



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

GREY CARPENTERS
GOVERNOR

11000 IROUADZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-8178

Date: 7-10-70

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

Re: Proposed HC _____
Proposed DHIC _____
Proposed NSL ~~_____~~
Proposed SWD _____
Proposed WFX _____
Proposed FMX _____

Gentlemen: DD X

I have examined the application dated 7-10-70
for the UNOCAL DAY B #8
Operator Lease & Well No.

A-7-27N-8W and my recommendations are as follows:
Unit, S-T-R

Approved

Yours truly,

Eric Bush

Unocal Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145

OIL CONSERVATION DIVISION
RECEIVED

UNOCAL

'90 JUL 5 AM 9 31

July 2, 1990

Farmington District

Mr. William Lemay, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
State Land Office Building
Post Office Box 2088
Santa Fe, New Mexico 87503

RECEIVED

JUL 10 1990

**OIL CON. DIV.
DIST. 3**

Attn: E. Busch

7/9/90

Re: Application of Union Oil Company of California
dba Unocal for a Directional Drilling Project
and Unorthodox surface location for the Day B #8
well, San Juan County, New Mexico

Dear Mr. Lemay:

Union Oil Company of California dba Unocal hereby makes this application for administrative approval for a deviated drilling project in the N/2 Section 7, T27N, R8W, San Juan County, New Mexico, forming a standard 320 acre coal gas spacing and proration unit in the Basin Fruitland Coal Gas Pool for its Day B #8 well. The well is proposed to be spudded at an unorthodox location in the NE/4 Section 7, T27N, R8W, and directionally drilled to a standard location in the same section quarter. This project qualifies for administrative approval pursuant to the provisions of Rules 8 and 9 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool as follows:

1) The proposed well will be located in the narrow steep-walled Fresno Canyon at the base of Hollis Pass. Due to topographic and wildlife considerations a standard surface location in the northeast quarter of Section 7 is not available. Extensive blasting and road work would be necessary in order to make a standard location, and the Bureau of Land Management has indicated its disapproval of this option. The well can, however, be drilled from the existing pad of the plugged and abandoned Day B #3 well located at 724 feet from the North line and 1222 feet from the West line, Section 7, T27N, R8W.

2) The surface location of the proposed well is at an unorthodox location 734 feet from the North line and 1,233 feet from the West line of Section 7, approximately 15 feet southwest of the abandoned Day B #3 wellbore. Since encountering the old wellbore would be detrimental to drilling operations, Unocal proposes the well be deviated to the southwest with a projected bottom-hole location of 876 FNL and 1375 FEL, Section 7, T27N, R8W. As such the bore hole will not enter or exit the coalbed seams outside of a drilling window which is in accordance with the setback requirements of Rule 7 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool, for its bottom-hole location will be no closer than 790 feet to the outer boundary of the unit nor closer than 130 feet to any quarter section line as shown on the copy of OCD Form C-102 which is attached to this application.

3) In accordance with Rule 9(B) a copy of this application has been submitted to all offset owners and operators by certified mail return receipt with a request that they furnish the OCD with a Waiver of Objection, and that they return one copy to Unocal's office. A map of the Day B lease is attached to this application showing offset operatorship.

4) A schematic drawing and footage tabulation of the proposed well is attached to this application which describes the casing, tubing, perforated interval, kick-off point, and proposed trajectory of the drain hole section.

5) Unocal during, or upon completion of drilling operations, will conduct a directional survey on the vertical and lateral portions of the wellbore and submit a copy of this survey to the Santa Fe and Aztec Offices of the Division.

Union Oil Company of California, therefore, requests that the Director approve this application for a directional project and an unorthodox surface location.

Respectfully submitted,

Union Oil Company of California
dba Unocal


Bill Hering
District Petroleum Engineer

STATE OF NEW MEXICO)
)
COUNTY OF SAN JUAN)

APPLICANT'S STATEMENT AND AFFIDAVIT

BEFORE ME, the undersigned authority on this day personally appeared Bill Hering, known to me to be the person whose name is subscribed to this instrument, who, having been by me first duly sworn, upon oath states as follows:

- (1) That this Statement and Affidavit is made concerning administrative approval for a non-standard surface location exception and a deviated drilling project for the:

Day B # 8
NE 1/4 section 7, T27N, R8W
San Juan County, New Mexico
Basin Fruitland Coal Gas Pool

- (2) That to the best of his information, knowledge and belief, the land plat showing offset operations and working interest owners and any off setting wells producing from the same pool or formation is current and correct.
- (4) That notice has been mailed, return receipt, to all working interest owners adjacent to the proration unit requesting a waiver of objection and that a copy at their election be sent to the New Mexico Oil Conservation Division

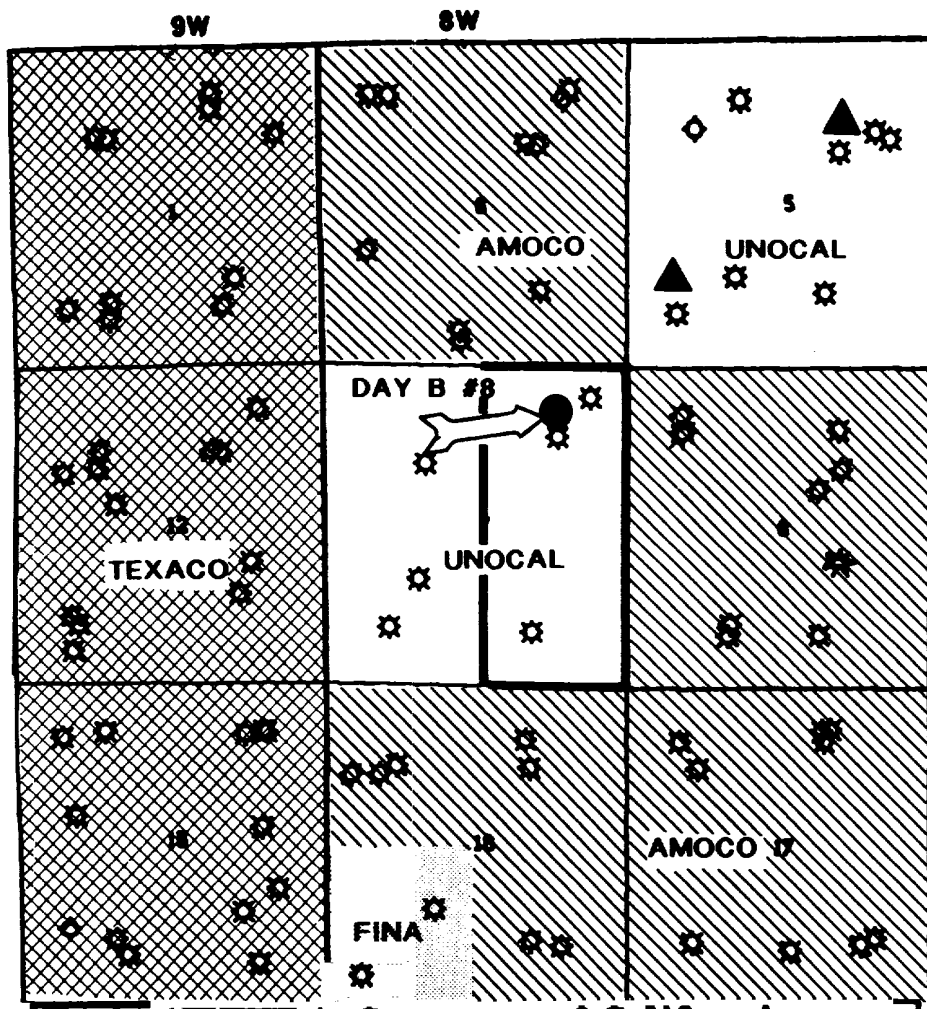
- (5) That he certifies that the information and data contained in the request are true and correct and that all copies of records or summaries of such records relied upon in the petition are true, correct and authentic copies of documents on file in the offices of Union Oil Company of California.
- (6) That he is of lawful age, that he is a responsible official of Union, that he is duly authorized to make this Statement and Affidavit on behalf of Union, that he has knowledge of the facts contained herein, that this Statement and Affidavit is true and correct, and that he adopts the allegations herein as his sworn statement.

Bill Hering

SUBSCRIBED AND SWORN TO before me, this undersigned authority, on this day of July 2nd, 1990.

