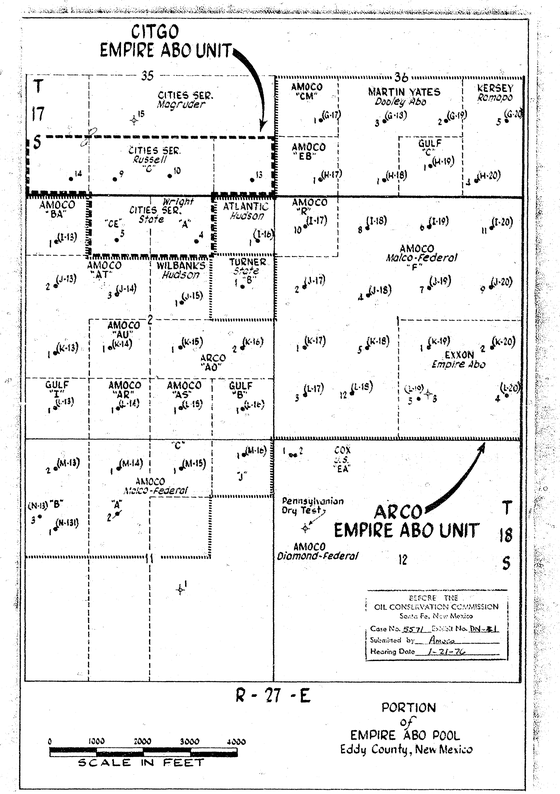
Case No.
5571

Large Exhibits

N.A.R.A. MICROGRAPHICS

BEST AVAILABLE COPY



N.M.O.C.C. MICROGRAPHICS
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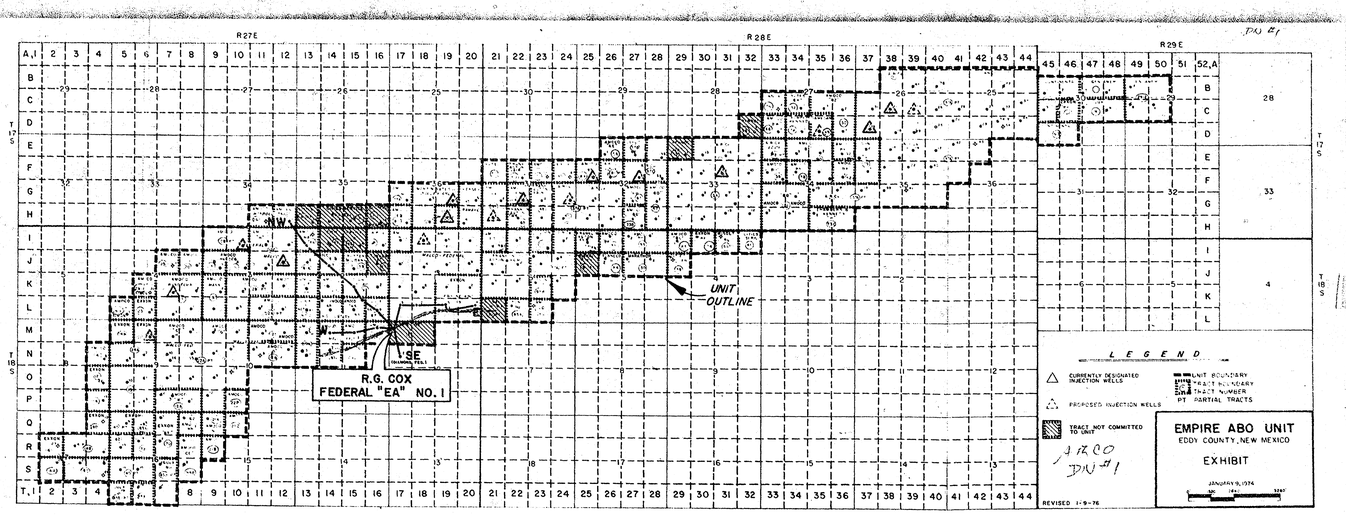

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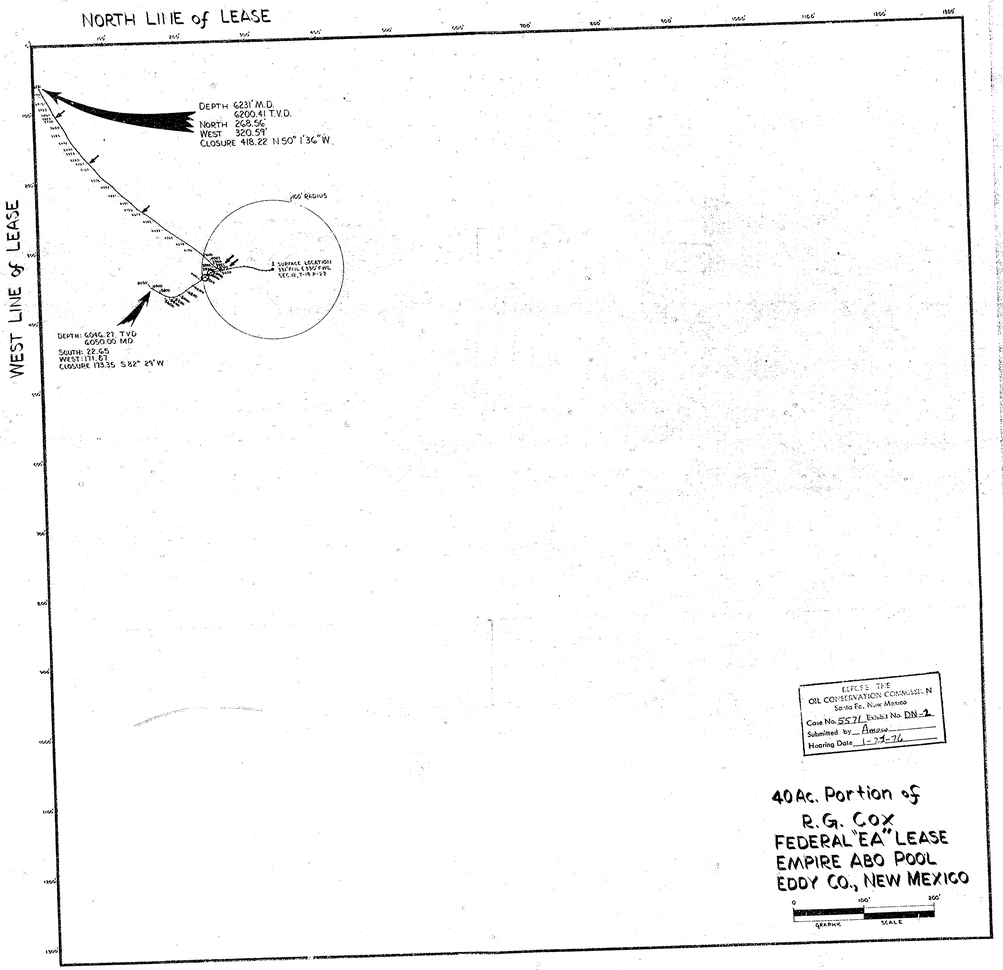


RECEIVED
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5571 Exhibit No. DN-2
Submitted by Amoco
Hearing Date 1-14-76

40 Ac. Portion of
R. G. Cox
FEDERAL "EA" LEASE
EMPIRE ABO POOL
EDDY CO., NEW MEXICO

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

GEO TECH PETROLEUM INC.
FEDERAL E.A. NO. 1
EDDY CO., NEW MEXICO

VERTICAL SECTION PLOT
SCALE 1" = 100'

HORIZONTAL PLOT
SCALE 1" = 80'

4000' M.D.
T.V.D.

KICK OFF POINT

TARGET - 1284
100' SQUARE

NORTH LSE. LINE

WEST LSE. LINE

330' F.W.L.

SURFACE LOCATION

6000' T.V.D.

6000' M.D.

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 5571
Submitted by AMOCO
Hearing Date 11/19/75

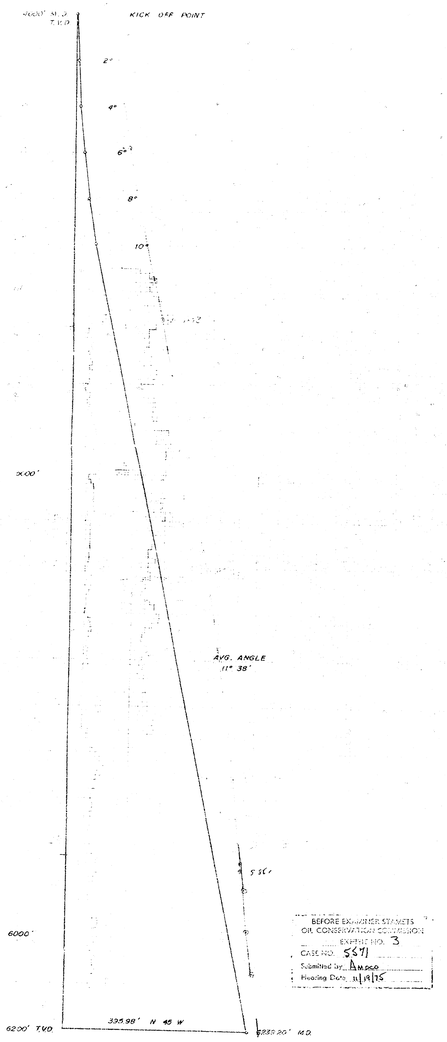
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5571 Exhibit No. ON-4
Submitted by Amoco
Hearing Date 1-30-76

N.M.M.C.F. MICROGRAPHICS

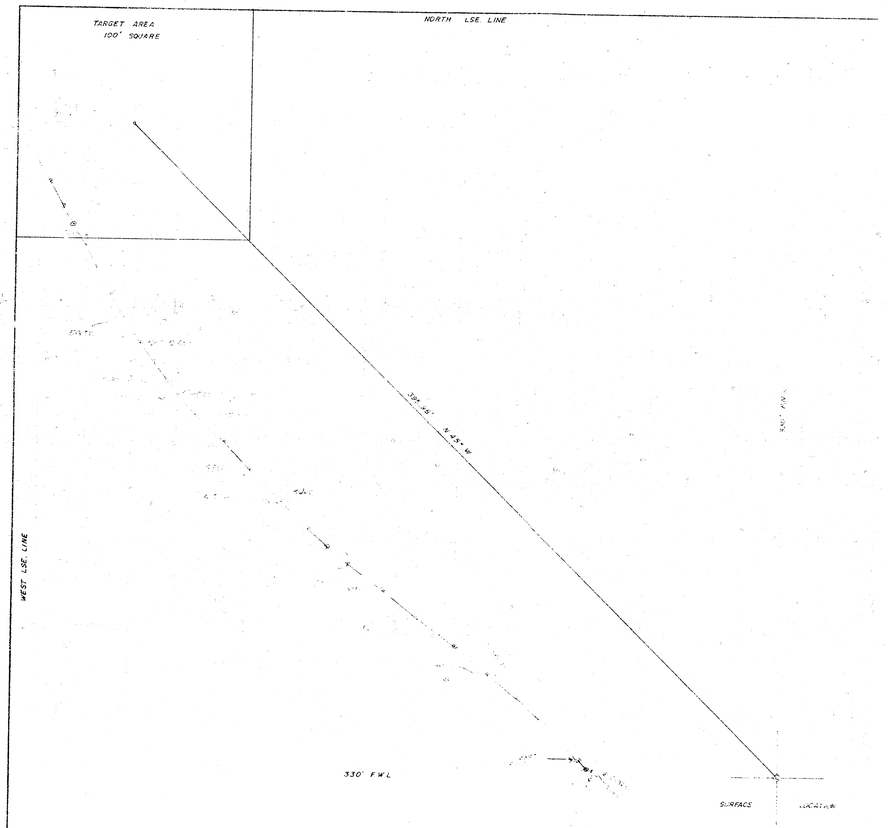
BEST AVAILABLE COPY

GEO TECH PETROLEUM INC.
FEDERAL E.A., NO. 1
EDDY CO., NEW MEXICO

VERTICAL SECTION PLOT
SCALE 1" = 100'



HORIZONTAL PLOT
SCALE 1" = 20'



BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 5571
Submitted by Amoco
Hearing Date 11/19/75

BEFORE EXAMINER
OIL CONSERVATION COMMISSION
EXHIBIT NO.
CASE NO.
Submitted by
Hearing Date

N.M.O.C.C. MICROGRAPHICS

BEST AVAILABLE COPY

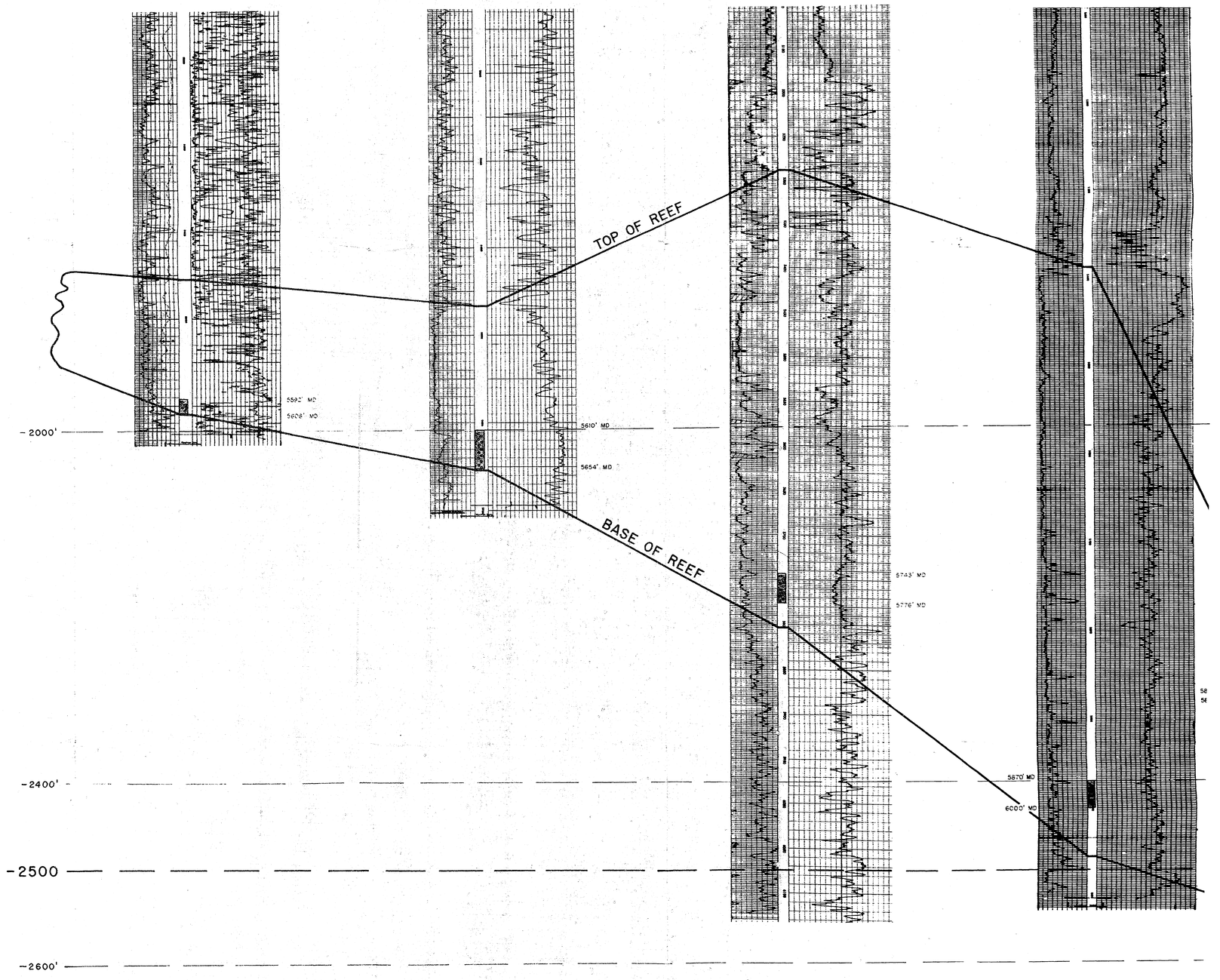
NW

A.R.Co.
E.A.U. NO. H-12
(Amoco Trigg No. 1)
ELEV. 3625'
T.D. 5638'(5633' TVD)

A.R.Co.
E.A.U. NO. I-13
(Amoco State BA-1)
ELEV. 3604'
T.D. 5695'(5691' TVD)

A.R.Co.
E.A.U. NO. J-14
(Amoco State AT-3)
ELEV. 3573'
T.D. 6133'(6131' TVD)

A.R.Co.
E.A.U. NO. K-15
(A.R.Co. State AO-1)
ELEV. 3562'
T.D. 6100'(6091' TVD)



NOVEMBER 1975
DAILY AVERAGE PRODUCTION

S. I.
DCE TO HIGH
GOR

SEMU-19
10-31-76
DCE TO HIGH GOR

OIL: 230 BOPD
GAS: 367 MCF/D
WATER: 19 BWPD
GOR: 1,469 MCF/BO

OIL: 254 BOPD
GAS: 286 MCF/D
WATER: 0 BWPD
GOR: 1,042 MCF/BO

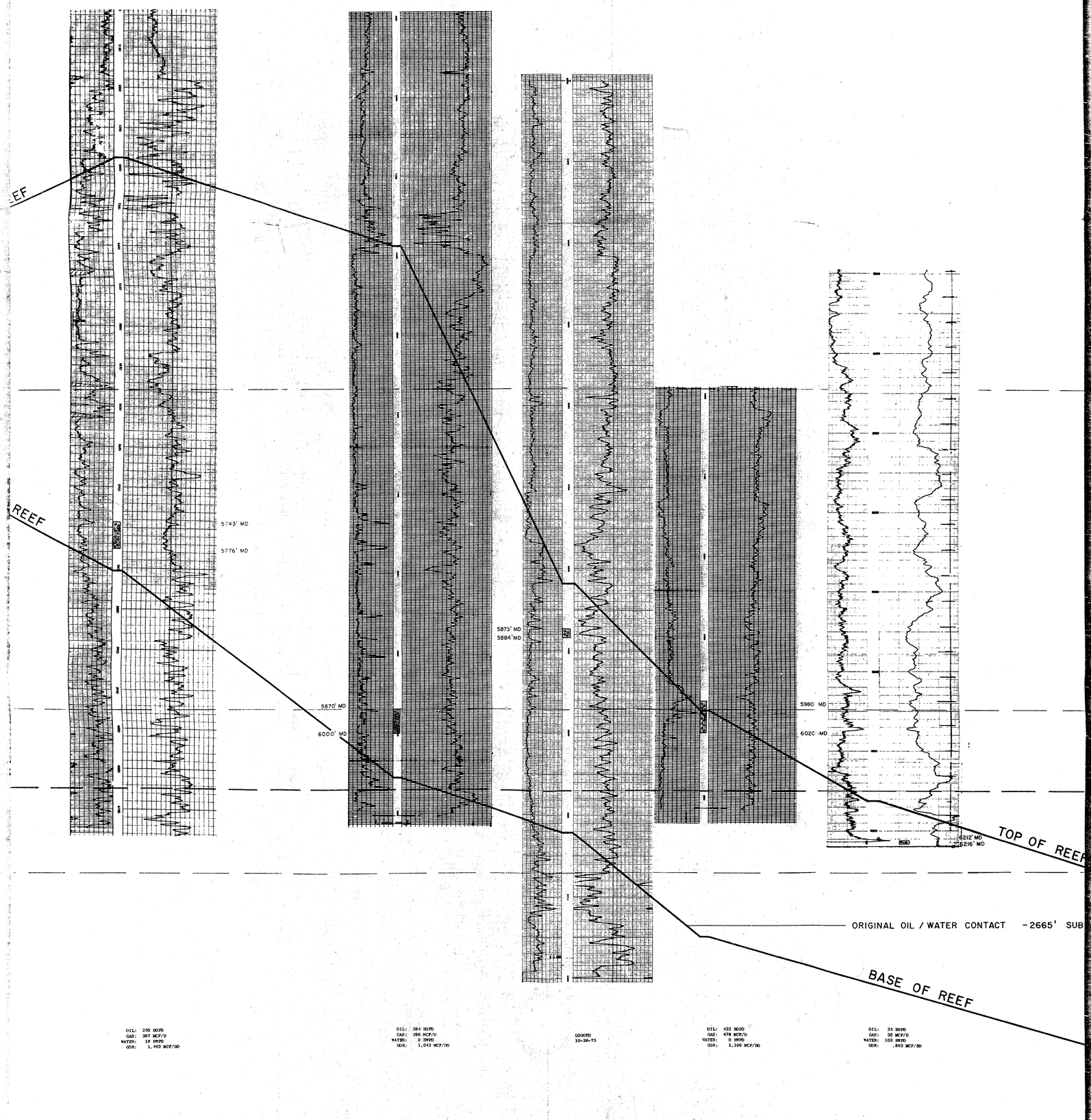
A.R.Co.
E.A.U. NO. J-14
(Amoco State AT-3)
ELEV. 3573'
T.D. 6133'(6131' TVD)

