Case No
4352

Large Exhibits

A
West

DALPORT #1 SPURCK
SW SW 36-14S-29E

DST Op 1½" GTS 3", Est 30 Mcf.
FP 66#
Oil Show
SIP 772-769#

DALPORT # 5 SPURCK
NW SE 36-14S-29E

DST 20' Mud
SIP 86-106#
T.I.T.E.
Por 13%

DALPORT #8 SPURCK
S 36-14S-29E

GAS-OIL CONTACT +1937
GAS-OIL CONTACT (1937)
POR 26%
Brown Stain
Red Sd.
GOR 4427-1 2-'70
60,000 2-'71
SQZ UPPER PERF 3-'71
GOR TSTM., ACIDIZED
60,000-1 4-'71
N_2 64%
R.D. 1969.5'
T.D. 1971'
Dalport Oil Corporation
Spurck State #8
Double L
Chaves County, New Mexico

QUEEN
UPPER
MIDDLE
GAS
Tite
Oil
STN
SALT
Anhydrite
Base Salt
Yates
7 Rivers
Queen
Grayburg
San Andres
Glorieta
Paddock
Blinebry
5½" CASING

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Dalport EXHIBIT NO. 4
CASE NO. 4332

B
SW

McCLELLAN #1-B LISA
NW NW 13-15S-29E

4285 MCF Upper TITE
Tite
Oil
Gas

McCLELLAN #1 PATRICK
SE SW 12-15S-29E

6613 MCF
N_2 63%
BHP 5-11-70 656#
JACK M. McCLELLAN
PATRICK FEDERAL #1
WILDCAT
CHAVES COUNTY, NEW MEXICO
R.D. 2007.5'
T.D. 1999'
4½" CASING

McCLELLAN #2 PATRICK
NW SE 12-15S-29E

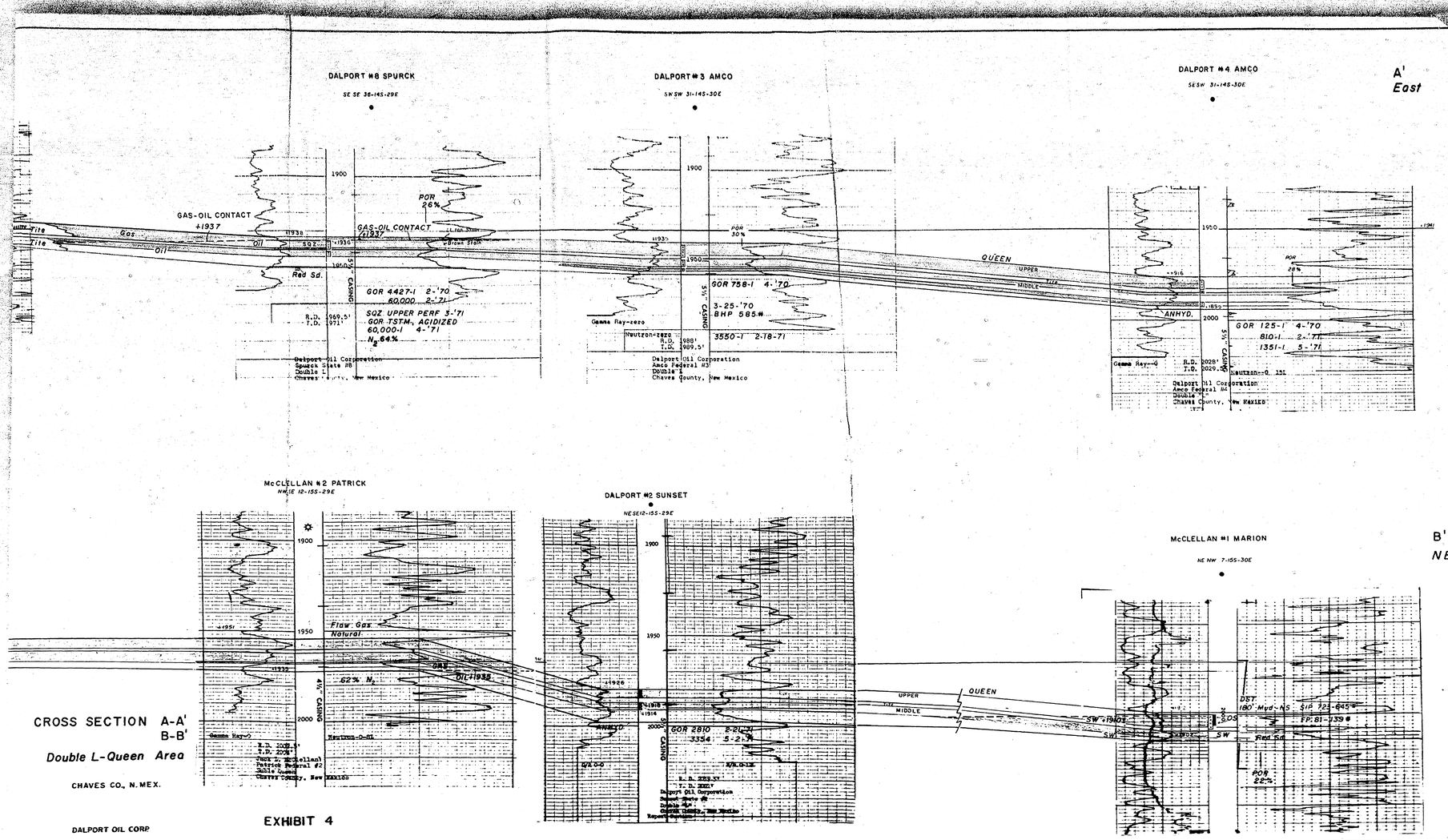
Flow Gas
Natural
62% N_2
Oil-1933
Queen Bay-O
Newman-O-01
R.D. 2002.5'
T.D. 2000'
Jack M. McClellan
Patrick Federal #2
Wildcat
Chaves County, New Mexico
4½" CASING

