



Oil Conservation Division

June 2, 1995

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, New Mexico 87504

Attention: Messrs. Michael E. Stogner
David R. Catanach

RE: **Application for the June 29, 1995 examiner hearing concerning a project to drill a horizontal lateral section into the Gallup formation**
L. L. McConnell No. 13, Surf Loc: 970' FSL, 1800' FWL, Unit N
Sec. 31-T25N-R3W, West Lindrith Gallup-Dakota Oil Pool
Rio Arriba County, New Mexico

11304

Gentlemen:

Texaco Exploration and Production Inc. seeks approval to drill a short radius horizontal re-entry into the Gallup formation. We are requesting that this project be added to the June 29, 1995 examiner hearing docket. We intend to drain the Gallup portion of the subject pool in two adjacent 160 acre spacing units with the proposed re-entry. Therefore, we are also requesting an assignment of allowable based on a non-standard or double proration unit.

We plan to mill out a section of casing, sidetrack, drill and complete a single 2500' short radius horizontal section into the Gallup formation. Attachment #IV. A and #IV B, respectively are wellbore diagrams for the current and proposed completions. The wellbore diagram of the proposed completion shows the vertical orientation of the re-entry. The horizontal leg will be in a eastward direction staying at least 790' from the southern boundary of the spacing unit (see attachment #III). We expect to recover additional Gallup reserves in the adjacent undeveloped W. Lindrith Gallup Dakota 160 acre spacing unit (SE quarter of section 31, T25N-R3W). These reserves would normally be recovered by an additional vertical well. Both spacing units are included in the Texaco Exploration and Producing Inc. operated L. L. McConnell lease (ownership is common).

Also attached are copies of signed certified mail return receipt cards (or signed waivers) from the operators of offset spacing units who have received written notification of our application for this horizontal re-entry project.

Your attention to this matter is greatly appreciated. If you have any questions concerning this matter please contact me at 505-325-4397, ext. 20.

Sincerely,

Ted A. Tipton
Operating Unit Manager
MRR/s, Attachments, cc: NMOCD-Aztec

8.5 miles

W. Lindrith
Lindrith

LIST OF ATTACHMENTS

- I. DRILLING PROCEDURE
- II. BASE MAP
- III. N.M.O.C.D. WELL LOCATION AND ACREAGE DEDICATION PLAT - FORM C-102
- IV. A. WELLBORE DIAGRAM - EXISTING CONDITION
B. WELLBORE DIAGRAM - PROPOSED CONDITION
- V. OFFSET OPERATOR PLAT
- VI. OFFSET OPERATOR ADDRESS LIST
- VII. ELECTRIC LOG OF HORIZONTAL INTERVAL
- VIII. RETURN REGISTERED RECEIPTS FROM OFFSET OPERATORS

Attachment I

L. L. McCONNELL #13 HORIZONTAL SINGLE LATERAL REENTRY

The subject well is a producing well. It is to be reentered and a single horizontal lateral is to be drilled in the Gallup formation. The existing perforations will be squeeze cemented and a 40' section is to be milled in the casing. A short radius horizontal lateral will be drilled in the east direction approximately 2500' long. The well will be acidized using coiled tubing, if necessary, and then production tested.

WELL PREPARATION:

- 1) MIRUSU. Pull and LD rods. Nipple up 3M BOPE.
- 2) Kill well with produced water.
- 3) TOH and lay down 2-7/8" production tubing.
- 4) TIIH with 4-3/4" bit on 2-7/8" work string and clean out to PBTD. TOH.

SQUEEZE EXISTING PERFORATIONS:

- 5) TIIH with cement retainer on tubing and set above perfs (6892'-7147') at 6850'.
- 6) Space out tubing in neutral position and test tubing to 3000 psi. Rig up squeeze manifold. Establish rate into perforations (2 BPM), note pump in pressure. Pressure up annulus to 1000 psi, monitor casing during job.
- 7) Cement squeeze with 150 sx Class "G" with 0.2% D156 and 0.2% D65 to obtain a fluid loss of 200-300 cc/30 min. (determine by lab testing) followed by 100 sx Class "G" neat, mixed at 15.8 ppg. Minimum pump time 150 minutes at 175°F.
 - a) Spot cement to end of tubing.
 - b) Sting into retainer.
 - c) When cement reaches perforations, slow rate to 1/2 BPM
 - d) Maximum squeeze pressure 3000 psi.
 - e) Displace cement to retainer.
- 8) Pull out of retainer, reverse out cement and check for flow. Pull tubing to 4000' and shut-in for 24 hours. TOH with tubing.

