

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, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P. O. Box 2088
Santa Fe, NM 87504-2088

Form C-101

Revised February 10, 1994

Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address. Apache Corporation		² OGRID Number 873
C/o J. O. Easley, Inc., P. O. Box 2691, Roswell, NM 88202-2691		³ API Number 30-025 - 34554
⁴ Property Code 22879	⁵ Property Name Owen B	⁶ Well No. 7

⁷ Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
K	34	21S	37E		1650	South	2310	West	Lea

⁸ Proposed 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
⁹ Proposed Pool 1 Penrose, Skelly Grayburg					¹⁰ Proposed Pool 2				

¹¹ Work Type Code N	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 3429'
¹⁶ Multiple No	¹⁷ Proposed Depth 4500'	¹⁸ Formation Penrose-Grayburg	¹⁹ Contractor	²⁰ Spud Date 1-7-99

²¹ Proposed Casing and Cement Program

Hole size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
11"	8 5/8"	24#	1200'	350	Circ to Surf
7 7/8"	5 1/2"	17#	3950'	705	Circ to Surf

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

See Exhibit "C"

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Ken Hammonds

Printed name: **Ken Hammonds**

Title: **Agent for Apache Corporation**

Date:

Phone: **505-625-8807**

OIL CONSERVATION DIVISION

Approved by: *William*

Title:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

EXHIBIT "A"

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

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34554	Pool Code 50350	Pool Name Penrose; Skelly-Grayburg
Property Code 22879	Property Name OWEN B	Well Number 7
OGRID No. 873	Operator Name APACHE CORPORATION	Elevation 3429'

Surface Location

UL or lot No. K	Section 34	Township 21 S	Range 37 E	Lot Idn	Feet from the 1650	North/South line SOUTH	Feet from the 2310	East/West line WEST	County LEA
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Bottom Hole Location If Different From Surface

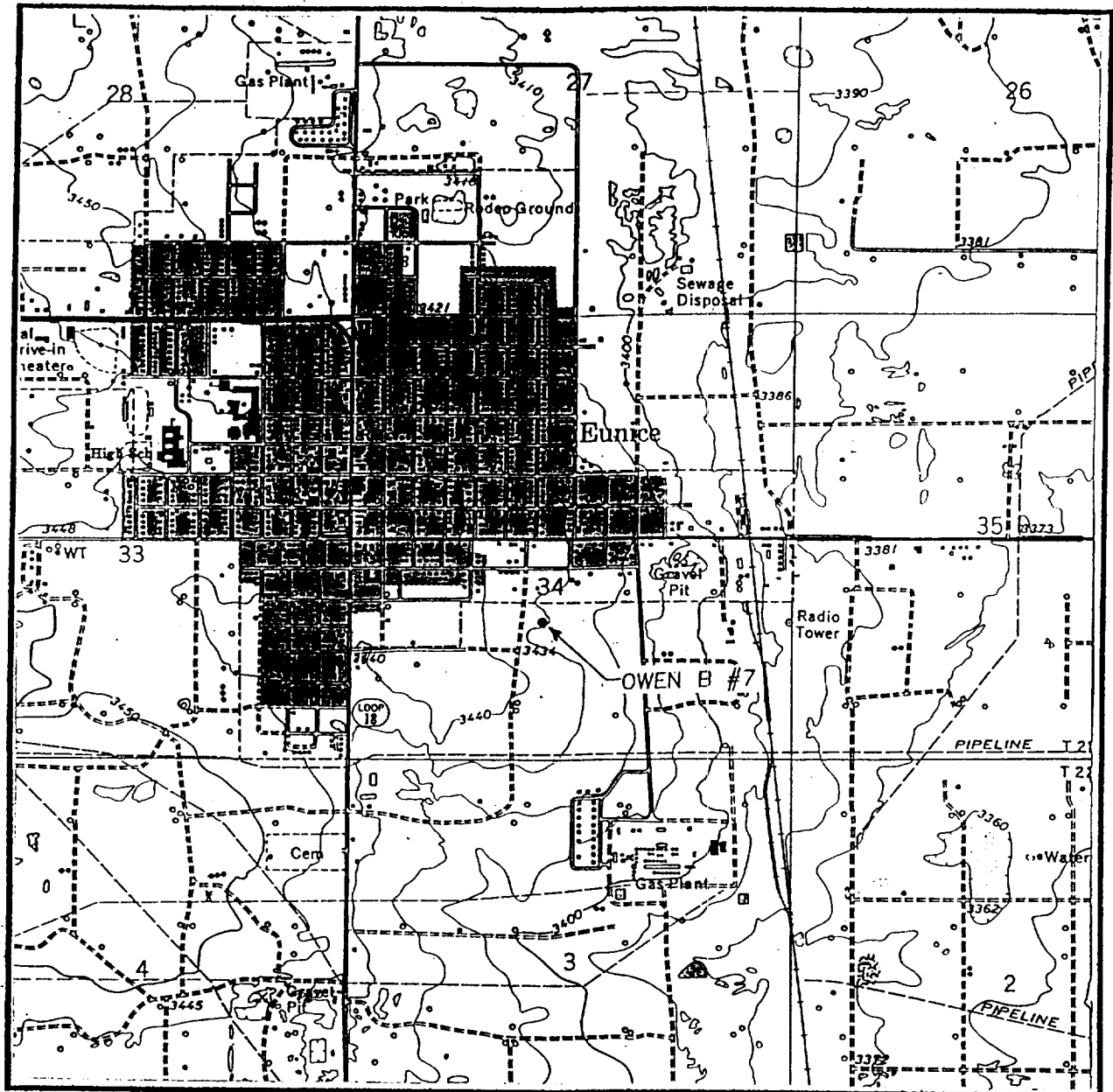
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

