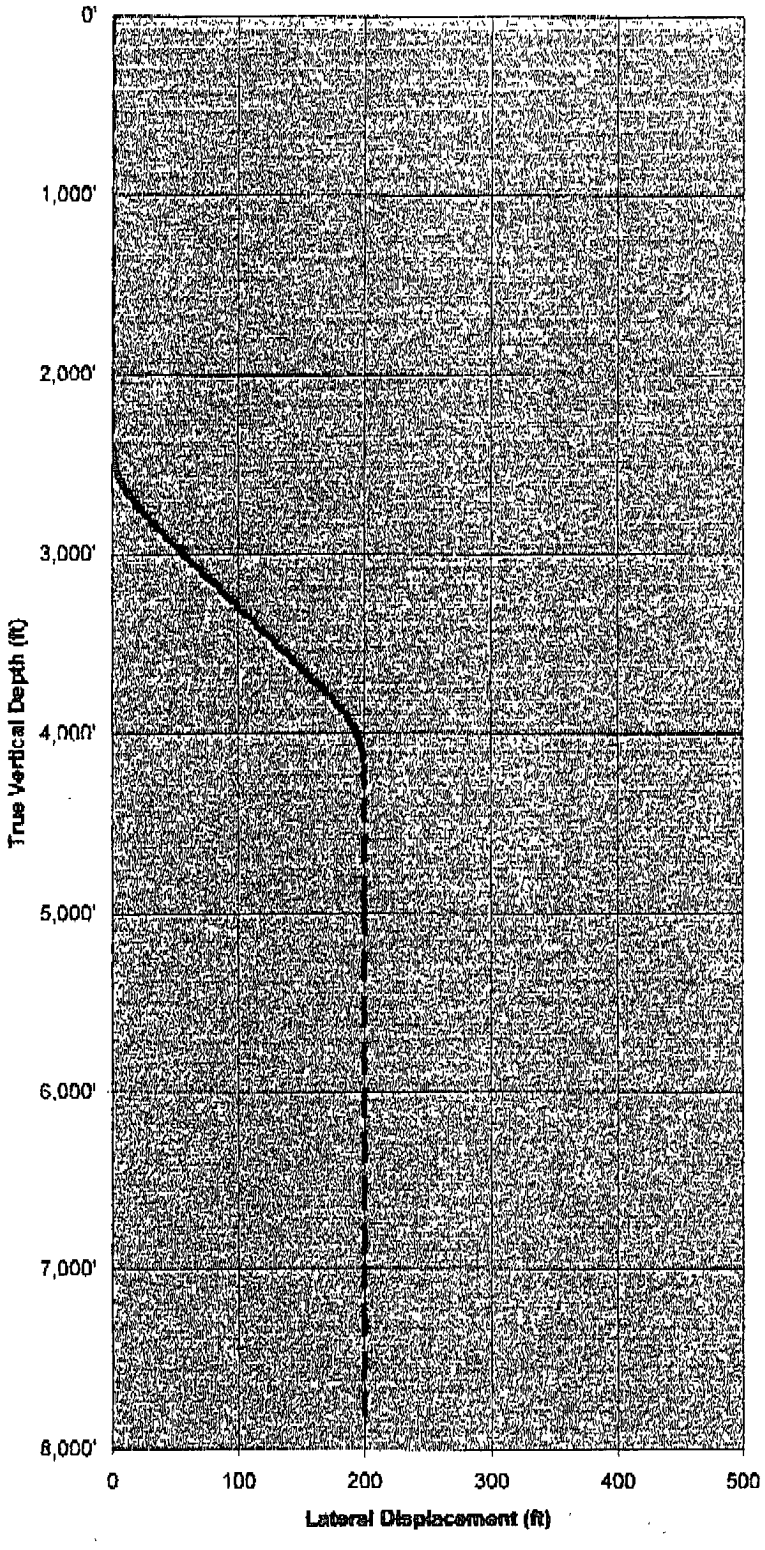
After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Penn Carbonate formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as a gas well.

