

Case 11436

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Armstrong Energy Corporation
Address: P.O. Box 1973, Roswell, N.M. 88202
Contact party: Bruce A. Stubbs Phone: 505-624-2800
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
 1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
Name: Bruce A. Stubbs Title Agent
Signature: *Bruce A. Stubbs* Date: November 2, 1995

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

ARMSTRONG ENERGY CORPORATION

MOBIL LEA FEDERAL #6 PMW
330' FSL & 990 FWL
SECTION 2-T20S-R34E
LEA COUNTY, NEW MEXICO

III. PROPOSED PRESSURE MAINTENANCE WELL DATA:

A.

CONDUCTOR PIPE: 16"-54 #/FT SET @ 42', CEMENT TO SURFACE W/ 3 CU. YDS. REDI-MIX
SURFACE CASING: 9 5/8"-36 #/FT. SET @ 1700', CEMENTED TO SURFACE W/ 1100 SX
LONG STRING CASING: 5 1/2"-15.5 #/FT. SET @ 6100', CEMENTED IN TWO STAGES WITH A D.V. TOOL @ 5200'
1ST STAGE - 450 SX, CIRCULATED TO D.V. TOOL
2ND STAGE - 1600 SX CIRCULATED TO SURFACE
TOTAL DEPTH: 6100'
TUBING: 2 7/8"-6.5 #/FT., J-55, W/ FREECOM CERAMIC COATING
PACKER: BAKER LOCKSET W/ ON-OFF TOOL AND PROFILE NIPPLE, SET @ 5850'

B.

INJECTION FORMATION: DELAWARE - CHERRY CANYON - THIRD SAND
(AS SHOWN ON MOBIL LEA STATE #3 LOG FROM 5910'-6012')
FIELD: NORTHEAST LEA DELAWARE
INJECTION INTERVAL: 5930'-5970', CASED HOLE
ORIGINAL WELL PURPOSE: THIS WELL WILL BE DRILLED AS A PRESSURE MAINTENANCE WELL.
OTHER PERFORATED INTERVALS: NONE
DEPTHS AND NAMES OF OTHER OIL & GAS ZONES IN THE AREA: DELAWARE -CHERRY CANYON - 1ST SAND - 5456'-5676'
BONE SPRINGS - 9476'-10258'
MORROW - 13034'-13462'
DEVONIAN - 14360'

22" HOLE

14 3/4" HOLE

T/SALT @ 1590'
T/ANHYDRITE @1650'
B/ANHYDRITE @ 1700'

8 3/4" & 7 7/8" HOLE

YATES @ 2880'

SEVEN RIVERS @ 3170'

QUEEN @ 4150'

GRAYBURG @ 4950'

DELAWARE @ 5130'

16"-54 #/FT. @ 42'
3 CU. YDS. REDI-MIX

III. PROPOSED PRESSURE MAINTENANCE WELL

CONFIGURATION

MOBIL LEA STATE #6 PMW
ARMSTRONG ENERGY CORPORATION
330' FSL & 990' FWL
SW/SW
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

PROPOSED SPUD DATE: 1/15/96

9 5/8"-36 #/FT. @ 1700'
1100 SX
CIRC.

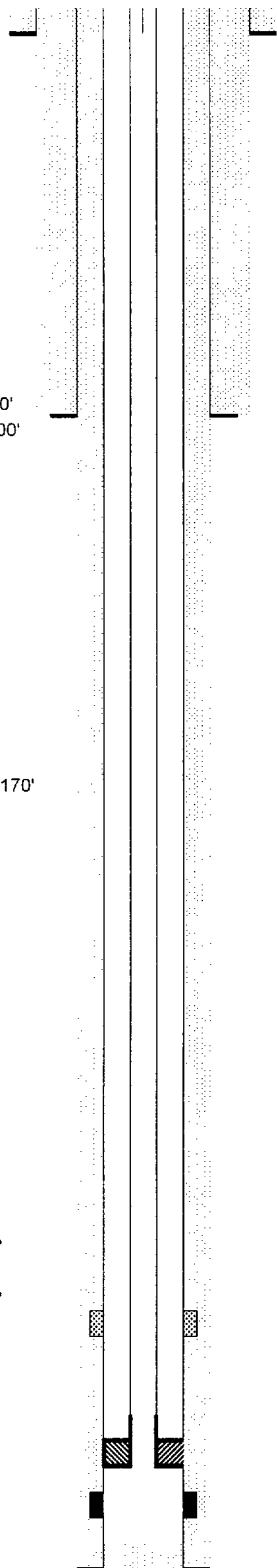
2 7/8" 6.5 #/FT. J-55 TUBING, FREECOM CERAMIC COATING

D.V. TOOL @ 5200'
1600 SX
CIRC.

ON/OFF TOOL WITH PROFILE NIPPLE
BAKER LOCKSET PACKER - NICKLE PLATED

5930'-5990', 2 JSPF, ACIDIZE W/ 3000 GALS. 7 1/2% NEFE ACID, FRAC W/ 20,000 GALS
CARRYING 45,000# 20-40 SAND

5 1/2"-15.5 #/FT. @ 6100'
450 SX



22" HOLE

16"-54 #/FT. @ 42'
3 CU. YDS. REDI-MIX

MOBIL LEA STATE #1
ARMSTRONG ENERGY CORPORATION
1800' FSL & 1980' FWL
NE/SW
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

14 3/4" HOLE

SPUD DATE: 9/30/92

WELL TYPE: OIL WELL

T/SALT @1625'

9 5/8"-36 #/FT. @ 1697'
1300 SX.
CIRC.

CONDUCTOR PIPE:

CASING: 16"-54 #/FT. @ 42'
HOLE: 22" HOLE
CEMENT: 3 CU. YDS. REDI-MIX
T.O.C.: CIRC.

8 3/4" & 7 7/8" HOLE

SURFACE CASING:

CASING: 9 5/8"-36 #/FT. @ 1697'
HOLE: 14 3/4" HOLE
CEMENT: 1300 SX.
T.O.C.: CIRC.

B/SALT @ 3540'
YATES @ 3630'

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. @ 6289'
HOLE: 8 3/4" & 7 7/8" HOLE
CEMENT: 290 SX
2ND STAGE: D.V. TOOL @ 5345'
CEMENT: 1600 SX.
T.O.C.: CIRC.
TOTAL DEPTH: 6289'

PRODUCTION ZONES: CHERRY CANYON

QUEEN @ 4662'

SAN ANDRES @ 5095'

DELAWARE @ 5345'

D.V. TOOL @ 5345'
1600 SX.
CIRC.