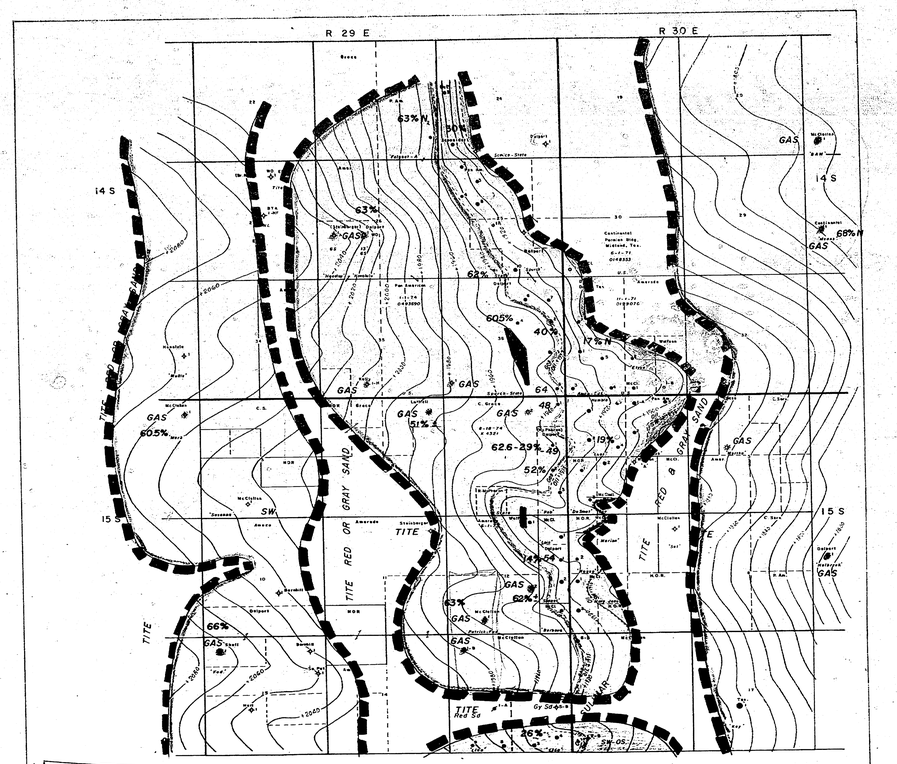
LINE OF CROSS-SECTIONS
14S
15S
29E
30E

CROSS SECTION A-A'
B-B'
Double L-Queen Area
CHAVES CO., N. MEX.
DALPORT OIL CORP

EXHIBIT 4

U.S.G.S. MICROGRAPHICS


DALPORT #8 SPURCK
SE SE 36-14S-29E
DALPORT #3 AMCO
SWSW 31-14S-30E
DALPORT #4 AMCO
SESW 31-14S-30E
A'
East
GAS-OIL CONTACT
+1937
Gas
Oil
Red Sd.
SQZ.
POR 26%
GOR 4427-1 2-'70
60,000 2-'71
SQZ UPPER PERF 3-'71
GOR TSTM, ACIDIZED
60,000-1 4-'71
N2 64%
R.D. 1969.5'
T.D. 1971'
5½" CASING
Dalport Oil Corporation
Spurck State #8
Double L
Chaves County, New Mexico
GOR 758-1 4-'70
3-25-'70
BHP 585 #
3550-1 2-18-71
Gamma Ray-zero
Neutron-zero
R.D. 1988'
T.D. 1989.5'
Dalport Oil Corporation
Amco Federal #3
Double L
Chaves County, New Mexico
QUEEN
UPPER
MIDDLE
SAND
ANHYD.
GOR 125-1 4-'70
810-1 2-'71
1351-1 5-'71
R.D. 2028'
T.D. 2029.5'
Dalport Oil Corporation
Amco Federal #4
Double L
Chaves County, New MEXICO
McCLELLAN #2 PATRICK
NW1E 12-15S-29E
DALPORT #2 SUNSET
NE SE 12-15S-29E
McCLELLAN #1 MARION
NE NW 7-15S-30E
B'
NE
Flow Gas
Natural
62% N2
GAS
OIL
SW
DST
180' Mud-NS SIP 723-645#
FP 81-139#
POR 22%
CROSS SECTION A-A'
B-B'
Double L-Queen Area
CHAVES CO., N. MEX.
DALPORT OIL CORP.
EXHIBIT 4


R 29 E
R 30 E
14 S
15 S
63%N
63%
62%
60.5%
40
64
48
51%
62.6-29%-49
52%
19%
63%
62%
66%
26%
GAS
TITE
RED OR GRAY SAND
RED & GRAY SAND
SW
Red Su
By Sd-Gas
LEGEND:
63% Nitrogen Content
DOUBLE L QUEEN AREA
CHAVES CO, N MEX.
TOP QUEEN SAND
C.I. 10'
Scale: 1"=2000'
DATE: 6-'71
EXHIBIT 1
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Applicant EXHIBIT NO. 1
CASE NO. 4852

B

B'

Mc CLELLAN
LISA FEDERAL 1-B
DF Elev. 3935

DALPORT
SUNSET STATE 1
DF Elev. 3896

HUMBLE
DE SMET FEDERAL 1
KB Elev. 3891

SUBSEA +1000'

SUBSEA +1000

1750
1800
1850
1900
1950

DOUBLE L QUEEN PAY

OPEN HOLE

G/O @ -1936

TD 3471

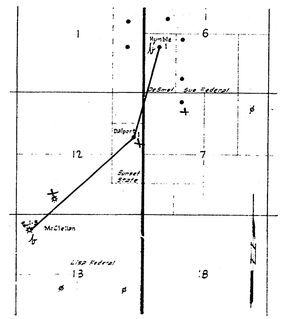
CAOF 4285 MCFGPD (10-2-66)

TD 1980

No gas recorded on Potential Test (3-23-70)

TD 1975

GOR 360 (20-30 Day Test, 2-19-70)



HUMBLE OIL & REFINING COMPANY
Southwestern Division
Production Department — Hobbs District
STRUCTURE CROSS SECTION B - B'
DOUBLE L QUEEN POOL
CHAVES COUNTY, NEW MEXICO
T-15-S, R-30-E
Scale: Vertical: 1" = 20' Horizontal: None
Geol.: J.D.C.
Date: 4-20-70

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 4361

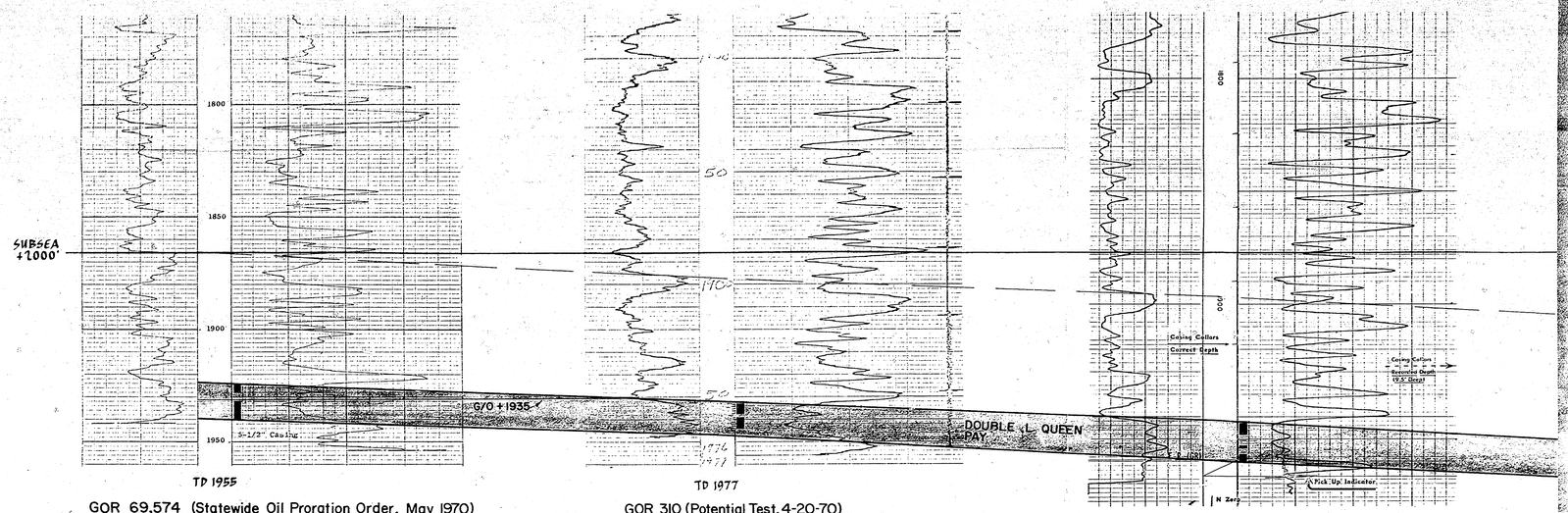
#3

A

DALPORT (McPHERON)
ROB STATE 1
GL Elev. 3866

HUMBLE
F. B. LUSK et al 2
KB Elev. 3886

HUMBLE
F. B. LUSK et al 1
KB Elev. 3877

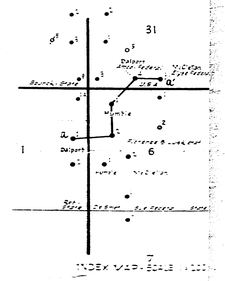


GOR 69,574 (Statewide Oil Proration Order, May 1970)

GOR 310 (Potential Test, 4-20-70)

GOR 217, 20-30 Day Test (3-28-70)

