New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-3 (July 1992)

Harvey E. Yates Company

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: ~~NMNM-100590~~ LC 029406
6. IF INDIAN, ALLOTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: PEARSALL 6 FED
8. FARM OR LEASE NAME, WELL NO.: 4
9. API WELL NO.: 30-025-36001
10. FIELD AND POOL, OR WILDCAT: YOUNG BONE SPRINGS NORTH
11. SEC., T., R., M., OR BLK AND SURVEY OR AREA: SEC 6, T18S, R32E
12. COUNTY OR PARISH: LEA
13. STATE: NM

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: HARVEY E. YATES COMPANY

3. ADDRESS AND TELEPHONE NO.: P.O. BOX 1933, ROSWELL, NEW MEXICO 88202 505-623-6601

4. LOCATION OF WELL (REPORT LOCATION CLEARLY AND IN ACCORDANCE WITH ANY STATE REQUIREMENTS)
AT SURFACE: 2,280' FSL & 990' FWL
AT PROPOSED PROD. ZONE: SAME

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 20 MILES SW OF MALJAMAR, NM

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
990'	480	40
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
1,000'	9,475'	ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3,814'
APPROX. DATE WORK WILL START: 08/01/02

23. PROPOSED CASING AND CEMENTING PROGRAM

Capitan Controlled Water Basin

SIZE OF HOLE	GRADE, SIZE OF CASING	WT PER FT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8" H-40	48#	400' (Alt Csg Depth)	425 SX "C" W/2% CACL & 1/4# CELLOSEAL
12 1/4"	8 5/8" J-55	32#	3,100'	350 SX "C" W/2% CACL & 1/4# CELLOSEAL, 1,000 SX FILLER *
7 7/8"	5 1/2" J-55	17#	9,475'	1000 SX LEAD & 400 SX TAIL **
	(SEE EXHIBIT "E")			

ALL CASING WILL BE NEW, OR USED MEETING BLM SPECS.
CEMENT WILL BE CIRCULATED ON 13 3/8" AND 8 5/8" CASING.
CEMENT QUANTITIES AND ADDITIVES ARE SUBJECT TO CHANGE DUE TO HOLE CONDITIONS.
* FILLER CEMENT 35/65 "C" POZ w/ 6% GEL, 5# SALT, & 1/4# FLOSEAL
** LEAD: 1000 SX "H" POZ w/ 2% GEL & 5# SALT PER SACK
TAIL: 400 SX "H" w/ 3% KCL, .5% FLUID LOSS, .3% DISPERSENT, 1% BONDING AGENT, .3% RETARDER, & .2% SODIUM METASILICATE PER SACK

PROPOSED MUD PROGRAM

0-400'	FRESH WATER, PAPER, & EZ MUD. MW-9.0 VIS-31
400'-3,100'	BRINE WATER AFTER TOP OF RUSTLER, PAPER, & EZ MUD. MW-10.0, VIS-31
3,100'-9,475'	FRESH WATER, PAPER, EZ MUD, & AMMONIA NITRATE. 30-60,000 CHLORIDES MW-9.0 VIS-31

MUD PROGRAM SUBJECT TO CHANGE DUE TO HOLE CONDITIONS

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

RECEIVED
SEP 2002
Hobbs OCD

24. SIGNED: Bob Williams — Bob Williams — TITLE: Drilling Superintendent — DATE: 06/17/2002

(THIS SPACE FOR FEDERAL OR STATE OFFICE USE)

PERMIT NO. _____ APPROVAL DATE _____

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:

APPROVED BY: /s/ Mary J. Rugwell — For TITLE: FIELD MANAGER — DATE: SEP 13 2002

TITLE 18 U.S.C. SECTION 1001, MAKES IT A CRIME FOR ANY PERSONS 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

APPROVAL FOR 1 YEAR

OPER. OGRID NO. 10179
PROPERTY NO. 28097
POOL CODE 53580
EFF. DATE 9-16-02
API NO. 30-025-36001

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SCA

K2

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised February 10, 1994
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
30-025-36661	65350	YOUNG BONE SPRING, NORTH

Property Code	Property Name	Well Number
25097	PEARSALL 6 FEDERAL	4

OGRID No.	Operator Name	Elevation
010179	HARVEY E. YATES COMPANY	3814'