5890'-5931', 41 SHOTS

5 1/2"-15.5 #/FT. @ 6289'
290 SX

22" HOLE

16"-54 #/FT. @ 40'
3 CU. YDS. REDI-MIX

MOBIL LEA STATE #2
ARMSTRONG ENERGY CORPORATION
1800' FSL & 990' FWL
NW/SW
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 3/19/93

WELL TYPE: OIL WELL

CONDUCTOR PIPE:

CASING: 16"-54 #/FT. @ 40'
HOLE: 22" HOLE
CEMENT: 3 CU. YDS. REDI-MIX
T.O.C.: CIRC.

SURFACE CASING:

CASING: 9 5/8"-36 #/FT. @ 1702'
HOLE: 14 3/4" HOLE
CEMENT: 1200 SX.
T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. @ 6289'
HOLE: 8 3/4" & 7 7/8" HOLE
CEMENT: 380 SX
2ND STAGE: D.V. TOOL @ 5171'
CEMENT: 1600 SX.
T.O.C.: CIRC.
TOTAL DEPTH: 6256'

PRODUCTION ZONES: CHERRY CANYON

14 3/4" HOLE

T/SALT @ 1600'

9 5/8"-36 #/FT. @ 1702'
1200 SX
CIRC.

8 3/4" & 7 7/8" HOLE

YATES @ 3500'

SEVEN RIVERS @ 3790'

QUEEN @ 4655'

GRAYBURG @ 4890'

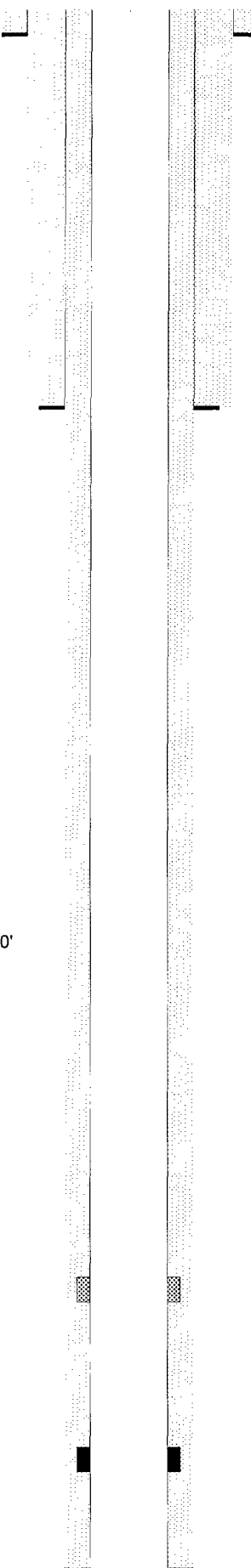
SAN ANDRES @ 5100

DELAWARE @ 5345

D.V. TOOL @ 5171'
1600 SX
CIRC.

5890'-5930', 39 shots

5 1/2"-15.5 #/FT. @ 6256'
380 SX



22" HOLE

16"-54 #/FT. @ 42'
3 CU. YDS.

MOBIL LEA STATE #3
ARMSTRONG ENERGY CORPORATION
990' FSL & 870' FWL
SW/SW
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

14 3/4" HOLE

SPUD DATE: 8/5/93

WELL TYPE: OIL WELL

T/SALT @ 1590'

CONDUCTOR PIPE:

CASING: 16"-54 #/FT. @ 42'
HOLE: 22" HOLE
CEMENT: 3 CU. YDS. REDI-MIX
T.O.C.: CIRC.

9 5/8"-36 #/FT. @ 1706'
1100 SX
CIRC.

SURFACE CASING:

CASING: 9 5/8"-36 #/FT. @ 1706'
HOLE: 14 3/4" HOLE
CEMENT: 1100 SX.
T.O.C.: CIRC.

8 3/4" & 7 7/8" HOLE

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. @ 6300'
HOLE: 8 3/4" & 7 7/8" HOLE
CEMENT: 414 SX
2ND STAGE: D.V. TOOL @ 5126'
CEMENT: 1600 SX.
T.O.C.: CIRC.
TOTAL DEPTH: 6256'

YATES @ 2880'

PRODUCTION ZONES: CHERRY CANYON

SEVEN RIVERS @ 3165'

QUEEN @ 4140'

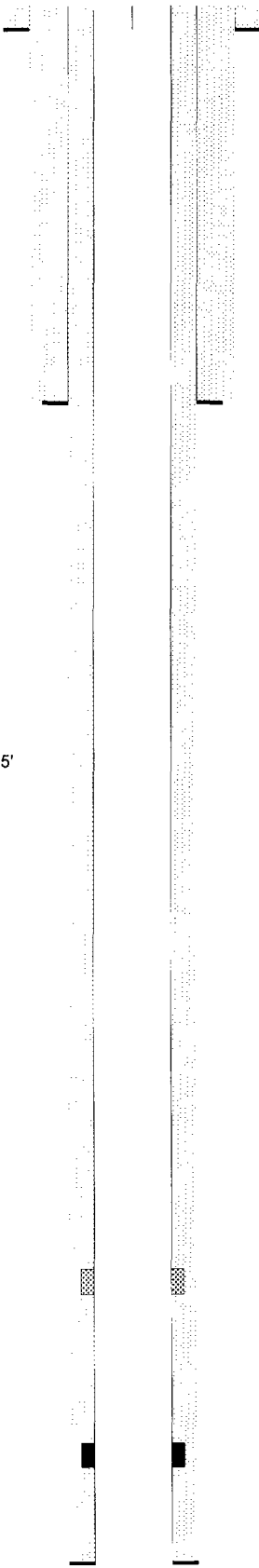
GRAYBURG @ 4940'

D.V. TOOL @ 5126'
1600 SX
CIRC.

DELAWARE @ 5110'

5918'-5936', 30 SHOTS

5 1/2"-15.5 #/FT. @ 6300'
414 SX



22" HOLE

16"-54 #/FT. @ 40'
3 CU. YDS. REDI-MIX

MOBIL LEA STATE #4
ARMSTRONG ENERGY CORPORATION
1155' FSL & 1770' FWL
SE/SW
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

14 3/4" HOLE

SPUD DATE: 12/7/93

WELL TYPE: OIL WELL

T/SALT @ 1605'

9 5/8"-36 #/FT. @ 1706'
1050 SX
CIRC.

CONDUCTOR PIPE:

CASING: 16"-54 #/FT. @ 40'
HOLE: 22" HOLE
CEMENT: 3 CU. YDS. REDI-MIX
T.O.C.: CIRC.

