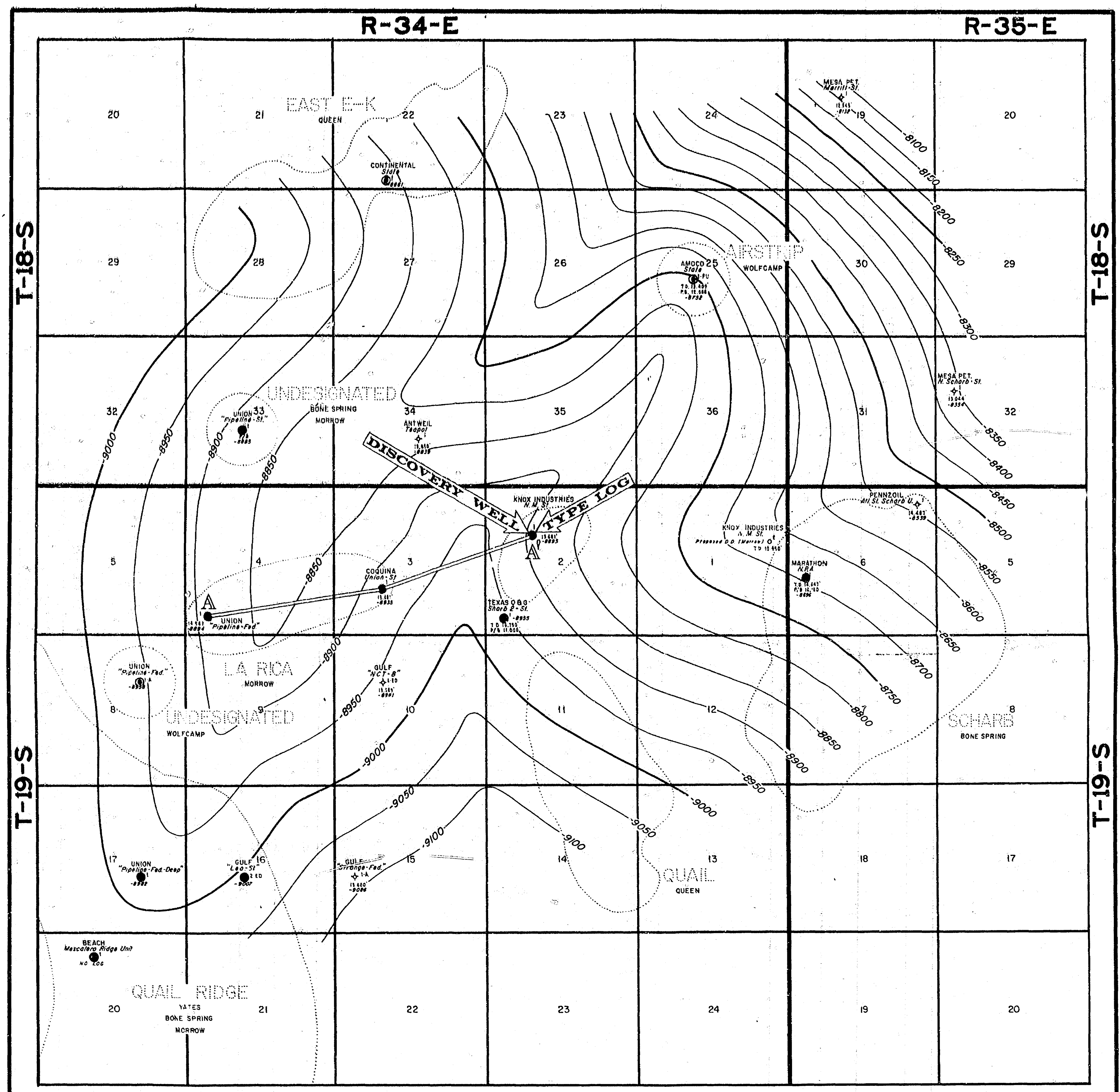
Case No
6947

Large Exhibits

W.K.M.C.F. MICROGRAPHICS

BEST AVAILABLE COPY


R-34-E
R-35-E
T-18-S
T-19-S
EAST E-K
QUEEN
CONTINENTAL
State
AIRSTRIP
WOLFCAMP
AMOCO
State
MESA PET.
Merrill-St.
MESA PET.
N. Schorb-St.
UNDESIGNATED
BONE SPRING
MORROW
UNION
"Pipeline-St."
ANTWEIL
Teapot
DISCOVERY WELL
TYPE LOG
KNOX INDUSTRIES
N. M. St.
KNOX INDUSTRIES
N. M. St.
Proposed D.D. (Morrow)
PENNZOIL
All St. Schorb U.
MARATHON
N.R.A.
COQUINA
Union-St
UNION
"Pipeline-Fed"
TEXAS O & G
Sharb 2-St.
UNION
"Pipeline-Fed."
LA RICA
MORROW
GULF
"NCT-B"
UNDESIGNATED
WOLFCAMP
SCHARB
BONE SPRING
UNION
"Pipeline-Fed-Deep"
GULF
"Leo-St"
GULF
"Strange-Fed."
QUAIL
QUEEN
BEACH
Mescalero Ridge Unit
NO LOG
QUAIL RIDGE
YATES
BONE SPRING
MORROW
A
A'
-8100
-8150
-8200
-8250
-8300
-8350
-8400
-8450
-8500
-8550
-8600
-8650
-8700
-8750
-8800
-8850
-8900
-8950
-9000
-9050
-9100

N

LEGEND

● --BONE SPRING PRODUCTION

● ----WOLFCAMP PRODUCTION

● -------MORROW PRODUCTION

KNOX INDUSTRIES, INC.

TOP OF MORROW STRUCTURE

DISCOVERY WELL - *No. 1 New Mexico - State*

SE/NW 2-19-34

LEA COUNTY, NEW MEXICO

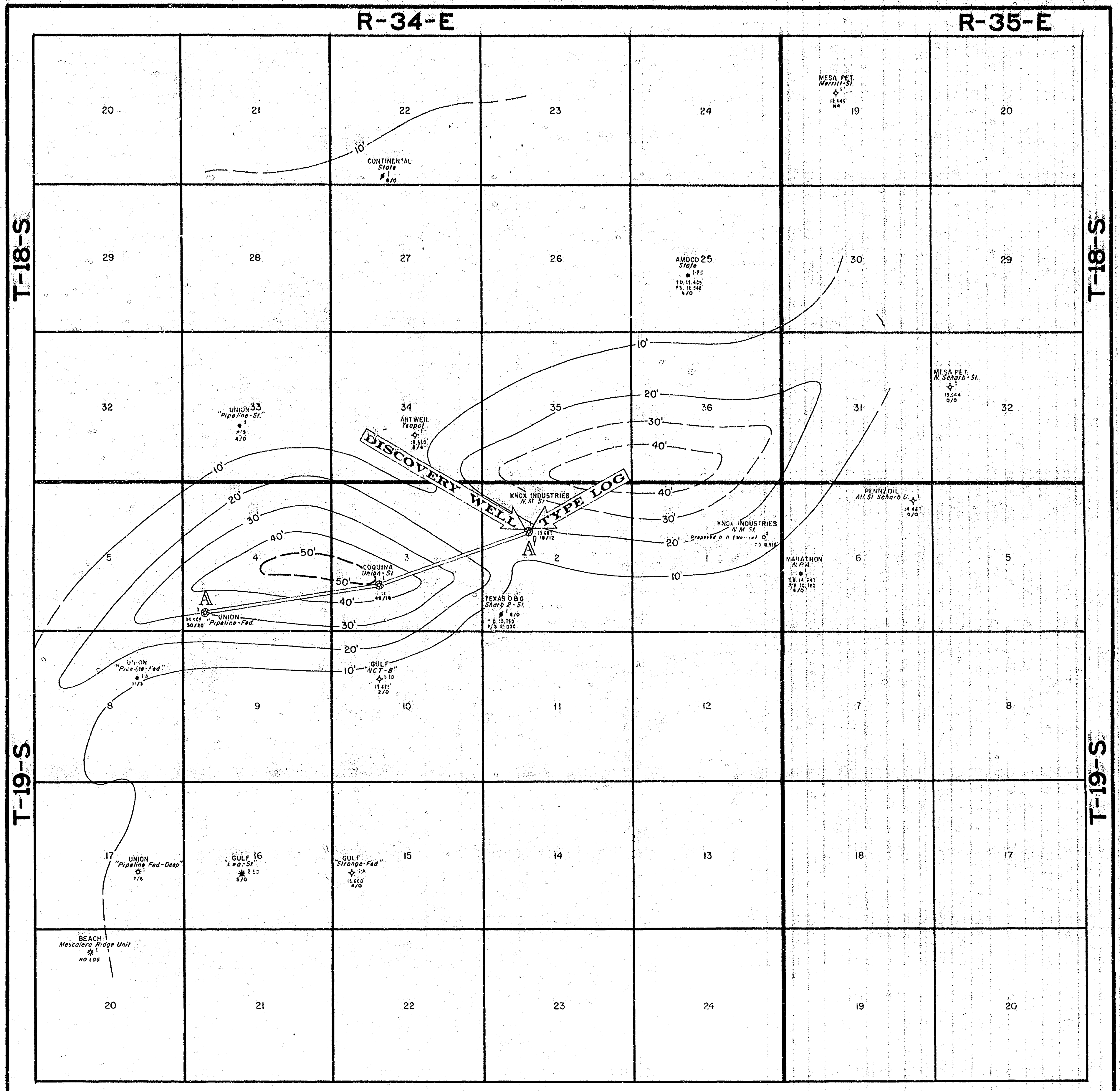
C. I. ---------50'

SCALE 1" = 2000'

BY RR

DATE 18 June 1981

Exhibit 1
Case 6347


R-34-E
R-35-E
T-18-S
T-19-S
20
21
22
23
24
19
20
29
28
27
26
25
30
29
32
33
34
35
36
31
32
5
4
3
2
1
6
5
8
9
10
11
12
7
8
17
16
15
14
13
18
17
20
21
22
23
24
19
20
10'
20'
30'
40'
50'
DISCOVERY WELL
TYPE LOG
A
A'
CONTINENTAL
State
MESA PET.
Merritt-St.
AMOCO
State
1-FD
UNION
"Pipeline-St."
ANTWEIL
Teapot
MESA PET.
N. Scharb-St.
KNOX INDUSTRIES
N.M. St.
PENNZOIL
Atl. St. Scharb U.
KNOX INDUSTRIES
N.M. St.
COQUINA
Union-St.
UNION
"Pipeline-Fed."
TEXAS O & G
Sharb 2-St.
MARATHON
N.P.A.
UNION
"Pipeline-Fed."
GULF
"NCT-B"
UNION
"Pipeline Fed.-Deep"
GULF
"Lea-St."
GULF
"Stronge-Fed."
BEACH
Mescalero Ridge Unit
NO LOG

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Knox EXHIBIT NO. 2
CASE NO. 6947
Submitted by
Hearing Date 24 Jun 80

KNOX INDUSTRIES, INC.