Humble Ek 2
Qa 4352



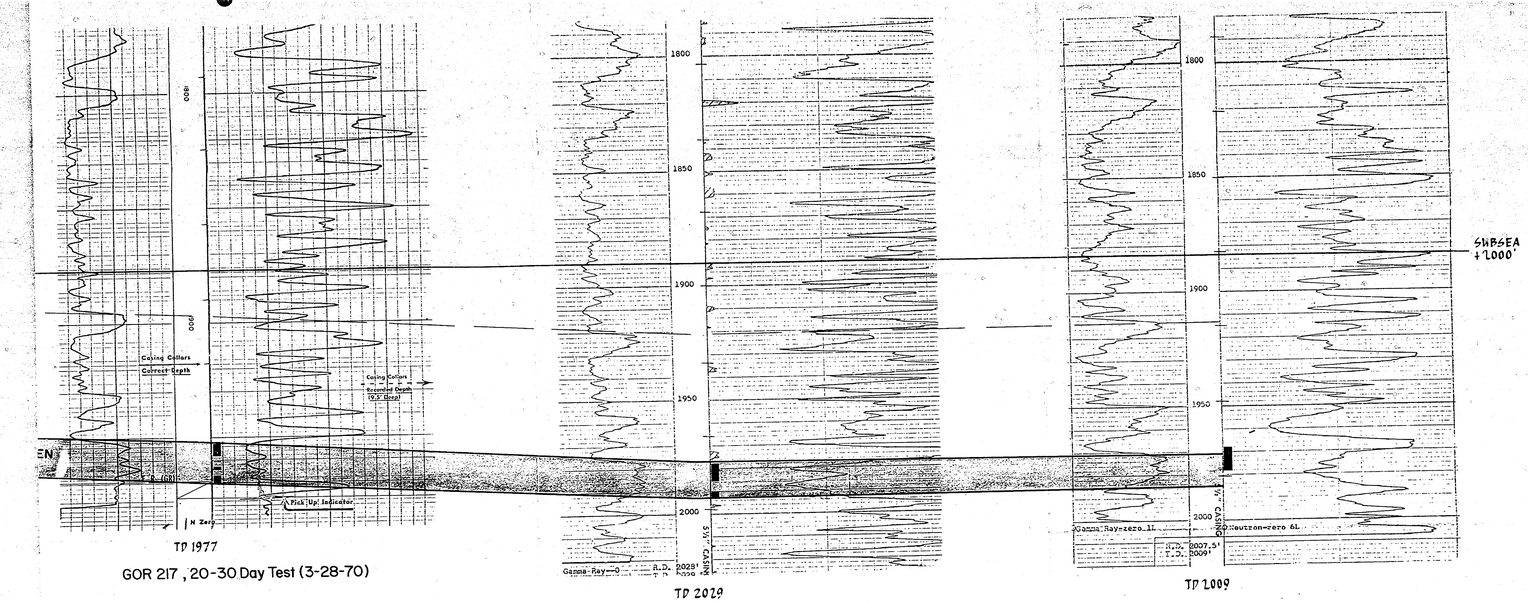


A'

HUMBLE
F.B. LUSK et al 1
KB Elev. 3877

DALPORT
AMCO FEDERAL 4
KB Elev. 3890

McCLELLAN
ELYSE FEDERAL 1
GL Elev. 3884



TD 1977

GOR 217, 20-30 Day Test (3-28-70)

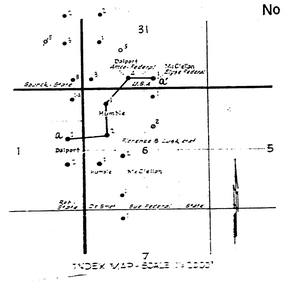
TD 2029

No gas recorded on Potential Test (3-22-70)

TD 2009

GOR 762 (Statewide Oil Proration Order, May 1970)

Humble SK 2
Dr 4352



INDEX MAP - SCALE 1" = 2000'

HUMBLE OIL & REFINING COMPANY
Southwestern Division
Production Department — Hobbs District
STRUCTURE CROSS SECTION A - A'
DOUBLE L QUEEN POOL
CHAVES COUNTY, NEW MEXICO
T-13-S, R-30-E
Scale: Vertical; 1" = 20'
Horizontal; None
Cwd.; J.D.C.
Date: 4-20-70

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Humble EXHIBIT NO. 2
CASE NO. 4352

#2

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

GAS ANALYSES
DOUBLE L, SULIMAR AND UNDESIGNATED QUEEN GAS POOLS
CHAVES COUNTY, NEW MEXICO
Gulf Oil Corp. & Associates
Engineering Consultants

	UNDESIGNATED QUEEN GAS POOL	SULIMAR QUEEN OIL POOL								DOUBLE L QUEEN OIL POOL				UNDESIGNATED QUEEN GAS POOL
Lease	McClellan	McClellan Liza "A"	McClellan Liza "A"	McClellan Liza "A"	McClellan Liza "B"	McClellan Liza "B"	McClellan Liza "C"	McClellan Liza "C"	McClellan Liza "C"	McClellan Mirtha Federal	Dalport Scout Federal	Dalport Rob	Dalport Rob	Communal Oil Nevaa
Well Number	Patrick Federal 1		2, 3, 4, 6	2, 3, 4, 5, 6, 7	3, 4	2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1	1 C	1	2	1
Section, Township (S) Range (E)	12-11-29	13 & 24-11-30	13 & 24-11-30	13 & 24-11-30	19-11-30	19-11-30	24-11-30	24-11-30	24-11-30	7-11-30	19-11-29	1-11-29	1-11-29	21-11-30
Date of Test	5-5-69	5-20-69	9-12-69	10-13-69	5-22-69	9-15-69	5-21-69	9-12-69	10-13-69	12-10-69	5-5-70	5-11-70	5-11-70	3-21-70
Mol% N_2	67.930	55.490	37.9200	50.510	29.240	26.150	37.990	19.55	22.320	41.630	9.900	29.650	31.900	67.7200
GPM	1.196	2.501	3.7200	3.439	5.036	5.784	11.227	9.49	9.197	4.132	13.396	7.918	2.572	1.4490
BTU wet basis	491	663	963	925	1376	1432	1726	1564	1526	963	1955	1316	749	651
Specific gravity	0.894	0.804	0.9247	0.971	1.163	1.105	1.215	1.16	1.128	0.976	1.225 1200-psig CO_2	1.026 1200-psig	0.731 Calculated	0.9297
GOR	dry gas	4441	2155	1736	679	1331	230	369	464	—	—	—	—	dry gas

EXHIBIT 10

U.S.W.G.F. GEOGRAPHICS
BEST AVAILABLE COPY

RESERVOIR INTERFERENCE AND LIMIT TEST
DOUBLE L POOL, LEA COUNTY, NEW MEXICO
Prepared by: Lloyd A. Jones & Associates
Engineering Consultants

Elapsed Time Hours	Gulf Oil Corporation Sunset Federal Well No. 1	Pan American Petroleum Corporation Patrick Federal Well No. 1
0	616.9	665.6
0.500	625.5	
1.000	629.2	
1.500	631.0	
2.000	632.0	
3.000	634.0	
4.000	636.0	
5.000	637.2	
6.000	638.0	
8.000	639.7	
10.000	641.0	
12.000	642.0	
14.000	642.7	
16.000	643.5	
18.000	644.0	
20.000	644.5	
22.000	645.0	
24.000	645.3	
26.000	645.6	
28.000	645.9	
30.000	646.2	
32.000	646.4	
34.000	646.6	
36.000	646.8	
38.000	647.0	
40.000	647.2	
42.000	647.4	
44.000	647.5	
46.000	647.7	
48.000	647.8	
50.000	647.9	
52.000	648.0	
54.000	648.1	
56.000	648.2	
58.000	648.3	
60.000	648.4	
62.000	648.5	
64.000	648.6	
66.000	648.7	
68.000	648.8	
70.000	648.9	
72.000	649.0	
74.000	649.1	
76.000	649.2	
78.000	649.3	
80.000	649.4	
82.000	649.5	
84.000	649.6	
86.000	649.7	
88.000	649.8	
90.000	649.9	
92.000	650.0	
94.000	650.1	
96.000	650.2	
98.000	650.3	
100.000	650.4	
102.000	650.5	
104.000	650.6	
106.000	650.7	
108.000	650.8	
110.000	650.9	
112.000	651.0	
114.000	651.1	
116.000	651.2	
118.000	651.3	
120.000	651.4	
122.000	651.5	
124.000	651.6	
126.000	651.7	
128.000	651.8	
130.000	651.9	
132.000	652.0	
134.000	652.1	
136.000	652.2	
138.000	652.3	
140.000	652.4	
141.000	652.5	

Remarks

Sunset Well produced 181 BOPD on 16/64" choke prior to commencing interference test. Shut in at 1:00 p.m., May 9, 1970. Cumulative oil production estimated at 3150 barrels.

Patrick Federal, Well No. 1, has been shut in since completion on September 30, 1969.

Gauges on.
Test commenced 1430 hours, May 9, 1970.

Flow Rate on Patrick Federal No. 1 - 3020 MCFD.

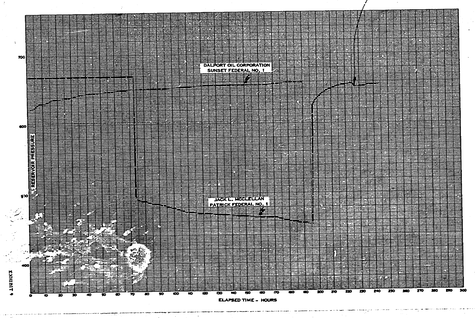
open Pat. to 12000 psig 661.5 elev

Flow Rate on Patrick Federal No. 1 - 3410 MCFD.

Final Measurement of Sunset Federal No. 1 buildup pressure.