Surface Location

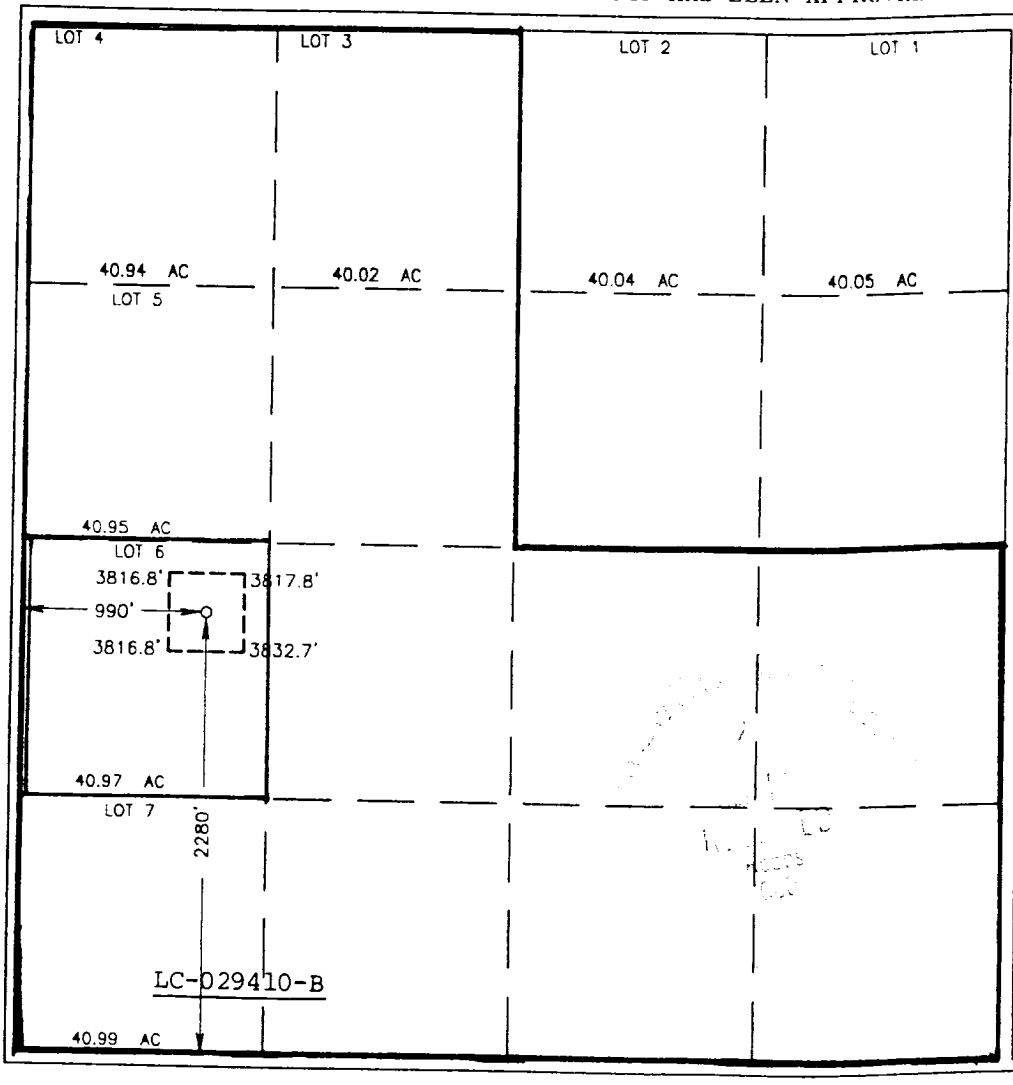
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
6/L	6	18-S	32-E		2280	SOUTH	990	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Bob Williams
Signature

Bob Williams
Printed Name

Drilling Superintendent
Title

June 17, 2002
Date

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 supervison, and that the same is true and correct to the best of my belief.