'PAY ZONE' ISOPACH

DISCOVERY WELL - *No. 1 New Mexico - State*

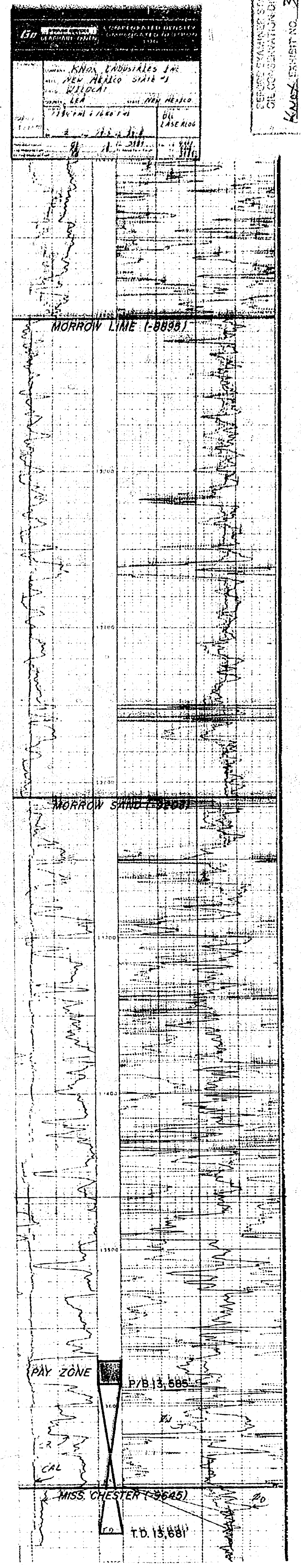
SE/NW 2-19-34

LEA COUNTY, NEW MEXICO

C.I. ---------- 10'
BY RFR
SCALE 1"=2000'
DATE 18 June 1980

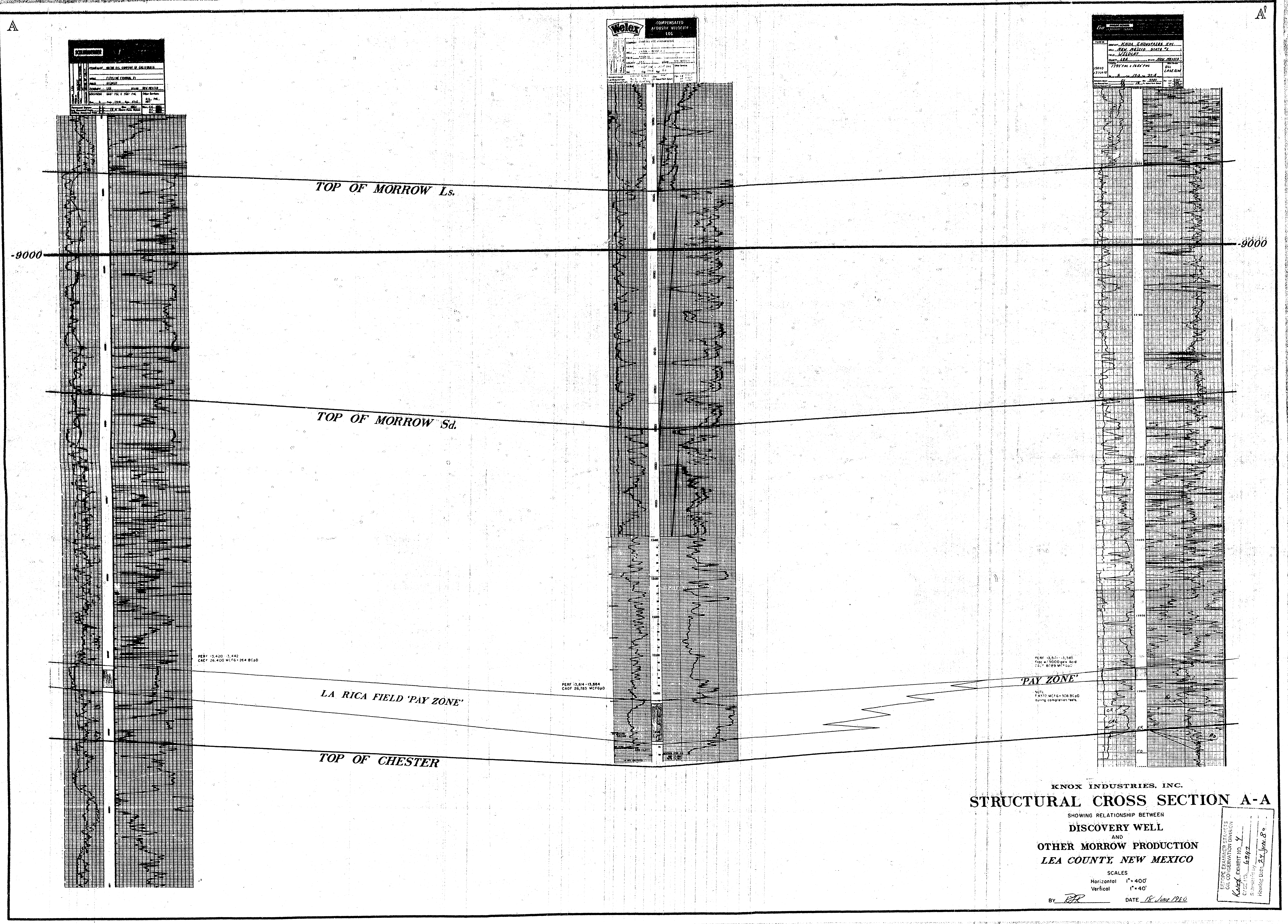
TYPE LOG

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Knox EXHIBIT NO. 3
CASE NO. 6947
Submitted by
Hearing Date 24 Jan 80



PERFS: 13,571-13,585
Frac W/ 3000 gals Acid
CAOF 8089 MCFGpD

[illegible] MICROGRAPHICS
BEST AVAILABLE COPY


A
A'
TOP OF MORROW Ls.
-9000
-9000
TOP OF MORROW Sd.
COMPENSATED ACOUSTIC VELOCITY LOG
Welex
PERF 13,420 - 13,442
CAOF 26,400 MCFG + 264 BCpD
LA RICA FIELD 'PAY ZONE'
PERF 13,614 - 13,664
CAOF 26,783 MCFGpD
PERF 13,571 - 13,585
Frac w/ 3000 gals Acid
CAOF 8089 MCFGpD
'PAY ZONE'
NOTE
F 4370 MCFG + 308 BCpD
during completion tests.
GR
CAL
TD
TOP OF CHESTER

KNOX INDUSTRIES, INC.

STRUCTURAL CROSS SECTION A-A

SHOWING RELATIONSHIP BETWEEN

DISCOVERY WELL

AND

OTHER MORROW PRODUCTION

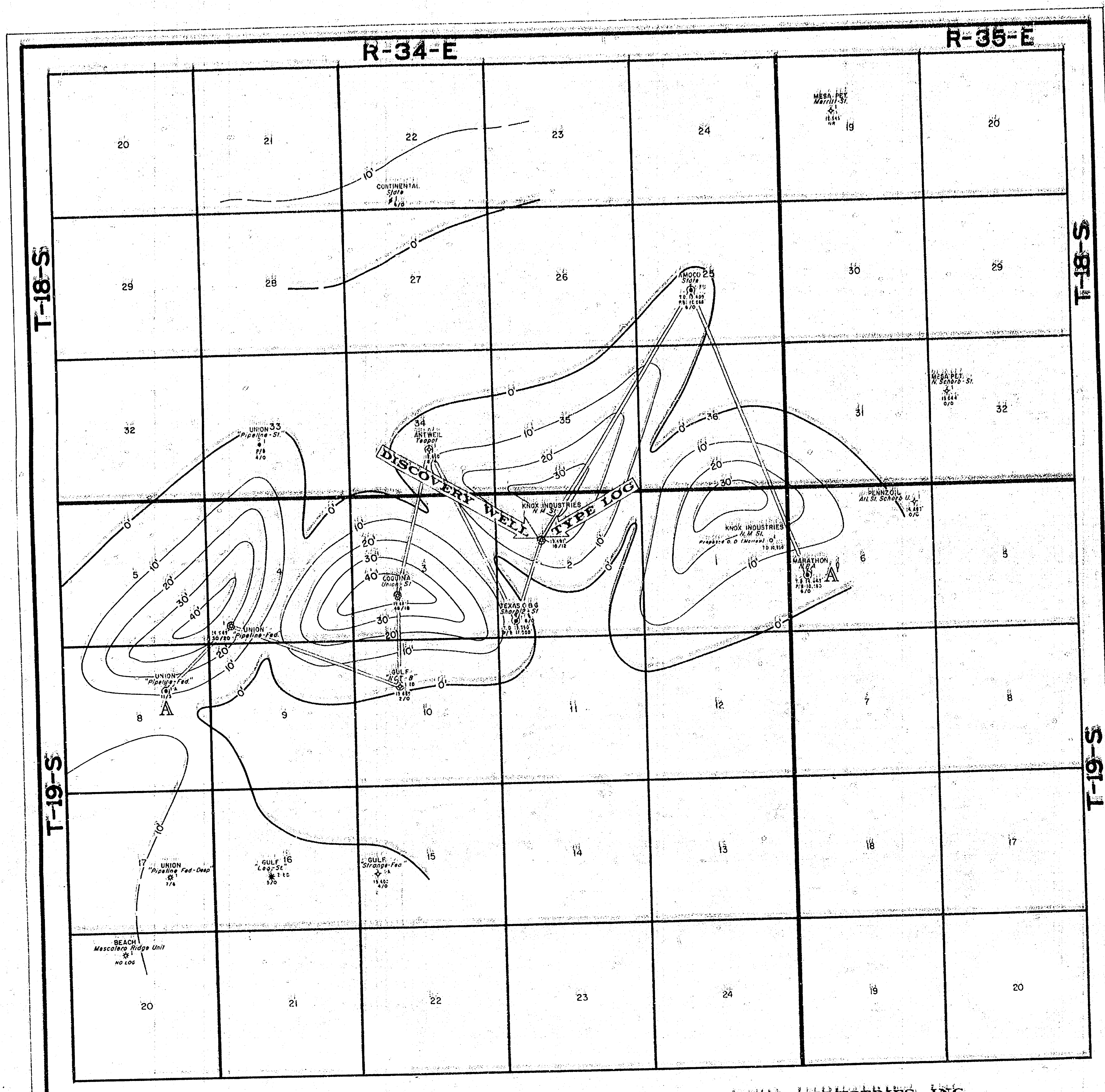
LEA COUNTY, NEW MEXICO

SCALES
Horizontal 1" = 400'
Vertical 1" = 40'

BY RJR DATE 18 June 1980

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Knox EXHIBIT NO. 4
CASE NO. 6942
Submitted by
Hearing Date 24 Jun 80

W.K.H.C.F. MICROGRAPHICS
BEST AVAILABLE COPY


R-34-E
R-35-E
T-18-S
T-19-S
CONTINENTAL
State
MESA PET.
Merrill-St.
AMOCO
State
UNION
"Pipeline-St."
ANTWEIL
Teapot
DISCOVERY WELL
TYPE LOG
KNOX INDUSTRIES
N.M. St.
MESA PET.
N. Schorb-St.
PENNZOIL
Atl. St. Schorb U.
KNOX INDUSTRIES
N.M. St.
Proposed O. D. (Morrow)
MARATHON
NPA
COQUINA
Union-St.
UNION
"Pipeline-Fed."
TEXAS O.& G.
Sharp 2-St.
UNION
"Pipeline-Fed."
GULF
"NCT-B"
A
A'
UNION
"Pipeline Fed.-Deep"
GULF
"Lea-St."
GULF
"Strange-Fed"
BEACH
Mescalero Ridge Unit
NO LOG
0'
10'
20'
30'
40'

KNOX INDUSTRIES, INC.

'PAY ZONE' ISOPACH

DISCOVERY WELL - *No. 1 New Mexico - State*

SE/NW 2-19-34

LEA COUNTY, NEW MEXICO

C.I. ---------- 10'

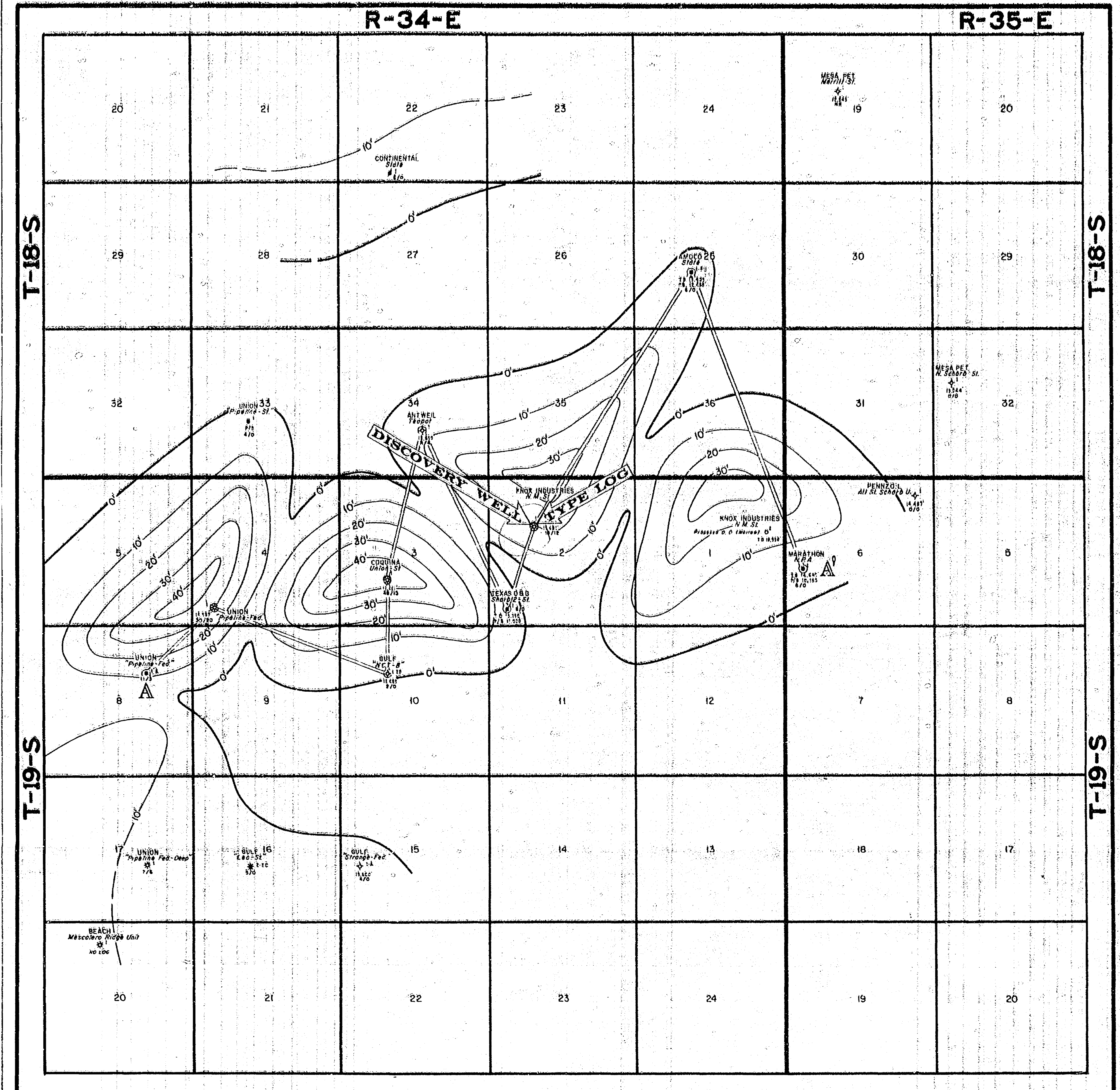
SCALE 1"=2000'

BY ________

DATE ________

[illegible] MICROGRAPHICS

BEST AVAILABLE COPY


R-34-E
R-35-E
T-18-S
T-19-S
20
21
22
23
24
19
20
MESA PET.
CONTINENTAL
State
29
28
27
26
25
30
29
AMOCO
State
32
33
34
35
36
31
32
MESA PET.
UNION
"Pipeline-St."
ANTWEIL
Teapot
DISCOVERY WELL TYPE LOG
KNOX INDUSTRIES
N.M. St.
KNOX INDUSTRIES
N.M. St.
PENNZOIL
All St. Schore U.
5
4
3
2
1
6
COQUINA
Union St.
UNION
"Pipeline-Fed."
TEXAS O.& G.
Sharbl 2-St.
MARATHON
N.P.A.
A
A'
UNION
"Pipeline-Fed."
GULF
"NCT-B"
8
9
10
11
12
7
8
17
16
15
14
13
18
17
UNION
"Pipeline Fed.-Deep"
GULF
"Lea-St."
GULF
"Strange-Fed."
BEACH
Mescalero Ridge Unit
NO LOG
20
21
22
23
24
19
20
0'
10'
20'
30'
40'
N

KNOX INDUSTRIES, INC.