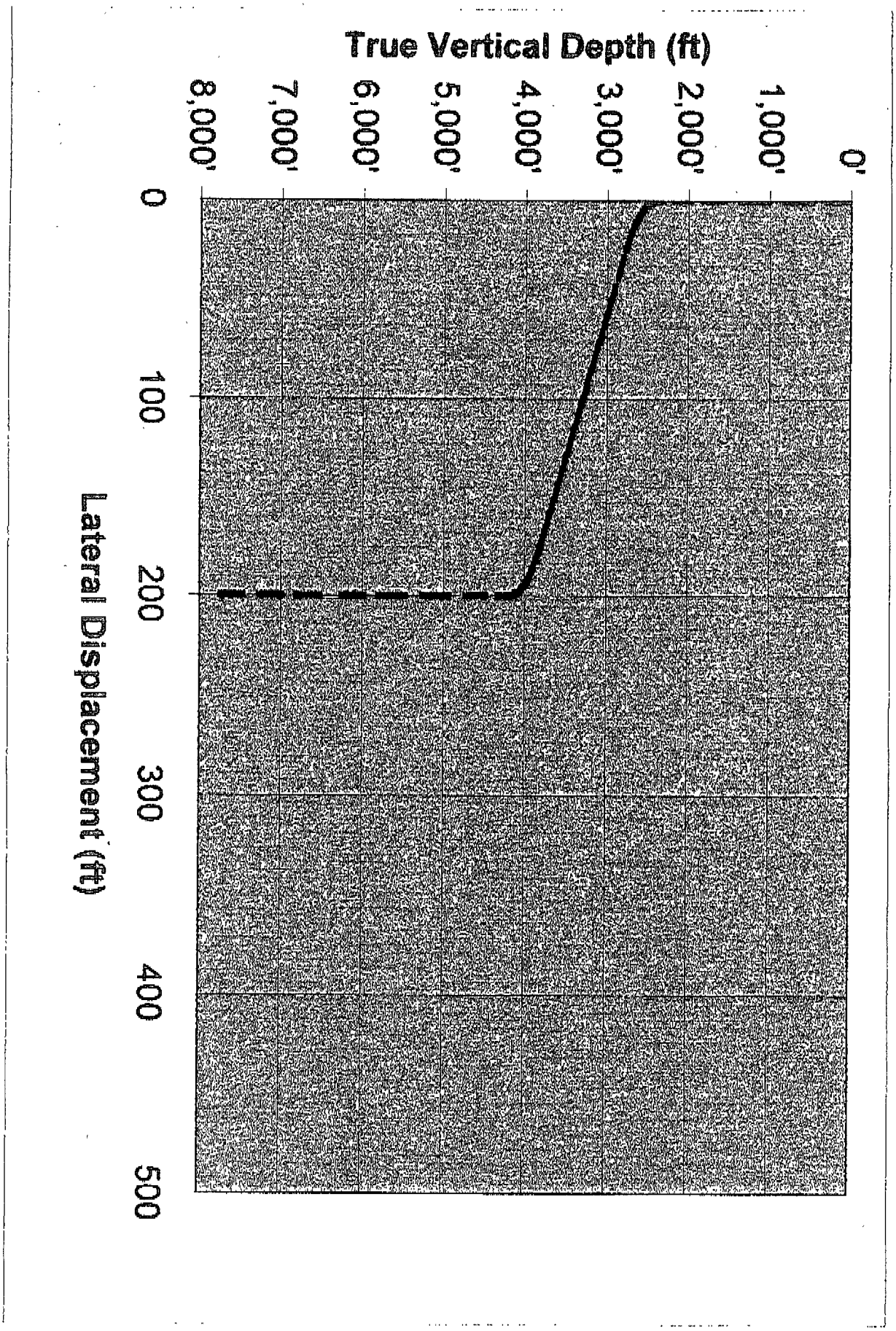
Directional Well Planner — **Apache Corp.** — **Bright Federal #6**

	Sec	FSL	FWL
Surface Location	21	460'	660'
Btm Hole Location	21	660'	660'
Displacement (N/S & E/W)		200'	0'
Direction (Surf > BHL)		N	E
Direction (deg.)			**0.00**
Total Displacement			**200'**
Kick Off Depth			2,400'
Max. Build / Drop (deg./100')			2.0
Target TVD			7,800'

Build, Hold and Drop

	TMD	Inclination	Lat. displac	TVD
	0'	0	0	0'
Kick Off	2,400'	0.0	0.0	2,400'
	2,500'	2.0	1.7	2,500'
	2,600'	4.0	7.0	2,600'
	2,700'	6.0	15.7	2,699'
	2,800'	8.0	27.9	2,798'
	2,900'	8.3	42.1	2,898'
	3,000'	8.3	56.6	2,997'
	3,100'	8.3	71.0	3,096'
	3,200'	8.3	85.5	3,195'
	3,300'	8.3	100.0	3,293'
	3,400'	8.3	114.5	3,392'
	3,500'	8.3	129.0	3,491'
	3,600'	8.3	143.4	3,590'
	3,700'	8.3	157.9	3,689'
	3,800'	8.0	172.1	3,788'
	3,900'	6.0	184.3	3,886'
	4,000'	4.0	193.8	3,987'
	4,100'	2.0	198.3	4,087'
	4,200'	0.0	200.0	4,187'
	5,000'	0.0	200.0	4,987'
	6,000'	0.0	200.0	5,987'
	7,000'	0.0	200.0	6,987'
	7,813'	0.0	200.0	7,800'