A.R.Co.
E.A.U. NO. K-15
(A.R.Co. State AO-1)
ELEV. 3562'
T.D. 6100'(6091' TVD)

A.R.Co.
E.A.U. NO. L-151
ELEV. 3567'
T.D. 6275'
(6271' TVD)

A.R.Co.
E.A.U. NO. L-16
(Gulf State 1-NCT)
ELEV. 3586'
T.D. 6115'(6109' TVD)

R.G. COX "EA" NO. 1
ELEV. 3620'
T.D. 6220' (6189' TVD)



OIL: 250 BOPD
GAS: 367 MCF/D
WATER: 19 BWPD
GOR: 1,469 MCF/BO

OIL: 384 BOPD
GAS: 296 MCF/D
WATER: 0 BWPD
GOR: 1,042 MCF/BO

LOGGED
10-26-75

OIL: 432 BOPD
GAS: 478 MCF/D
WATER: 0 BWPD
GOR: 1,106 MCF/BO

OIL: 35 BOPD
GAS: 30 MCF/D
WATER: 103 BWPD
GOR: 863 MCF/BO

Co.
U. NO. L-151
V. 3567'
6275'
71' TVD)

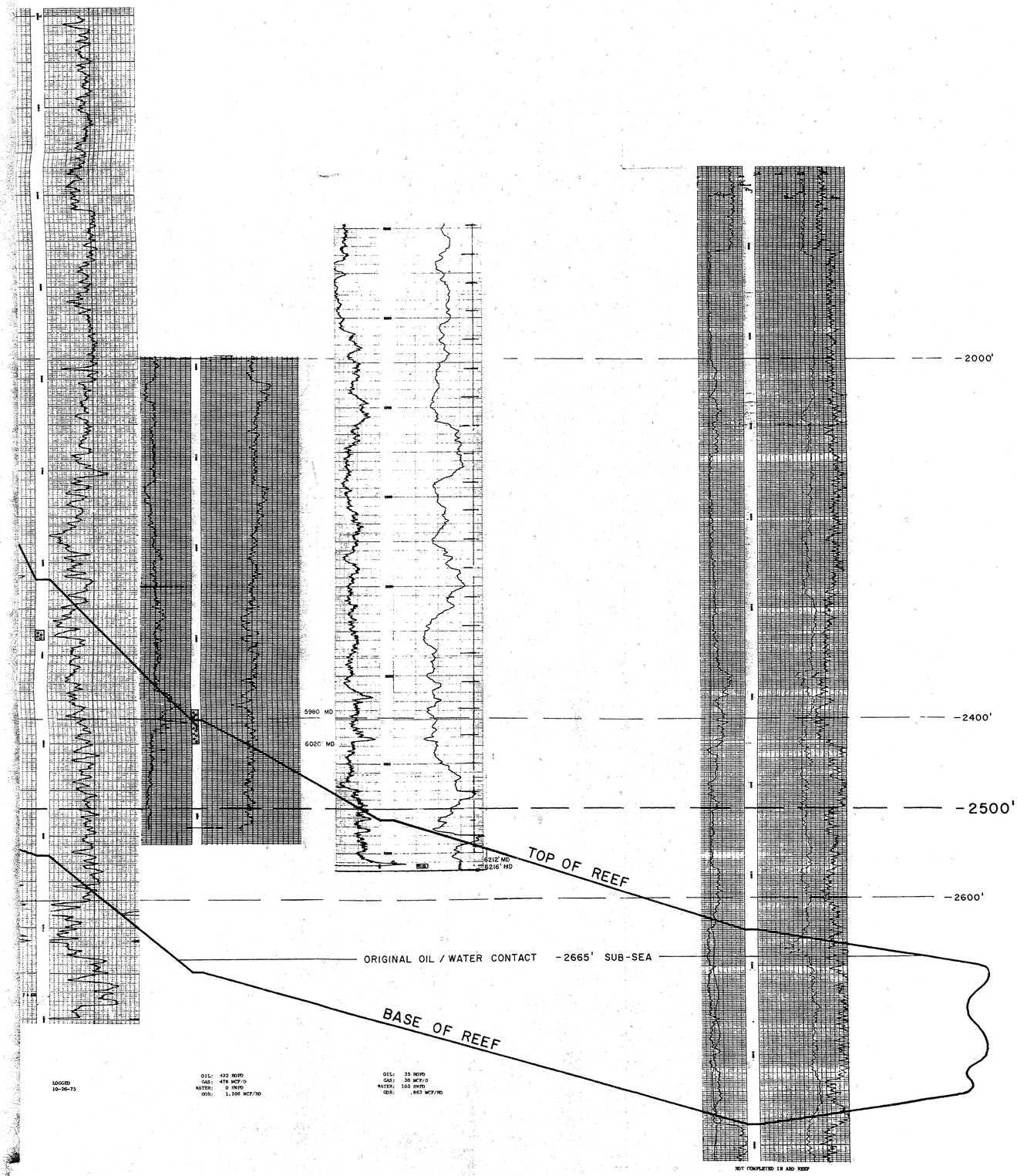
A.R.Co.
E.A.U. NO. L-16
(Gulf State 1-NCT)
ELEV. 3586'
T.D. 6115' (6109' TVD)

R.G. COX "EA" NO. 1
ELEV. 3620'
T.D. 6220' (6189' TVD)

AMOCO DIAMOND FED. NO. 1
ELEV. 3623'
T.D. 10,372' (AT 6737' MD, TVD = 6735')

SE

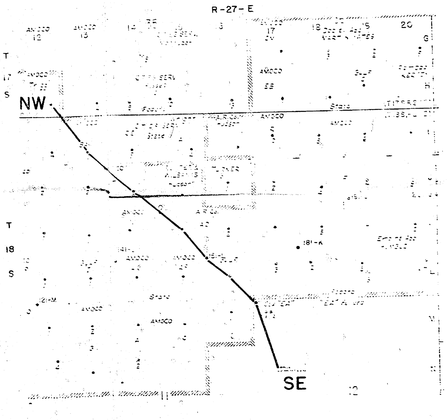
NW

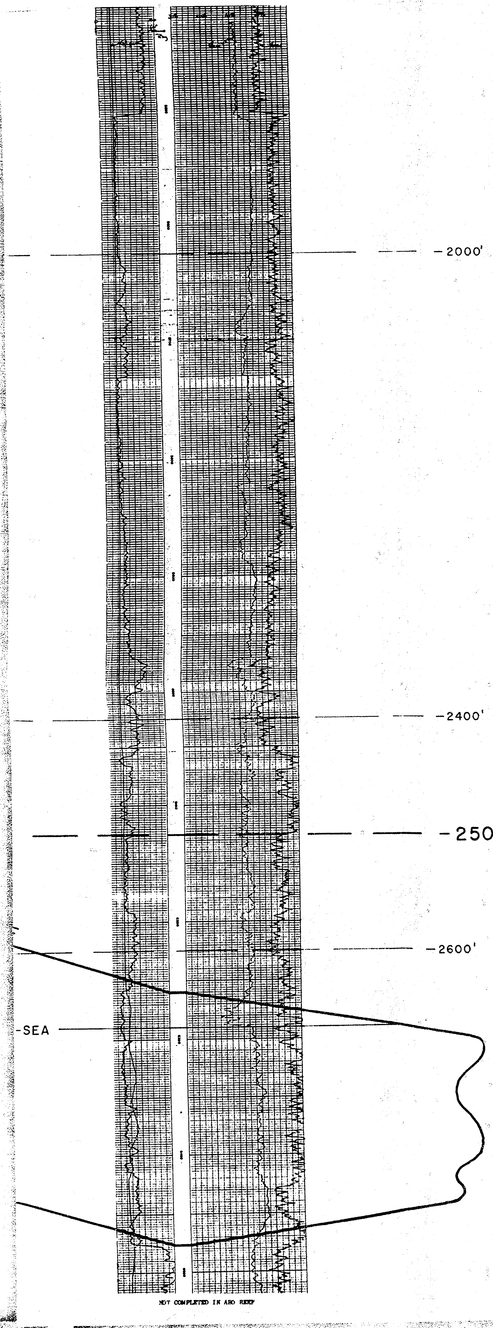


BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. EXHIBIT No. 3
Submitted by ARCO
Hearing Date 2-26-76

SE

AMOCO DIAMOND FED. NO. 1
ELEV. 3623'
T.D. 10,372' (AT 6737' MD, TVD = 6735')





AtlanticRichfieldCompany
North American Producing Division
Permian District Midland, Texas

PORTION OF EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO
NW – SE
(DATUM: – 2500' SUBSEA)

SCALE: VERTICAL 1"=40, HORIZONTAL 1"= 200'

By: TO SOMMELIER	Drawn By: MSS	Date: 11-75
Date: 11-18-75	Checked By: MSS	Date: 2-19-76
Dept: WEST AREA ENGR.	Dwg. No.	

NOT PUBLISHED CONFIDENTIAL

W

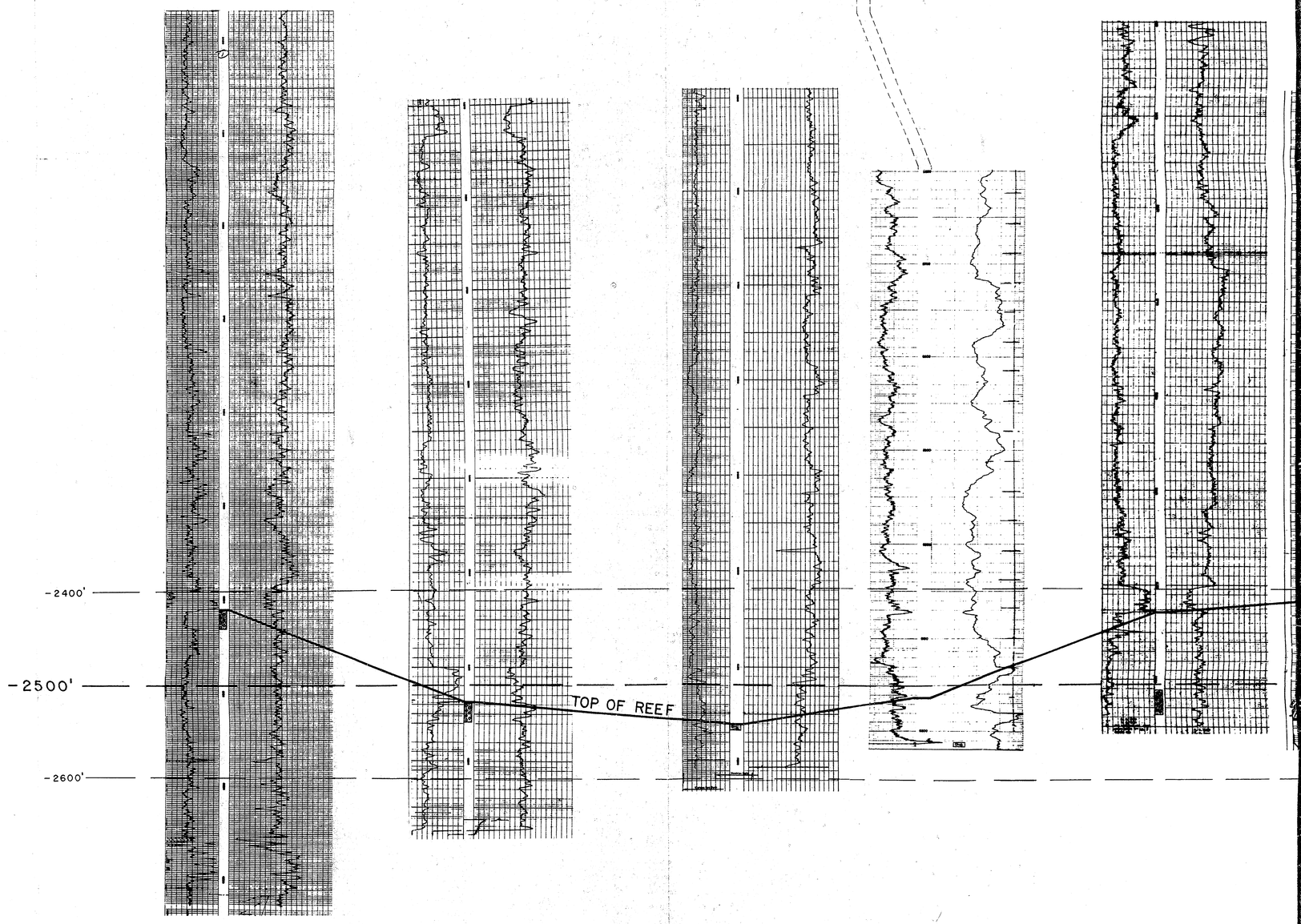
A.R.Co.
E.A.U. NO. M-14
(Amoco Malco A-1)
ELEV. 3585'
T.D. 6315'(6309' TVD)

A.R.Co
E.A.U. NO. M-15
(Amoco Malco C-1)
ELEV. 3610'
T.D. 6260' (6251' TVD)

A.R.Co.
E.A.U. NO. M-16
(Amoco Malco J-1)
ELEV. 3616'
T.D. 6211' (6209' TVD)

R.G. COX, FED. "EA" NO. 1
ELEV. 3620'
T.D. 6220' (6189' TVD)

A.R.Co.
E.A.U. NO. L-17
(Amoco Malco F-3)
ELEV. 3602'
T.D. 6150'(6147' TVD)



NOVEMBER 1975
DAILY AVERAGE PRODUCTION

REEF TOP: 6015' MD (-2424' S.S.-TVD)
PERFORATIONS: 6014'-6030' MD (-3038'-3441' S.S.-TVD)

OIL: 350 BOPD
GAS: 365 MCF/D
WATER: 18 BWPD
GOR: 1,044 MCF/BO

COMPLETED: November 1957

I. P. OIL: 84 BOPD
GAS: 126 MCF/D
WATER: 0 BWPD
GOR: 1,503 MCF/BO

REEF TOP: 6136' MD (-2517' S.S.-TVD)
PERFORATIONS: 6138'-6158' MD (-2519'-2539' S.S.-TVD)

OIL: 150 BOPD
GAS: 167 MCF/D
WATER: 42 BWPD
GOR: 1,112 MCF/BO

COMPLETED: April 1958

I. P. OIL: 73 BOPD
GAS: 106 MCF/D
WATER: 7 BWPD
GOR: 1,446 MCF/BO

REEF TOP: 6161' MD (2543' S.S.-TVD)
PERFORATIONS: 6162'-6167' MD (-2544-2549' S.S.-TVD)

OIL: 150 BOPD
GAS: 140 MCF/D
WATER: 71 BWPD
GOR: 1,064 MCF/BO

COMPLETED: August 1959

I. P. OIL: 58 BOPD
GAS: 52 MCF/D
WATER: 23 BWPD
GOR: ,894 MCF/BO

REEF TOP: 6162' MD (-2512' S.S.-TVD)
PERFORATIONS: 6212'-6216' MD (-2562'-2566' S.S.-TVD)

OIL: 35 BOPD
GAS: 30 MCF/D
WATER: 103 BWPD
GOR: ,863 MCF/BO

COMPLETED: August 1975

I. P. OIL: 34 BOPD
GAS: 30 MCF/D
WATER: 110 BWPD
GOR: ,882 MCF/BO

REEF TOP: 6026' MD (-2425' S.S.-TVD)
PERFORATIONS: 6111'-6136' MD (-2506'-2331' S.S.-TVD)

OIL: 400 BOPD
GAS: 325 MCF/D
WATER: 8 BWPD
GOR: ,814 MCF/BO

COMPLETED: July 1959

I. P. OIL: 150 BOPD
GAS: 125 MCF/D
WATER: 0 BWPD
GOR: 1,117 MCF/BO

ST. FOLDING CHT
M.A.C.F. MONOGRAPHICS

A.R.Co.
E.A.U. NO. M-16
(Amoco Malco J-1)
ELEV. 3616'
T.D. 6211' (6209' TVD)

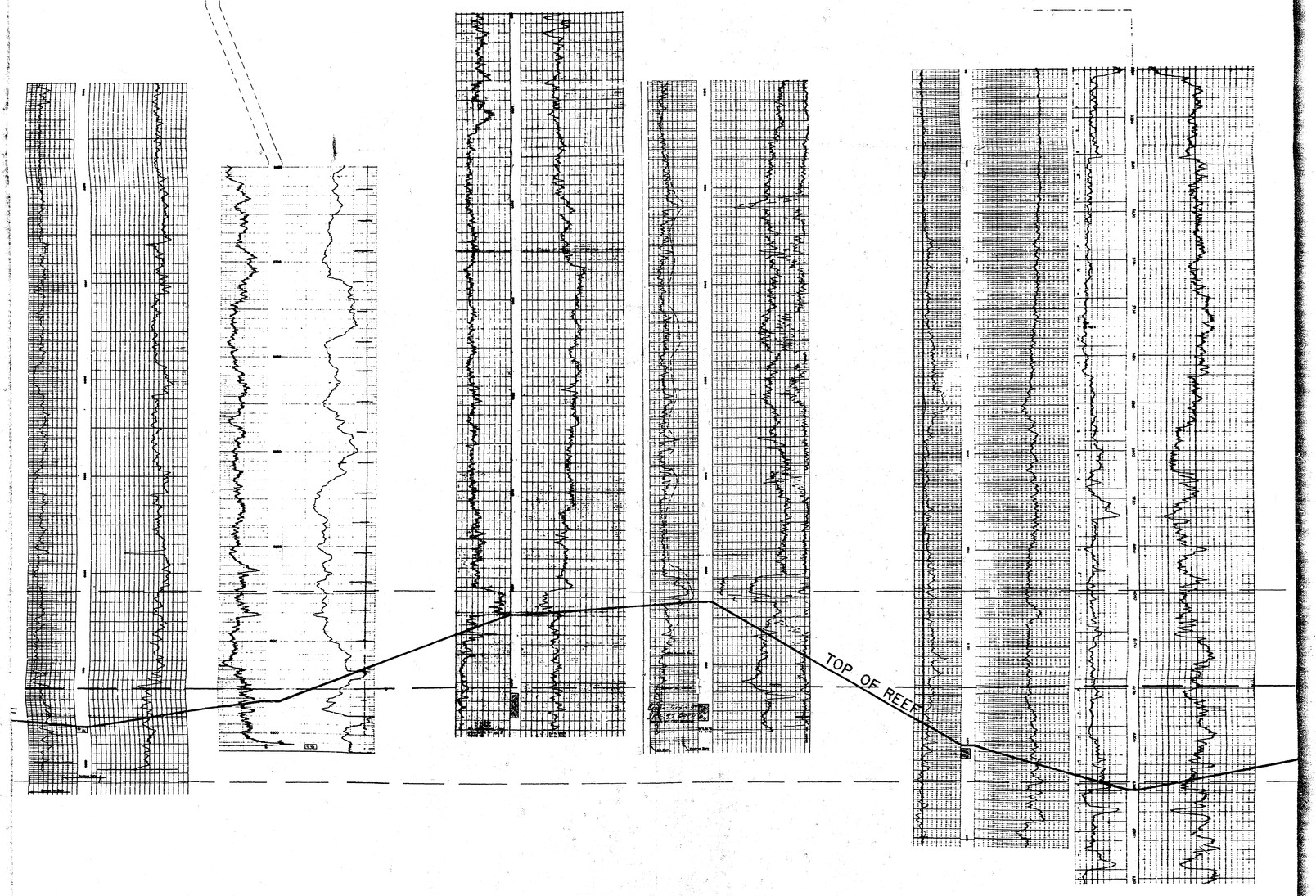
R.G. COX, FED. "EA" NO. 1
ELEV. 3620'
T.D. 6220' (6189' TVD)

