Case No.
5582

Large Exhibits



CASE 5582: Southeastern New Mexico nomenclature case calling for an order for the creation and extension of certain pools in Eddy, Lea, and Chaves Counties, New Mexico.

(a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Bass-Morrow Gas Pool. The discovery well is the Perry R. Bass Big Eddy Unit Well No. 39 located in Unit G of Section 29, Township 21 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
Section 29: E/2

(b) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Cherry Canyon production and designated as the South Carlsbad-Cherry Canyon Pool. Further to assign approximately 16,275 barrels of oil discovery allowable to the discovery well, the Belco Petroleum Company Martin Com Well No. 2, located in Unit P of Section 20, Township 22 South, Range 27 East, NMPM. Said well was completed September 12, 1975. The top of the perforations is at 3235 feet. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 20: NW/4

(c) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Corral Draw-Wolfcamp Gas Pool. The discovery well is the Mobil Oil Corporation Corral Draw Unit Well No. 2 located in Unit P of Section 27, Township 25 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 29 EAST, NMPM
Section 22: SW/4
ADDITION ---------- Section 23: SE/4

(d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Phantom Draw-Wolfcamp Gas Pool. The discovery well is the Texas Pacific Oil Company, Inc. Phantom Draw Unit Well No. 1, located in Unit M of Section 20, Township 26 South, Range 31 East, NMPM. Said pool would comprise:

TOWNSHIP 26 SOUTH, RANGE 31 EAST, NMPM
Section 20: SW/4
ADDITION ---------- Section 20: NW/4

(e) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Bone Springs production and designated as the Sand Dunes-Bone Spring Pool. The discovery well is the Skelly Oil Company Federal Sand 18 Well No. 1, located in Unit H of Section 18, Township 23 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 32 EAST, NMPM
Section 18: E/2

(f) EXTEND the Atoka-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 1: W/2
Section 3: E/2

(g) EXTEND the South Bell Lake-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 6: S/2
Section 7: N/2

(h) EXTEND the Blinebry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 27: NW/4

(i) EXTEND the Casey-Strawn Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 36: NW/4

(j) EXTEND the East Carlsbad-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
ADDITION ---------- Section 23: SW/4
ADDITION ---------- Section 26: NW/4

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 1: NE/4

(k) EXTEND the Canatary-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM
Section 28: S/2

(l) EXTEND the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 30 EAST, NMPM
Section 32: SE/4
Section 33: SW/4

(m) EXTEND the Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 18: NE/4

(n) EXTEND the Indian Draw-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 18: S/2 NE/4 & E/2 SW/4

(o) EXTEND the West Knowles-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 37 EAST, NMPM
Section 35: NW/4

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
ADDITION ---------- Section 3: NW/4

(p) EXTEND the Langlie Mattix Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 36 EAST, NMPM
Section 3: NW/4

(q) EXTEND the Llano-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

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(h) EXTEND the Bilbrey Gill and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 27: NW/4

(i) EXTEND the Caney-Stream Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 35: NW/4

(j) EXTEND the East Carlsbad-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
ADDITION ---------- Section 23: SW/4
ADDITION ---------- Section 26: NW/4

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 11: NE/4

(k) EXTEND the Cemetery-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM
Section 26: W/2

(l) EXTEND the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 30 EAST, NMPM
Section 22: SE/4
Section 23: SW/4

(m) EXTEND the Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 18: NE/4

(n) EXTEND the Indian Draw-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 18: S/2 NE/4 & E/2 SW/4

(o) EXTEND the West Knowles-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 33: NW/4

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
ADDITION ---------- Section 31: NW/4

(p) EXTEND the Lanelle Mattix Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 36 EAST, NMPM
Section 31: NW/4

(q) EXTEND the Indian-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 35 EAST, NMPM
Section 31: NE/4

(r) EXTEND the Penasco Draw San Andres-Yeso Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM
Section 1: SE/4 SW/4

(s) EXTEND the Red Tank-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 32 EAST, NMPM
Section 17: All

(t) EXTEND the Sand Dunes-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
Section 25: W/2

(u) EXTEND the Shugart Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 23: E/2 SW/4

(v) EXTEND the Ton Tom-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 31 EAST, NMPM
Section 27: SE/4

TOWNSHIP 8 SOUTH, RANGE 31 EAST, NMPM
ADDITION ---------- Section 4: NW/4

(w) EXTEND the Tres Papalotes-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
Section 28: SE/4

(x) EXTEND the Tulk-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 32 EAST, NMPM
Section 27: SW/4

(y) EXTEND the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 35: SE/4

TO BE DISMISSED — TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 2: E/2

(z) EXTEND the Wade-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
Section 31: SE/4
ADDITION ---------- Section 10: SE/4

(aa) EXTEND the Wantz-Granite Wash Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 1: NE/4

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
Section 19: SE/4

(bb) EXTEND the Warren-Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 34: NW/4

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Welex

COMPENSATED ACOUSTIC VELOCITY LOG

COMPANY BELCO PETROLEUM CORPORATION

WELL MARTIN # 2

FIELD SOUTH CARLSBAD

COUNTY EDDY STATE NEW MEXICO

Location 2205' FNL & 1750' FWL

Sec. 20 Twp. 22-S Rge. 27-E

Other Services

Permanent Datum Ground Level Elev. 3136'

Log Measured From K. B. - 10 ft. Above Perm. Datum Elev. K.B. 3146'

D.F. 3145'