8 3/4" & 7 7/8" HOLE

SURFACE CASING:

CASING: 9 5/8"-36 #/FT. @ 1706'
HOLE: 14 3/4" HOLE
CEMENT: 1050 SX.
T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. @ 6285'
HOLE: 8 3/4" & 7 7/8" HOLE
CEMENT: 360 SX
2ND STAGE: D.V. TOOL @ 5166'
CEMENT: 1550 SX.
T.O.C.: CIRC.
TOTAL DEPTH: 6285'

YATES @ 3600'

PRODUCTION ZONES: CHERRY CANYON

SEVEN RIVERS @ 3680'

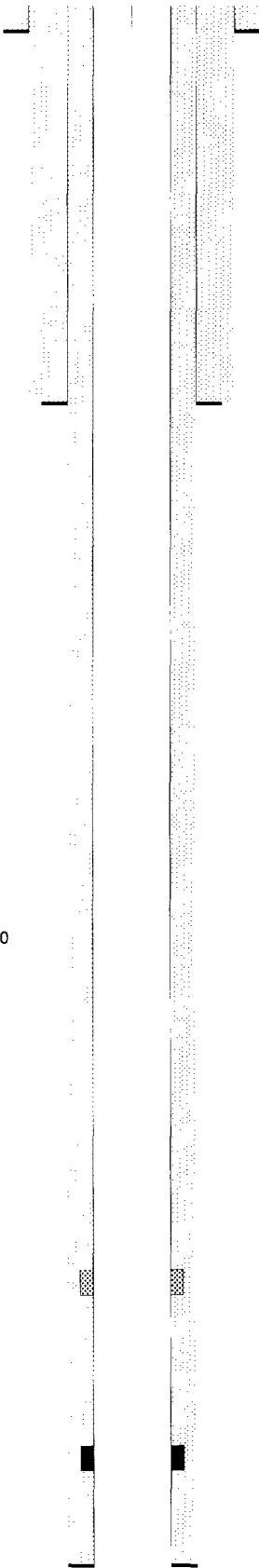
QUEEN @ 4665'

D.V. TOOL @ 5166'
1550 SX.
CIRC.

DELAWARE @ 5435'

5910'-5940', 31 SHOTS

5 1/2"-15.5 #/FT. @ 6285'
360 SX



22" HOLE

14"-28 #/FT. @ 40'
3 CU.YDS. REDI-MIX

MOBIL LEA STATE #5
ARMSTRONG ENERGY CORPORATION
2440' FNL & 870' FWL
SW/NW
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 3/26/94

WELL TYPE: OIL WELL

12 1/4" HOLE

CONDUCTOR PIPE:

CASING: 16"-54 #/FT. @ 40'

HOLE: 22" HOLE

CEMENT: 3 CU. YDS. REDI-MIX

T.O.C.: CIRC.

T/SALT @ 1700'

8 5/8"-32 #/FT. @ 1705'
800 SX
CIRC.

SURFACE CASING:

CASING: 8 5/8"-32 #/FT. @ 1705'

HOLE: 12 1/4" HOLE

CEMENT: 800 SX.

T.O.C.: CIRC.

7 7/8" HOLE

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. @ 6058'

HOLE: 7 7/8" HOLE

CEMENT: 325 SX

2ND STAGE: D.V. TOOL @ 5207'

CEMENT: 1400 SX.

T.O.C.: CIRC.

TOTAL DEPTH: 6058'

YATES @ 3590'

PRODUCTION ZONES: CHERRY CANYON

SEVEN RIVERS @ 3800'

QUEEN @ 4650'

D.V. TOOL @ 5207'
1400 SX
CIRC.
5610'-5630', 21 SHOTS

DELAWARE @ 5540'

5 1/2"-15.5 #/FT. @ 6058'
325 SX

17 1/2" HOLE

VI-F

MOBIL STATE #1
MIDCONTINENT
1980' FSL & 1980' FEL
NW/SE
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 4/16/85

WELL TYPE: OIL WELL

SURFACE CASING:

CASING: 13 3/8"-54.5 #/FT. K-55 @ 422'
HOLE: 17 1/2" HOLE
CEMENT: 450 SX
T.O.C.: CIRC.

INTERMEDIATE CASING:

CASING: 8 5/8"-32 & 28 #/FT @ 4380'
HOLE: 11" HOLE
CEMENT: 2700 SX.
T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-17#/FT J-55 & N-80 @ 9816'
HOLE: 7 7/8" HOLE
CEMENT: 225 SX
T.O.C.: CALC. @ 8550'
2ND STAGE: D.V. TOOL @ 6374'
CEMENT: 505 SX.
T.O.C.: CALC. @ 2660'
TOTAL DEPTH: 10800'

PRODUCTION ZONES: FIRST BONE SPRINGS SAND
CHERRY CANYON

11" HOLE

RUSTLER @ 1653'

YATES @ 1650'

13 3/8"-54.5 #/FT. K-55 @ 422'
250 SX. "HLC" 3% SALT, & 1/4# FLOCELE
200 SX CLASS "C", 2% CACL
CIRCULATED 135 SX

QUEEN @ 4665'

SAN ANDRES @ 4800'

8 5/8"-32 & 28 #/FT @ 4380'
1000 SX HLC, 18 % SALT, 5# GILSONITE & 1/4 #/SX FLOCELE
1500 SX HLC, 18% SALT & 1/4 #/SX FLOCELE
200 SX CLASS "C" W/ 1% CACL
CIRCULATED 550 SX

7 7/8" HOLE

DELAWARE @ 5630'

5626', 31', 33', 44', 71, 75', 86', 93' & 95', 10 SHOTS

D.V. TOOL @ 6374'
355 SX HLC W/ 1/4#/SX FLOCELE
150 SX CLASS "H"

1.97 CU.FT./SX 699.35 CU.FT.
1.06 CU.FT./SX 159.00 CU.FT.

7 7/8" X 5 1/2" 0.1733 CU.FT./FT

THEORETICAL FILL 4953.0 FT.
LESS 25% EXCESS 3714.8 FT.
CALCULATED T.O.C. 2660 FT.

BONE SPRINGS LIME
@ 7930'

CALCULATED T.O.C. 8550'

1ST BONE SPRINGS
SAND @ 9500'

CIBP @ 9600'
9650'-54', 9663'66', 9676'-9681' & 9636'-9688', 2 SHOTS/FT.

2ND BONE SPR. SAND
@ 10,737'

5 1/2"-17#/FT J-55 & N-80 @ 9816'
225 SX CLASS "H" 50/50 POZ 2% GEL, .6% HALAD-22A, .3% CFR-2, 5# KCL & 1/4# FLOCELE

1.30 CU. FT./SX 292.5 CU.FT.
7 7/8" X 5 1/2" 0.1733 CU.FT./FT

THEORETICAL FILL 1687.8 FT.
LESS 25% EXCESS 1265.9 FT.
CALCULATED T.O.C. 8550.1 FT.

T.D. @ 10800'

25 SX @ SURFACE

VI-G

MOBIL STATE #2
SPECTRUM "7" EXPLORATION
660' FSL & 1980' FWL
SE/SW
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 6/12/86

WELL TYPE: DRY HOLE, P/A

SURFACE CASING:

CASING: 8 5/8"24 #/FT. @ 1728'
HOLE: 12 1/4" HOLE
CEMENT: 850 SX.
T.O.C.: CIRC.