A.R.Co.
E.A.U. NO. L-17
(Amoco Malco F-3)
ELEV. 3602'
T.D. 6150'(6147' TVD)

A.R.Co.
E.A.U. NO. L-18
(Amoco Malco F-12)
ELEV. 3621'
T.D. 6175' (6173' TVD)

A.R.Co.
E.A.U. NO. L-19
(Exxon Fed. No. 5)
ELEV. 3637'
T.D. 6300'(6295' TVD)

A.R.Co.
E.A.U. NO. L-19 DH
(Exxon Fed. No. 3)
ELEV. 3641'
T.D. 6365' (6360' TVD)



REEF TOP: 6161' MD (-2543' S.S.-TVD)
PERFORATIONS: 6163'-6167' MD (-2545-2549' S.S.-TVD)

OIL: 130 BOPD
GAS: 169 MCF/D
WATER: 71 BWPD
GOR: 1,064 MCF/BO

COMPLETED: August 1959

I. P. OIL: 58 BOPD
GAS: 50 MCF/D
WATER: 23 BWPD
GOR: .894 MCF/BO

REEF TOP: 6162' MD (-2513' S.S.-TVD)
PERFORATIONS: 6213'-6216' MD (-2563'-2566' S.S.-TVD)

OIL: 35 BOPD
GAS: 30 MCF/D
WATER: 103 BWPD
GOR: .863 MCF/BO

COMPLETED: August 1975

I. P. OIL: 34 BOPD
GAS: 30 MCF/D
WATER: 110 BWPD
GOR: .883 MCF/BO

REEF TOP: 6030' MD (-2455' S.S.-TVD)
PERFORATIONS: 6111'-6138' MD (-3506'-2533' S.S.-TVD)

OIL: 400 BOPD
GAS: 325 MCF/D
WATER: 8 BWPD
GOR: .814 MCF/BO

COMPLETED: July 1959

I. P. OIL: 110 BOPD
GAS: 125 MCF/D
WATER: 0 BWPD
GOR: 1.137 MCF/BO

REEF TOP: 6034' MD (-3411' S.S.-TVD)
PERFORATIONS: 6142'-6160' MD (-2519'-2537' S.S.-TVD)

OIL: 450 BOPD
GAS: 377 MCF/D
WATER: 0 BWPD
GOR: .839 MCF/BO

COMPLETED: November 1951

I. P. OIL: 97 BOPD
GAS: 51 MCF/D
WATER: 0 BWPD
GOR: .553 MCF/BO

REEF TOP: 6003' MD (-2561' S.S.-TVD)
PERFORATIONS: 6007'-6217' MD (-2565'-2575' S.S.-TVD)

OIL: 80 BOPD
GAS: 70 MCF/D
WATER: 13 BWPD
GOR: .877 MCF/BO

COMPLETED: April 1971

I. P. OIL: 80 BOPD
GAS: 89 MCF/D
WATER: 26 BWPD
GOR: 1.106 MCF/BO

REEF TOP: 6255' MD (-3009' S.S.-TVD)
PERFORATIONS: D-A

MAP FEATURE CUT
U.S.G.S. TOPOGRAPHIC

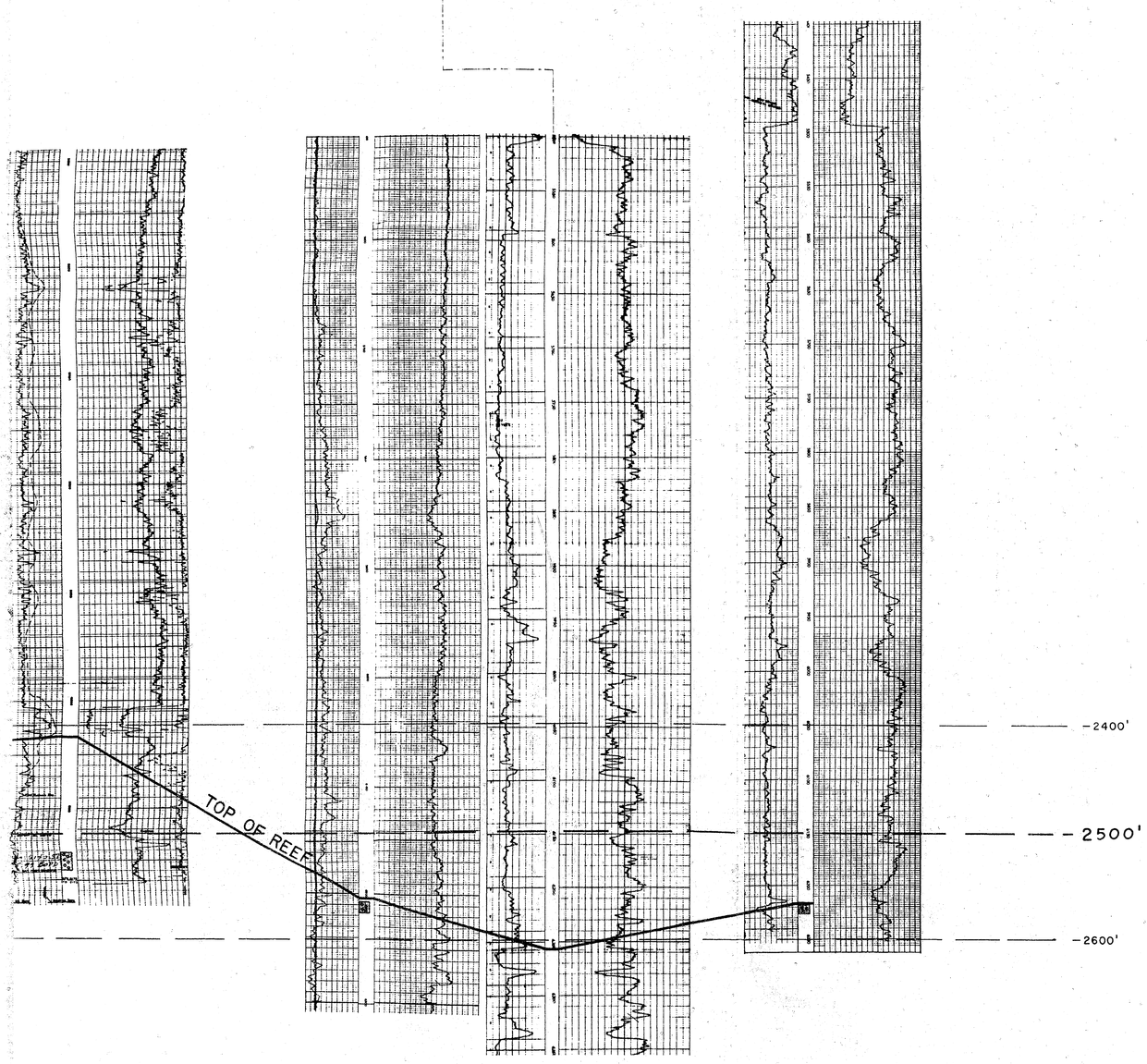
E

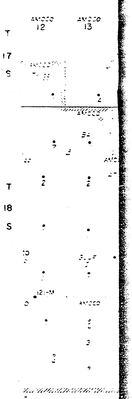
A.R.Co.
E.A.U. NO. L-18
(Amoco Malco F-12)
ELEV. 3621'
T.D. 6175' (6173' TVD)

A.R.Co.
E.A.U. NO. L-19
(Exxon Fed. No. 5)
ELEV. 3637'
T.D. 6300' (6295' TVD)

A.R.Co.
E.A.U. NO. L-19 DH
(Exxon Fed. No. 3)
ELEV. 3641'
T.D. 6365' (6360' TVD)

A.R.Co.
E.A.U. NO. L-20
(Exxon Fed. No. 4)
ELEV. 3647'
T.D. 6250' (6247' TVD)





REEF TOP: 6034' MD (-3411' S.S.-TVD)
PERFORATIONS: 6140'-6160' MD (-2519'-2537' S.S.-TVD)

OIL: 450 BOPD
GAS: 377 MCF/D
WATER: 0 BWPD
GOR: .839 MCF/BO

COMPLETED: November 1951

P. OIL: 97 BOPD
GAS: 51 MCF/D
WATER: 0 BWPD
GOR: .523 MCF/BO

REEF TOP: 6203' MD (-3581' S.S.-TVD)
PERFORATIONS: 6207'-6217' MD (-2565'-2575' S.S.-TVD)

OIL: 80 BOPD
GAS: 70 MCF/D
WATER: 13 BWPD
GOR: .877 MCF/BO

COMPLETED: April 1971

I. P. OIL: 80 BOPD
GAS: 69 MCF/D
WATER: 26 BWPD
GOR: 1,108 MCF/BO

REEF TOP: 6255' MD (-3609' S.S.-TVD)
PERFORATIONS: N/A

REEF TOP: 6216' MD (-3568' S.S.-TVD)
PERFORATIONS: 6218'-6226' MD (-2568'-2576' S.S.-TVD)

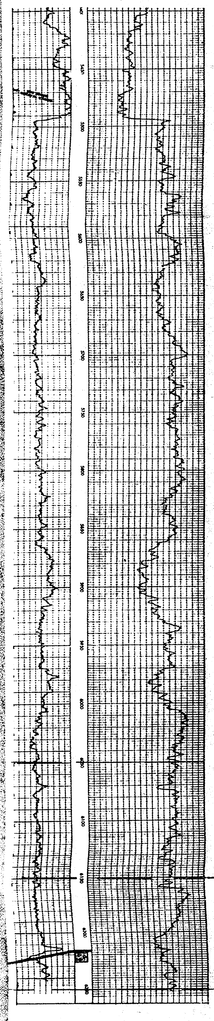
OIL: 284 BOPD
GAS: 250 MCF/D
WATER: 3 BWPD
GOR: .879 MCF/BO

COMPLETED: December 1961

I. P. OIL: 44 BOPD
GAS: 40 MCF/D
WATER: 82 BWPD
GOR: .931 MCF/BO

E

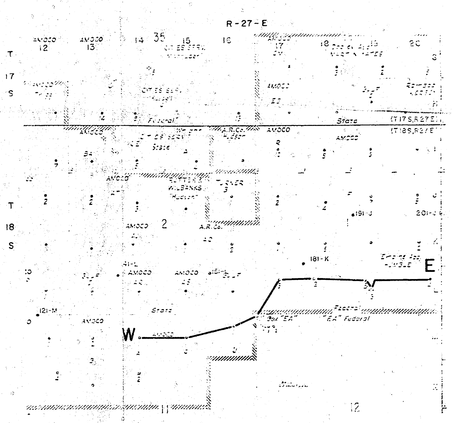
A.R.Co.
E.A.U. NO. L-20
(Exxon Fed. No. 4)
ELEV. 3647'
T.D. 6250'(6247' TVD)



-2400'

-2500'

-2600'



AtlanticRichfieldCompany
North American Producing Division
Permian District Midland, Texas

PORTION OF EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO
W-E
(DATUM: -2500' SUBSEA)

SCALE: VERTICAL 1"=40' HORIZONTAL 1"=200'

Dr.	E.D. SOMMERS	Drawn No.	MSS Date: 11-75
Date	11-14-75	Revised No.	MSS Date: 2-19-76
Dept.	WEST AREA ENGR	Dwg. No.	

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. _____ Exhibit No. 4
Submitted by A.R.Co.
Hearing Date 2-24-76

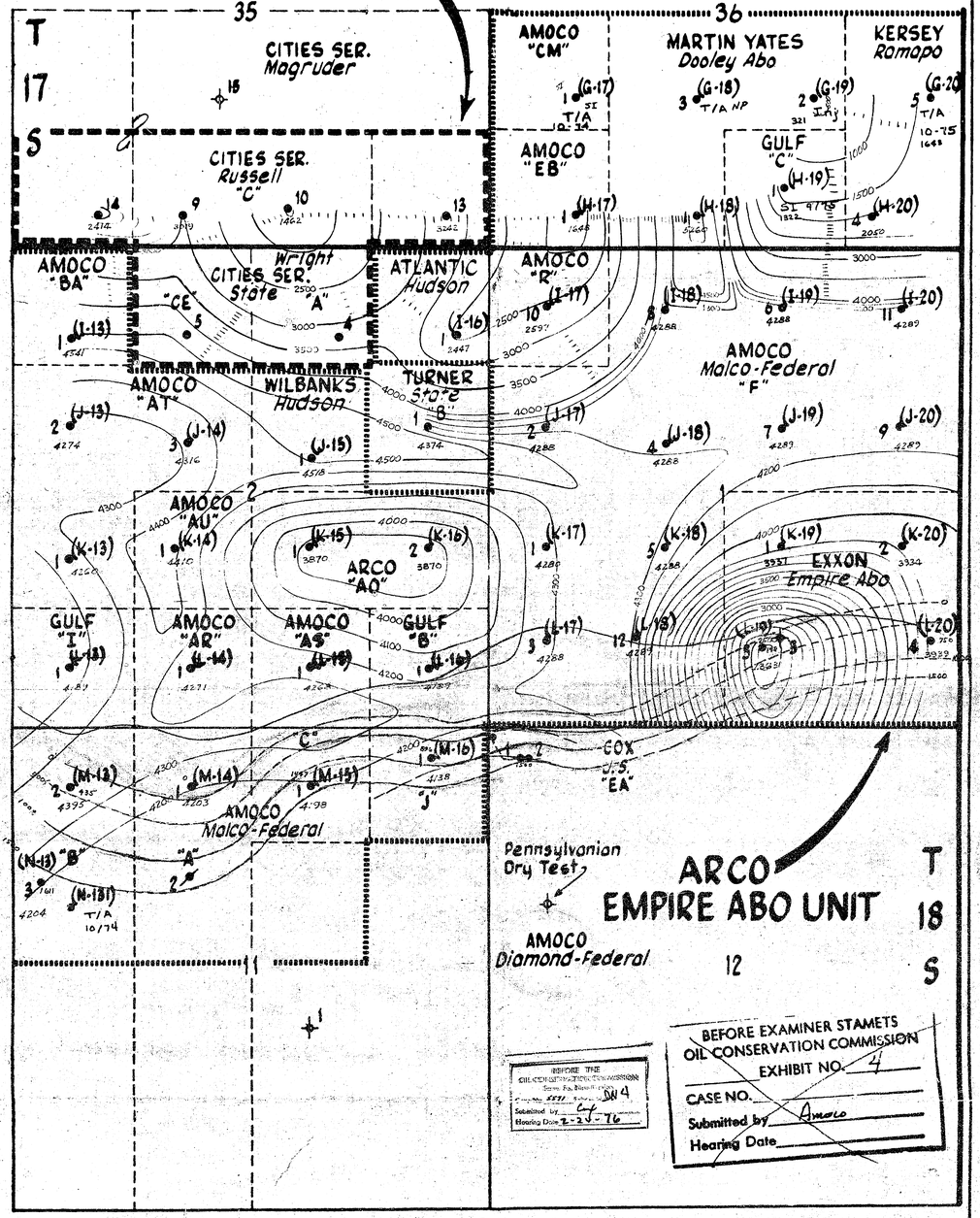
RKB TOP: 6216' MD (-2566' S.S.-TVD)
PERFORATIONS: 6218'-6226' MD (-2568'-2576' S.S.-TVD)

OIL: 384 BOPD
GAS: 590 MCF/D
WATER: 3 BWPD
GOR: .879 MCF/BO

COMPLETED: December 1961

I. P. OIL: 44 BOPD
GAS: 42 MCF/D
WATER: 82 BWPD
GOR: .951 MCF/BO

CITGO
EMPIRE ABO UNIT



BEFORE THE OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5771 Exhibit No. SN 4
Submitted by Ctf
Hearing Date 2-27-76

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO.
Submitted by Amoco
Hearing Date

OIL PRODUCTION
SEPTEMBER 1973

Contour Interval 100 BOPMonth
500 BWP Month

0 1000 2000 3000 4000
SCALE IN FEET

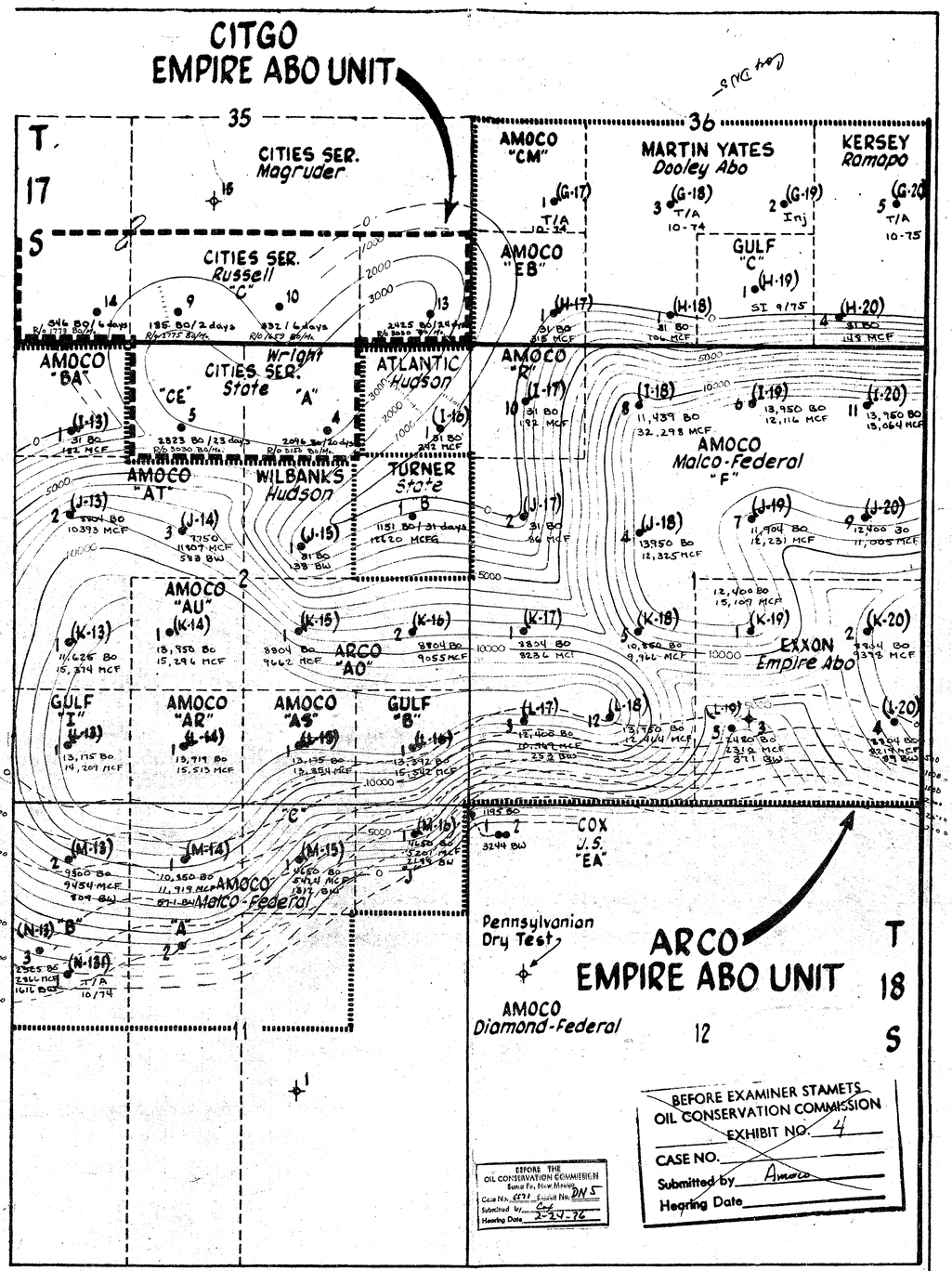
R - 27 - E

PORTION
of
EMPIRE ABO POOL
Eddy County, New Mexico

Cont Dn 4

Cont'd

U.N.M.G.P. MICROGRAPHICS
BEST AVAILABLE COPY



FLUID & GAS PRODUCTION
OCTOBER 1975

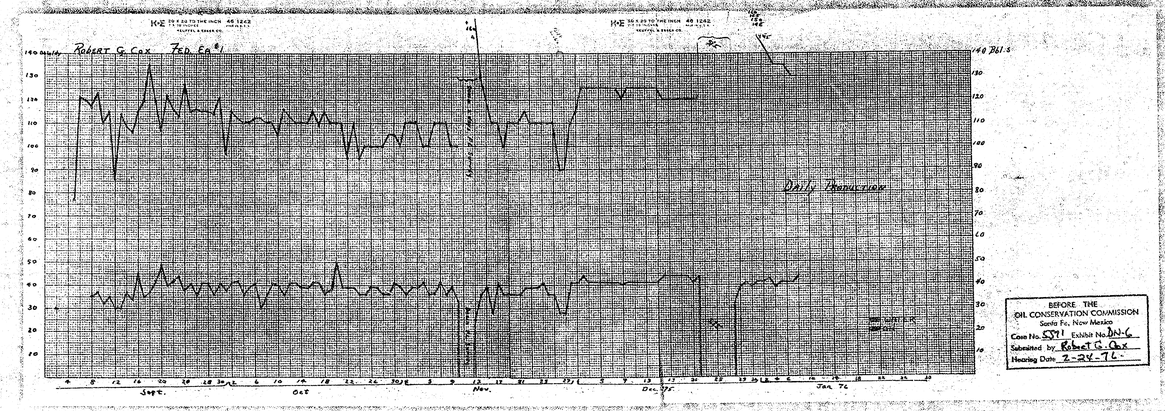
R - 27 - E

Contour Interval : 1000 BOP Month
: 500 BWP Month

0 1000 2000 3000 4000
SCALE IN FEET

PORTION
of
EMPIRE ABO POOL
Eddy County, New Mexico

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



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5971 Exhibit No. Ox-6
Submitted by Robert G. Cox
Hearing Date 2-24-76.