G.L. 3136'

Drlg. Measured From Kelly Bushing

Date	9/6/75				
Run No.	- One -				
Depth—Driller	3375				
Depth—Wireline	3367				
Btm. Log Inter.	3361				
Top Log Inter.	50				
Casing—Driller	8-5/8" @ 392	@	@	@	
Casing—Wireline	392				
Bit Size	7-7/8"				
Type Fluid in Hole	Salt Water				
Dens. / Visc.	10.1 /30				
pH / Fluid Loss	6.0 /28 ml	ml	ml	ml	ml
Source of Sample	Pit				
R_m @ Meas. Temp.	.10 @ 70°F	@ °F	@ °F	@ °F	@ °F
R_mf @ Meas. Temp.	.07 @ 70°F	@ °F	@ °F	@ °F	@ °F
R_mc @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F	@ °F
Source R_m, R_mf, R_mc	Measured	-	-	-	-
R_m @ BHT	.06 @ 110°F	@ °F	@ °F	@ °F	@ °F
Time Since Circ.	5 Hours				
Max. Rec. Temp.	110°F B.H.	°F	°F	°F	°F
Equip. / Location	8444 / Hobbs				
Recorded By	Ed Norris				
Witnessed By	Mr. Henry				

Scale Changes

Change Without Prior Additional Samples	Type Log	Depth	Scale Up Hole	Scale Down Hole
Open Hole				
Cased Hole				

Other Services

Other Services															
Borehole Record	Run No.														
	From														
	To														
	Bit Size														
	Csg. Size														
	Wt. / Fluid														

Equipment Data

Type Log															
Depth															
Run No.															
Top Temp. Rec.															
Max. Rec. Temp.															
Equip. No.															
Location															
Recorded By															
Witnessed By															

Pad Type

Top Position

Other

CENTER | 2500

Remarks

Run No.															
Tool Pos.															
Standoff															
Spacing															
Gamma Ray															
Caliper															
Sonic															
Other															

Remarks

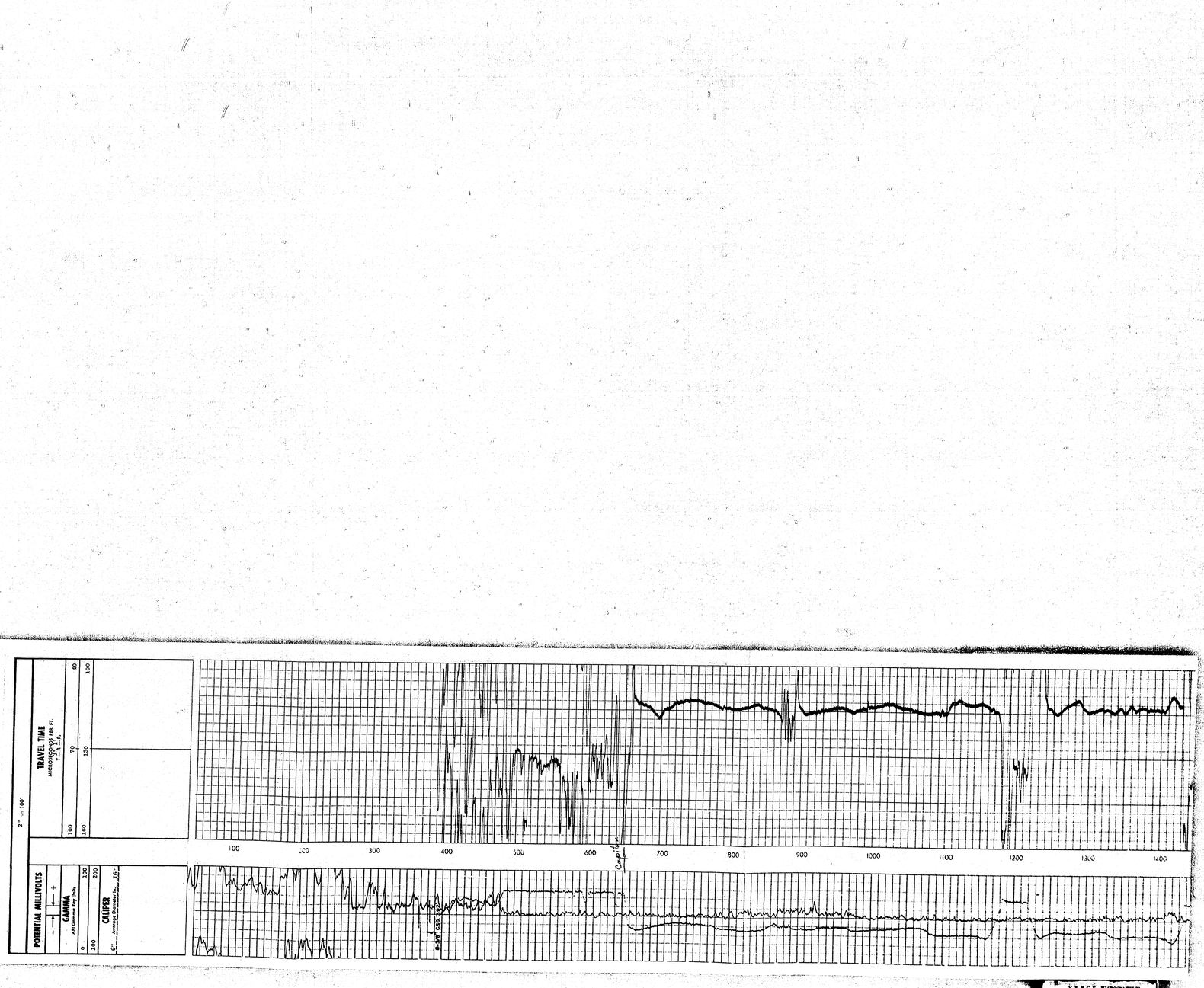
Run No.															
Tool Pos.															
Standoff															
Spacing															
Gamma Ray															
Caliper															
Sonic															
Other															