Final Flow Rate on Patrick Federal No. 1 - 3096 MCFD. Well shut in for pressure buildup.

Sand in hole



U.S.G.S. TOPOGRAPHIC

RESERVOIR PRESSURE BUILDUP
DALPORT OIL CORPORATION, SUNSET FEDERAL, NO. 1 WELL
BOUNDLESS FIELD
CHAVES COUNTY, NEW MEXICO
Ralph H. Viney & Associates
Engineering Consultants

DISCUSSION

Calculations presented are based on generally accepted and used methods originally developed by Horner and modified by Miller, Dyes and Hutchinson for determination of permeability has wide acceptance. The formation as a boundary dominated bulidup fata uses an equation by Olsay and Hawkins where multiple boundary conditions could exist. The exercise is referred to in: ADOE Monograph No. 1 publication, "Pressure Buildup and Flow Tests in Wells," by Mathews and Russell.

Permeability Calculations

$$K = \frac{(162.6)(q_o)(B_o)(\mu_o)}{mh}$$

where q_o = daily oil production - barrels
B_o = formation volume factor
μ_o = oil viscosity centipoises
m = slope psi/cycle

$$K = \frac{(162.6)(273)(1.05)(0.7)}{(3.48)(70)} = 1879 \text{ md.}$$

Sunset - Federal No. 1
Distance to Boundaries

$$d = \sqrt{0.00105 \frac{(K)(\Delta t)}{(\phi)(\mu)(C_t)}}$$

where d = distance to boundary in feet
K = permeability, millidarcies
Δt = time after shut in, hours
ϕ = porosity, fraction of bulk volume
μ = oil viscosity, centipoise
C_t = oil compressibility (Average)

Two boundary conditions are noted on buildup curve, namely at 4.5 hours and 20.3 hours. The shape of the buildup curve suggests that the inflection represents boundaries rather than interference from other wells.

First Boundary

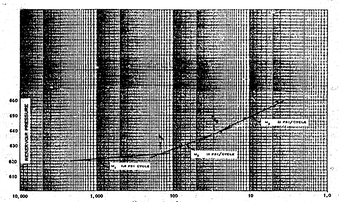
$$d_1 = \sqrt{0.00105 \frac{(1879)(4.5)}{(0.28)(1.30)(17.68 \times 10^{-6})}}$$

= 737 feet

Second Boundary

$$d_2 = \sqrt{0.00105 \frac{(1879)(20.3)}{(0.28)(1.30)(17.68 \times 10^{-6})}}$$

= 1664 feet



Shut In Time	Reservoir Pressure psig	$t_p + \Delta t$	$\frac{t_p + \Delta t}{\Delta t}$
0	618.0	639.0	∞
0.5	618.0	639.5	1279.0
1.0	620.0	640.0	640.0
2.0	623.0	641.0	320.5
4.0	626.0	643.0	160.8
6.0	631.0	645.0	78.6
8.0	634.0	647.0	80.9
10.0	638.0	649.0	64.9
20.0	657.0	659.0	33.0
30.0	658.0	669.0	22.3
36.0	663.0	675.0	18.8
40.0	665.0	679.0	17.0
41.0	665.0	680.0	16.6
42.0	666.0	681.0	16.2
43.0	666.0	682.0	15.9
44.0	666.0	683.0	15.5
45.0	666.0	684.0	15.2
53.0	670.9	723.0	7.4
73.0	675.3	743.0	6.4
93.0	681.0	764.0	4.8
113.3	686.7	784.3	4.5
133.3	692.7	804.3	4.3
153.3	695.7	824.2	4.2

Test commenced 1200 hours May 4, 1970

Cumulative production (N$_p$)	9,170	barrels
Daily oil production prior to test (q)	121	barrels
Effective life $\frac{N_p}{q}$ hours ($24\ N_p/q$)	652	hours
Oil viscosity (μ_o)	0.34	centipoise
Formation volume factor (B_o)	1.30	barrels/barrels

EXHIBIT 7

RESERVOIR PRESSURE DRAWDOWN OR LIMIT TEST
JACK McCLELLAN, PATRICK FEDERAL, NO. 1 WELL
UNDESIGNATED QUEEN GAS POOL
CHAVES COUNTY, NEW MEXICO
Ralph H. Viney & Associates
Engineering Consultants

DISCUSSION

Two boundaries were observed in the test on the Jack L. McClellan Patrick Federal No. 1 Well. The first boundary was determined to be 1494 feet from the well bore, and the second was calculated to be 3380 feet. The calculated radius of investigation was 3816 feet during the five-day test period.

The methods and information used are shown below. The terms and nomenclature are common to the industry.

First Boundary

$$t_{p_1} = 0.79 \text{ days}$$
$$d_1 = \frac{2\sqrt{(70)(.78)}\ t_{p_1}}{} = 1681.56\sqrt{t_{p_1}}$$
$$d_1 = \underline{1494} \text{ feet}$$

Second Boundary

$$t_{p_2} = 4.04 \text{ days}$$
$$d_2 = \underline{3380} \text{ feet}$$

Radius of Investigation (Ri)

$$t_{p_3} = 5.15 \text{ days}$$
$$Ri = \underline{3816} \text{ feet}$$

Basic Data

Initial shut-in pressure 5-4-1970	669 psig
Final Flowing Pressure 123.75 hours	657.9 psig
Average Pressure	574.4 psig
Reservoir Temperature	87° F.
Specific Gravity (Air = 1.0)	0.694
μ_g	0.01538 cps.
B_g	4.09168
q_g	3656 MCFD
h	9 feet
ϕ	27.5%
S_w	45.0%

$$C_{f_g} = \frac{(0.6065)(0.001801725) + (0.4000)(3.35 \times 10^{-4}) + (1.25 \times 10^{-4})}{0.45} = 0.0018094$$

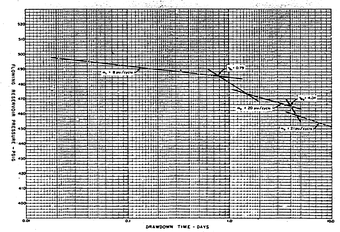
Formulas, Calculations and Nomenclature

The permeability of the contributing reservoir was calculated to be 546 millidarcies.

$$K_g = \frac{(162.6)(1540)(0.038)(0.034)}{(9)(5)} = 546 \text{ millidarcies}$$

$$d = 2\sqrt{M\ t_p}$$

where d = distance to barrier, in feet
t_p = actual time for pressure waves to reach barrier, days
M = diffusivity constant = $\frac{(6.33 \times 10^{-3})(K_g)}{(\phi_{gc})(\mu_g)(C_{f_g})}$
K_g = effective permeability to gas = $\frac{(162.6)(q_g)(\mu_g)(B_g)}{(h)(\Delta m)}$
ϕ_{gc} = hydrocarbon porosity fraction = ϕ (1-S_w)
μ_g = gas viscosity at reservoir conditions, centipoise
C_{f_g} = effective gas compressibility = $\frac{(C_g)(S_g) + (S_w)(C_w) + C_f}{S_g}$
q_g = daily gas production, MCF
B_g = gas formation volume factor, reservoir barrels/MCF
= $\left[\frac{(p_{sc})}{(T_{sc})}\right]\left[\frac{(T_r)}{(p_r)}\right]\left[\frac{(Z)}{(5.615)}\right]$ = μ_g
m_1 = initial slope of pressure drawdown curve, psi/cycle
h = formation thickness, feet
S_w, S_g = saturation fraction of pore space, in water, in gas
C_g, C_w, C_f = compressibility per^{-1}, gas, water, formation



Elapsed Time t_p Hours	Elapsed Time t_p Days	Reservoir Pressure psig	ΔTime Days	ΔPressure psig	$\frac{\Delta Pressure}{\Delta Time}$	Remarks
0		669.0			—	Shut in gas well. Completed September 3,
0.50	0.02083	669.0	0.02083	152.0	7,296	1969. Test commenced 1400 hours, May 7,
1.00	0.04167	681.5	0.02084	2.5	91,900	1970.
2.00	0.08334	682.6	0.04167	3.0	71,994	
4.00	0.16667	685.0	0.08333	2.0	32,000	Note - 3,429 MCFD @ 12.2 psig and 60° F.
8.00	0.33334	688.8	0.16667	1.8	8,900	
12.00	0.50000	691.0	0.16667	2.2	13,200	
18.00	0.68750	691.5	0.18683	0.5	1,726	
24.00	1.00000	692.0	0.33333	0.5	24,480	
36.00	1.50000	674.5	0.50000	4.0	16,896	
48.00	2.00000	671.0	0.50000	3.0	6,000	
60.00	2.50000	667.5	0.50000	3.0	6,000	
72.00	3.00000	665.3	0.50000	2.2	4,440	Note - 3,422 MCFD @ 12.2 psig and 60° F.
84.00	3.50000	663.1	0.50000	2.2	4,440	
96.00	4.00000	660.9	0.50000	2.2	4,440	
97.00	4.04166	660.7	0.04166	0.2	2,880	
109.00	4.54166	658.9	0.50000	1.8	22,680	Note - 3,596 MCFD @ 12.2 psig and 60° F.
123.75	5.15625	657.9	0.61459	1.1	2,197	Well shut in for pressure buildup.