Melissa Osborne
Notary Public in and for
San Juan County, New Mexico

My Commission Expires: 01/11/92



Union Oil Company of California
OIL AND GAS DIVISION
SOUTHWESTERN REGION

DAY 'B' LEASE

SAN JUAN COUNTY

OFFSET OPERATORS

● **PROPOSED FRUITLAND WELL**
 ▲ **EXISTING FRUITLAND WELLS**

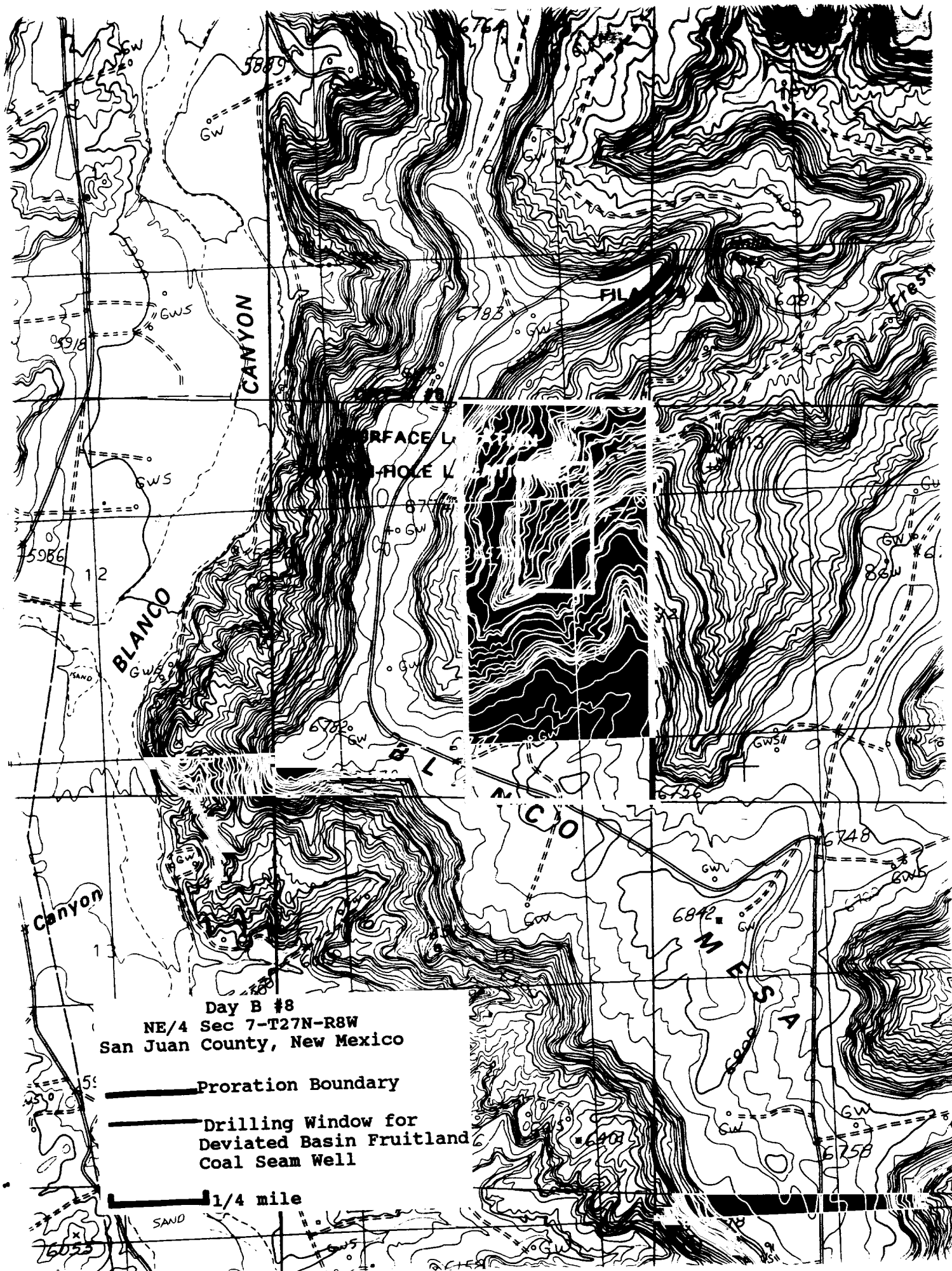
INTERPRETED BY	DATE MAY 4, 1980	SCALE 1" = 3,000 FEET	DATUM NAD83
DRAFTED BY	CONTOUR INTERVAL	LAT 36.55555	LONG -107.70000

OFFSET OWNERSHIP
Day B #8 Well
NE/4 Section 7, T27N, R8W
San Juan County, New Mexico

<u>Location</u>	<u>Operator</u>	<u>Working Interest Owner</u>
NW/4 Sec 7	Unocal 3300 N. Butler, Ste 200 Farmington, NM 87401	Meridian Oil, Inc. P.O. Box 4289 Farmington, NM 87499 Burton - Hawks, Inc. P.O. Box 359 Casper, Wyoming 82602
SW/4 Sec 7	Unocal	Meridian Oil, Inc.
NW/4 Sec 18	Amoco Production Company P.O. Box 800 Denver, CO 80201	Conoco, Inc. 3817 NW Expressway Oklahoma City, OK 73112
NE/4 Sec 18	Amoco Production Company	Conoco, Inc.
NW/4 Sec 17	Amoco Production Company	Conoco, Inc.
SW/4 Sec 8	Amoco Production Company	Conoco, Inc.
NW/4 Sec 8	Amoco Production Company	Conoco, Inc.
SW/4 Sec 5	Unocal	Meridian Oil, Inc. Burton - Hawks, Inc.
SE/4 Sec 6	Amoco Production Company	Conoco, Inc.
SW/4 Sec 6	Amoco Production Company	Conoco, Inc.

WELLS WITHIN THE DAY B #8 PRORATION UNIT

<u>WELL</u>	<u>POOL</u>	<u>LOCATION</u>			<u>STATUS</u>
		<u>U.L.</u>	<u>SEC</u>	<u>I</u> <u>R</u>	
DAY B #1	BLANCO SOUTH PICTURED CLIFFS	A	7	27N 8W	ACTIVE
DAY B #3	BASIN DAKOTA	A	7	27N 8W	P & A'D
DAY B #5	BLANCO MESA VERDE	A	7	27N 8W	ACTIVE
DAY B #7	BLANCO SOUTH PICTURED CLIFFS	0	7	27N 8W	ACTIVE





United States Department of the Interior

BUREAU OF LAND MANAGEMENT
FARMINGTON RESOURCE AREA
1235 LAPLATA HIGHWAY
FARMINGTON, NEW MEXICO 87401



IN REPLY REFER TO:
SF-078571 (WC)
3160.5-1(a) (019)

JUN 05 1999

Union Oil Company of California
c/o Mr. Chris Russell
P. O. Box 2074
Farmington, NM 87499

Dear Mr. Russell:

Enclosed please find a copy of a memorandum from Paul Corbett, Farmington Resource Area Wildlife biologist. This correspondence concerns the location of your well No. 8 Day B, proposed to be located in sec. 7, T. 27 N., R. 8 W., lease SF-078571. Due to the outlined wildlife concerns, the rough topography, and the significant amount of additional disturbance required, BLM requests this well be relocated. The new location is proposed at 734' FNL and 1233' FEL in sec. 7, T. 27 N., R. 8 W.; only slightly unorthodox. This move would significantly improve the access road and well pad.

If you have any additional questions please contact Don Ellsworth at (505) 327-5344.

Sincerely,

Bruce E. Ellsworth

Ron Fellows
for Area Manager

Enclosure

March 27, 1990

Field Investigation: Day B #8 well site

I went to the area that was layed out for the well site for the Day B #8 well and the associated access road to investigate the area for wildlife values in regards to the proposal for the development of this well.

I found the area to be utilized by deer, coyote, several rodents and small game as well as several song birds. The habitat in the area for big game (deer) is good and supports several browse species. These plants are being utilized but are in good condition. There is no evidence of water being available on the bench.

These bench areas are crucial for wildlife. They provide for resting and escape cover for adult animals and young. They are used for access and movement to and from water and feeding areas. They represent the only source of undisturbed habitat in many of the areas where well development has been occuring over the last 20 years. In this respect they are a stronghold and are considered crucial in many of the areas of oil and gas development, because of there unique status.

This bench has an awful lot of rock in the area proposed for the road construction. This would cause a lot of added surface disturbance and cause a lot of destruction of habitat, thus a loss to all wildlife species in the area.

For the above reasons I am against this development and would like to see this well and associated road not be allowed. I asked that this well be relocated.

