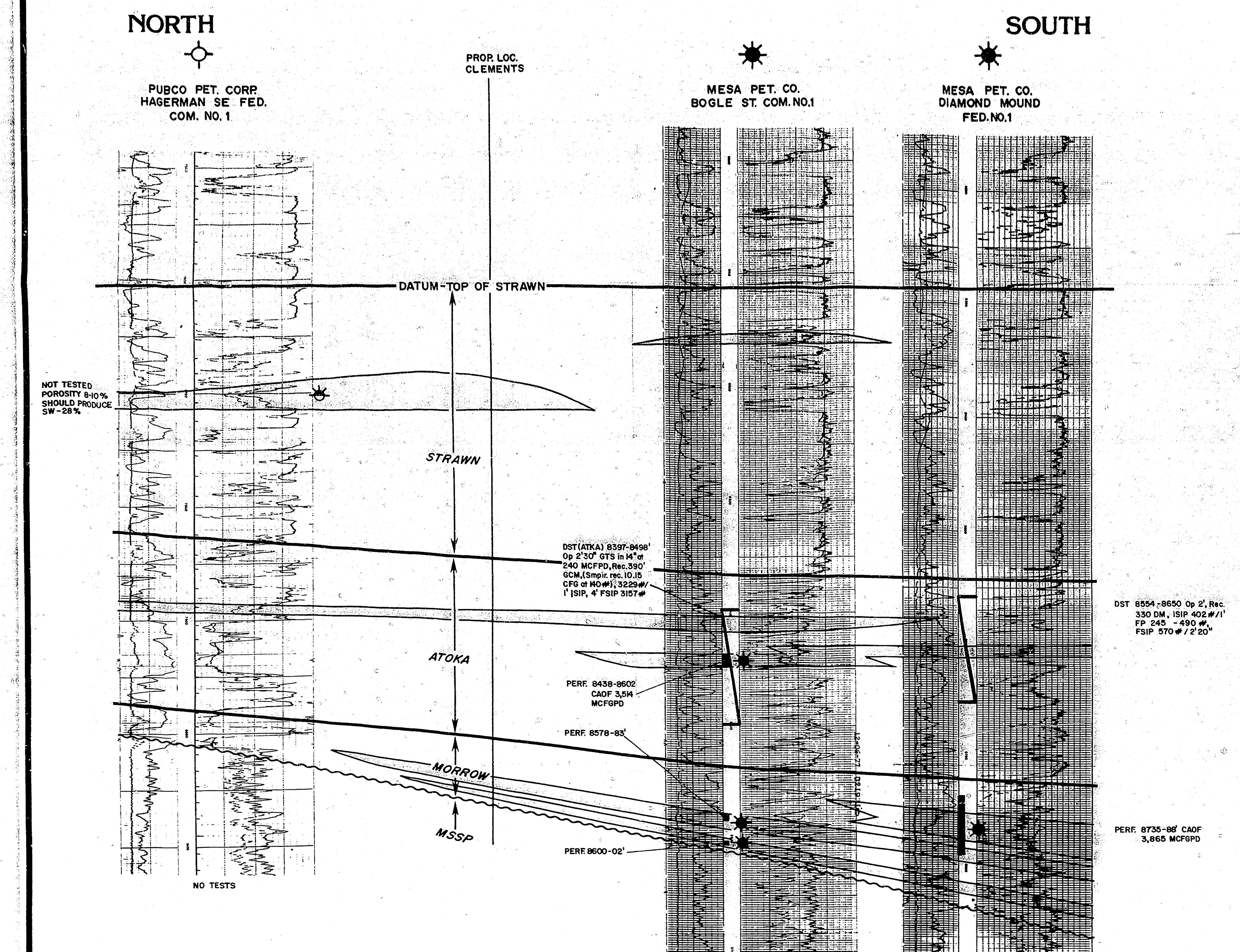
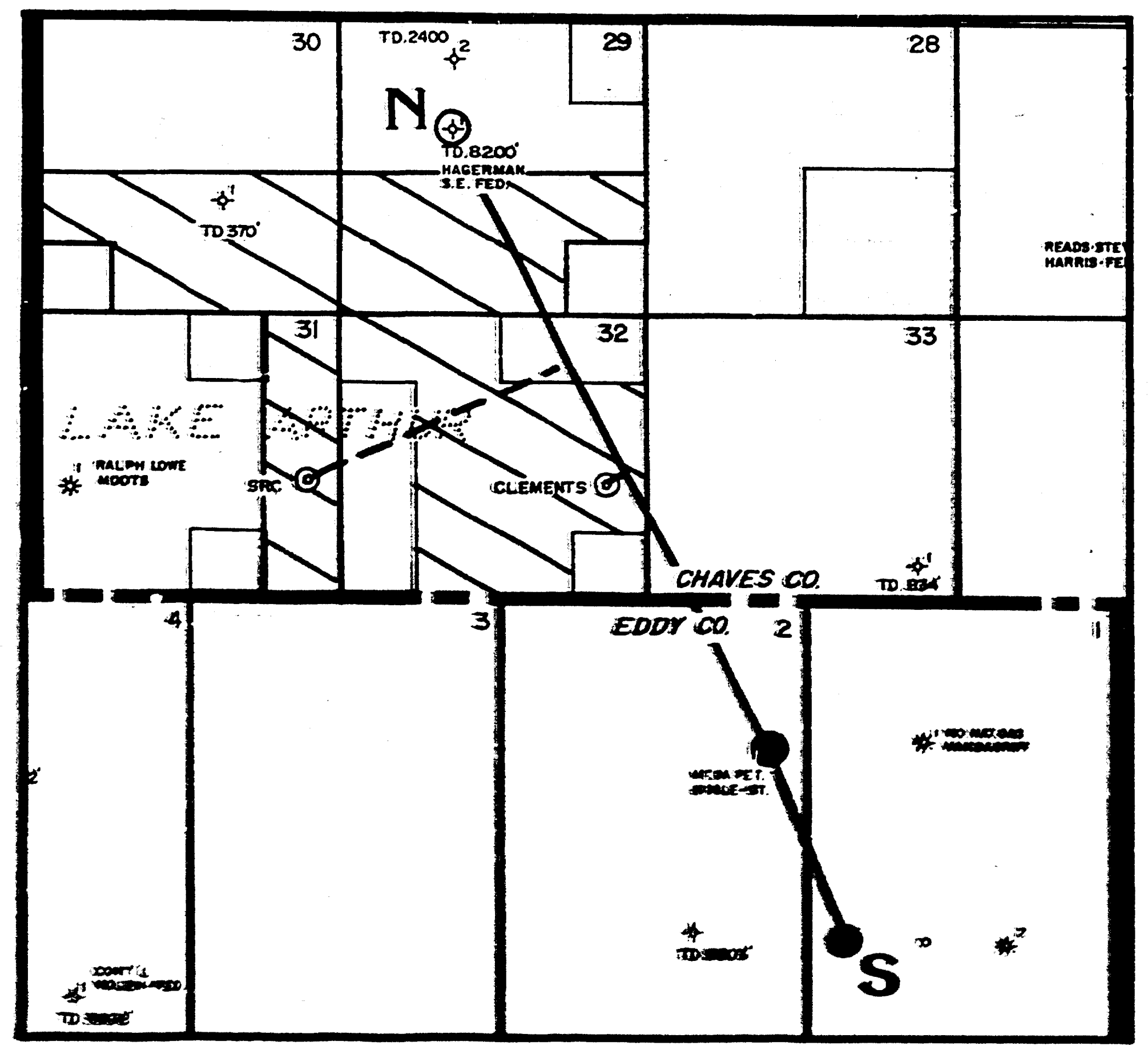
Case No.
7323

Large Exhibits

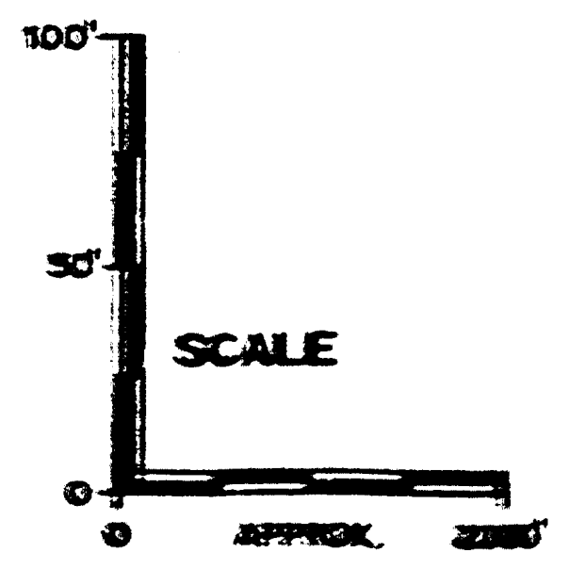

NORTH
SOUTH
PUBCO PET. CORP.
HAGERMAN SE FED.
COM. NO. 1
PROP. LOC.
CLEMENTS
MESA PET. CO.
BOGLE ST. COM. NO. 1
MESA PET. CO.
DIAMOND MOUND
FED. NO. 1
DATUM-TOP OF STRAWN
NOT TESTED
POROSITY 8-10%
SHOULD PRODUCE
SW-28%
STRAWN
ATOKA
MORROW
MSSP
DST(ATKA) 8397-8498'
Op 2'30" GTS in 14" at
240 MCFPD, Rec. 390'
GCM, (Smplr. rec. 10.15
CFG at 140#), 3229#/
1' ISIP, 4' FSIP 3157#
PERF. 8438-8602
CAOF 3,514
MCFGPD
PERF. 8578-83'
PERF. 8600-02'
DST 8554-8650 Op 2', Rec.
330 DM, ISIP 402#/1'
FP 245 - 490#,
FSIP 570#/2'20"
PERF. 8735-88' CAOF
3,865 MCFGPD
NO TESTS

CAOF 3,514 MCFGPD on DEC/1977
CUM to MAY,1,81 691.8 M̄CFG
AVG. DAILY PROD. 2.22 M̄CFGPD (4/81)

CAOF 3,856 MCFGPD on MAR/1978
CUM to MAY,1,81 1,046.8 M̄CFG
AVG. DAILY PROD. .786 M̄CFGPD (4/81)


30
29
28
TD.2400
N
TD.8200'
HAGERMAN
S.E. FED.
TD 370'
READS-STE
HARRIS-FE
31
32
33
LAKE ARTHUR
RALPH LOWE
MOOTS
SRC
CLEMENTS
CHAVES CO.
TD. 834'
EDDY CO.
4
3
2
1
MESA PET.
BOGLE-ST.
S

INDEX MAP 1"=2000'


100'
50'
0
SCALE
0
APPROX.
2000'

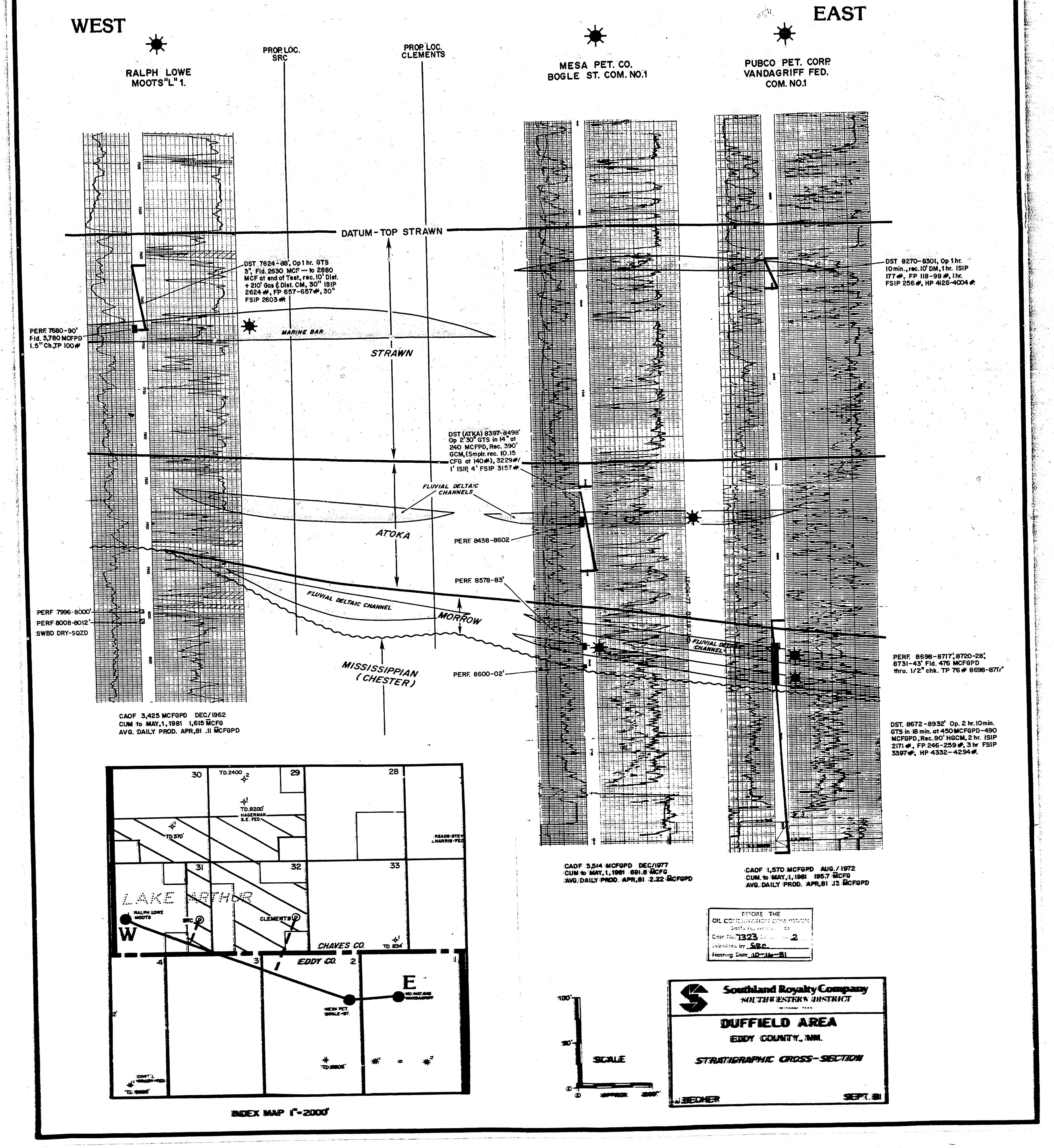
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7323 Exhibit No. 1
Submitted by SRC
Hearing Date 10-14-81

Southland Royalty Company
SOUTHWESTERN DISTRICT
MIDLAND, TEXAS

DUFFIELD AREA
CHAVES-EDDY COS. NM

STRATIGRAPHIC CROSS-SECTION

J. BECHER SEPT. 81


WEST
EAST
RALPH LOWE
MOOTS "L" 1.
PROP. LOC.
SRC
PROP. LOC.
CLEMENTS
MESA PET. CO.
BOGLE ST. COM. NO.1
PUBCO PET. CORP.
VANDAGRIFF FED.
COM. NO.1
DATUM - TOP STRAWN
MARINE BAR
STRAWN
FLUVIAL DELTAIC CHANNELS
ATOKA
FLUVIAL DELTAIC CHANNEL
MORROW
FLUVIAL DELTAIC CHANNEL
MISSISSIPPIAN (CHESTER)
7550
7600
7650
7700
7750
7950
8000
8050
30
TD. 2400
29
28
TD. 8200'
HAGERMAN S.E. FED.
TD 370'
READS-STEV. & HARRIS-FED.
31
32
33
LAKE ARTHUR
RALPH LOWE MOOTS
W
SRC
CLEMENTS
CHAVES CO.
TD. 834'
EDDY CO.
4
3
2
1
E
MESA PET. BOGLE-ST.
100'
50'
0
SCALE

DST 7624-88', Op 1 hr. GTS 3", Fld. 2630 MCF — to 2880 MCF at end of Test, rec. 10' Dist. + 210' Gas & Dist. CM, 30" ISIP 2624 #, FP 657-657 #, 30" FSIP 2603 #

PERF. 7680-90' Fld. 3,780 MCFPD 1.5" Ch., TP 100 #

PERF. 7996-8000'
PERF. 8008-8012'
SWBD DRY-SQZD

CAOF 3,425 MCFGPD DEC/1962
CUM to MAY, 1, 1981 1,615 $\overline{M}$CFG
AVG. DAILY PROD. APR, 81 .11 $\overline{M}$CFGPD

DST (ATKA) 8397-8498' Op 2' 30" GTS in 14" at 240 MCFPD, Rec. 390' GCM, (Smplr. rec. 10.15 CFG at 140 #), 3229 #/ 1' ISIP, 4' FSIP 3157 #

PERF. 8438-8602

PERF. 8578-83'

PERF. 8600-02'

CAOF 3,514 MCFGPD DEC/1977
CUM to MAY, 1, 1981 691.8 $\overline{M}$CFG
AVG. DAILY PROD. APR, 81 2.22 $\overline{M}$CFGPD

DST 8270-8301, Op 1 hr. 10 min., rec. 10' DM, 1 hr. ISIP 177 #, FP 118-98 #, 1 hr. FSIP 256 #, HP 4126-4004 #.

PERF. 8698-8717', 8720-28', 8731-43' Fld. 476 MCFGPD thru. 1/2" chk. TP 76 # 8698-8717'

DST. 8672-8932' Op. 2 hr. 10 min. GTS in 18 min. at 450 MCFGPD-490 MCFGPD, Rec. 90' HGCM, 2 hr. ISIP 2171 #, FP 246-259 #, 3 hr FSIP 3397 #, HP 4332-4294 #.

CAOF 1,570 MCFGPD AUG./1972
CUM. to MAY, 1, 1981 195.7 $\overline{M}$CFG
AVG. DAILY PROD. APR, 81 .13 $\overline{M}$CFGPD

INDEX MAP 1"=2000'

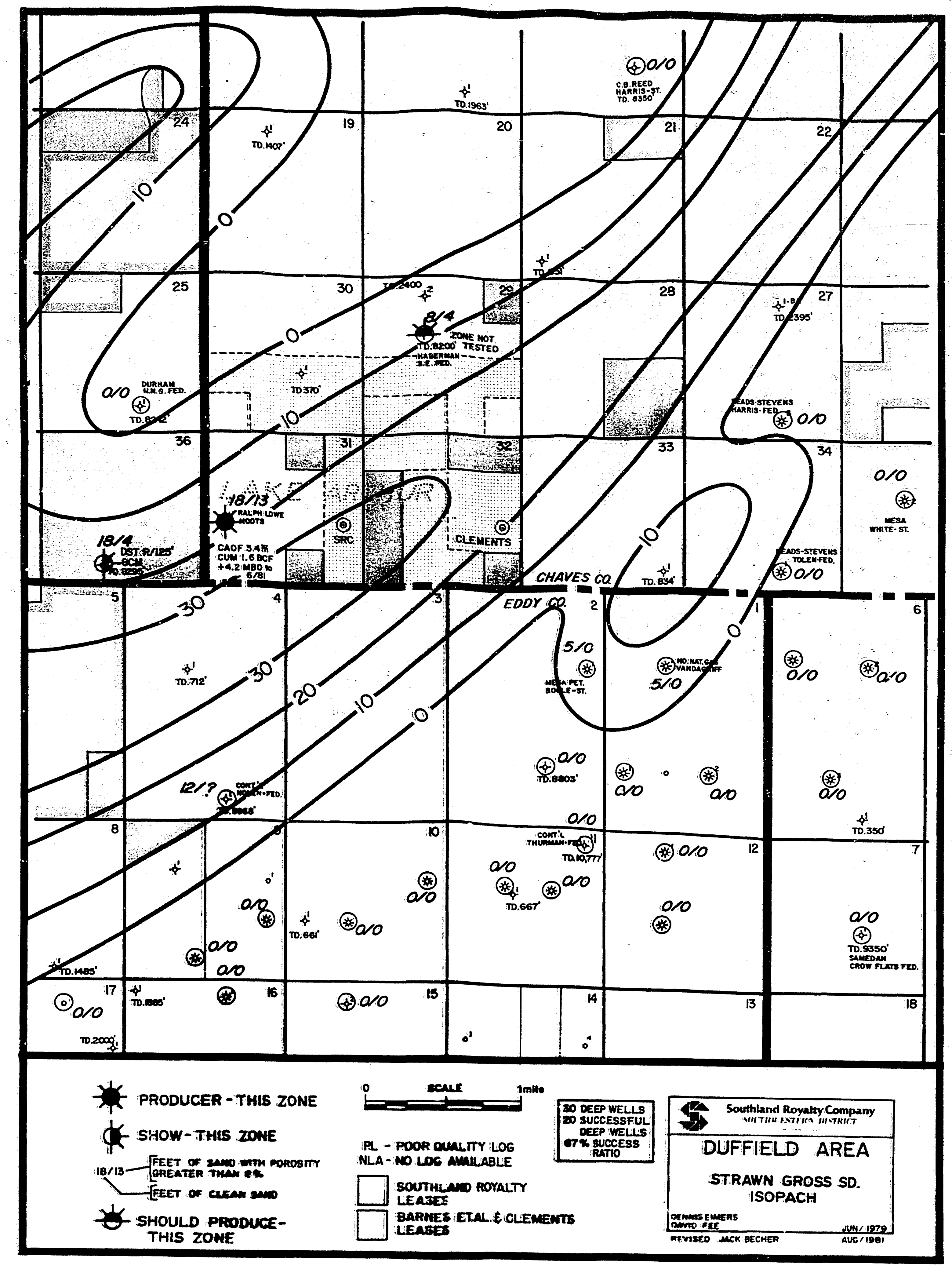
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7323 Exhibit No. 2
Submitted by SRC
Hearing Date 10-14-81

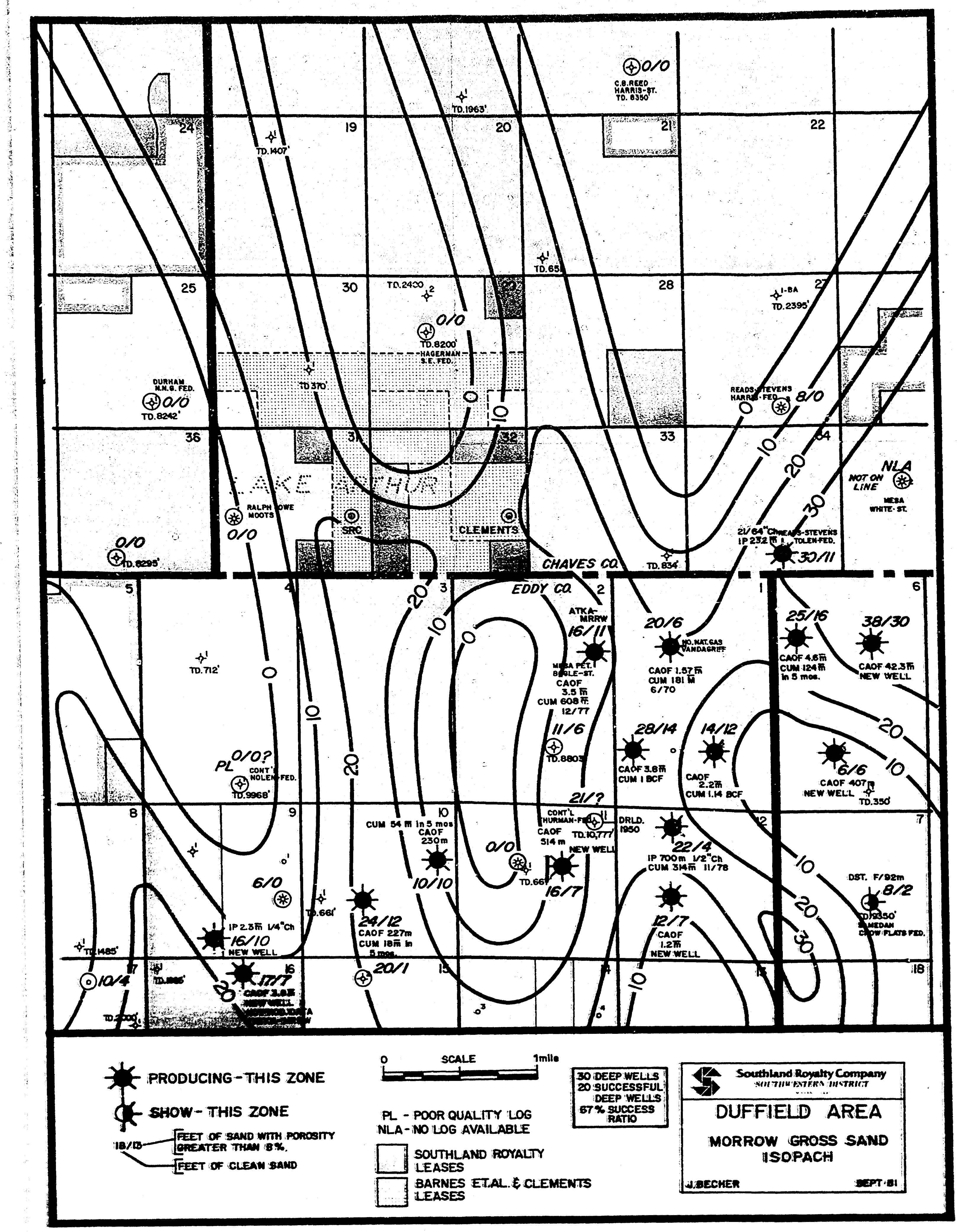
Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA
EDDY COUNTY, NM.