True Vertical Depth (ft)
0,
1,000,
2,000,
3,000,
4,000,
5,000,
6,000,
7,000,
8,000,
Lateral Displacement (ft)
0
100
200
300
400
500

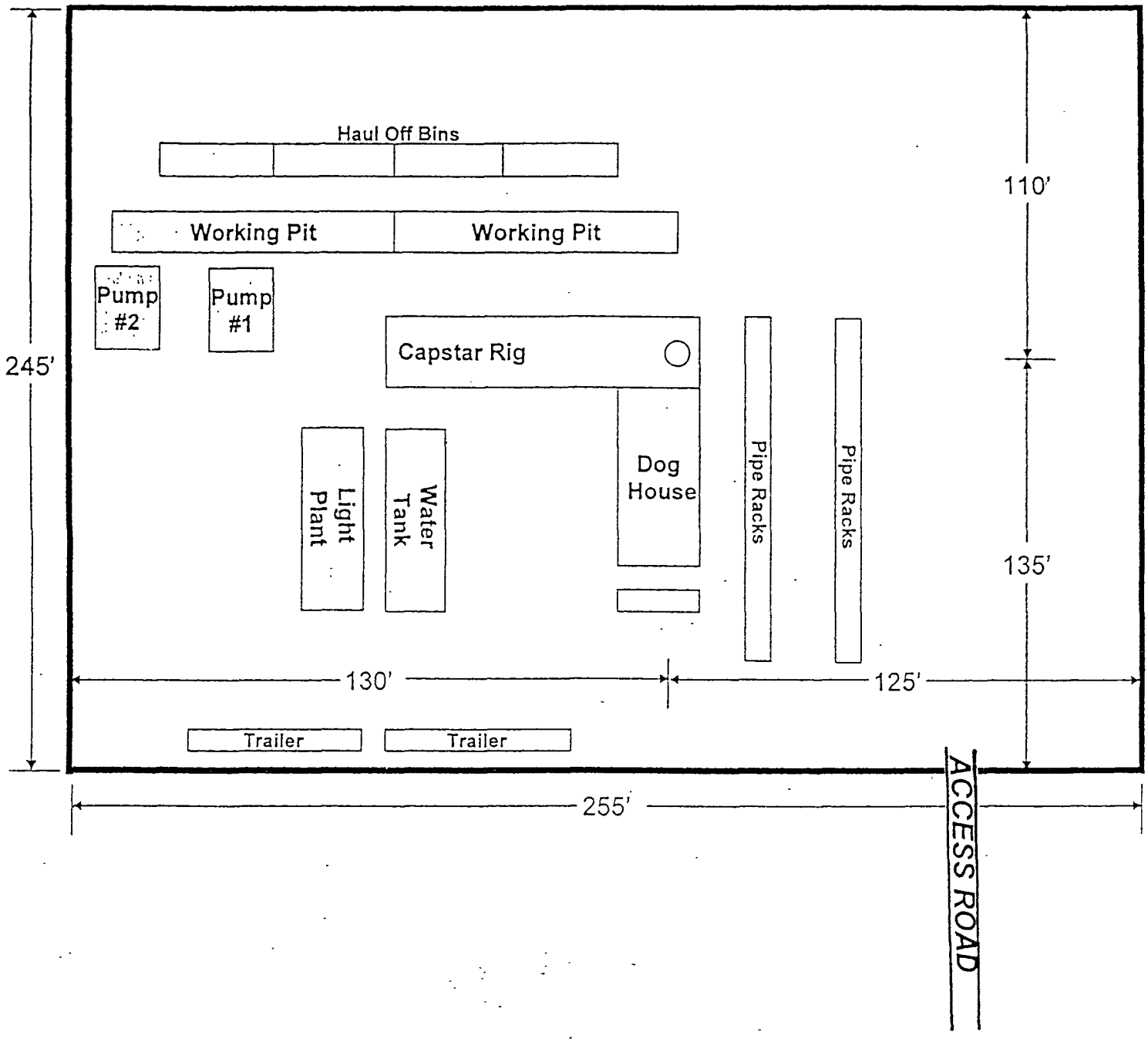
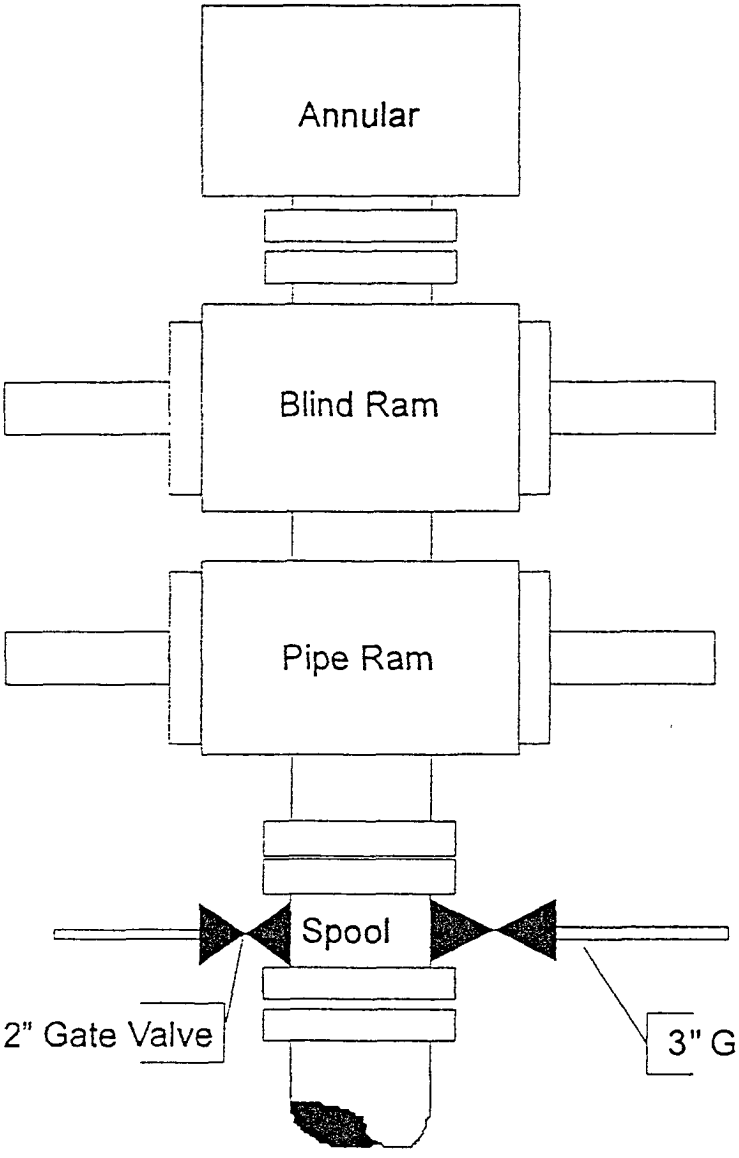


