

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: B. 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.

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

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

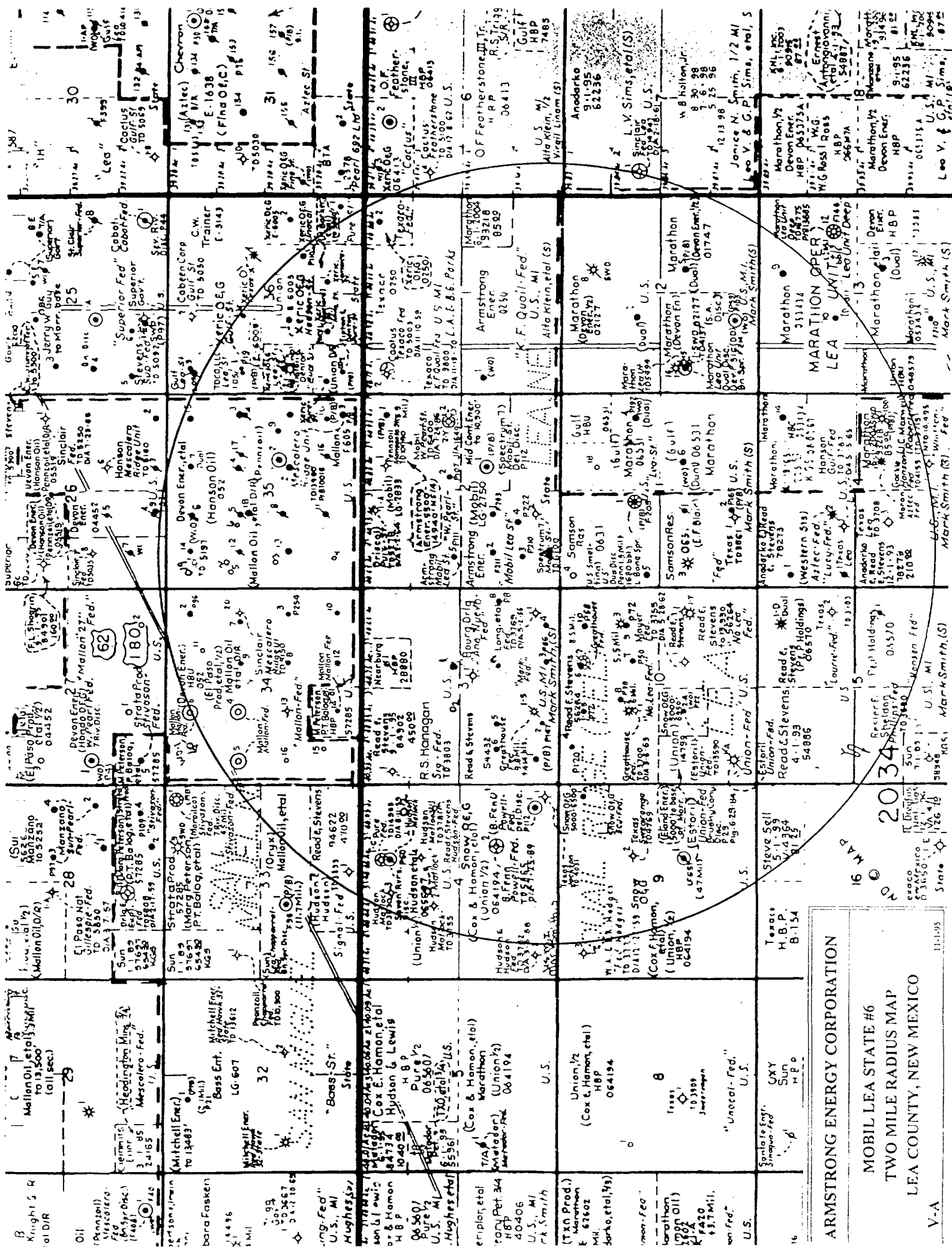