Remarks

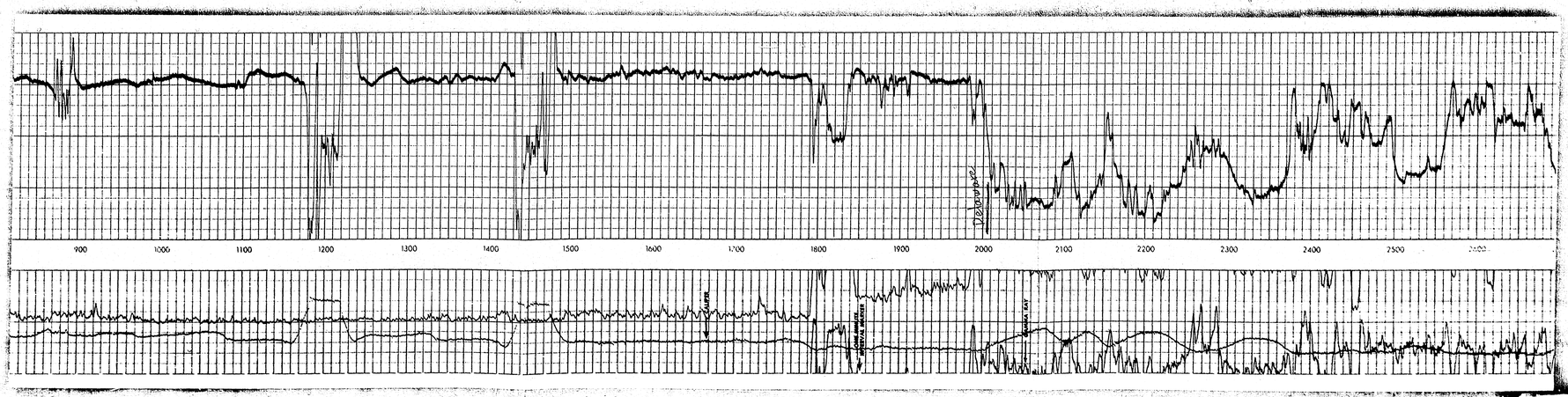
Run No.															
Tool Pos.															
Standoff															
Spacing															
Gamma Ray															
Caliper															
Sonic															
Other															