Paul C. Calkins
Area Biologist

**DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL		5. LEASE NUMBER SF-078571	
1b. TYPE OF WELL GAS		6. IF INDIAN, ALL. OR TRIBE NAME	
2. OPERATOR UNION OIL CO. OF CAL.		7. UNIT AGREEMENT NAME None	
3. ADDRESS OF OPERATOR P O BOX 2074 FARMINGTON, NM, 87401 (505)-325-8786		8. FARM OR LEASE NAME DAY "B"	
		9. WELL NO. # 8	
4. LOCATION OF WELL 734' FNL, 1233' FEL BHL 836' FNL, 1335' FEL		10. FIELD, POOL, OR WILDCAT BASIN FRUITLAND COAL	
		11. SEC. 7, T.27N, R.8W	
14. DISTANCE FROM NEAREST TOWN 30 Miles SE of Bloomfield		12. COUNTY San Juan	13. STATE New Mex.
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE 734'		16. ACRES IN LEASE 320.00	17. ACRES ASSIGNED TO WELL 320
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DRILLING, COMPLETED OR APPLIED FOR ON THIS LEASE: 367'		19. PROPOSED DEPTH TVD 2485' TMD 2490'	20. ROTARY OR CABLE TOOLS Rotary
21. ELEVATIONS (DF, FT, GR, ETC.) 6272' GL		22. APPROX. DATE WORK WILL BEGIN Summer 1990	
23. PROPOSED CASING AND CEMENTING PROGRAM SEE ATTACHED DRILLING PLAN			
24. AUTHORIZED BY: <u>Chris Russell</u>		DATE <u>5/24/90</u>	
AGENT			
PERMIT NO. _____		APPROVAL DATE _____	
APPROVED BY _____		TITLE _____ DATE _____	
NOTE: THIS FORMAT IS ISSUED IN LIEU OF BLM FORM 3160-3			

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

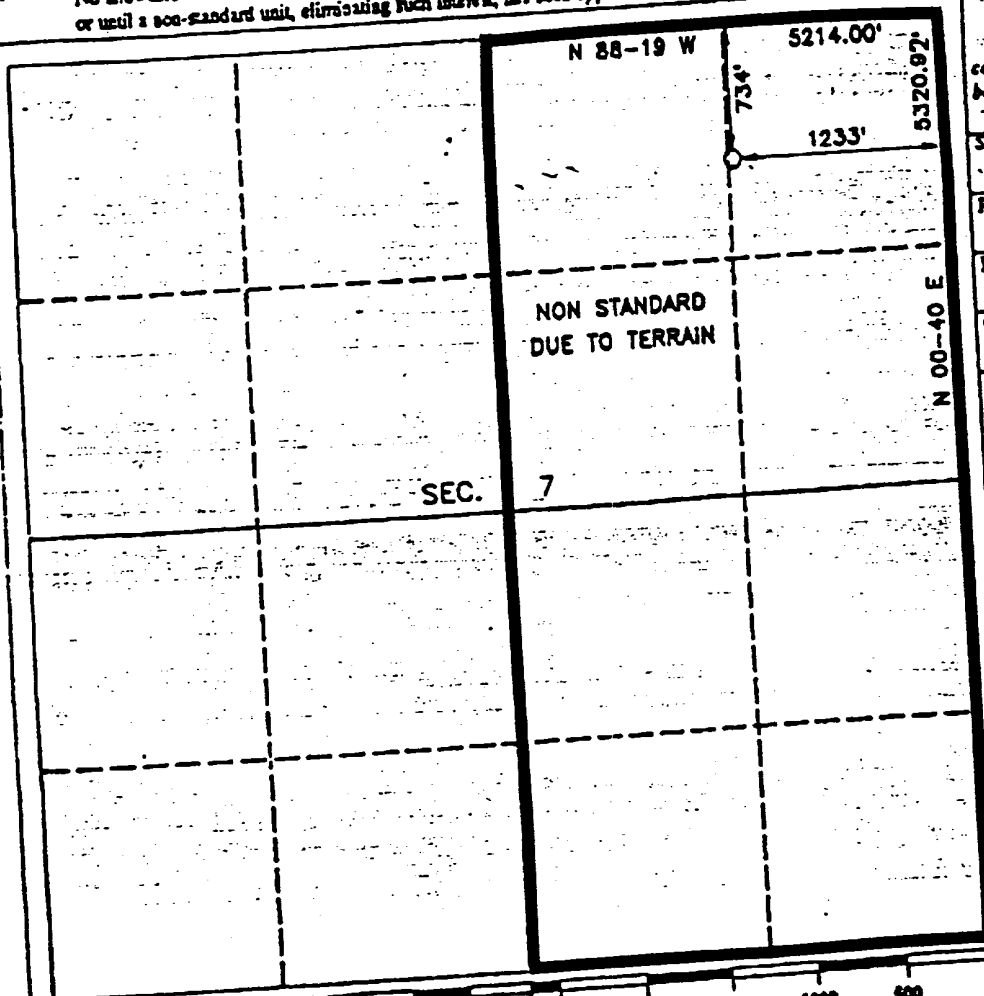
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised 1-1-80

WELL LOCATION AND ACREAGE DEDICATION PLAT
All Distances must be from the outer boundaries of the section

Operator UNION OIL CO. OF CALIFORNIA			Lease DAY B	Well No. 8
Unit Lease A	Section 7	Township T.27 N.	Range R.8 W.	County SAN JUAN COUNTY
Actual Footage Location of Well: 734 feet from the NORTH line and 1233 feet from the EAST line				
Ground level Elev. 6272	Producing Formation FRUITLAND COAL	Pool BASIN FRUITLAND COAL		Dedicated Acreage: 320 Acres

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature *William Hering*
Printed Name **William Hering**
Position **Dist. Petroleum Engineer**
Company **Union Oil Co. of California**
Date **5-14-90**

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 knowledge and belief.

Date Surveyed **APR 10 1990**
Signature of and Seal of Professional Surveyor **R. HOWARD DAGGETT**
Certificate No. **9670**
As Practicing Professional Land Surveyor

8 POINT DRILLING PLAN

1. ESTIMATED FORMATION TOPS

<u>FORMATION NAME</u>	<u>VERT. DEPTH</u>	<u>MEAS. DEPTH</u>	<u>ANGLE</u>
Ojo Alamo	1428'	1430'	4.0
Kirtland Shale	1533'	1536'	4.0
Fruitland Coal	2190'	2194'	4.0
Pictured Cliffs	2395'	2400'	4.0
Total Depth	2485'	2490'	4.0

NOTE: Wellbore will be directionally drilled, kick-off-point will be at 325', angle will be built at a rate of 2.0 deg./100' to a maximum angle of 4 degrees directed southwest of surface location (see attached Section View and Directional Plan attachments 1 and 2).

2. OIL, GAS, WATER, OR OTHER MINERAL BEARING ZONES

EXPECTED GAS ZONES

Fruitland Coal
 Pictured Cliffs

VERT. DEPTH FROM GL

2190' - 2395'
 2395' - TD

EXPECTED WATER ZONES

Ojo Alamo

VERT. DEPTH FROM GL

1428'

Possible water zones will be protected by 8-5/8" surface casing and/or 4-1/2" production strings, both of which will be cemented to surface.

3. PRESSURE CONTROL BOP'S AND RELATED EQUIPMENT

Casing Head: 8-5/8" X 11" - 2000 psi W.P.

BOP Stack and Related Equipment: (See attachments 3, and 4)

One double-gate BOP with 4-1/2" pipe and blind rams.

One choke manifold with adjustable and positive chokes.

The BOP and choke manifold will be rated at 2000 psi,

Testing Procedure:

The BOP and related equipment will be capable of testing to 2000 psi in accordance with the provisions of Onshore Oil and Gas Order No. 2.

BOP's will be operationally tested daily, and each test will be logged in the IADC Daily Drilling Report.

Blooie line:

The blooie line and related equipment will meet all requirements of Onshore Oil and Gas Order No. 2.

4. CASING AND CEMENTING PROGRAM

<u>SURFACE CASING</u>						
<u>AGE</u>	<u>Depth</u>	<u>Hole Size</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>
New	0-225'	12-1/4"	8-5/8"	20.0#	X-42	ST&C
<u>INTERMEDIATE CASING</u>						
<u>Age</u>	<u>Depth</u>	<u>Hole Size</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>
New	0-TD	7-7/8"	4-1/2"	15.5#	K-55	ST&C

MINIMUM SAFETY FACTORS

Collapse: 1.0
Tension: 1.8
Burst: 1.0

Cementing Program:

1. The 8-5/8" surface casing will be cemented to the surface with 175 sacks of class "B" cement with 2% CaCl₂ and 1/4# per sack flocele.
2. The 4-1/2" production casing will be cemented in 2 stages with the DV tool set at 1900'. 1st stage will be cemented with 85 sacks class "H" cement with .95% Flo-Lock-1, 18% Thrifty Lite, 3% KCL, 3% Hi-seal. 2nd stage will be cemented with 325 sacks pacesetter lite with 6% gel, 1/3# cello-seal, 8% CF-1, 3% Hi-seal followed with 50 sacks class "C" cement. Actual cement volumes will be calculated from open hole logs and will be designed to circulate to surface.

Auxiliary Equipment:

A Kelly cock will be used.

A full-opening safety valve will be used.

5. DRILLING FLUID PROGRAM

<u>Vert. Depth</u>	<u>Type</u>	<u>Weight</u>	<u>Vis</u>	<u>W.L.</u>
0-225'	Spud Mud	--	-	N.C.
225-1900'	Fresh water	8.5	AR	12 cc
1900-TD	Fresh water	8.5-9.5	AR	4-6 cc

Sufficient materials to maintain mud requirements and to meet lost circulation and threatened blowout conditions shall be stored at the location.