5 1/2"-15.5 #/FT. @ 6100'
450 SX

III. PROPOSED PRESSURE MAINTENANCE WELL

CONFIGURATION

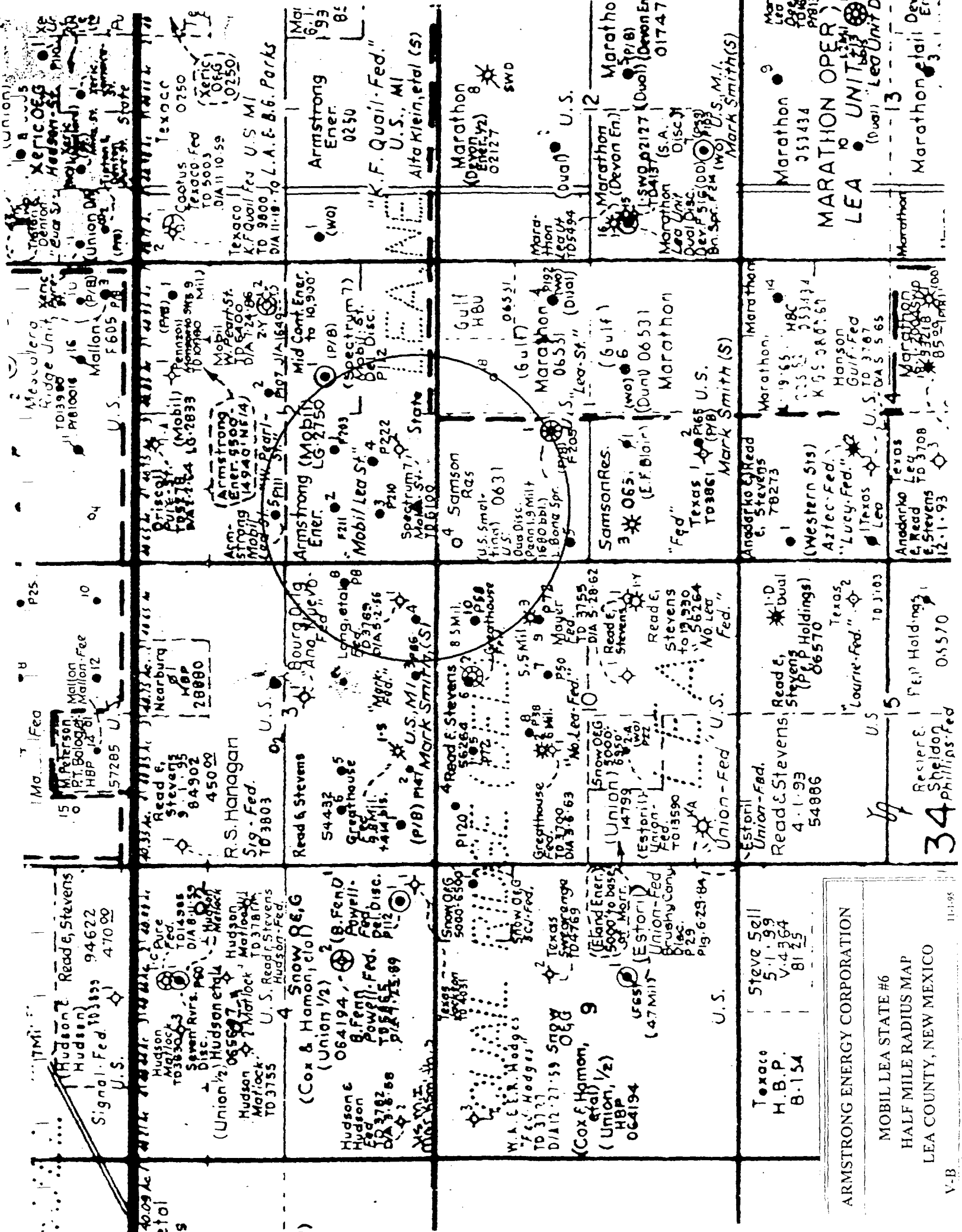
MOBIL LEA STATE #6 PMW
ARMSTRONG ENERGY CORPORATION
330' FSL & 990' FWL
SW/SW
SECTION 2-T20S-R34E
LEA COUNTY, N.M.