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. Signature Ken Hammonds Printed Name Agent for Apache Corp Title 12/16/98 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 supervision, and that the same is true and correct to the best of my belief. OCTOBER 1, 1998 Date Surveyed CDG Signature & Seal of Professional Surveyor Certificate No. RONALD J. EDSON 3239 GARY EDSON 12641

EXHIBIT "B"

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL - 10'

SEC. 34 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1650' FSL & 2310' FWL

ELEVATION 3429'

OPERATOR APACHE CORPORATION

LEASE OWEN B

U.S.G.S. TOPOGRAPHIC MAP

EUNICE, NM

**JOHN WEST ENGINEERING
HOBBS, NEW MEXICO**

(505) 393-3117

EXHIBIT "B2"



SEC. 34 TWP. 21-S RGE. 37-E
SURVEY _____ N.M.P.M.
COUNTY _____ LEA
DESCRIPTION 1650' FSL & 2310' FWL
ELEVATION _____ 3429'
OPERATOR APACHE CORPORATION
LEASE _____ OWEN B

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

EXHIBIT "C"
Owen B #7

DRILLING PROGRAM

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

II. Estimated Tops of Geological Markers:

<u>FORMATION</u>	<u>DEPTH</u>
Yates	2500'
Grayburg	3600'
TD	4500'

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

<u>SUBSTANCE</u>	<u>DEPTH</u>
Fresh Water	None anticipated
Oil	3600'
Gas	None anticipated

IV. A. Proposed Casing Program:

<u>HOLE SIZE</u>	<u>CASING SIZE</u>	<u>GRADE</u>	<u>WEIGHT PER FOOT</u>	<u>DEPTH</u>
11"	8 5/8"	K55 STC	24#	1200'
7 7/8"	5 1/2"	K55 LTC	17#	3950'

B. Proposed Cement Program:

8 5/8" Cement with 350 sx PBCZ to surface.
5 1/2" Cement with 445 sx Interfill "C" and 260 sx POZ 50/50 premium.

The top of cement is designed to reach 100' above 8 5/8" casing shoe.

V. Proposed Mud Program:

The well will be drilled to total depth using fresh water & brine. 8.6-9.2 weight mud using fresh water will be used from surface to 1200' and 9.0 - 10.3 weight mud with brine water will be used from 1200' to TD.

VI. Proposed Control Equipment:

Will install on the 8 5/8" surface casing a 10" Series 900, Type "E", Shaffer Double Hydraulic BOP, with pipe and blind rams and annular stabbing valve, and will test before drilling in the Queen formation. BOP working pressure: 3000 psi. See Exhibit "E" for BOP layout.