STRATIGRAPHIC CROSS-SECTION

J. BECHER
SEPT. 81


DUFFIELD AREA
STRAWN GROSS SD.
ISOPACH
Southland Royalty Company
SOUTHWESTERN DISTRICT
DENNIS EIMERS
DAVID FEE
JUN/1979
REVISED JACK BECHER
AUG/1981
PRODUCER - THIS ZONE
SHOW - THIS ZONE
18/13
FEET OF SAND WITH POROSITY GREATER THAN 8%
FEET OF CLEAN SAND
SHOULD PRODUCE - THIS ZONE
0 SCALE 1mile
P.L. - POOR QUALITY LOG
NLA - NO LOG AVAILABLE
SOUTHLAND ROYALTY LEASES
BARNES ETAL. & CLEMENTS LEASES
30 DEEP WELLS
20 SUCCESSFUL DEEP WELLS
67% SUCCESS RATIO
CHAVES CO.
EDDY CO.
0
10
20
30
TD.1407'
TD.1963'
C.B. REED HARRIS-ST. TD. 8350'
0/0
DURHAM H.N.S. FED.
TD.8242'
TD.2400
TD.370'
8/4
ZONE NOT TESTED
TD.8200'
HABERMAN S.E. FED.
TD.2395'
READS-STEVENS HARRIS-FED.
MESA WHITE-ST.
READS-STEVENS TOLEN-FED.
TD.834'
18/13
RALPH LOWE MOOTS
CAOF 3.4 MM
CUM 1.6 BCF
+4.2 MBO to 6/81
18/4
DST R/125'
GCM
TD.8295'
SRC
CLEMENTS
LAKE ARTHUR
TD.712'
5/0
MESA PET. BOGLE-ST.
NO. NAT. GAS VANDAGRIFF
TD.8805'
12/1?
CONT'L. TD.8868'
CONT'L THURMAN-FED.
TD.10,171'
TD.667'
TD.661'
TD.1485'
TD.1885'
TD.2000'
TD.350'
TD.9350'
SAMEDAN CROW FLATS FED.
24
19
20
21
22
25
30
29
28
27
36
31
32
33
34
5
4
3
2
1
6
8
9
10
11
12
7
17
16
15
14
13
18


24
19
20
21
22
25
30
28
27
36
31
32
33
34
5
4
3
2
1
6
8
9
10
11
12
7
17
16
15
14
13
18
TD.1407'
TD.1963'
0/0
C.B.REED HARRIS-ST. TD. 8350'
TD.651
TD.2400
0/0
TD.8200' HAGERMAN S.E. FED.
1-BA TD.2395'
DURHAM N.N.G. FED.
0/0
TD.8242'
TD.370'
READS-STEVENS HARRIS-FED.
8/0
LAKE ARTHUR
RALPH LOWE MOOTS
0/0
SRC
CLEMENTS
NLA
NOT ON LINE
MESA WHITE-ST.
0/0
TD.8295'
21/64" CHREADS-STEVENS TOLEN-FED.
IP 232 M
30/11
CHAVES CO.
TD. 834'
EDDY CO.
ATKA-MRRW
16/11
MESA PET. BOGLE-ST.
CAOF 3.5 M
CUM 608 M 12/77
20/6
NO. NAT. GAS VANDAGRIFF
CAOF 1.57 M
CUM 181 M 6/70
25/16
CAOF 4.6 M CUM 124 M in 5 mos.
38/30
CAOF 42.3 M NEW WELL
TD.712'
PL 0/0?
CONT'L NOLEN-FED.
TD.9968'
11/6
TD.8803'
28/14
CAOF 3.8 M CUM 1 BCF
14/12
CAOF 2.2 M CUM 1.14 BCF
6/6
CAOF 407 m NEW WELL
TD.350'
21/?
CONT'L THURMAN-FED.
CAOF 514 m
TD.10,777'
NEW WELL
DRLD. 1950
CUM 54 M in 5 mos
CAOF 230m
10/10
0/0
TD.661'
16/7
22/4
IP 700m 1/2" Ch
CUM 314 M 11/78
6/0
TD.661'
24/12
CAOF 227m
CUM 18 M in 5 mos.
12/7
CAOF 1.2 M NEW WELL
DST. F/92m
8/2
TD.9350'
SAMEDAN CROW FLATS FED.
IP 2.3 M 1/4" Ch
16/10
NEW WELL
TD.1485'
10/4
TD.1885'
17/7
CAOF 3.8 M NEW WELL
TD.2000'
20/1
0
10
20
30
PRODUCING - THIS ZONE
SHOW - THIS ZONE
18/15
FEET OF SAND WITH POROSITY GREATER THAN 8%.
FEET OF CLEAN SAND
0
SCALE
1mile
PL - POOR QUALITY LOG
NLA - NO LOG AVAILABLE
SOUTHLAND ROYALTY LEASES
BARNES ET.AL. & CLEMENTS LEASES

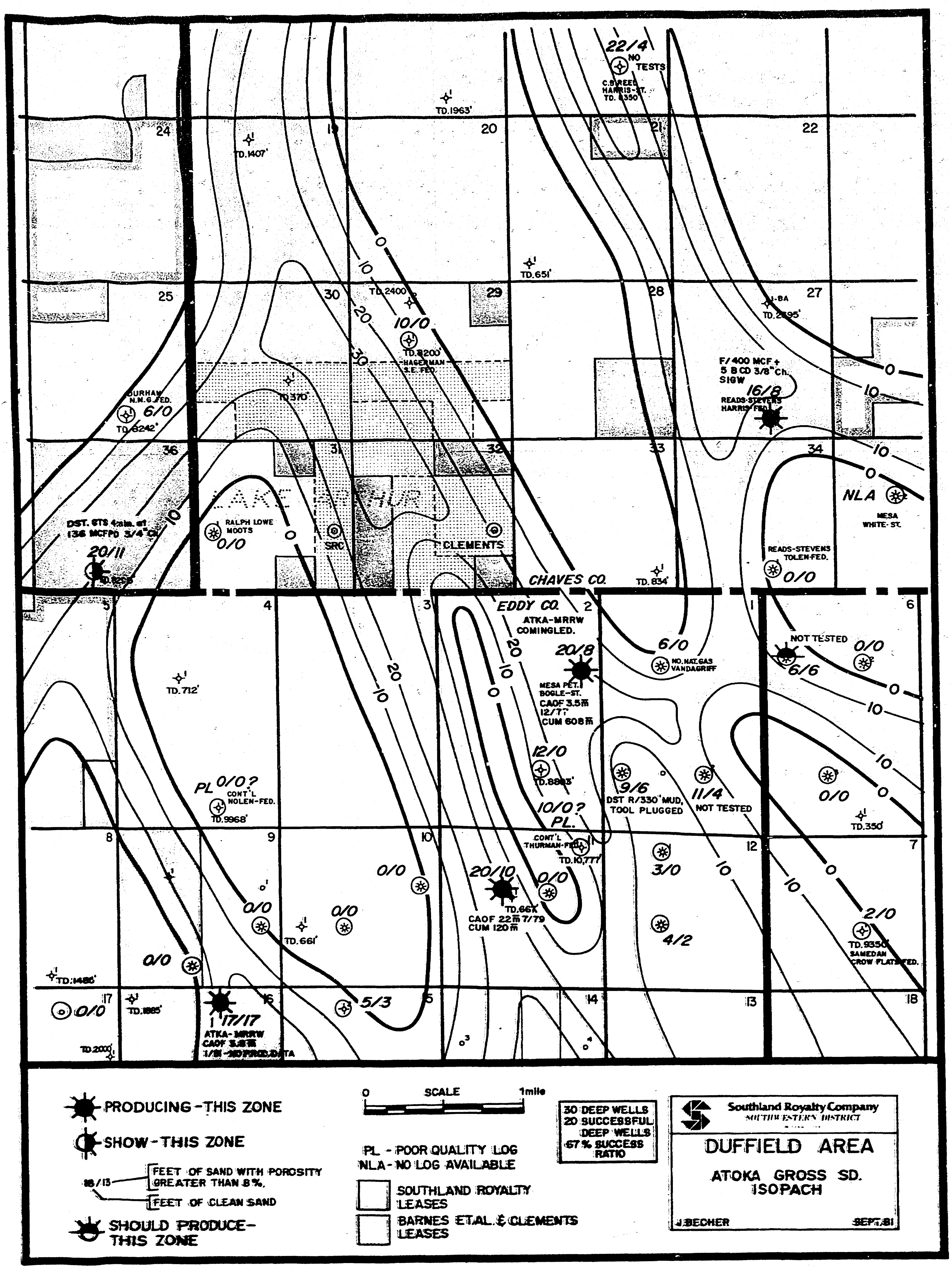
30 DEEP WELLS
20 SUCCESSFUL DEEP WELLS
67% SUCCESS RATIO

Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA

MORROW GROSS SAND
ISOPACH

J. BECHER SEPT.-81

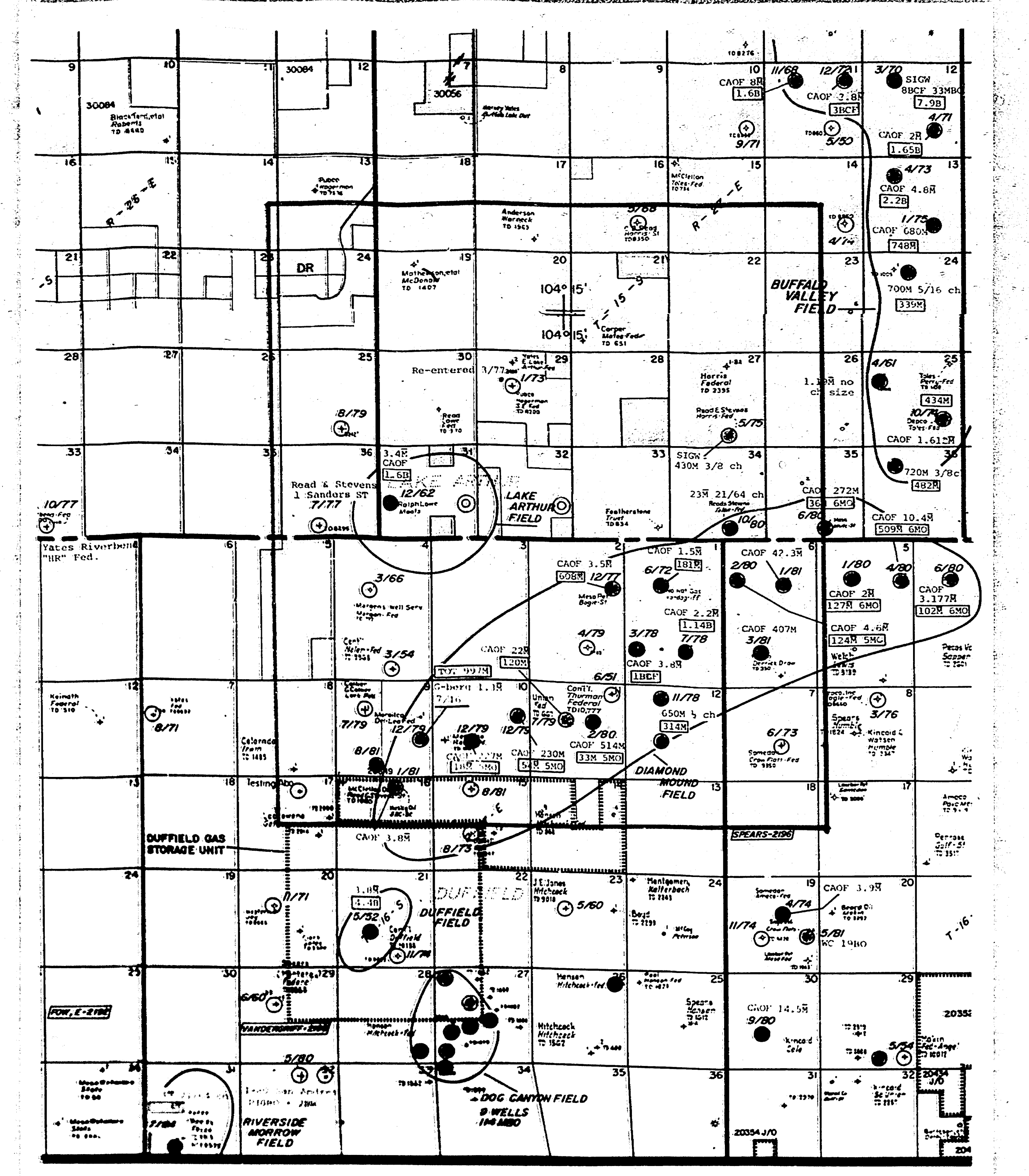

22/4
NO TESTS
C.B. REED HARRIS-ST.
TD. 8350
TD. 1963'
24
TD. 1407'
19
20
21
22
0
10
20
30
TD. 651'
25
30
TD. 2400
29
28
27
J-BA
TD. 2795'
10/0
TD. 8200
HAGERMAN S.E. FED.
F/400 MCF + 5 BCD 3/8" Ch. SIGW
16/8
READS-STEVENS HARRIS-FED.
DURHAM N.N.G. FED.
6/0
TD. 8242'
TD. 370'
36
31
32
33
34
NLA
MESA WHITE-ST.
DST. GTS 4 min. at 136 MCFPD 3/4" Ch.
20/11
TD. 8265
RALPH LOWE MOOTS
0/0
SRC
CLEMENTS
CHAVES CO.
TD. 834'
READS-STEVENS TOLEN-FED.
0/0
EDDY CO.
5
4
3
2
1
6
ATKA-MRRW COMINGLED.
20/8
MESA PET. BOGLE-ST.
CAOF 3.5 MM 12/77
CUM 608 MM
6/0
NO. NAT. GAS VANDAGRIFF
NOT TESTED
0/0
6/6
TD. 712'
12/0
TD. 8885'
9/6
DST R/330' MUD, TOOL PLUGGED
11/4
NOT TESTED
0/0
TD. 350'
PL 0/0?
CONT'L NOLEN-FED.
TD. 9968'
10/0? PL.
CONT'L THURMAN-FED.
TD. 10,777'
8
9
10
11
12
7
0/0
20/10
TD. 66?'
CAOF 22 MM 7/79
CUM 120 MM
0/0
3/0
2/0
TD. 9350'
SAMEDAN CROW FLATS FED.
0/0
TD. 661'
0/0
4/2
0/0
TD. 1486'
17
16
15
14
13
18
0/0
TD. 1885'
17/17
ATKA-MRRW
CAOF 3.8 MM
1/81 - NO PROD. DATA
5/3
TD. 2000'
LAKE ARTHUR
PRODUCING - THIS ZONE
SHOW - THIS ZONE
18/13
FEET OF SAND WITH POROSITY GREATER THAN 8%.
FEET OF CLEAN SAND
SHOULD PRODUCE - THIS ZONE
0
SCALE
1 mile
PL - POOR QUALITY LOG
NLA - NO LOG AVAILABLE
SOUTHLAND ROYALTY LEASES
BARNES ET.AL. & CLEMENTS LEASES
30 DEEP WELLS
20 SUCCESSFUL DEEP WELLS
67% SUCCESS RATIO

Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA

ATOKA GROSS SD.
ISOPACH

J. BECHER
SEPT. 81



BUFFALO VALLEY FIELD
LAKE ARTHUR FIELD
DIAMOND MOUND FIELD
DUFFIELD GAS STORAGE UNIT
DUFFIELD FIELD
DOG CANYON FIELD
9 WELLS
146 MBO
RIVERSIDE MORROW FIELD
R-26-E
R-27-E
T-15-S
T-16-S

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7323 Exhibit No. 6
Submitted by SRC
Hearing Date 10-14-81

LEGEND

● — GRAYBURG
○ — SAN ANDRES
◉ — WOLFCAMP
● — STRAWN
⊕ — ATOKA
● — MORROW

Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA
EDDY & CHAVES CO., NM.

PRODUCTION MAP

1" = 4000'

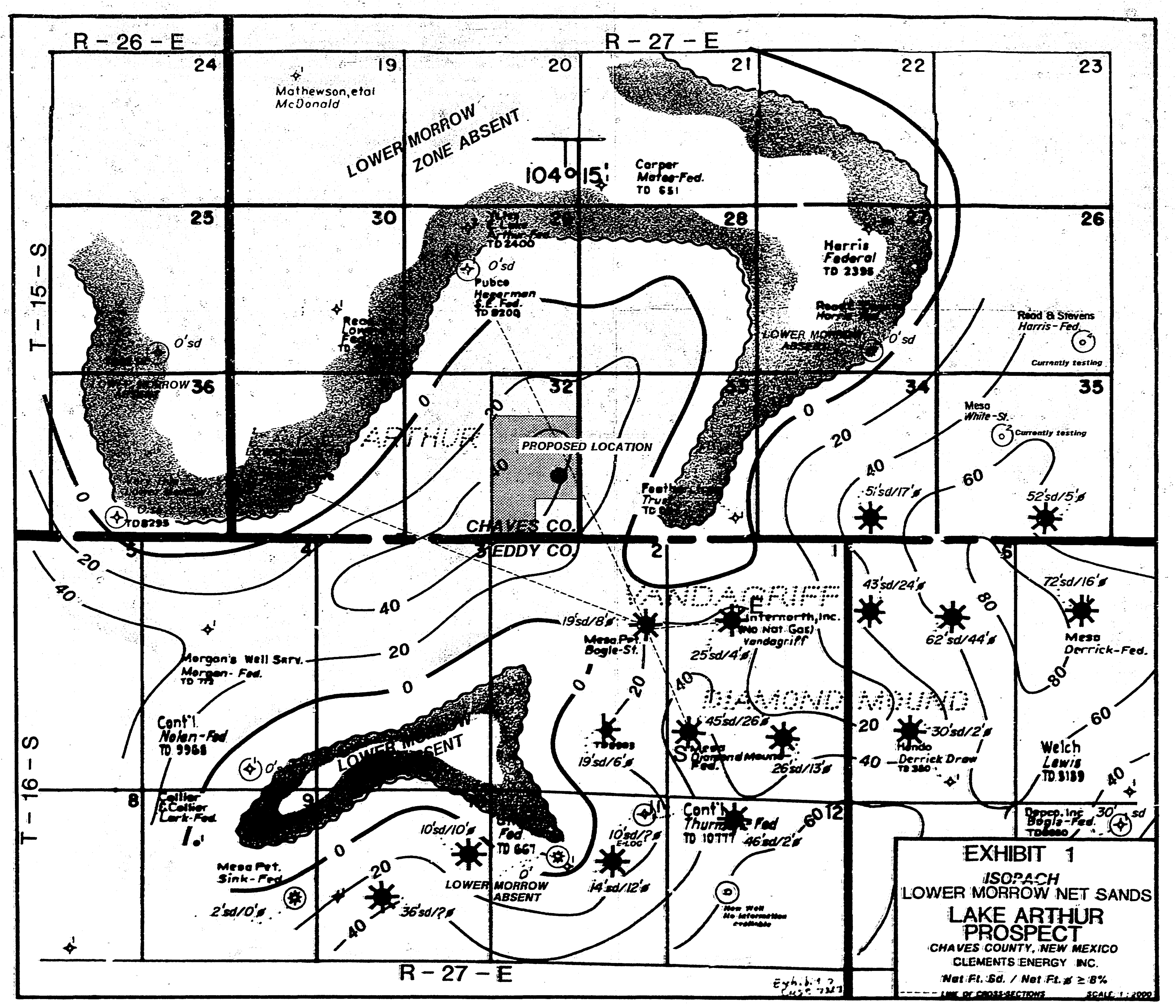

R-26-E
R-27-E
T-15-S
T-16-S
24
19
20
21
22
23
25
30
29
28
27
26
36
31
32
33
34
35
Mathewson, etal
McDonald
LOWER MORROW ZONE ABSENT
104° 15'
Carper
Mates-Fed.
TD 651
Harris
Federal
TD 2395
Reed & Stevens
Harris-Fed.
Currently testing
LOWER MORROW ABSENT
O'sd
Pubco
Hagerman
S.E. Fed.
TD 8200
LAKE ARTHUR
PROPOSED LOCATION
Mesa
White-St.
Currently testing
5'sd/17'ø
52'sd/5'ø
CHAVES CO.
EDDY CO.
TD 8295
5
4
3
2
1
6
8
9
10
11
12
7
VANDAGRIFF
Internorth, Inc.
(No Nat Gas)
Vandagriff
19'sd/8'ø
Mesa Pet.
Bogle-St.
25'sd/4'ø
43'sd/24'ø
62'sd/44'ø
72'sd/16'ø
Mesa
Derrick-Fed.
Morgan's Well Serv.
Morgan-Fed.
Cont'l
Nolen-Fed
TD 9968
DIAMOND MOUND
45'sd/26'ø
Mesa
Diamond Mound
Fed.
26'sd/13'ø
19'sd/6'ø
30'sd/2'ø
Hondo
Derrick Draw
Welch
Lewis
TD 3189
Depco, Inc
Bogle-Fed.
30' sd
Collier & Collier
Lark-Fed.
Mesa Pet.
Sink-Fed
2'sd/0'ø
10'sd/10'ø
36'sd/?ø
Fed
TD 667
LOWER MORROW ABSENT
10'sd/?ø
E-LOG
14'sd/12'ø
Cont'l
Thurman Fed
TD 10777
46'sd/2'ø
New Well
No information available
0
20
40
60
80

EXHIBIT 1

ISOPACH
LOWER MORROW NET SANDS

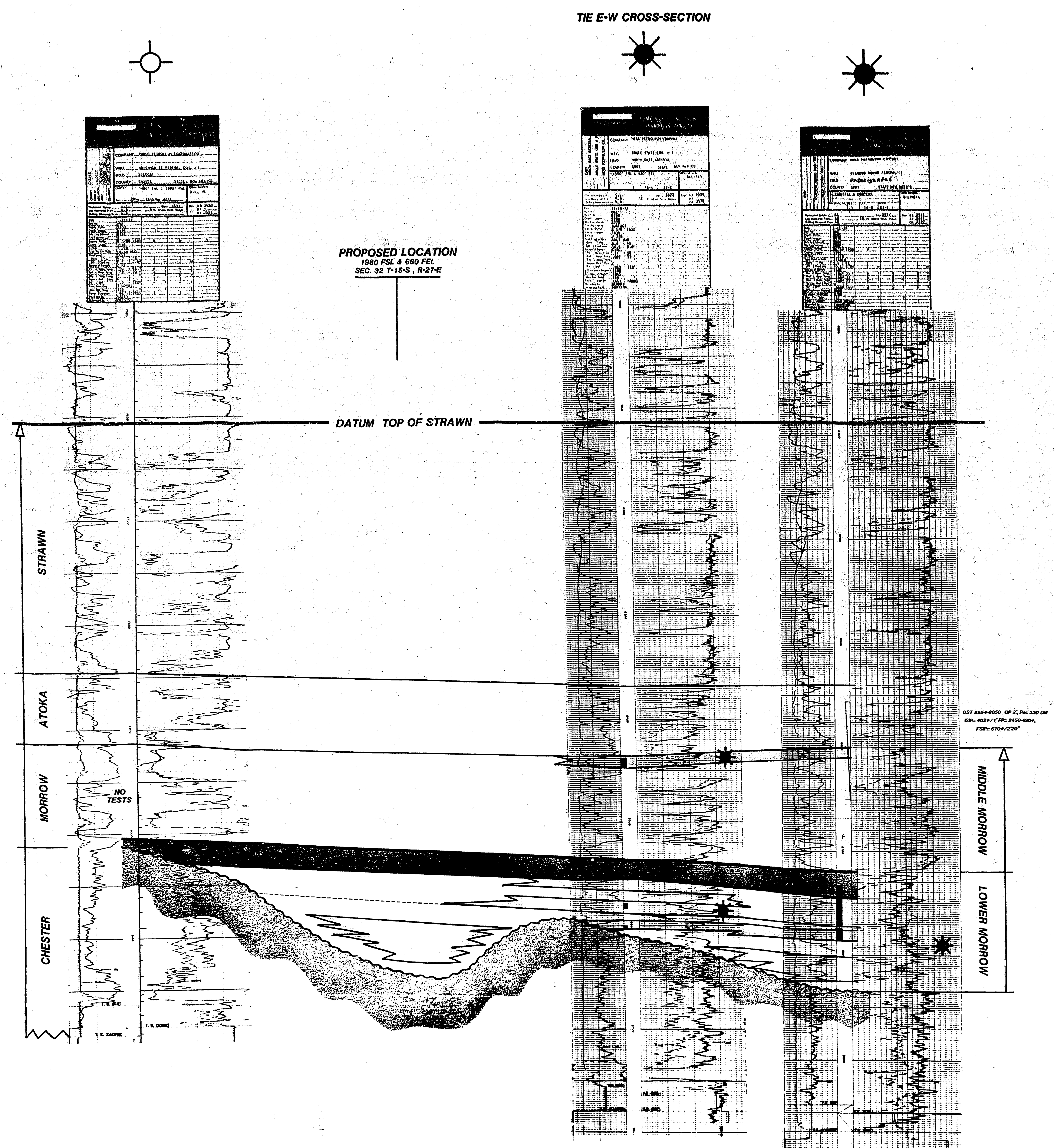
LAKE ARTHUR PROSPECT

CHAVES COUNTY, NEW MEXICO
CLEMENTS ENERGY INC.