PROPOSED SPUD DATE: 1/15/96



ARMSTRONG ENERGY CORPORATION

MOBIL LEA STATE #6
TWO MILE RADIUS MAP
LEA COUNTY, NEW MEXICO
V-A
11-1-95



ARMSTRONG ENERGY CORPORATION

MOBIL LEA STATE #6

HALF MILE RADIUS MAP

LEA COUNTY, NEW MEXICO

V-B

22" HOLE

14 3/4" HOLE

T/SALT @ 1625'

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

B/SALT @ 3540'
YATES @ 3630'

QUEEN @ 4662'

SAN ANDRES @ 5095'

DELAWARE @ 5345'

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

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

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

5890'-5931', 41 SHOTS

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

VI-A

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

SPUD DATE: 9/30/92

WELL TYPE: OIL WELL

CONDUCTOR PIPE:

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

SURFACE CASING:

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

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

22" HOLE

14 3/4" HOLE

T/SALT @ 1600'

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

YATES @ 3500'

SEVEN RIVERS @ 3790'

QUEEN @ 4655'

GRAYBURG @ 4890'

SAN ANDRES @ 5100'

DELAWARE @ 5345'

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

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

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

5890'-5930', 39 shots

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

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

VI-B

22" HOLE

14 3/4" HOLE

T/SALT @ 1590'

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

YATES @ 2880'

SEVEN RIVERS @ 3165'

QUEEN @ 4140'

GRAYBURG @ 4940'

DELAWARE @ 5110'

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

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

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

5918'-5936', 30 SHOTS

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

VI-C

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

SPUD DATE: 8/5/93

WELL TYPE: OIL WELL

CONDUCTOR PIPE:

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

SURFACE CASING:

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

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'

PRODUCTION ZONES: CHERRY CANYON

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.

SPUD DATE: 12/7/93

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. @ 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'

PRODUCTION ZONES: CHERRY CANYON

14 3/4" HOLE

T/SALT @ 1605'

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

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

YATES @ 3600'

SEVEN RIVERS @ 3680

QUEEN @ 4665'

DELAWARE @ 5435'

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

5910'-5940', 31 SHOTS

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

22" HOLE

12 1/4" HOLE

T/SALT @ 1700'

7 7/8" HOLE

YATES @ 3590'

SEVEN RIVERS @ 3800'

QUEEN @ 4650'

DELAWARE @ 5540'

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

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

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

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

VI-E

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

CONDUCTOR PIPE:

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

SURFACE CASING:

CASING: 8 5/8"-32 #/FT. @ 1705'
HOLE: 12 1/4" HOLE
CEMENT: 800 SX.
T.O.C.: CIRC.

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'

PRODUCTION ZONES: CHERRY CANYON

17 1/2" HOLE

VI-F

13 3/8"-54.5 #/FT. K-55 @ 422'
250 SX, 7HLC 3% SALT, & 1/4# FLOCELE
200 SX CLASS "C", 2% CACL
CIRCULATED 135 SX

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'

QUEEN @ 4665'

SAN ANDRES @ 4800'

7 7/8" HOLE

DELAWARE @ 5630'

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

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'

7 7/8" HOLE

B/SALT @ 3248'

YATES @ 3705'

SEVEN RIVERS @ 4290'

QUEEN @ 4682'

GRAYBURG @ 5113'

T.D. @ 6100'

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

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

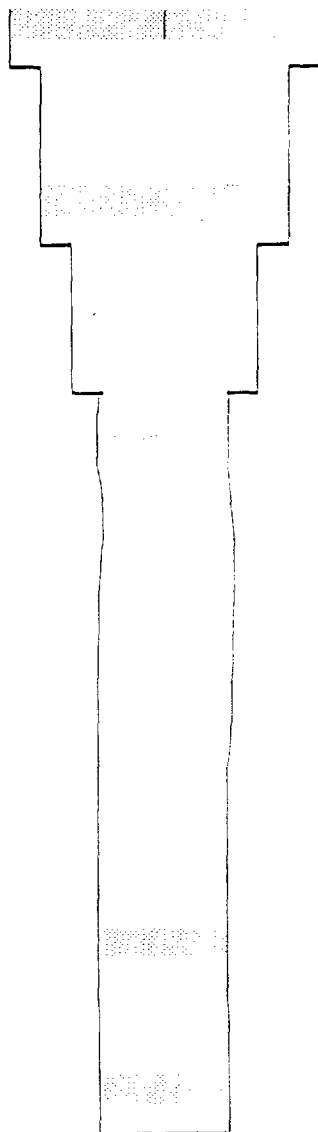
598.5 CU.FT.

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.



BRIDGE @ 80' W/ 90 SX CEMENT

VI-H

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'

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.