EXHIBIT "G"
RIG LAY OUT PLAT

APACHE CORPORATION
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY CO. NM

3000psi - BOPE



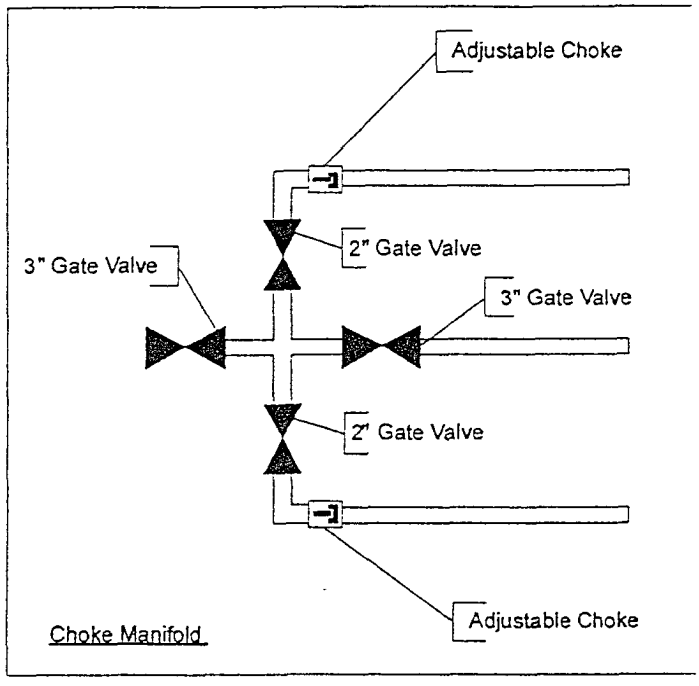


EXHIBIT "E"
SKETCH OF BOP &CHOKE MANIFOLD

APACHE CORPORATION
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY CO. NM

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

EMERGENCY CALL LIST (CONT.)