Net Ft. Sd. / Net Ft. ø ≥ 8%

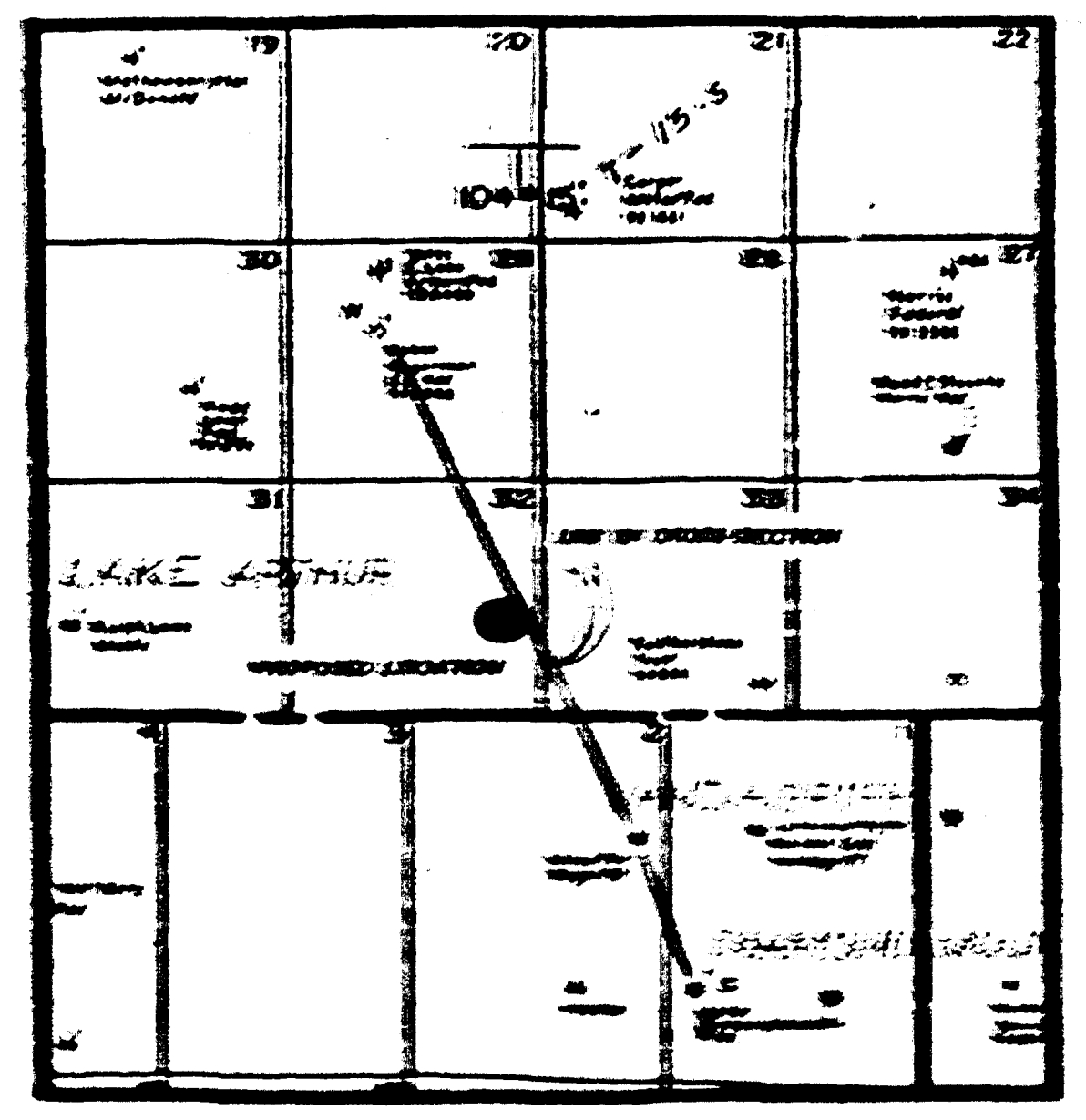
------ LINE OF CROSS-SECTIONS SCALE 1 : 2000

TIE E-W CROSS-SECTION


PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S, R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
NO TESTS
DST 8554-8650 OP 2', Rec 330 DM
ISIP= 402#/1' FP= 2450-490#,
FSIP= 570#/2'20"
MIDDLE MORROW
LOWER MORROW

CAOF 3,514 MCFPD 12/77
891.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 3,858 MCFPD 3/78
1,046.8 MMCF CUM. PROD. to 5/1/81
.786 MMCFGPD AVG. DAILY PROD. 4/81


19
20
21
22
30
29
28
27
31
32
33
34
4
3
2
1
T-15-S
LAKE ARTHUR
LINE OF CROSS-SECTION
PROPOSED LOCATION

SCALE: 1"=4000'

SCALE
100'
2000'
APPROX.

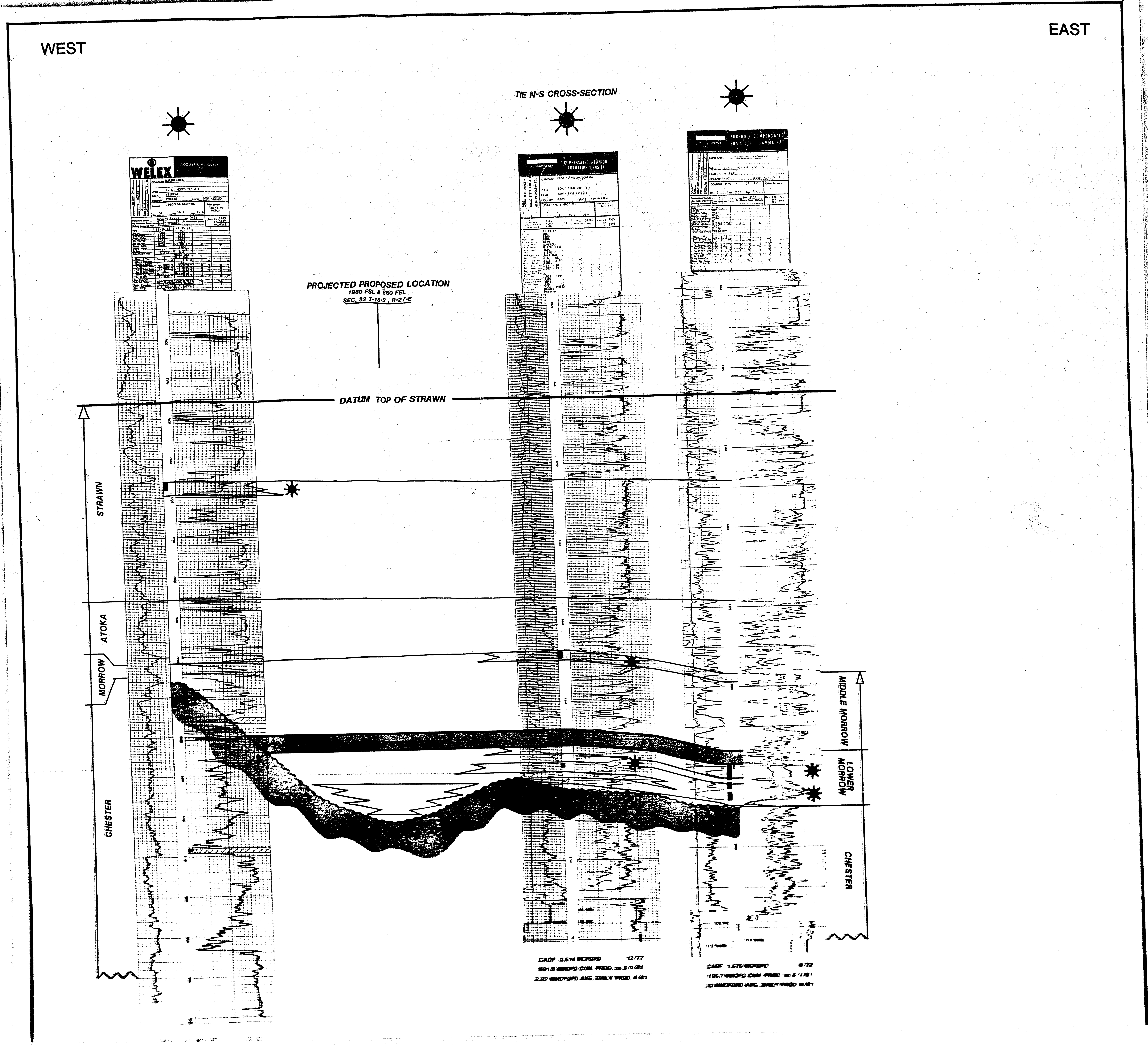
EXHIBIT 2

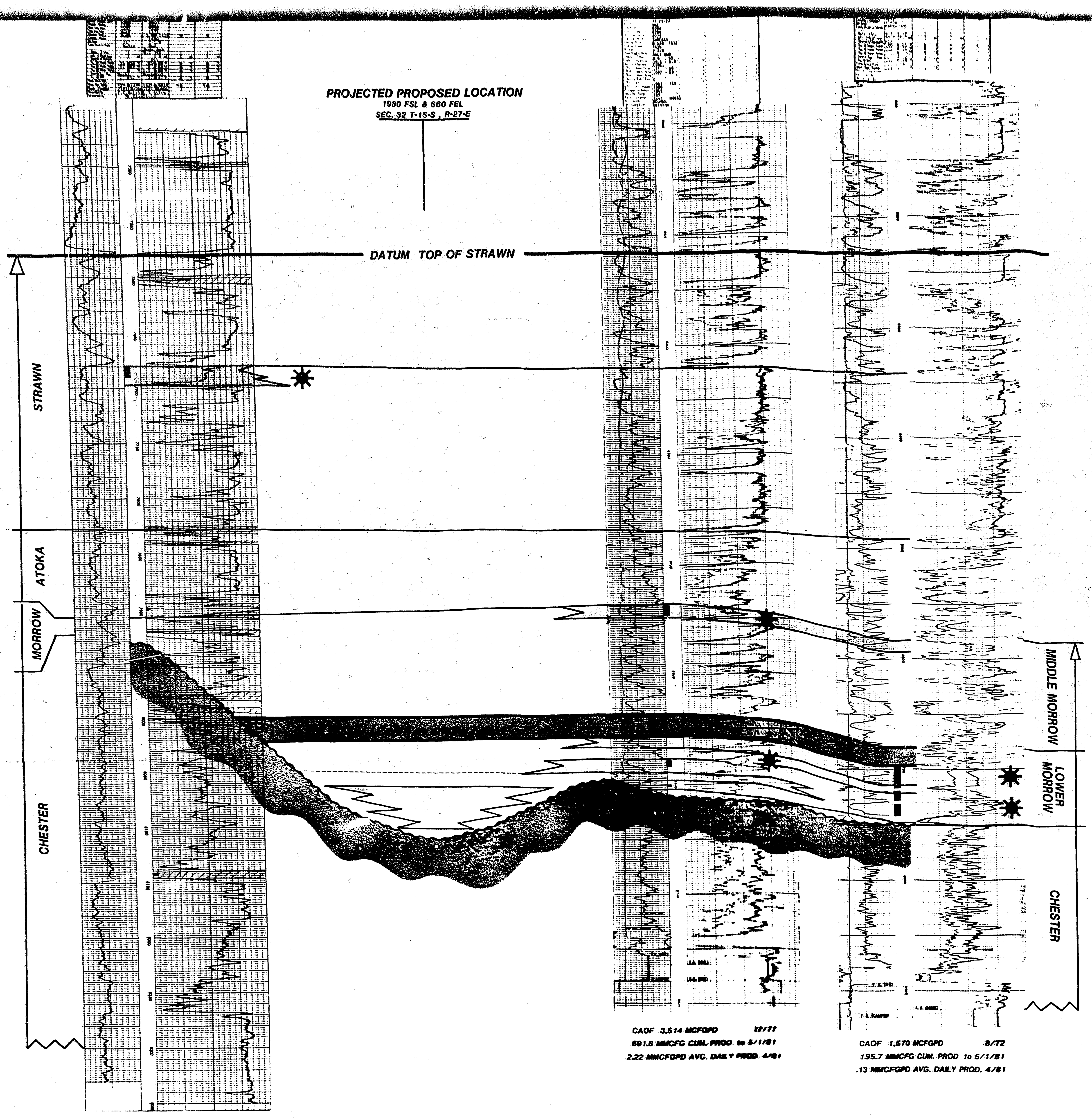
STRATIGRAPHIC CROSS – SECTION

LAKE ARTHUR PROSPECT

CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.


WEST
EAST
TIE N-S CROSS-SECTION
WELEX
PROJECTED PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
MIDDLE MORROW
LOWER MORROW
CHESTER
CADF 3,514 MCFGPD 12/77
5913 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD 4/81
CADF 1,570 MCFGPD 6/72
125.7 MMCFG CUM PROD to 5/1/81
.13 MMCFGPD AVG. DAILY PROD 4/81


PROJECTED PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
MIDDLE MORROW
LOWER MORROW
CHESTER

CAOF 3,514 MCFGPD 12/77
691.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 1,570 MCFGPD 8/72
195.7 MMCFG CUM. PROD to 5/1/81
.13 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 3,425 MCFGPD 12/62
1,615 MMCFG CUM. PROD. to 5/1/81
.11 MMCFGPD AVG. DAILY PROD. 4/81

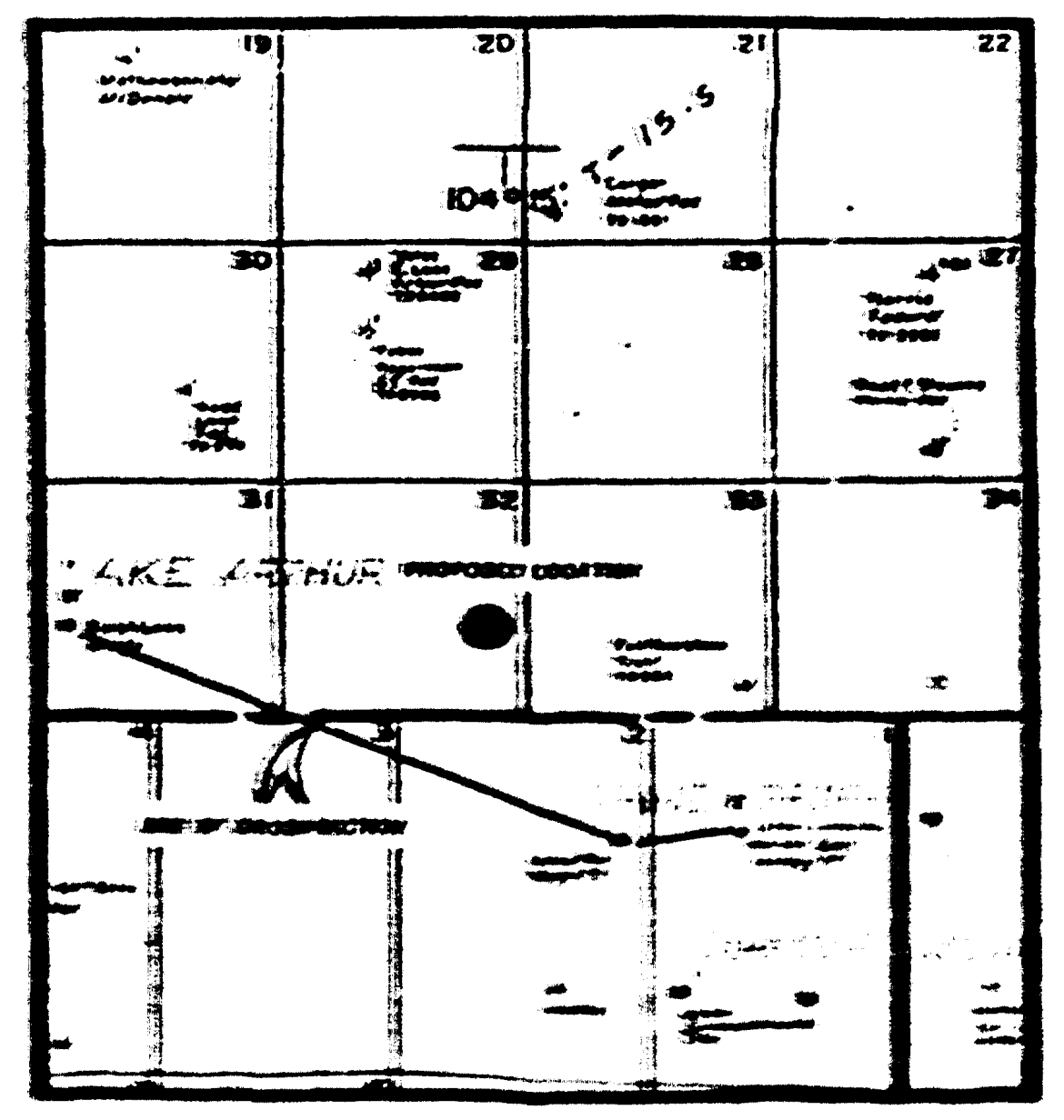

19
20
21
22
T-15-S
104
30
29
28
27
31
32
33
34
LAKE ARTHUR
PROPOSED LOCATION

EXHIBIT 3
STRATIGRAPHIC CROSS - SECTION

LAKE ARTHUR PROSPECT
CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.

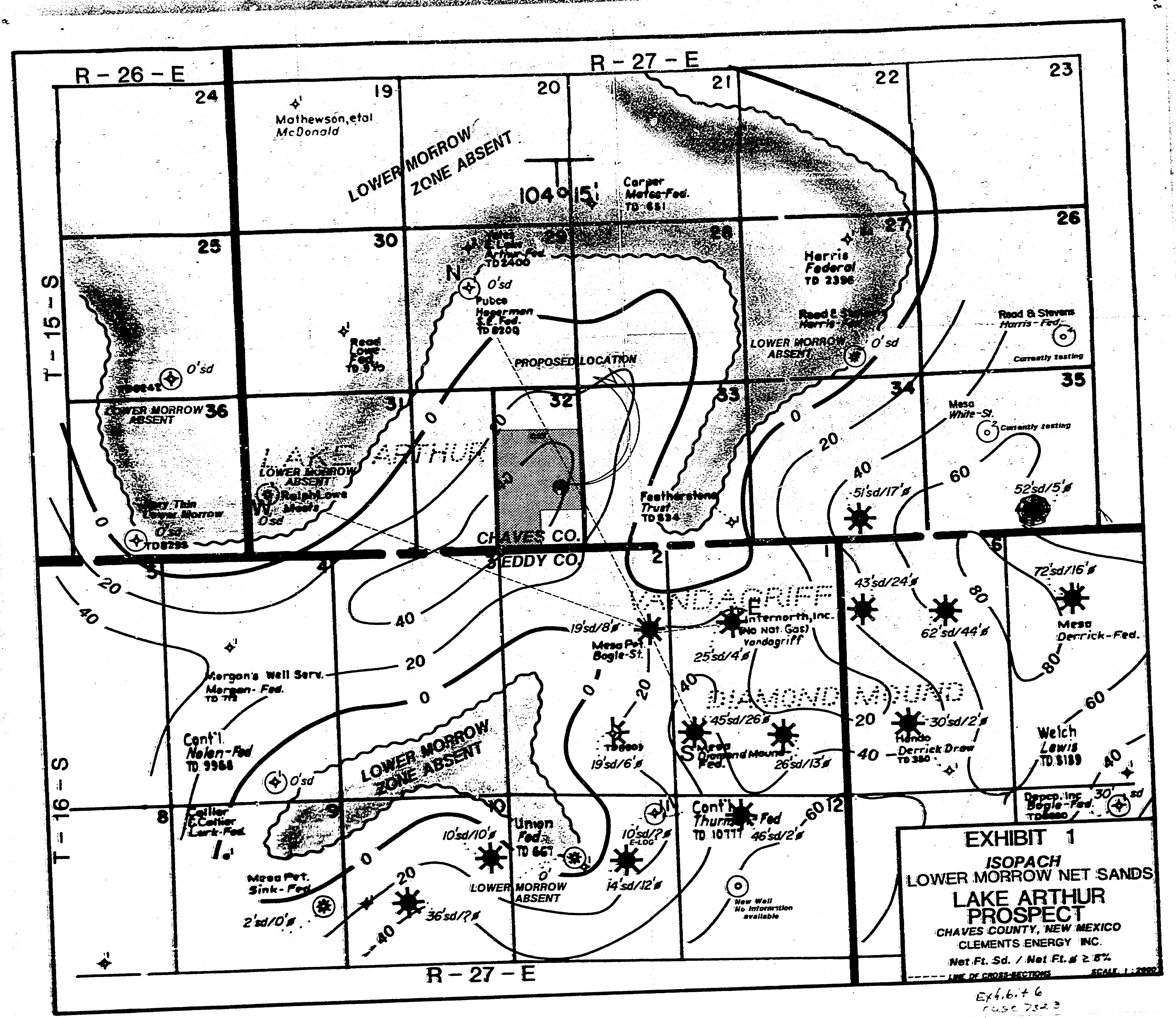
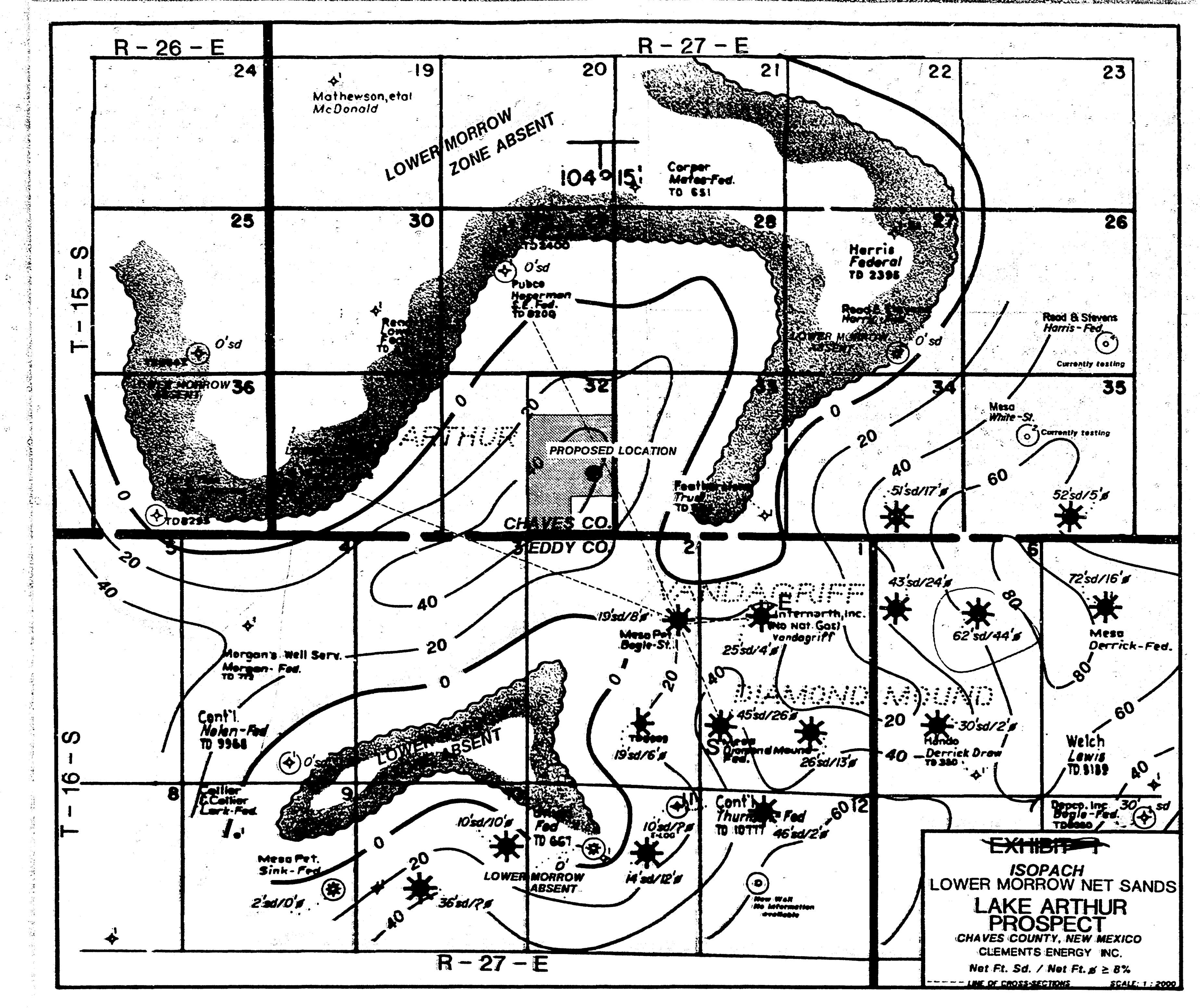

R-26-E
R-27-E
T-15-S
T-16-S
Mathewson, etal
McDonald
LOWER MORROW ZONE ABSENT
104°15'
Carper
Meteo-Fed.
TD 651
Harris
Federal
TD 2396
Read & Stevens
Harris-Fed.
Currently testing
Read & Stevens
Harris-Fed.
LOWER MORROW ABSENT
0'sd
Pubco
Hagerman
S.E. Fed.
TD 8200
N
Read
Lowe-
Fed.
TD 570
PROPOSED LOCATION
LAKE ARTHUR
LOWER MORROW ABSENT
Ralph Lowe
Meels
W
Very Thin
Lower Morrow
TD 8298
TD 8247
CHAVES CO.
EDDY CO.
Featherstone
Trust
TD 834
Mesa
White-St.
Currently testing
51'sd/17'ø
52'sd/5'ø
43'sd/24'ø
62'sd/44'ø
72'sd/16'ø
Mesa
Derrick-Fed.
VANDAGRIFF
Internorth, Inc.
(No Nat. Gas)
Vandagriff
19'sd/8'ø
Mesa Pet.
Bogle-St.
25'sd/4'ø
DIAMOND MOUND
45'sd/26'ø
Mesa
Diamond Mound
Fed.
26'sd/13'ø
19'sd/6'ø
30'sd/2'ø
Hondo
Derrick Draw
TD 380
Welch
Lewis
TD 8189
Depco, Inc
Bogle-Fed.
30'sd
Morgan's Well Serv.
Morgan-Fed.
Cont'l.
Nelen-Fed
TD 9966
Collier
& Collier
Lark-Fed.
Mesa Pet.
Sink-Fed
2'sd/0'ø
36'sd/?ø
10'sd/10'ø
Union
Fed.
TD 867
LOWER MORROW ABSENT
10'sd/?ø
E-LOG
14'sd/12'ø
Cont'l
Thurman Fed
TD 10777
46'sd/2'ø
New Well
No information available
0
20
40
60
80
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
1
2
3
4
5
6
7
8
9
10
11
12

EXHIBIT 1

ISOPACH
LOWER MORROW NET SANDS
LAKE ARTHUR
PROSPECT
CHAVES COUNTY, NEW MEXICO
CLEMENTS ENERGY INC.
Net Ft. Sd. / Net Ft. ø ≥ 8%
------ LINE OF CROSS-SECTIONS
SCALE 1 : 2000