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'

TOTAL DEPTH: 6132'

PRODUCTION ZONES: CHERRY CANYON

17 1/2" HOLE

EST. T.O.C. 850'

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

11" HOLE

YATES @ 3695'

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

DELAWARE @ 5415'

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

7 7/8" HOLE

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

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

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

T.O.C. @ 1500', CBL

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

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

11" HOLE

7 7/8" 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

17 1/2" HOLE

OCHOA @ 1556'

7 7/8" HOLE

YATES @ 3401'

SEVEN RIVERS @ 3840'

DELAWARE @ 5456'

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

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

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"

17 1/2" HOLE

10 SX SURFACE PLUG

FEDERAL "10" #2
GREATHOUSE, PIERCE & DAVIS
680' FNL & 1980' FEL
NWNE
SECTION 10-T20S-R34E
LEA COUNTY, N.M.

SPUD DATE: 2/6/64

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

11" HOLE

25 SX SHOE PLUG
13 3/8" - 48 #/FT. @ 528'
300 SX CLASS "C"
W/ 2% CACL
CIRC.
CUT CASING @ 840'
25 SX STUB PLUG

RUSTLER @ 1550'

TISALT @ 3150'

YATES @ 3195'

QUEEN @ 3670'

TALME @ 4650'

25 SX PLUG @ 3400' - 3500'
EST T.O.C. @ 3480'

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

7 7/8" HOLE

BONE SPRINGS @ 8250'

CUT CASING @ 8600'
25 SX @ 8600'

25 SX @ 10300' - 10000'

EST. T.O.C. @ 12050'

25 SX @ 12500' - 12800'

13182' - 13186'

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

STRAWN @ 12110'

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

D.V. TOOL @ 3062'
 ECP @ 3905'
 1900 SX
 CIRC 350 SX.

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

D.V. TOOL @ 10094'
 100 SX THICKSET
 2050 SX 50/50 POZMIX
 100 SX THICKSET
 EST TOC @ SURF.

13452'-13462', 4 JS/PF

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

17 1/2" HOLE

12 1/4" & 11" HOLE

TANSILL @ 3192'

YATES @ 3405'

7 7/8" HOLE

WOLF CAMP @ 10031'

STRAWN @ 12186'

ATOKA @ 12634'

MORROW @ 12925'

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

T.O.C. @ 535', CBL

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

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

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 @ 1550'

12 1/4" & 11"

YATES @ 3395'

SEVEN RIVERS @ 3834'

DELAWARE @ 5450'

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

17 1/2" HOLE

OCHOA @ 1556'

T.O.C. @ 1700'

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

YATES @ 3401'

SEVEN RIVERS @ 3840'

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

7 7/8" HOLE

DELAWARE @ 5456'

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.

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

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"

YATES @ 3422'

SEVEN RIVERS @ 3830'

DELAWARE @ 5454'

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 @ 1810'

T/SALT @ 1850'

B/SALT @ 3260'

YATES @ 3440'

QUEEN @ 3748'

TUBS @ 4634'

8 5/8" HOLE

BONE SPRINGS @ 8202'

T/PENN @ 12080'

MISSISSIPPIAN @ 13084'

WOODFORD @ 14305'
DEVONIAN @ 14478'

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

SPUD DATE: 11/4/60

WELL TYPE: GAS WELL - OIL WELL

SURFACE CASING:

CASING: 16" @ 8'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

16" @ 8'FT @ 723'
1200 SX
CIRC.

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

EST TOC @ 8680'

SQUEEZE HOLES @ 9420' & 9555'
SHOT HOLES @ 9470'
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 FLOCELE, .5% CFR-2
10253'-10258', 10150'-10156', 9517'-9517', 9597'-9598', 9478'-9478', 4 JSPF

PSTD @ 12880'
SPOT #1 SX CLASS "H" W/ .75% CF-14 ON TOP OF PACKER
SPOT #5 SX CLASS "H" W/ .75% CF-14 ON TOP OF PACKER
PACKER @ 12848'

13034'-13054', 80 SHOTS
CIBP @ 13054'

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 BWPD
MAXIMUM DAILY RATE 500 BWPD

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 "CHINLEE", FORMATION WHICH OCCURS AT 65'-200' AND IS APPROXIMATELY 100'-150' THICK. THE CLOSEST FRESHWATER WELL IS THE ROBERTS WELL LOCATED ONE 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 MILE 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 CARRYING 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 ANALYZED 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
ANALYZED 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".