Loco Hills Police Dept		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

5/28/08 DM

SURFACE USE PLAN
APPLICATION TO DRILL

APACHE CORPORATION
BRIGHT FEDERAL # 5
UNIT "M" SECTION 21
T21S-R23E EDDY 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 the junction of U.S. Hi-way 285 and State HI-way 137 go West 9 miles to the junction of 137 and CR-401, bear Right follow 401 7 miles to location on the North side of road.

D. Exhibit "C" shows roads and proposed roads to location.

2. PLANNED ACCESS ROADS: Approximately 300' of road will be constructed.

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 - None known

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"

BRIGHT FEDERAL # 5-DIRECTION WELL

DRILLING PROGRAM

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

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Estimated Tops of Geological Markers:

FORMATION	DEPTH
Quaternary alluvials	Surface
San Andres	405'
Glorieta	1891'
Bone Spring	3183'
Thrid Bone Spring	5573'
Wolfcamp	5752'
Cisco	5857'
Upper Penn Carbonate	7073'
Upper Penn State	7466'
TD	7800'

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

SUBSTANCE	DEPTH
Oil	Very little anticipated
Gas	Upper Penn Carbonate @ 7073' Upper Penn Shale @ 7466'
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
17 ½"	13 3/8" 12.715"	H40 STC	48#	300'	300	TOC – Surface 8.9 ppg Water-based mud, 80°F Est. Static Temp. 78°F Est. Circ. Temp.
12 ¼"	9 5/8" 8.835"	K55 LTC	40#	2,300'	750	TOC - Surface 8.9 ppg Brine-based Mud; 89 ° F Est. Static Temp; 83 ° F Est. Circ. Temp.
8 3/4"	7" 4.892"	L80HC LTC	26#	7,800'	950	TOC – Surface Float Collar set @ 6855'/ 8.9 ppg Brine Mud; 141 ° F Est. Static Temp; 117 ° F Est. Circ. Temp.

Proposed Cement Program:

CASING	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
13 3/8"	N/A	300 sacks Class C Cement + 2% bwoc Calcium Chloride + 56.4% Fresh Water 402 Vol. Cu Ft 1.3 Vol. Factor Slurry Weight (ppg) 14.8 Slurry Yield (cf/sack) 1.34 Amount of Mix Water (gps)6.36 Estimated Pumping Time – 70 BC (HH:MM)-2:21;	40.5 bbls Fresh Water @ 8.33 ppg

13 3/8" Water String: Volume Calculations:

300 ft x	0.694 cf/ft	with	50% excess	=	312.4 cf
42 ft	x 0.881 cf/ft	with	0% excess	=	37.0 cf (inside pipe)
	TOTAL SLURRY VOLUME			=	349.4 cf
				=	62.2 bbls

Spacer 20.0 bbls Water @ 8.33 ppg

CASING	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
9 5/8"	500 sacks 35:65 Poz:Class C Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 6% bwoc Bentonite gel 975 Vol. Cu Ft 1.9 Vol. Factor Slurry Weight (ppg) 12.5 Slurry Yield (cf/sack) 1.95 Amount of Mix Water (gps) 10.7; Estimated Pumping Time – 70 BC (HH:MM)-4:15;	250 sacks Class C Cement + 2% bwoc Calcium Chloride + 56.4% Fresh Water 335 Vol. Cu Ft 1.3 Vol. Factor Slurry Weight (ppg) 14.8 Slurry Yield (cf/sack) 1.34 Amount of Mix Water (gps)6.36 Estimated Pumping Time – 70 BC (HH:MM)-2:21;	171.1 bbls Fresh Water @ 8.33 ppg

9 5/8" Surface Casing: Volume Calculations:

2,000 ft	x	0..313 cf/ft	with	75% excess	=	1,095.6 cf
300 ft	x	0.376 cf/ft	with	0% excess	=	112.9 cf
44 ft	x	0.426 cf/ft	with	0% excess	=	18.7 cf (inside pipe)
		TOTAL SLURRY VOLUME			=	1,227.2 cf
					=	218.6 bbls