Remarks

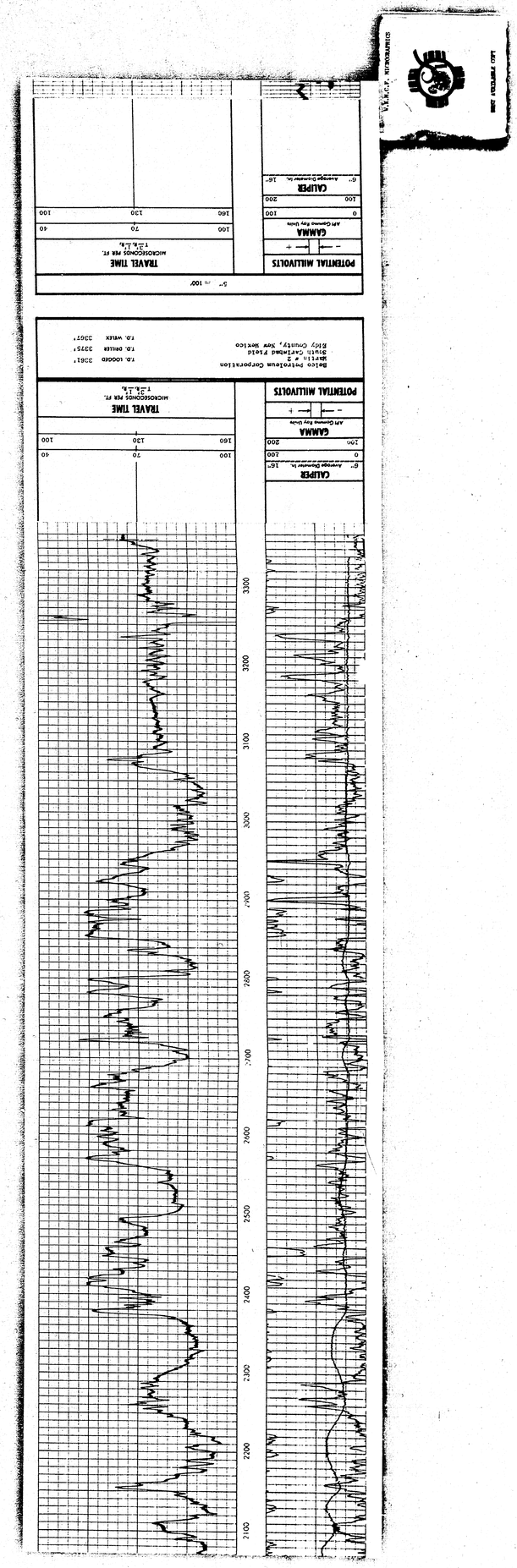
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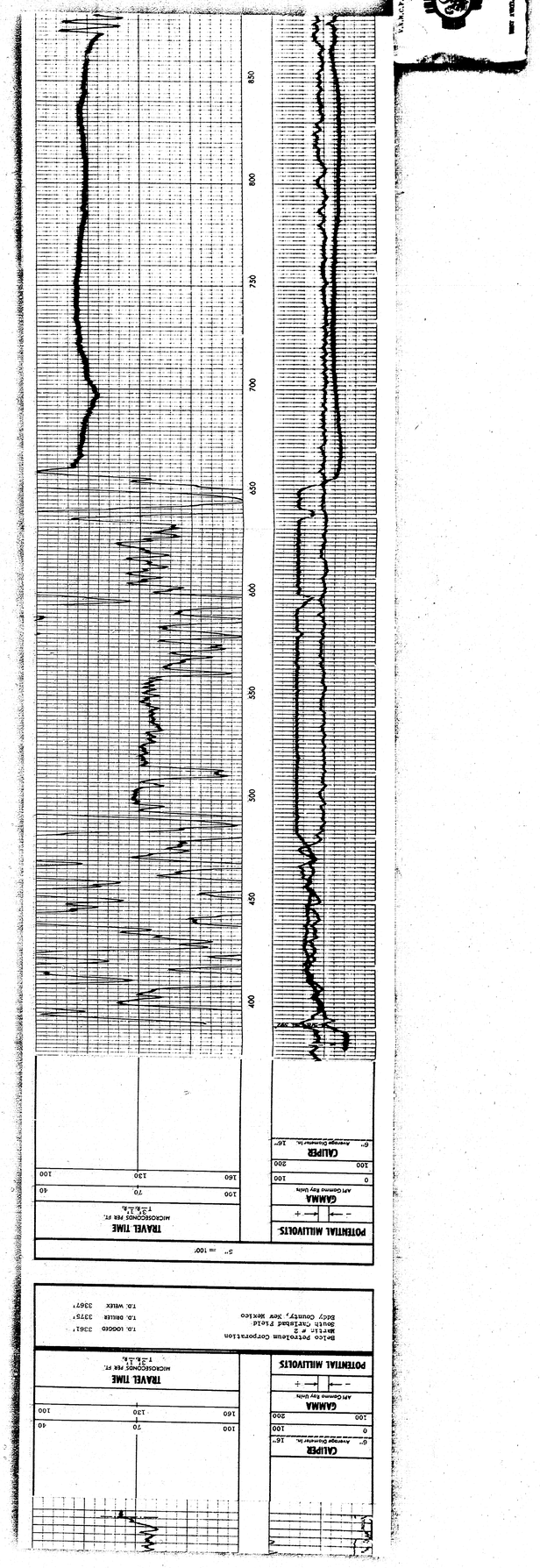


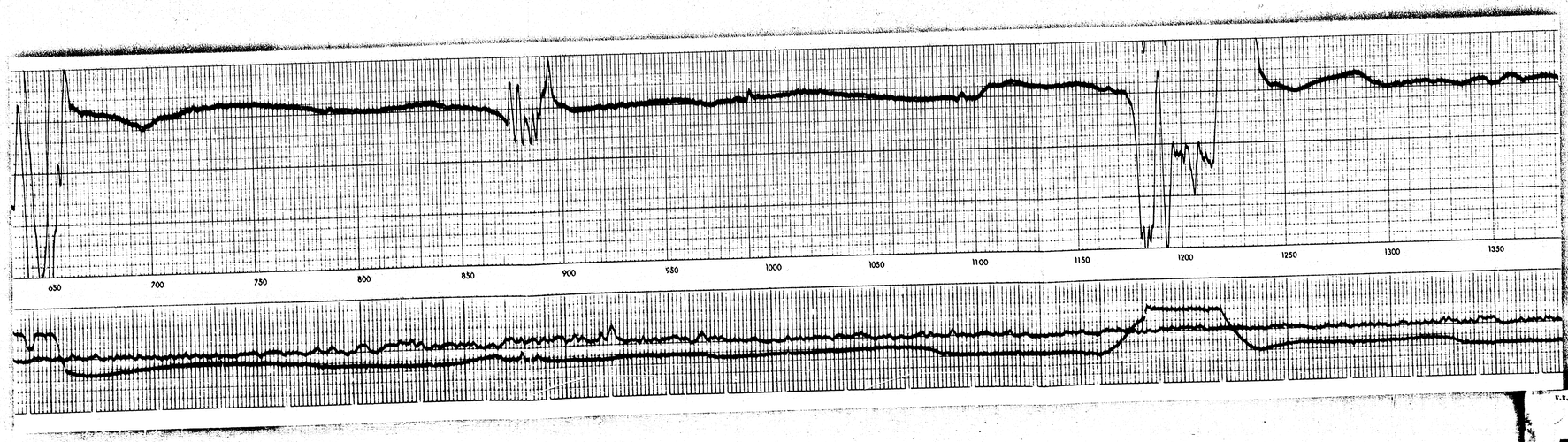
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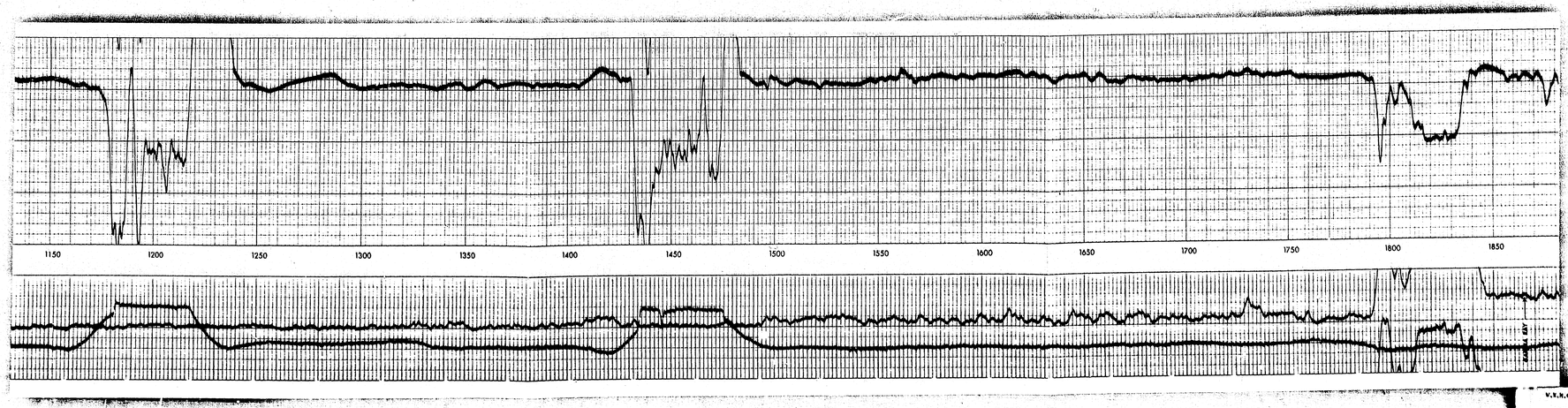
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Belco Petroleum Corporation
Shutt Catclaw Field
Eddy County, New Mexico
T.D. logger 3361'
T.D. driller 3375'
T.D. water 3367'
POTENTIAL MILLIVOLTS
GAMMA
API Gamma Ray Units
CALIPER
Average Diameter in.
TRAVEL TIME
MICROSECONDS PER FT.
T.T.T.
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200