VII. Auxiliary Equipment:

Blowout preventor, gas detector, kelly cock, pit level monitor, flow sensors, and stabbing valve.

VIII A. Testing Program:

Drill Stem Tests: None planned

B. Logging Program:

Density Neutron

C. Coring Program:

None planned

IX. 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.

EXHIBIT "D"
Owen B #7

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 (H₂S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S 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 H₂S 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 H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S 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.

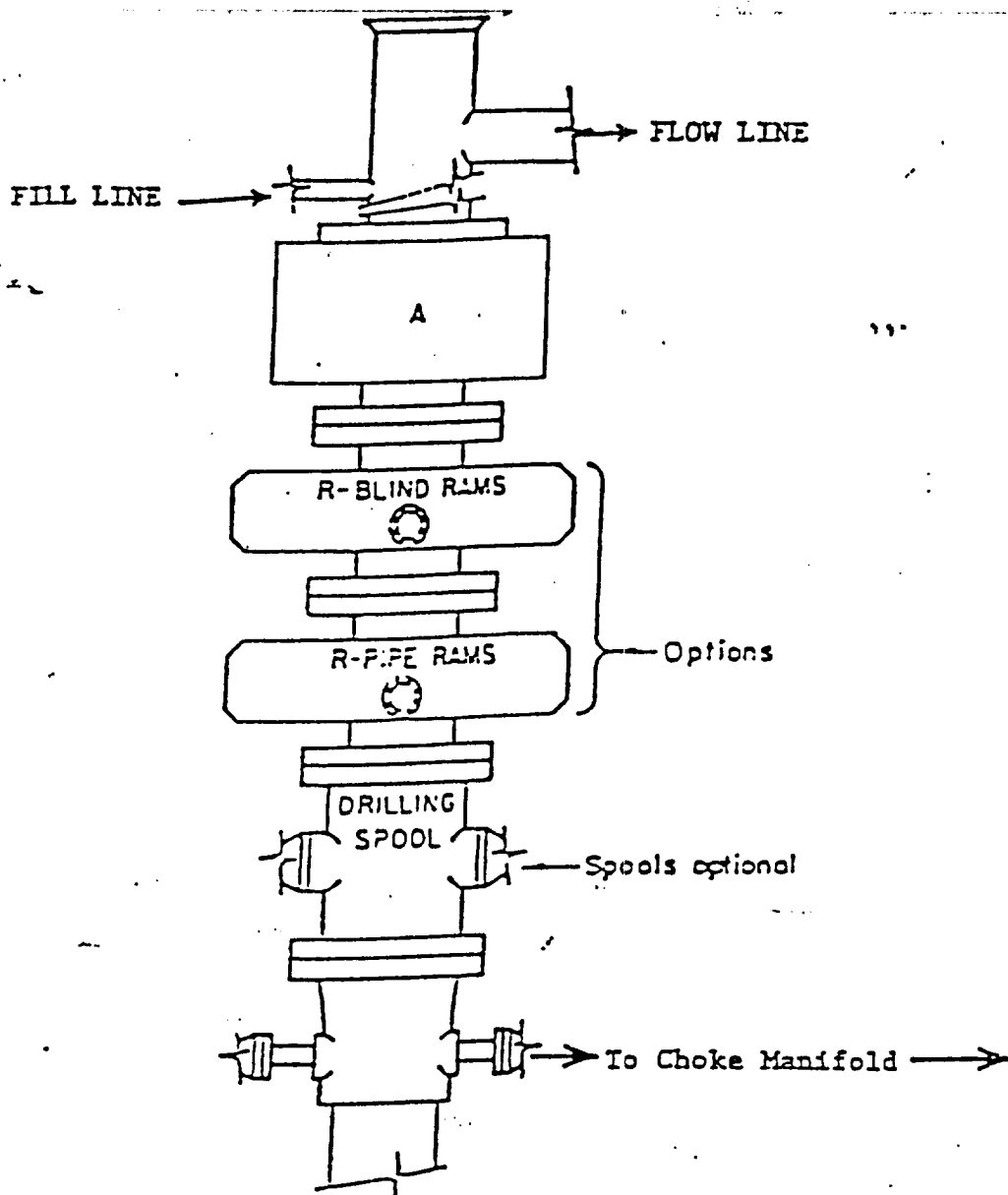
II. H₂S Safety Equipment and Systems

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating, the first zone containing, or reasonably expected to contain, H₂S.