Exhibit 6
Case 7323


R - 26 - E
R - 27 - E
T - 15 - S
T - 16 - S
24
19
20
21
22
23
25
30
28
27
26
36
32
33
34
35
5
4
3
2
1
6
8
9
10
11
12
7
Mathewson, etal
McDonald
LOWER MORROW
ZONE ABSENT
104° 15'
Carper
Metes-Fed.
TD 651
Harris
Federal
TD 2398
Read & Stevens
Harris-Fed.
Currently testing
LOWER MORROW
ABSENT
0'sd
TD 2400
0'sd
Pubco
Hagerman
S.E. Fed.
TD 8200
0'sd
TD 8295
ARTHUR
PROPOSED LOCATION
Feather
Trust
CHAVES CO.
EDDY CO.
Mesa
White-St.
Currently testing
51'sd/17'ø
52'sd/5'ø
43'sd/24'ø
62'sd/44'ø
72'sd/16'ø
Mesa
Derrick-Fed.
VANDAGRIFF
19'sd/8'ø
Mesa Pet.
Bogle-St.
Internorth, Inc.
(No Nat. Gas)
Vandagriff
25'sd/4'ø
Morgan's Well Serv.
Morgan-Fed.
TD 773
Cont'l.
Nelen-Fed
TD 9968
0'sd
Collier
C.Collier
Lark-Fed.
LOWER MORROW
ABSENT
DIAMOND MOUND
45'sd/26'ø
Diamond Mound
Fed.
26'sd/13'ø
19'sd/6'ø
30'sd/2'ø
Hondo
Derrick Draw
TD 380
Welch
Lewis
TD 8189
Depco, Inc
Bogle-Fed.
TD 8080
30' sd
10'sd/10'ø
Fed
TD 667
0'
10'sd/?ø
E-LOG
Cont'l
Thurman Fed
TD 10777
46'sd/2'ø
Mesa Pet.
Sink-Fed
2'sd/0'ø
36'sd/?ø
LOWER MORROW
ABSENT
14'sd/12'ø
New Well
No information
available
0
20
40
60
80

~~EXHIBIT 1~~

ISOPACH

LOWER MORROW NET SANDS

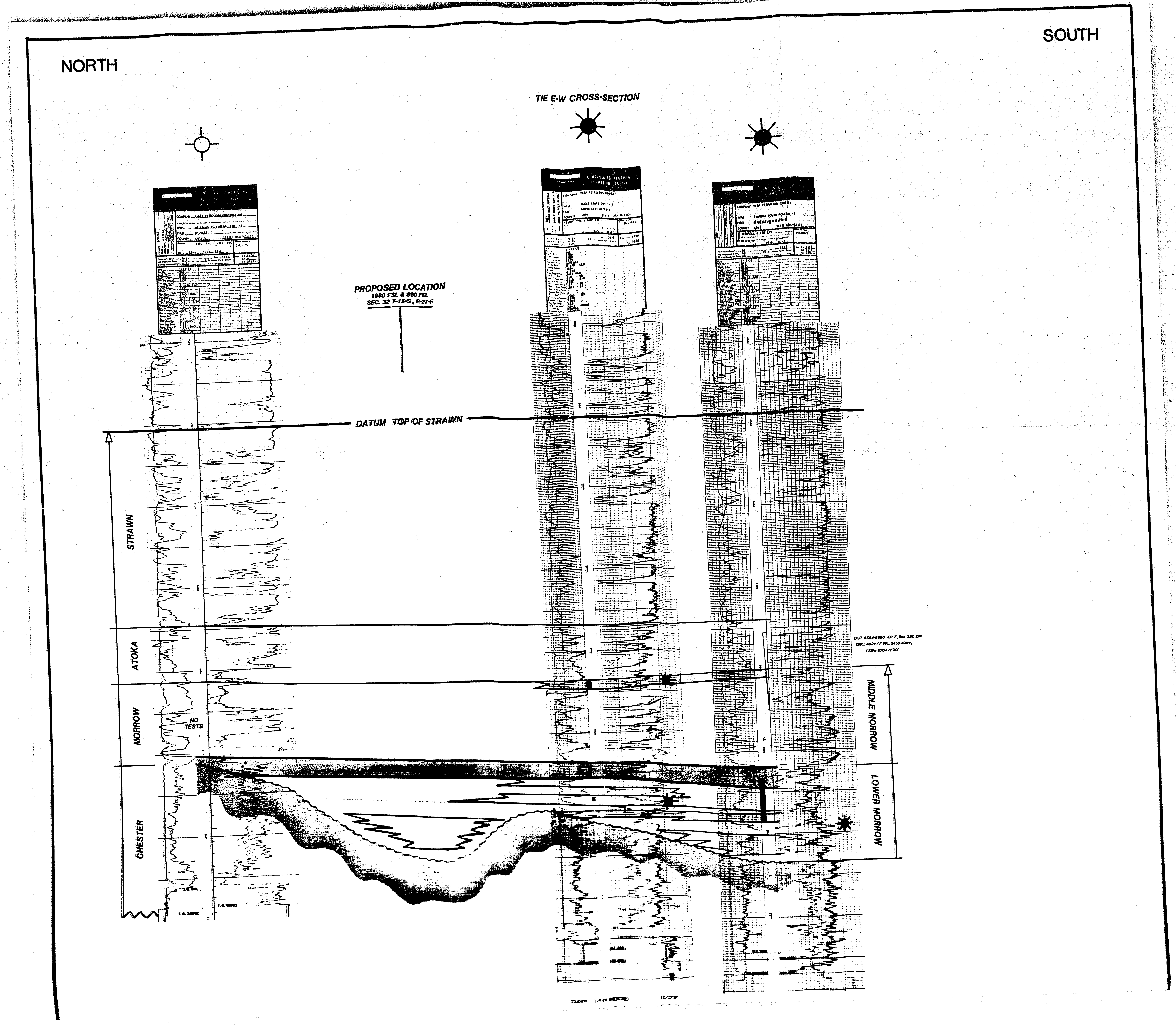
LAKE ARTHUR
PROSPECT

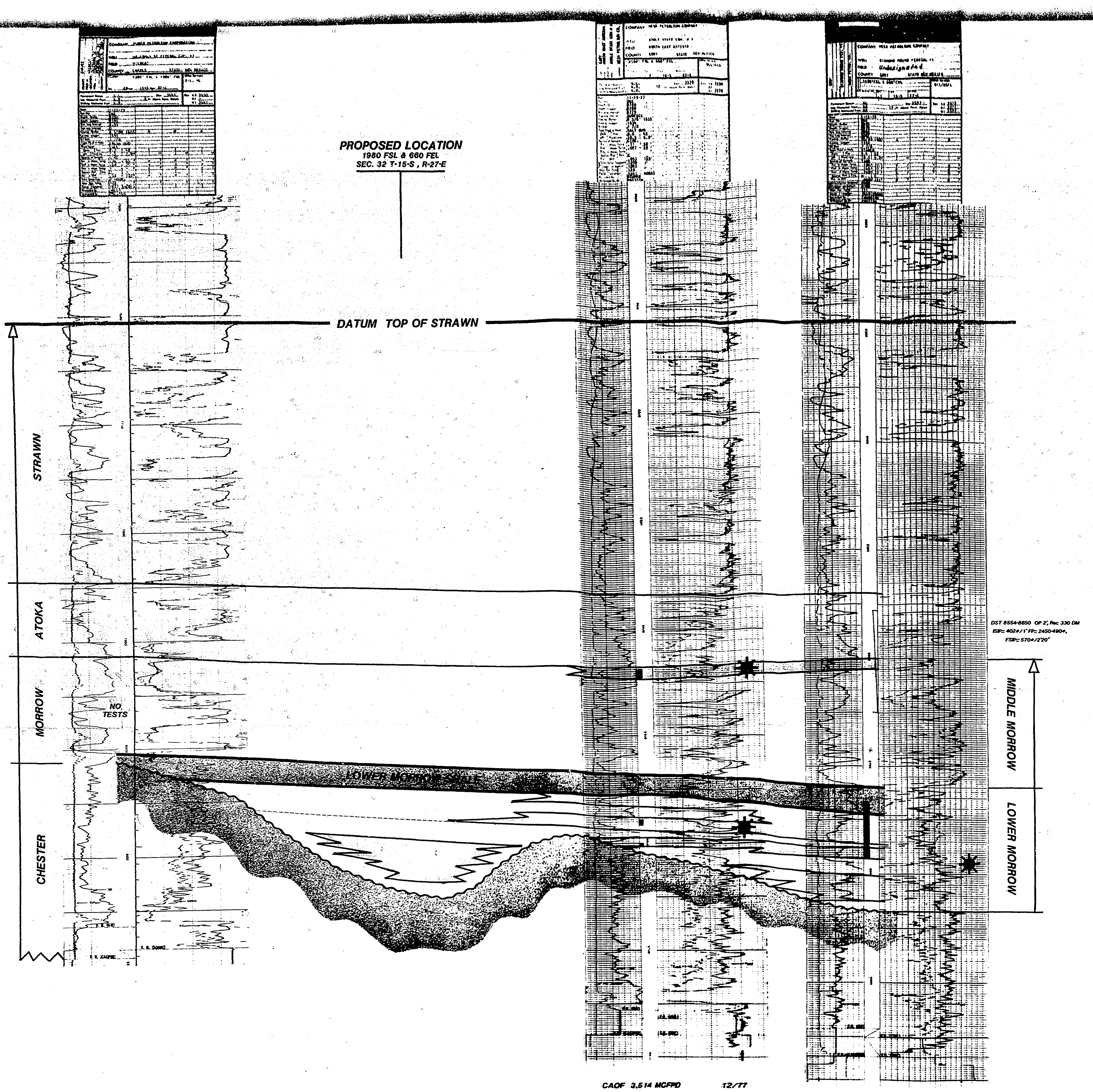
CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.

Net Ft. Sd. / Net Ft. ø ≥ 8%

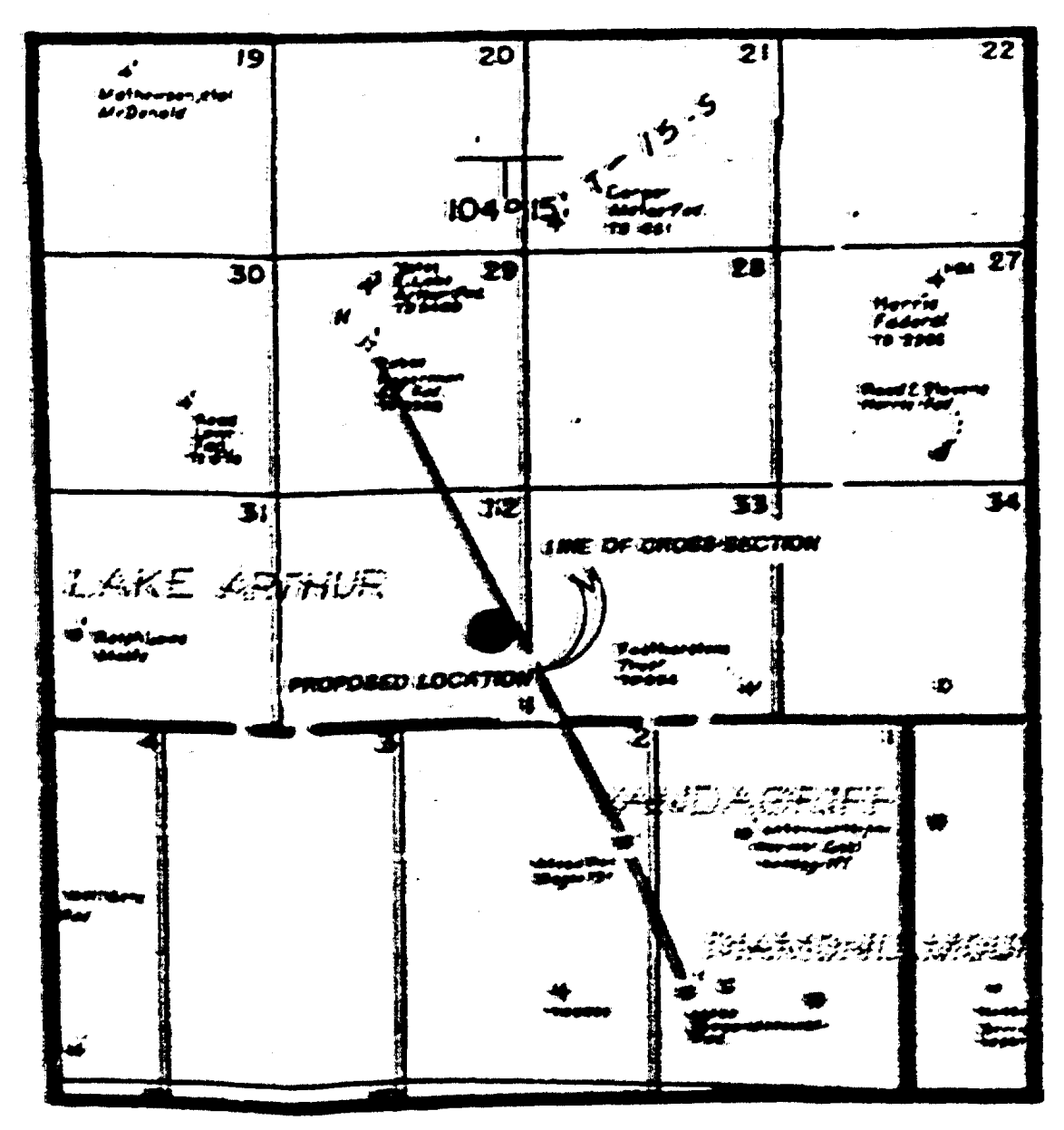
------ LINE OF CROSS-SECTIONS   SCALE: 1 : 2000

NORTH
SOUTH
TIE E-W CROSS-SECTION
PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
NO TESTS
CHESTER
DST 8564-8650 OP 2', Rec 330 DM
ISIP= 402#/1' FP= 2450-490#,
FSIP= 570#/2'20"
MIDDLE MORROW
LOWER MORROW


PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
NO. TESTS
LOWER MORROW SHALE
MIDDLE MORROW
LOWER MORROW
DST 8554-8650 OP 2', Rec 330 DM
ISIP= 402#/1' FP= 2450-490#,
FSIP= 570#/2'20"

CAOF 3,514 MCFPD 12/77
691.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 3,856 MCFPD 3/78
1,046.8 MMCF CUM. PROD. to 5/1/81
.786 MMCFGPD AVG. DAILY PROD. 4/81


19
20
21
22
30
29
28
27
31
32
33
34
104°15'
T-15-S
LAKE ARTHUR
LINE OF CROSS-SECTION
PROPOSED LOCATION
Harris Federal
Mathewson etal McDonald

SCALE: 1"=4000'

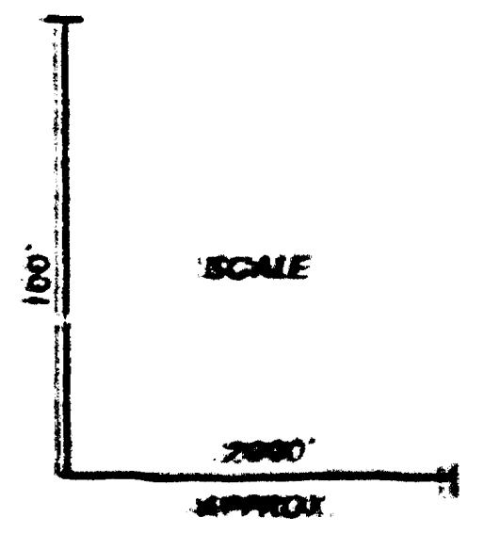

100'
SCALE
2000'
APPROX

EXHIBIT 2

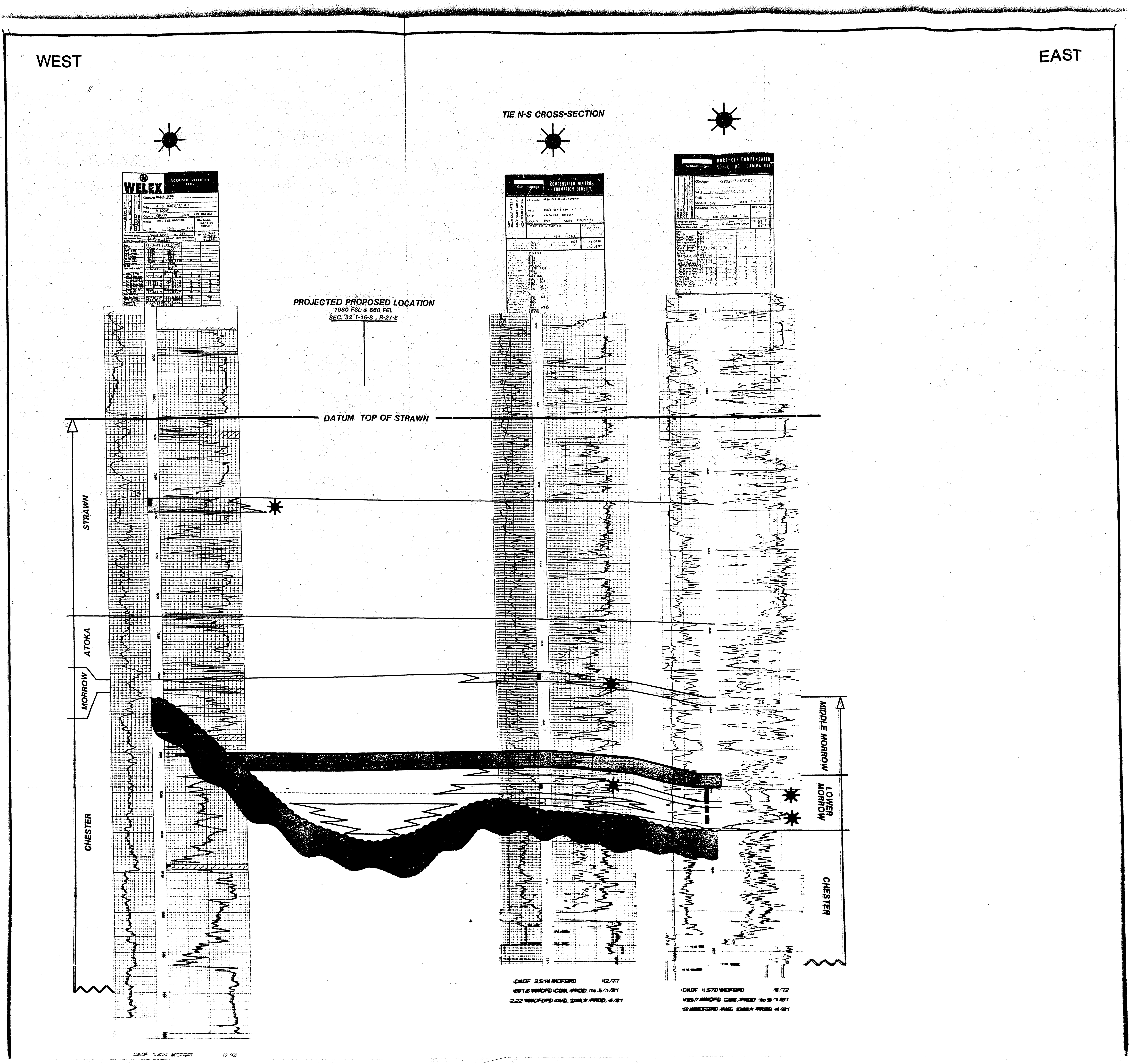
STRATIGRAPHIC CROSS - SECTION

LAKE ARTHUR PROSPECT

CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7323 Exhibit No. 8
Submitted by Clements
Hearing Date

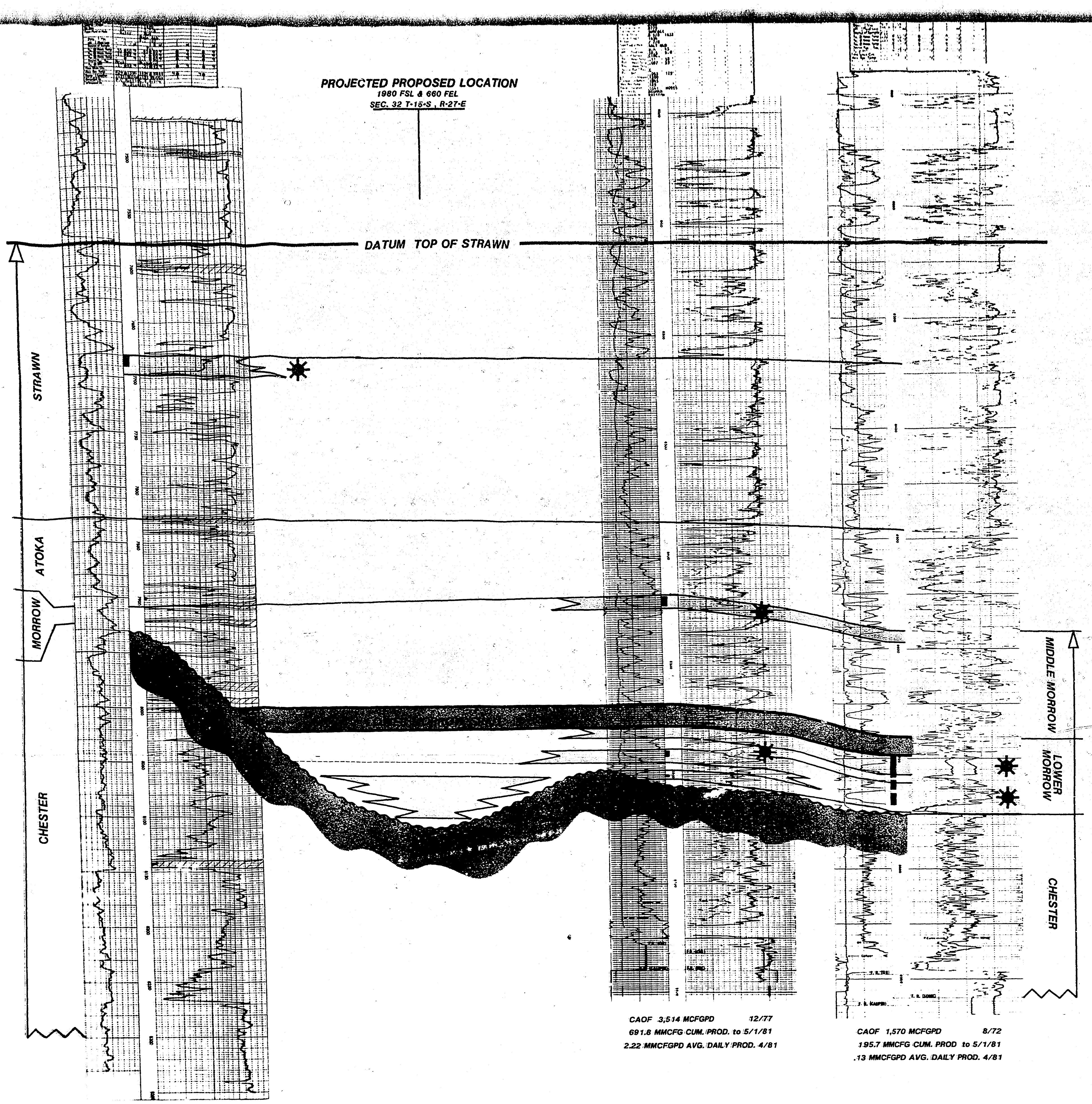

WEST
EAST
TIE N-S CROSS-SECTION
WELEX
ACOUSTIC VELOCITY LOG
COMPANY RALPH LOWE
WELL J. L. HOOTS "L" # 1
FIELD WILDCAT
COUNTY CHAVES STATE NEW MEXICO
Schlumberger
COMPENSATED NEUTRON FORMATION DENSITY
COMPANY MESA PETROLEUM COMPANY
WELL BOGLE STATE COM. # 1
FIELD NORTH EAST ARTESIA
COUNTY EDDY STATE NEW MEXICO
Schlumberger
BOREHOLE COMPENSATED SONIC LOG GAMMA RAY
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
MIDDLE MORROW
LOWER MORROW
CHESTER

PROJECTED PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E

CAOF [illegible] MCFPD [illegible]

CAOF 3,514 MCFPD 12/77
891.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFPD AVG. DAILY PROD. 4/81