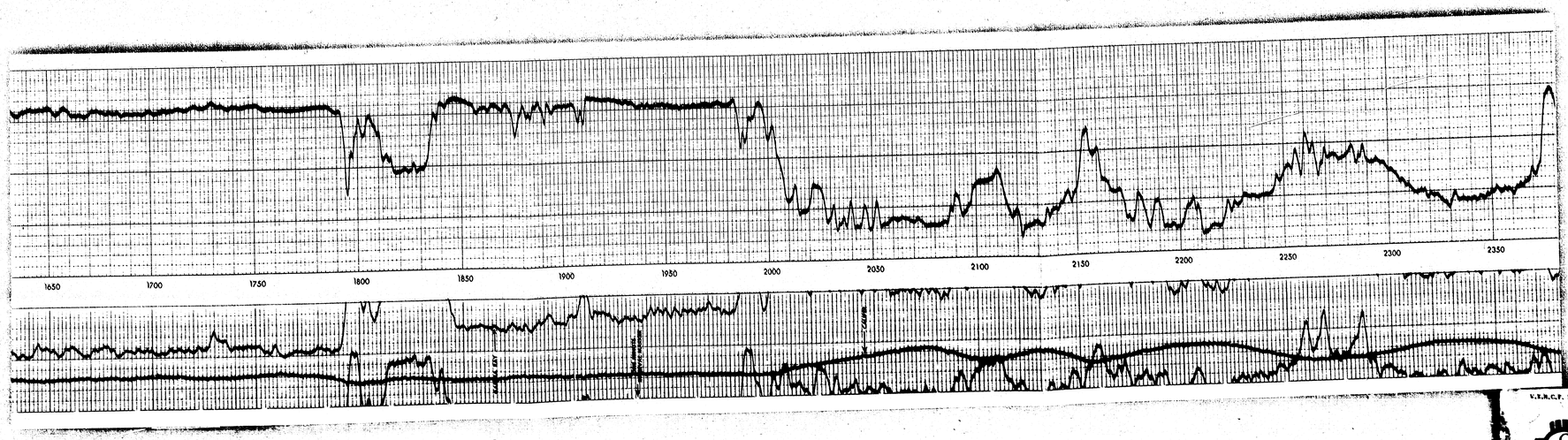

SCHLUMBERGER
WELL SURVEYING CORP.
HOUSTON, TEXAS
400
450
500
550
600
650
700
750
800
850
CALIPER
6" Average Diameter in. 16"
0
100
200
GAMMA
API Gamma Ray Units
100
160
200
POTENTIAL MILLIVOLTS
– → ← +
GAMMA
API Gamma Ray Units
0
100
200
CALIPER
6" Average Diameter in. 16"
TRAVEL TIME
MICROSECONDS PER FT.
100
70
40
160
130
100
5" = 100'
POTENTIAL MILLIVOLTS
– → ← +
TRAVEL TIME
MICROSECONDS PER FT.
100
70
40
160
130
100
Belco Petroleum Corporation
Burtis # 2
South Carlsbad Field
Eddy County, New Mexico
T.D. LOGGED 3361'
T.D. DRILLER 3375'
T.D. WLEX 3367'