JUNE 11, 2002
Date Surveyed AWB

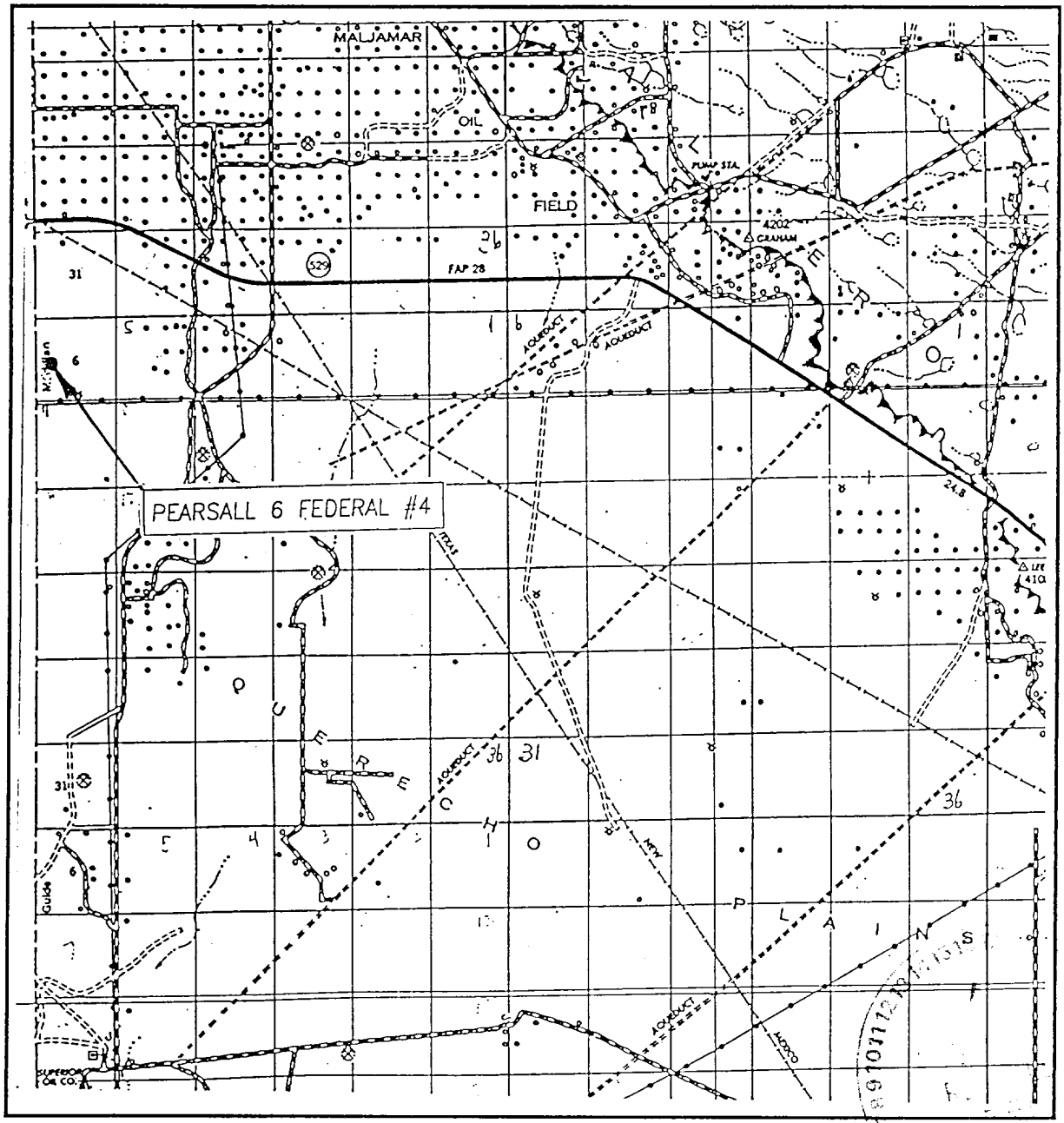
Signature & Seal of Professional Surveyor

Ronald J. Eidson 6/13/02

02.11.0446

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 6 TWP. 18-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 2280' FSL & 990' FWL