LONG STRING:

CASING: 4 1/2"-10.5#/FT. & 11.6#/FT. @ 6043'
HOLE: 7 7/8" HOLE
CEMENT: 450 SX
T.O.C.: CALC. @ 4075'
TOTAL DEPTH: 6100'

PRODUCTION ZONES: TESTED CHERRY CANYON

12 1/4" HOLE

RUSTLER @ 1600'

T.D. @1731'

40 SX PLUG @ 1778'

8 5/8"24 #/FT. @ 1728'
650 SX HLC W/ 1/4#/SX FLOCELE
200 SX CLASS "C" W/ 2% CACL
CIRCULATED 100 SX

7 7/8" HOLE

B/SALT @ 3248'

YATES @ 3705'

SEVEN RIVERS @ 4290'

QUEEN @ 4682'

GRAYBURG @ 5113'

CASING CUT AND PULLED @ 2903'
40 SX PLUG @2950', DID NOT TAG
40 SX @ 2950', TAGGED @ 2793'

EST. TOC @ 4075'

25 SX @ 4600'

25 SX PLUG @ 5600'-5400'

25 SX PLUG @ 5650'-5600'
5698', 5699', 5700', 01', 02', 05', 06', 07', 13', 14', 15' & 16'

4 1/2"-10.5#/FT. & 11.6#/FT. @ 6043'
450 SX CLASS "C" POZ W/ .6% CF-14 & 1/4#/SX FLOCELE

YIELD 1.33 CU.FT./SX

598.5 CU.FT.

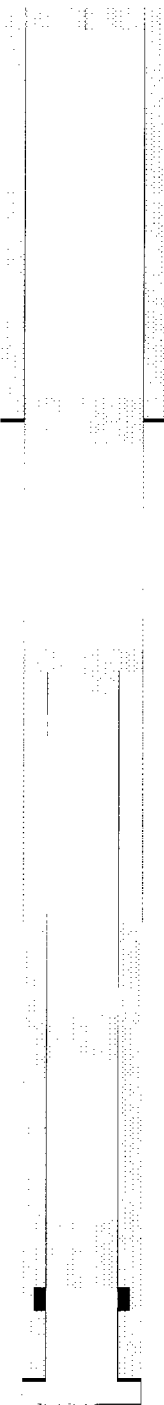
7 7/8" X 4 1/2"

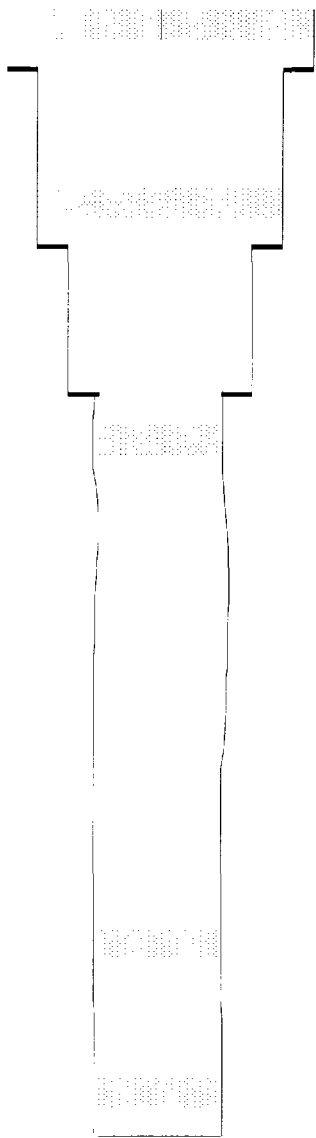
0.2278 CU.FT./FT.

LESS 25%
EST. T.O.C.

2627.3 FT.
1970.5 FT
4073 FT.

T.D. @6100'





BRIDGE @ 80' W/ 90 SX CEMENT

13 3/8" @ 126'
SET & PULLED

10 SX PLUG @ 600'

10 3/4" @ 720'
SET & PULLED

8" @ 1300'
SET & PULLED
20 SX PLUG @ 1500'

ANHYDRITE @ 1562'

B/SALT @ 3160'

YATES @ 3379'

20 SX PLUG @ 3270'

25 SX PLUG @ 3755'

T.D. @ 3769'

VI-H

FEDERAL "A" #1
LANG & SCHLACHTER
660' FSL & 660' FEL
SE/SE
SECTION 3-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 3/26/56

WELL TYPE: DRY HOLE, P/A

**THIS WELL DID NOT PENETRATE
THE CHERRY CANYON INTERVAL**

MARK FEDERAL #3
READ & STEVENS INC.
330' SFL & 1900' FEL
SW/SE
SECTION 3-T20S-R34E
LEA COUNTY, N.M.

17 1/2" HOLE

EST. T.O.C. 850'

SPUD DATE: 12/26/92

WELL TYPE: OIL WELL

SURFACE CASING:

CASING: 13 3/8"-54.5 #/FT. K-55 @ 1590'
HOLE: 17 1/2" HOLE
CEMENT: 1250 SX
T.O.C.: CIRC.

INTERMEDIATE CASING:

CASING: 8 5/8"-32 #/FT @ 4975'
HOLE: 11" HOLE
CEMENT: 1700 SX.
T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. J-55 @ 6132'
HOLE: 7 7/8" HOLE
CEMENT: 650 SX
T.O.C.: CALC. @ 850'

11" HOLE

13 3/8"-54.5 #/FT. J-55 @ 1590'
1000 SX LITE
250 SX PREMIUM PLUS
CIRC. 105 SX

TOTAL DEPTH: 6132'

PRODUCTION ZONES: CHERRY CANYON

YATES @ 3695'

DELAWARE @ 5415'

8 5/8"-32 #/FT. @ 4975'
1700 SX
CIRC.