6. CORING, TESTING, & LOGGING PROGRAM

DST'S: None Planned

Logging: DISFL-GR-SP, FDC-CNL-GR
Coal Log (to 50' above Coal)

Cores: None planned.

Completion:

During completion, the drilling rig will be removed and a completion rig will be moved in and BOP's of a similar pressure rating will be used.

The Fruitland Coal will be selectively perforated, stimulated and tested.

If productive, the Fruitland Coal formation will be hydraulically fractured.

Whether the well is completed as a dry hole or producer a "Well Completion or Re-completion Report and Log" (Form 3160-4) will be submitted within 30 days after completion of the well, per 43 CFR 3164. At least two copies of all logs, geologic summaries, sample descriptions, and all other data obtained during the drilling and completion operation will be filed with form 3160-4.

7. ABNORMAL PRESSURES, TEMPERATURES, AND POTENTIAL HAZARDS:

No above normal pressures zone are anticipated

Below normal pressures may occur in the Pictured Cliffs formation due to depletion.

<u>Formation</u>	<u>Est. Reservoir Pressure</u>
Fruitland Coal	800 PSI

Normal temperature gradients are anticipated.

No hydrogen sulfide gas is anticipated.

8. ADDITIONAL INFORMATION:

STARTING DATE:

Road and location work will begin as soon as approval has been received from the BLM, weather permitting. Drilling should commence immediately upon approval of the APD, weather permitting.

The BLM will be notified 48 hours before dirt work begins and 24 hours before drilling operations begin.

Duration of Operations:

Drilling will be approx. 6 days
Completion will be approx. 10 days.

EXACT ENGINEERING AND WELL SITE MANAGEMENT

13 POINT SURFACE USE PLAN

1. DIRECTIONS AND EXISTING ROADS:

- A. The proposed well lies approximately 30 miles south and east of Bloomfield New Mexico. The well site as staked is shown on the surveyors plat.
- B. Proposed route to location: See maps attachments 7 & 8
- C. Approximately 150 feet of new access road will be required.
- D. Existing roads are shown on Maps 7 and 8.
- E. Existing roads that are used will be maintained at a standard equal to or better than the conditions of the roads prior to the start of operations, weather conditions permitting. At the conclusion of drilling and completion operations, the roads will be repaired and restored to a standard equal to or better than the conditions at the start of operations.

2. PLANNED ACCESS ROADS:

- A. Width: 16' top running width and 35' bottom width.
- B. Maximum Grade: 1%
- C. Turnouts: No turnouts will be required.
- D. Drainage Design: The access road will not cross a drainage. Drainage design will be incorporated into the road to facilitate the run-off of water due to rain or snow.
- F. Location and size of culverts: No culverts will be required.

3. LOCATION OF EXISTING WELLS:

Attachment #6 shows producing wells, water wells, abandoned wells etc., within a one-mile radius of the proposed well.

- a. Water wells - 0
- b. Abandoned Wells - 1
- c. TA wells - 0
- d. Disposal Wells - 0
- e. Drilling Wells - 1
- f. Producing wells - 21
- g. Shut-In Wells - 0
- h. Injection Wells - 0
- i. Monitoring Wells - 0

4. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES

A. Each active well within a one-mile radius of the proposed well has a separator and a condensate tank owned by the operator, and a dehydrator and a gas meter owned by El Paso Natural Gas Company. Several miles of gas gathering lines owned by El Paso Natural Gas Company are located within the one-mile radius of each location. No oil gathering lines are present.

- B.
- (1) All permanent production facilities will be painted as per BLM requirements.
 - (2) The production pad will be 220' X 200' (see Attachment 5).
 - (3) No outside construction materials should be necessary.
 - (4) All equipment will either be fenced or have metal guards in place. One emergency pit will be required. It will be fenced.
 - (5) The tank battery will be surrounded by a dike sufficient to hold 1-1/2 times the capacity of the storage tanks.
 - (6) All site security regulations will be adhered to at all times.
 - (7) A gas gathering line right-of-way, if required will be applied for separately from this plan.

- C. Plan for rehabilitation of disturbed areas no longer needed for operations after construction is complete:

- (1) The reserve pit will be completely fenced. When the reserve pit is dry, the pit will be backfilled and the fence will be removed.
- (2) The area of the drill site not needed for production operations, including the reserve pit, will be re-contoured to the natural level. the topsoil will be redistributed and will be reseeded with the recommended BLM seed mixture. prior to reseeding, all disturbed areas will be scarified and left with a rough surface.

Note:

The BLM will be notified before starting reclamation work that involves equipment and upon completion of restoration measures.

5. LOCATION AND TYPE OF WATER SUPPLY

- A. The well will be drilled with fresh water from the Ice Canyon water hole.
- B. The water will be hauled by truck to the location along the existing road.
- C. No water well is proposed.

6. SOURCE OF CONSTRUCTION MATERIALS

- A. The proposed location will utilize soil material which is on the location. No construction material will be needed. If at a later date it is determined that gravel is needed on the road, the gravel will be purchased at that time from a local vender.
- B. Topsoil from the location and the access road will be stockpiled by the well site for restoration purposes. the soil material will be obtained from the immediate area of drilling operations and will be used to fill in the low areas.

7. METHODS FOR HANDLING WASTE DISPOSAL

- A. The reserve pit will not be lined. Prior drilling, the reserve pit will be fenced on three sides with woven wire material.
- B. Drilling fluids will be disposed of in the reserve pit. The water will be allowed to evaporate and the remaining solids will be buried.
- C. In the event of a producing well, produced fluids will be handled in a tank battery on the location. Produced water will be disposed of in accordance with NTL-2B.
- D. Chemical toilets will be utilized.
- E. Garbage and other waste material will be disposed of in a portable trash cage which will be completely enclosed with small mesh wire. The trash will be hauled to an approved landfill or incinerated off-site.
- F. When the rig moves out, all extraneous material will be disposed of as garbage or hauled to town. When the pits have dried, they will be backfilled and re-contoured.

8. ANCILLARY FACILITIES

No camps or airstrips will be needed.

9. WELLSITE LAYOUT

See attachment 5 for the wellsite layout.

- A. A maximum cut will be 5'.
- B. No living facilities will be installed. however, two trailer houses will be on location for Company personnel.

10. PLANS FOR RESTORATION OF THE SURFACE

- A. After the reserve pit is dry, the pit will be backfilled, leveled and contoured to an acceptable level with the BLM. Topsoil will then be redistributed over the pit area.
- B. Revegetation and rehabilitation: The location will be reseeded with a recommended BLM seed mixture as per BLM specifications.
- C. Care of pits prior to rig release: Prior to rig release, pits will be fenced and so maintained until cleanup. If oil is on the pit, it will be removed.
- D. Immediately following the completion of operations, cleanup will commence. As soon as the pit is completely dry, the pit will be filled and cleanup finalized. Seed will be broadcast in the fall of the year.

11. SURFACE OWNERSHIP

- A. The land is federally owned and administered by the Bureau of Land Management.

12. OTHER INFORMATION

- A. The surface is used for livestock grazing and is administered by the BLM.
- B. Proximity of water, occupied dwellings, archeological, historical or cultural sites:
There are no reservoirs or flowing streams in the immediate area of this lease.
An archeological survey has been made and a copy is attached to this APD.

13. OPERATOR'S FIELD REPRESENTATIVE AND CERTIFICATION

Anyone having questions concerning this APD should contact:

Chris Russell, Consultant
Exact Engineering
Farmington, NM 87401
(505)-325-8786

A. Field Representative:

Chris Russell
Exact Engineering
Farmington, NM 87401
(505)-325-8786

B. Certification:

I hereby 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 the plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Union Oil Company of California and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

5/24/90

Date

Chris Russell

Agent

EXACT ENGINEERING AND WELLSITE MANAGEMENT

Day B Well No. 8 - Directional Plan for 4 deg well

Surface Location: 734' FNL & 1233' FEL, Sec. 7, T27N-R8W

Vertical Depths-

Top of Pay: 2190
Base of Pay: 2395
Bottom Hole: 2485

Build Rate: 2.0 degrees/100'
Kick Off Pt.: 325'