'PAY ZONE' ISOPACH

DISCOVERY WELL - *No. 1 New Mexico - State*

SE/NW 2-19-34

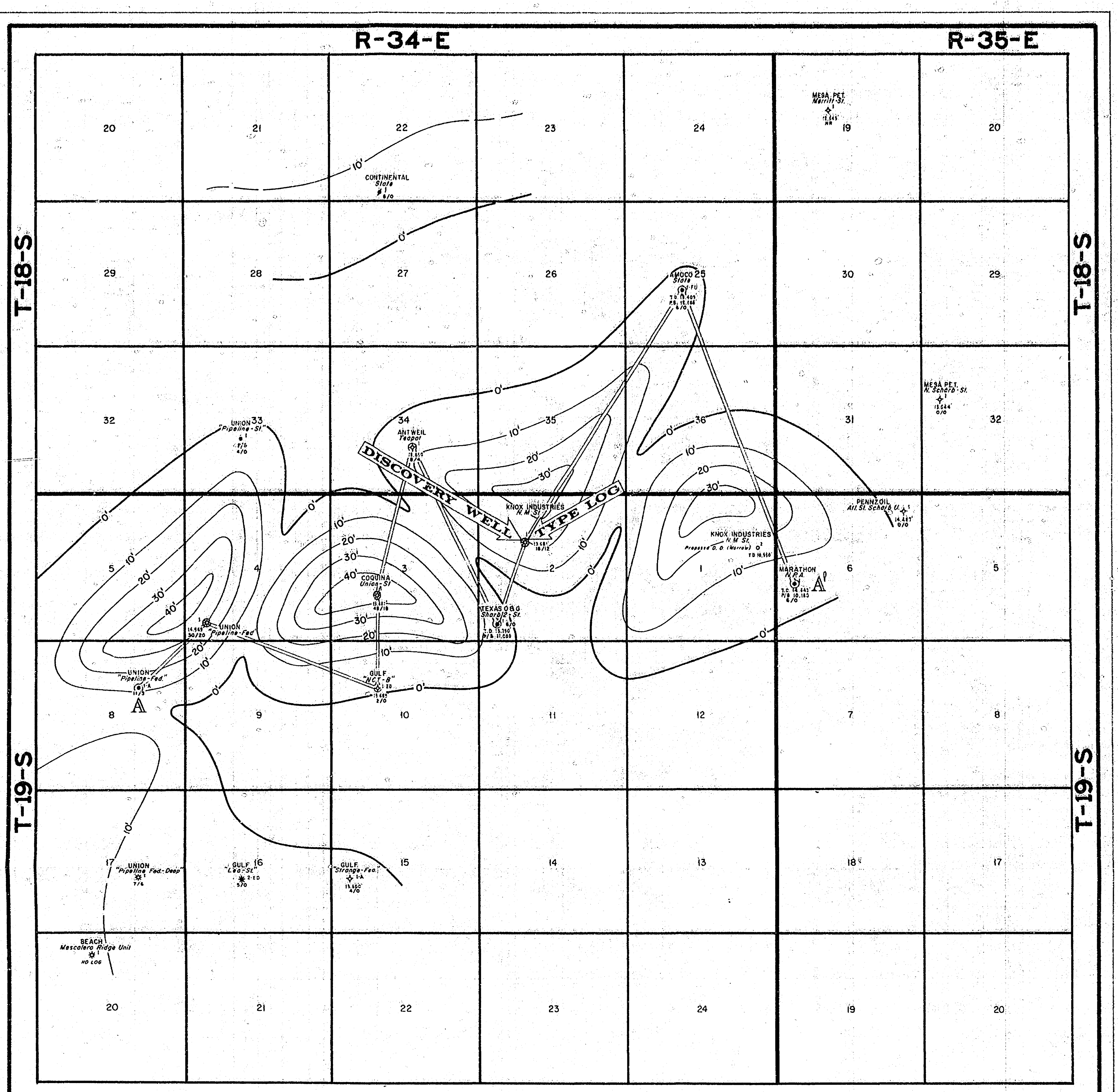
LEA COUNTY, NEW MEXICO

C.I. ---------- 10'

BY ________

SCALE 1"=2000'

DATE ________


R-34-E
R-35-E
T-18-S
T-19-S
20
21
22
23
24
19
20
10'
CONTINENTAL
State
1
6/0
MESA PET.
Merrill-St.
1
12,645'
NR
0'
29
28
27
26
AMOCO 25
State
1-FU
T.D. 13,403'
P.B. 12,656'
6/0
30
29
32
UNION 33
"Pipeline-St."
1
7/6
4/0
34
ANTWEIL
Teapot
1
13,650'
18/4
0'
10'
35
20'
30'
0'
36
10'
20
30'
31
MESA PET.
N. Scharb-St.
1
13,644'
0/0
32
DISCOVERY WELL
TYPE LOG
KNOX INDUSTRIES
N.M. St.
1
13,581'
18/12
5
10'
20'
30'
40'
4
UNION
"Pipeline-Fed"
1
14,969
30/20
10'
20'
30'
40'
COQUINA
Union-St
1A
13,681'
48/16
3
2
10'
0'
KNOX INDUSTRIES
N.M. St.
Proposed O.D. (Morrow) 2
TD 10,550'
1
10'
MARATHON
N.P.A.
T.D. 14,543'
P/B 10,183
6/0
A'
PENNZOIL
All. St. Scharb U. 1
14,487'
0/0
6
5
TEXAS O&G
Sharb/2-St.
1
6/0
T.D. 13,350'
P/B 11,000
UNION
"Pipeline-Fed."
1-A
11/3
A
20'
10'
0'
GULF
"NCT-B"
1-ED
13,689
2/0
0'
8
9
10
11
12
7
8
10'
17
UNION
"Pipeline Fed.-Deep"
1
7/6
GULF 16
"Lea-St"
2-ED
5/0
GULF
"Strange-Fed."
1-A
13,600'
4/0
15
14
13
18
17
BEACH
Mescalero Ridge Unit
1
NO LOG
20
21
22
23
24
19
20
N

KNOX INDUSTRIES, INC.

'PAY ZONE' ISOPACH

DISCOVERY WELL - *No. 1 New Mexico - State*

SE/NW 2-19-34

LEA COUNTY, NEW MEXICO

C.I. ---------- 10' BY ________

SCALE 1"=2000' DATE ________

N.M.M.C.F. MICROGRAPHICS

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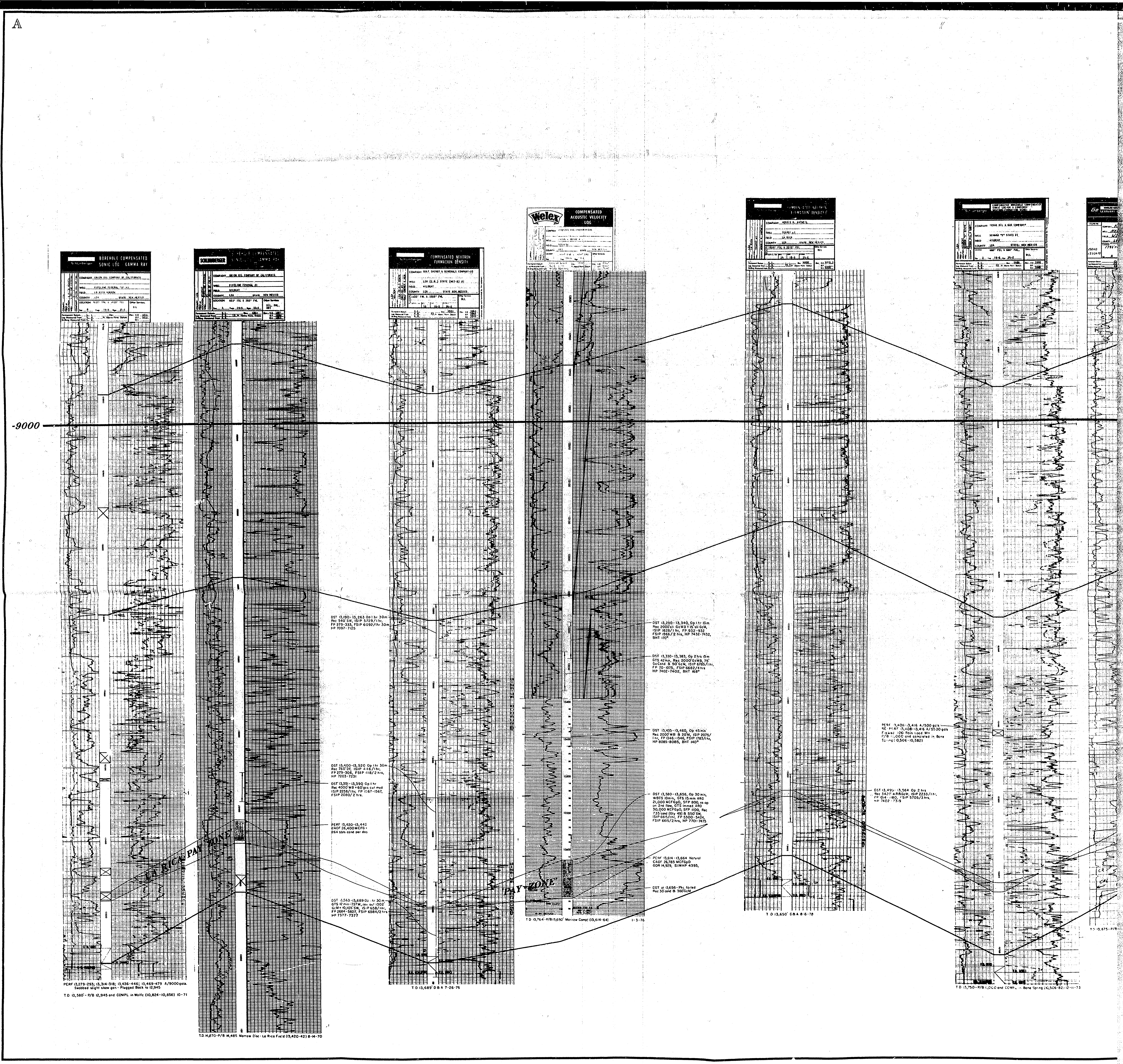

A
-9000
BOREHOLE COMPENSATED SONIC LOG - GAMMA RAY
SCHLUMBERGER
COMPENSATED NEUTRON FORMATION DENSITY
Welex
COMPENSATED ACOUSTIC VELOCITY LOG
COMPENSATED BOREHOLE COMPENSATED SONIC LOG GAMMA RAY
LA RICA PAY ZONE
PAY ZONE

PERF 13,279-293; 13,314-318; 13,436-446; 13,469-479 A/9000 gals.
Swabbed slight show gas - Plugged Back to 12,945

T.D. 13,580' - P/B 12,945 and COMPL in Wolfc (10,824-10,856) 10-71

T.D. 14,870-P/B 14,485 Morrow Disc - La Rica Field (13,420-42) 8-14-70

DST 13,190-13,263 Op 1 hr 30m
Rec 540 SW, ISIP 5729/1 hr,
FP 279-333, FSIP 6092/1hr 30m
HP 7097-7125

DST 13,400-13,520 Op 1 hr 30m
Rec 760 DF, ISIP 446/1hr,
FP 279-306, FSIP 418/2 hrs,
HP 7203-7231

DST 13,351-13,390 Op 1 hr
Rec 4000 WB + 60 gas cut mud
ISIP 2258/1hr, FP 1567-1567,
FSIP 2080/2 hrs.