7 7/8" HOLE

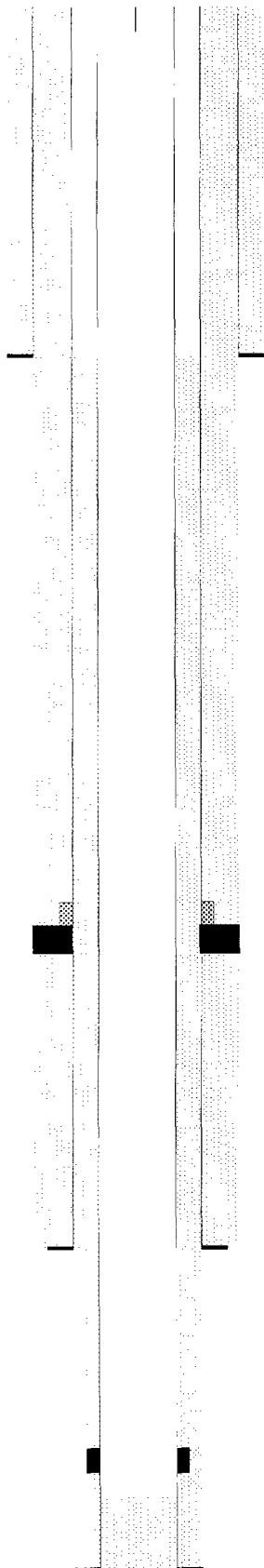
5628'-5634', 5648'-5656', 5662'-5680'

5 1/2"-15.5 #/FT. J-55 @ 6132'
250 SX LITE
400 SX CLASS "H"

17 1/2" HOLE

11" HOLE

7 7/8" HOLE



MARK FEDERAL #4
 READ & STEVENS INC.
 330' SFL & 990' FEL
 SE/SE
 SECTION 3-T20S-R34E
 LEA COUNTY, N.M.

SPUD DATE: 10/27/93

WELL TYPE: OIL WELL

T.O.C. @ 1500', CBL

13 3/8"-54.5 #/FT. @ 1486'
 950 SX LITE
 250 CLASS "C"
 CIRC. 160 SX

SURFACE CASING:

CASING: 13 3/8"-54.5 #/FT. @ 1486'
 HOLE: 17 1/2" HOLE
 CEMENT: 1200 SX
 T.O.C.: CIRC.

INTERMEDIATE CASING:

CASING: 8 5/8"-32 #/FT @ 5005'
 HOLE: 11" HOLE
 CEMENT: 1750 SX.
 T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. J-55 @ 6132'
 HOLE: 7 7/8" HOLE
 CEMENT: 650 SX
 T.O.C.: 1500' - CBL

TOTAL DEPTH: 6214'

PRODUCTION ZONES: CHERRY CANYON

D.V. TOOL @ 3771'
 ECP @ 3816'
 1100 SX LITE W/ 15 #/SX SALT & 1/4 #/SX FLOCELE
 250 SX PREMIUM PLUS W/ 2% CACL
 CIRC

8 5/8"-32 #/FT. J-55 & S-80 @ 5005'
 400 SX PREMIUM PLUS

5912'-5922'

PBTD @ 6157'

5 1/2"-15.5 #/FT. J-55 @ 6214'
 250 SX LITE
 400 SX CLASS "C"

17 1/2" HOLE

MARK FEDERAL #8
READ & STEVENS INC.
1650' FSL & 330' FEL
NE/SE
SECTION 3-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 8/31/93

WELL TYP OIL WELL

SURFACE CASING:

CASING: 13 3/8"-54.5 #/FT. @ 1496'
HOLE: 17 1/2" HOLE
CEMENT: 1250 SX
T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. J-55 @ 6349'
HOLE: 7 7/8" HOLE
CEMENT: 2690 SX
T.O.C.: CIRC.

TOTAL DE 6349'

PRODUCTION ZONES: CHERRY CANYON

OCHOA @ 1556'

13 3/8"-54.5 #/FT. @ 1496'
950 SX LITE
250 SX P.P.
CIRC.

7 7/8" HOLE

YATES @ 3401'

SEVEN RIVERS @ 3840'

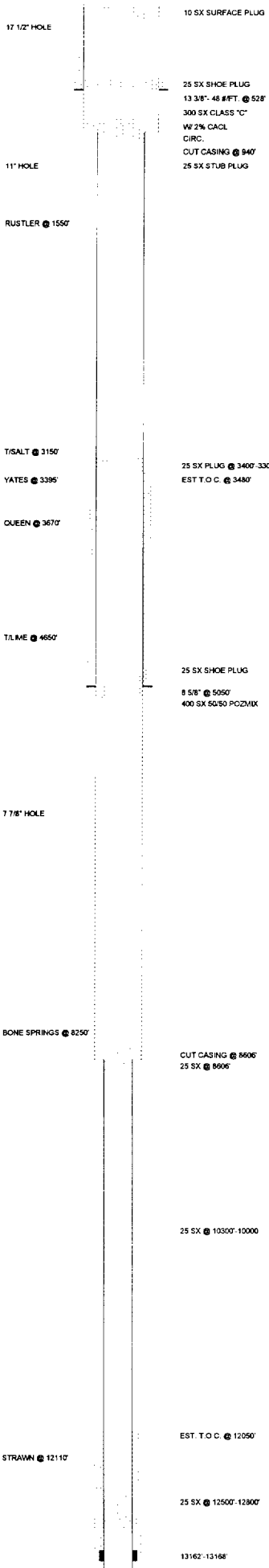
D.V. TOOL @ 3830'
1400 SX HLC W/ 10 #/SX SALT
470 SX CLASS "C"
CIRC 86 SX TO SURFACE

DELAWARE @ 5456'

5910'-5986', 32 SHOTS

6030'-6038', 32 SHOTS

5 1/2"-15.5 #/FT. @ 6349'
545 SX HLC W/ 5 #/SX GILSONITE
275 SX CLASS "H"



FEDERAL "10" #2
 GREATHOUSE, PIERCE & DAVIS
 660' FNL & 1980' FEL
 NW/NE
 SECTION 10-T20S-R34E
 LEA COUNTY, N.M.

SPUD DATE: 2/6/84

WELL TYPE: GAS WELL, P/A

SURFACE CASING:

CASING: 13 3/8" 48 #/FT. @ 528'
 HOLE: 17 1/2" HOLE
 CEMENT: 330 SX
 T.O.C.: CIRC.

INTERMEDIATE CASING:

CASING: 8 5/8" @ 5050'
 HOLE: 11" HOLE
 CEMENT: 400 SX
 T.O.C.: CALC. @ 3480'

LONG STRING:

CASING: 4 1/2"-11.6 & 13.5 #/FT., N-80 @ 13200'
 HOLE: 7 7/8" HOLE
 CEMENT: 250 SX
 T.O.C.: CALC. @ 12050'

TOTAL DEPTH: 13200'

PRODUCTION ZONES: MORROW

25 SX PLUG @ 3400-3300'
 EST T.O.C. @ 3480'

25 SX SHOE PLUG
 8 5/8" @ 5050'
 400 SX 50/50 POZMIK

CUT CASING @ 8606'
 25 SX @ 8606'

25 SX @ 10300'-10000'

EST. T.O.C. @ 12050'

25 SX @ 12500'-12800'

13162'-13168'

4 1/2"-11.6 & 13.5 #/FT., N-80 @ 13200'
 250 SX 50/50 POZ W 2% GEL, 20 #/SX SALT

NORTH LEA FEDERAL #3
READ & STEVENS INC.
1650' FNL & 990' FEL
SE/NE
SECTION 10-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 10/19/87

WELL TYPE: GAS WELL

SURFACE CASING:

CASING: 13 3/8"-68 #/FT J-55 @ 1595'
HOLE: 17 1/2" HOLE
CEMENT: 1265 SX
T.O.C.: CIRC.