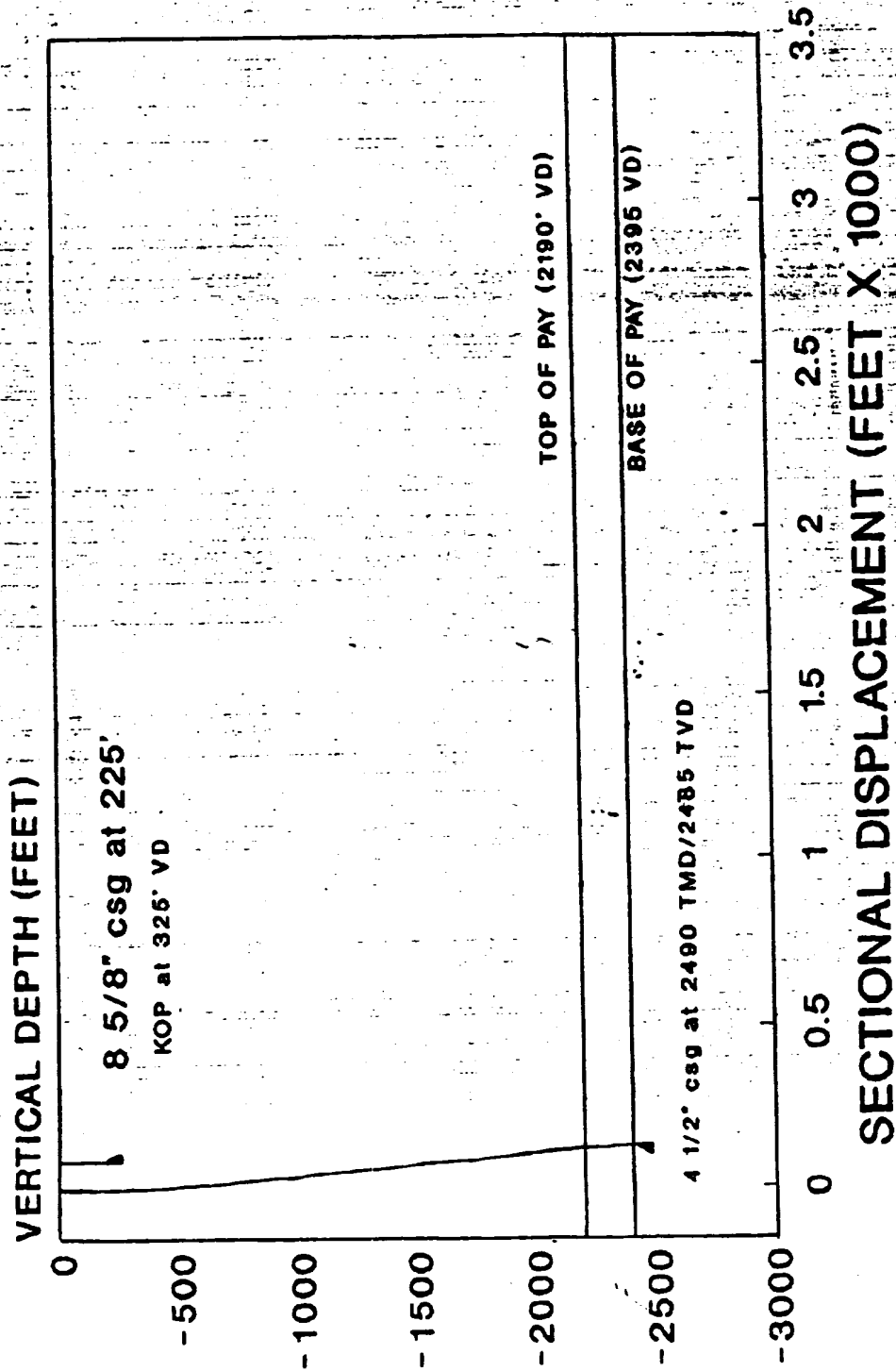
Directed: Southwest
Section: 225.0 deg
y-axis x-axis

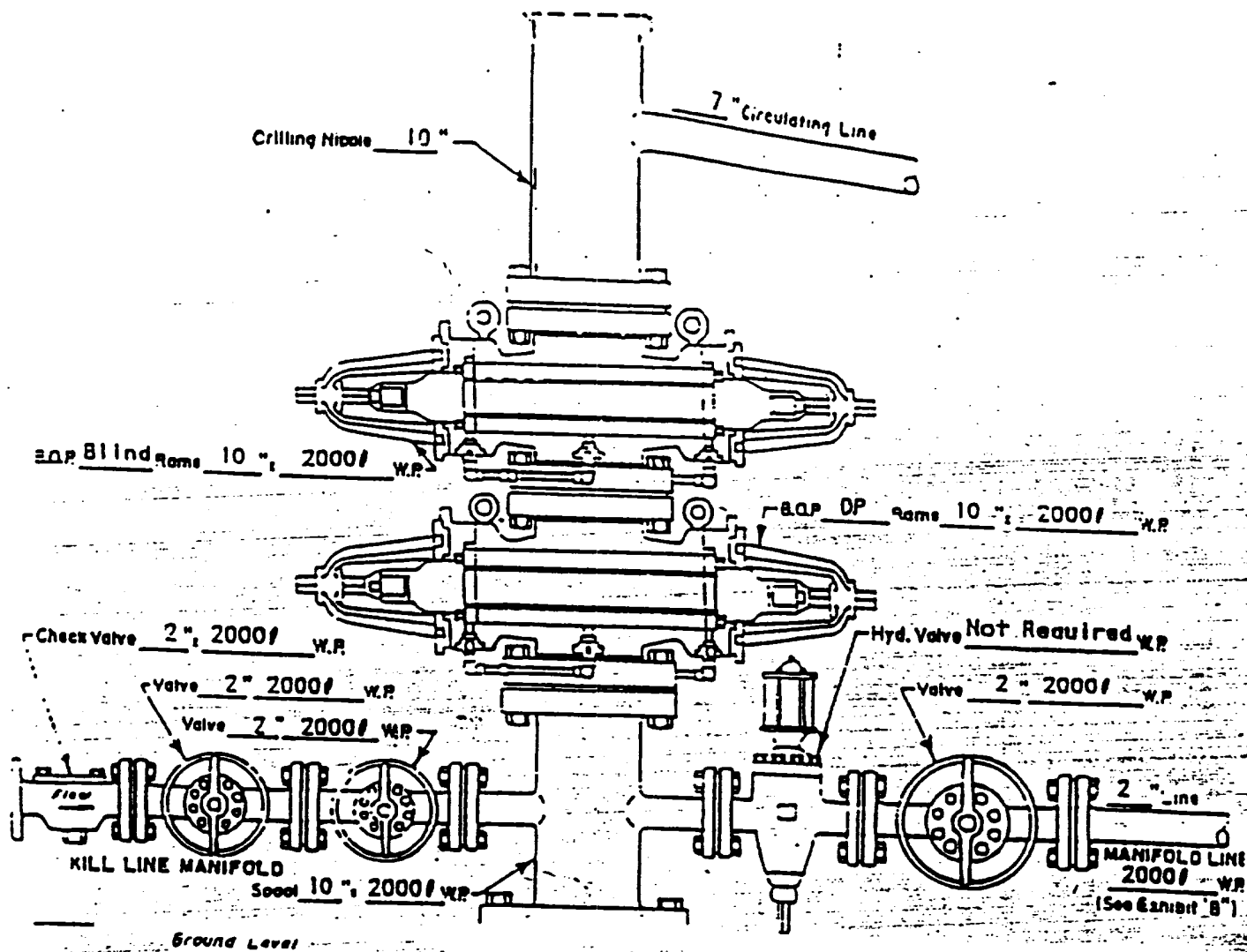
Point	Comment	M. Depth	Angle	V. Depth	Section
0	Surface	0	0	0.0	0.0
1	KOP	325	0	325.0	0.0
2		425	2	425.0	1.7
3		525	4	524.8	7.0
4		625	4	624.6	14.0
5		725	4	724.4	20.9
6		825	4	824.1	27.9
7		925	4	923.9	34.9
8		1025	4	1023.6	41.9
9		1125	4	1123.4	48.8
10		1225	4	1223.1	55.8
11		1325	4	1322.9	62.8
12		1425	4	1422.7	69.8
13		1525	4	1522.4	76.7
14		1625	4	1622.2	83.7
15		1725	4	1721.9	90.7
16		1825	4	1821.7	97.7
17		1925	4	1921.4	104.6
18		2025	4	2021.2	111.6
19		2125	4	2121.0	118.6
20	Top Pay	2194	4	2190.0	123.4
21	Base Pay	2400	4	2395.0	137.8
22	BH Loc	2490	4	2485.0	144.0

Top of Pay: 821' FNL & 1320' FEL, Sec. 7, T27N-R8W
Base Pay: 831' FNL & 1330' FEL, Sec. 7, T27N-R8W
BHL: 836' FNL & 1335' FEL, Sec. 7, T27N-R8W