EXHIBIT 8

W.W.R.C.F. PHOTOGRAPHICS
BEST AVAILABLE COPY

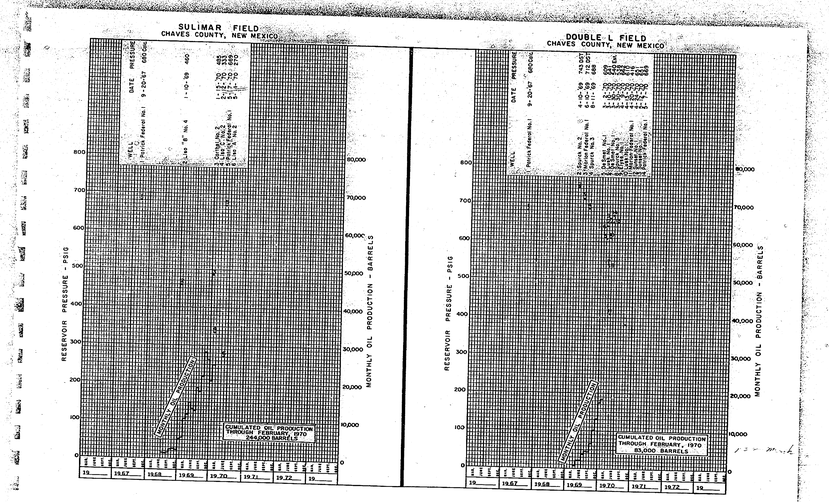
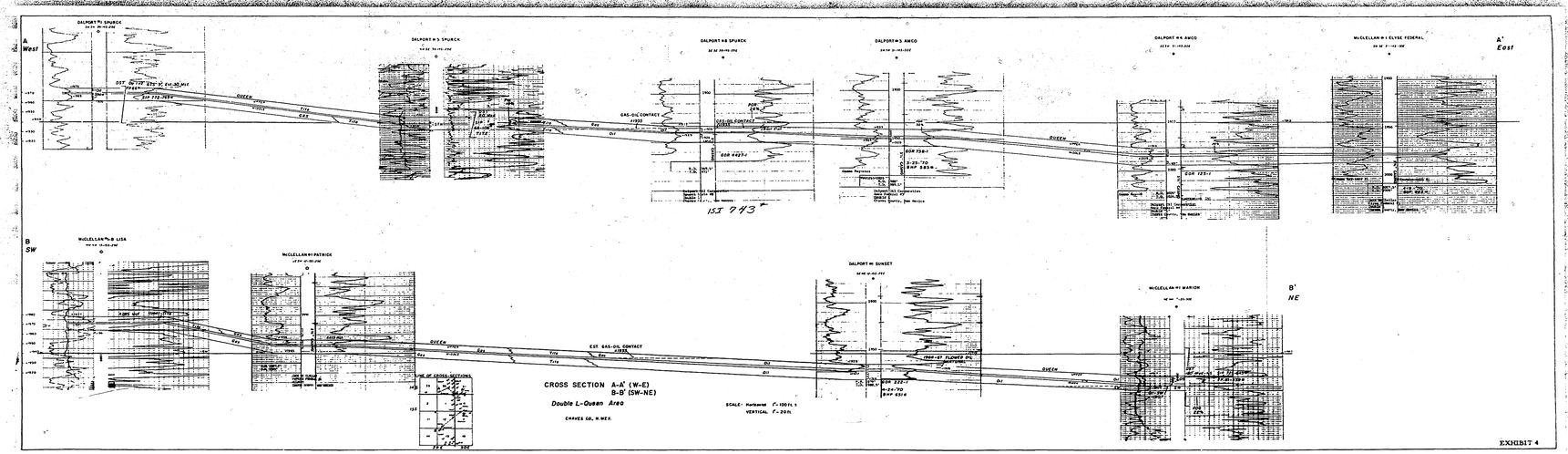
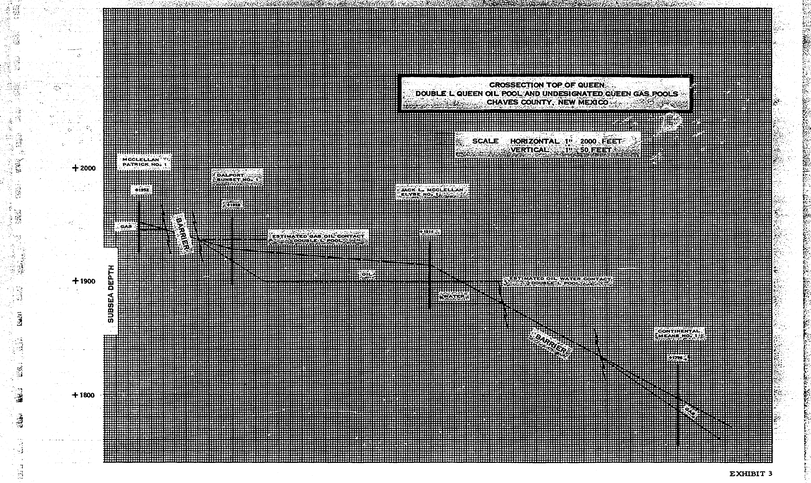


EXHIBIT 5

U.S.G.S. TOPOGRAPHICS
BEST AVAILABLE COPY



U.S.G.S. TOPOGRAPHIC
BEST AVAILABLE COPY


CROSSECTION TOP OF QUEEN
DOUBLE L QUEEN OIL POOL AND UNDESIGNATED QUEEN GAS POOLS
CHAVES COUNTY, NEW MEXICO
SCALE HORIZONTAL 1" = 2000 FEET
VERTICAL 1" = 50 FEET
SUBSEA DEPTH
+2000
+1900
+1800
MOCLELLAN "C" NATIONAL NO. 1
GULFSIDE "A" (ABANDONED) NO. 1
JACK L. MOCLELLAN ETAL NO. 1
8385
8390
8395
8400
SURFACE
ESTIMATED GAS-OIL CONTACT DOUBLE L POOL
DOUBLE L QUEEN OIL POOL
DOUBLE L QUEEN GAS POOL
CONTINENTAL OIL CO. NO. 1
CONTINENTAL OIL CO. NO. 2
CONTINENTAL OIL CO. NO. 3
CONTINENTAL OIL CO. NO. 4
CONTINENTAL OIL CO. NO. 5
CONTINENTAL OIL CO. NO. 6
CONTINENTAL OIL CO. NO. 7
CONTINENTAL OIL CO. NO. 8
CONTINENTAL OIL CO. NO.