PERF 13,420-13,442
CAOF 26,400 MCFG +
264 bbls cond per day

DST 13,563-13,689 Op 1 hr 30 m
GTS 12 min - TSTM, rev out 1302'
GcM + 10,105 SW, ISIP 658/1hr,
FP 2684-5827, FSIP 6584/2 hrs
HP 7377-7377

T.D 13,689' D & A 7-26-75

DST 13,290-13,340, Op 1 hr 10m
Rec 2000 sli GcWB + 15 sli GcM,
ISIP 1628/1 hr, FP 932-932
FSIP 1966/2 hrs, HP 7432-7432,
BHT 170°

DST 13,330-13,383, Op 2 hrs 15m
GTS 42 min, Rec 2000 GcWB, 75'
GcCond & 50 GcM, ISIP 6785/1 hr,
FP 70-1075, FSIP 6682/4 hrs
HP 7402-7402, BHT 168°

DST 13,435-13,460, Op 45 min
Rec 2000 WB & 20 M, ISIP 2075/
1 hr, FP 1346-1346, FSIP 1783/1 hr,
HP 8085-8085, BHT 140°

DST 13,580-13,656, Op 30 min,
WBTS 10 min, GTS 15 min ARO
21,000 MCFGpD, SFP 800, re-op
on 2nd flow, GTS immed ARO
30,000 MCFGpD, SFP 1100, Rec
735 cond (Gty 49) & 550 SW,
ISIP 6615/1 hr, FP 5300-5424,
FSIP 6615/2 hrs, HP 7701-7475

PERF 13,614-13,664 Natural
CAOF 26,783 MCFGpD
GOR 14,929, SIWHP 4393,

DST at 13,656 - Pkr failed
Rec 30 cond & 360 GcM

T.D 13,764 - P/B 13,690 Morrow Compl (13,614-64)

1-3-76

T.D 13,650' D & A 8-6-78

PERF 13,408-13,416 A/500 gals
RE-PERF 13,408-13,416 A/5500 gals
Flowed 100 Bbls Load Wtr.
P/B 11,000 and completed in Bone
Spring (10,506-10,582)

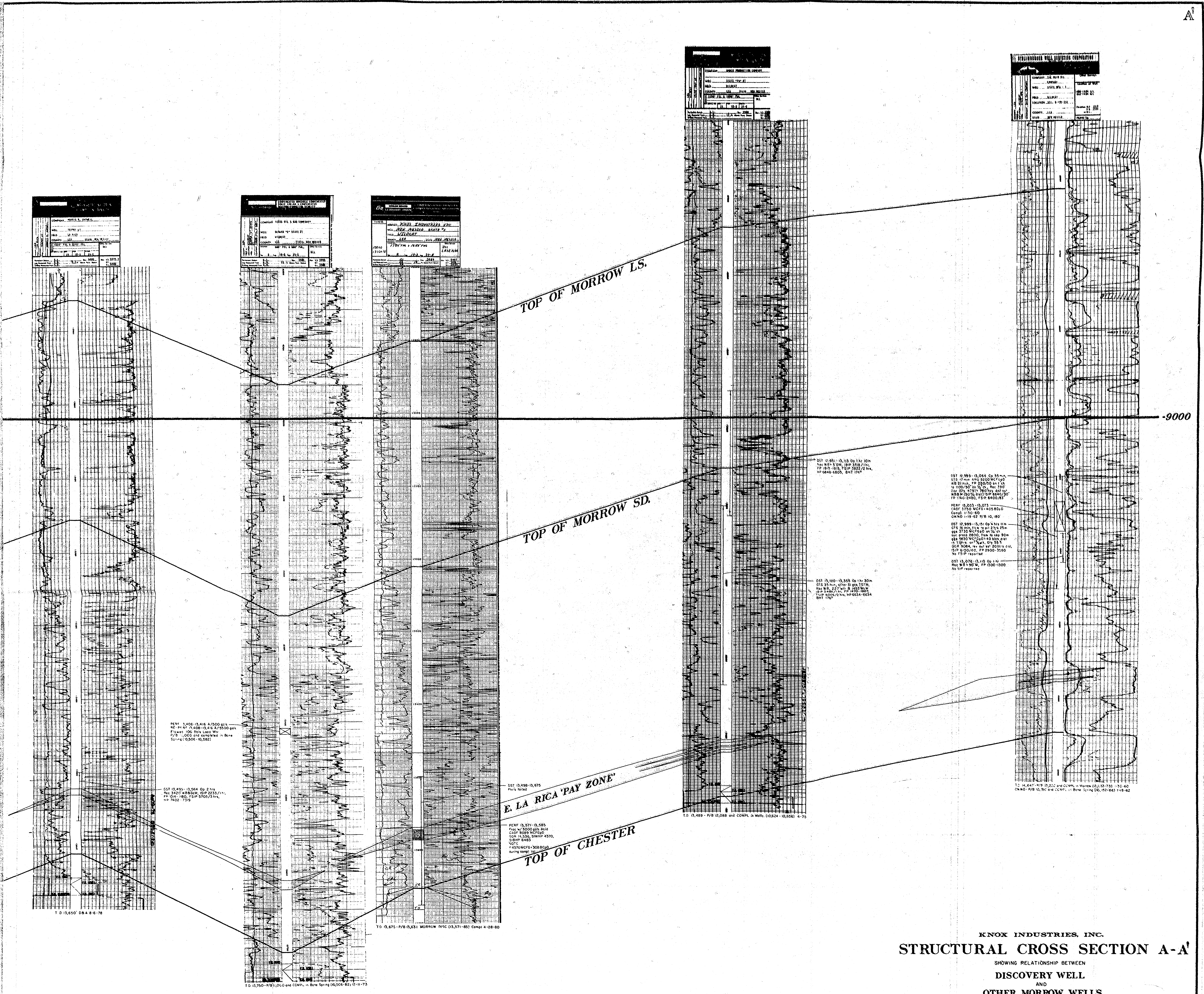
DST 13,499-13,564 Op 2 hrs
Rec 3420 WB & GcM, ISIP 2233/1 hr,
FP 1014-1180, FSIP 5705/3 hrs,
HP 7402-7319

T.D 13,750 - P/B 11,000 and COMPL in Bone Spring (10,506-82) 12-11-73

T.D 13,675 - P/B

N.M.O.C.D. MICROGRAPHICS

BEST AVAILABLE COPY


A'
TOP OF MORROW LS.
-9000
TOP OF MORROW SD.
E. LA RICA 'PAY ZONE'
TOP OF CHESTER
GR
CAL
FR
TD
PERF 3,408-13,416 A/500 gals
RE-PERF 13,408-13,416 A/5500 gals
Flowed 100 Bbls Load Wtr
P/B 11,000 and completed in Bone Spring (10,506-10,582)
DST 13,499-13,564 Op 2 hrs
Rec 3420' WB&GcM, ISIP 2233/1 hr,
FP 1014-1180, FSIP 5705/3 hrs,
HP 7402-7319
T.D. 13,650' D&A 8-6-78
T.D. 13,750-P/B 11,000 and COMPL in Bone Spring (10,506-82) 12-11-73
DST 13,498-13,675
Pkr's failed
PERF 13,571-13,585
Frac w/ 3000 gals Acid
CAOF 8089 MCFGpD
GOR 14,536, SIWHP 4370,
SIBHP 6483
NOTE
F 4370 MCFG + 308 BCpD
during compl tst
T.D. 13,675-P/B 13,631 MORROW DISC (13,571-85) Compl 4-28-80
DST 12,951-13,113 Op 1 hr 10m
Rec WB + 5 DM, ISIP 3518/1 hr,
FP 1915-1915, FSIP 3822/2 hrs,
HP 6848-6805, BHT 174°
DST 13,100-13,355 Op 1 hr 30m
GTS 35 min, after SI gas TSTM,
Rec WB, 227' wtr & 1453' WcM
ISIP 5466/1 hr, FP 1470-1607,
FSIP 6006/2 hrs, HP 6634-6634
BHT 176°
T.D. 13,489 - P/B 12,088 and COMPL in Wolfc. (10,624-10,656) 4-75
DST 12,999-13,064 Op 55 min,
GTS 17 min AHO 5200 MCFGpD
WB 21 min, FP 250/30 on 1" ck
to 1100/30" on ½" ck, Rec 390'
Dist (Gty 47.9) + 780' hvy dist cut
WB&M (50% dist) ISIP 6640/30"
FP 1740-2480, FSIP 6400/83"
PERF 13,033-13,073
CAOF 3750 MCFG + 405 BOpD
Compl. 1-30-60
OWWO 1-19-62 P/B 10,180'
DST 12,999-13,151 Op 4 hrs 11m
GTS 16 min, flow to pit 2 hrs 25m
gas 3730 MCFGpD on ¼" ck
suc press 2600, flow to sep 90m
gas 5830 MCFGpD + 40 bbls dist
in 1½ hrs on 2¾₄ ck, Gty 38.5
GOR 9084, rev out est 20 bbls dist,
ISIP 6100/60, FP 2900-3560
No FSIP reported
DST 13,076-13,115 Op 1 hr
Rec WB + 90' M, FP 1300-1300
No SIP reported
T.D. 14,647'-P/B 13,220 and COMPL in Morrow (13,033-73) 1-30-60
OWWO - P/B 10,180 and COMPL in Bone Spring (10,152-66) 1-19-62

KNOX INDUSTRIES, INC.

STRUCTURAL CROSS SECTION A-A'