ATTACHMENT #1

DAY B WELL NO. 8 SECTION VIEW OF 4 DEGREE WELLBORE





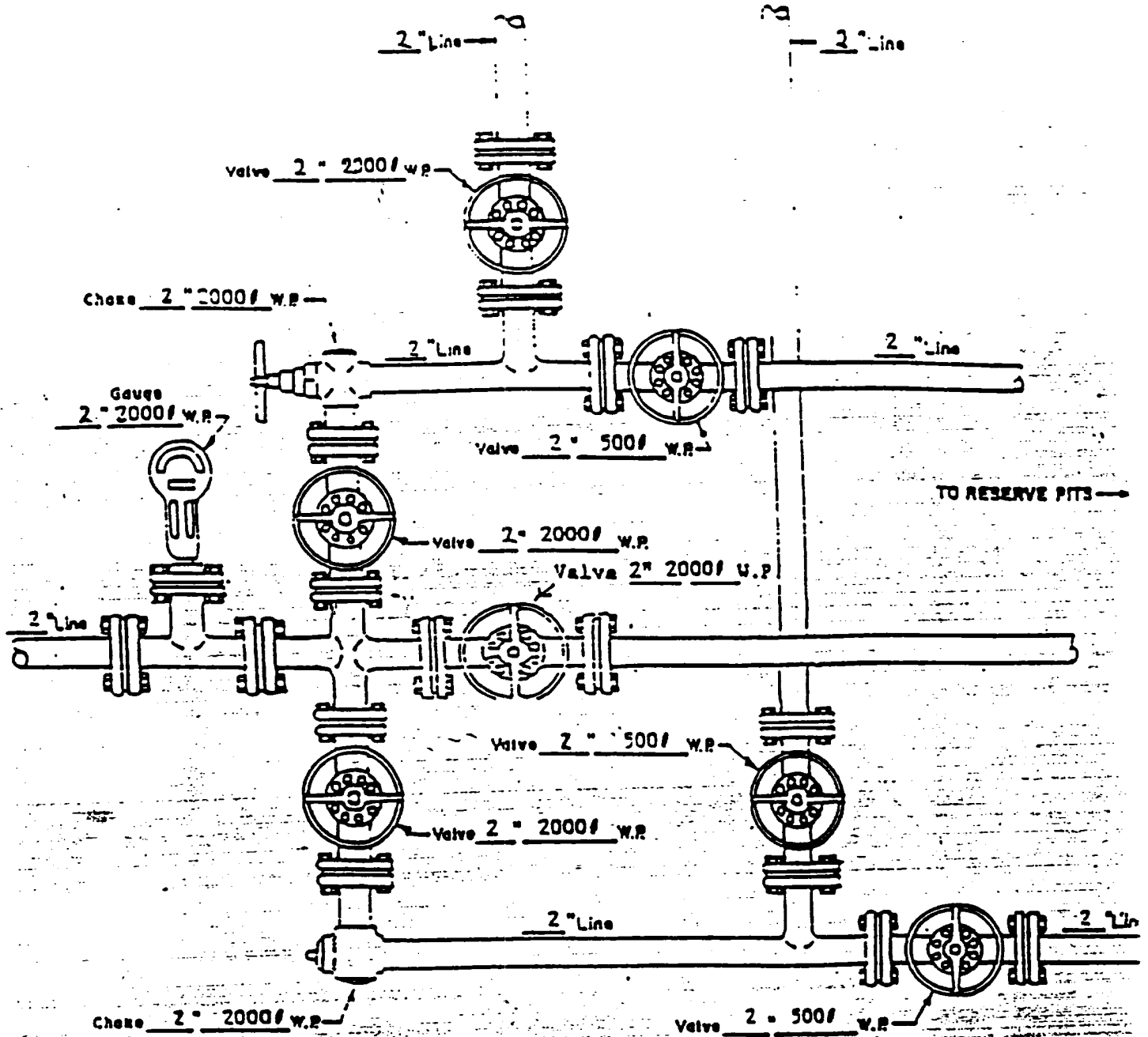
WELL HEAD B.O.P.
2000 #W.P.

- ☐ Manual
- ☒ Hydraulic

UNION OIL COMPANY OF CALIFORNIA
FRUITLAND COAL WELL BOP SCHEMATIC
FRUITLAND COAL WELL BOP

ATTACHMENT #3

TO WORKING PITS



MANIFOLD
2000 #W.P.

- ☒ Manual
☐ Hydraulic

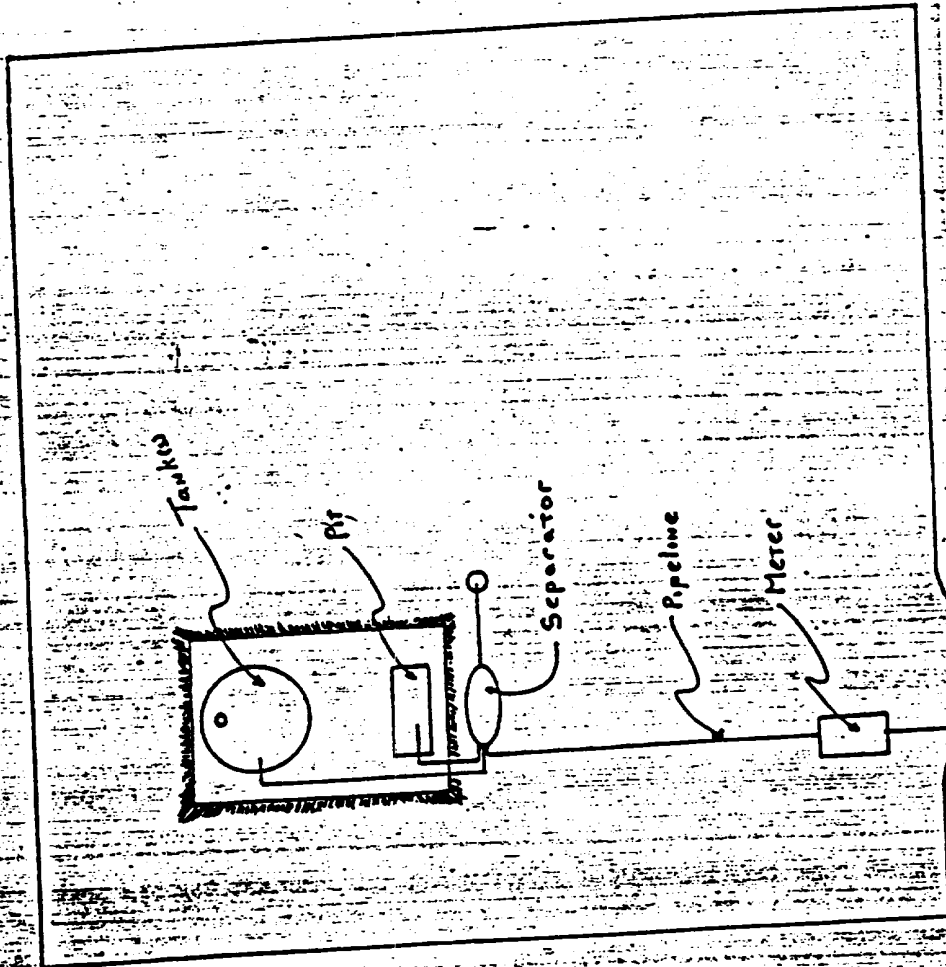
UNION OIL COMPANY OF CALIFORNIA

FRUITLAND COAL WELL CHOKE MANIFOLD

ATTACHMENT #4

1"=50'