R 29E

R 30E

T 14 S

T 15 S

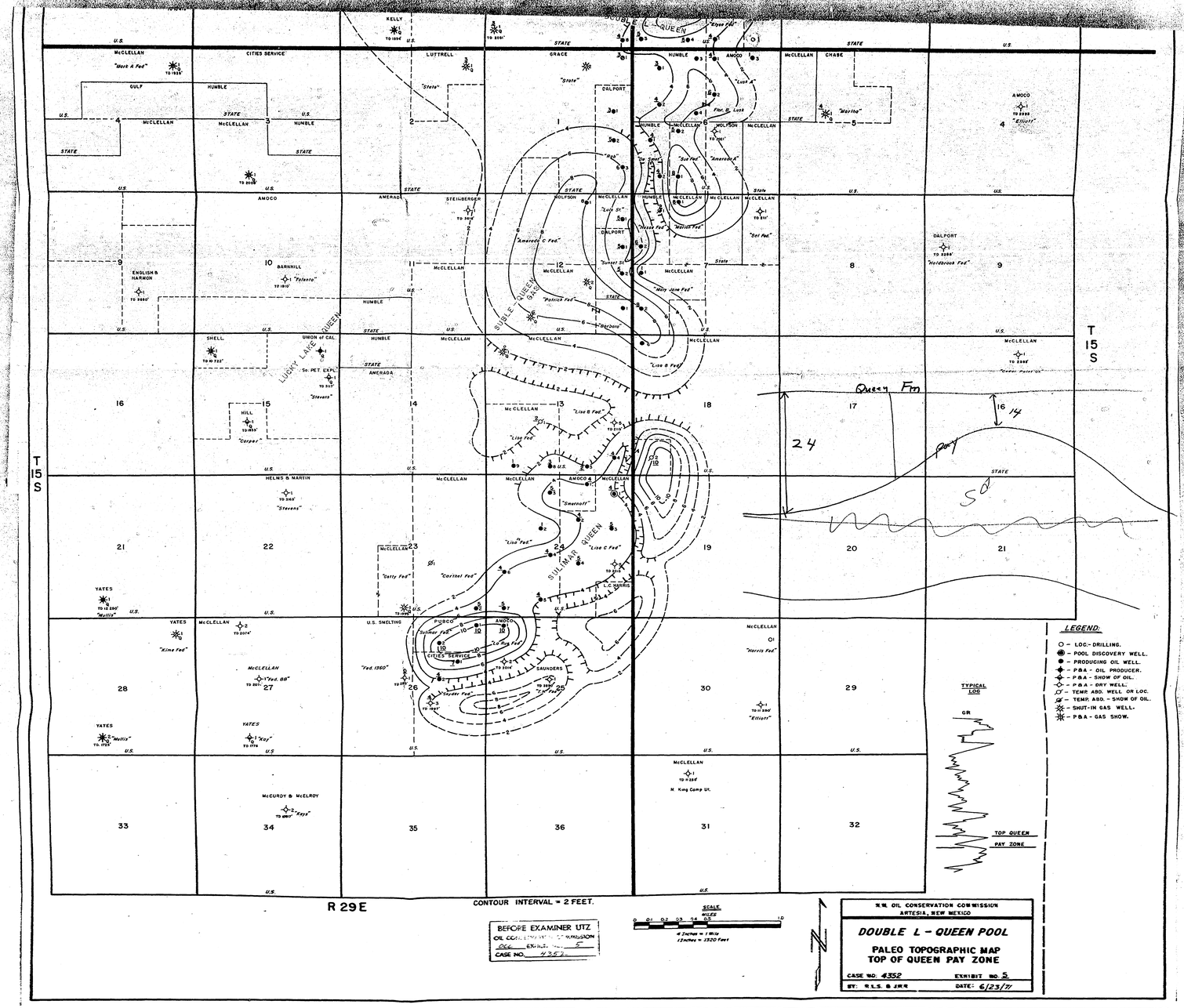
VEST RANCH - QUEEN

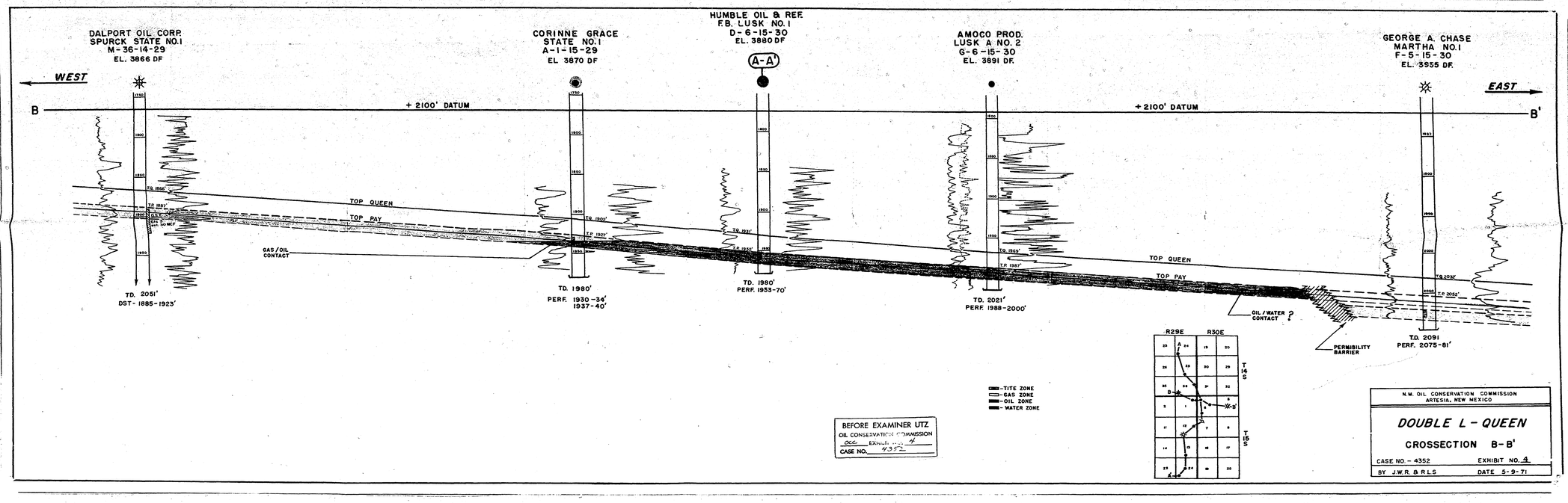
DOUBLE L QUEEN

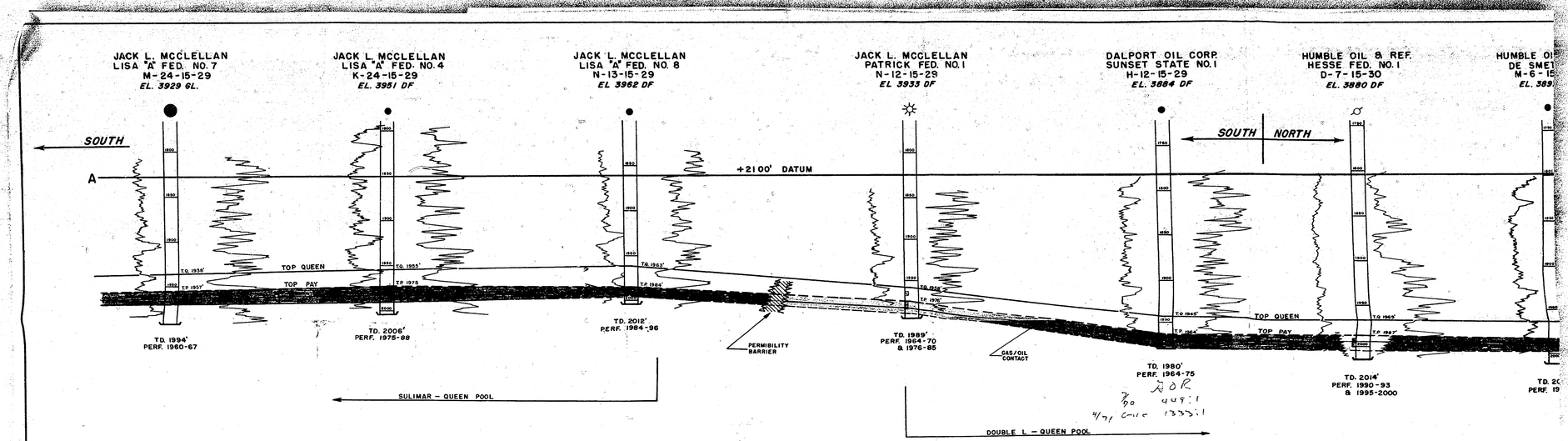
SIBLEY QUEEN GAS

LAKE QUEEN

U.S.G.S. TOPOGRAPHIC

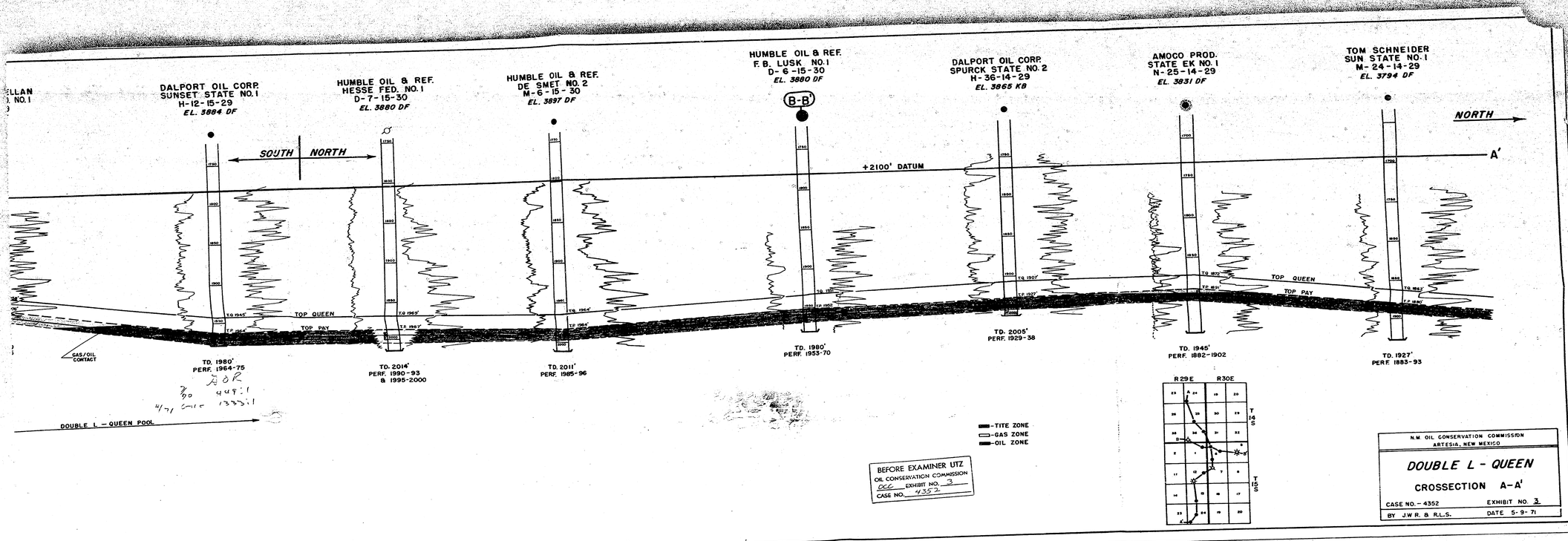

DOUBLE L QUEEN
SUSIE QUEEN GAS
LUCKY LADY QUEEN
SULIMAR QUEEN
T 15 S
R 29 E
CONTOUR INTERVAL = 2 FEET.
SCALE
4 Inches = 1 Mile
12 Inches = 1320 Feet
Queen Fm
24
50'
TYPICAL LOG
GR
TOP QUEEN PAY ZONE
LEGEND:
O – LOC.- DRILLING.
– POOL DISCOVERY WELL.
– PRODUCING OIL WELL.
– P&A - OIL PRODUCER.
– P&A - SHOW OF OIL.
– P&A - DRY WELL.
– TEMP. ABD. WELL OR LOC.
– TEMP. ABD. - SHOW OF OIL.
– SHUT-IN GAS WELL.
– P&A - GAS SHOW.
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 4352
N.M. OIL CONSERVATION COMMISSION
ARTESIA, NEW MEXICO
DOUBLE L - QUEEN POOL
PALEO TOPOGRAPHIC MAP
TOP OF QUEEN PAY ZONE
CASE NO. 4352
EXHIBIT NO. 5
BY: R.L.S. & JMR
DATE: 6/23/77


DALPORT OIL CORP.