INTERMEDIATE CASING:

CASING: 8 5/8"-32 #/FT @ 5195'
HOLE: 12 1/4" & 11" HOLE
CEMENT: 2475 SX.
T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-20 & 23 #/FT. @ 13730'
HOLE: 7 7/8" HOLE
CEMENT: 3295 S
T.O.C.: CIRC.

TOTAL DEPTH: 13730'

PRODUCTION ZONES: MORROW

17 1/2" HOLE

13 3/8"-68 #/FT J-55 @ 1595'
1265 SX
CIRC 466 SX

12 1/4" & 11" HOLE

TANSILL @ 3192

YATES @ 3406

D.V. TOOL @ 3862
ECP @ 3905
1900 SX
CIRC 350 SX.

8 5/8"-32 #/FT. @ 5195'
575 SX

7 7/8" HOLE

D.V. TOOL @ 10094
100 SX THICKSET
2050 SX SORSI POZMIX
100 SX THICKSET
EST. TOC @ SURF.

WOLFCAMP @ 10931

STRAWN @ 12186

ATOKA @ 12634

MORROW @ 12925

1345Z-1346Z, 4 JSPP

5 1/2"-20 & 23 #/FT. @ 13730'
1045 SX50/50 POZ
CIRC 150 SX @ D.V. TOOL

17 1/2" HOLE

T.O.C. @ 535', CBL

NORTH LEA FEDERAL #9
 READ & STEVENS INC.
 1800' FNL & 990' FEL
 SE/NE
 SECTION 10-T20S-R34E
 LEA COUNTY, N.M.

SPUD DATE: 3/23/93

WELL TYPE: OIL WELL

SURFACE CASING:

CASING: 13 3/8"-54.5 #/FT. J-55 @ 1567'
 HOLE: 17 1/2" HOLE
 CEMENT: 1150 SX
 T.O.C.: CIRC.

INTERMEDIATE CASING:

CASING: 8 5/8"-32 #/FT @ 4965'
 HOLE: 12 1/4" & 11" HOLE
 CEMENT: 1750 SX.
 T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. J-55 @ 6300'
 HOLE: 7 7/8" HOLE
 CEMENT: 650 SX
 T.O.C.: 535' - CBL

TOTAL DEPTH: 6300'

PRODUCTION ZONES: CHERRY CANYON

OCHOA @ 1550'

13 3/8"-54.5 #/FT. J-55 @ 1567'
 900 SX LITE
 250 SX P.P.
 CIRC.

12 1/4" & 11"

YATES @ 3395'

SEVEN RIVERS @ 3834'

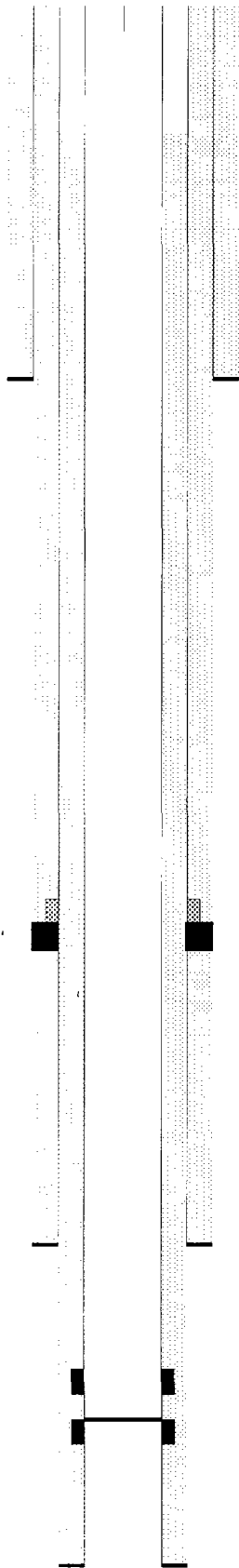
D.V. TOOL @ 3787'
 ECP @ 3851'
 1100 SX LITE
 250 SX P.P.
 CIRC.

DELAWARE @ 5450'

8 5/8"-32 #/FT. J-55 & S-80 @ 4965'
 400 SX P.P.

5610'-5676'
 CIBP @ 5880'
 5892'-5904'

5 1/2"-15.5 #/FT. J-55 @ 6300'
 250 SX LITE
 450 SX P.P.



17 1/2" HOLE

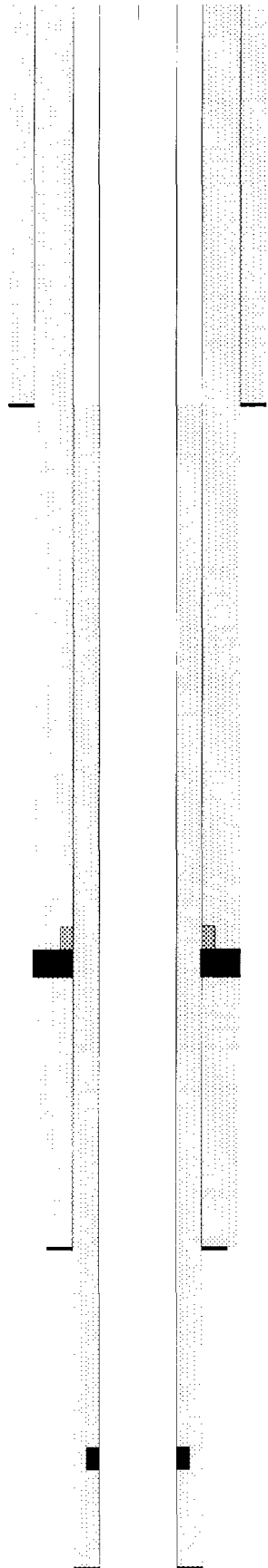
OCHOA @ 1556'

YATES @ 3401'

SEVEN RIVERS @ 3840'

7 7/8" HOLE

DELAWARE @ 5456'



T.O.C. @ 1700'

13 3/8"-54.5 #/FT. J-55 @ 1550'
900 SX LITE
250 SX P.P. W/ 2% CACL
CIRC.

D.V. TOOL @ 3803'
ECP @ 3865'
1100 SX LITE
250 P.P.
CIRC. 125 SX

8 5/8"-32 #/FT S-80 & J-55 @ 4975'
400 SX CLASS "H"
CIRC 80 SX @ D.V. TOOL

5910'-5930', 40 SHOTS

5 1/2"-15.5#/FT. J-55 @ 6245'
250 SX LITE
450 SX P.P.