L. L. McConnell #13
Horizontal Reentry
Rio Arriba County, New Mexico
Drilling & Completion Procedure

- 9) Trip in hole with 4-3/4" bit, drill collars and tubing and drill out retainer and cement to 6850'.
- 10) Circulate hole clean. Shut in backside and test casing to 500 psi.

MILL 5 1/2" CASING:

- 11) Circulate hole with mud for milling. TOH with tubing and bit.

MUD: Starch
Volume: (6800' * .0238 bbl/ft = 162 bbls + 200 bbls for pit = 362 bbls)
Weight: 8.5 - 8.7
Funnel Visc.: 75-80
- 12) If casing collar log is not available in Area, Run GR-CCL to determine position of collars. (Window may be moved +/- 10 to avoid milling a casing collar).
- 13) TIH with mill for 5 1/2" casing on 2 7/8" workstring. Mill 40' section of casing from +/-6780' - 6820'. While milling, run paper sweeps in the mud to ensure the hole is clean. Place ditch magnets in return lines to catch metal cuttings. Any time a trip is made, make sure the hole is clean and the blades are retracted.
- 14) TOH with mill.

SPOT KICK OFF PLUG:

- 15) TIH with diverter tool and +/- 400' 2 3/8" (2 1/16" if available) on 2 7/8" work string to PBTD 6850'. Circulate Starch mud out of hole. Pull up hole so diverter tool is across milled section and wash section. TIH to PBTD.
- 16) Spot 50 sx Class "G" mixed at 17.5 PPG from 6850' to +/- 6580' (200' above window). Batch mix cement. Pull out of cement plug slow to approximately 4000'. **Do not reverse circulate** . Shut in for 24 hours minimum. TOH with tubing.

L. L. McConnell #13
Horizontal Reentry
Rio Arriba County, New Mexico
Drilling & Completion Procedure

- 17) TIH with 4 3/4" bit and dress off cement to the KOP at 6790'. TOH with 4 3/4" bit. Cement must drill 1.5-2 min/ft with 10 pts and 50 RPM to insure the plug is hard enough for kickoff.
- 18) Circulate hole clean.

DRILL CURVE SECTION (EAST DIRECTION):

- 19) Displace hole with starch mud. TOH with bit.

MUD: Starch
Volume: (6800' * .0238 bbl/ft + 200 bbls for pit + 2500' * .0219 bbl/ft)
(162 bbls + 200 bbls + 55 bbls = 417 bbls)
Weight: 8.7
Funel Visc.: 35-40

- 20) Pick up kick-off motor and test on surface. TIH with kick-off BHA s follows:

4 3/4" bit.
Kick-off motor (with 2.5-3.0° bent sub)
Float/ orientation sub.
1 jt 2 7/8" flexible monel collars.
Enough P-110 tubing to reach from KOP to end of planned horizontal wellbore.
Drill collars
2 7/8", Grade G, AOH DP. to surface.

- 21) TIH to **KOP (6790')**. Run GYRO and Orient motor to east direction. Break circulation and establish off bottom pressure at operating flow rates. **Planned build rate is 57°/100' with a radius of 100'**.
- 22) Slowly lower motor to bottom, adjusting toolface as necessary to compensate for reactive torque. Drill approximately 20' of build section with kick-off motor. TOH with kick-off motor and lay down. Pick up build motor (3 restricted articulations to maintain build rates below 70°/100') and TIH. Continue drilling curve while maintaining proper toolface orientation. Drill curve section to **target depth of 6890' TVD** for start of horizontal.

L. L. McConnell #13
Horizontal Reentry
Rio Arriba County, New Mexico
Drilling & Completion Procedure

23) Circulate hole clean. TOH with curve motor.

DRILL HORIZONTAL LATERAL (EAST DIRECTION):

24) TIH with lateral motor BHA. (Same as step 22 but motor has lower build rate.)

25) Drill the **horizontal lateral (2500')** adjusting tool face as needed to the target. **The end of the horizontal target depth is 6980' TVD.** There is a window around the target line which the well path is to stay within. (see attached well plan for well path and hardlines). While drilling the lateral section, run sweeps of 5 bbls. water, 3 bbls prehydrated gel (90+ viscosity), and 1 gallon polymer.

26) At TD circulate hole clean with mud. TOH. Release directional equipment.

COMPLETION:

27) TIH with muleshoe, 6 jts P-110 tbg and 5-1/2" casing on 2 7/8" tubing. Space out so P-110 tubing is across curve section and packer is in the casing. Set the packer.