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

WEST
A

HUMBLE OIL AND REFINING COMPANY
NO. 5 EMPIRE-FEDERAL-ABO (L-19)
ELEVATION 3637' K.B.

220' ±

HUMBLE OIL AND REFINING COMPANY
NO. 3 EMPIRE-FEDERAL-ABO
ELEVATION 3641' K.B.

1650' ±

HUMBLE OIL AND REFINING COMPANY
NO. 4 EMPIRE-FEDERAL-ABO (L-20)
ELEVATION 3647' K.B.

EAST
A'

DATUM
BONE SPRINGS CORRELATION POINT

TOP
ABO REEF

-2473

Rec. 50 SWCW

Rec. 30 SWCW

Rec. 1170 SW

IP: P 125 BOPD + 41 BWPD

IP: F 149 BOPD + 271 BWPD

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5871 Exhibit No. 24
Submitted by Robert A. Cox
Hearing Date 2-24-76

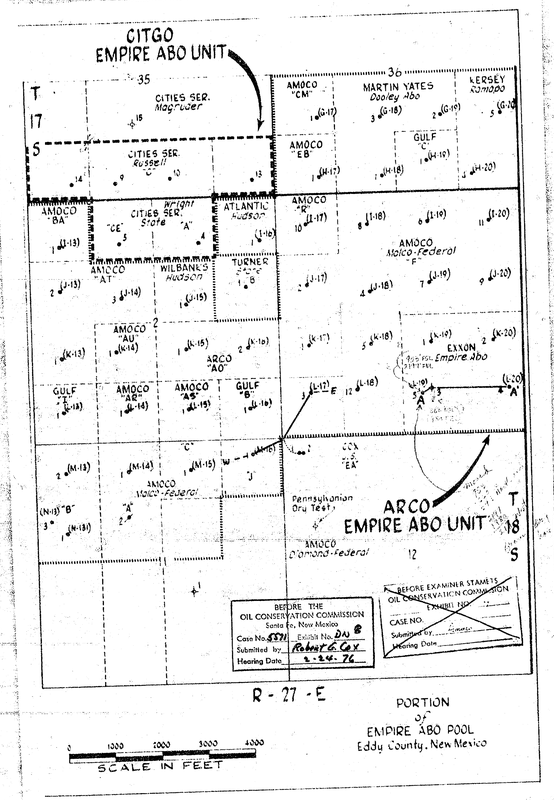
CROSS SECTION A-A'
WEST TO EAST
EMPIRE ABO FIELD
EDDY COUNTY, NEW MEXICO

DATUM- BONE SPRINGS CORRELATION POINT
HORIZONTAL SCALE: 1" = 50' (APPROXIMATE)
VERTICAL SCALE: 1" = 40'

FEBRUARY, 1976
DALLAS, TEXAS

H J. GRUY AND ASSOCIATES, INC.

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



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

W

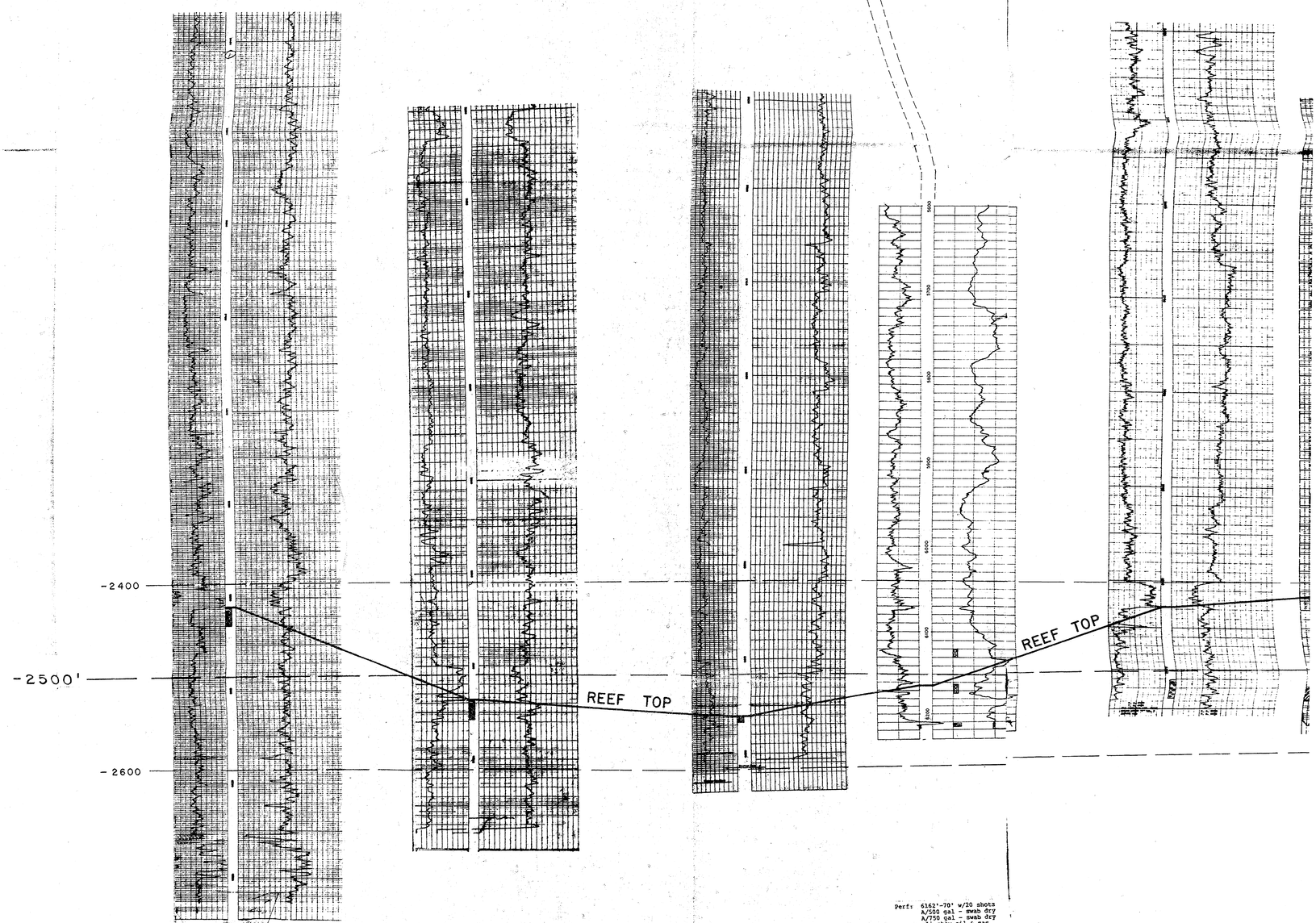
A.R.Co.
E.A.U. NO. M-14
(Amoco Malco A-1)
ELEV. 3585'
T.D. 6314'

A.R.Co
E.A.U. NO. M-15
(Amoco Malco C-1)
ELEV. 3610'
T.D. 6166'

A.R.Co.
E.A.U. NO. M-16
(Amoco Malco J-1)
ELEV. 3616'
T.D. 6211'

R.G. COX, FED. "EA" NO. 1
ELEV. 3620'
T.D. 6220' (6190' TVD)

A.R.Co.
E.A.U. NO. L-17
(Amoco Malco F-3)
ELEV. 3602'
T.D. 6150'



* — JUNE 1975 DAILY AVERAGE PRODUCTION

** — SEPTEMBER 1975 DAILY AVERAGE PRODUCTION

* REEF TOP: 6015' (-2430' S.S.)
PERFORATIONS: 6014'-6030' (-2434'-2450' S.S.)
OIL: 300 BOPD
GAS: 303 MCF/D
WATER: 16 BWPD
GOR: 1,011 MCF/BO
COMPLETED: November 1957
I. P. OIL: 84 BOPD
GAS: 126 MCF/D
WATER: 0 BWPD
GOR: 1,503 MCF/BO

* REEF TOP: 6136' (-2526' S.S.)
PERFORATIONS: 6138'-6158' (-2528'-2548' S.S.)
OIL: 190 BOPD
GAS: 162 MCF/D
WATER: 42 BWPD
GOR: 1,078 MCF/BO
COMPLETED: April 1958
I. P. OIL: 73 BOPD
GAS: 106 MCF/D
WATER: 7 BWPD
GOR: 1,466 MCF/BO

* REEF TOP: 6161' 42543' S.S.)
PERFORATIONS: 6162'-6167' (-2546'-2551' S.S.)
OIL: 126 BOPD
GAS: 126 MCF/D
WATER: 50 BWPD
GOR: 1,000 MCF/BO
COMPLETED: August 1959
I. P. OIL: 56 BOPD
GAS: 52 MCF/D
WATER: 23 BWPD
GOR: .894 MCF/BO

** Perf: 6162'-70' w/20 shots
A/500 gal - swab dry
A/750 gal - swab dry
sli show oil & gas
A/10,000 gal 15% - swb'd
dry - no fluid entry -
313 bbls load to recover
Perf: 6120'-30' w/20 shots
A/1500 gal swb'd dry -
no show
REEF TOP: 6163' (-2512' S.S.)
PERFORATIONS: 6213'-6216' (-2562'-2566' S.S.)
OIL: 35 BOPD
GAS: 30 MCF/D
WATER: 110 BWPD
GOR: 857 MCF/BO
COMPLETED: August 1975
I. P. OIL: 34 BOPD
GAS: 30 MCF/D
WATER: 110 BWPD
GOR: .882 MCF/BO

* REEF TOP: 6090' (-2428' S.S.)
PERFORATIONS: 6111'-6136' (-2509'-2534' S.S.)
OIL: 400 BOPD
GAS: 312 MCF/D
WATER: 8 BWPD
GOR: .780 MCF/BO
COMPLETED: July 1959
I. P. OIL: 110 BOPD
GAS: 132 MCF/D
WATER: 0 BWPD
GOR: 1,117 MCF/BO

DN-9

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5971 Exhibit No. 9
Submitted by Robert G. Cox
Hearing Date 3-24-76

9

A.R.Co.
E.A.U. NO. M-16
(Amoco Malco J-1)
ELEV. 3616'
T.D. 6211'

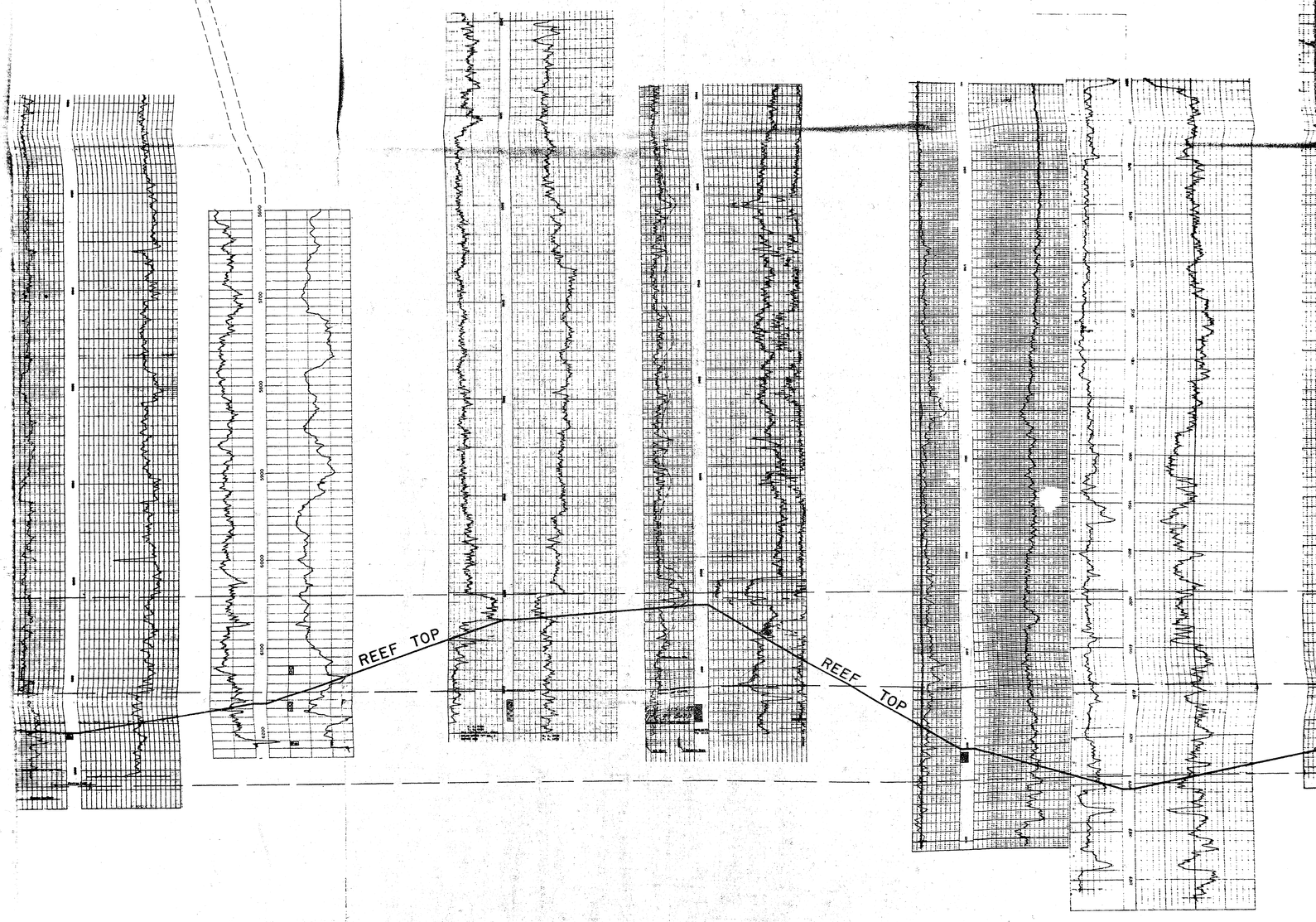
R.G. COX, FED. "EA" NO. 1
ELEV. 3620'
T.D. 6220' (6190' TVD)

A.R.Co.
E.A.U. NO. L-17
(Amoco Malco F-3)
ELEV. 3602'
T.D. 6150'

A.R.Co.
E.A.U. NO. L-18
(Amoco Malco F-12)
ELEV. 3621'
T.D. 6171'

A.R.Co.
E.A.U. NO. L-19
(Exxon Fed. No. 5)
ELEV. 3637'
T.D. 6280'

A.R.Co.
E.A.U. NO. L-19 DH
(Exxon Fed. No. 3)
ELEV. 3641'
T.D. 6365'



REEF TOP: 6141' (-2545' S.S.)
PERFORATIONS: 6162'-6167' (-2546'-2551' S.S.)

OIL: 198 BOPD
GAS: 130 MCF/D
WATER: 59 BWPD
GOR: 1,000 MCF/BO

COMPLETED: August 1959

I. P. OIL: 58 BOPD
GAS: 52 MCF/D
WATER: 33 BWPD
GOR: .894 MCF/BO

Perf: 6162'-70' w/20 shots
A/500 gal - swab dry
A/750 gal - swab dry
A/1,000 gal 15% mud-d
A/1,000 gal 15% swb'd
dry - no fluid entry -
3½ bbls load to recover
Perf: 6120'-30' w/20 shots
A/1000 gal swb'd dry -
no show

REEF TOP: 6163' (-3512' S.S.)
PERFORATIONS: 6212'-6216' (-3562'-3566' S.S.)

OIL: 35 BOPD
GAS: 30 MCF/D
WATER: 110 BWPD
GOR: .857 MCF/BO

COMPLETED: August 1975

I. P. OIL: 34 BOPD
GAS: 30 MCF/D
WATER: 110 BWPD
GOR: .882 MCF/BO

REEF TOP: 6030' (-2438' S.S.)
PERFORATIONS: 6112'-6136' (-2508'-2534' S.S.)

OIL: 400 BOPD
GAS: 312 MCF/D
WATER: 8 BWPD
GOR: .780 MCF/BO

COMPLETED: July 1959

I. P. OIL: 110 BOPD
GAS: 123 MCF/D
WATER: 0 BWPD
GOR: 1,117 MCF/BO

REEF TOP: 6034' (-2413' S.S.)
PERFORATIONS: 6142'-6160' (-2522'-2539' S.S.)

OIL: 150 BOPD
GAS: 363 MCF/D
WATER: 0 BWPD
GOR: 2,4,6 MCF/BO

COMPLETED: November 1951

I. P. OIL: 97 BOPD
GAS: 51 MCF/D
WATER: 0 BWPD
GOR: .525 MCF/BO

REEF TOP: 6202' (-2584' S.S.)
PERFORATIONS: 6207'-6217' (-2570'-2580' S.S.)