SPURCK STATE NO.1
M-36-14-29
EL. 3866 DF
CORINNE GRACE
STATE NO.1
A-1-15-29
EL 3870 DF
HUMBLE OIL & REF.
F.B. LUSK NO.1
D-6-15-30
EL. 3880 DF
A-A'
AMOCO PROD.
LUSK A NO.2
G-6-15-30
EL. 3891 DF.
GEORGE A. CHASE
MARTHA NO.1
F-5-15-30
EL. 3935 DF.
WEST
EAST
B
B'
+2100' DATUM
+2100' DATUM
TOP QUEEN
TOP PAY
GAS/OIL CONTACT
TOP QUEEN
TOP PAY
OIL/WATER CONTACT ?
PERMIBILITY BARRIER
TD. 2051'
DST- 1885-1923'
TD. 1980'
PERF. 1930-34'
1937-40'
TD. 1980'
PERF. 1953-70'
TD. 2021'
PERF. 1988-2000'
TD. 2091
PERF. 2075-81'
-TITE ZONE
-GAS ZONE
-OIL ZONE
-WATER ZONE
R29E
R30E
T 14 S
T 15 S
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
CASE NO. 4352
N.M. OIL CONSERVATION COMMISSION
ARTESIA, NEW MEXICO
DOUBLE L - QUEEN
CROSSECTION B-B'
CASE NO. - 4352
EXHIBIT NO. 4
BY J.W.R. & R.L.S
DATE 5-9-71



7/70 449:1
4/71 CHG 1333:1

U.S.G.S. PHOTOGRAPHIC
BEST AVAILABLE COPY



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
CASE NO. 4352 EXHIBIT NO. 3