Spacer 20.0 bbls Water @ 8.33 ppg

CASING	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
7"	700 sacks (50:50) Poz (Fly Ash): Class C Cement + 5% bwow Sodium Chloride + 5 lbs/sack LCM-1 + 0.4% bwoc FL-52 + 10% bwoc Bentonite 1715 Vol. Cu Ft 2.4 Vol. Factor Slurry Weight (ppg) 11.8 Slurry Yield (cf/sack) 2.45 Amount of Mix Water (gps) 13.57; Estimated Pumping Time – 70 BC (HH:MM)-3:03;	250 sacks (50:50) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride +0.5% bwoc FL-25 + 0.3% bwoc CD-32 + 0.3% bwoc FL-52 + 0.1% bwoc Sodium Metasilicate + 3 lb/sack LCM-1 + 2% bwoc Bentonite 325 Vol. Cu Ft 1. 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)-4:39;	166.4 bbls 2% Kcl Water @ 8.43 ppg

7" Production Casing: Volume Calculations:

2300 ft	x	0.158 cf/ft	with	0% excess	=	364.3 cf
4200 ft	x	0.1733 cf/ft	with	60% excess	=	1,163.7 cf
1300 ft	x	0.1733 cf/ft	with	40% excess	=	315.2 cf
40 ft	x	0.1305 cf/ft	with	0% excess	=	5.2 cf(inside pipe)
		TOTAL SLURRY VOLUME			=	1,848.4 cf
					=	329.2 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 – 300'	Weight: 8.4 – 8.6 ppg Viscosity: 36 – 40 sec/qt pH: 9.5 - 10 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.
300 – 2,300'	Weight: 8.4 – 8.6 ppg Viscosity: 28 – 34 sec/qt pH: 10 – 10.5 Filtrate: NC	Drill out from under the water string with Brine Water. Pre-mix Anco Salt Gel with viscosity 38 – 42 sec/qt pumped as 50 bbl sweeps. Paper should be added at 2 bags after every 100' drilled to control seepage losses. Use Lime to maintain pH at 10-10.5. Add 1 -2 quarts of Anco Drill N down drill pipe at connections.
2,300' – 6000'	Weight: 8.4 – 8.8 ppg Viscosity: 28 – 32 sec/qt pH: 10 -10.5 Filtrate: NC	Drill out from under the intermediate casing with Brine Water. Use Lime to maintain pH at 10-10.5. Add 1 -2 quarts of Anco Drill N down drill pipe at connections. Pre-mix Anco Salt Gel with viscosity 38 – 42 sec/qt pumped as 50 bbl sweeps. Paper should be added at 2 bags after every 100' drilled to control seepage losses.
6000' – TD	Weight: 8.8 – 9.4 ppg Viscosity: 34 – 38 sec/qt pH: 9.5 -10 Filtrate: 10-12 cm/30 min	From 6000' to Total Depth adjust and maintain pH with Caustic Soda. Treat system with WT-22 @ 0.1 ppb. **Add H2S scavenger as needed to control H2S in the system.** Mix Starch (yellow) to control API filtrate at 10-12 cc. Sweep hole with Anco Drill N every 100'.

Proposed Control Equipment:

Will install on the 9 5/8" surface casing a 9" x 3000 psi WP Double Ram BOP and 9" x 2000 psi WP Annular BOP. Will test using a 3rd party tester before drilling out of surface casing.

Auxiliary Equipment:

9" x 3000 psi double BOP/blind & pipe ram
9" x 2000 psi annular BOP
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-2,300'
CNL, GR from TD-Surface

Mudlogging Program:
10' samples from 3,500' to TD

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.

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Bottom Hole Pressure Calculations
The bottom hole pressure is estimate at less than 500 psi based on offset well test information. Low bottom hole pressures are expected with some possibility of water flows.

Hydrogen Sulfide Drilling Operations Plan

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.

Surface Location

SW ¼ of Section 21, Township 21 South, Range 23 East, N.M.P.M.
Eddy County, New Mexico
460' FSL, 660' FWL, Unit M

Bottom Hole Location

SW ¼ of Section 21, Township 21 South, Range 23 East, N.M.P.M.
Eddy County, New Mexico
660' FSL, 660' FWL, Unit M

Directional Drilling Plan

The well will be directionally drilled for a total lateral displacement from surface location to bottom hole location of 200' North of the surface location. The directional drilling plan is to kick off at approximately 4,800' TVD, building angle at a rate of 2°/100' to an angle of 7°. This angle will be maintained to a TVD of 6,600' at which time the angle will be dropped to vertical at a rate of 2°/100'. The well will be drilled approximately vertically from a TVD of 7,000' to a TVD of 7,800' (approx. 7,820 MD).