SHOWING RELATIONSHIP BETWEEN

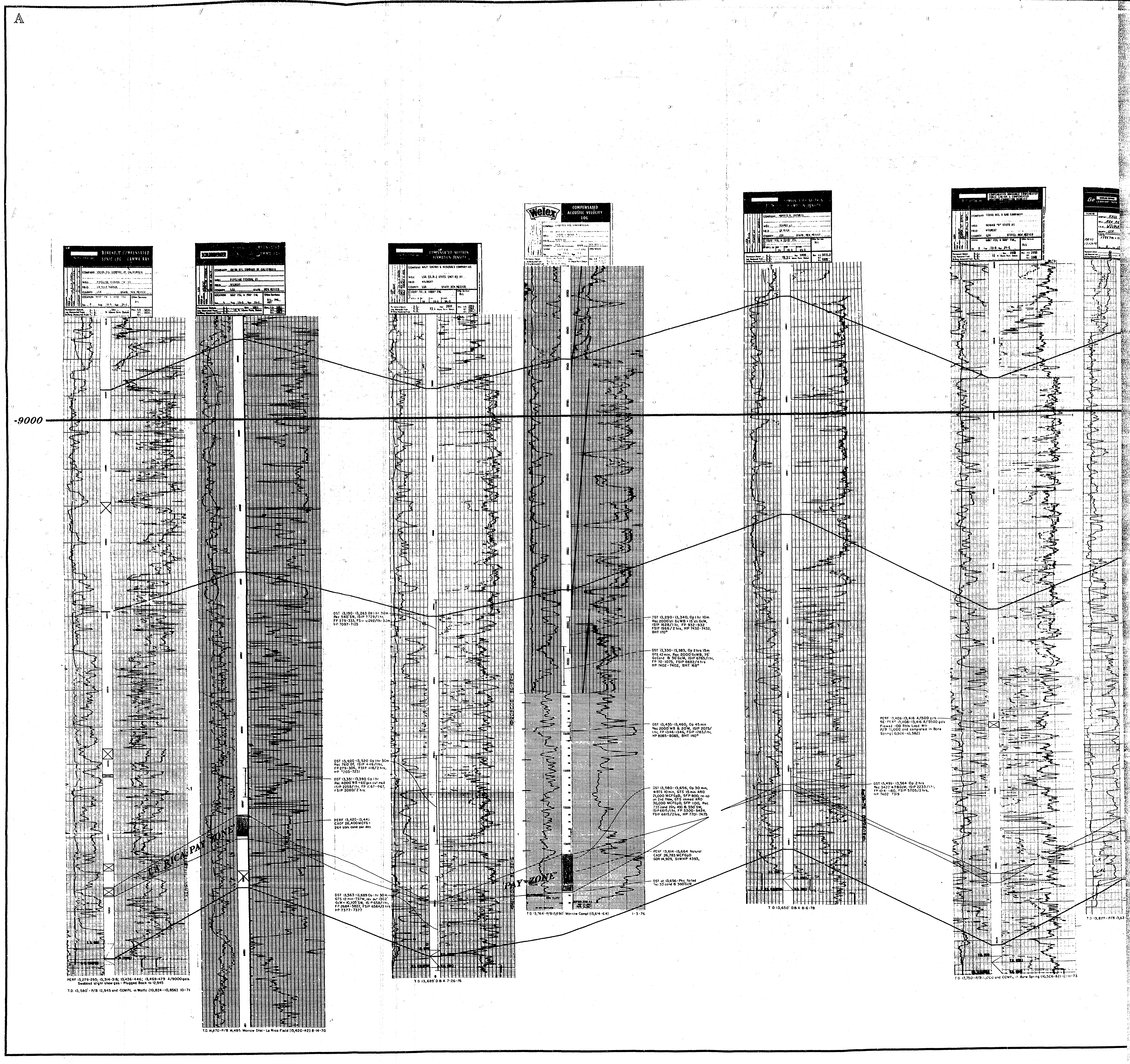
DISCOVERY WELL
AND
OTHER MORROW WELLS

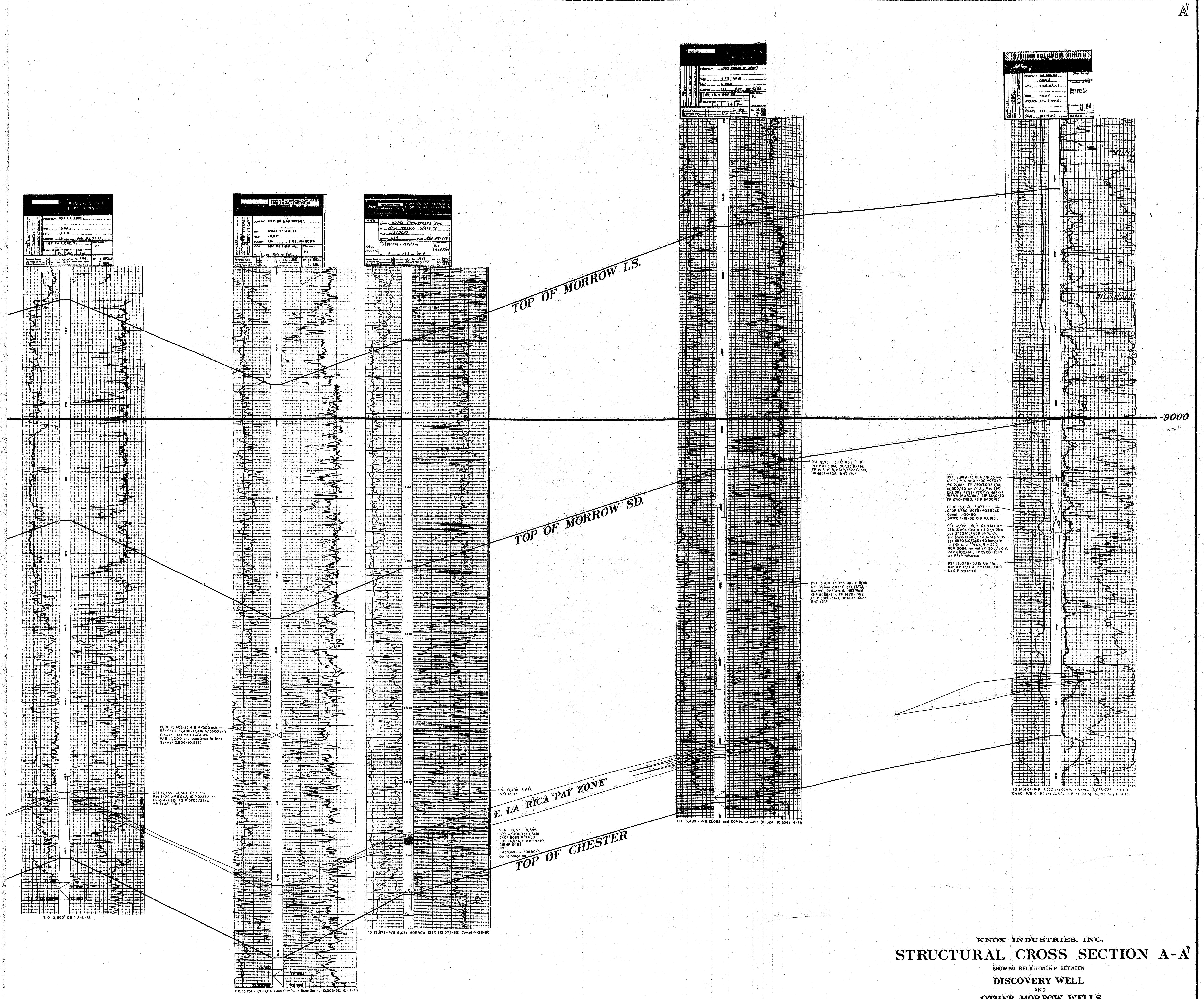
LEA COUNTY, NEW MEXICO

SCALES
Horizontal - Exaggerated
Vertical 1" = 40'

BY__________ DATE__________

[illegible] MICROGRAPHICS
BEST AVAILABLE COPY


A
-9000
LA RICA PAY ZONE
PAY ZONE
DST 13,190-13,263 Op 1 hr 30m
Rec 540' SW, ISIP 5729/1 hr,
FP 279-333, FSIP 6092/1hr 30m
HP 7097-7125
DST 13,400-13,520 Op 1 hr 30m
Rec 760' DF, ISIP 446/1hr,
FP 279-306, FSIP 418/2 hrs.
HP 7203-7231
DST 13,351-13,390 Op 1 hr
Rec 4000' WB + 60' gas cut mud
ISIP 2258/1hr, FP 1567-1567,
FSIP 2080/2 hrs.
PERF 13,420-13,442
CAOF 26,400 MCFG +
264 bbls cond per day
DST 13,563-13,689 Op 1 hr 30 m
GTS 12 min-TSTM, rev out 1302'
GcM + 10,105' SW, ISIP 658/1hr,
FP 2684-5827, FSIP 6584/2 hrs
HP 7377-7377
PERF 13,279-293; 13,314-318; 13,436-446; 13,469-479 A/9000 gals
Swabbed slight show gas - Plugged Back to 12,945
T.D. 13,580' - P/B 12,945 and COMPL in Wolfc (10,824-10,856) 10-71
T.D. 14,870-P/B 14,485 Morrow Disc - La Rica Field (13,420-42) 8-14-70
T D 13,689' D & A 7-26-76
DST 13,290-13,340, Op 1 hr 10m
Rec 2000' sli GcWB + 15' sli GcM,
ISIP 1628/1 hr, FP 932-932
FSIP 1966/2 hrs, HP 7432-7432,
BHT 170°
DST 13,330-13,383, Op 2 hrs 15m
GTS 42 min, Rec 2000' GcWB, 75'
GcCond & 50' GcM, ISIP 6785/1 hr,
FP 70-1075, FSIP 6682/4 hrs
HP 7402-7402, BHT 168°
DST 13,435-13,460, Op 45 min
Rec 2000' WB & 20' M, ISIP 2075/1 hr, FP 1346-1346, FSIP 1783/1 hr,
HP 8085-8085, BHT 140°
DST 13,580-13,656, Op 30 min,
WBTS 10 min, GTS 15 min ARO
21,000 MCFGpD, SFP 800, re-op
on 2nd flow, GTS immed ARO
30,000 MCFGpD, SFP 1100, Rec
735' cond (Gty 49) & 550' SW,
ISIP 6615/1 hr, FP 5300-5424,
FSIP 6615/2 hrs, HP 7701-7475
PERF 13,614-13,664 Natural
CAOF 26,783 MCFGpD
GOR 14,929, SIWHP 4393,
DST at 13,656-Pkr, failed
Rec 30' cond & 360' GcM
T D 13,764'-P/B 13,690' Morrow Compl (13,614-64)
1-3-76
T D 13,650' D & A 8-6-78
DST 13,499-13,564 Op 2 hrs
Rec 3420' WB & GcM, ISIP 2233/1 hr,
FP 1014-1160, FSIP 5705/3 hrs,
HP 7402-7319
PERF 13,408-13,416 A/500 gals
RE-PERF 13,408-13,416 A/5500 gals
Flowed 100 Bbls Load Wtr
P/B 11,000 and completed in Bone Spring (10,506-10,582)
T D 13,750 - P/B 11,000 and COMPL in Bone Spring (10,506-82) 12-11-73
T D 13,675 - P/B 13,63
Welex
COMPENSATED ACOUSTIC VELOCITY LOG
BOREHOLE COMPENSATED SONIC LOG - GAMMA RAY
COMPENSATED NEUTRON FORMATION DENSITY
SCHLUMBERGER



PERF 13,408-13,416 A/500 gals
RE-PERF 13,408-13,416 A/5500 gals
Flowed 100 Bbls Load Wtr
P/B 11,000 and completed in Bone Spring (10,506-10,582)

DST 13,499-13,564 Op 2 hrs
Rec 3420 WBBGcM, ISIP 2233/1 hr,
FP 1014-1180, FSIP 5705/3 hrs,
HP 7402-7319

T D 13,650' D&A 8-6-78

T.D. 13,750 - P/B 11,000 and COMPL in Bone Spring (10,506-82) 12-11-73

DST 13,498-13,675
Pkr's failed

PERF 13,571-13,585
Frac w/ 3000 gals Acid
CAOF 8089 MCFGpD
GOR 14,536, SIWHP 4370,
SIBHP 6483
NOTE
F 4370 MCFG + 308 BCpD
during compl tst

TD 13,675 - P/B 13,631 MORROW DISC (13,571-85) Compl 4-28-80

DST 12,951-13,113 Op 1 hr 10m
Rec WB + 5' OM, ISIP 3518/1 hr,
FP 1915-1915, FSIP 3822/2 hrs,
HP 6848-6805, BHT 174°

DST 13,100-13,355 Op 1 hr 30m
GTS 35 min, after SI gas TSTM,
Rec WB, 227' wtr & 1453' WcM
ISIP 5466/1 hr, FP 1470-1607,
FSIP 6006/2 hrs, HP 6634-6634
BHT 176°

T.D. 13,489 - P/B 12,088 and COMPL in Wolfc. (10,624-10,656) 4-75

DST 12,999-13,064 Op 55 min,
GTS 17 min ARO 5200 MCFGpD
WB 21 min, FP 250/30 on 1" ck
to 1100/50" on ½" ck, Rec 390'
Dist (Gty. 47.9) + 780' hvy dist cut
WB&M (50% dist) ISIP 6640/30"
FP 1740-2480, FSIP 6400/83"

PERF 13,033-13,073
CAOF 3750 MCFG + 405 BDpD
Compl 1-30-60
OWWO 1-19-62 P/B 10,180

DST 12,999-13,151 Op 4 hrs 11m
GTS 16 min, flow to pit 2 hrs 25m
gge 3730 MCFGpD on ¼" ck.
sur. press 2800, flow to sep 90m
gge 5830 MCFGpD + 40 bbls dist
in 1½ hrs. on 24/64 ck, Gty 55.5
GOR 9084, rev out est 20 bbls dist,
ISIP 6100/60, FP 2900-3560
No FSIP reported

DST 13,076-13,115 Op 1 hr
Rec WB + 90' M, FP 1300-1300
No SIP reported

T.D. 14,647' - P/B 13,220 and COMPL in Morrow (13,033-73) 1-30-60
OWWO - P/B 10,180 and COMPL in Bone Spring (10,152-66) 1-19-62

KNOX INDUSTRIES, INC.

STRUCTURAL CROSS SECTION A-A'

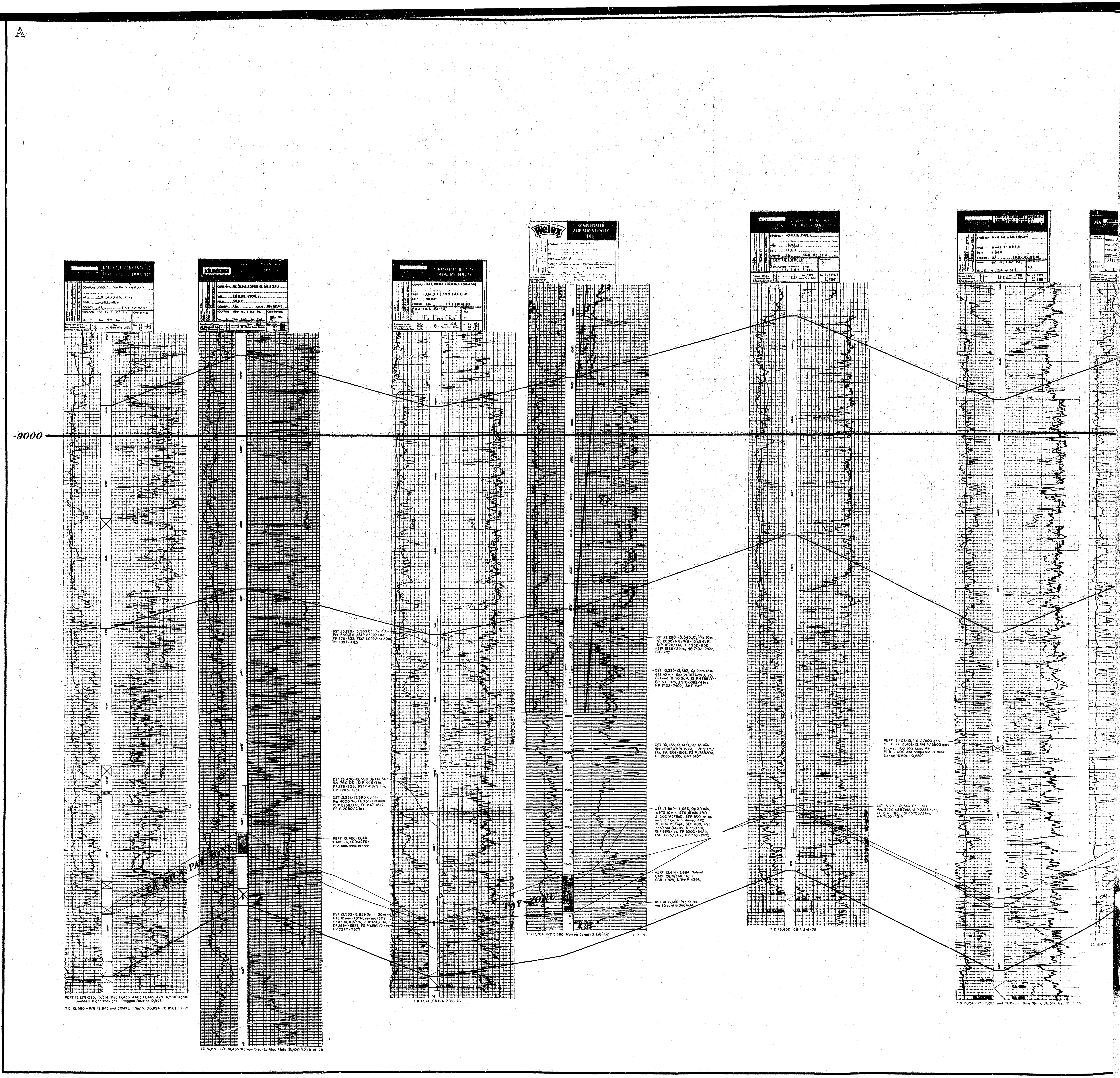
SHOWING RELATIONSHIP BETWEEN

DISCOVERY WELL
AND
OTHER MORROW WELLS

LEA COUNTY, NEW MEXICO

SCALES
Horizontal - Exaggerated
Vertical 1" = 40'