OIL: 80 BOPD
GAS: 67 MCF/D
WATER: 12 BWPD
GOR: .843 MCF BO

COMPLETED: April 1971

I. P. OIL: 60 BOPD
GAS: 89 MCF D
WATER: 26 BWPD
GOR: 1,108 MCF/BO

REEF TOP: 6250' (-2614' S.S.)
PERFORATIONS: D-A

DN-9

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5971 Exhibit No. 9
Submitted by Robert C. Cox
Hearing Date 2-24-76

9

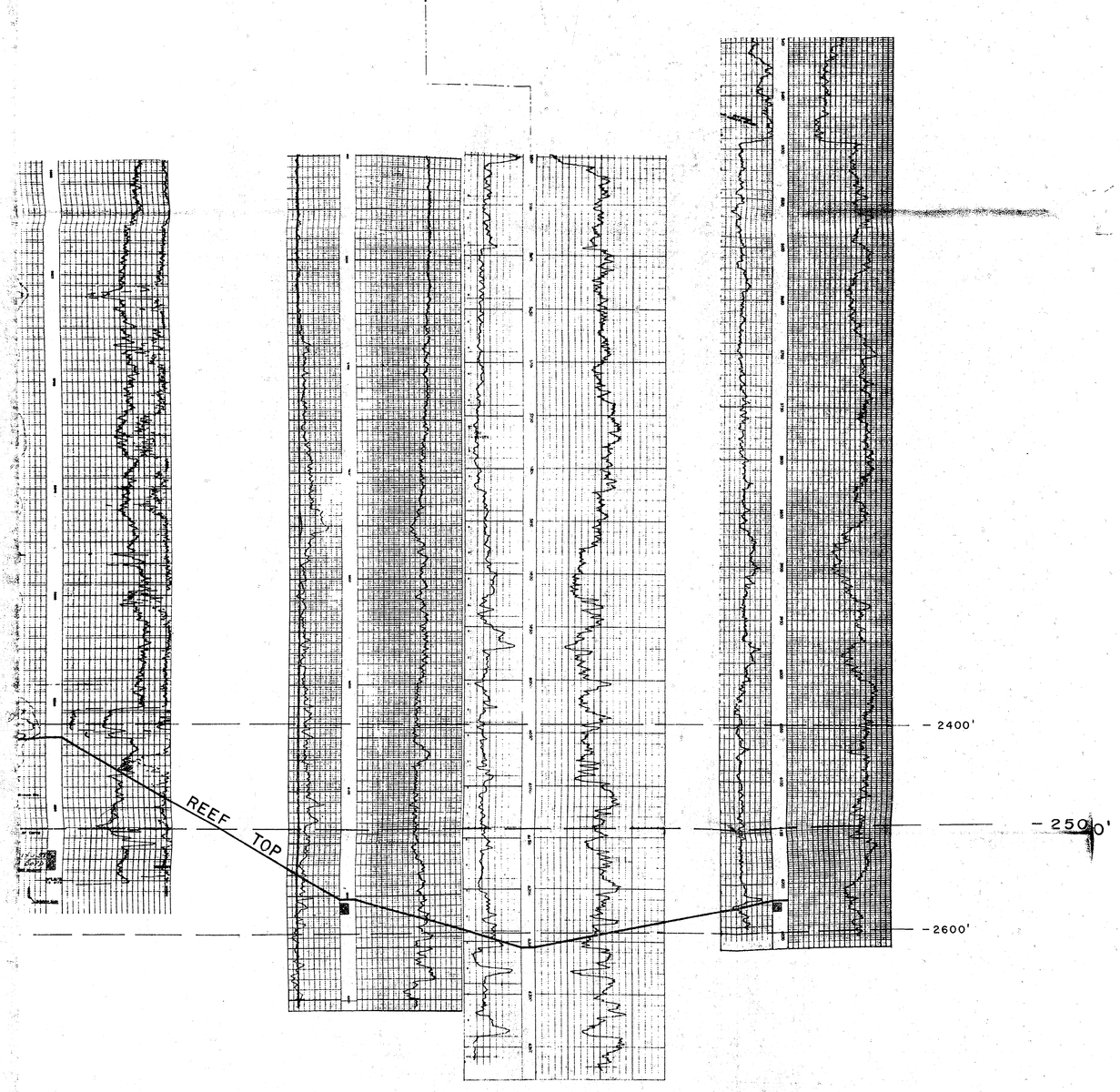
E

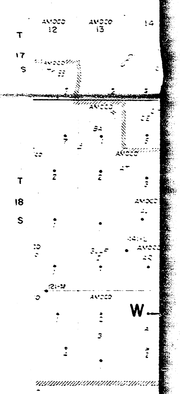
.R.Co.
.A.U. NO. L-18
Amoco Malco F-12)
LEV. 3621'
.D. 6171'

A.R.Co.
E.A.U. NO. L-19
(Exxon Fed. No. 5)
ELEV. 3637'
T.D. 6280'

A.R.Co.
E.A.U. NO. L-19 DH
(Exxon Fed. No. 3)
ELEV. 3641'
T.D. 6365'

A.R.Co.
E.A.U. NO. L-20
(Exxon Fed. No. 4)
ELEV. 3647'
T.D. 6250'





...TOP: 6034' (-2413' S.S.)
...ATIONS: 6142'-6160' (-2521'-2539' S.S.)

OIL: 450 BOPD
GAS: 363 MCF/D
WATER: 0 BWPD
GOR: .806 MCF/BO

...MPLETED: November 1951

I. P. OIL: 97 BOPD
GAS: 51 MCF/D
WATER: 0 BWPD
GOR: .533 MCF/BO

REEF TOP: 6203' (-2566' S.S.)
PERFORATIONS: 6207'-6217' (-2570'-2580' S.S.)

OIL: 80 BOPD
GAS: 87 MCF/D
WATER: 12 BWPD
GOR: .963 MCF/BO

COMPLETED: April 1971

I. P. OIL: 80 BOPD
GAS: 89 MCF/D
WATER: 26 BWPD
GOR: 1,108 MCF/BO

REEF TOP: 6255' (-2614' S.S.)
PERFORATIONS: N/A

REEF TOP: 6316' (-2569' S.S.)
PERFORATIONS: 6316'-6326' (-2571'-2579' S.S.)

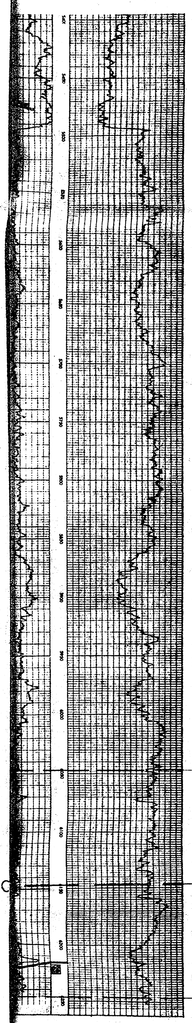
OIL: 284 BOPD
GAS: 562 MCF/D
WATER: 3 BWPD
GOR: 1,991 MCF/BO

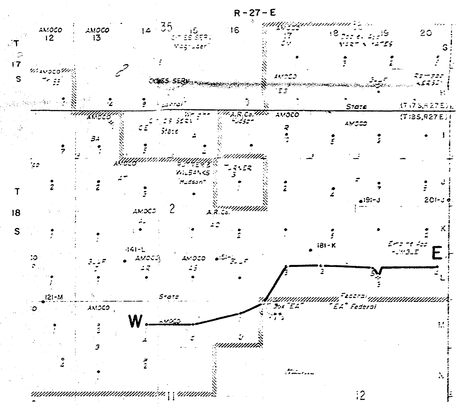
COMPLETED: December 1961

I. P. OIL: 44 BOPD
GAS: 42 MCF/D
WATER: 82 BWPD
GOR: .955 MCF/BO

E

A.R.Co.
E.A.U. NO. L-20
(Exxon Fed. No. 4)
ELEV. 3647'
T.D. 6250'





RESV TOP: 6216' (-2569' S.S.)
PERFORATIONS: 6218'-6236' -2571'-2579' S.S.)

* — JUNE 19 DAILY A
OIL: 384 BOPD
GAS: 502 MCF/D
WATER: 2 BWPD
GOR: 1,981 MCF /BO

COMPLETED: December 1961

** — SEPTEMB DAILY AV. P.
OIL: 44 BOPD
GAS: 43 MCF /D
WATER: #2 BWPD
GOR: .951 MCF /BO

AtlanticRichfieldCompany
North American Producing Division
Permian District Midland, Texas

PORTION OF EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO

(DATUM: -2500' SUBSEA)

SCALE: VERTICAL 1"=40' HORIZONTAL 1"= 200'

Dr.	E.D. SYMMERS	Drawn No.	M.S.S.
Date	11-14-79	Sheet No.	
From	WEST AREA ENGR	Dwg. No.	

NW

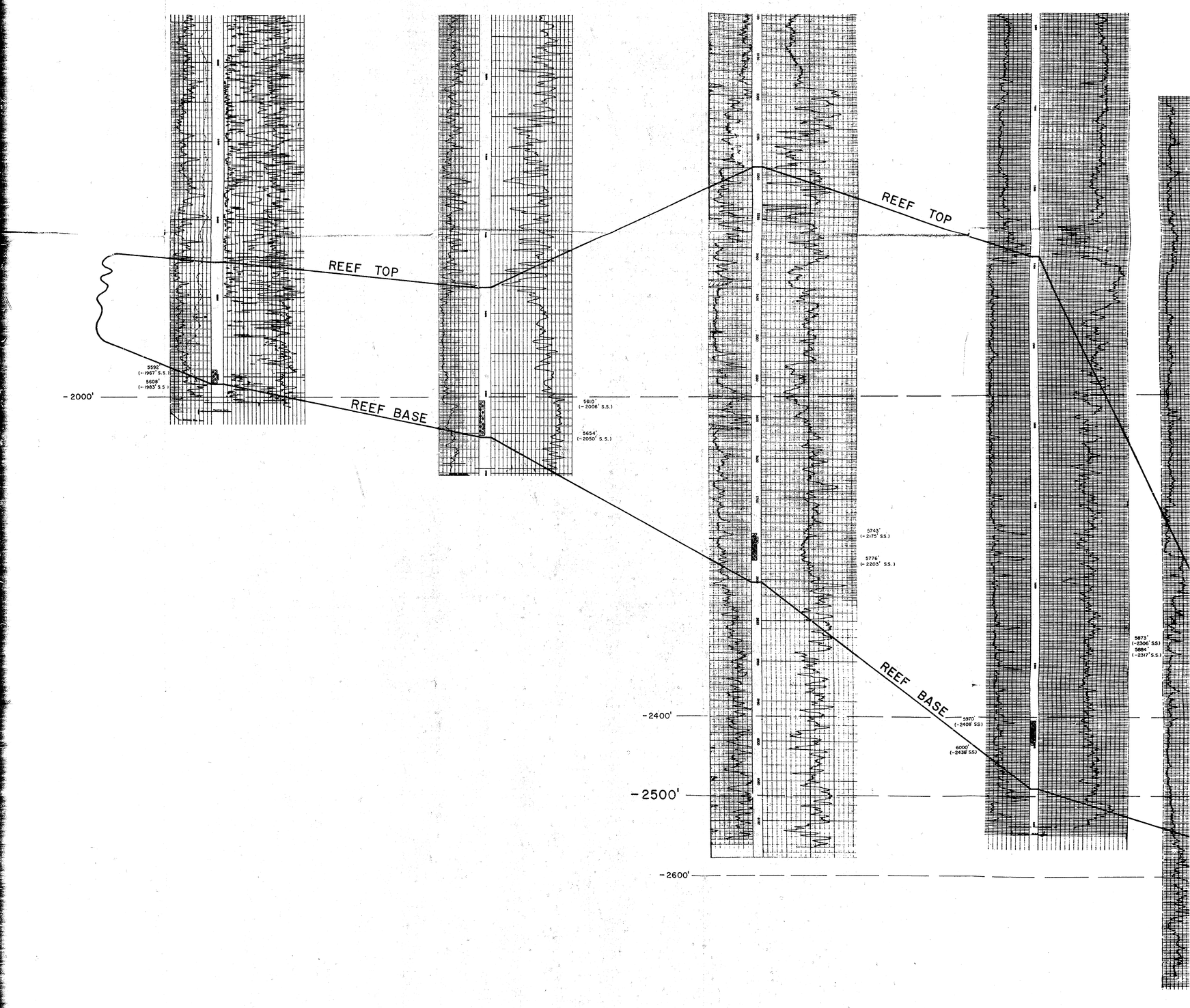
A.R.Co.
E.A.U. NO. H-12
(Amoco Trigg No. 1)
ELEV. 3625'
T.D. 5640'

A.R.Co.
E.A.U. NO. I-13
(Amoco State BA-1)
ELEV. 3604'
T.D. 5690'

A.R.Co.
E.A.U. NO. J-14
(Amoco State AT-3)
ELEV. 3573'
T.D. 6123'

A.R.Co.
E.A.U. NO. K-15
(A.R.Co. State AO-1)
ELEV. 3562'
T.D. 6100'

A.R.C
E.A.
ELEV
T.D.



SEPTEMBER 1973
DAILY AVERAGE PRODUCTION

S. I.
DUE TO HIGH
GOR

OIL: 1 BOPD
GAS: 6 MCF/D
WATER: 0 BWPD
GOR: 6 MCF/BO

OIL: 250 BOPD
GAS: 336 MCF/D
WATER: 19 BWPD
GOR: 1,430 MCF/BO

OIL: 284 BOPD
GAS: 383 MCF/D
WATER: 0 BWPD
GOR: 1,004 MCF/BO

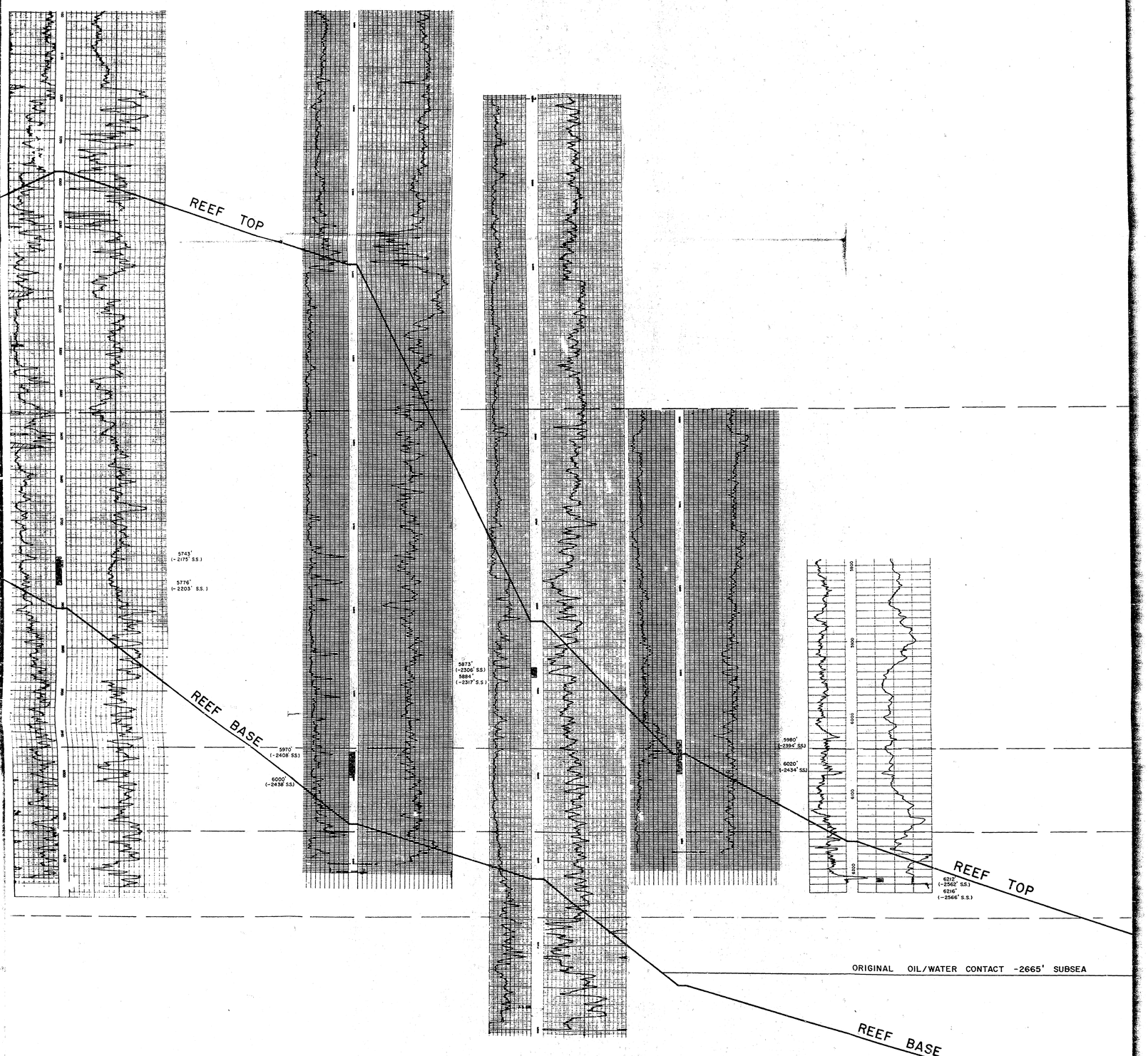
A.R.Co.
E.A.U. NO. J-14
(Amoco State AT-3)
ELEV. 3573'
T.D. 6123'

A.R.Co.
E.A.U. NO. K-15
(A.R.Co. State AO-1)
ELEV. 3562'
T.D. 6100'

A.R.Co.
E.A.U. NO. L-151
ELEV. 3567'
T.D. 6275'

A.R.Co.
E.A.U. NO. L-16
(Gulf State 1-NCT)
ELEV. 3586'
T.D. 6115'

R.G. COX "EA" NO. 1
ELEV. 3620'
T.D. 6220' (6190' TVD)