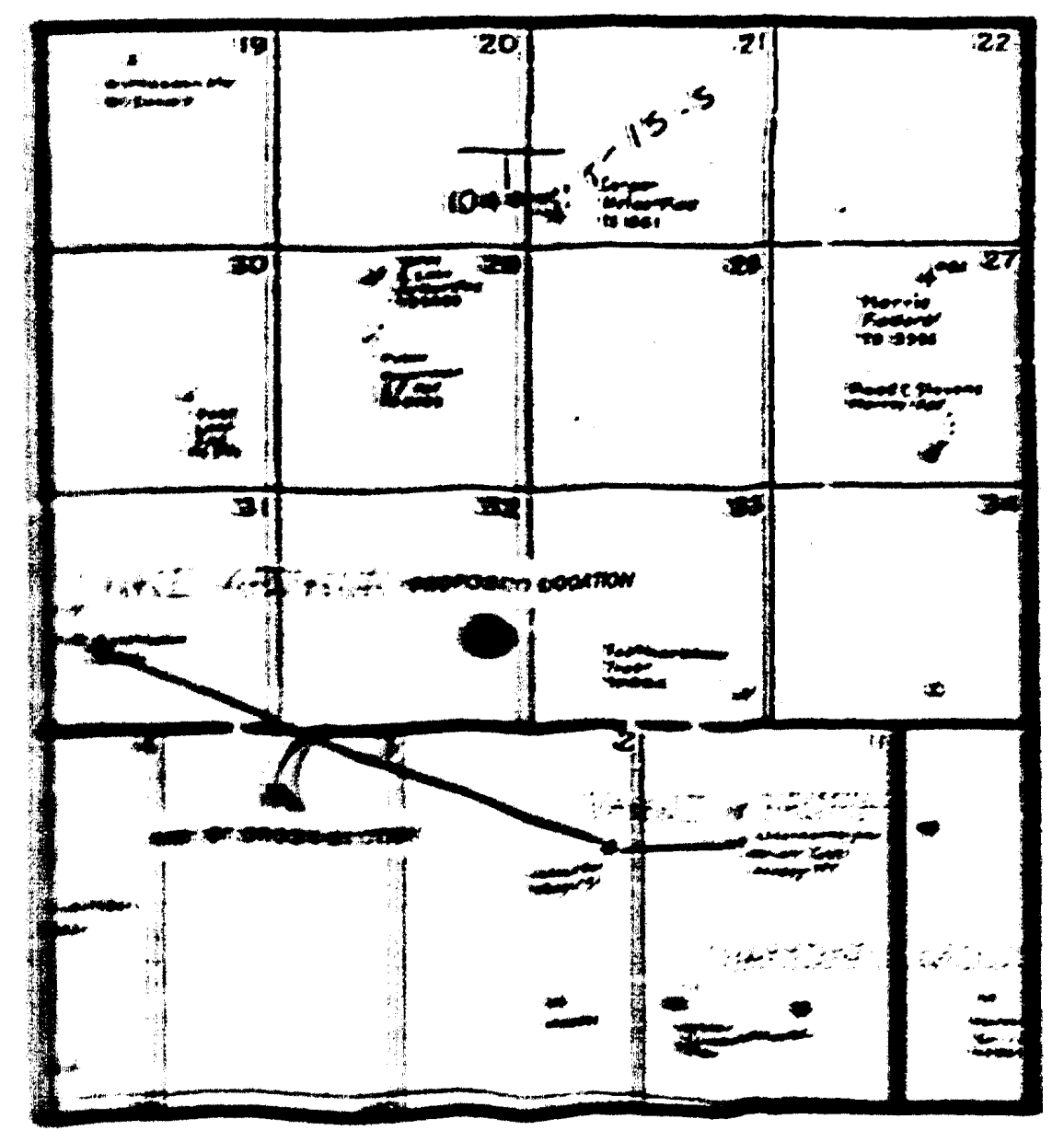
CAOF 1,570 MCFPD 8/72
135.7 MMCFG CUM. PROD. to 5/1/81
.13 MMCFPD AVG. DAILY PROD. 4/81


PROJECTED PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S, R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
MIDDLE MORROW
LOWER MORROW
CHESTER

CAOF 3,426 MCFGPD 12/62
1,616 MMCFG CUM. PROD. to 5/1/81
.11 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 3,514 MCFGPD 12/77
691.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 1,570 MCFGPD 8/72
195.7 MMCFG CUM. PROD to 5/1/81
.13 MMCFGPD AVG. DAILY PROD. 4/81


19
20
21
22
T-15-S
30
29
28
27
31
32
33
34
PROPOSED LOCATION
SCALE

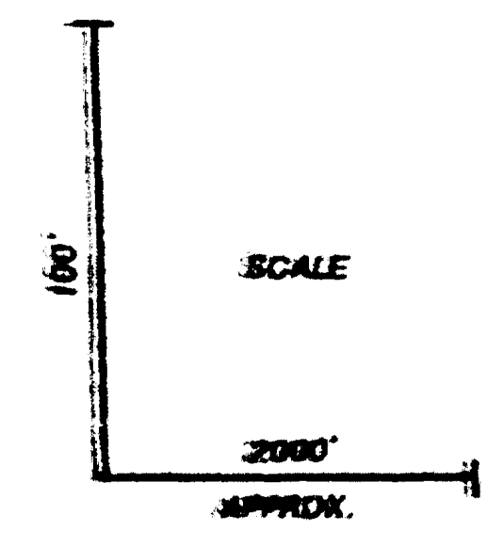
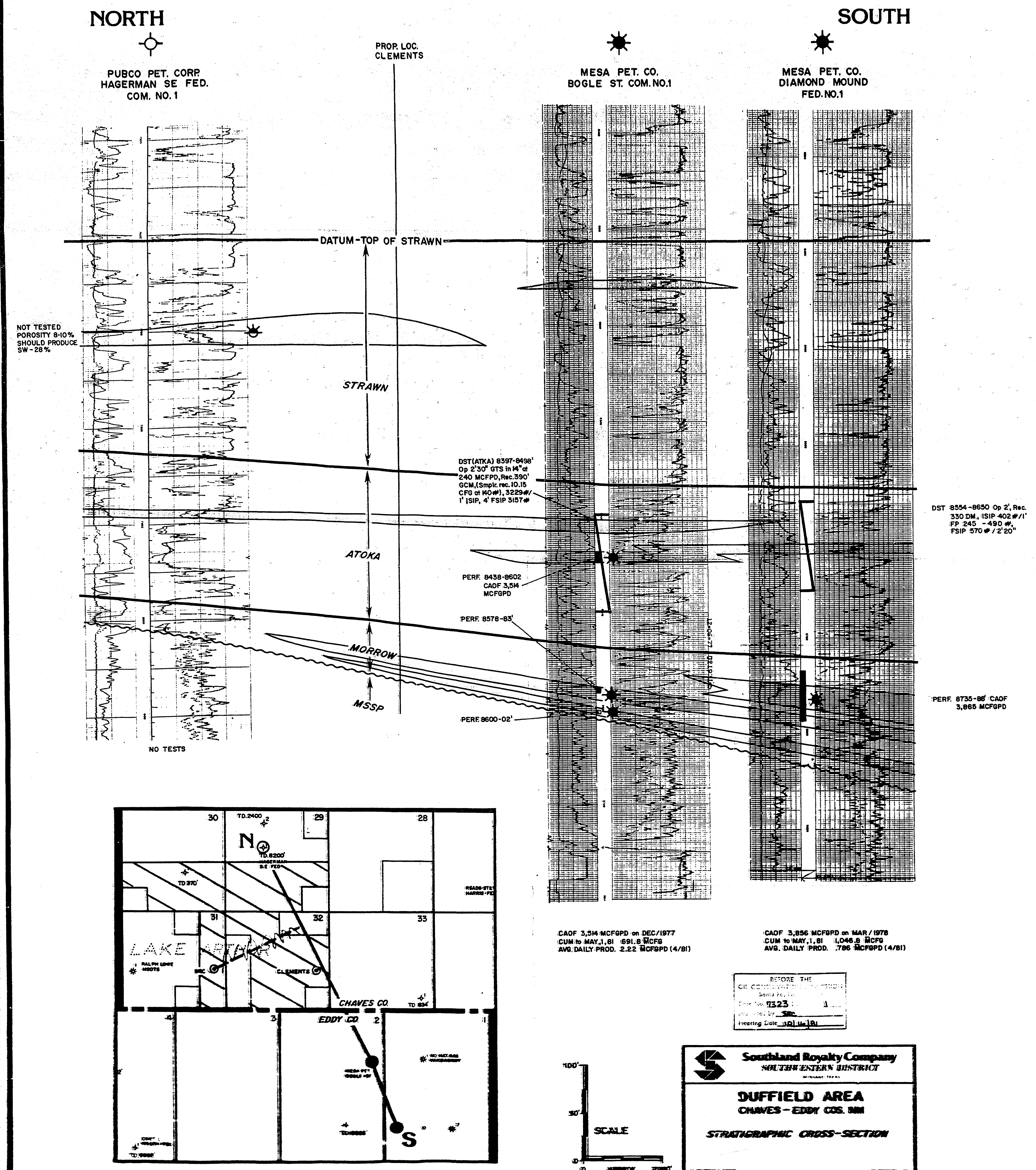

100'
SCALE
2000'
APPROX.

EXHIBIT 9
STRATIGRAPHIC CROSS - SECTION

LAKE ARTHUR PROSPECT
CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7323 Exhibit No. 9
Submitted by Clements
Hearing Date


NORTH
SOUTH
PUBCO PET. CORP.
HAGERMAN SE FED.
COM. NO. 1
PROP. LOC.
CLEMENTS
MESA PET. CO.
BOGLE ST. COM. NO.1
MESA PET. CO.
DIAMOND MOUND
FED. NO.1
DATUM-TOP OF STRAWN
NOT TESTED
POROSITY 8-10%
SHOULD PRODUCE
SW-28%
STRAWN
ATOKA
MORROW
MSSP
NO TESTS
DST(ATKA) 8397-8498'
Op 2'30" GTS in 14" at
240 MCFPD, Rec. 390'
GCM, (Smplr. rec. 10.15
CFG at 140#), 3229#/
1' ISIP, 4' FSIP 3157#
PERF. 8438-8602
CAOF 3,514
MCFGPD
PERF. 8578-83'
PERF. 8600-02'
DST 8554-8650 Op 2', Rec.
330 DM., ISIP 402#/1'
FP 245 -490#,
FSIP 570#/2'20"
PERF. 8735-88' CAOF
3,865 MCFGPD
CAOF 3,514 MCFGPD on DEC/1977
CUM to MAY, 1, 81 691.8 M̄CFG
AVG. DAILY PROD. 2.22 M̄CFGPD (4/81)
CAOF 3,856 MCFGPD on MAR/1978
CUM to MAY, 1, 81 1,046.8 M̄CFG
AVG. DAILY PROD. .786 M̄CFGPD (4/81)
30
TD. 2400
29
28
N
TD. 8200'
HAGERMAN
S.E. FED.
TD 370'
READS-STE
HARRIS FED
31
32
33
LAKE ARTHUR
RALPH LOWE
MOOTS
SRC
CLEMENTS
CHAVES CO.
TD 834'
EDDY CO.
4
3
2
1
MESA PET.
BOGLE ST
S
INDEX MAP 1"=2000'
100'
50'
SCALE
0
0 APPROX. 2000'

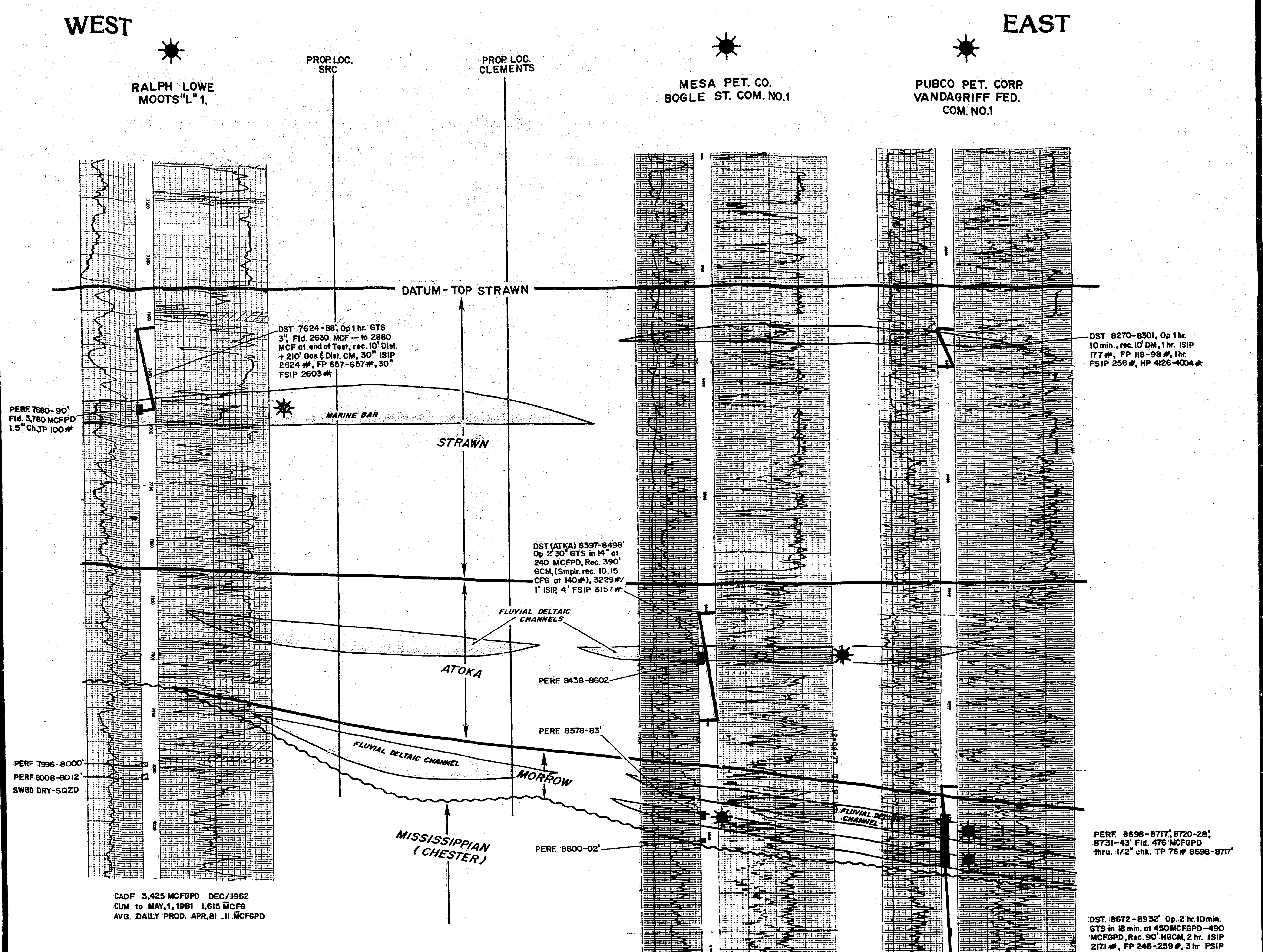
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7323 Exhibit No. 1
Submitted by SRC
Hearing Date 10/14/81

Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA
CHAVES - EDDY COS. NM

STRATIGRAPHIC CROSS-SECTION

J. BECHER SEPT. 81
]


WEST
EAST
RALPH LOWE
MOOTS "L" 1.
PROP. LOC.
SRC
PROP. LOC.
CLEMENTS
MESA PET. CO.
BOGLE ST. COM. NO.1
PUBCO PET. CORP.
VANDAGRIFF FED.
COM. NO.1
DATUM - TOP STRAWN
MARINE BAR
STRAWN
FLUVIAL DELTAIC
CHANNELS
ATOKA
FLUVIAL DELTAIC CHANNEL
MORROW
FLUVIAL DELTAIC
CHANNEL
MISSISSIPPIAN
(CHESTER)
PERF. 8438-8602
PERF. 8578-83'
PERF. 8600-02'
PERF 7996-8000'
PERF 8008-8012'
SWBD DRY-SQZD

DST 7624-88', Op 1 hr. GTS 3", Fld. 2630 MCF — to 288C MCF at end of Test, rec. 10' Dist. + 210' Gas & Dist. CM, 30" ISIP 2624 #, FP 657-657#, 30" FSIP 2603#.

PERF. 7680-90'
Fld. 3,780 MCFPD
1.5" Ch.,TP 100#

DST (ATKA) 8397-8498' Op 2'30" GTS in 14" at 240 MCFPD, Rec. 390' GCM, (Snplr. rec. 10.15 CFG at 140#), 3229#/ 1' ISIP, 4' FSIP 3157#.

DST 8270-8301, Op 1 hr. 10 min., rec. 10' DM, 1 hr. ISIP 177#, FP 118-98#, 1 hr. FSIP 256#, HP 4126-4004#.

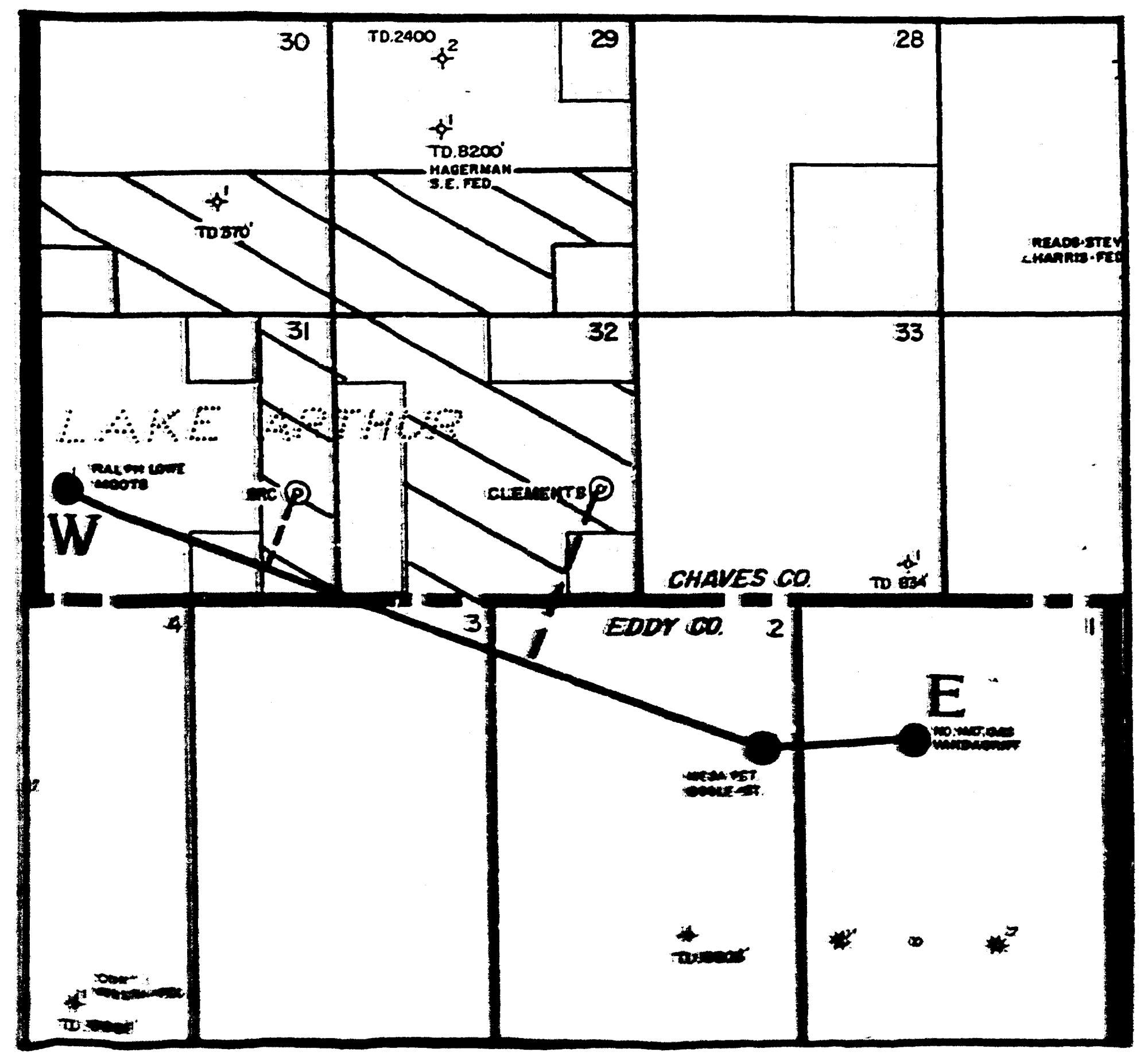
PERF. 8698-8717', 8720-28', 8731-43' Fld. 476 MCFGPD thru. 1/2" chk. TP 76# 8698-8717'

DST. 8672-8932' Op. 2 hr. 10 min. GTS in 18 min. at 450 MCFGPD—490 MCFGPD, Rec. 90' HGCM, 2 hr. ISIP 2171#, FP 246-259#, 3 hr FSIP 3397#, HP 4332-4294#.

CAOF 3,425 MCFGPD DEC/1962
CUM to MAY, 1, 1981 1,615 MCFG
AVG. DAILY PROD. APR, 81 .11 MCFGPD

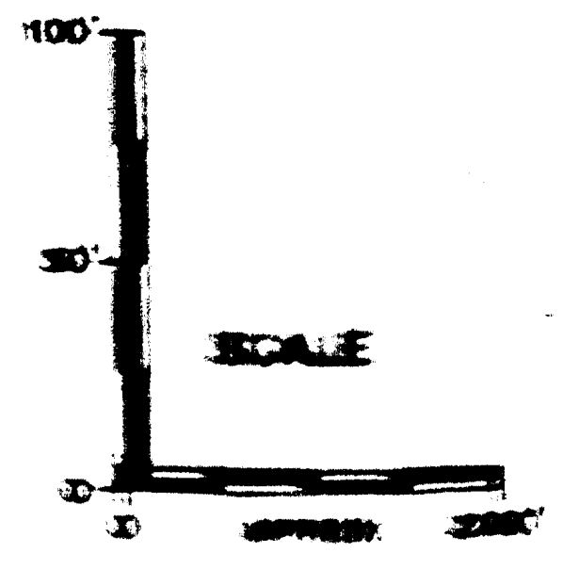
CAOF 3,544 MCFGPD DEC/1977
CUM to MAY, 1, 1981 691.8 MCFG
AVG. DAILY PROD APR, 81 2.22 MCFGPD

CAOF 1,570 MCFGPD AUG./1972
CUM. to MAY, 1, 1981 196.7 MCFG
AVG. DAILY PROD. APR, 81 .13 MCFGPD


30
29
28
31
32
33
4
3
2
1
TD.2400
TD.8200'
HAGERMAN
S.E. FED.
TD 370'
READS-STEV
HARRIS-FED
LAKE ARTHUR
RALPH LOWE
MOOTS
SRC
CLEMENTS
W
E
CHAVES CO.
EDDY CO.
TD 834'
MESA PET
BOGLE ST.

INDEX MAP 1"=2000'

BEFORE THE
OIL CONSERVATION [illegible]
[illegible]
Case No. 7323 Exhibit No. 2
Submitted by SRC
Hearing Date 10-16-81

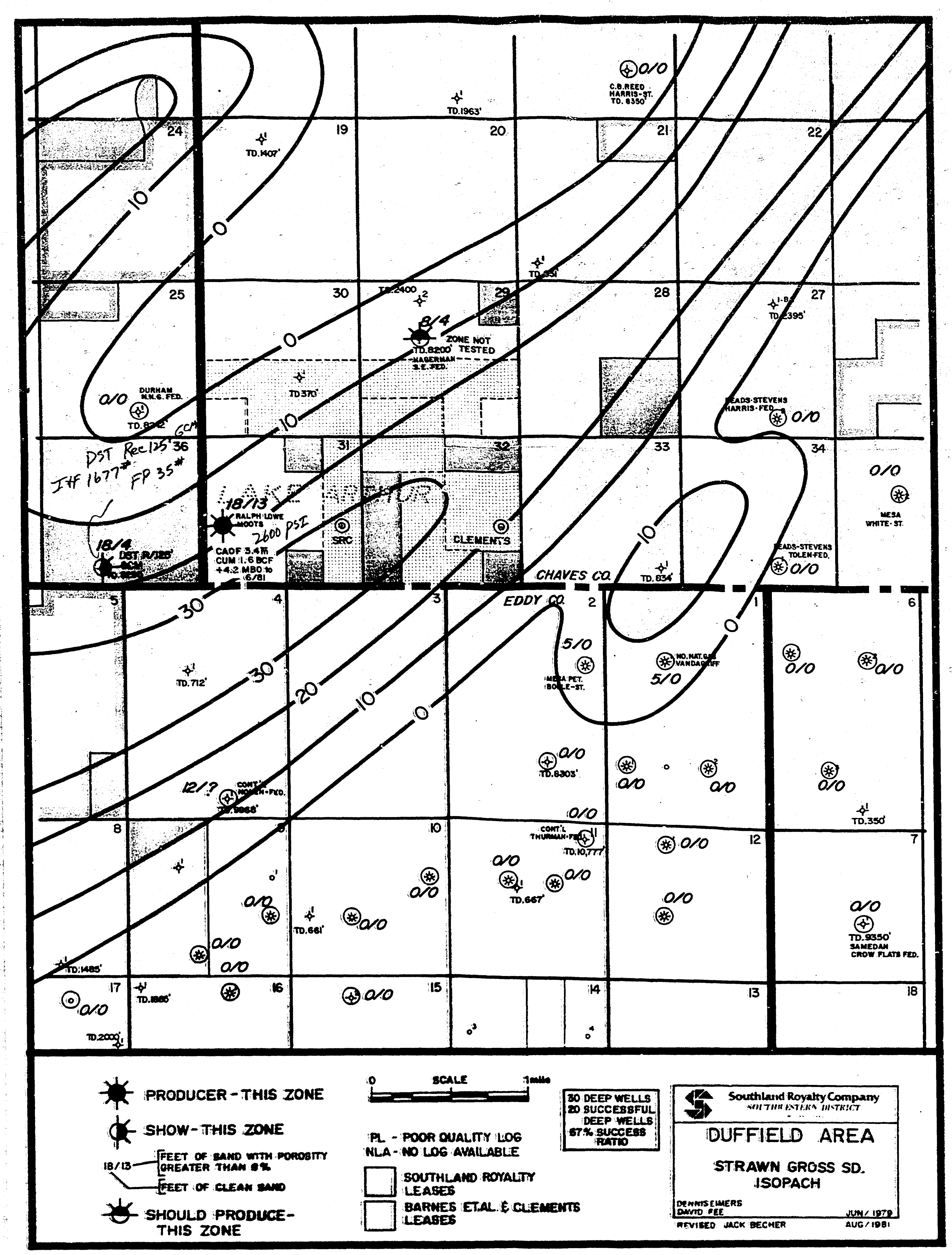

100'
50'
0
0
APPROX.
2000'
SCALE

Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA
EDDY COUNTY, N.M.