BY________ DATE________



DST 13,190-13,263 Op 1 hr 30m
Rec 540 SW, ISIP 5723/1 hr,
FP 279-333, FSIP 6092/1hr 30m
HP 7097-7125

DST 13,400-13,520 Op 1 hr 30m
Rec 760 DF, ISIP 446/1hr,
FP 279-306, FSIP 418/2 hrs,
HP 7203-7231

DST 13,351-13,390 Op 1 hr
Rec 4000 WB + 60 gcs cut mud
ISIP 2258/1hr, FP 1567-1567,
FSIP 2080/2 hrs.

PERF 13,420-13,442
CAOF 26,400 MCFG +
264 bbls cond per day

DST 13,563-13,689 Op 1 hr 30 m
GTS 12 min-TSTM, rev out 1302
GcM + 10,105 SW, ISIP 658/1hr,
FP 2684-5827, FSIP 6584/2 hrs
HP 7377-7377

PERF 13,279-293; 13,314-318; 13,436-446; 13,469-479 A/9000 gals.
Swabbed slight show gas - Plugged Back to 12,945

T.D. 13,580' - P/B 12,945 and COMPL in Wolfc (10,824-10,856) 10-71

T.D. 14,870 - P/B 14,485 Morrow Disc - La Rica Field (13,420-42) 8-14-70

T D 13,689' D & A 7-26-76

DST 13,290-13,340, Op 1 hr 10m
Rec 2000 sli GcWB + 15 sli GcM,
ISIP 1628/1 hr, FP 932-932
FSIP 1966/2 hrs, HP 7432-7432,
BHT 170°

DST 13,330-13,383, Op 2 hrs 15m
GTS 42 min, Rec 2000 GcWB, 75
GcCond & 50 GcM, ISIP 6785/1hr,
FP 70-1075, FSIP 6682/4 hrs
HP 7402-7402, BHT 168°

DST 13,435-13,460, Op 45 min
Rec 2000 WB & 20 M, ISIP 2075/
1 hr, FP 1346-1346, FSIP 1783/1hr,
HP 8085-8065, BHT 140°

DST 13,580-13,656, Op 30 min,
WBTS 10 min, GTS 15 min ARO
21,000 MCFGpD, SFP 800, re-op
on 2nd flow, GTS immed ARO
30,000 MCFGpD, SFP 1100, Rec
735 cond (Gty 49) & 550 SW,
ISIP 6615/1hr, FP 5300-5424,
FSIP 6615/2hrs, HP 7701-7475

PERF 13,614-13,664 Natural
CAOF 26,783 MCFGpD
GOR 14,929, SIWHP 4393,

DST at 13,656 - Pkr, failed
Rec 30 cond & 360 GcM

T D 13,764 - P/B 13,690 Morrow Compl (13,614-64) 1-3-76

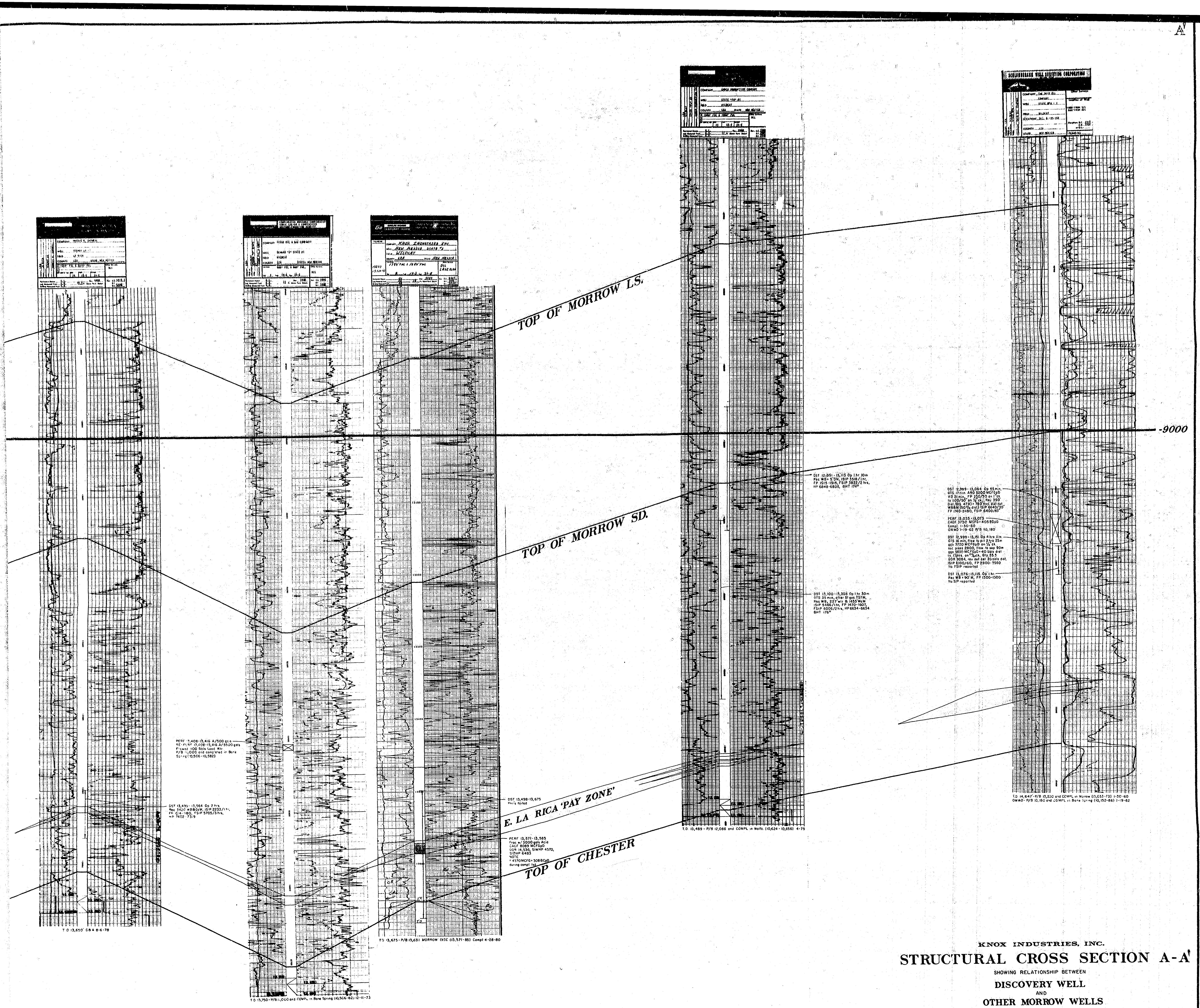
T D 13,650' D & A 8-6-78

PERF 13,408-13,416 A/500 gals
RE-PERF 13,408-13,416 A/5500 gals
Flowed 100 Bbls Load Wtr
P/B 11,000 and completed in Bone
Spring (10,506-10,582)

DST 13,499-13,564 Op 2 hrs
Rec 3420 WB & GcM, ISIP 2233/1hr,
FF 1014-1180, FSIP 5705/3 hrs,
HP 7402-7319

T D 13,750 - P/B 11,000 and COMPL in Bone Spring (10,506-82) 12-11-73

V.S.M.C.F. MICROGRAPHICS
BEST AVAILABLE COPY



PERF 13,408-13,416 A/500 gals
RE-PERF 13,408-13,416 A/5500 gals
Flowed 100 Bbls Load Wtr.
P/B 11,000 and completed in Bone Spring (10,506-10,582)

DST 13,499-13,564 Op 2 hrs
Rec 3420 WB&GcM, ISIP 2233/1hr,
FP 614-1180, FSIP 5705/3 hrs,
HP 7402-7319

T O 13,650' D&A 8-6-78

T O 13,750 - P/B 11,000 and COMPL in Bone Spring (10,506-82) 12-11-73

DST 13,498-13,675
Pkr's failed

PERF 13,571-13,585
Frac w/ 3000 gals Acid
CAOF 8089 MCFGpD
GOR 14,536, SIWHP 4370,
SIBHP 6483
NOTE
F 4370 MCFG + 308 BCpD
during compl tst

TO 13,675 - P/B 13,631 MORROW DISC (13,571-85) Compl 4-28-80

DST 12,951-13,113 Op 1 hr 10m
Rec WB + 5' OM, ISIP 3518/1hr,
FP 1915-1915, FSIP 3822/2 hrs,
HP 6848-6805, BHT 174°

DST 13,100-13,305 Op 1 hr 30m
GTS 35 min, after SI gas TSTM,
Rec WB, 227' wtr & 1453' WcM
ISIP 5466/1hr, FP 1470-1607,
FSIP 6006/2 hrs, HP 6634-6634
BHT 176°

T.O. 13,489 - P/B 12,086 and COMPL in Wolfc. (10,624-10,656) 4-75

DST 12,999-13,064 Op 55 min.
GTS 17 min ARO 5200 MCFGpD
WB 21 min, FP 250/30 on 1" ck.
to 1100/50" on ½" ck., Rec 390'
Dist (Gty. 47.9) + 780' hvy. dist cut
WB&M (50% dist) ISIP 6640/30"
FP 1740-2480, FSIP 6400/83"

PERF 13,033-13,073
CAOF 3750 MCFG + 405 BOpD
Compl. 1-30-60
OWWO 1-19-62 P/B 10,180

DST 12,999-13,151 Op 4 hrs 11m.
GTS 16 min, flow to pit 2 hrs 25m
gas 3720 MCFGpD on ¼" ck.
sur press 2800, flow to sep 90m
gge 5830 MCFGpD + 40 bbls dist
in 1½ hrs. on 24/64 ck, Gty. 55.5
GOR 9084, rev out est 20 bbls dist,
ISIP 6100/60, FP 2900-3560
No FSIP reported

DST 13,076-13,115 Op 1 hr
Rec WB + 90' M, FP 1300-1300
No SIP reported

T.O. 14,647'-P/B 13,220 and COMPL in Morrow (13,033-73) 1-30-60
OWWO - P/B 10,180 and COMPL in Bone Spring (10,152-66) 1-19-62

KNOX INDUSTRIES, INC.