OIL: 230 BOPD
GAS: 356 MCF/D
WATER: 19 BWPD
GOR: 1,430 MCF/BO

OIL: 284 BOPD
GAS: 283 MCF/D
WATER: 0 BWPD
GOR: 1,004 MCF/BO

LOGGED
10-26-73

OIL: 432 BOPD
GAS: 461 MCF/D
WATER: 0 BWPD
GOR: 1,067 MCF/BO

OIL: 35 BOPD
GAS: 30 MCF/D
WATER: 110 BWPD
GOR: .857 MCF/BO

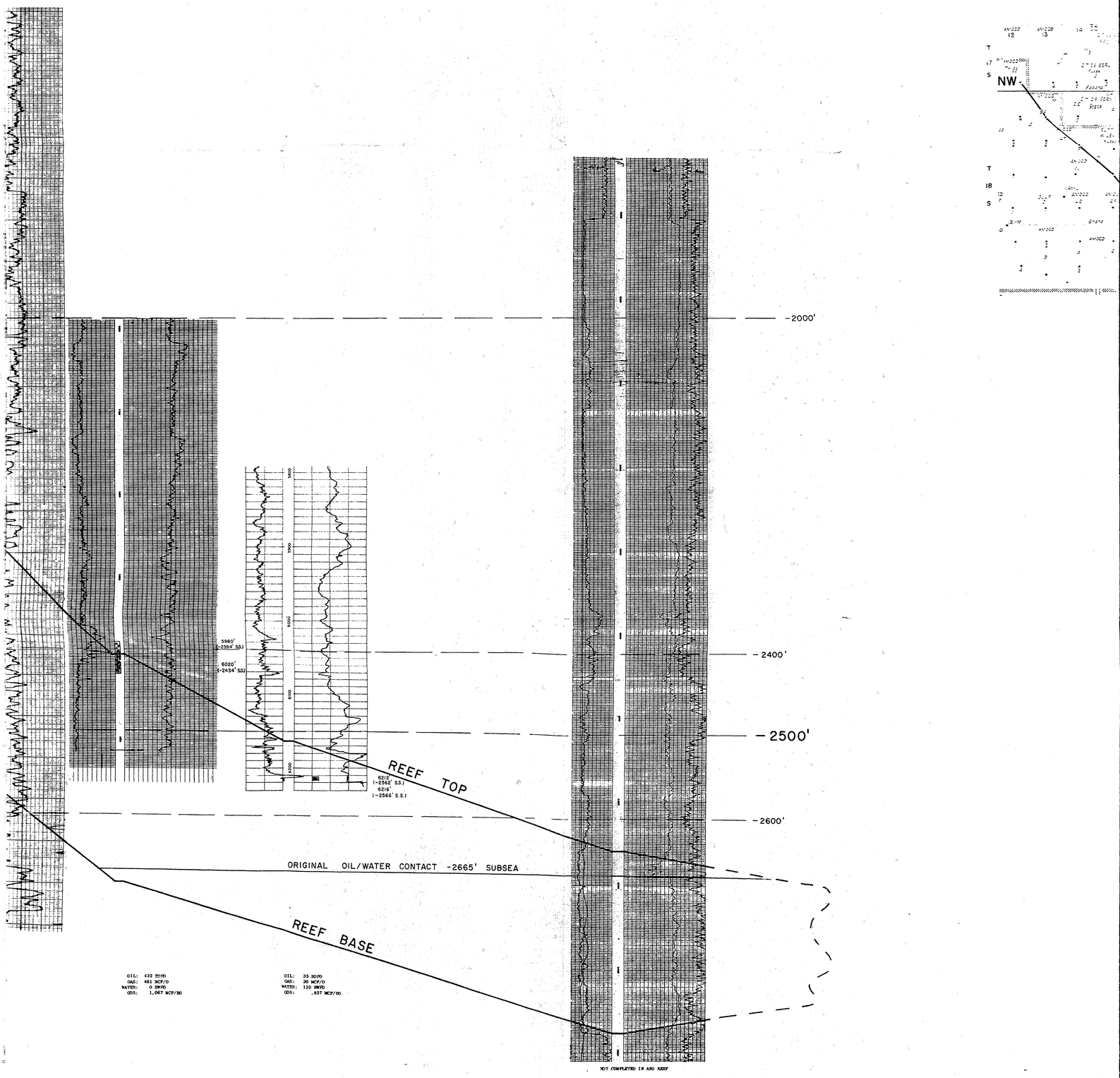
L-151

A.R.Co.
E.A.U. NO. L-16
(Gulf State 1-NCT)
ELEV. 3586'
T.D. 6115'

R.G. COX "EA" NO. 1
ELEV. 3620'
T.D. 6220' (6190' TVD)

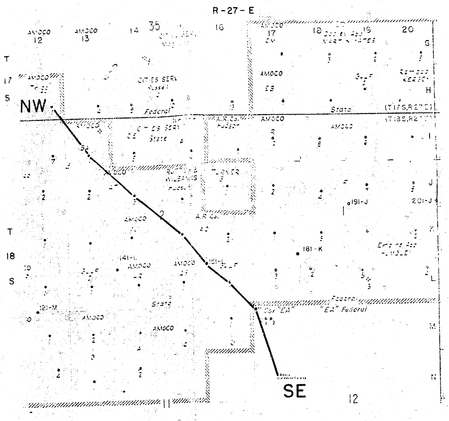
AMOCO DIAMOND FED. NO. 1
ELEV. 3623'
T.D. 10,372'

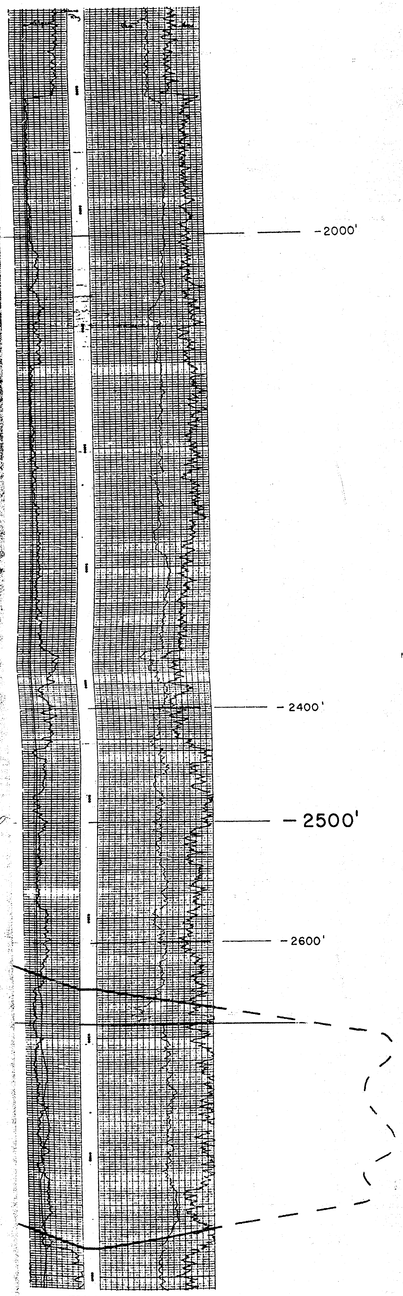
SE



SE

AMOCO DIAMOND FED. NO. 1
ELEV. 3623'
T.D. 10,372'





AtlanticRichfieldCompany
North American Producing Division
Permian District Midland, Texas

PORTION OF EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO.

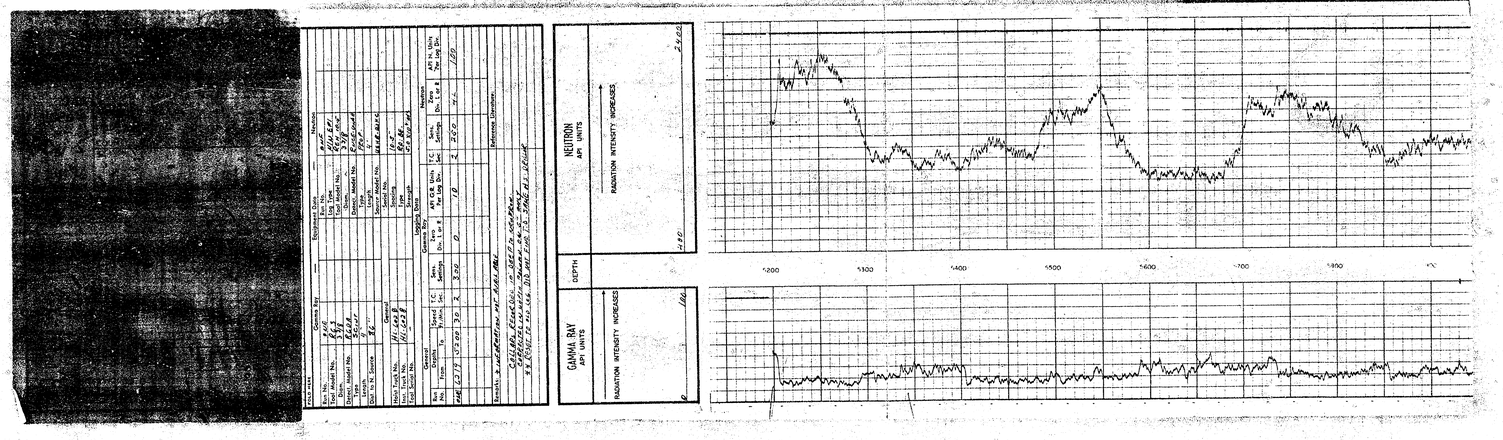
(DATUM: -2500' SUBSEA)

SCALE: VERTICAL 1"=40', HORIZONTAL 1"= 200'

By: ED SOMMERS	Checked: MSS	Date: 11-75	
Date: 11-14-75	Revised:	Date:	
For: WEST AREA ENGR	Dwg. No.		

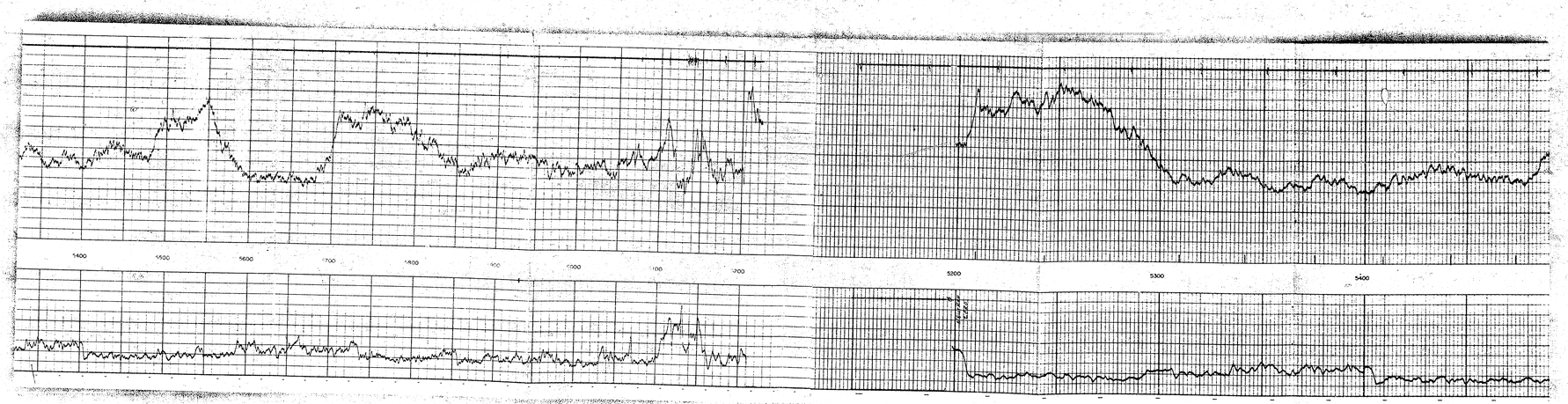
DN-10
Cox -

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5571 Exhibit No. 10
Submitted by Atlantic Richfield Co. Cox
Hearing Date 5-24-76

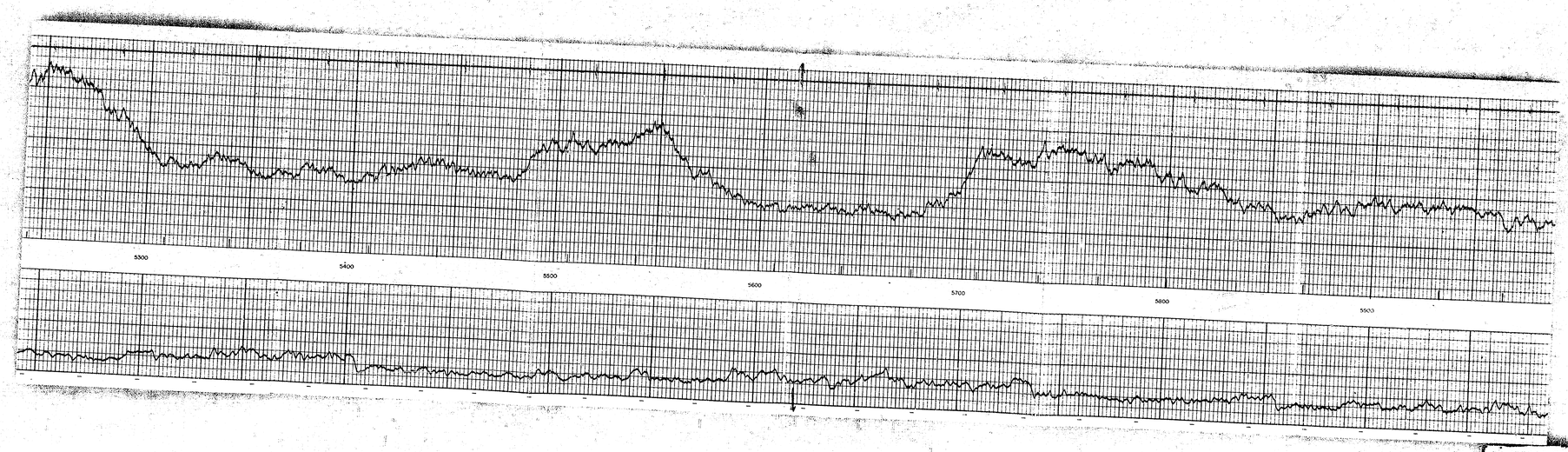


W.N.N.C.F. MICROGRAPHICS

BEST AVAILABLE COPY

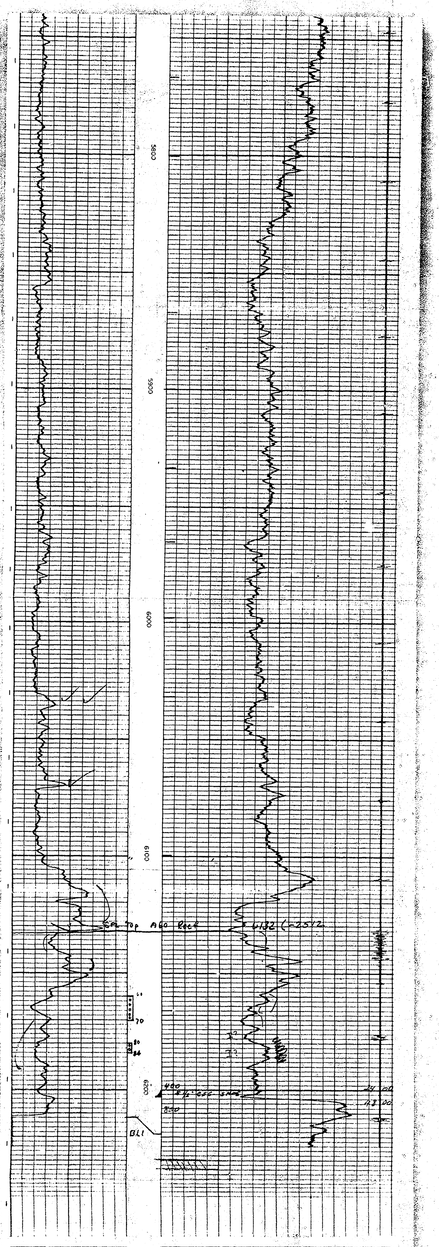


U.S.W.C.F. MICROGRAPHICS
BEST AVAILABLE COPY



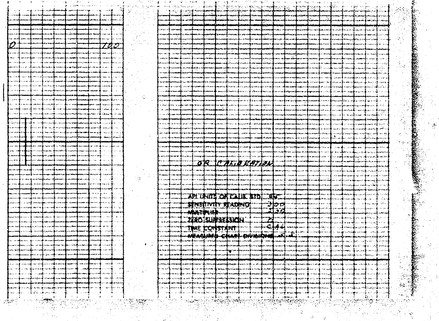
U.N.M.C.F. MICROGRAPHICS

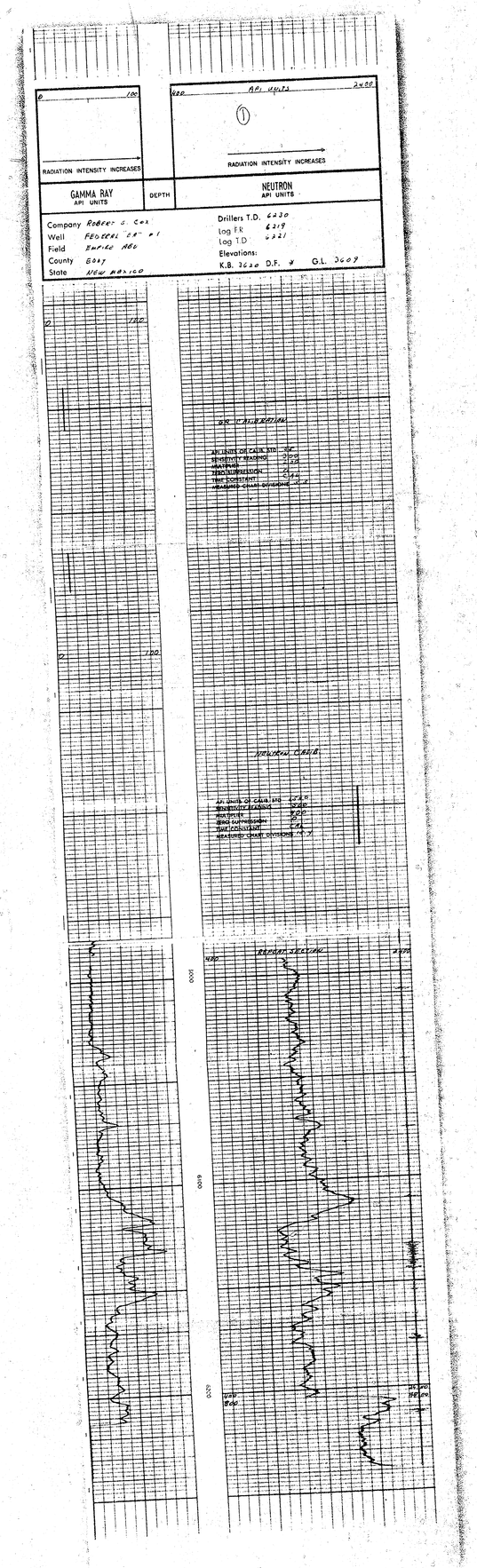
BEST AVAILABLE COPY



0	100	400	API UNITS	2400
RADIATION INTENSITY INCREASES				RADIATION INTENSITY INCREASES
GAMMA RAY API UNITS	DEPTH			NEUTRON API UNITS

Company	Robert L. Cox	Drillers T.D.	6220
Well	Federal Cox #1	Log ER	6219
Field	Empire Abo	Log TD	6221
County	Eddy	Elevations:	
State	New Mexico	K.B. 3620 D.F.	G.L. 3609




0 100
RADIATION INTENSITY INCREASES
600 API UNITS 2400
RADIATION INTENSITY INCREASES
GAMMA RAY
API UNITS
DEPTH
NEUTRON
API UNITS
Company Robert S. Cox
Well Federal com #1
Field Empire Abo
County Eddy
State New Mexico
Drillers T.D. 6230
Log F.R. 6219
Log T.D. 6221
Elevations:
K.B. 3630 D.F. N G.L. 3609
0
100
200
GAMMA CALIBRATION
API UNITS OF CALIB. STD. 200
SENSITIVITY READING 2.00
MULTIPLIER 100
TIME SUPPRESSION 0.45
TIME CONSTANT 2
RECORDED CHART DIVISIONS 10 X
NEUTRON CALIB.
API UNITS OF CALIB. STD. 1240
SENSITIVITY READING 12.40
MULTIPLIER 100
TIME SUPPRESSION 0.45
TIME CONSTANT 2
RECORDED CHART DIVISIONS 10 X
6000
6100
6200
NEUTRON
2400
1200
1800

Dresser Atlas

Sidewall Neutron Gamma Ray

COPY WALT LIPSKI

FILE NO.

Amoco's X-DN6 2-24-76 Core 5571 D.N.

COMPANY ROBERT G. COX

WELL FEDERAL "FA" NO. 2

FIELD EMPIRE ABO

COUNTY EDDY STATE NEW MEXICO

LOCATION: 330'FNL & 455'FWL

Other Services

SEC 12 TWP 18-S RGE 27-E

Permanent Datum GROUND LEVEL Elev. 3609

Log Measured from K. B. 11 Ft. Above Permanent Datum

Drilling Measured from K. B.