R 29E

R 30E

T 14 S

T 15 S

DOUBLE L - QUEEN

VEST RANCH - QUEEN

LUCKY LAKE QUEEN

SUBLE - QUEEN GAS

SUDMAN QUEEN

DOGIE FARMS

BARNHILL

HELMS & MARTIN

ENGLISH & HANNON

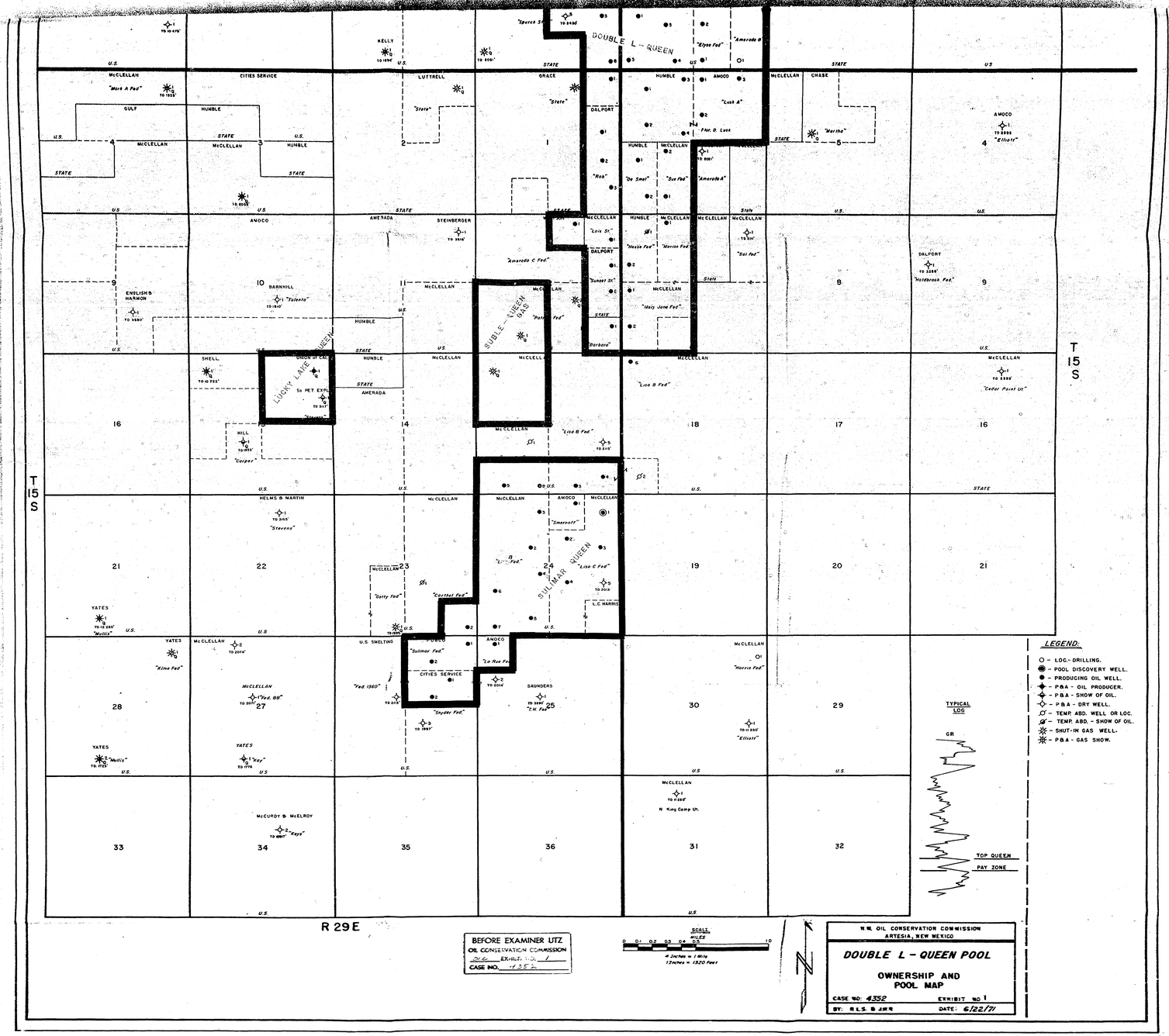
STEINBERGER

LEGEND

- LOC - DRILLING
- POOL DISCOVERY WELL
- PRODUCING OIL WELL

U.S.G.S. TOPOGRAPHIC

WEST ACCESSIBLE COPY


DOUBLE L - QUEEN
SUBLE - QUEEN GAS
LUCKY LAKE QUEEN
SUMMAR QUEEN
T 15 S
T 15 S
R 29 E
KELLY
CITIES SERVICE
LUTTRELL
GRACE
HUMBLE
AMOCO
McCLELLAN
CHASE
GULF
DALPORT
AMERADA
STEINBERGER
ENGLISH & HARMON
BARNHILL
SHELL
UNION OF CAL.
So. PET. EXPL.
HILL
HELMS & MARTIN
YATES
McCURDY & McELROY
U.S. SMELTING
PUBCO
SAUNDERS
N. King Camp Ut.
Cedar Point Ut.
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 4352
SCALE MILES
4 inches = 1 Mile
12 inches = 1320 Feet
N.M. OIL CONSERVATION COMMISSION
ARTESIA, NEW MEXICO
DOUBLE L - QUEEN POOL
OWNERSHIP AND POOL MAP
CASE NO: 4352
EXHIBIT NO 1
BY: R.L.S. & JMH
DATE: 6/22/71
TYPICAL LOG
GR
TOP QUEEN
PAY ZONE
LEGEND:
O - LOC.- DRILLING.
- POOL DISCOVERY WELL.
- PRODUCING OIL WELL.
- P.B.A. - OIL PRODUCER.
- P.B.A. - SHOW OF OIL.
- P.B.A. - DRY WELL.
- TEMP. ABD. WELL OR LOC.
- TEMP. ABD. - SHOW OF OIL.
- SHUT-IN GAS WELL.
- P.B.A. - GAS SHOW.

R 29E

R 30E

T 14 S

T 15 S

A

A'

B

B'

DOUBLE A - QUEEN

WEST RANCH - QUEEN

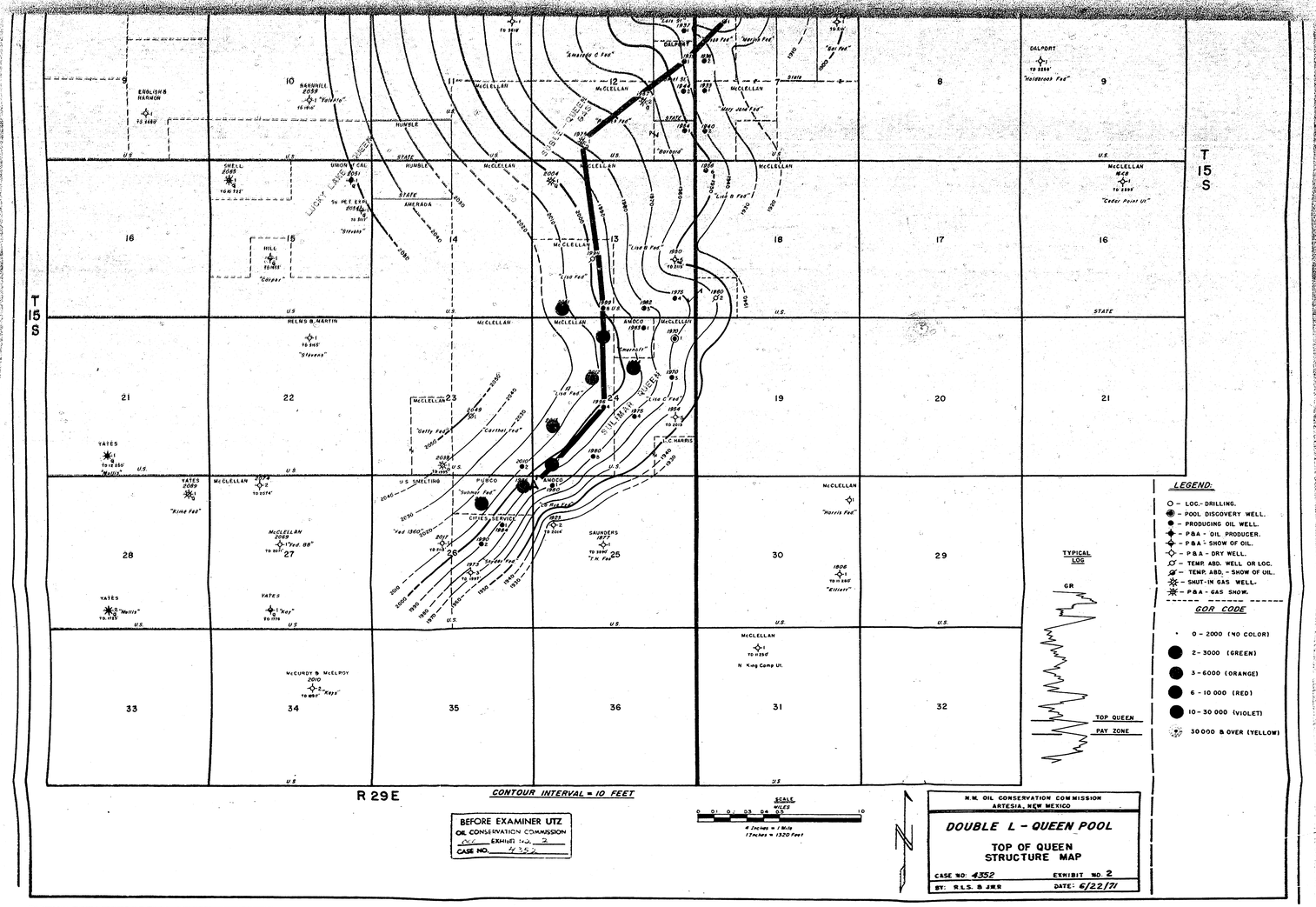
SIBLEY - QUEEN GAS

LUCKY LADY - QUEEN

LEGEND

- LOC - DRILLING
- POOL DISCOVERY WELL
- PRODUCING OIL WELL
- PBA - OIL PRODUCER
- PBA - SHOW OF OIL
- PBA - DRY WELL
- TEMP ABD WELL OR LOC
- TEMP ABD - SHOW OF OIL

TYPICAL LOG


T 15 S
R 29E
CONTOUR INTERVAL = 10 FEET
LUCKY LAKE QUEEN GAS
DOUBLE L QUEEN
GILLMAN QUEEN
McCLELLAN
HUMBLE
STATE
AMERADA
SHELL
UNION CAL
HILL
HELMS & MARTIN
YATES
ANOCO
PURCO
U.S. SMELTING
CITIES SERVICE
SAUNDERS
McCUNDY & McELROY
DALPORT
LEGEND:
○ – LOC.- DRILLING.
◉ – POOL DISCOVERY WELL.
● – PRODUCING OIL WELL.
✦ – P&A - OIL PRODUCER.
✧ – P&A - SHOW OF OIL.
◇ – P&A - DRY WELL.
– TEMP. ABD. WELL OR LOC.
– TEMP. ABD. - SHOW OF OIL.
– SHUT-IN GAS WELL.
– P&A - GAS SHOW.
GOR CODE
0 - 2000 (NO COLOR)
2 - 3000 (GREEN)
3 - 6000 (ORANGE)
6 - 10 000 (RED)
10 - 30 000 (VIOLET)
30 000 & OVER (YELLOW)
TYPICAL LOG
GR
TOP QUEEN
PAY ZONE
SCALE
MILES
1 Inches = 1 Mile
1 Inches = 1320 Feet
N
N.M. OIL CONSERVATION COMMISSION
ARTESIA, NEW MEXICO
DOUBLE L - QUEEN POOL
TOP OF QUEEN
STRUCTURE MAP
CASE NO: 4352
EXHIBIT NO. 2
BY: R.L.S. & J.M.R.
DATE: 6/22/71
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 4352