N

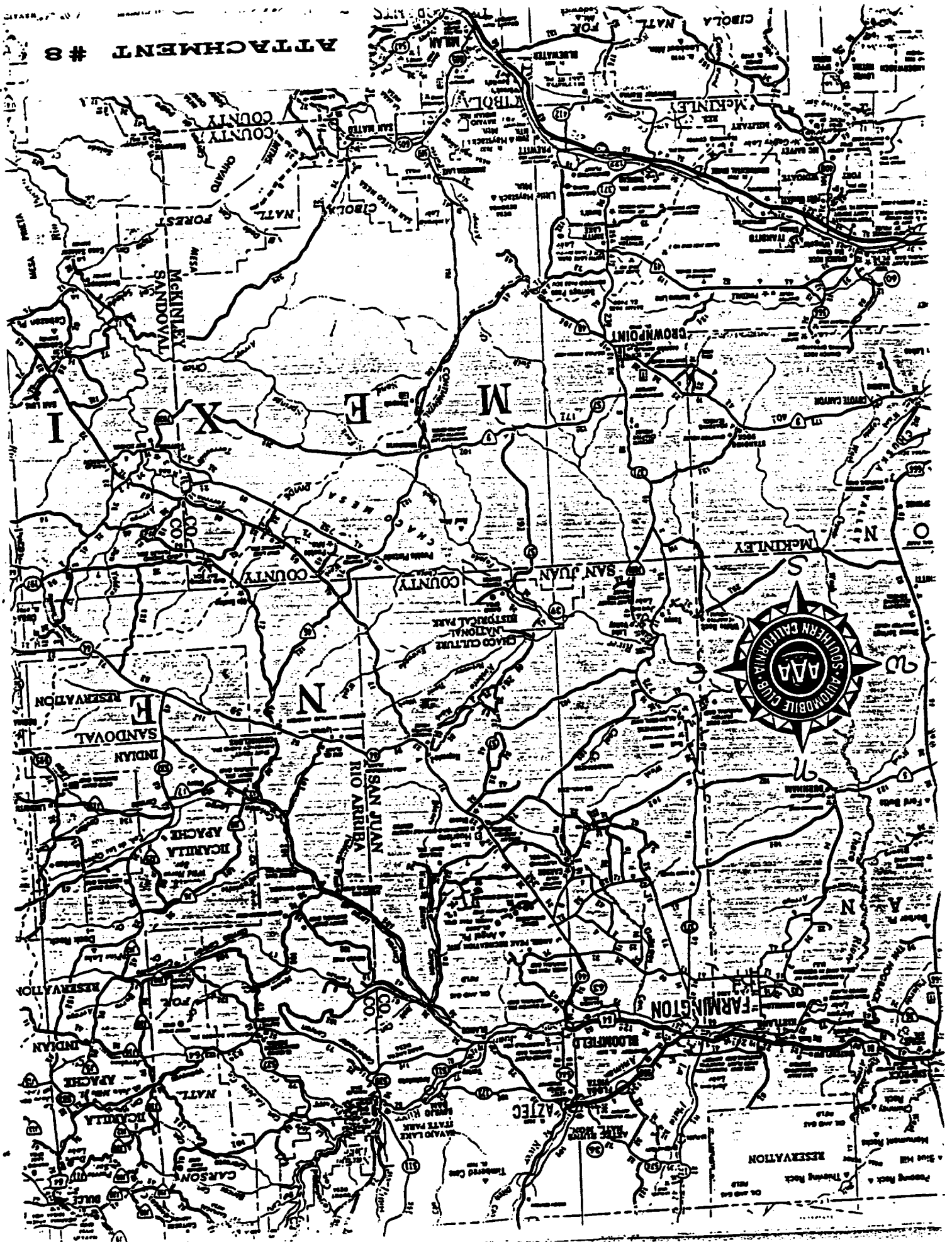


UNION OIL COMPANY OF CALIFORNIA
FRUITLAND COAL WELL FACILITIES
DAY "B" WELL #8
SAN JUAN COUNTY, NEW MEXICO

ATTACHMENT # 5



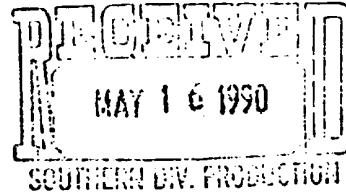
ATTACHMENT # 7



Unocal Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145



May 10, 1990



Farmington District

Certified Mail

Amoco Production Company
Attn: T. D. Autrey
P.O. Box 800
Denver, CO 80201

Re: Offset Operator Consent
Day B #8 S-7, T27N, R9W
San Juan County, New Mexico

Gentlemen:

Union Oil Company of California dba Unocal intends to drill and complete the Day B #8 well in the northeast quarter of Section 7, T27N, R9W to the Basin Fruitland Coal Gas seam. Due to topography considerations this well will be spudded at an unorthodox surface location of 734' FNL and 1233' FEL and directionally drilled in a southwesterly direction to an orthodox bottom-hole location of 836' FNL and 1335' FEL. An administrative approval application for an unorthodox surface location and deviation of the wellbore from vertical has been made to the New Mexico Oil Conservation Division (NMOCD). Since records show your company to be an offset operator, Unocal respectfully requests that you indicate your approval or disapproval of this project to the NMOCD. If you have no objection, please sign and date the Waiver of Objection given below, furnishing one copy to the NMOCD and forwarding one copy to the office indicated on the letter-head. Since this project is critical in regard to timing, your early response would be appreciated.

Respectfully submitted,

Union Oil Company of California
dba Unocal

Bill Hering
Bill Hering
District Petroleum Engineer

WAIVER

Amoco Production Co. hereby waives objection to Union Oil Company of California's application for an unorthodox surface location and deviated wellbore for their Day B #8 well as proposed above.

By: *JWH Hawkins*

Date: 5-18-90

Unocal Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145

JUN 18 1990

UNOCAL

June 13, 1990

Farmington District

Certified Mail

Burton-Hawks Inc.
P.O. Box 359
Casper, Wyoming 82602

Re: Offset Owner Consent
Day B #8 S-7, T27N, R8W
San Juan County, New Mexico

Gentlemen:

Union Oil Company of California dba Unocal intends to drill and complete the Day B #8 well in the northeast quarter of Section 7, T27N, R8W to the Basin Fruitland Coal Gas seam. Due to topography considerations this well will be spudded at an unorthodox surface location of 734' FNL and 1233' FEL and directionally drilled in a southwesterly direction to an orthodox bottom-hole location of 836' FNL and 1335' FEL. An administrative approval application for an unorthodox surface location and deviation of the wellbore from vertical has been made to the New Mexico Oil Conservation Division (NMOCD). Since records show your company to be an offset owner, Unocal respectfully requests that you indicate your approval or disapproval of this project to the NMOCD. If you have no objection, please sign and date the Waiver of Objection given below, furnishing one copy to the NMOCD and forwarding one copy to the office indicated on the letter-head. Since this project is critical in regard to timing, your early response would be appreciated.

Respectfully submitted,

Union Oil Company of California
dba Unocal


Bill Hering
District Petroleum Engineer

WAIVER

_____ hereby waives objection to Union Oil Company of California's application for an unorthodox surface location and deviated wellbore for their Day B #8 well as proposed above.

By: 4/10/90

Date: 

RECEIVED

OCT 12 1990

OIL CON. DIV.]

DIST. 3

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 10076
Order No. R-9311

APPLICATION OF MESA OPERATING
LIMITED PARTNERSHIP FOR COMPULSORY
POOLING, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on September 19, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 2nd day of October, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Mesa Operating Limited Partnership, seeks an order pooling all mineral interests in the Basin-Fruitland Coal Gas Pool underlying the W/2 of Section 16, Township 29 North, Range 8 West, NMPM, San Juan County, New Mexico, forming a standard 320-acre gas spacing and proration unit for said pool. Said unit is to be dedicated to its proposed "F.C." State Com Well No. 27 to be drilled at a standard coal gas well location 2330 feet from the South line and 890 feet from the West line (Unit L) of said Section 16.

CASE NO. 10076
Order No. R-9311
Page -2-

(3) The applicant has the right to drill and proposes to drill its "F.C." State Com Well No. 27 at the standard coal gas well location described above.

(4) There are interest owners in the proposed proration unit who have not agreed to pool their interests.

(5) To avoid the drilling of unnecessary wells, to protect correlative rights, to avoid waste, and to afford to the owner of each interest in said unit the opportunity to recover or receive without unnecessary expense his just and fair share of the production in any pool completion resulting from this order, the subject application should be approved by pooling all mineral interests, whatever they may be, within said unit.

(6) The applicant should be designated the operator of the subject well and unit.

(7) Any non-consenting working interest owner should be afforded the opportunity to pay his share of estimated well costs to the operator in lieu of paying his share of reasonable well costs out of production.

(8) Any non-consenting working interest owner who does not pay his share of estimated well costs should have withheld from production his share of the reasonable well costs plus an additional 156 percent thereof as a reasonable charge for the risk involved in the drilling of the well.

(9) Any non-consenting interest owner should be afforded the opportunity to object to the actual well costs but actual well costs should be adopted as the reasonable well costs in the absence of such objection.

(10) Following determination of reasonable well costs, any non-consenting working interest owner who has paid his share of estimated costs should pay to the operator any amount that reasonable well costs exceed estimated well costs and should receive from the operator any amount that paid estimated well costs exceed reasonable well costs.

CASE NO. 10076

Order No. R-9311

Page -6-

(10) Any unleased mineral interest shall be considered a seven-eighths (7/8) working interest and a one-eighth (1/8) royalty interest for the purpose of allocating costs and charges under the terms of this order.

(11) Any well costs or charges which are to be paid out of production shall be withheld only from the working interest's share of production, and no costs or charges shall be withheld from production attributable to royalty interests.

(12) All proceeds from production from the subject well which are not disbursed for any reason shall immediately be placed in escrow in San Juan County, New Mexico, to be paid to the true owner thereof upon demand and proof of ownership; the operator shall notify the Division of the name and address of said escrow agent within 30 days from the date of first deposit with said escrow agent.

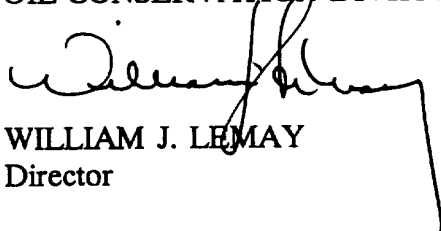
(13) Should all parties to this forced pooling order reach voluntary agreement subsequent to entry of this order, this order shall thereafter be of no further effect.

(14) The operator of the well and unit shall notify the Director of the Division in writing of the subsequent voluntary agreement of all parties subject to the forced pooling provisions of this order.

(15) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

CASE NO. 10076
Order No. R-9311
Page -5-

well costs; provided however, if there is objection to actual well costs within said 45-day period the Division will determine reasonable well costs after public notice and hearing.