NORTH LEA FEDERAL #10
READ & STEVENS INC.
660' FNL & 990' FEL
NE/NE
SECTION 10-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 2/11/93

WELL TYP OIL WELL

SURFACE CASING:

CASING: 13 3/8"-54.5 #/FT. J-55 @ 1550'
HOLE: 17 1/2" HOLE
CEMENT: 1150 SX
T.O.C.: CIRC.

INTERMEDIATE CASING:

CASING: 8 5/8"-32 #/FT @ 4975'
HOLE: 11" HOLE
CEMENT: 1750 SX.
T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-15.5 #/FT. J-55 @ 6245'
HOLE: 7 7/8" HOLE
CEMENT: 700 SX
T.O.C.: 1700'

TOTAL DE 6245'

PRODUCTION ZONES CHERRY CANYON

FEDERAL #5
SAMSON RESOURCES
2310' FNL & 330' FWL
SW/NW
SECTION 11-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 12/4/94

WELL TYPE: OIL WELL

SURFACE CASING:

CASING: 9 5/8"-36 #/FT. @ 1607'
HOLE: 12 1/4" HOLE
CEMENT: 600 SX
T.O.C.: CIRC.

LONG STRING:

CASING: 5 1/2"-17 #/FT. J-55 @ 6255'
HOLE: 7 7/8" HOLE
CEMENT: 1320 SX
T.O.C.: CIRC.

TOTAL DEPTH: 6255'

PRODUCTION ZONES: CHERRY CANYON

12 1/4" HOLE

RUSTLER @ 1590'

7 7/8" HOLE

YATES @ 3422'

SEVEN RIVERS @ 3830'

DELAWARE @ 5454'

9 5/8"-36 #/FT. @ 1607'
450 SX CLASS "C" LITE
150 SX CLASS "C"
CIRC.

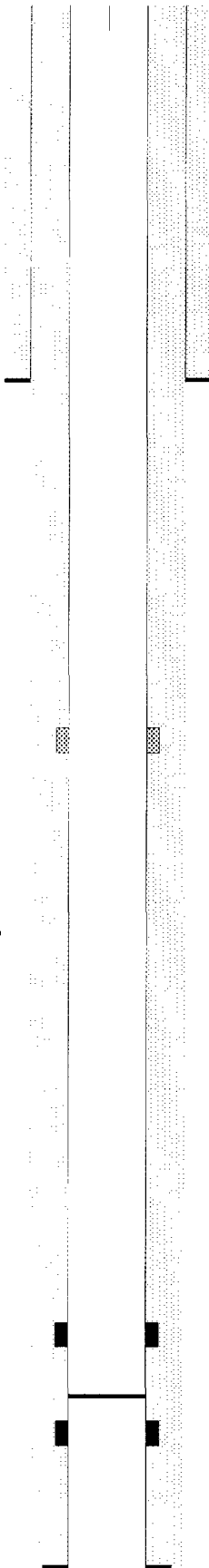
D.V. TOOL @ 3009'
610 SX CLASS "C" W/ADD.
100 SX CLASS "C"

5456'-5466', 21 SHOTS

CIBP @ 5560'

5702'-5782', 100 SHOTS

5 1/2"-17 #/FT. J-55 @ 6255'
410 SX CLASS "C" LITE
200 SX CLASS "C" W/ADD.



24" HOLE
 13 3/4" HOLE
 ANHYDRITE @ 1610'
 T/SALT @ 1650'
 B/SALT @ 3290'
 YATES @ 3440'
 QUEEN @ 3748'
 TUBBS @ 4634'
 9 5/8" HOLE
 BONE SPRINGS @ 8202'
 T/PENN @ 12060'
 MISSISSIPPIAN @ 13684'
 WOODFORD @ 14305'
 DEVONIAN @ 14478'

FEDERAL #1
 GEODYNE OPERATING COMPANY
 1980' FNL & 2130' FWL
 SE/NW
 SECTION 11-T20S-R34E
 LEA COUNTY, N.M.

16-65 #FT. @ 723'
 1200 SX
 CIRC

SPUD DATE: 11/4/60
 WELL TYPE: GAS WELL - OIL WELL

SURFACE CASING:
 CASING: 16-65 #FT. @ 723'
 HOLE: 24" HOLE
 CEMENT: 1200 SX
 T.O.C.: CIRC.

INTERMEDIATE CASING:
 CASING: 10 3/4" @ 5293'
 HOLE: 13 3/4" HOLE
 CEMENT: 3420 SX
 T.O.C.: CIRC.

LONG STRING:
 CASING: 7"-29 & 32 #FT @ 14360'
 HOLE: 9 5/8" HOLE
 CEMENT: 1700 SX
 T.O.C.: CALC. @ 8680'

TOTAL DEPTH: 14619'
 PRODUCTION ZONES:
 TESTED DEVONIAN
 PRODUCED MORROW
 RECOMPLETED TO BONE SPRINGS

10 3/4" @ 5293'
 3420 SX
 CIRC.

EST TOC @ 8680'

SQUEEZE HOLES @ 8420' & 9555'
 SHOT HOLES @ 8470'
 SQUEEZE W/ 30 SX CLASS "H" W/ 75% CF-14
 SQUEEZE W/ 30 SX CLASS "H"
 SQUEEZE W/ 30 SX CLASS "H" W/ 75% CF-14

10158'-10166', 32 SHOTS
 SQUEEZED W/ 100 SX CLASS "H" W/ 60% SX SAND,
 1/4 #SX FLOCCLE, 5% CFR-2
 10253'-10258', 10150'-10156', 9572'-9577', 9560'-9568', 9476'-9466', 4 JSPF

PBTD @ 12696'
 SPOT 61 SX CLASS "H" W/ 75% CF-14 ON TOP OF PACKER
 SPOT 65 SX CLASS "H" W/ 75% CF-14 ON TOP OF PACKER
 PACKER @ 12948'

13034'-13054', 80 SHOTS
 CIRC @ 13055'

7"-29 & 32 #FT @ 14360'
 1700 SX
 T.D. @ 14619'

ARMSTRONG ENERGY CORPORATION

MOBIL LEA FEDERAL #6 PMW
330' FSL & 990 FWL
SECTION 2-T20S-R34E
LEA COUNTY, NEW MEXICO

VII. PROPOSED OPERATION:

VOLUME OF FLUID TO BE INJECTED:

AVERAGE DAILY RATE 400 BHPD
MAXIMUM DAILY RATE 500 BHPD

SYSTEM TYPE:

CLOSED

INJECTION PRESSURE:

AVERAGE INJECTION PRESSURE 500 PSI
MAXIMUM INJECTION PRESSURE 750 PSI

WATER SOURCE:

PRODUCED DELAWARE WATER FROM WELLS IN SECTIONS 1 & 2
T20S-R34E

WATER ANALYSIS:

MOBIL LEA STATE #1 12/9/92

TOTAL HARDNESS	1820.00	me/l
CALCIUM	32076.98	mg/l
MAGNESIUM	2673.31	mg/l
IRON	30.00	mg/l
SODIUM	44604.19	mg/l
CHLORIDE	1321995.38	mg/l
SULFATE	550.00	mg/l
CARBONATE	0.00	mg/l
BICARBONATE	183.04	mg/l
TOTAL SOLIDS	213112.90	mg/l
CARBON DIOXIDE	217.80	mg/l
pH	6.65	
SPECIFIC GRAVITY	1.14	
TDS	213115.89	
RESISTIVITY	0.057	@ 70 DEGREES

ARMSTRONG ENERGY CORPORATION

MOBIL LEA FEDERAL #6 PMW
330' FSL & 990 FWL
SECTION 2-T20S-R34E
LEA COUNTY, NEW MEXICO

VIII. GEOLOGICAL DATA:

GEOLOGICAL NAME: DELAWARE - CHERRY CANYON

LITHOLOGICAL DETAIL: PRIMARILY SANDSTONES INTERBEDDED WITH LIMESTONE AND SHALE.

FORMATION TOP: CHERRY CANYON - THIRD SAND @ -2239
(MOBIL LEA STATE #3 LOG)

THICKNESS: 104 FT, 5910' - 6014'

GEOLOGICAL DATA OF DRINKING WATER ZONE: THE UNDERGROUND SOURCE OF DRINKING WATER IN THE AREA IS THE "CHINLE", WHICH OCCURS AT 65'-200' IN THIS AREA AND IS APPROXIMATELY 100'-150' THICK. THE CLOSEST FRESHWATER WELL IS THE ROBERTS WELL LOCATED ON AND ONE-HALF MILES WEST IN THE SE/SE SECTION 4-T20S-R34E. THE STATE ENGINEERS OFFICE INDICATES THAT THERE ARE ONLY MINOR ISOLATED ACCUMULATIONS OF FRESH WATER IN THIS AREA AND THERE ARE NO WELLS WITHIN ONE MOILE OF THE PROPOSED WELL.

ARMSTRONG ENERGY CORPORATION

MOBIL LEA FEDERAL #6 PMW
330' FSL & 990 FWL
SECTION 2-T20S-R34E
LEA COUNTY, NEW MEXICO

IX. PROPOSED STIMULATION PROGRAM:

ACID BREAKDOWN: AFTER PERFORATING THE ZONE WILL BE ACIDIZED WITH 3000 GALLONS OF 7 1/2% HCL NEFE ACID WITH RCN BALLSEALERS.

FRACTURE STIMULATION: THE ZONE WILL BE FRACTURE STIMULATED WITH 20,000 GALLONS OF CROSSLINKED GELLED WATER CARRING 45,000 POUNDS OF 20-40 SAND.

X. LOGGING AND TEST DATA: THIS WELL HAS NOT BEEN DRILLED YET. LOGS AND TEST DATA WILL BE SUBMITTED TO THE COMMISSION UPON COMPLETION OF THIS WELL. THE ANTICIPATED COMPLETION DATE IS FEBRUARY 1, 1996.

ARMSTRONG ENERGY CORPORATION

MOBIL LEA FEDERAL #6 PMW
 330' FSL & 990 FWL
 SECTION 2-T20S-R34E
 LEA COUNTY, NEW MEXICO

XI. ANALYSIS OF FRESH WATER WELLS:

THE CLOSEST SOURCE OF FRESH WATER IS A WINDMILL USED FOR LIVESTOCK WATERING LOCATED IN THE SE/SE OF SECTION 4-T20S-R34E. THIS IS CALLED THE ROBERTS WELL AND IT IS APPROXIMATELY ONE AND ONE-HALF MILES WEST OF THE PROPOSED PRESSURE MAINTENANCE WELL. A RECENT CHECK (10/31/95) BY ARMSTRONG ENERGY'S PUMPER INDICATED THIS WELL IS CAPPED AND WATER IS BEING PIPED TO THIS STOCK TANK FROM A SOURCE APPROXIMATELY TWO AND ONE-HALF MILES NORTH NORTHEAST OF THIS SITE. A SAMPLE OF THIS WATER WAS ANALYSED AND THE RESULTS ARE INCLUDED.

MR. KEN FRESQUEZ, WITH THE NEW MEXICO STATE ENGINEERS OFFICE IN ROSWELL, INDICATES THERE IS ONLY LIMITED AMOUNTS OF FRESH WATER IN THE AREA AND THE ROBERTS WELL IS THE CLOSEST SOURCE OF FRESH WATER. HE INDICATES THE ROBERTS WELL WAS DRILLED TO A DEPTH OF 200 FEET AND PRODUCES WATER FROM THE CHINLEE FORMATION. IN JANUARY 1986 THE WELL HAD A FLUID LEVEL OF 125.86 FEET FROM THE SURFACE.

SAMPLE FROM THE ROBERTS WELL STOCK TANK
 ANALYSED BY BAKER PETROLEUM CHEMICALS, INC.

11/01/95

ANALYSIS # 4462

TOTAL HARDNESS	1.00 me/l
CALCIUM	20.00 mg/l
MAGNESIUM	0.00 mg/l
IRON	0.00 mg/l
SODIUM	4452.80 mg/l
CHLORIDE	5000.00 mg/l
SULFATE	660.00 mg/l
CARBONATE	600.00 mg/l
BICARBONATE	1220.00 mg/l
TOTAL SOLIDS	11952.80 mg/l
CARBON DIOXIDE	0.00 mg/l
pH	7.70
SPECIFIC GRAVITY	1.00
TDS	11952.80 PPM

ARMSTRONG ENERGY CORPORATION

MOBIL LEA FEDERAL #6 PMW
330' FSL & 990 FWL
SECTION 2-T20S-R34E
LEA COUNTY, NEW MEXICO

XII. COMMUNICATION WITH SOURCES OF DRINKING WATER:

AFTER EXAMINING ALL AVAILABLE GEOLOGICAL AND ENGINEERING DATA, WE FIND NO EVIDENCE OF OPEN FAULTS OR ANY OTHER HYDROLOGIC CONNECTION BETWEEN THE INJECTION ZONE AND ANY UNDERGROUND SOURCE OF DRINKING WATER.

ARMSTRONG ENERGY CORPORATION

MOBIL LEA FEDERAL #6 PMW
330' FSL & 990 FWL
SECTION 2-T20S-R34E
LEA COUNTY, NEW MEXICO

XIII. NOTICE

A COPY OF OUR APPLICATION HAS BEEN FURNISHED BY CERTIFIED MAIL TO THE SURFACE OWNER AND TO EACH LEASEHOLD OPERATOR WITHIN ONE-HALF MILE OF OUR PROPOSED PRESSURE MAINTENANCE WELL. SEE LISTING ON EXHIBIT "A".