STRATIGRAPHIC CROSS-SECTION

J. BECHER SEPT. 81

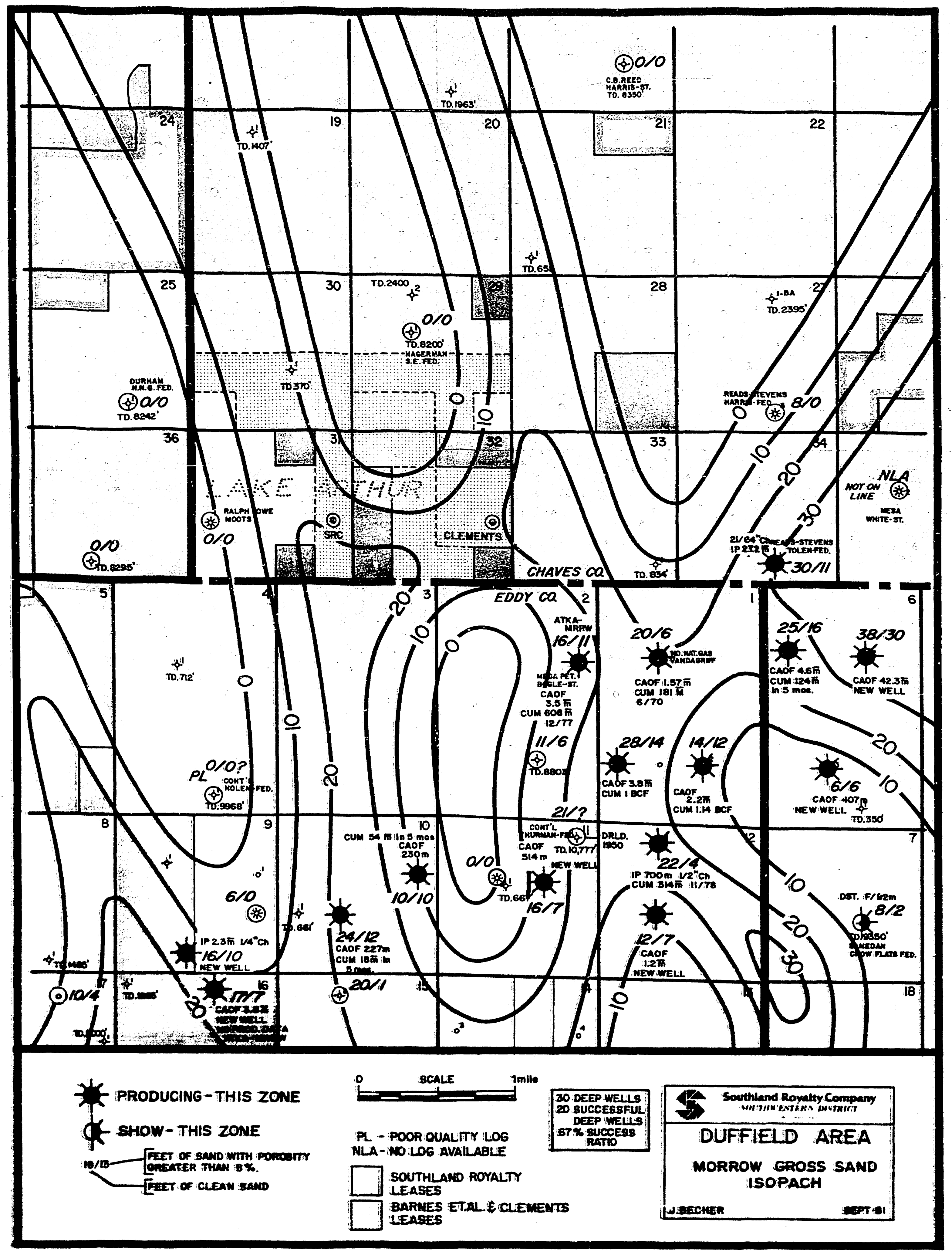

24
19
20
21
22
25
30
29
28
27
36
31
32
33
34
5
4
3
2
1
6
8
9
10
11
12
7
17
16
15
14
13
18
10
0
10
0
10
30
30
20
10
0
10
0
C.B.REED HARRIS-ST. TD. 8350'
0/0
TD.1963'
TD.1407'
TD.551'
TD.2400
8/4
ZONE NOT TESTED
TD.8200'
HAGERMAN S.E.FED.
TD.2395'
TD.370'
DURHAM N.N.G. FED.
0/0
TD.8242'
LEADS-STEVENS HARRIS-FED.
0/0
DST Rec 125' GCM
IHF 1677# FP 35#
18/13
RALPH LOWE MOOTS
2600 PSI
CAOF 3.4 MM
CUM 1.6 BCF
+4.2 MBO to 6/81
18/4
DST R/125' GCM
SRC
CLEMENTS
LAKE ARTHUR
0/0
MESA WHITE-ST.
LEADS-STEVENS TOLEN-FED.
0/0
CHAVES CO.
EDDY CO.
TD. 834'
5/0
MESA PET. BOYLE-ST.
NO. NAT. GAS VANDAGRIFF
5/0
0/0
0/0
TD.712'
12/?
CONT'L WOMEN-FED.
TD.9868'
0/0
TD.8303'
0/0
0/0
0/0
TD.350'
0/0
CONT'L THURMAN-FED.
TD.10,777'
0/0
0/0
TD.667'
0/0
0/0
0/0
0/0
TD.661'
0/0
0/0
0/0
0/0
TD.9350'
SAMEDAN CROW FLATS FED.
TD.1485'
0/0
TD.1985'
0/0
TD.2000'
PRODUCER - THIS ZONE
SHOW - THIS ZONE
18/13
FEET OF SAND WITH POROSITY GREATER THAN 8%
FEET OF CLEAN SAND
SHOULD PRODUCE - THIS ZONE
0
SCALE
1 mile
PL - POOR QUALITY LOG
NLA - NO LOG AVAILABLE
SOUTHLAND ROYALTY LEASES
BARNES ET.AL. & CLEMENTS LEASES
30 DEEP WELLS
20 SUCCESSFUL DEEP WELLS
67% SUCCESS RATIO

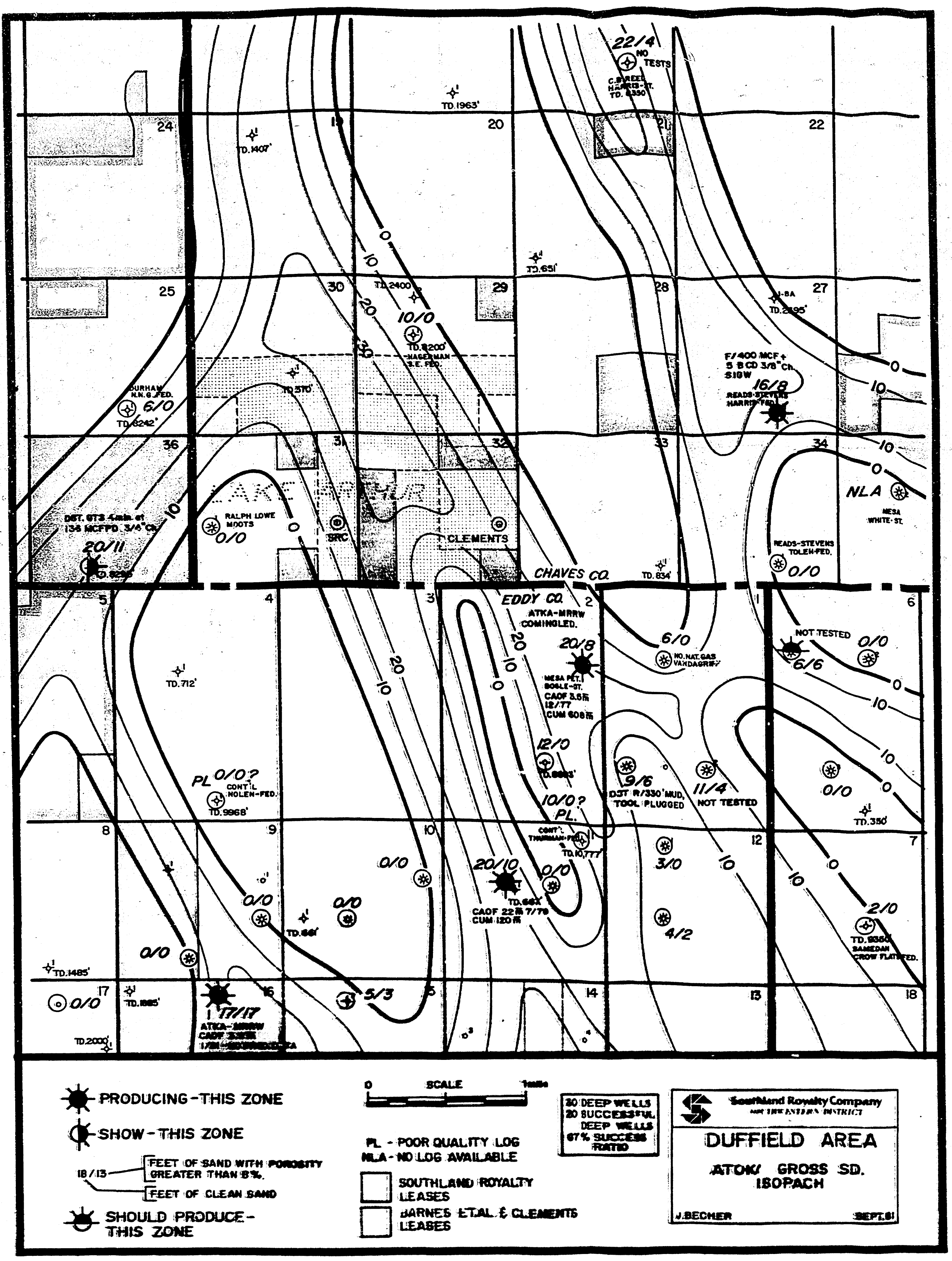
Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA

STRAWN GROSS SD.
ISOPACH

DENNIS EIMERS
DAVID FEE
JUN / 1979
REVISED JACK BECHER
AUG / 1981


0/0
C.B. REED
HARRIS-ST.
TD. 8350'
TD. 1963'
TD. 1407'
24
19
20
21
22
TD. 65
TD. 2400
25
30
29
28
27
1-BA
TD. 2395'
0/0
TD. 8200'
HAGERMAN
S.E. FED.
DURHAM
N.M.G. FED.
0/0
TD. 8242'
TD 370'
READS-STEVENS
HARRIS-FED.
8/0
36
31
32
33
34
NLA
NOT ON LINE
MESA
WHITE-ST.
LAKE ARTHUR
RALPH LOWE
MOOTS
0/0
SRC
CLEMENTS
0/0
TD. 8295'
CHAVES CO.
TD. 834'
21/64" CHREADS-STEVENS
IP 232 M̄
TOLEN-FED.
30/11
EDDY CO.
5
4
3
2
1
6
ATKA-
MRRW
16/11
MESA PET.
BOGLE-ST.
CAOF
3.5 M̄
CUM 608 M̄
12/77
20/6
NO. NAT. GAS
VANDAGRIFF
CAOF 1.57 M̄
CUM 181 M̄
6/70
25/16
CAOF 4.6 M̄
CUM 124 M̄
in 5 mos.
38/30
CAOF 42.3 M̄
NEW WELL
TD. 712'
PL 0/0?
CONT'L
NOLEN-FED.
TD. 9968'
11/6
TD. 8803'
28/14
CAOF 3.8 M̄
CUM 1 BCF
14/12
CAOF
2.2 M̄
CUM 1.14 BCF
6/6
CAOF 407 m
NEW WELL
TD. 350'
8
9
10
11
12
7
CUM 54 M̄ in 5 mos
CAOF
230 m
21/?
CONT'L
THURMAN-FED.
CAOF
514 m
TD. 10,777'
NEW WELL
DRLD.
1950
0/0
TD. 66
22/4
IP 700 m 1/2" Ch
CUM 314 M̄ 11/78
6/0
10/10
16/7
DST. F/9.2 m
8/2
TD. 9350'
CROW FLATS FED.
TD. 661'
24/12
CAOF 227 m
CUM 18 M̄ in
5 mos.
IP 2.3 M̄ 1/4" Ch
16/10
NEW WELL
12/7
CAOF
1.2 M̄
NEW WELL
TD. 1485'
10/4
17
16
15
14
13
18
17/7
CAOF 3.8 M̄
NEW WELL
20/1
0
10
20
30
PRODUCING - THIS ZONE
SHOW - THIS ZONE
16/13
FEET OF SAND WITH POROSITY GREATER THAN 8%.
FEET OF CLEAN SAND
0
SCALE
1 mile
PL - POOR QUALITY LOG
NLA - NO LOG AVAILABLE
SOUTHLAND ROYALTY LEASES
BARNES ET AL. & CLEMENTS LEASES
30 DEEP WELLS
20 SUCCESSFUL DEEP WELLS
67% SUCCESS RATIO
Southland Royalty Company
SOUTHWESTERN DISTRICT
DUFFIELD AREA
MORROW GROSS SAND ISOPACH
J. BECHER
SEPT '81


24
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36
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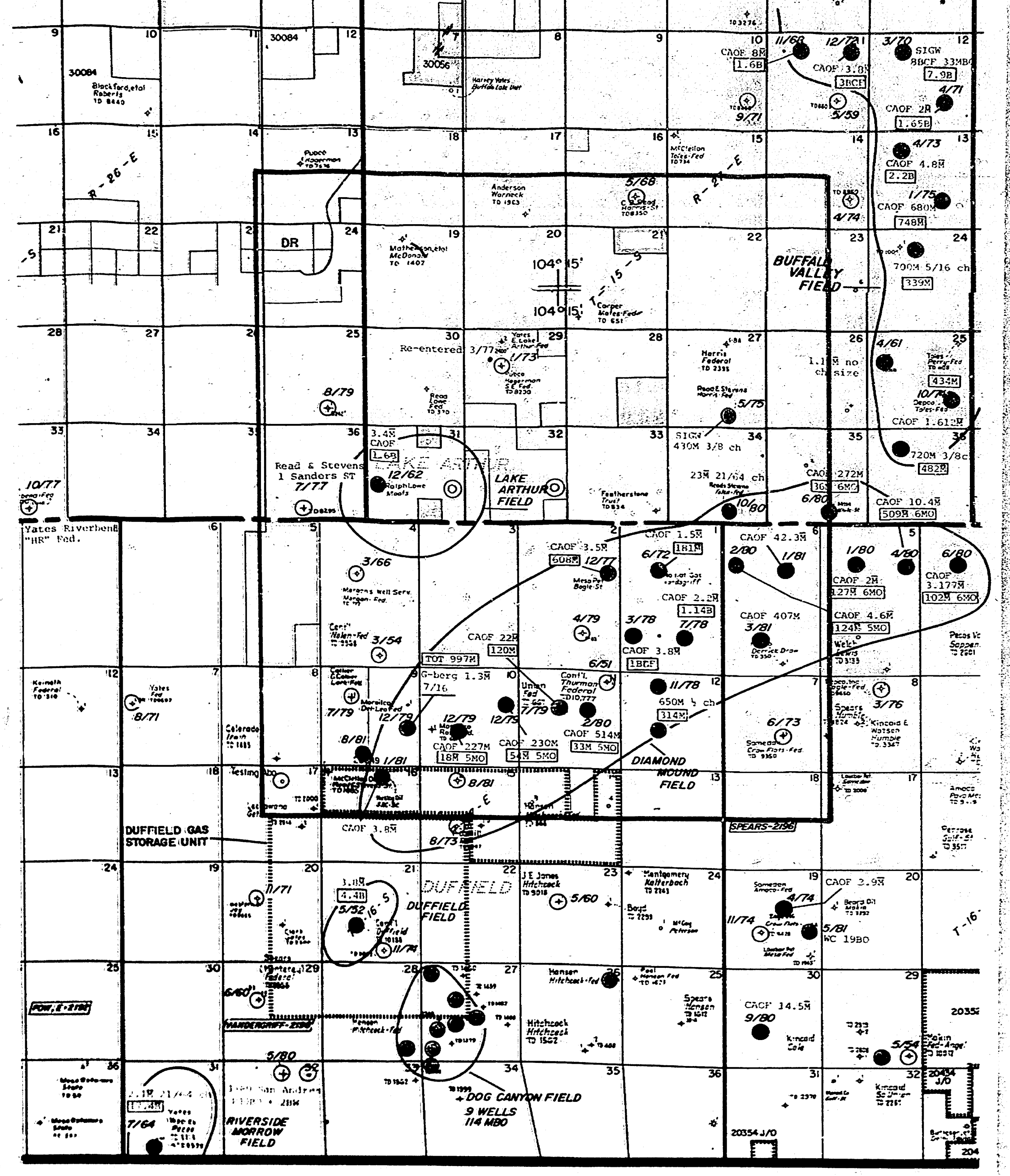
32
33
34
5
4
3
2
1
6
8
9
10
12
7
17
16
15
14
13
18
22/4
NO TESTS
C. BREEL HARRIS-ST. TD. 8350
TD.1963'
TD.1407'
TD.651'
TD.2400'
10/0
TD.8200' HAGERMAN S.E. FED.
I-BA TD.2895'
F/400 MCF + 5 BCD 3/8" Ch. SIGW
16/8
READS-STEVENS HARRIS-FED.
DURHAM N.N.G. FED.
6/0
TD.8242'
TD.310'
LAKE ARTHUR
DST. GTS 4 min. at 134 MCFPD 3/4" Ch.
20/11
TD.8295'
RALPH LOWE MOOTS
0/0
SRC
CLEMENTS
NLA
MESA WHITE-ST.
READS-STEVENS TOLEN-FED.
0/0
TD.834'
CHAVES CO.
EDDY CO.
ATKA-MRRW COMINGLED.
20/8
MESA PET. BOGLE-ST. CAOF 3.5 MM 12/77 CUM 608 MM
6/0
NO. NAT. GAS VANDAGRIFF
NOT TESTED
0/0
6/6
TD.712'
PL 0/0?
CONT'L NOLEN-FED.
TD.9968'
12/0
TD.9963'
10/0?
PL.
CONT'L THURMAN-FED.
TD.10,777'
9/6
DST R/330' MUD. TOOL PLUGGED
11/4
NOT TESTED
0/0
TD.350'
0/0
0/0
0/0
TD.661'
20/10
TD.96X
CAOF 22 MM 7/79
CUM 120 MM
0/0
3/0
4/2
2/0
TD.9350'
SAMEDAN CROW FLATS FED.
0/0
TD.1485'
0/0
TD.1985'
17/17
ATKA-MRRW
TD.2000'
5/3
0
10
20
30
PRODUCING - THIS ZONE
SHOW - THIS ZONE
18/13
FEET OF SAND WITH POROSITY GREATER THAN 8%.
FEET OF CLEAN SAND
SHOULD PRODUCE - THIS ZONE
0
SCALE
1 mile
PL - POOR QUALITY LOG
NLA - NO LOG AVAILABLE
SOUTHLAND ROYALTY LEASES
BARNES ET.AL. & CLEMENTS LEASES
30 DEEP WELLS
20 SUCCESSFUL DEEP WELLS
67% SUCCESS RATIO

Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA

ATOKA GROSS SD.
ISOPACH

J.BECHER SEPT.81


BUFFALO VALLEY FIELD
LAKE ARTHUR FIELD
DIAMOND MOUND FIELD
DUFFIELD GAS STORAGE UNIT
DUFFIELD FIELD
RIVERSIDE MORROW FIELD
DOG CANYON FIELD
9 WELLS
114 MBO
R-26-E
R-27-E
104° 15'

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7323 Exhibit No. 6
Submitted by SRC
Hearing Date 10-16-81

LEGEND

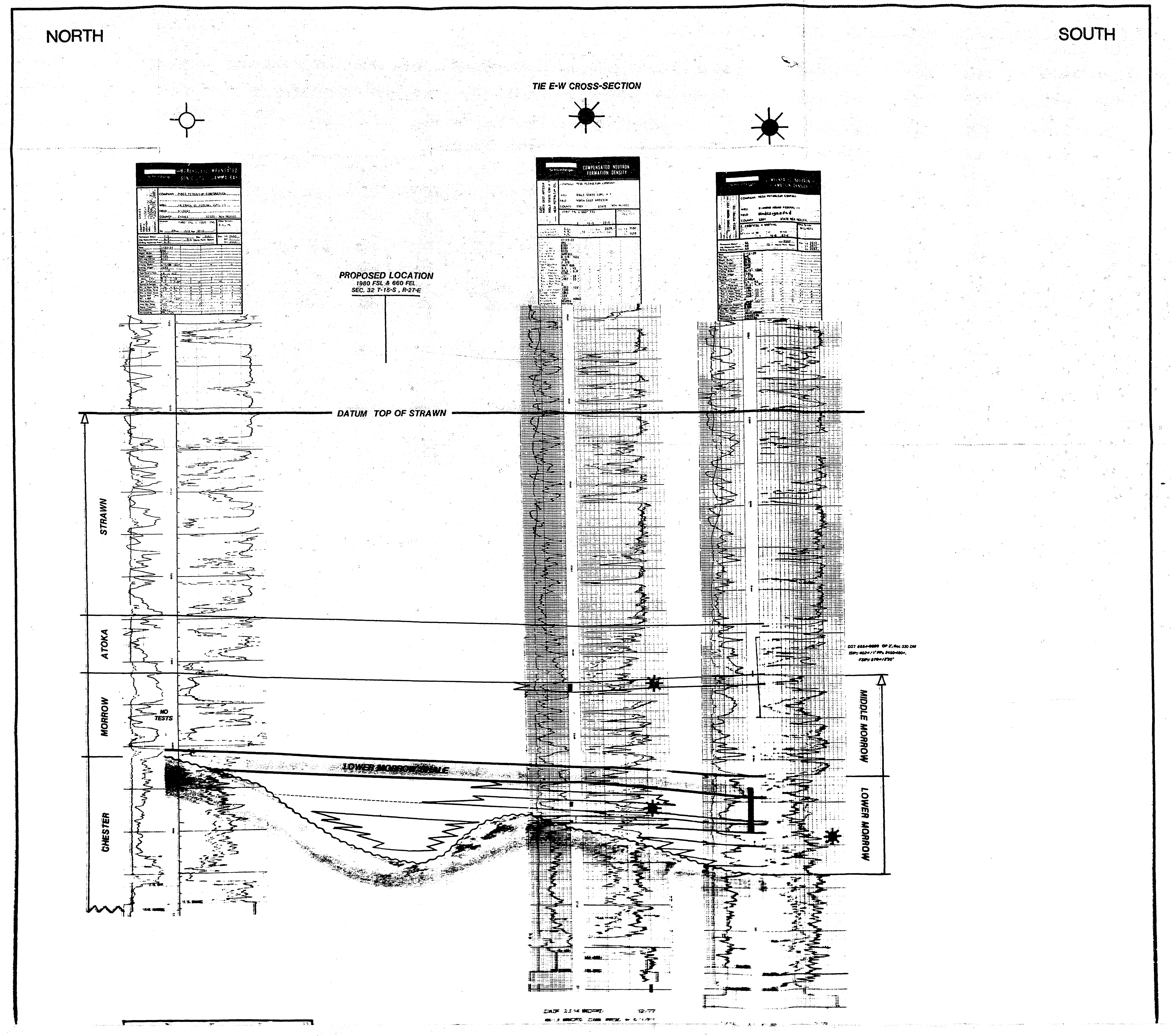
- ● — GRAYBURG
- ○ — SAN ANDRES
- ● — WOLFCAMP
- ● — STRAWN
- ● — ATOKA
- ● — MORROW

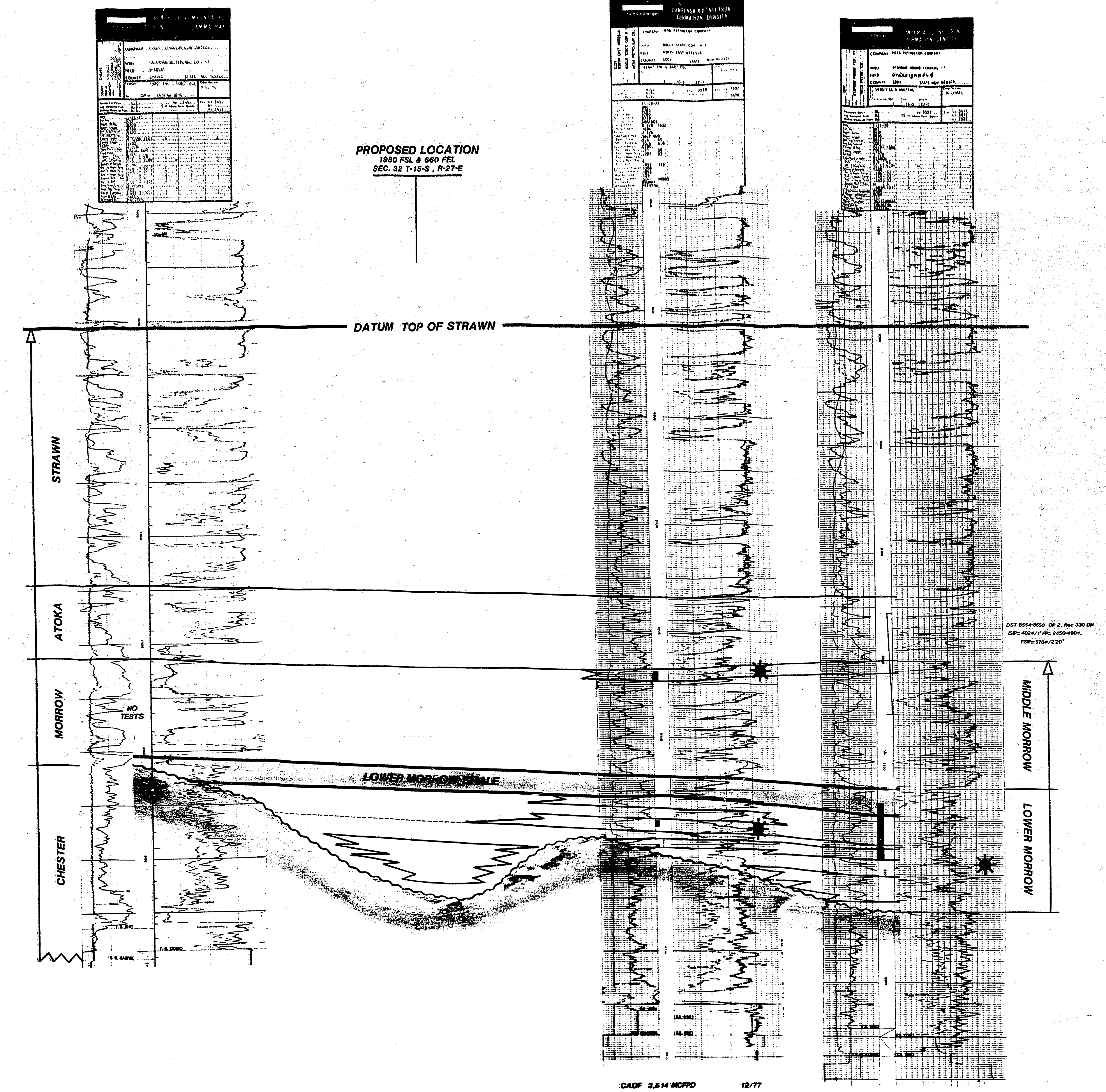
Southland Royalty Company
SOUTHWESTERN DISTRICT

DUFFIELD AREA
EDDY & CHAVES CO., NM.