28) Rig up coiled tubing unit. TIH with "PERFCLEAN" jetting sub on 1 1/2" coiled tubing to TD. Circulate mud out of hole

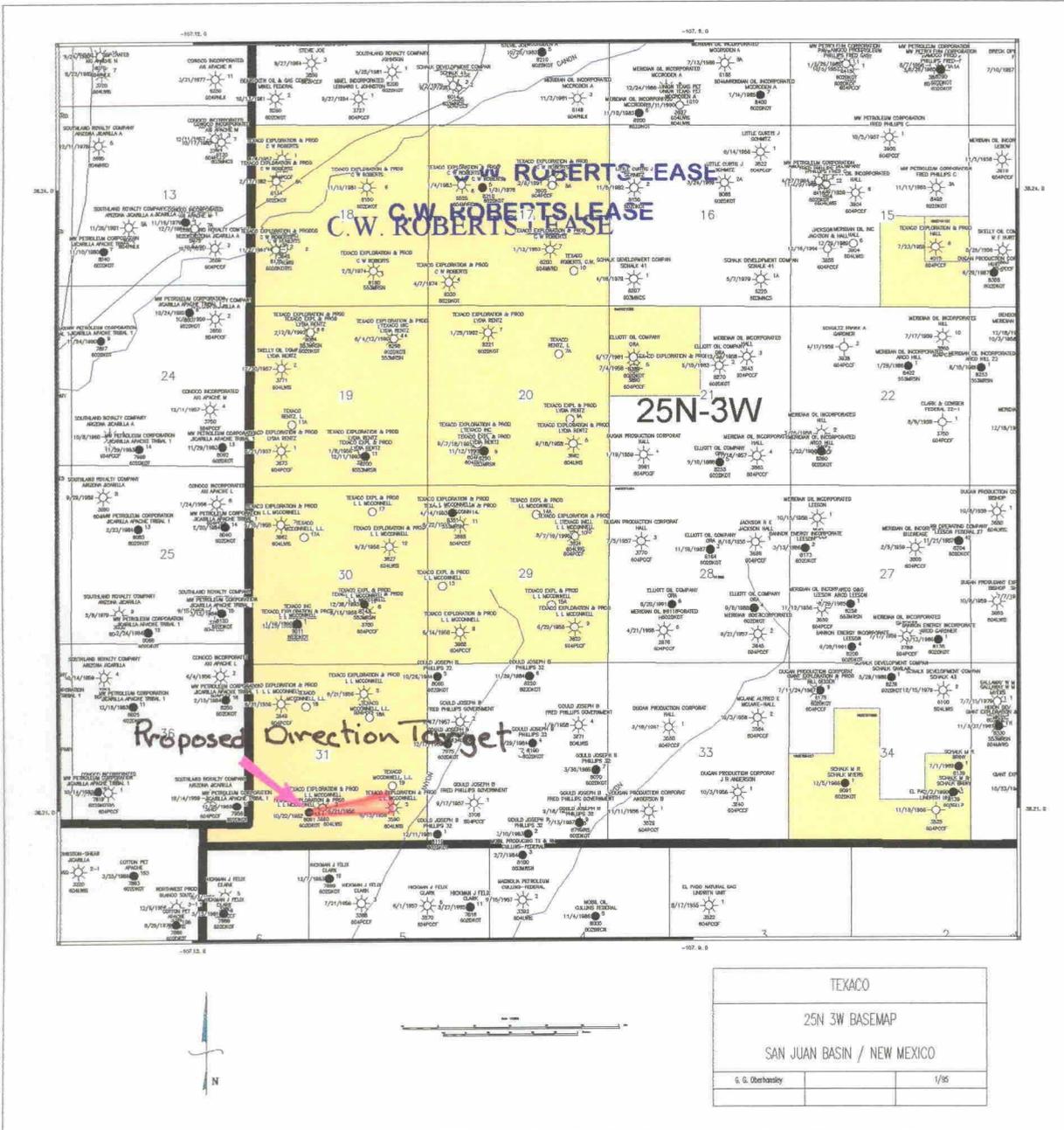
29) Wash 1st lateral open hole with 25,000 gallons 15% NEFE. Rate 2 BPM. POH with coiled tubing while acidizing so entire open hole is stimulated.

30) Displace acid to the end of the tubing. SI for 15 min.

31) Flow well until dead. TOH with coiled tubing.

32) TOH with workstring. TIH with production equipment and test well as needed.