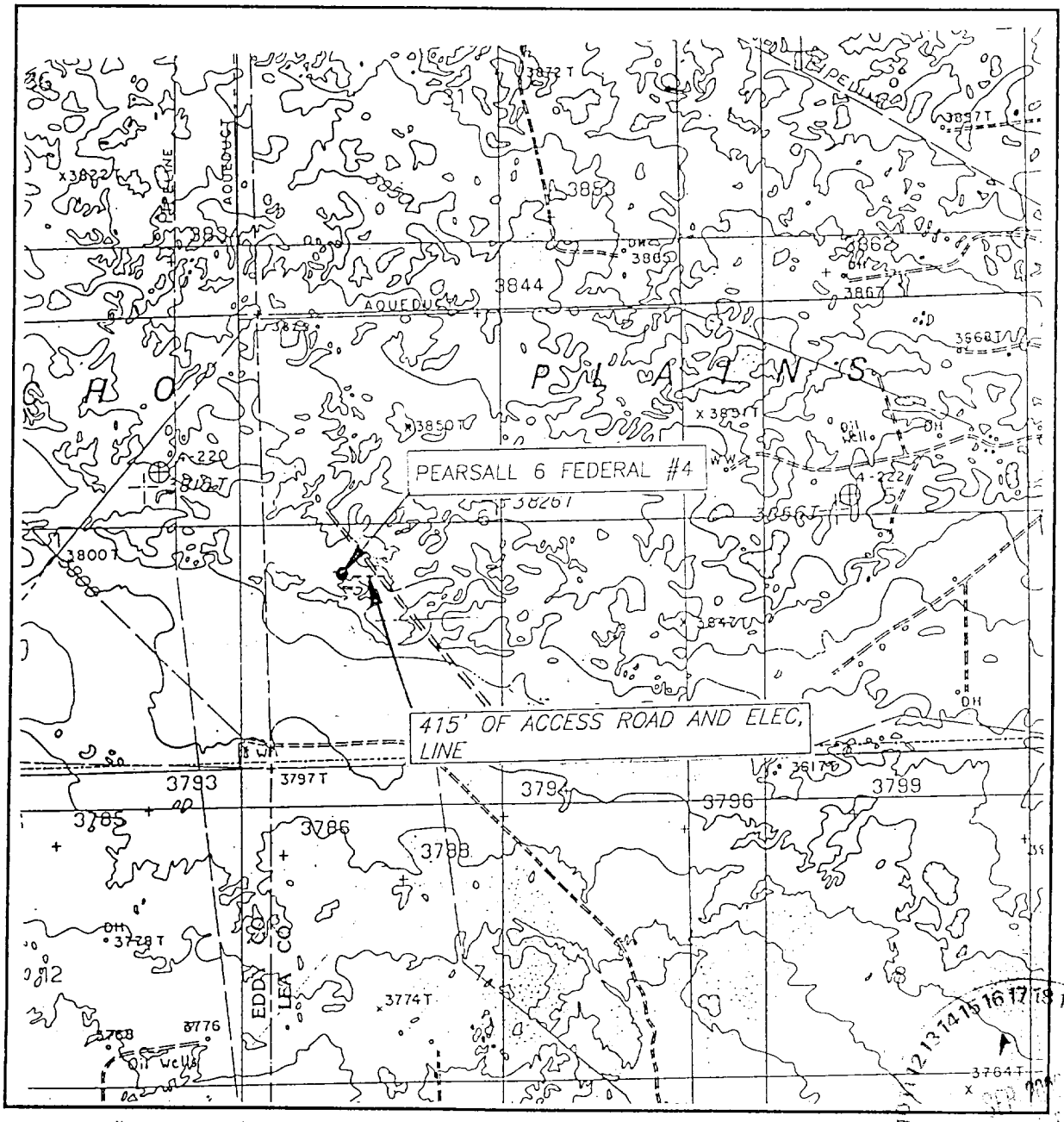
ELEVATION 3814

OPERATOR HARVEY E. YATES COMPANY

LEASE PEARSALL 6 FEDERAL

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
MALJAMAR, N.M.

SEC. 6 TWP. 18-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 2280' FSL & 990' FWL

ELEVATION 3814'

OPERATOR HARVEY E. YATES COMPANY

LEASE PEARSALL 6 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
MALJAMAR, N.M.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

Application
Harvey E. Yates Company
Pearsall 6 Fed #4
Section 6, T18S, R32E
Lea County, New Mexico

In conjunction with Form 3160-3, Application For Permit To Drill Or Deepen subject well, Harvey E. Yates Company submits the following ten items of pertinent information in accordance with Onshore Oil & Gas Order No 10.

1. Geologic Name of Surface Formation:
   Quaternary allunium and bolson deposits.

2. Estimated Tops of Significant Geologic Markers:

Rustler	965	Loco Hills	4,185	Top B Sand	8,280
Yates	2,495	San Andres	4,640	Top C Sand	8,510
Seven Rivers	2,880	Delaware	4,780	Base C Sand	8,690
Bowers	3,315	BSPG	5,690	C-Zone	8,750
Queen	3,545	BSPG 1st Sand	7,585	3rd Sand	8,900
Penrose	3,815	B-Zone	7,785	Wolfcamp	9,250
Grayburg	4,075	BSPG 2nd Sand	8,230		

3. Estimated Depths at which Water, Oil, or Gas Formations are expected:
   Oil: 4,640
   Gas: 4,640

4. Proposed Casing Program:
   See Form 3160-3

5. Pressure Control Equipment:
   This well will be rated 3M

   Request for variance on BOP for drilling 12 1/4" intermediate hole.
   Due to no pressured formations from base of surface to TD of 12 1/4" hole @ 3,100',
   we propose to:
   1. Use a 3,000 psi BOP with one set of pipe rams and one set of blind rams.
   2. Test the 13 3/8" casing and BOP stack to 1,000 psi with rig pump prior to drilling 13 3/8" casing shoe.
   3. Change pipe rams to 8 5/8" rams prior to running 8 5/8" casing.

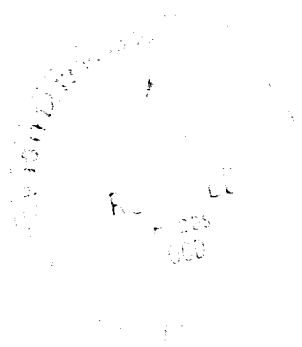
6. Drilling Fluid Program:
   See Form 3160-3

7. Auxiliary Equipment:
   H2S Compliance Package.

8. Testing, Logging, and Coring Program:
   One possible DST is planned for the Bonespring B or C Zone
   The planned logs are Western Atlas CNL-ZDEN, DACS, and DLL-MLL

9. Abnormal Conditions, Pressures, Temperature, or Potential Hazards:
   No abnormal conditions are anticapated in this wellbore
   BHST 160° F
   BHP 2,000 psi

10. Anticipated Starting Date & Duration of Operation:
    Spud Date: Approximately August 1, 2002. Duration of this project will be approximately 40 days from start of construction of drilling pad until finish of completion operations.