(6) Within 60 days following determination of reasonable well costs, any non-consenting working interest owner who has paid his share of estimated well costs in advance as provided above shall pay to the operator his pro rata share of the amount that reasonable well costs exceed estimated well costs and shall receive from the operator his pro rata share of the amount that estimated well costs exceed reasonable well costs.

(7) The operator is hereby authorized to withhold the following costs and charges from production:

- (A) The pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.
- (B) As a charge for the risk involved in the drilling of the well, 156 percent of the pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.

(8) The operator shall distribute said costs and charges withheld from production to the parties who advanced the well costs.

(9) \$3831.00 per month while drilling and \$382.00 per month while producing are hereby fixed as reasonable charges for supervision (combined fixed rates); the operator is hereby authorized to withhold from production the proportionate share of such supervision charges attributable to each non-consenting working interest, and in addition thereto, the operator is hereby authorized to withhold from production the proportionate share of actual expenditures required for operating such well, not in excess of what are reasonable, attributable to each non-consenting working interest.

CASE NO. 10076

Order No. R-9311

Page -4-

PROVIDED HOWEVER THAT, the operator of said unit shall commence the drilling of said well on or before the 1st day of January, 1991, and shall thereafter continue the drilling of said well with due diligence to a depth sufficient to test the Basin-Fruitland Coal Gas Pool.

PROVIDED FURTHER THAT, in the event said operator does not commence the drilling of said well on or before the 1st day of January, 1991, Ordering Paragraph No. (1) of this order shall be null and void and of no effect whatsoever, unless said operator obtains a time extension from the Division Director for good cause shown.

PROVIDED FURTHER THAT, should said well not be drilled to completion, or abandonment, within 120 days after commencement thereof, said operator shall appear before the Division Director and show cause why Ordering Paragraph No. (1) of this order should not be rescinded.

(2) Mesa Operating Limited Partnership is hereby designated the operator of the subject well and unit.

(3) After the effective date of this order and within 90 days prior to commencing said well, the operator shall furnish the Division and each known working interest owner in the subject unit an itemized schedule of estimated well costs.

(4) Within 30 days from the date the schedule of estimated well costs is furnished to him, any non-consenting working interest owner shall have the right to pay his share of estimated well costs to the operator in lieu of paying his share of reasonable well costs out of production, and any such owner who pays his share of estimated well costs as provided above shall remain liable for operating costs but shall not be liable for risk charges.

(5) The operator shall furnish the Division and each known working interest owner an itemized schedule of actual well costs within 90 days following completion of the well; if no objection to the actual well costs is received by the Division and the Division has not objected within 45 days following receipt of said schedule, the actual well costs shall be the reasonable

CASE NO. 10076

Order No. R-9311

Page -3-

(11) \$3831.00 per month while drilling and \$382.00 per month while producing should be fixed as reasonable charges for supervision (combined fixed rates); the operator should be authorized to withhold from production the proportionate share of such supervision charges attributable to each non-consenting working interest, and in addition thereto, the operator should be authorized to withhold from production the proportionate share of actual expenditures required for operating the subject well, not in excess of what are reasonable, attributable to each non-consenting working interest.

(12) All proceeds from production from the subject well which are not disbursed for any reason should be placed in escrow to be paid to the true owner thereof upon demand and proof of ownership.

(13) Upon the failure of the operator of said pooled unit to commence the drilling of the well to which said unit is dedicated on or before January 1, 1991, the order pooling said unit should become null and void and of no effect whatsoever.

(14) Should all the parties to this forced pooling reach voluntary agreement subsequent to entry of this order, this order shall thereafter be of no further effect.

(15) The operator of the well and unit shall notify the Director of the Division in writing of the subsequent voluntary agreement of all parties subject to the forced pooling provisions of this order.

IT IS THEREFORE ORDERED THAT:

(1) All mineral interests, whatever they may be, in the Basin-Fruitland Coal Gas Pool underlying the W/2 of Section 16, Township 29 North, Range 8 West, NMPM, San Juan County, New Mexico, are hereby pooled forming a standard 320-acre gas spacing and proration unit for said pool. Said unit shall be dedicated to the proposed "F.C." State Com Well No. 27 to be drilled at a standard coal gas well location 2330 feet from the South line and 890 feet from the West line (Unit L) of said Section 16.



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

August 16, 1990

RECEIVED
AUG 20 1990
OIL CON. DIV.
DIST. 3

Parker and Parsley Petroleum Company
c/o A.R. Kendrick
Box 516
Aztec, NM 87410-0516

Administrative Order DD-39(NSBHL)

Dear Mr. Kendrick:

Under the provisions of General Rule 111 (c), (d) and (e), A. R. Kendrick on behalf of Parker and Parsley Petroleum Company made application to the New Mexico Oil Conservation Division on July 23, 1990, for authorization to directionally drill its proposed Rosa Unit Well No. 296, Rio Arriba County, New Mexico.

The Division Director Finds That:

- (1) The application has been duly filed under the provisions of Rule 111(d) and (e) of the Division General Rules and Regulations and Rule 8 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool, as promulgated by Division Order No. R-8768;
- (2) Satisfactory information has been provided that all offset operators have been duly notified;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in General Rule 111 and said Order No. R-8768 have either been or will be met; and
- (4) No objections have been received within the waiting period prescribed by said rules.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Parker and Parsley Petroleum Company, is hereby authorized to directionally drill its Rosa Unit Well No. 296, the surface location of which shall be 1190 feet from the North line and 670 feet from the West line (Unit D) of Section 12, Township 31 North, Range 4 West, NMPM, Rio Arriba County, New Mexico, by kicking off from the vertical and drilling in such a manner as to bottom in the Basin-Fruitland Coal Gas Pool within 50 feet of a point 1190 feet from the North line and 900 feet from the West line (Unit D) of said Section 12, being an unorthodox subsurface coal gas well location for said pool.

PROVIDED HOWEVER THAT: prior to directional drilling, the operator shall determine the subsurface location of the kick-off point; and

PROVIDED FURTHER THAT subsequent to the above-described directional drilling, should said well be a producer, a directional survey shall be made of the wellbore from a total depth to the kick-off point; the operator shall cause the surveying company to forward a copy of the survey report directly to both the Santa Fe office and the Aztec District office of the Division.

(2) The operator shall also notify the Division's Aztec District office of the date and time said survey is to be commenced.

(3) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

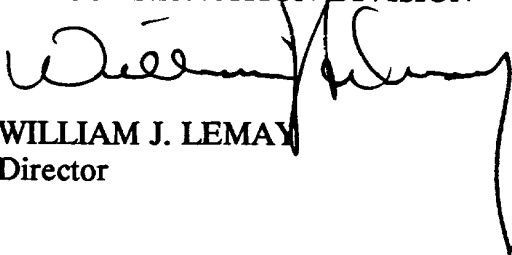
(4) The W/2 of said Section 12 shall be dedicated to the well forming a standard 320-acre gas spacing and proration unit for said pool.

(5) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

Administrative Order DD-39(NSBHL)
Parker and Parsley Petroleum Company
August 16, 1990
Page No. 3

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read 'William J. Lemay', is written over the printed name and title. The signature is fluid and cursive, with a long vertical stroke extending downwards from the end of the name.

WILLIAM J. LEMAY
Director

S E A L

cc: Oil Conservation Division - Aztec
US Bureau of Land Management - Farmington
US Forest Service - Blanco

Unocal Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145

UNOCAL

May 10, 1990



Farmington District

Certified Mail

Meridian Oil Inc.
Attn: Allen Alexander
P.O. Box 4289
Farmington, NM 87499

Re: Offset Operator Consent
Day B #8 S-7, T27N, R9W *R-8W*
San Juan County, New Mexico

Gentlemen:

Union Oil Company of California dba Unocal intends to drill and complete the Day B #8 well in the northeast quarter of Section 7, T27N, R9W to the Basin Fruitland Coal Gas seam. Due to topography considerations this well will be spudded at an unorthodox surface location of 734' FNL and 1233' FEL and directionally drilled in a southwesterly direction to an orthodox bottom-hole location of 836' FNL and 1335' FEL. An administrative approval application for an unorthodox surface location and deviation of the wellbore from vertical has been made to the New Mexico Oil Conservation Division (NMOCD). Since records show your company to be an offset operator*, Unocal respectfully requests that you indicate your approval or disapproval of this project to the NMOCD. If you have no objection, please sign and date the Waiver of Objection given below, furnishing one copy to the NMOCD and forwarding one copy to the office indicated on the letter-head. Since this project is critical in regard to timing, your early response would be appreciated.

Respectfully submitted,

*or working interest owner

Union Oil Company of California
dba Unocal

Bill Hering
Bill Hering
District Petroleum Engineer

WAIVER

El Paso Production Company hereby waives objection to Union Oil Company of California's application for an unorthodox surface location and deviated wellbore for their Day B #8 well as proposed above.

By: S.W. Nance by NEF
S.W. Nance
Regional Engineer Manager

Date: 5/23/90