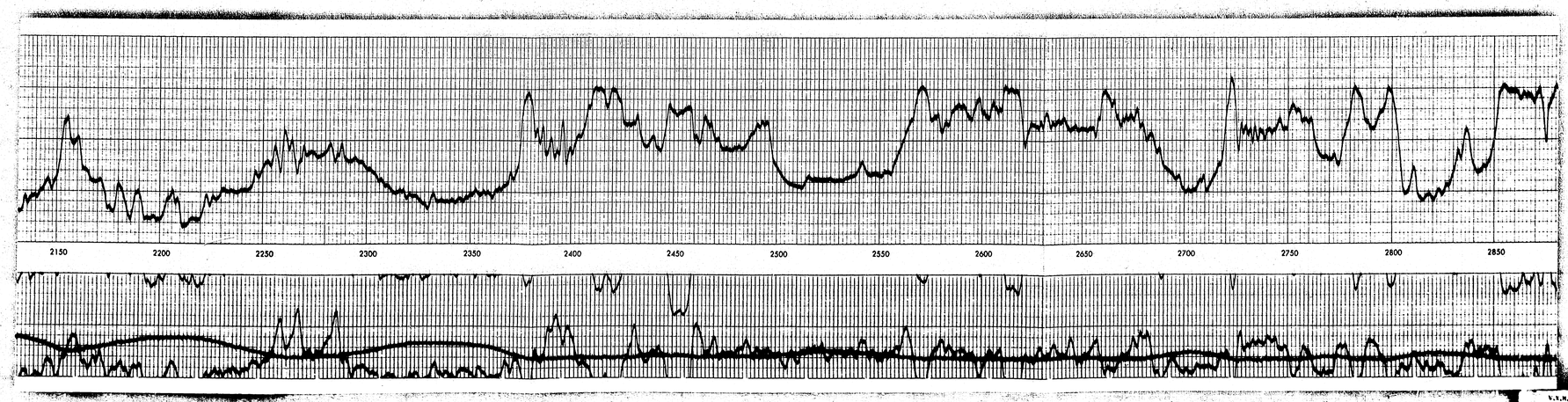


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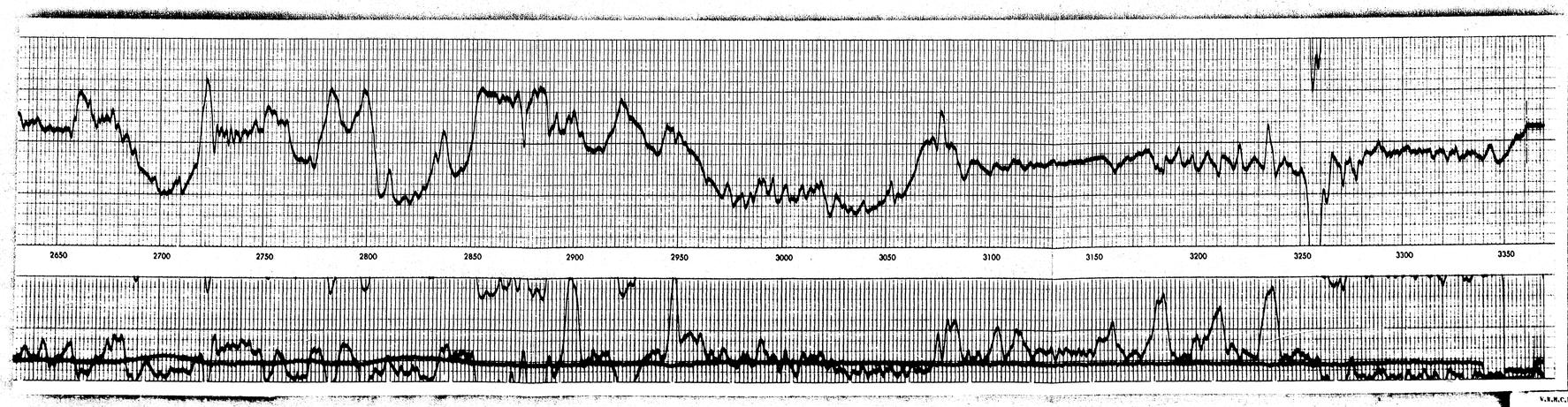


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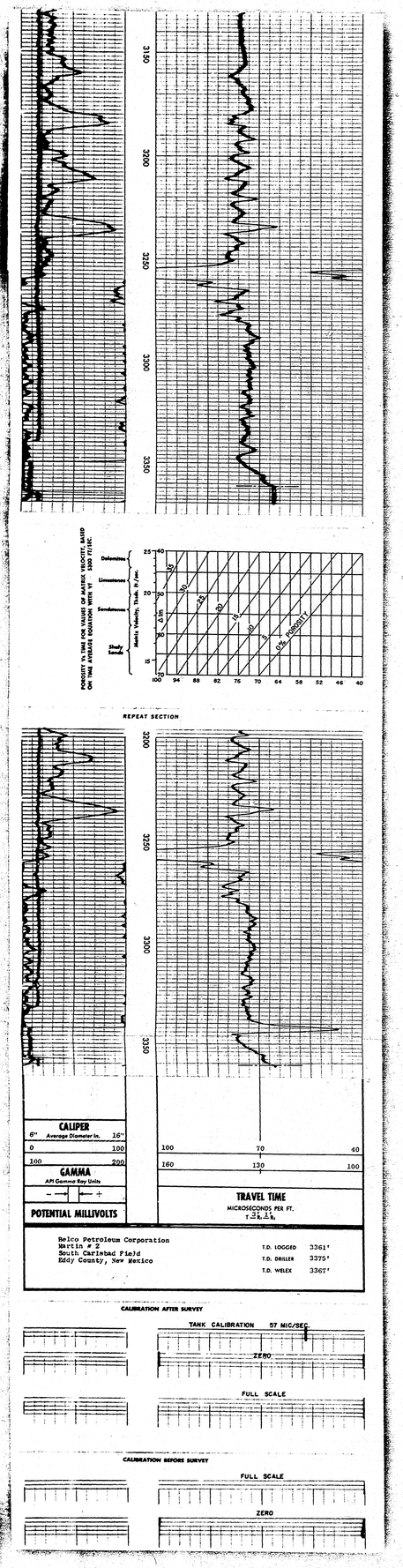