Elevations: KB 3620, DF 3619, GL 3609

Date	12-15-71			
Run No.	ONE			
Depth—Driller	6225			
Depth—Logger	6227			
Bottom Logged Interval	6225			
Top Logged Interval	SURFACE			
Casing—Driller	8 5/8 @ 1497	@	@	@
Casing—Logger	1470			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEM-GEL			
Density and Viscosity	8.5 | 38			
pH and Fluid Loss	8.6 | 10 cc	cc	cc	cc
Source of Sample	PIT			
Rm @ Meas. Temp.	.81 @ 64 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.78 @ 64 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	- @ °F	@ °F	@ °F	@ °F
Source of Rmf and Rmc	MEAS |			
Rm @ BHT	.47 @ 110 °F	@ °F	@ °F	@ °F
Time Since Circ.	4 HOURS			
Max. Rec. Temp. Deg. F.	110 °F	°F	°F	°F
Equip. No. and Location	6028 | HOBBS			
Recorded By	MC ATEE			
Witnessed By	MR. COX			

THIS HEADING AND LOG CONFORMS TO API RECOMMENDED STANDARD PRACTICE RP-31

FOLD HERE

Equipment Data

	Gamma Ray	Sidewall Neutron
Run No.	ONE	ONE
Log Type		N/EN
Tool Model No.	422	2407
Serial No.		301
Diam.	3 3/8"	3"
Detect. Model No.	RGDA	D3H
Type	SCINT.	P-COUNTER
Length	4"	4"
Dist. to N. Source	120"	
Source Model No.		S17R5
Serial No.		27942
Type		AM BE
Strength		4.5 CURIES

Computer Data: 40, 1 / 422, 1914

Logging Data

Run No.	Depths From	Depths To	Speed Ft./Min.	T.C. Sec.	Gamma Ray Sens. Settings	Sidewall Neutron Zero	Porosity Units/Div.	Scale	T.C. Sec.	Sens. Settings	Gamma Ray Zero Div. L or R	API G.R. Units/Div.
1	6225	1470	REC	1	220/090	L-5.45	2%	30%/0	1	600/090	0	10
1	1470	SURF.	REC						1	600/090	0	10

Reference Literature:

Remarks:

GAMMA RAY & CALIPER

10 API/CD API UNITS

0 API — 100 API

HOLE SIZE - INCHES 6 — 16

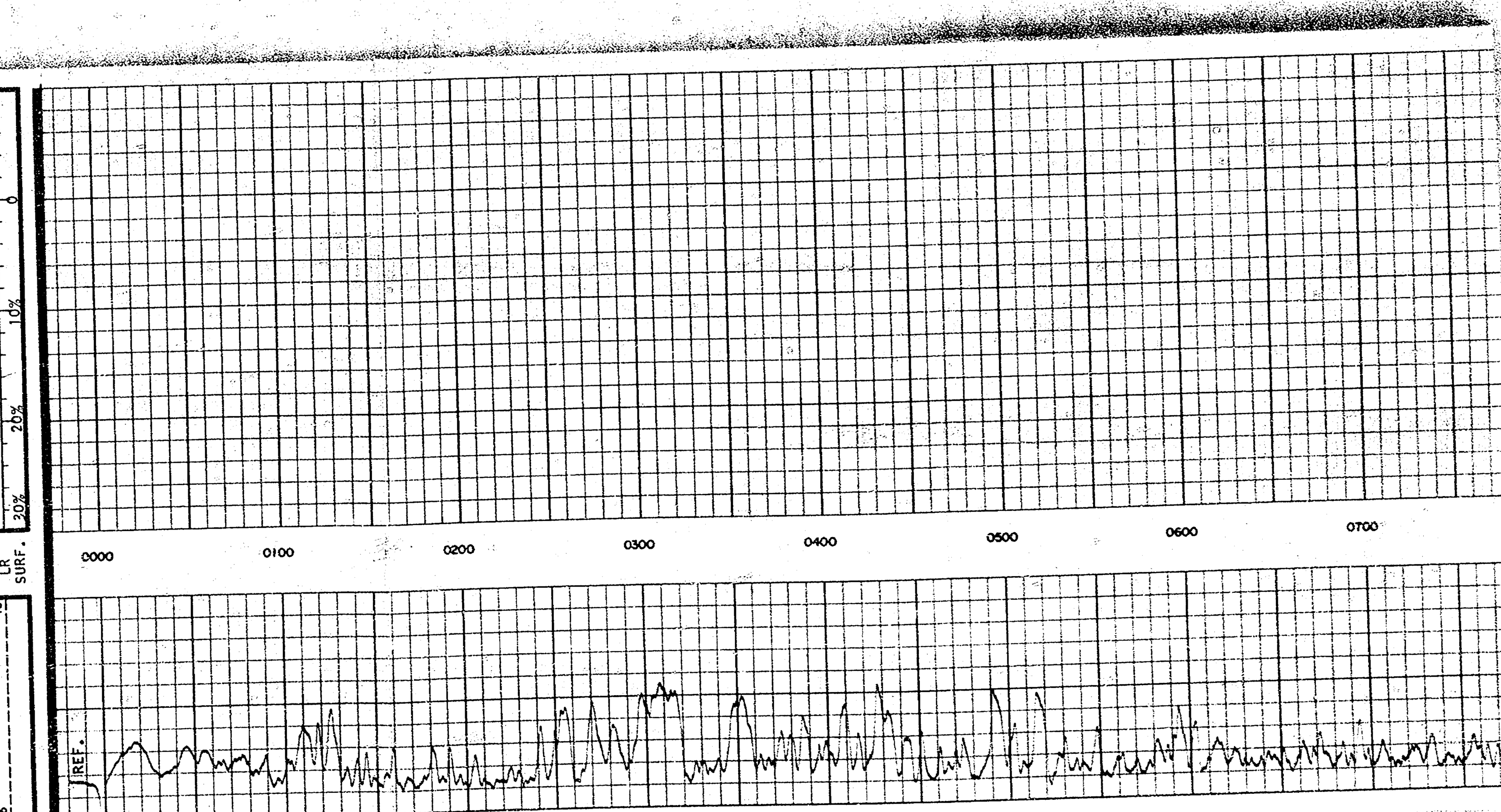
DEPTH

2"=100' LR SURF.

POROSITY %

LIMESTONE POROSITY

30% 20% 10% 0



W.N.M.C.F. MICROGRAPHICS

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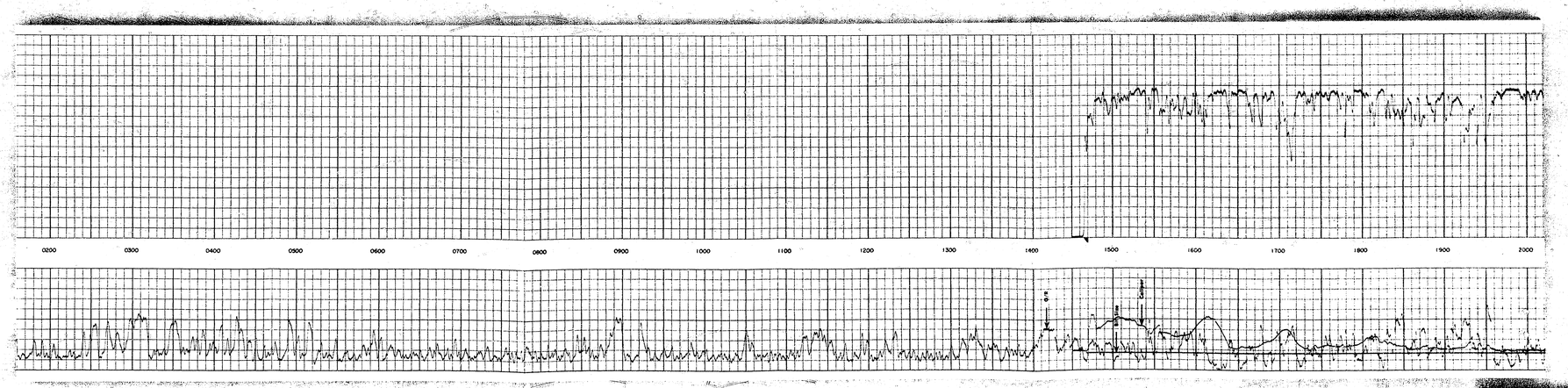

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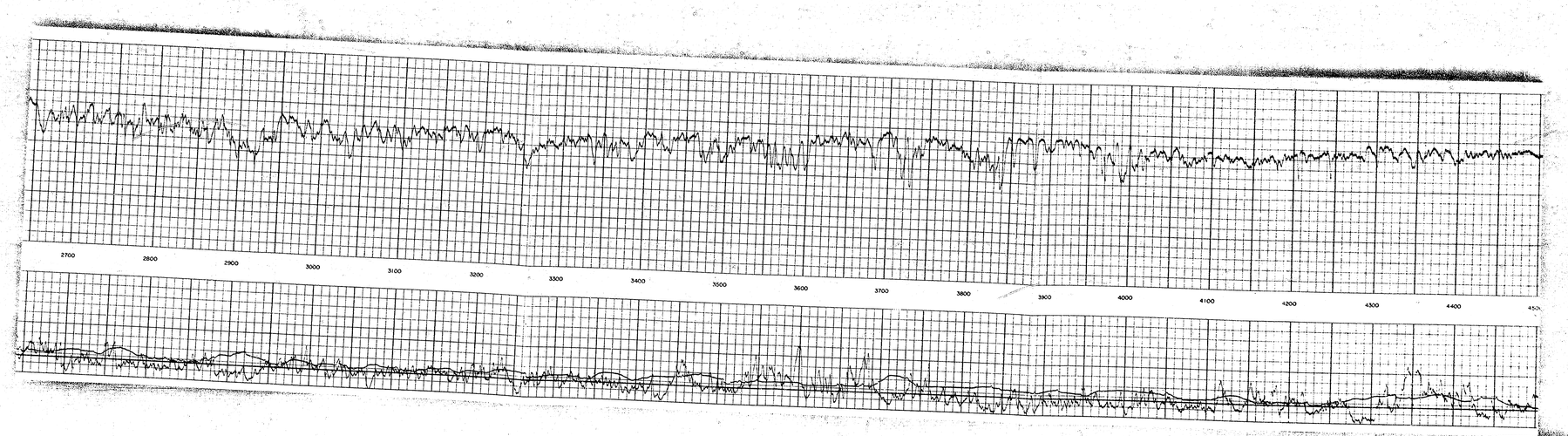

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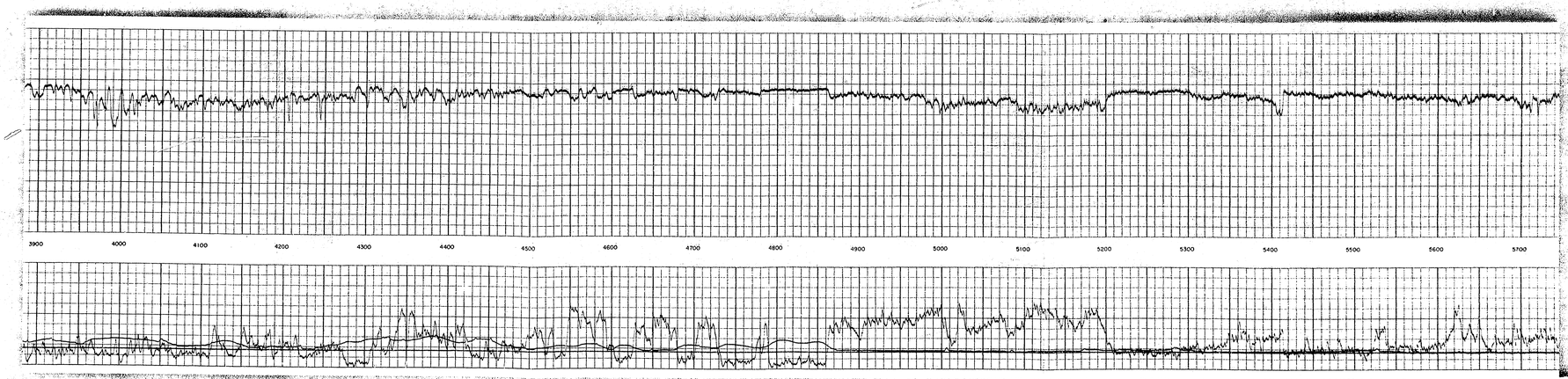

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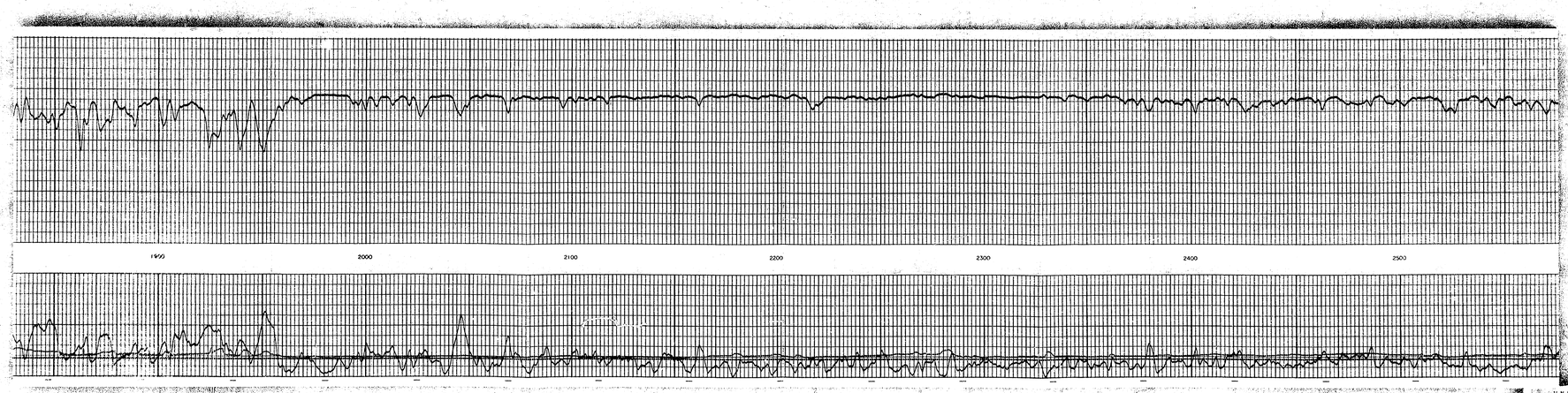

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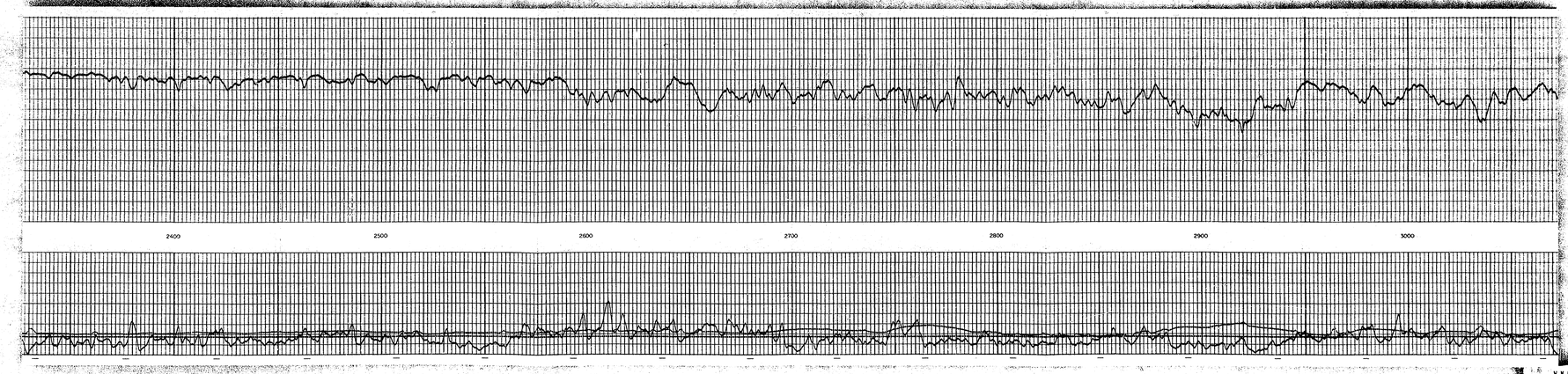

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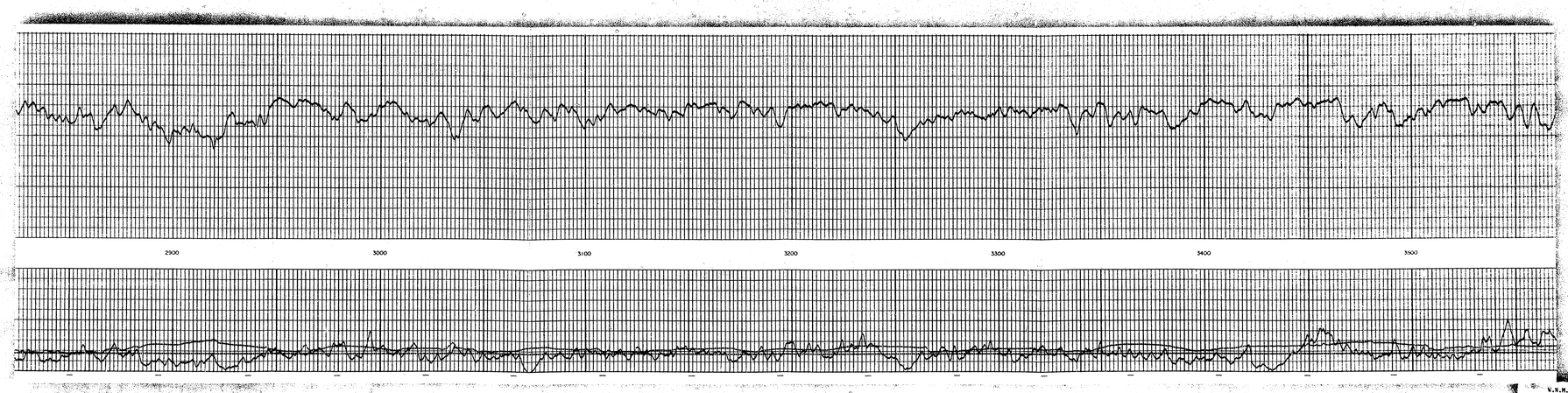

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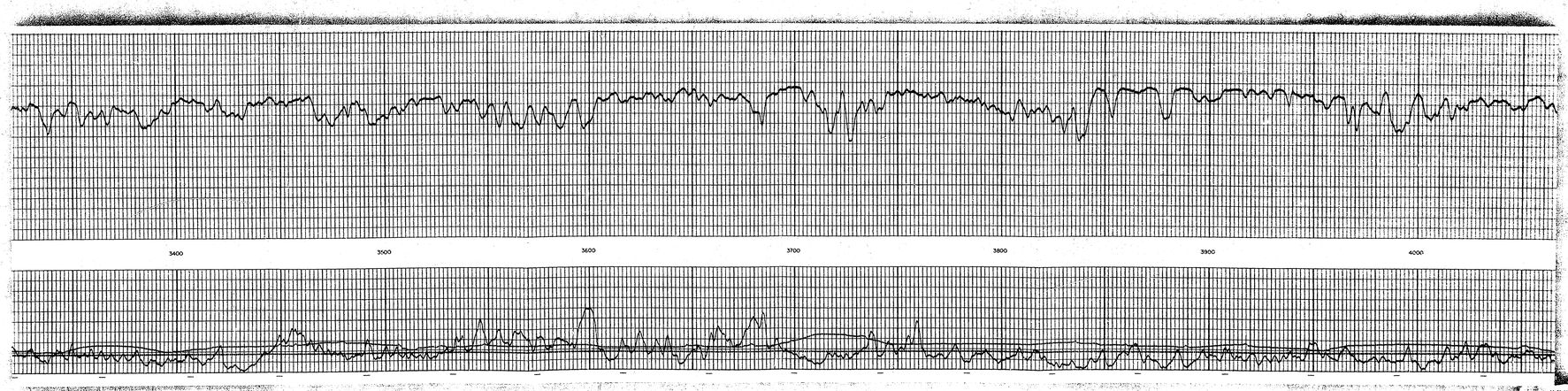