STRUCTURAL CROSS SECTION A-A'

SHOWING RELATIONSHIP BETWEEN

DISCOVERY WELL

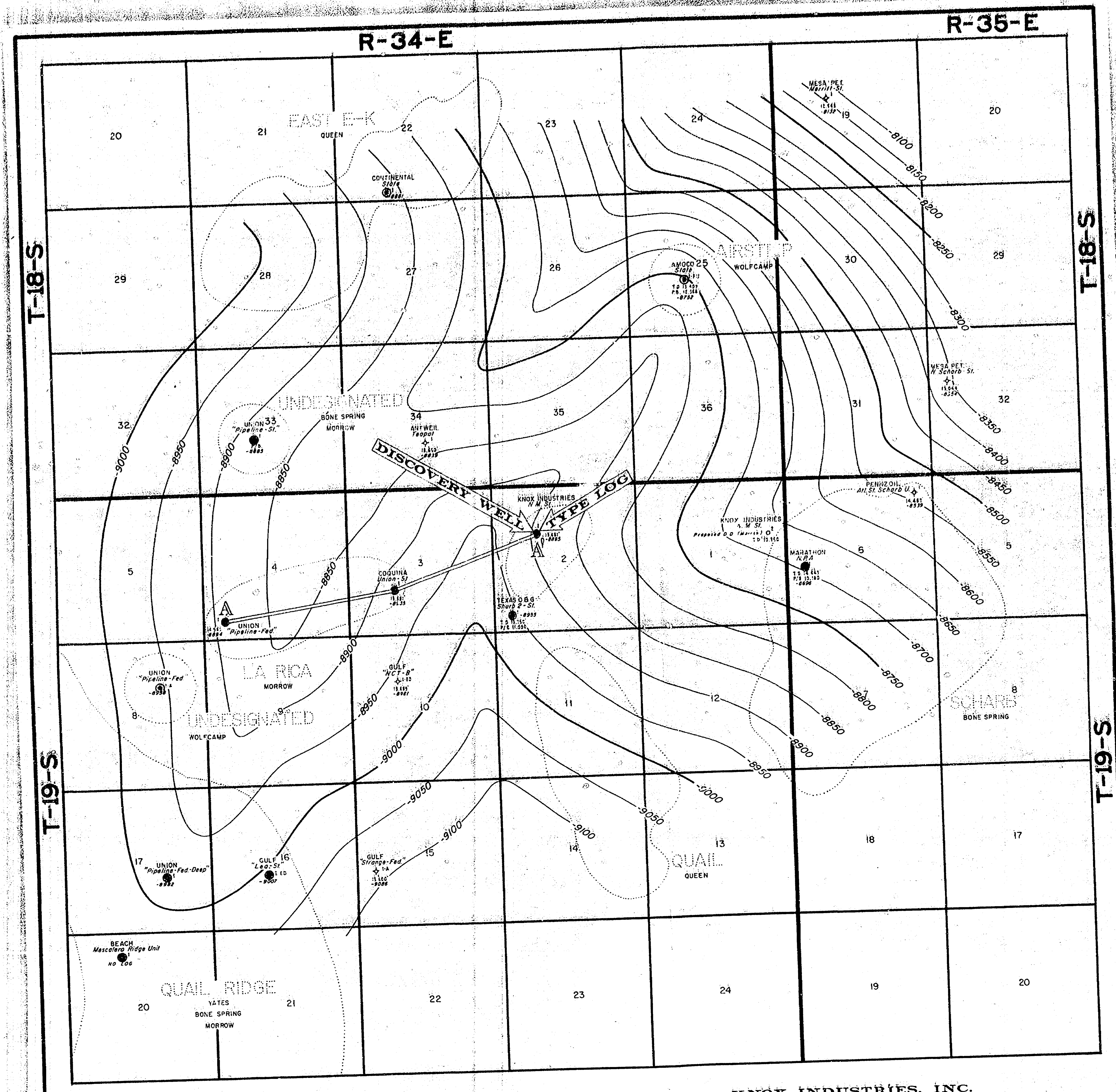
AND

OTHER MORROW WELLS

LEA COUNTY, NEW MEXICO

SCALES
Horizontal - Exaggerated
Vertical 1" = 40'

BY________ DATE________


R-34-E
R-35-E
T-18-S
T-19-S
EAST E-K
QUEEN
CONTINENTAL
AIRSTRIP
WOLFCAMP
AMOCO
State
MESA PET.
Merritt-St.
MESA PET.
N. Schorb-St.
UNDESIGNATED
BONE SPRING
MORROW
UNION
"Pipeline-St."
ANTWEIL
Teapot
DISCOVERY WELL
TYPE LOG
KNOX INDUSTRIES
N.M. St.
KNOX INDUSTRIES
N.M. St.
Proposed D.D.
PENNZOIL
Atl. St. Schorb U.
MARATHON
N.P.A.
COQUINA
Union-St.
UNION
"Pipeline-Fed."
TEXAS O.&G.
Shurb 2-St.
A
A'
LA RICA
MORROW
UNION
"Pipeline-Fed."
GULF
"NCT-B"
UNDESIGNATED
WOLFCAMP
SCHARB
BONE SPRING
UNION
"Pipeline-Fed.-Deep"
GULF
"Lea-St."
GULF
"Strange-Fed."
QUAIL
QUEEN
BEACH
Mescalero Ridge Unit
NO LOG
QUAIL RIDGE
YATES
BONE SPRING
MORROW
-8100
-8150
-8200
-8250
-8300
-8350
-8400
-8450
-8500
-8550
-8600
-8650
-8700
-8750
-8800
-8850
-8900
-8950
-9000
-9050
-9100

KNOX INDUSTRIES, INC.

TOP OF MORROW STRUCTURE

DISCOVERY WELL - *No. 1 New Mexico - State*

SE/NW 2-19-34

LEA COUNTY, NEW MEXICO

Exhibit 1
Case 6943

C.I.---------50'
SCALE 1"=2000'

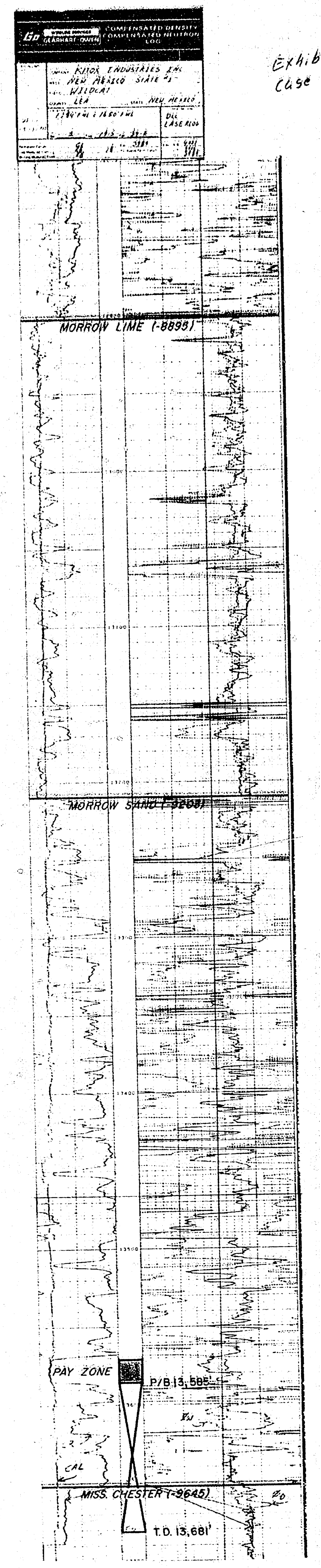
BY RHR
DATE 18 JUNE 1980

LEGEND

● --BONE SPRING PRODUCTION
◉ ----WOLFCAMP PRODUCTION
● -------MORROW PRODUCTION

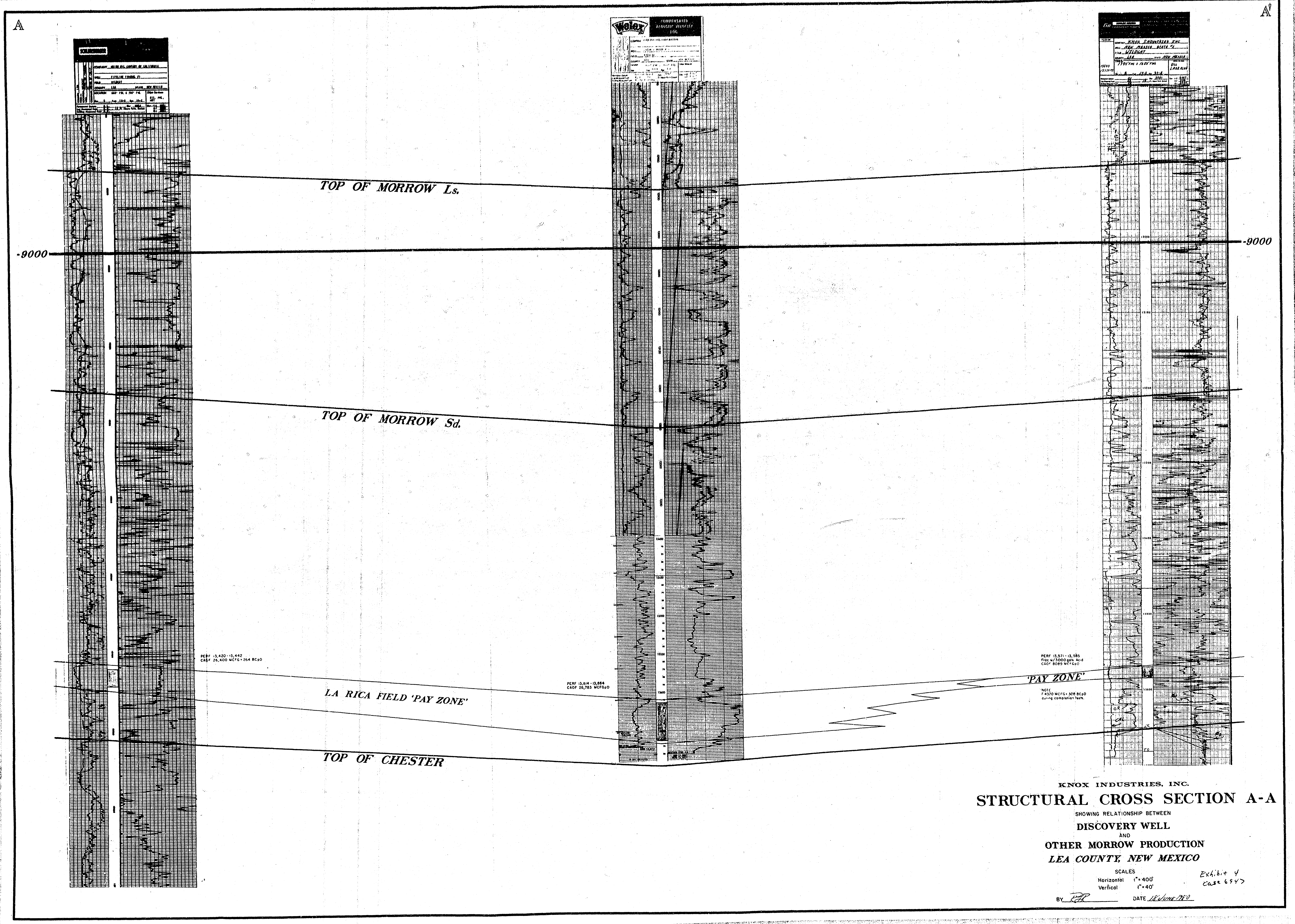
TYPE LOG

Exhibit 3
Case 6947



PERFS: 13,571-13,585
Frac W/ 3000 gals Acid
CAOF 8089 MCFGpD

N.M.O.C.F. MICROGRAPHICS
BEST AVAILABLE COPY


A
A'
SCHLUMBERGER
COMPANY
WELL
FIELD
WILDCAT
COUNTY LEA
STATE NEW MEXICO
LOCATION
Welex
COMPENSATED ACOUSTIC VELOCITY LOG
COMPANY KNOX INDUSTRIES INC
WELL NEW MEXICO STATE
FIELD WILDCAT
COUNTY LEA
STATE NEW MEXICO
TOP OF MORROW Ls.
-9000
-9000
TOP OF MORROW Sd.
PERF 13,420 - 13,442
CAOF 26,400 MCFG + 264 BCpD
PERF 13,614 - 13,664
CAOF 26,783 MCFGpD
LA RICA FIELD 'PAY ZONE'
TOP OF CHESTER
PERF 13,571 - 13,585
Frac w/3000 gals Acid
CAOF 8089 MCFGpD
'PAY ZONE'
NOTE
F 4370 MCFG + 308 BCpD
during completion tests.
GR
CAL
TD

KNOX INDUSTRIES, INC.