Leases Issued: NM-004686

Operating Rights:

Apache (dba Permian Basin Joint Venture, LLC)	56.250000
Marathon	43.438775
OXY	3.061225
Sacramento Partners LP	1.562500
John A. Yates	0.078125
John A. Yates Rep. of Peggy Yates Estate	0.078125
Sharbro Oil Ltd. Co.	0.156250
Harvey E. Yates Company	0.0691955
Jalapeno Corporation	0.0374908
Yates Energy	0.0295637

Acres in Lease:

Township 21 South, Range 23 East, NMPM
SEC 21 NW,N2SW,SWSW;

Total Acres 280.000

Acres Dedicated to Well:

There are 40.00 acres dedicated to this well, which takes in the UL M of Section 21, Township 21 South, Range 23 East, N.M.P.M., Eddy County, New Mexico.

Driving Directions

From the intersection of County Road # 401 and County Road # 402, go West on County Road # 401 approximately 0.6 miles. This location is approximately 500' North.

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.

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Surface Ownership

The surface and minerals are owned by The U S Department of Interior and is administered by The Bureau of Land Management. Therefore, a signed surface use agreement is not required.

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
SUITE 1500
TULAS, OKLAHOMA 74136-4224
PHONE 432-527-3311
CELL PH. 505-390-4368

NAME; JOE JANICA Joe T. Janica

TITLE; PERMIT ENGINEER

DATE; 05/08/08

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Apache Corporation
LEASE NO.:	NM-04686
WELL NAME & NO.:	5-Bright Federal
SURFACE HOLE FOOTAGE:	460' FSL & 660' FWL
BOTTOM HOLE FOOTAGE	660' FSL & 660' FWL
LOCATION:	Section 21, T. 21 S., R 23 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

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)

V-DOOR NORTHWEST.

Any collection facilities that are needed will be bermed to contain any spills that may occur.

Conditions of Approval
Cave and Karst

EA#: NM-520-08-0960
Lease #: NM-04686
Apache Corporation
Bright Fed. #5

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Berming:
Tank batteries will be bermed to contain 1 ½ times the content of the largest tank.

Bermed areas will be lined with a 4 oz. felt liner to prevent tears or punctures and a permanent 20 mil plastic liner.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.
A closed mud system using steel tanks for all cuttings and fluids is required. All fluids and cuttings will be hauled off site for disposal. No pits are allowed.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Delayed Blasting:
Any blasting will be phased and time delayed.

Abandonment Cementing:
Upon well abandonment the well bore will be cemented completely from 100 feet below the bottom of the cave bearing zone to the surface.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 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

Tanks are required for drilling operations: No Pits.

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.

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.

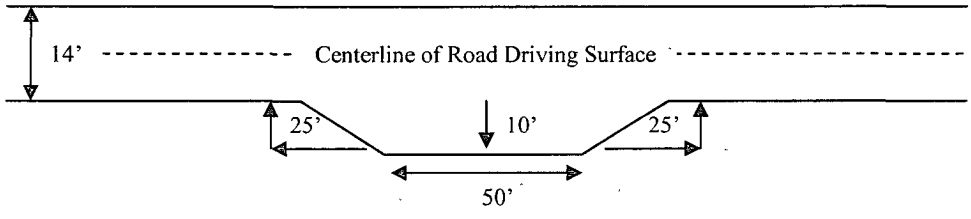
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching will be required on the uphill side of the road.

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

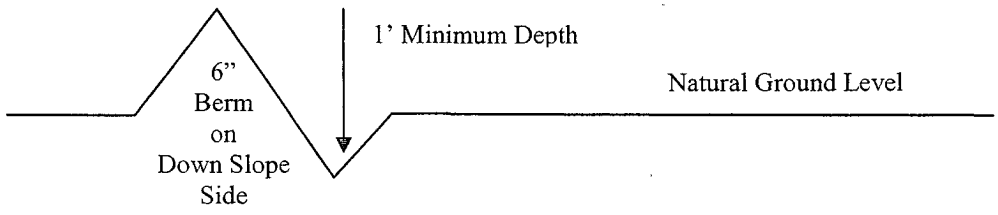
Standard Turnout – Plan View



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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