Attachment II



L.L. Mc Connell #13
 Horizontal Gallup re-entry

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980
DISTRICT II
P.O. Box 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 and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised February 10, 199
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copie
 AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 3003923008	² Pool Code 39189	³ Pool Name LINDRITH GALLUP-DAKOTA, WEST
⁴ Property Code 11177	⁵ Property Name L L MCCONNELL	
⁷ OGRID Number 022364	⁸ Operator Name TEXACO EXPLORATION & PRODUCTION, INC.	⁶ Well No. 13
⁹ Elevation 7278' KB		

¹⁰ Surface Location

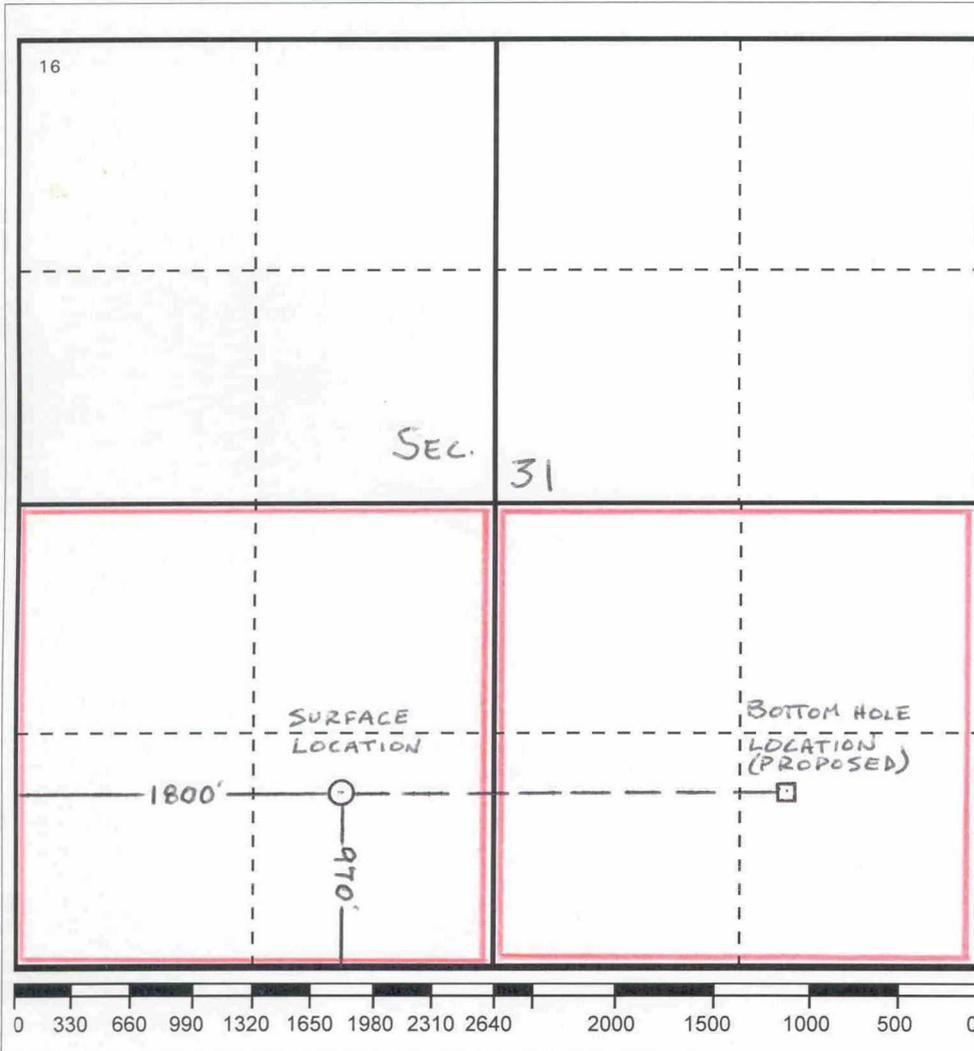
Ul or lot no.	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
N	31	25N	3W		970	SOUTH	1800	WEST	RIO ARRIBA

¹¹ 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

¹² Dedicated Acre	¹³ Joint or Infill No	¹⁴ Consolidation Code	¹⁵ 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



17 OPERATOR CERTIFICATION

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

Rached Hindi
Signature

RACHED HINDI
Printed Name

Senior Engineer
Position

6/2/95
Date

18 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

Signature & Seal of Professional Surveyor

Certificate No.



L.L. McCONNELL No. 13
CURRENT COMPLETION

LOCATION:

Unit N, 970' FSL & 1800' FWL
SE/4, SW/4, Sec. 31, T26N, R03W
Rio Arriba County

SPUD DATE: 6-14-82

COMPL. DATE: 6-26-82

FORMATION TOPS:

Ojo Alamo 3092'
Kirtland 3278'
Fruitland 3440'
Pictured Cliffs 3541'
Chacra 4438'
Mesa Verde 5214'
Gallup 6888'
Greenhorn 7703'
Graneros 7766'
Dakota 7789'

MESA VERDE PERFS (11/92):

SQZ'd w/ 200 SXS CMT
5588'-70', 5618'-20', 5748'-50'

GALLUP PERFS:

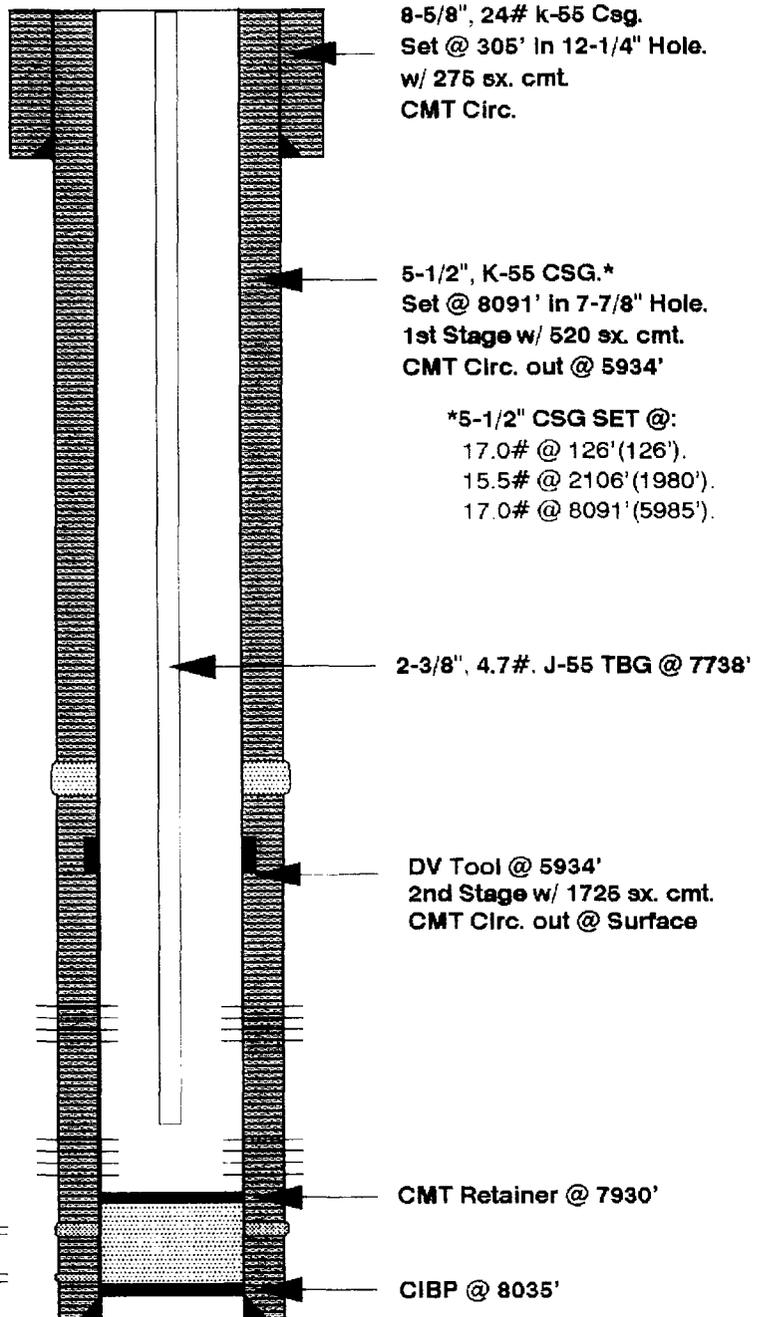
6882' - 7147'
6884' - 7146'

DAKOTA PERFS:

7790' - 7841'

SQZ'd 7940' - 7990'
w/ 59 SXS CMT

SQZ Hole @ 7996'
w/ 50 SXS CMT



8-5/8", 24# k-55 Csg.
Set @ 305' in 12-1/4" Hole.
w/ 275 ex. cmt.
CMT Circ.

5-1/2", K-55 CSG.*
Set @ 8091' in 7-7/8" Hole.
1st Stage w/ 520 ex. cmt.
CMT Circ. out @ 5934'

*5-1/2" CSG SET @:
17.0# @ 126'(126').
15.5# @ 2106'(1980').
17.0# @ 8091'(5985').