Surface Use Plan
Harvey E. Yates Company
Pearsall 6 Fed #4
Section 6, T18S, R32E
Lea County, New Mexico

1 **Existing Roads:**
Exhibit A is a portion of a New Mexico map showing the location of the proposed location. The location is approximately 20 miles SouthWest of Maljamar, NM. Leave Artesia on U.S. 82 & travel 31 miles east to the junction of NM 529. Turn Southeast and go 7 miles to NM 126. Turn South & go 2.6 miles. Turn right & go .6 miles. Turn right & go .4 miles. Turn left & go .5 miles. Turn right & go .3 miles to location.

2 **Planned Access Roads:**
Approximately 1,320' of new road will be built to access this location.

3 **Location of Existing Wells:**
See EXHIBIT B

4 **Location of Tank Batteries, Electric Lines, Etc:**
In the event a producing well is drilled, a tank battery will be built on the location.

5 **Location and Type of Water Supply:**
Water will be obtained from commercial sources.

6 **Source of Construction Material:**
We will use materials from the primary and auxillary reserve pits to build the location.

7 **Methods of Handling Waste Disposal:**
Waste will be handled in an approved manner. The wellsite will be cleaned of all waste within 30 days of final completion of the well.

8 **Ancillary Facilities:**
N/A

9 **Wellsite Layout:**
a. EXHIBIT D shows the relative location and dimensions of the well pad, reserve pits, and major rig components.

b. The land is rolling and sandy

c. The pad and pit area have been staked.

10 **Plan for Restoration of the Surface:**
a. After drilling and completion operations are completed, all equipment and other materials not needed for further operations will be removed. Pits will be back filled and the location cleaned of all trash to leave the wellsite as pleasant in appearance as possible.

b. If the proposed operation is nonproductive, all restoration and/or vegetation requirements of the BLM will be complied with, and will be accomplished as quickly as possible. All pits will be filled and leveled within 90 days after abandonment.

11 **Other Information:**

a. The surface and mineral owner is the Federal Government. The grazing Lesee is Williams & Son Cattle Company, and they have been contacted regarding operations.

b. The topography consists of sandy soil with native grasses. No wildlife was observed, but the usual inhabitants of this region are Jackrabbits, Reptiles, Coyotes, etc.

c. There are no ponds, lakes, or rivers in this area.

d. An Archaeological Survey has been made and a copy has been sent to the Carlsbad BLM office. There are no occupied dwellings or windmills in the area.

e. Should any incidental oil be recovered during testing of this well, this oil will be considered waste oil and not sellable due to contamination by drilling and/or completion fluids.

12 **Operator's Representative:**

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

Bob Williams

Bob Williams Drilling Superintendent
Harvey E. Yates Company
P.O. Box 1933
Roswell, NM
505-623-6601

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Roswell Resource Area
P.O. Drawer 1857
Roswell, New Mexico 88202-1857

Statement Accepting Responsibilities for Operations

Operator Name: Harvey E. Yates Company
Street or Box: P.O. Box 1933
City, State: Roswell, New Mexico
Zip Code: 88202

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

Lease No.:NMNM100590

Lease Name: Pearsall 6 Fed #4

Legal description of land: Sec 6, T18S, R32E, Lea County, New Mexico

Formation(s) (if applicable): Bonesprings 2nd sand

Bond Coverage: (State if individually bonded or another's bond): Blanket Bond

BLM Bond File No.:

Authorized Signature: Bob Wilson

Title: Drilling Superintendent

Date: June 17, 2002

EXHIBIT "C" BOP STACK

Pearsall 6 Fed #4
2,280' FSL & 990' FWL
Sec 6, T18S, R32E
Lea County, NM

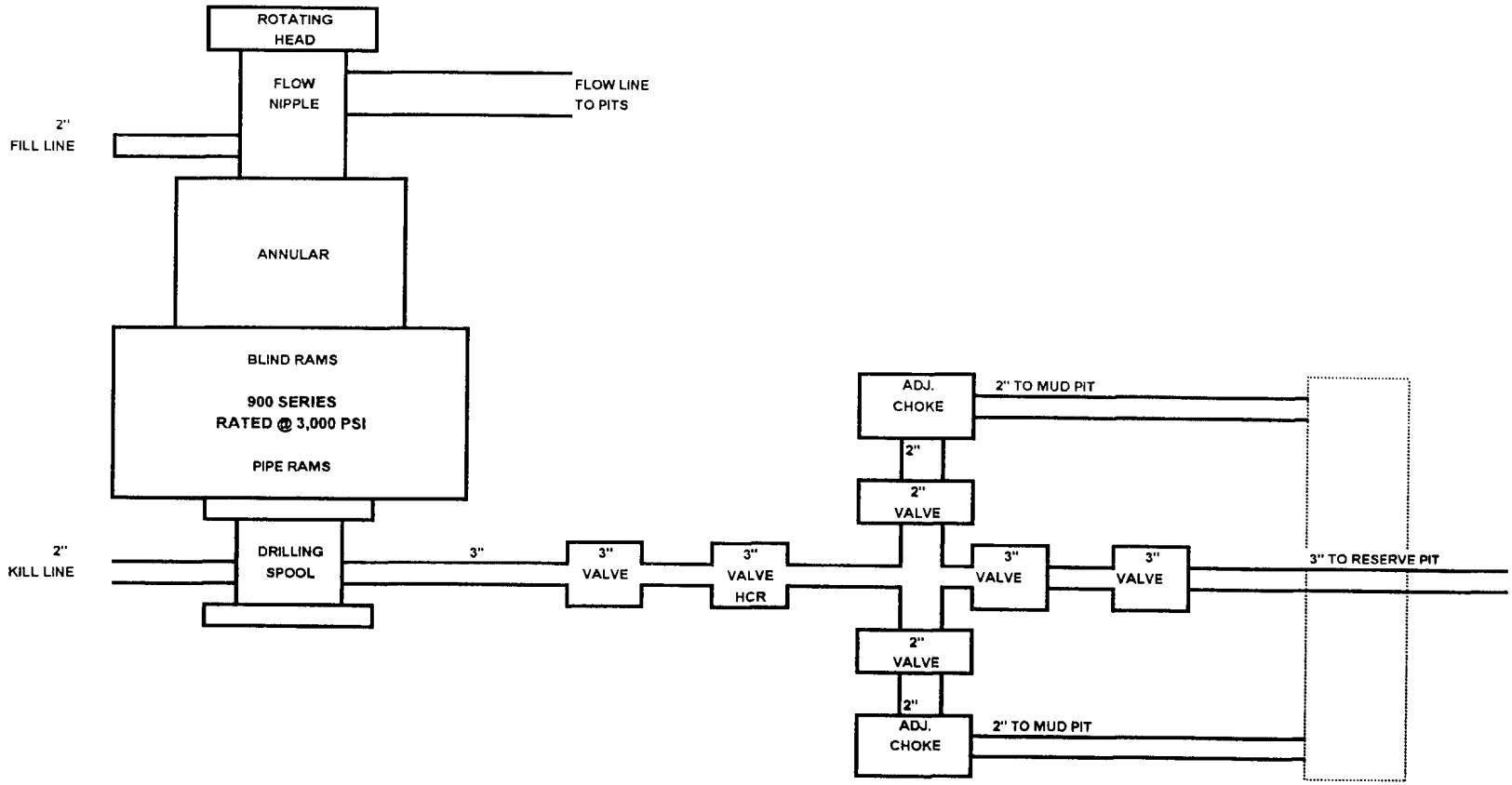


EXHIBIT "D" LOCATION DIAGRAM

Pearsall 6 Fed #4
2,280' FSL & 990' FWL
Sec 6, T18S, R32E
Lea County, NM

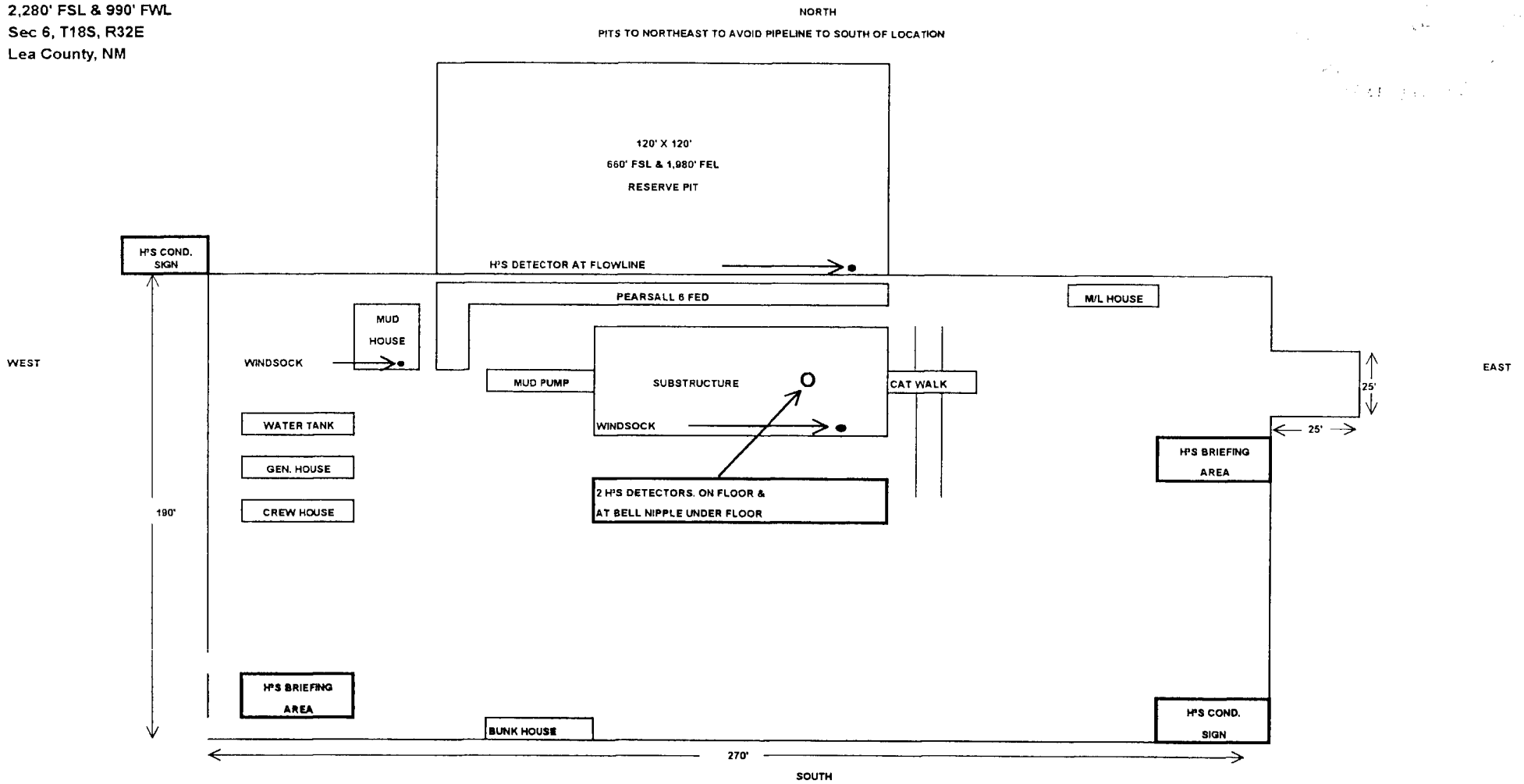


EXHIBIT "E" CASING DESIGN

Casing Design

Pearsall 6 Fed #4
2,280' FSL & 990' FWL
Sec 6, T18S, R32E
Lea County, NM

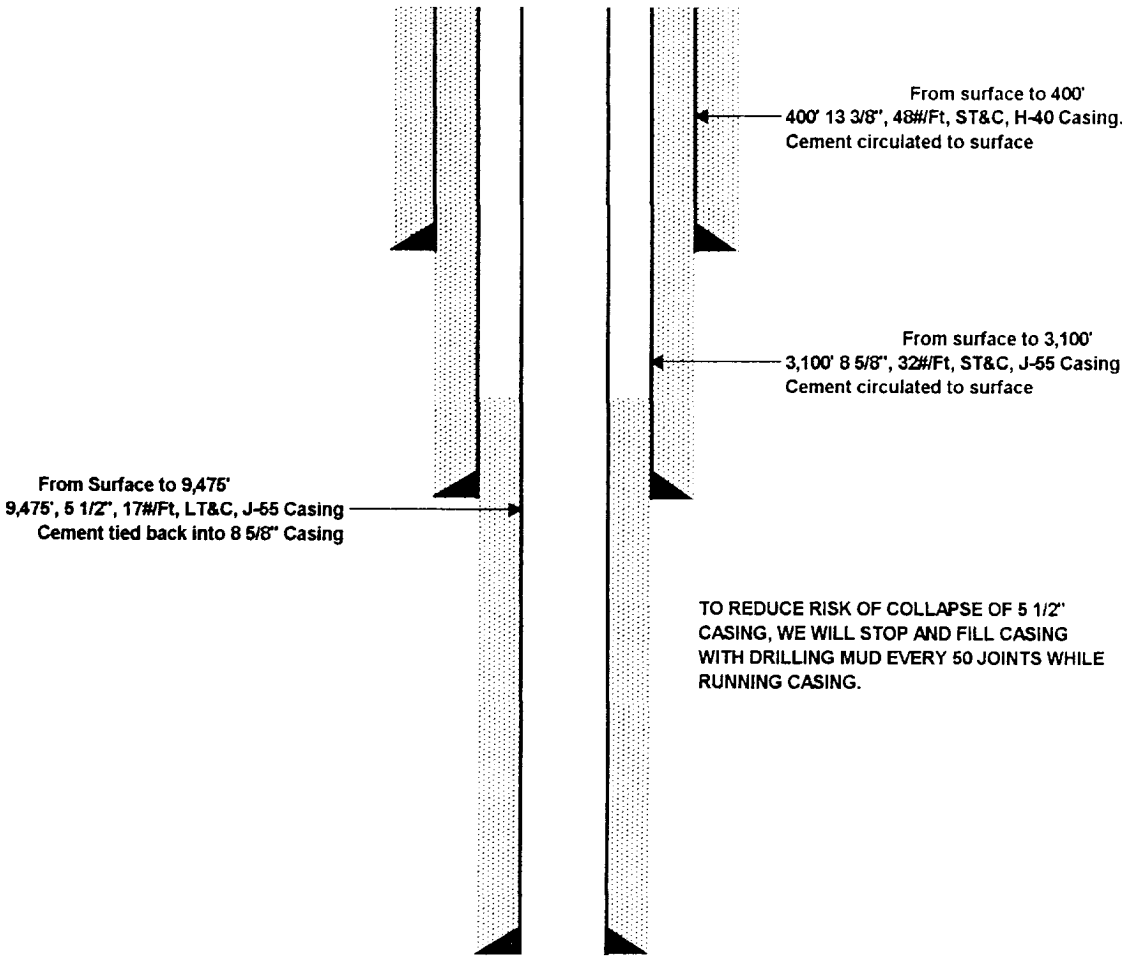


EXHIBIT "F"

Pearsall 6 Fed #4
2,280' FSL & 990' FWL
Sec 6, T18S, R32E
Lea County, NM

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis will show proof of training from a qualified instructor in the following areas before commencing any work on the above named 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 signs, briefing areas, and evacuation procedures.
5. The proper technique for rescues.

II H^2S Safety Equipment and Systems

All H^2S safety equipment and systems will be installed 1,000 feet prior to penetrating the first zone containing or reasonably expected to contain H^2S.

1. Well Control Equipment

   A. Choke manifold with a minimum of two adjustable chokes.
   B. Blind and pipe rams to accommodate all pipe in use.
   C. Auxiliary equipment to include annular preventer and rotating head.

2. Protective equipment for essential personnel

   A. Four 5 minute escape units in top dog house.
   B. One 30 minute SCBA at each briefing area.