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

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

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

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

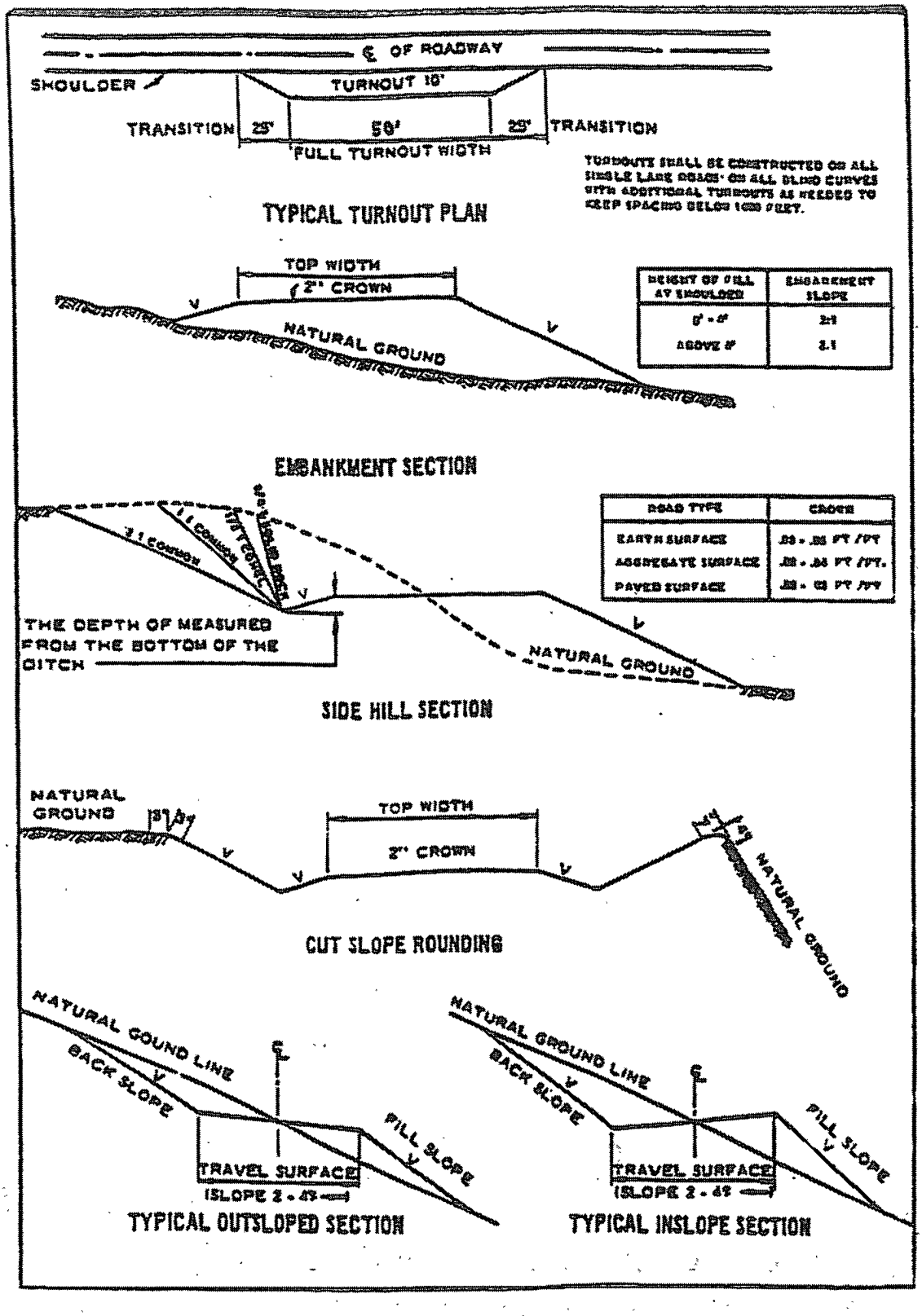
Fence Requirement

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

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

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Wolfcamp** formation. **If Hydrogen Sulfide is encountered, please provide measured values 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 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.

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.

High cave/karst.
Possible lost circulation in the San Andres and Wolfcamp formations.
Possible artesian water flows in the San Andres formation.
Potential high pressure gas burst in the Wolfcamp and high pressure zones in the Pennsylvanian section.

1. The **13-3/8** inch surface casing shall be set at approximately **300** feet and cemented to the surface.

    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 remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    c. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate well bore to be drilled with fresh water mud due to water being present to a depth of 1400'.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, b & c above. **Wait on cement (WOC) time for the primary cement job is to include the lead cement slurry due to high cave/karst area.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

3. The minimum required fill of cement behind the **7** inch production casing is:

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

4. 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8"** surface casing shoe shall be **3000 (3M)** psi.

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.

    e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

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

WWI 090108

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.

The 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 3, for Shallow 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 (*Setaria magrostachya*)	1.0
Green Spangletop (*Leptochloa dubia*)	2.0
Side oats Grama (*Bouteloua curtipendula)*	5.0

*Pounds of pure live seed:

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

(Insert Seed Mixture Here)

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.