STRUCTURAL CROSS SECTION A-A

SHOWING RELATIONSHIP BETWEEN

DISCOVERY WELL

AND

OTHER MORROW PRODUCTION

LEA COUNTY, NEW MEXICO

SCALES
Horizontal 1" = 400'
Vertical 1" = 40'

Exhibit 4
Case 6947

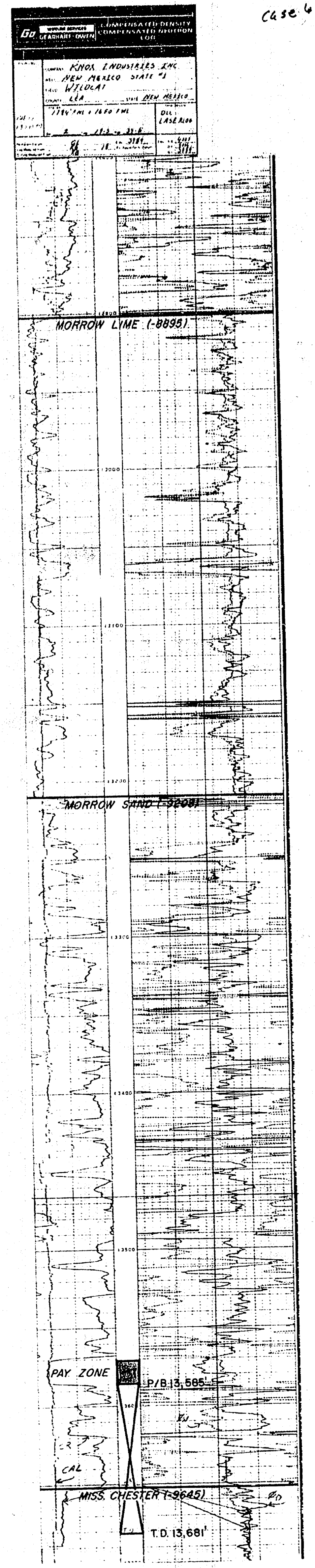
BY RJR

DATE 18 June 1980

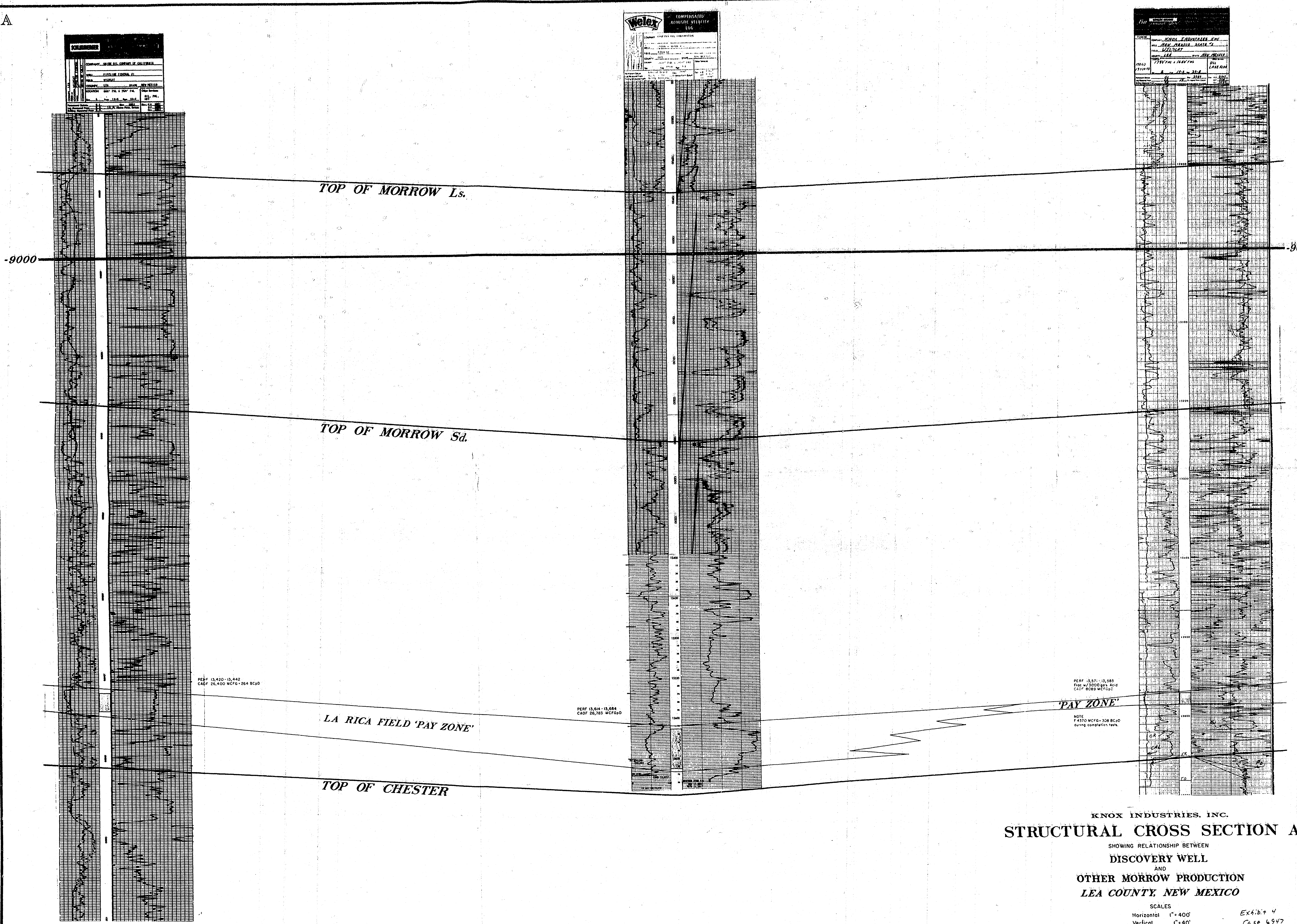
N.M.O.C.D. MICROGRAPHICS
BEST AVAILABLE COPY

TYPE LOG

Exhibit 3
Case 4947



PERFS: 13,571-13,585
Frac w/ 3000 gals Acid
CAOF 8089 MCFGpD


A
A'
SCHLUMBERGER
COMPANY UNION OIL COMPANY OF CALIFORNIA
WELL PIPELINE FEDERAL #1
FIELD WILDCAT
COUNTY LEA STATE NEW MEXICO
Welex
COMPENSATED ACOUSTIC VELOCITY LOG
COMPANY KNOX INDUSTRIES INC
WELL NEW MEXICO STATE #1
FIELD WILDCAT
COUNTY LEA STATE NEW MEXICO
TOP OF MORROW Ls.
-9000
-9000
TOP OF MORROW Sd.
PERF 13,420 - 13,442
CAOF 26,400 MCFG + 264 BCpD
LA RICA FIELD 'PAY ZONE'
PERF 13,614 - 13,684
CAOF 26,783 MCFGpD
TOP OF CHESTER
PERF 13,571 - 13,585
Frac w/3000 gals Acid
CAOF 8089 MCFGpD
'PAY ZONE'
NOTE
F 4370 MCFG + 308 BCpD
during completion tests.
GR
CAL
FR
TD

KNOX INDUSTRIES, INC.

STRUCTURAL CROSS SECTION A-A

SHOWING RELATIONSHIP BETWEEN

DISCOVERY WELL

AND

OTHER MORROW PRODUCTION

LEA COUNTY, NEW MEXICO

SCALES

Horizontal 1" = 400'
Vertical 1" = 40'

BY RFR DATE 18 June 1980

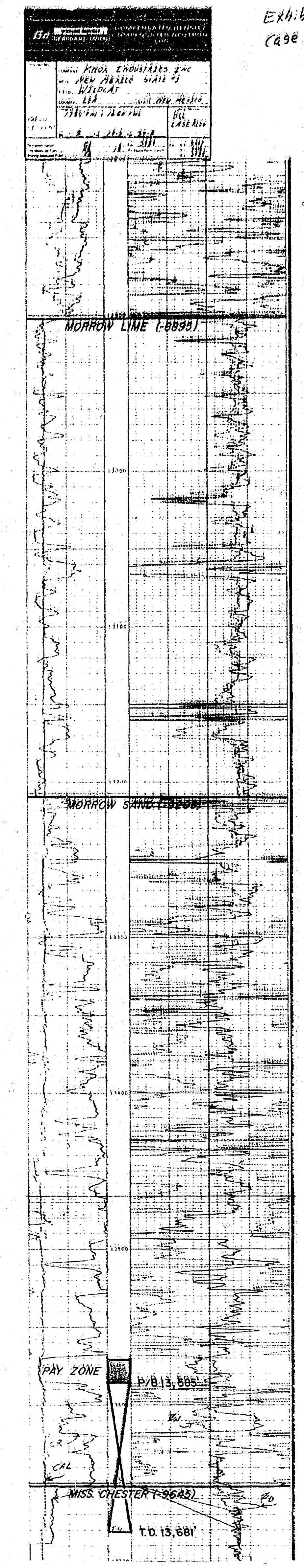
Exhibit 4
Case 6947

N.M.O.C.D. MICROGRAPHICS

BEST AVAILABLE COPY

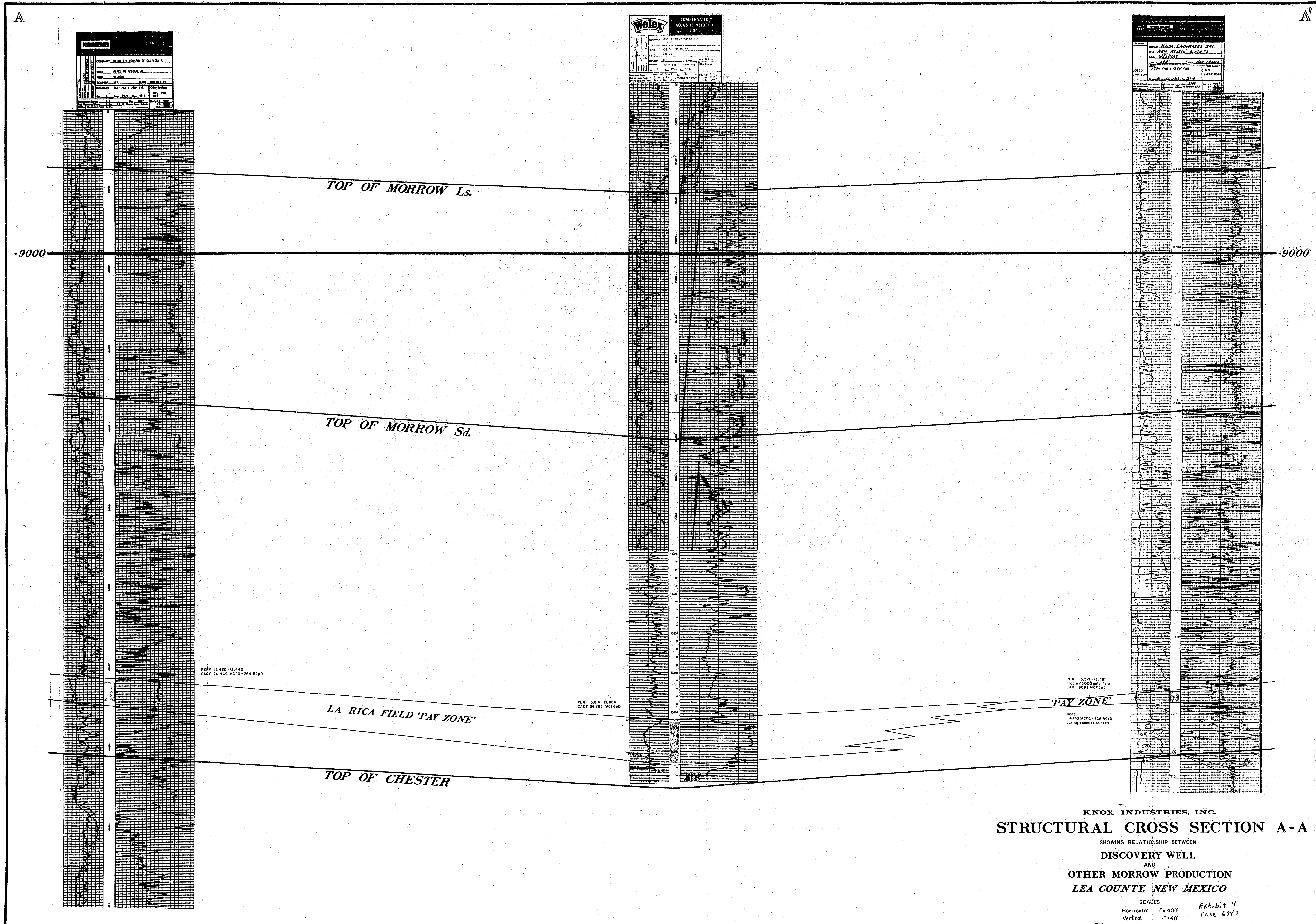
TYPE LOG

Exhibit 3
Case 6547



PERFS: 13,571-13,585
Frac W/ 3000 gals Acid
CAOF 8089 MCFGpD

V.V.N.C.F. MICROGRAPHICS
BEST AVAILABLE COPY


A
A'
-9000
-9000
TOP OF MORROW Ls.
TOP OF MORROW Sd.
LA RICA FIELD 'PAY ZONE'
TOP OF CHESTER
'PAY ZONE'
SCHLUMBERGER
COMPANY UNION OIL COMPANY OF CALIFORNIA
WELL PIPELINE FEDERAL #1
FIELD WILDCAT
COUNTY LEA STATE NEW MEXICO
Welex
COMPENSATED ACOUSTIC VELOCITY LOG
COMPANY KNOX INDUSTRIES INC.
WELL NEW MEXICO STATE #1
FIELD WILDCAT
COUNTY LEA STATE NEW MEXICO
1794' FNL & 1650' FWL
DLL
LASERLOG
GR
CAL
TD

PERF 13,420 - 13,442
CAOF 26,400 MCFG + 264 BCpD

PERF 13,614 - 13,664
CAOF 26,783 MCFGpD

PERF 13,571 - 13,585
Frac w/3000 gals Acid
CAOF 8089 MCFGpD

NOTE
F 4370 MCFG + 308 BCpD
during completion tests.

KNOX INDUSTRIES, INC.

STRUCTURAL CROSS SECTION A-A

SHOWING RELATIONSHIP BETWEEN

DISCOVERY WELL

AND

OTHER MORROW PRODUCTION

LEA COUNTY, NEW MEXICO

SCALES
Horizontal 1" = 400'
Vertical 1" = 40'

Exhibit 4
Case 6947

BY RFR DATE 18 June 1980