3. H^2S detection and monitoring equipment

   A. Three channel monitor located on floor, with detectors located on floor, on flow nipple, and on flow line on mud pit.

4. Visual Warning Systems

   A. Windsock located on floor and mud pits.
   B. Briefing area signs located on NE & SW corners of pad.
   C. H^2S Condition sign located at entrance to location.

5. Mud Program

The mud program has been designed to minimize the volume of possible H^2S circulated to surface. Proper weight, safe drilling practices, and the use of H^2S scavengers will minimize hazards when penetrating possible H^2S bearing zones.

6. Metallurgy

All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifolds, and associated lines and valves shall be suitable for an H^2S environment.

7. Communications

Drilling rig and company vehicles will be equipped with two way radios or cellular telephones.

8. Well testing

One Drill Stem Test is planned for this well.

EXHIBIT "G"

Harvey E. Yates Company
Pearsall 6 Fed #4
2,280' FSL & 990' FWL
Sec 6, T18S, R32E
Lea County, NM

Temporary Condition of Approval:

Drilling Fluids, Casing and Cementing Requirements for Most of Lea County:

Casing and Cementing

Surface casing is to be set at a sufficient depth to protect useable water zones and cement circulated to surface. In areas where the salt section (Salado) is present, surface casing should be set at least 25 feet into the top of the Rustler Anhydrite and cement circulated to the surface.

As an alternative, surface casing may be set through the Santa Rosa Formation or other potable water bearing zones and circulate cement to surface. For wells requiring an intermediate casing string, such string shall be cemented to the ground surface. In the case where intermediate casing is not required the operator shall case and cement the production hole to the ground surface.

While drilling from the surface casing to the Rustler fm it is recommended that operators periodically sweep the hole with viscous low water loss pills to help build a filter cake across useable water zones in the redbeds.

Drilling Fluid

Fresh water or fresh water spud mud shall be used to drill to surface casing depth. If surface casing is set at a lesser depth than the top of the Rustler fm., fresh water spud mud may be used to drill down to the first salt in the Rustler Fm. after which brine or fresh water may be used.

Non-toxic or biodegradable water based polymers, drilling paper, starch and gels may be used in the mud system in order to retard seepage into the redbeds.

Two to five percent diesel or crude oil may be used in the redbed section in order to control heaving shales and mudstones.

Caustics and Lime shall not be used in the red beds but may be added when the Rustler formation is reached. However, sodium carbonate maybe used for alkalinity or ph control while drilling the redbeds above the Rustler fm.

Additionally, questions of whether an additive may be used should be referred to the Roswell Field office.