1. **Well Control Equipment:**
 - 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, as indicated on Exhibit "F".
3. **H₂S detection and monitoring equipment:**
 - A. Two portable H₂S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 20 ppm are reached.
 - B. One portable SO₂ monitor positioned near flare line.
4. **Visual warning systems:**
 - A. Wind direction indicators as shown on Exhibit "F".
 - 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 H₂S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H₂S scavengers will minimize hazards when penetrating H₂S-bearing zones.
 - B. A mud-gas separator and an H₂S gas buster will be utilized.

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 H₂S service.
 - B. All elastomers used for packing and seals shall be H₂S trim.
7. Communication:
 - A. Radio communications in company vehicles including cellular telephone and 2-way radio.
 - B. Land Line (telephone) communications at field office.
8. Well testing:
 - A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours, and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H₂S environment will use the closed chamber method of testing.

EXHIBIT "E"
Owen B #7

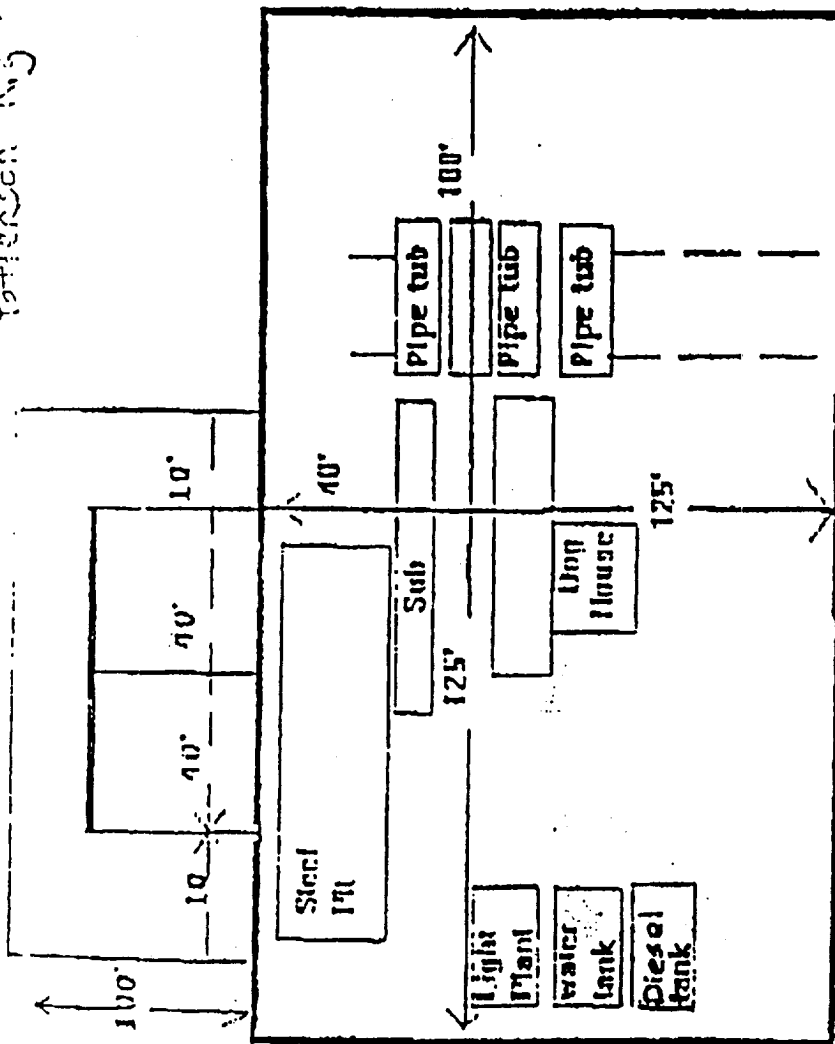


ARRANGEMENT SRRA

900 Series
3000 PSI WP

EXHIBIT "F"
Owen B #7

Patterson Rig #65



4/11/97

1
1000
1000

1000
1000
1000