2-3/8", 4.7# J-55 TBG @ 7738'

DV Tool @ 5934'
2nd Stage w/ 1725 ex. cmt.
CMT Circ. out @ Surface

CMT Retainer @ 7930'

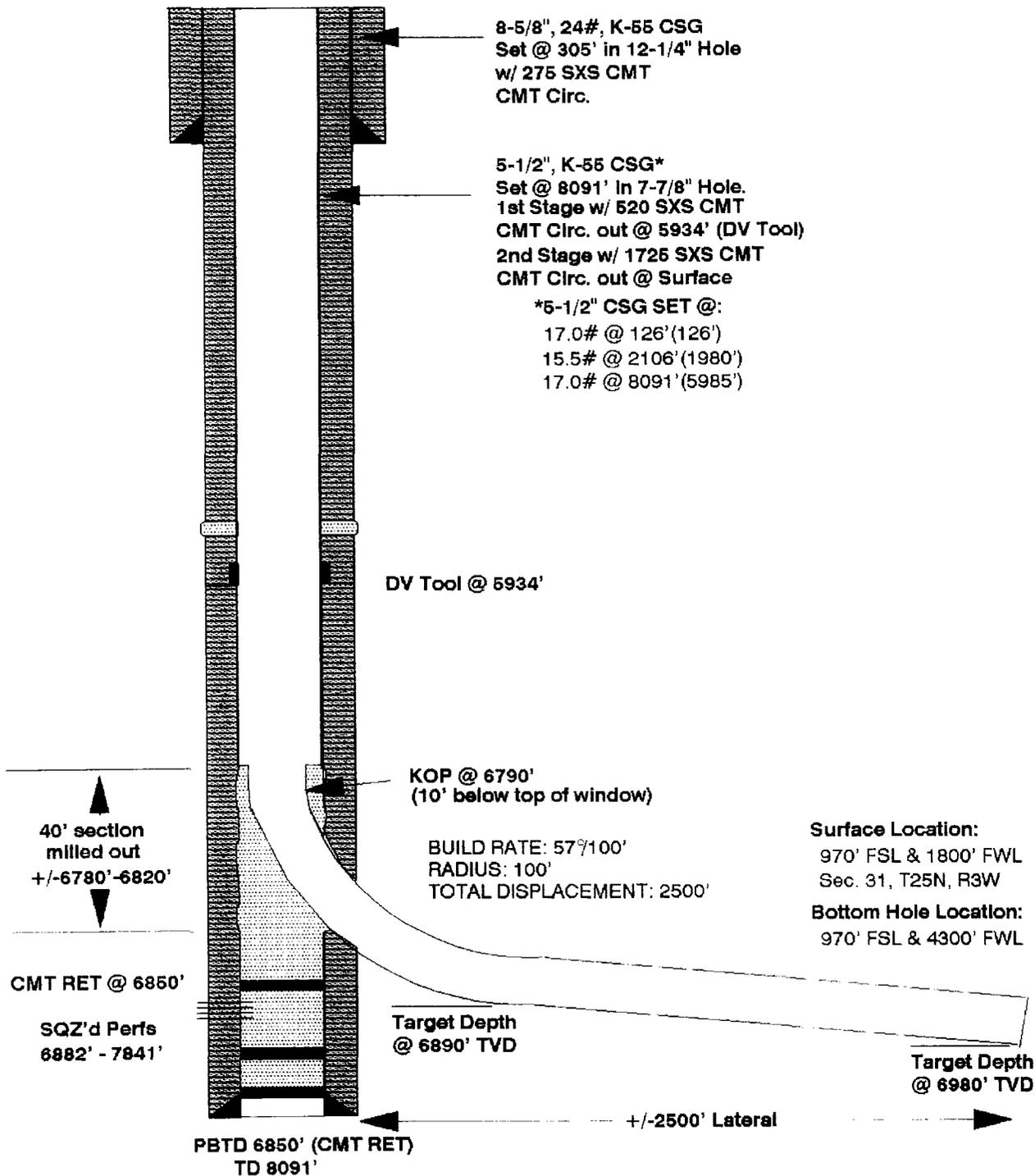
CIBP @ 8035'

PBTD - 7930'
TD - 8091'