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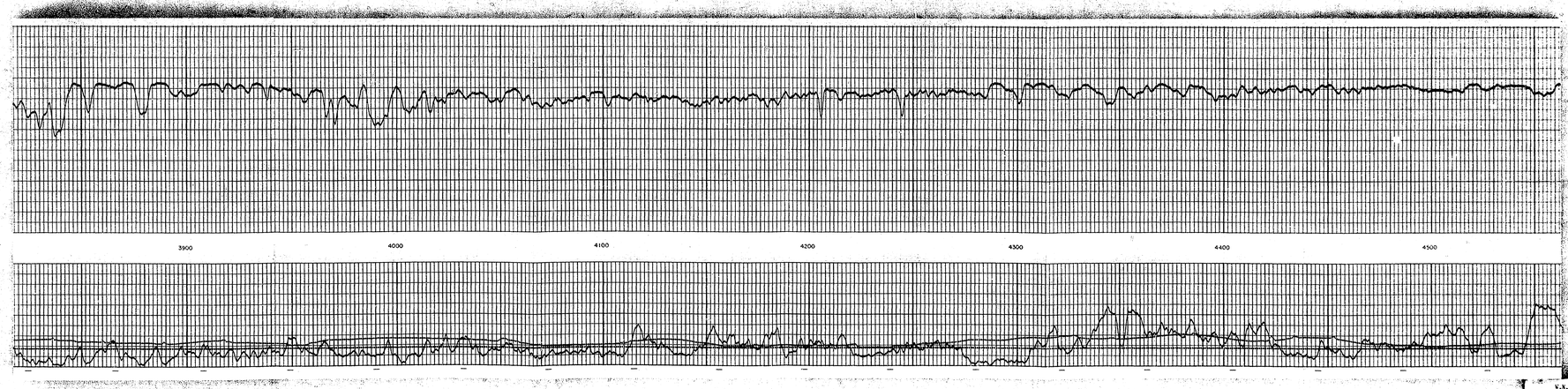

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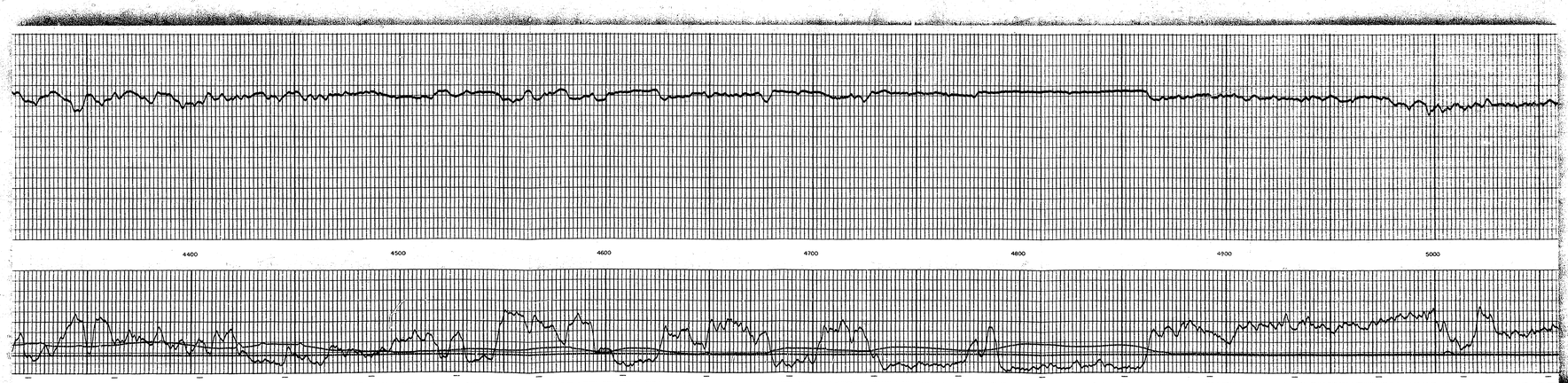

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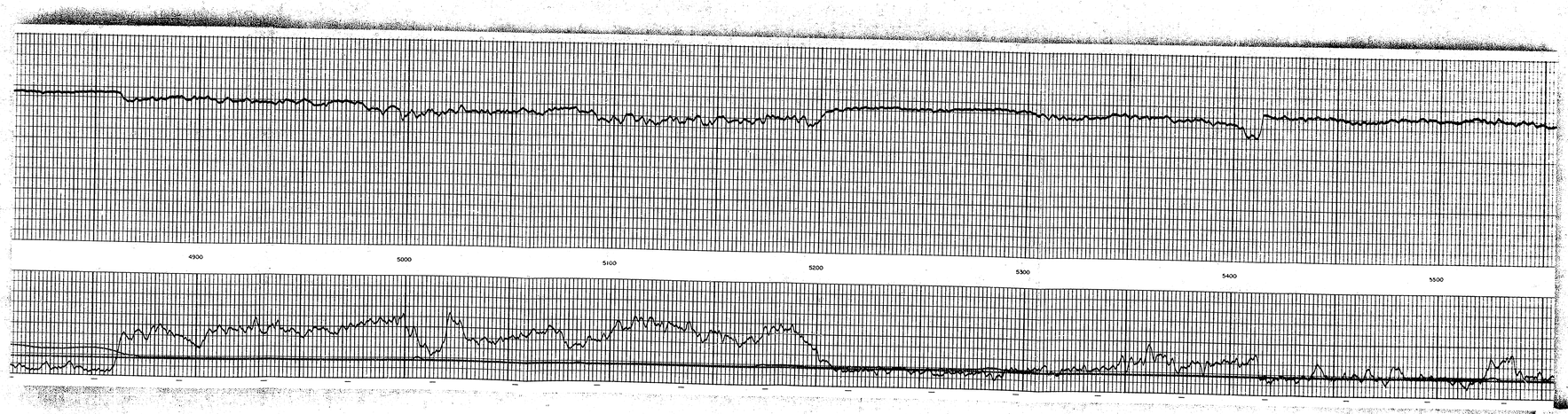

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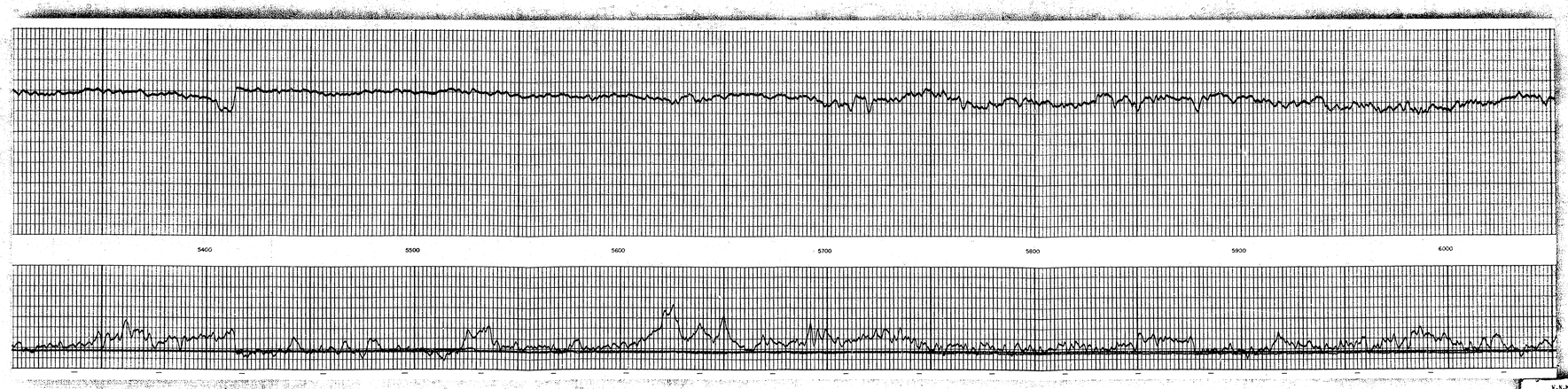

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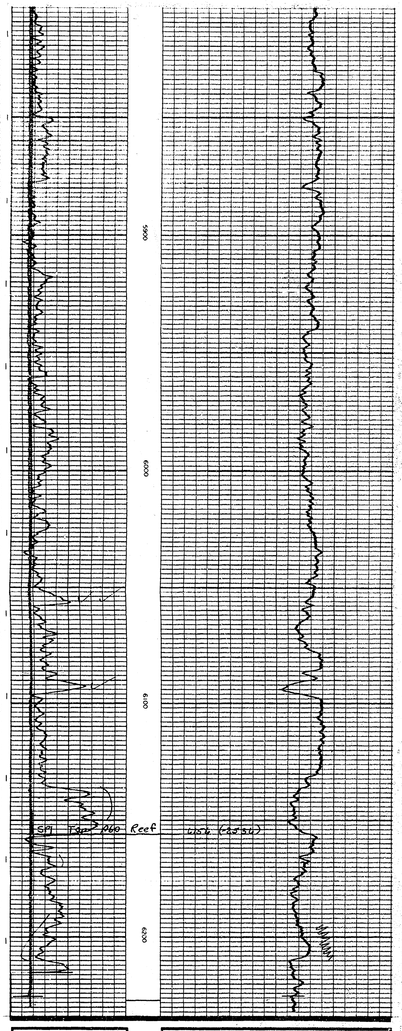
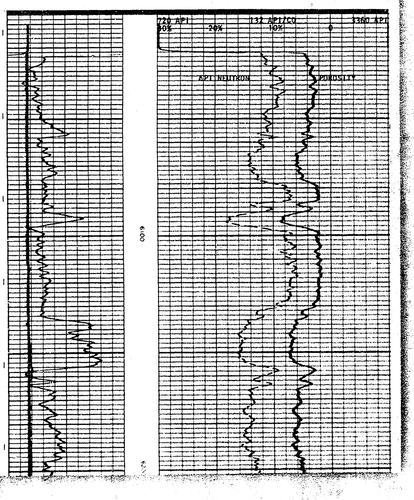


HOLE SIZE - INCHES		LIMESTONE POROSITY
6 16		30% 20% 10% 0
0 API 100 API		
10 API/CO API UNITS		
GAMMA RAY & CALIPER	DEPTH	POROSITY %

Company	ROBERT G. COX	Drillers T.D.	6225'
Well	FEDERAL "EA" NO. 2	Log F.R.	6225'
Field	EMPIRE ABO	Log T.D.	6227'
County	EDDY	Elevations:	
State	NEW MEXICO	K.B. 3620' D.F. 3619'	G.L. 3609'



N.M.O.C.D. MICROGRAPHICS

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Amoco's X-DNT
2-24-76 Case #5571 D.N.

REMD NO.	
COMPANY	Robert L. Cox
WELL	Federal "A" #1
FIELD	Empire Abo
COUNTY	Eddy STATE N.M.
LOCATION:	330' FNL & WL
SEC. 12 TWP. 18S RGE. 27E	OTHER SERVICES: Perf.
PERMANENT DATUM: G.L.	ELEV.: 3206 K.B. 3220
LOG MEASURED FROM: K.B.	11 Ft. ABOVE PERM. DATUM D.F. G.L. 3206
DRILLING MEASURED FROM: K.B.	

Date	8-3-75		
Run No.	One		
Type Log	Dual Induction		
Depth-Driller	6238		
Depth-Logger	6230		
Bottom logged interval	6230		
Top logged interval	5100		
Type fluid in hole	Brine		
Max rec. temp., deg. F			
Operating rig time	1:00		
Recorded by	Vandewater		
Witnessed by	Mr. Kane		

Run No.	Bit	Bore-Hole Record From	To	Size	Wgt.	Casing Record From	To

W.N.M.C.F. MICROGRAPHICS
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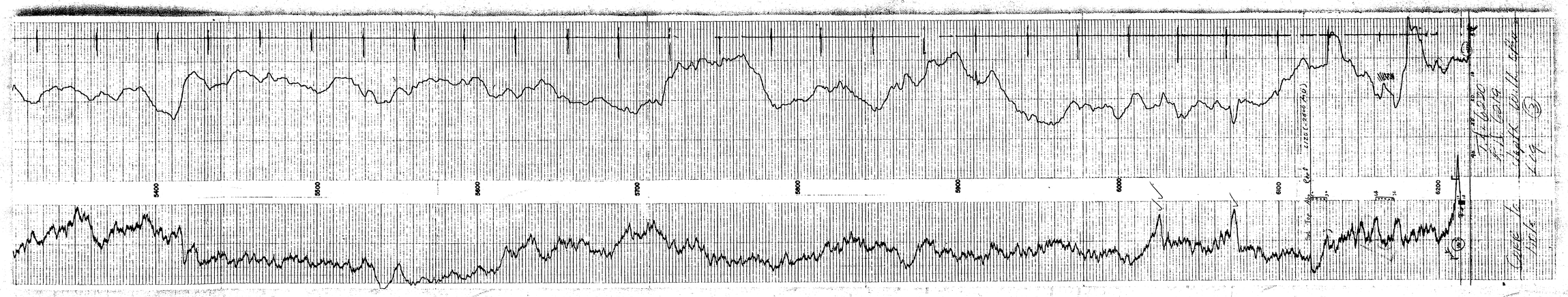

V.V.M.C.F. MICROGRAPHICS
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SCHLUMBERGER WELL SURVEYING CORPORATION
HOUSTON, TEXAS

Directional Log
COMPUTED

COUNTY EDDY
FIELD or LOCATION EMPIRE ABO
WELL USA MALCO REFG. "J" #1
COMPANY PAN AMERICAN PETR. CORP.

COMPANY PAN AMERICAN PETR. CORP.
WELL USA MALCO REFG. "J" #1 (Unit M16)
FIELD EMPIRE ABO
LOCATION SEC. 11-T18S-R27E
COUNTY EDDY
STATE NEW MEXICO

Location of Well: 330' FNL 653' FEL

Empire abo 11-18-16

Elevation: D.F. 3615, K.B. 3617, or G.L. 3603

FILING No.

RUN No.	1
Date	7-31-[illegible]
First Reading	6190
Last Reading	1500
Feet Measured	4690
Csg. Schlum.	1495
Csg. Driller	1495
Depth Reached	6190
Bottom Driller	6211
Depth Datum	KB 14' Abv. GL
Mud Nat.	GEL CHEM
Density	8.4
Viscosity	34
Max. Temp. °F	93
Bit Size	7 7/8
Depth intervals between shots	200'
P.C. No.	200
Opr. Rig Time	2 HRS
Truck No.	2522-ARTESIA
Recorded By	HOPKINS
Witnessed by	KELLEY

[redacted]

REMARKS

Depth	Drift Angle	Deflection: True Bearing	Deflection: Horizontal Footage	Deflection: Vertical Footage	Latitude N	Latitude S	Departure E	Departure W	Coordinates N	Coordinates S	Coordinates E	Coordinates W
1500	0		0	200		0	0					
1600	3/4	S81°E	2.62	199.98		.41	2.58			.41	2.58	
1800	1/2	S53 E	1.75	200		1.05	1.40			1.46	3.98	
2000	0		0	200								
2200	0		0	200								
2400	0		0	200								
2600	1/2	N5 W	1.75	200	1.74			.15	.28		3.83	
2800	1/4	N43 E	.87	200	.64		.60		.92		4.43	
3000	1/4	N35 E	.87	200	.71		.50		1.63		4.93	
3200	1/2	S62 E	1.75	200		.82	1.54		.81		6.47	
3400	3/4	S62 E	2.62	199.98		1.23	2.31			.42	6.78	
3600	1	S45 E	3.49	199.97		2.47	2.47			2.89	9.25	
3800	1/2	S46 E	1.75	200		1.21	1.26			4.10	10.51	
4000	3/4	E	2.62	199.98			2.62			4.10	13.13	
4200	1/2	S25 E	1.75	200		1.58	.74			5.68	13.87	
4400	1/2	S19 E	1.75	200		1.65	.57			7.33	14.44	
4600	1/4	S35 E	.87	200		.71	.50			8.04	14.94	
4800	1/4	N40 E	.87	200	.67		.56			7.37	15.50	
5000	1/2	S48 E	1.75	200		1.17	1.30			8.54	16.80	
5200	3/4	S75 E	2.62	199.98		.68	2.53			9.22	19.33	
5400	1	N54 E	3.49	199.97	2.05		2.82			7.17	22.15	
5600	1	N61 E	3.49	199.97	1.79		3.05			5.38	25.20	
5800	2 1/4	N75 E	7.85	199.85	2.05		7.58			3.33	32.78	
6000	3 3/4	N80 E	13.08	199.58	2.28		12.88			1.05	45.66	
6200	4 1/4	N70 E	7.41	99.72	2.53		6.96		1.48		52.62	

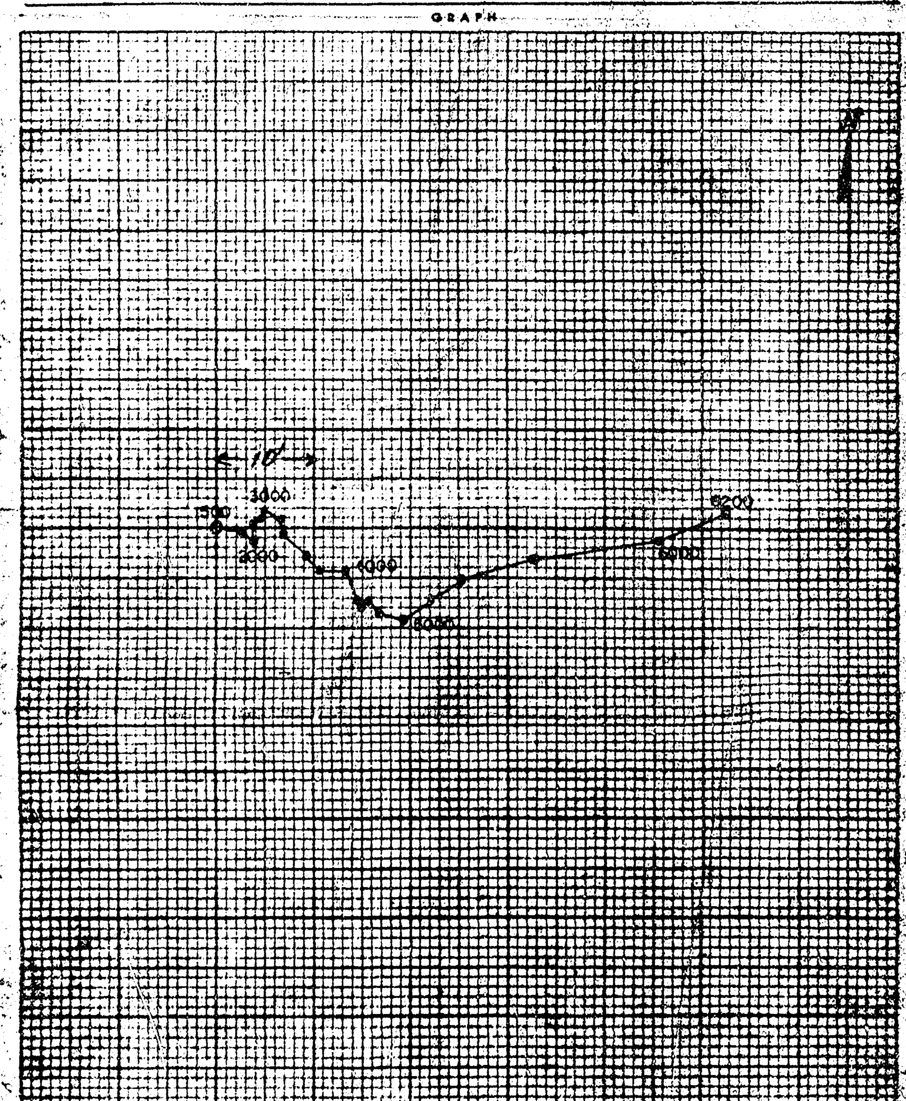
GRAPH OF DIRECTIONAL LOG

ALL DIRECTIONS ARE FROM TRUE NORTH

Scale— 1"=10'

	DEPTH	
Position of bottom of hole at	6200	Lies 52.62 East and 1.48 North of Casing Shoe
Position of bottom of hole at		
Position of bottom of hole at		
Position of bottom of hole at		

GRAPH



W.K.M.C.F. MICROGRAPHICS
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N.M.M.I.P. MICROGRAPHICS

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