PRODUCTION MAP

1" = 4000'

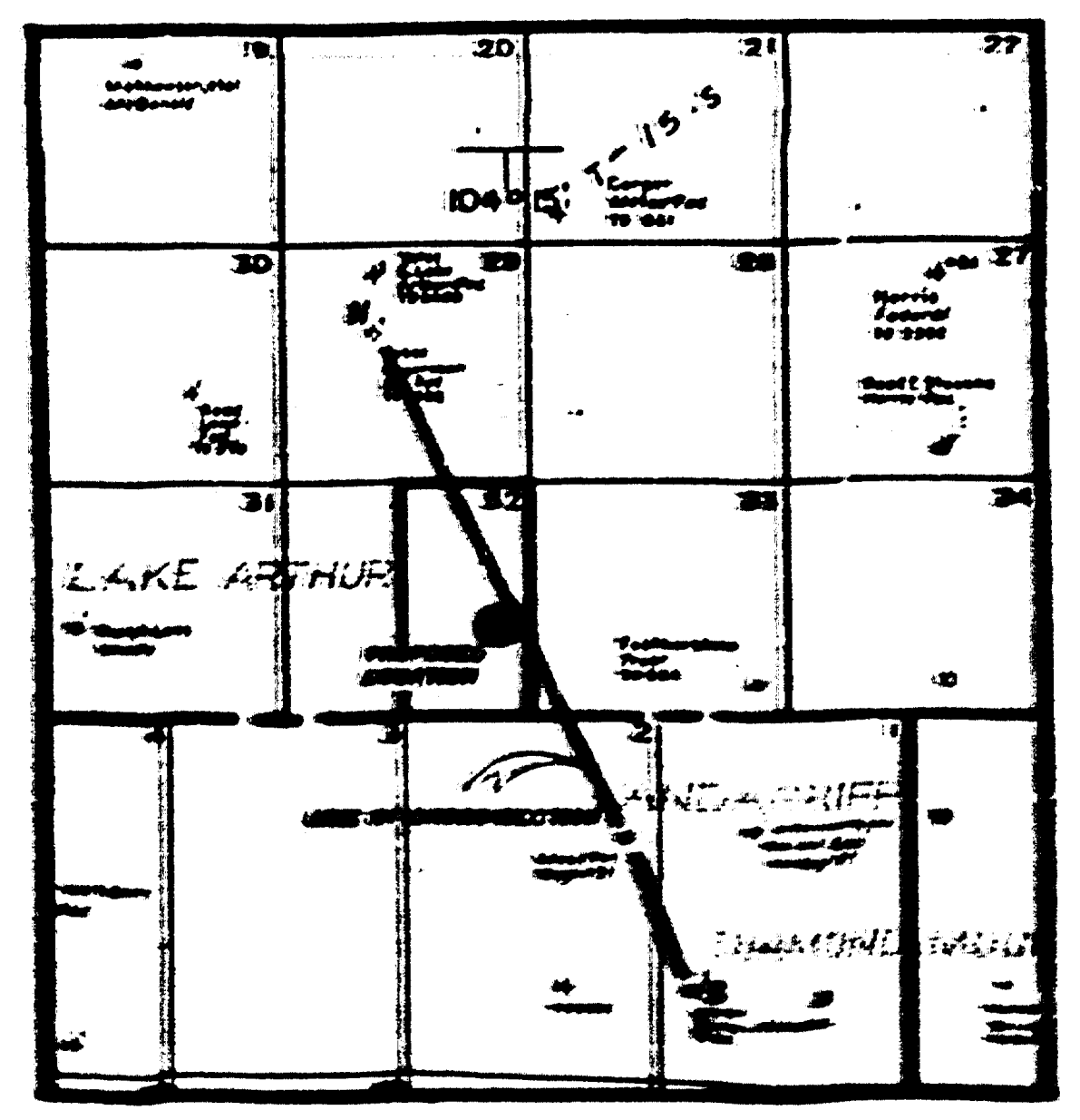
NORTH
SOUTH
TIE E-W CROSS-SECTION
COMPENSATED NEUTRON FORMATION DENSITY
PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S, R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
NO TESTS
LOWER MORROW SHALE
MIDDLE MORROW
LOWER MORROW
DST 8554-8680 OP 2', Rec 330 DM
12/77


PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
NO TESTS
CHESTER
LOWER MORROW SHALE
MIDDLE MORROW
LOWER MORROW

DST 8554-8650 OP 2', Rec 330 DM
ISIP= 402#/1' FP= 2450-490#.
FSIP= 570#/2'20"

CADF 3,514 MCFPD 12/77
691.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CADF 3,856 MCFPD 2/78
1,046.8 MMCF CUM. PROD. to 5/1/81
.786 MMCFGPD AVG. DAILY PROD. 4/81


19
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34
T-15-S
LAKE ARTHUR

SCALE : 1"=4000'

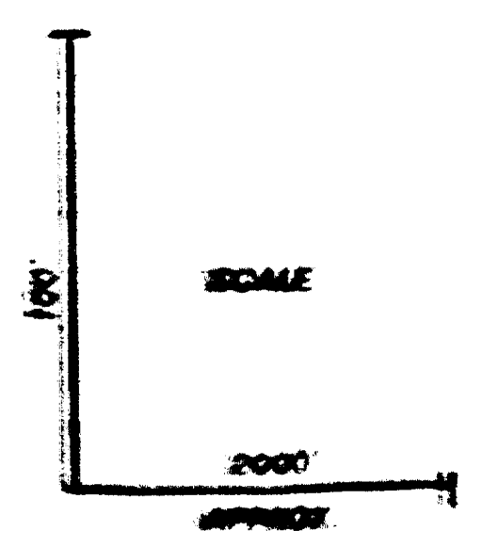

100'
SCALE
2000'
APPROX.

EXHIBIT 2

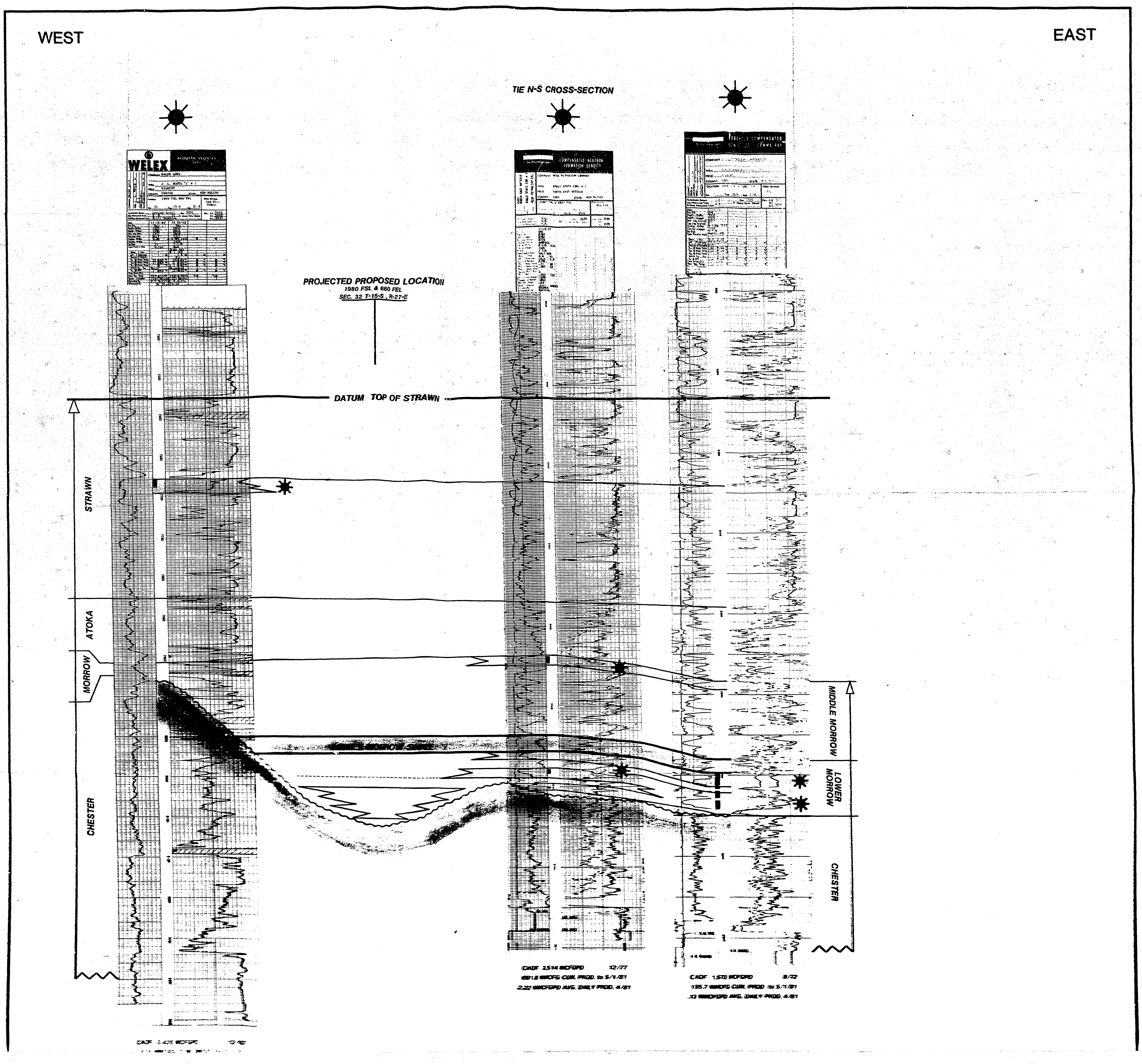
STRATIGRAPHIC CROSS - SECTION

LAKE ARTHUR PROSPECT

CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.

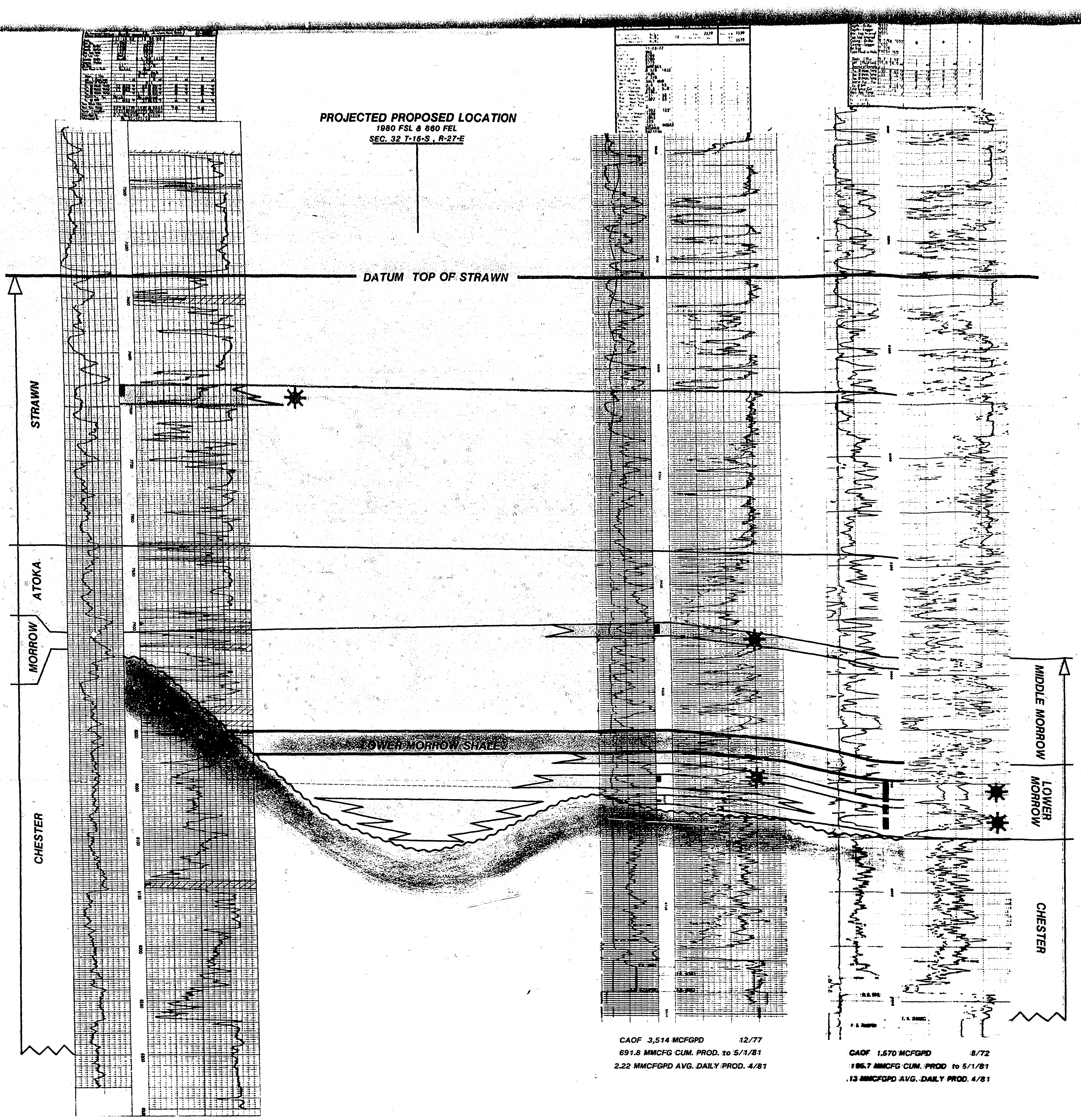
Exhibit 2
Case 7323


WEST
EAST
TIE N-S CROSS-SECTION
WELEX
COMPENSATED NEUTRON FORMATION DENSITY
PROJECTED PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
MORROW SHALE
MIDDLE MORROW
LOWER MORROW
CHESTER

CAOF 3,514 MCFGPD 12/77
891.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 1,570 MCFGPD 8/72
135.7 MMCFG CUM. PROD. to 5/1/81
.13 MMCFGPD AVG. DAILY PROD. 4/81

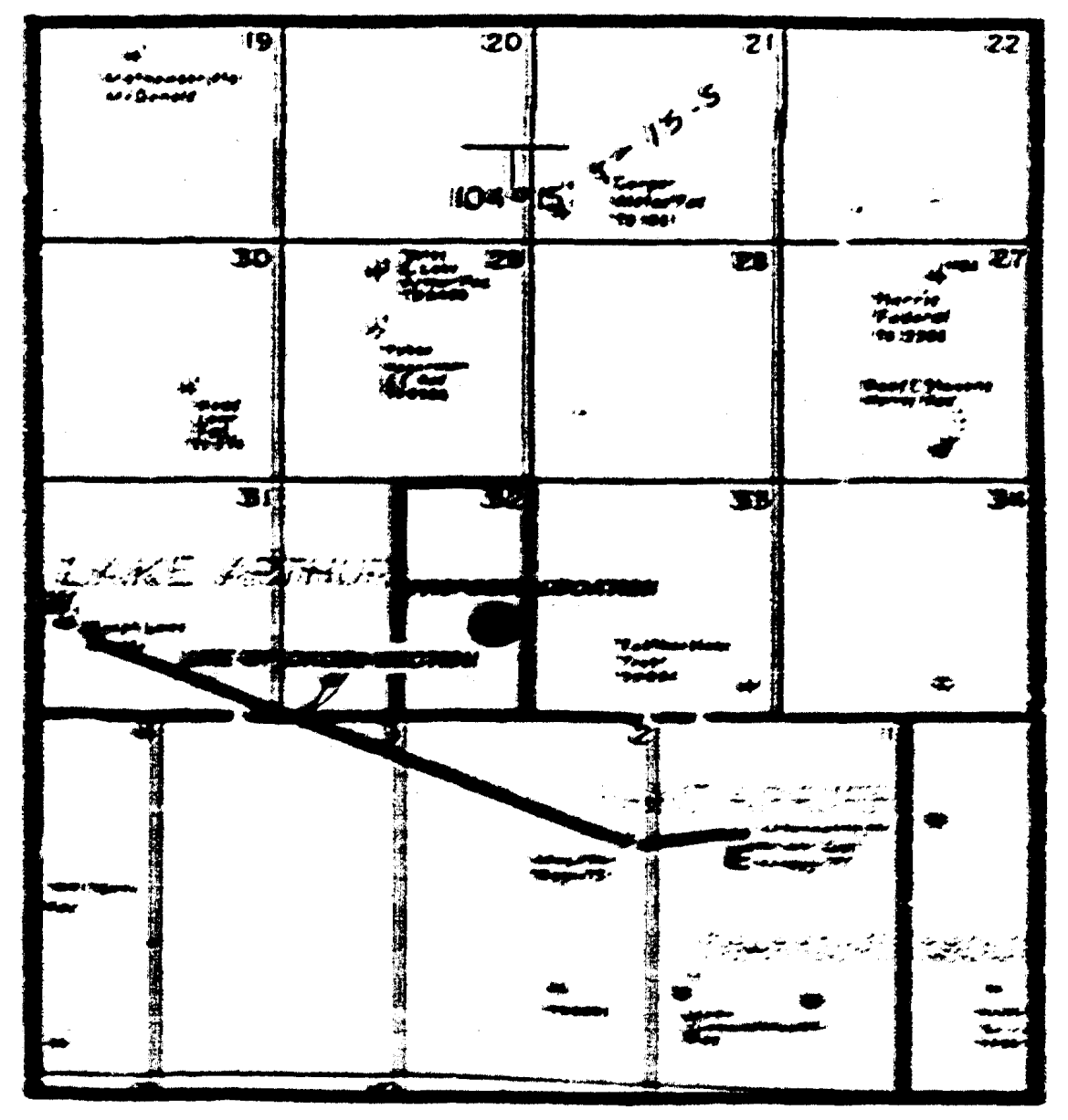
CAOF 2,425 MCFGPD 12/80


PROJECTED PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
LOWER MORROW SHALE
MIDDLE MORROW
LOWER MORROW
CHESTER

CAOF 3,514 MCFGPD 12/77
691.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 1,570 MCFGPD 8/72
186.7 MMCFG CUM. PROD to 5/1/81
.13 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 3,425 MCFGPD 12/62
1,615 MMCFG CUM. PROD. to 5/1/81
.11 MMCFGPD AVG. DAILY PROD. 4/81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32
33
34
T-15-S
LAKE ARTHUR

SCALE : 1" = 4000'

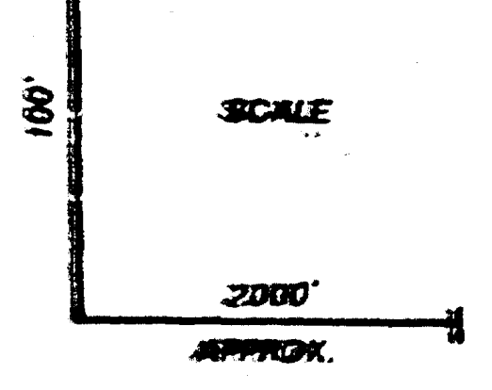

100'
SCALE
2000'
APPROX.

EXHIBIT 3
STRATIGRAPHIC CROSS - SECTION

LAKE ARTHUR PROSPECT
CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.

Exhibit 8
Case 7723

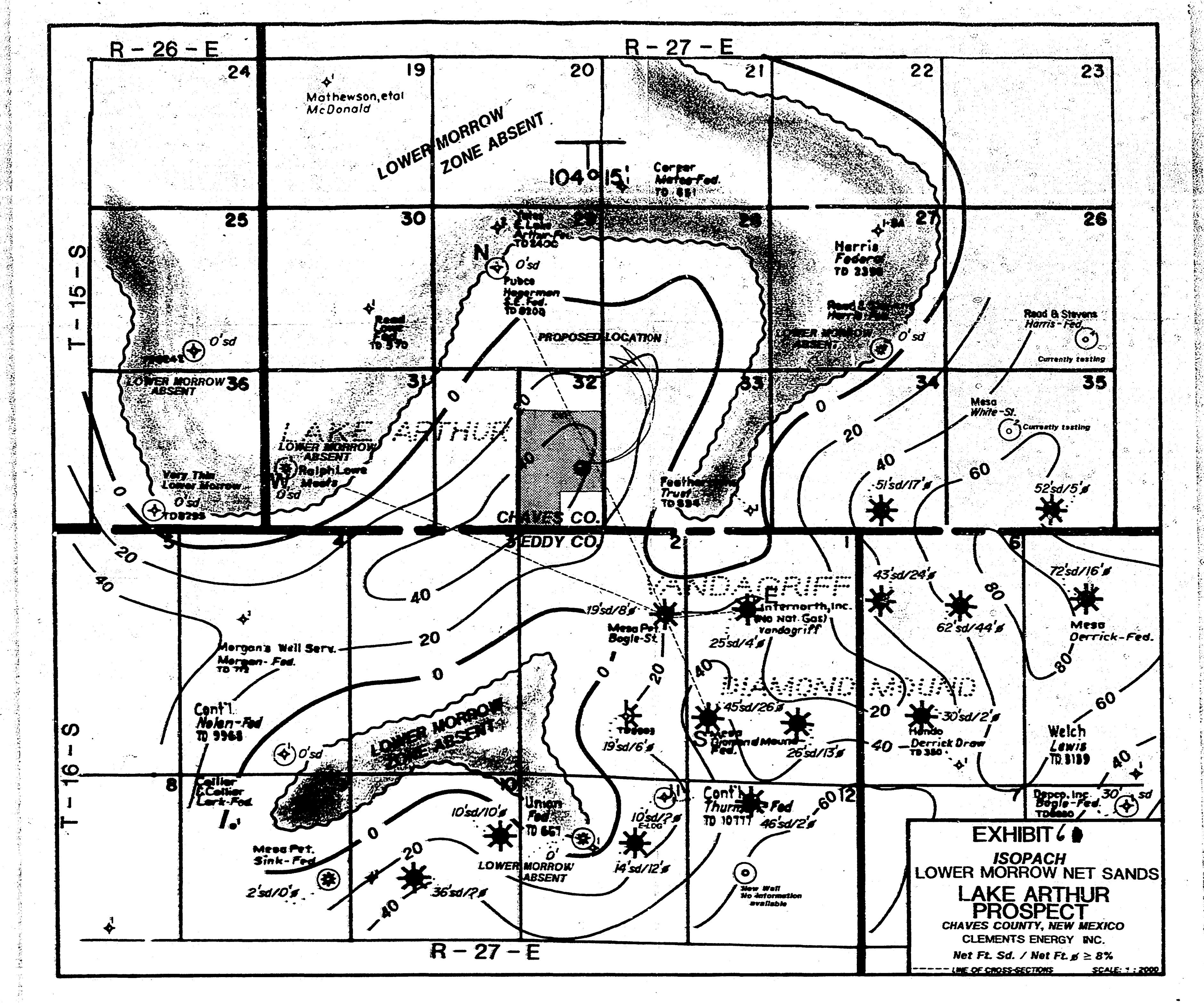
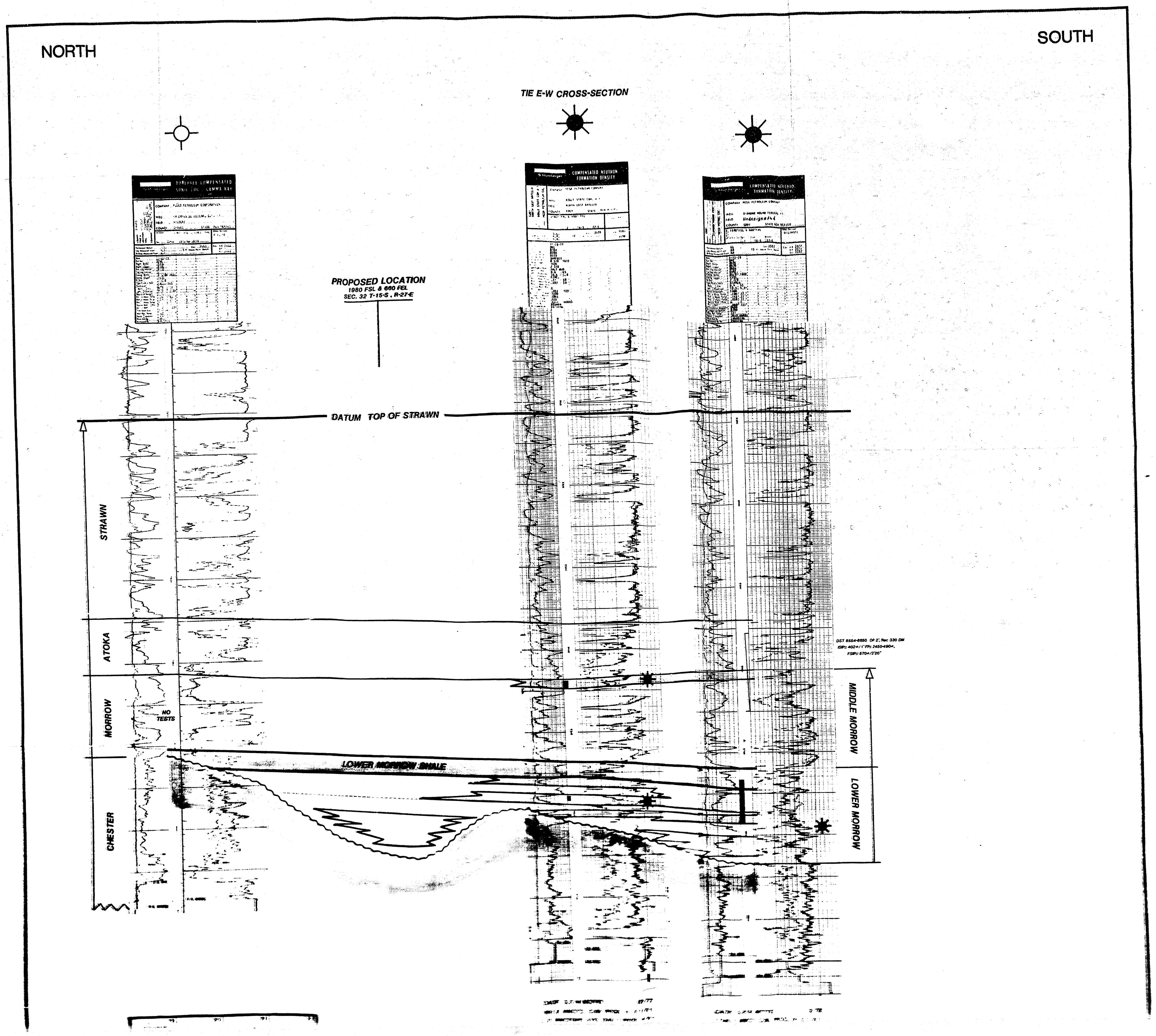
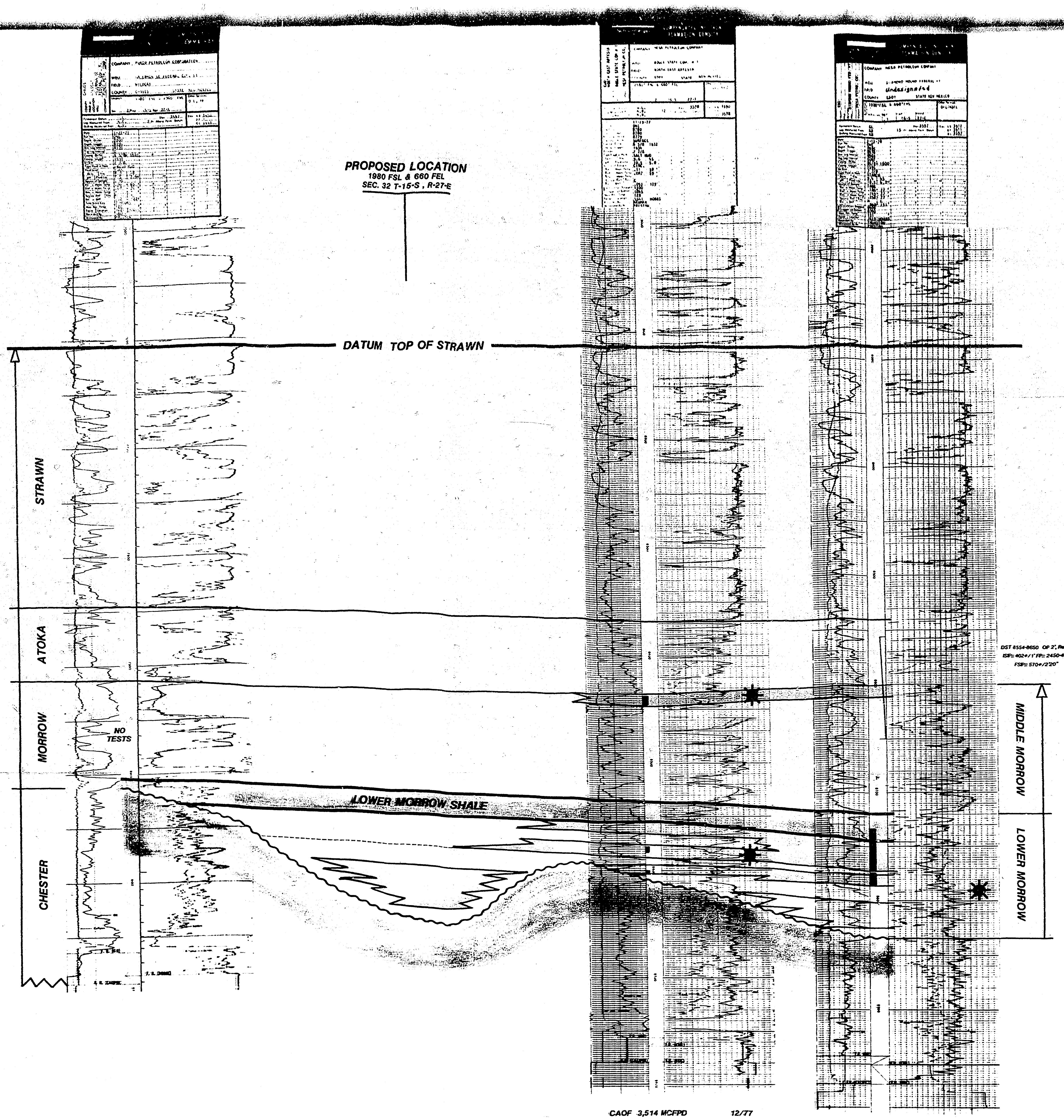