CAMPBELL, CARR & BERGE, P.A.

LAWYERS

MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE

MICHAEL H. FELDEWERT
TANNIS L. FOX
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PAUL R. OWEN

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JEFFERSON PLACE
SUITE 1 - 110 NORTH GUADALUPE
POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87504-2208
TELEPHONE: (505) 988-4421
TELECOPIER: (505) 983-6043

November 14, 1995

CERTIFIED MAIL -
RETURN RECEIPT REQUESTED

TO: ALL LEASEHOLD OPERATORS WITHIN ONE-HALF MILE OF THE PROPOSED INJECTION WELL, MOBIL FEDERAL NO. 6 PMW WELL, LOCATED 330 FEET FROM THE SOUTH LINE AND 990 FEET FROM THE WEST LINE OF SECTION, 2, TOWNSHIP 20 SOUTH, RANGE 34 EAST, LEA COUNTY, NEW MEXICO IN THE LEA STATE WATERFLOOD AREA AND OWNERS OF THE SURFACE ON WHICH THE WELL WILL BE LOCATED

Re: Application of Armstrong Energy Corporation for a Pressure Maintenance Project and for Qualification of this Project for the Recovered Oil Tax Credit Pursuant to the "New Mexico Oil Recovery Act"

Gentlemen:

Enclosed herewith is a copy of the above-referenced application of Armstrong Energy Corporation for approval of a pressure maintenance project in the Delaware formation in its Lea State Pressure Maintenance Project Area. This project area includes the following described area:

Township 20 South, Range 34 East, NMPM

Section 2: SW/4

This application has been set for hearing before an Examiner of the Oil Conservation Division on December 7, 1995. As an owner of an interest who may be affected by this application, you may appear at that hearing and present testimony. Failure to appear at that time or otherwise become a party of record will preclude you from challenging this application at a later date.

November 14, 1995

Page 2

Parties appearing in cases before the Division have been requested to file a Pre-hearing Statement substantially in the form prescribed by Oil Conservation Division Memorandum 2-90. Pre-hearing statements should be filed by 4:00 o'clock p.m., on the Friday before a scheduled hearing.

Very truly yours,

A handwritten signature in black ink, appearing to read "Paul R. Owen", with a long, sweeping horizontal stroke extending to the right.

WILLIAM F. CARR

PAUL R. OWEN

ATTORNEY FOR ARMSTRONG ENERGY CORPORATION

WFC/PRO:mlh

Enclosure

Devon Energy Corp.
20 North Broadway, Suite 1500
Oklahoma City, OK 73102

"Certified Mail-Return Receipt Requested"

Reed & Stevens, Inc.
Post Office Box 1518
Roswell, NM 88202

"Certified Mail-Return Receipt Requested"

Snow Oil & Gas Inc.
Post Office Box 1277
Andrews, TX 79714

"Certified Mail-Return Receipt Requested"

Bill Fenn, Inc.
Post Office Box 569
Giddings, TX 78942

"Certified Mail-Return Receipt Requested"

Texaco Inc.
Box 3109
Midland, TX 79702

"Certified Mail-Return Receipt Requested"

Nearburg Producing Co.
419 W. Cain
Hobbs, NM 88240

"Certified Mail-Return Receipt Requested"

Samson Resources
Two West 2nd Street
Tulsa, OK 74103

"Certified Mail-Return Receipt Requested"

Marathon Oil, Inc.
Box 552
Midland, TX 79702

"Certified Mail-Return Receipt Requested"

Chevron Production Co., USA
Post Office Box 1635
Houston, TX 77252

"Certified Mail-Return Receipt Requested"

Mid-Continent Energy, Inc.
401 S. Boston Ave., Suite 3500
Tulsa, OK 74103-4072

"Certified Mail-Return Receipt Requested"

Pennzoil Exploration & Production Co.
Post Office Box 2967
Houston, TX 77252-2967

"Certified Mail-Return Receipt Requested"

Pennzoil Exploration & Production Co.
Post Office Box 50090
Midland, TX 79710-0090

"Certified Mail-Return Receipt Requested"