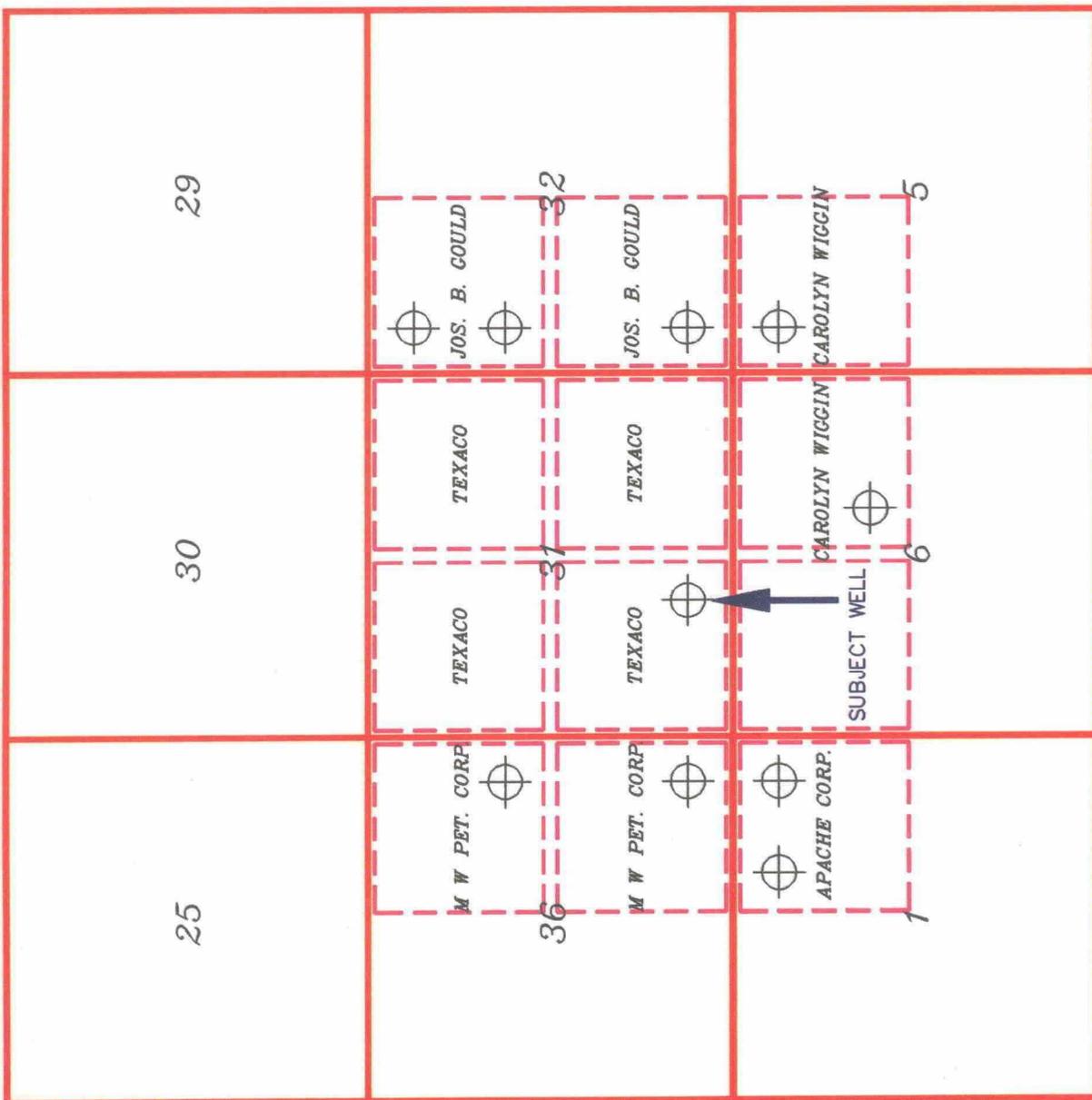
L.L. McCONNELL No. 13

PROPOSED SIDETRACK COMPLETION



T 25 N / R 03 W

Attachment I



WEST LINDRITH GALLUP/DAKOTA
160 AC. SPACING UNIT



TEXACO FARMINGTON OPERATING UNIT
DENVER DIVISION
DENVER, COLORADO

AREA: L. L. MCGONNELL LEASE
RIO ARRIBA COUNTY, NEW MEXICO
DESCRIPTION: OFFSET OPERATORS
WEST LINDRITH GALLUP/DAKOTA POOL
TEXACO E & P, INC. - L. L. MCGONNELL # 13

DATE: 5/3/95 BY: [] REVISION: []
 INTERVAL: [] SCALE: 1" = []
 GULLUP/DAKOTA []

Attachment VI

OFFSET OPERATORS
L.L. McCONNELL #13
WEST LINDRITH GALLUP/DAKOTA

Apache Corporation (MW Petroleum Corp.)