1650
1700
1750
1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
2300
2350



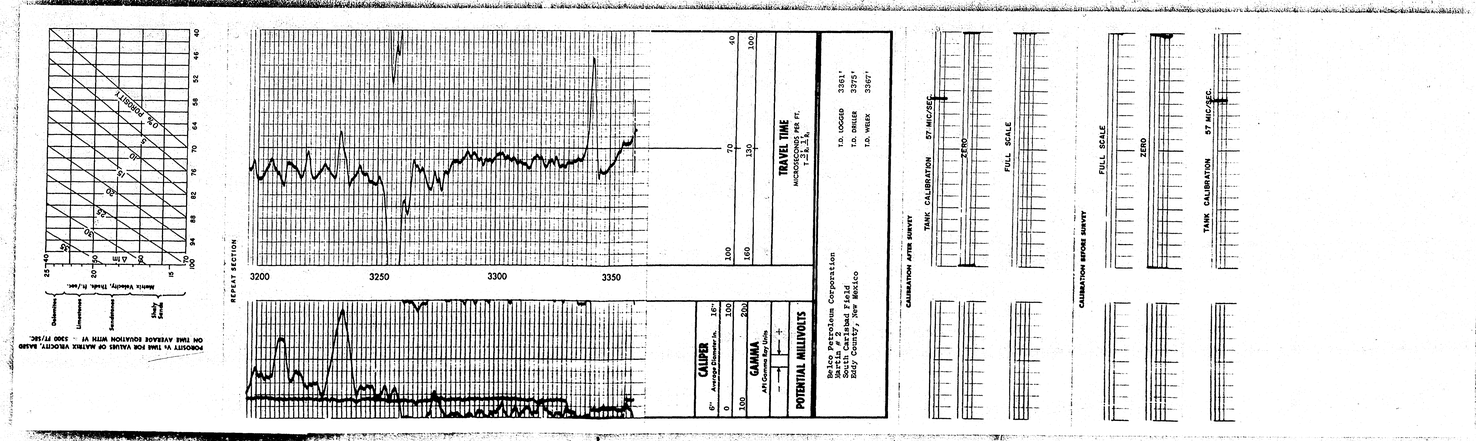
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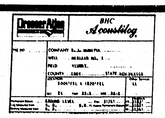

3150
3200
3250
3300
3350
POROSITY VS TIME FOR VALUES OF MATRIX VELOCITY, BASED ON THE AVERAGE EQUATION WITH Cp = 1.00 AND 1.40
Dolomites
Limestones
Sandstones
Shaly Beds
Matrix Velocity, Thsds. ft./sec.
Δ t in
25
20
15
40
30
20
15
100
94
88
82
76
70
64
58
52
46
40
0% POROSITY
REPEAT SECTION
3200
3250
3300
3350
CALIPER
6" Average Diameter in. 16"
0 100
100 200
GAMMA
API Gamma Ray Units
POTENTIAL MILLIVOLTS
100 70 40
160 130 100
TRAVEL TIME
MICROSECONDS PER FT.
Belco Petroleum Corporation
Martin # 2
South Carlsbad Field
Eddy County, New Mexico
T.D. LOGGED 3361'
T.D. DRILLER 3375'
T.D. WELEX 3367'
CALIBRATION AFTER SURVEY
TANK CALIBRATION 57 MIC/SEC
ZERO
FULL SCALE
CALIBRATION BEFORE SURVEY
FULL SCALE
ZERO


WELEX
A GEARHART-OWEN COMPANY



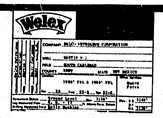
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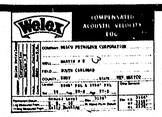
D. L. HANNIFIN
1 - Norland

EL 31,831 ● TD 4508



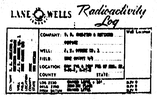
BELCO PET.
1 - Martin

EL 3149 ✠ TD 11,726



BELCO PET.
2 - Martin

EL 3146 ● TD 3375



U. S. SMELTING
1 - Gentry

EL 3162 ✗ TD 7300

A'

TOP DELAWARE

SEA LEVEL

SEA LEVEL

OST 4448-4508'
Open 180 min. GTS in 15 min.
GTS 95 min.
Rec. 1200' Mud, 840' MSO,
2197' (AG, 187' JX
IH 2331 FH 2346
ISI 2906/92 min.
FSI 2070/180 min.
IF 296 FF 968

Perf. 4456-64', A/500
Flwd. 6 BOPH
(IP 180 BOPD, 16/64" ch.)