R-26-E
R-27-E
T-15-S
T-16-S
LOWER MORROW ZONE ABSENT
104° 15'
Mathewson, etal McDonald
Carper Meter-Fed.
Harris Federal
Read & Stevens Harris-Fed.
Currently testing
PROPOSED LOCATION
LAKE ARTHUR
CHAVES CO.
EDDY CO.
VANDAGRIFF
DIAMOND MOUND
Mesa White-St.
Mesa Derrick-Fed.
Welch Lewis TD 3189
Hondo Derrick Draw
Depco, Inc. Bogle-Fed.
Internorth, Inc.
Mesa Pet. Bogle-St.
Mesa Pet. Sink-Fed.
Union Fed.
Cont'l Nolen-Fed TD 9968
Cont'l Thurman Fed TD 10777
Morgan's Well Serv. Morgan-Fed.
Collier Lark-Fed.
Feather Trust
Ralph Lowe
Very Thin Lower Morrow
LOWER MORROW ABSENT
New Well No Information Available
0
20
40
60
80
0'sd
51'sd/17'ø
52'sd/5'ø
43'sd/24'ø
62'sd/44'ø
72'sd/16'ø
19'sd/8'ø
25'sd/4'ø
45'sd/26'ø
26'sd/13'ø
19'sd/6'ø
30'sd/2'ø
10'sd/10'ø
10'sd/7'ø
14'sd/12'ø
46'sd/2'ø
36'sd/7'ø
2'sd/10'ø
30' sd

EXHIBIT 6

ISOPACH
LOWER MORROW NET SANDS
LAKE ARTHUR
PROSPECT
CHAVES COUNTY, NEW MEXICO
CLEMENTS ENERGY INC.
Net Ft. Sd. / Net Ft. ø ≥ 8%
------ LINE OF CROSS-SECTIONS SCALE: 1 : 2000



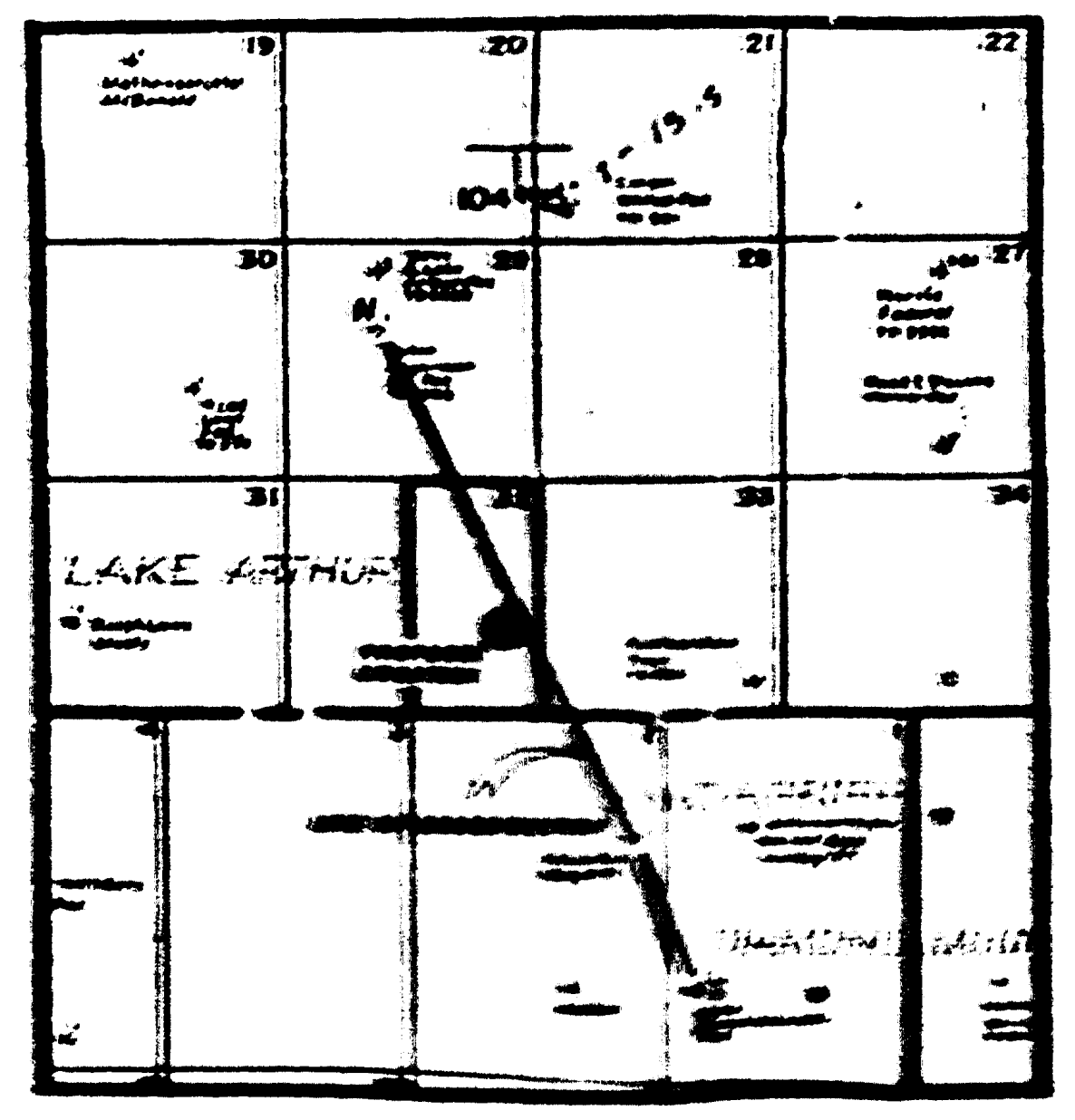
NORTH
SOUTH
TIE E-W CROSS-SECTION
PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
NO TESTS
LOWER MORROW SHALE
DST 8554-8650 OP 2', Rec 330 DM
ISIP= 402#/1' FP= 2450-490#.
FSIP= 670#/2'20"
MIDDLE MORROW
LOWER MORROW


PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
NO TESTS
CHESTER
LOWER MORROW SHALE
MIDDLE MORROW
LOWER MORROW

DST 8554-8650 OP 2', Rec 330 DM
ISP= 402#/1' FP= 2450-490#,
FSP= 570#/2'20"

CAOF 3,514 MCFPD 12/77
691.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 3,856 MCFPD 3/78
1,046.8 MMCF CUM. PROD. to 5/1/81
.786 MMCFGPD AVG. DAILY PROD. 4/81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T-15-S
LAKE ARTHUR

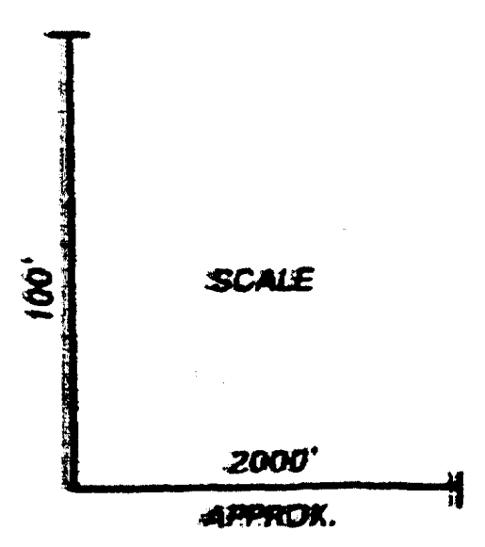

100'
SCALE
2000'
APPROX.

EXHIBIT 27

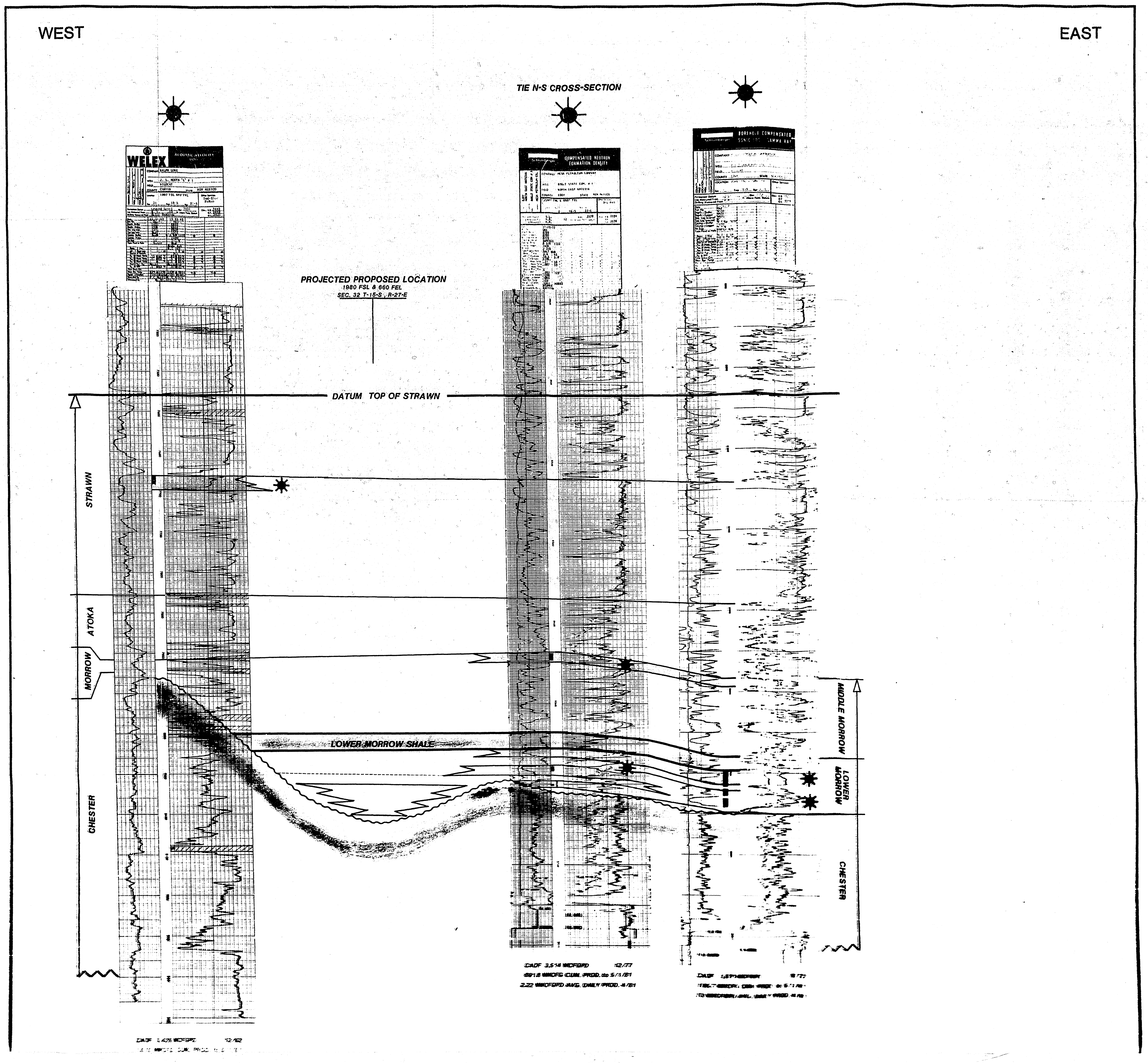
STRATIGRAPHIC CROSS - SECTION

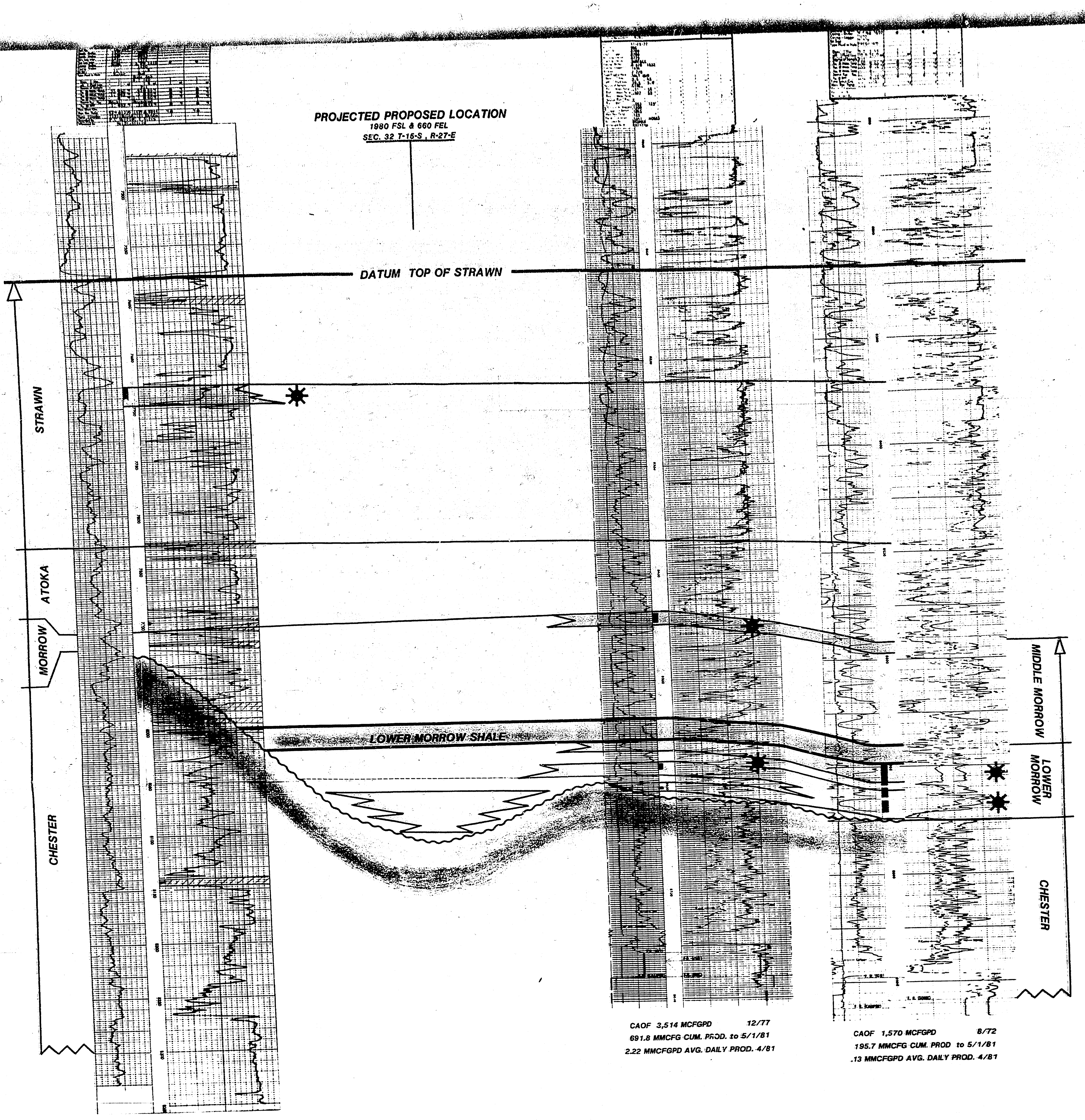
LAKE ARTHUR PROSPECT

CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.

Clements EXHIBIT NO. 7
CASE NO. 7223

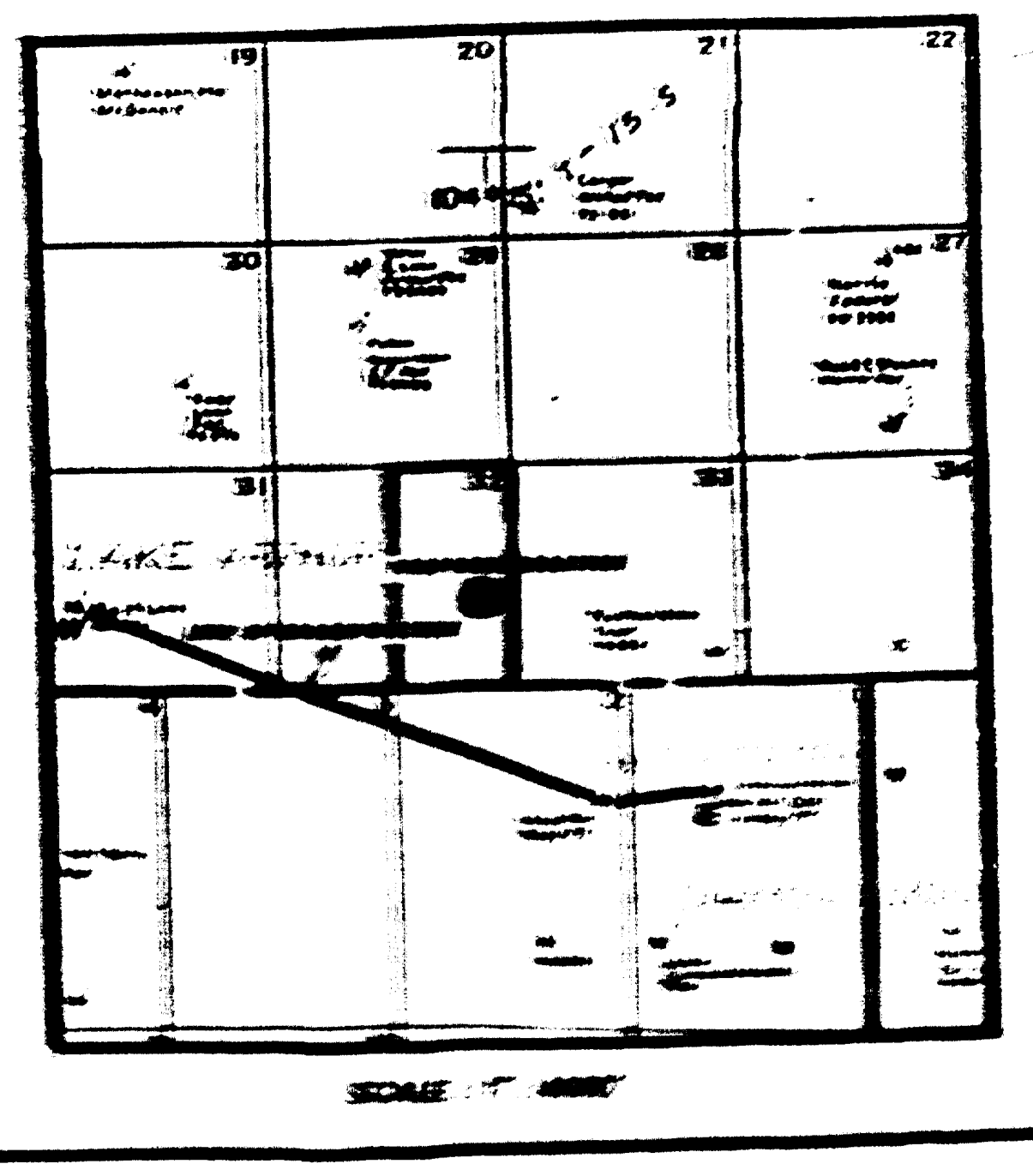

WEST
EAST
TIE N-S CROSS-SECTION
WELEX
COMPENSATED NEUTRON FORMATION DENSITY
BOREHOLE COMPENSATED SONIC LOG GAMMA RAY
PROJECTED PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-15-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
LOWER MORROW SHALE
MIDDLE MORROW
LOWER MORROW
CHESTER
CAOF 3,514 MCFGPD 12/77
891.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81
CAOF [illegible] 8/77
CAOF 1,475 MCFGPD 12/82


PROJECTED PROPOSED LOCATION
1980 FSL & 660 FEL
SEC. 32 T-16-S , R-27-E
DATUM TOP OF STRAWN
STRAWN
ATOKA
MORROW
CHESTER
LOWER MORROW SHALE
MIDDLE MORROW
LOWER MORROW
CHESTER

CAOF 3,514 MCFGPD 12/77
691.8 MMCFG CUM. PROD. to 5/1/81
2.22 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 1,570 MCFGPD 8/72
195.7 MMCFG CUM. PROD to 5/1/81
.13 MMCFGPD AVG. DAILY PROD. 4/81

CAOF 3,425 MCFGPD 12/62
1,615 MMCFG CUM. PROD. to 5/1/81
.11 MMCFGPD AVG. DAILY PROD. 4/81


19
20
21
22
T-15-S
LAKE ARTHUR

100'
SCALE
2000'
APPROX.

EXHIBIT 8
STRATIGRAPHIC CROSS - SECTION

LAKE ARTHUR PROSPECT
CHAVES COUNTY, NEW MEXICO

CLEMENTS ENERGY INC.