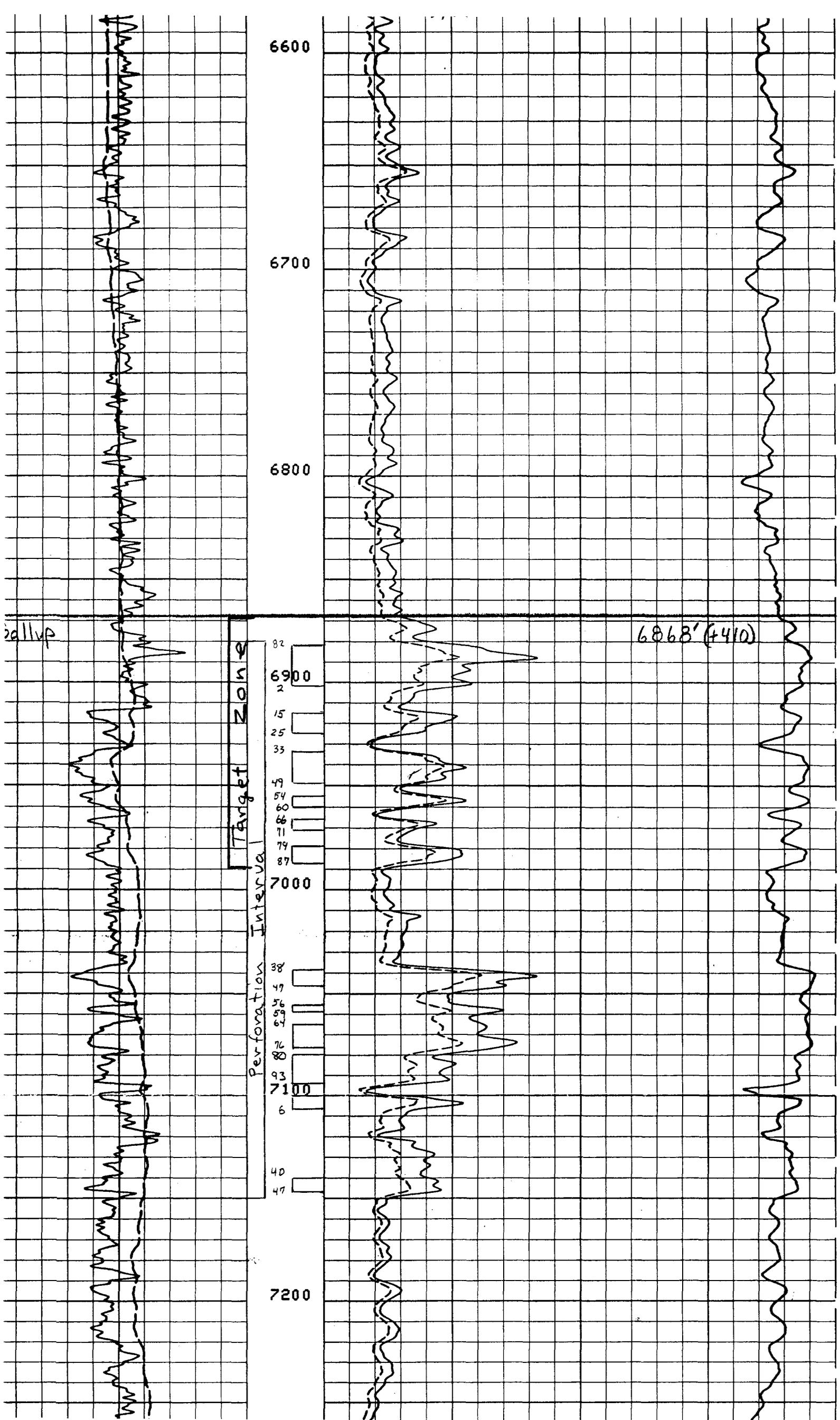
Ste. 1900
1700 Lincoln St.
Denver, CO 80203

Joseph B. Gould

430 South 3rd St.
Las Vegas, Nevada 89101

Carolyn Clark Wiggin Oil Properties

C/O Dugan Production Corp.
P.O. Box 420
Farmington, NM 87401



6600

6700

6800

6868' (+410)

Target Zone

Perforation Interval

82

6900

2

15

25

33

49

54

60

66

71

79

87

7000

38

49

56

62

76

83

7100

6

40

47

7200

cellup

Attachment VIII

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
 - 2. Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:

CAROLYN CLARK WIGGIN
OIL PROPERTIES
C/O DUGAN PRODUCTION CORP
PO BOX 420
FARMINGTON, NM 87401

4a. Article Number
2 175 054 505

4b. Service Type

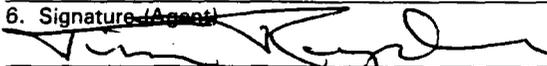
Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
5-30-95

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)



Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
 - 2. Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:

APACHE CORPORATION
(MW PETROLEUM CORP)
1700 LINCOLN ST., STE. 1900
DENVER, CO 80203

4a. Article Number
2 175 054 506

4b. Service Type

Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
5/30

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)



Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
 - 2. Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:

JOSEPH B. GOULD
430 SOUTH 3RD ST.
LAS VEGAS, NEVADA 89101

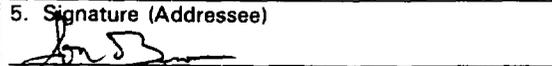
4a. Article Number
2 175 054 507

4b. Service Type

Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
5/30/95

5. Signature (Addressee)



8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

Thank you for using Return Receipt Service.