South Carlsbad Field
"Delaware Prod."

OST 3240-3304'
Open 5 & 60 min.
Rec. 450' Oil & 506' drlg. wtr.
IH 1640 FH 1640
ISI 1550/60 min.
FSI 1550/90 min.
IF 55 FF 467

Perf. 3255-3280';
A/500 gals. &
IPF 193 BOPD on 24/64" ch..
Gas TSTM

Proposed South Carlsbad
Upper Delaware Field

Perf 3090-95', Swbd. dry,
A/500; Swbd. Sul. Wtr.
w/scum oil, squeezed.

OST 3086-3106'
Open 130 min.
Rec. 301' GASSCM
ISI 215/20 min.
FF 120

OST 3164-3200'
Open 180 min.
Rec. 645' Sul. Wtr.
ISI 1295/15 min.
FF 55 FF 340

Perf. 3410-48', squeezed

OST 4590-4608'
Open 180 min.
Rec. 40' Mud to 102' SOAGCM
ISI 120/30 min.
IF 28 FF 80

OST 4976-5017'
Open 180 min.
Rec. 120' Mud, NS
ISI 150/20 min.
FF 95

OST 5020-64'
Open 180 min.
Rec. 180' GCM, 370' SW
ISI 1800/20 min.
IF 90 FF 380

OST 5160-5238'
Rec. 30' Mud
ISI 110/20 min.
FF 110

Perf. 5160-80'; 5186-5208'
A/1000 gals.

Perf. 5216-30'; A/1000
Swbd. dry, frac. w/10,000 gals.
Swbd. 33 BO & 38-1/2 BW in
24 hrs.

Nye Field
"Delaware Prod."

IP 23 BO & 43 BW in 24 hrs.
(5160-5230)

BONE SPRING

STRAWN

Perf. 10,354-360'; 10,364-368';
10,372-374'; A/12,500 gals.
Flow 250 MCF

South Carlsbad Field
"Strawn Production"

ATOKA

MORROW

Perf. 11,256-364'; 11,393-396';
11,404-427'; Unofficial
CAOF 35 MM (natural)

South Carlsbad Field
"Morrow Production"

32 S 26 E
16, 17, 25

BELCO PETROLEUM CORP.

Structural Cross Section
for
North NM Nomenclature Allocation

Vertical Scale - 1" = 200'

By Del Hendy

Date Oct.

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A

D. L. HANNIFIN
1 - Merland
EL 31,831 • TD 4508

BELCO PET.
1 - Martin
EL 3146 ✲ TD 11,726

BELCO PET.
2 - Martin
EL 3146 • TD 3375

U. S. SMELTING
1 - Gentry
EL 3162 ✓ TD 7300

A'

TOP DELAWARE

SEA LEVEL

SEA LEVEL

DST 3248-3304'
Open 5 & 60 min.
Rec. 450' Oil & 506' drlg. wtr.
IH 1640 FH 1640
ISI 1550/60 min.
FSI 1550/90 min.
IF 55 FF 467

Perf. 3255-3280';
A/500 gals.
IPF 193 BOPD on 24/64" ch.,
Gas TSTM

Proposed South Carlsbad Upper Delaware Field

Perf 3090-95', Swbd. dry, A/500; Swbd. Sul. Wtr. w/scum oil. squeezed.

DST 3086-3106'
Open 130 min.
Rec. 301' GASSOM
ISI 215/20 min.
FF 120

DST 3164-3200'
Open 180 min.
Rec. 645' Sul. Wtr.
ISI 1295/15 min.
IF 55 FF 340

Perf. 3410-48', squeezed

DST 4448-4508'
Open 180 min. GTS in 15 min.
GTS 95 min.
Rec. 1200' Mud, 840' MSO, 2197' (46, 187' SW
IH 2331 FH 2346
ISI 2906/92 min.
FSI 2070/180 min.
IF 296 FF 968

Perf. 4456-64', A/500
Flwd. 6 BOPH
(IP 180 BOPD, 16/64" ch.)

South Carlsbad Field
"Delaware Prod."

DST 4590-4608'
Open 180 min.
Rec. 40' Mud to 102' SOMGCM
ISI 120/30 min.
IF 28 FF 80

DST 4976-5017'
Open 180 min.
Rec. 120' Mud, NS
ISI 155/20 min.
FF 95

DST 5020-64'
Open 180 min.
Rec. 180' GCM, 370' SW
ISI 1800/20 min.
IF 90 FF 380

DST 5160-5238'
Rec. 30' Mud
ISI 110/20 min.
FF 110

Perf. 5160-80'; 5186-5208'
A/1000 gals.

Perf. 5216-30'; A/1000
Swbd. dry, frac. w/10,000 gals.
Swbd. 33 BO & 38-1/2 BW in 24 hrs.

Hog Field
"Delaware Prod."

IP 23 BO & 43 BW in 24 hrs.
(5160-5230)

BONE SPRING

STRAWN

Perf. 10,356-360'; 10,364-368'; 10,372-374'; A/12,500 gals.
Flow 250 MCF

South Carlsbad Field
"Strawn Production"

ATOKA

MORROW

Perf. 11,356-364'; 11,393-396'; 11,404-427'; Unofficial
CAOF 35 MM (natural)

South Carlsbad Field
"Morrow Production"

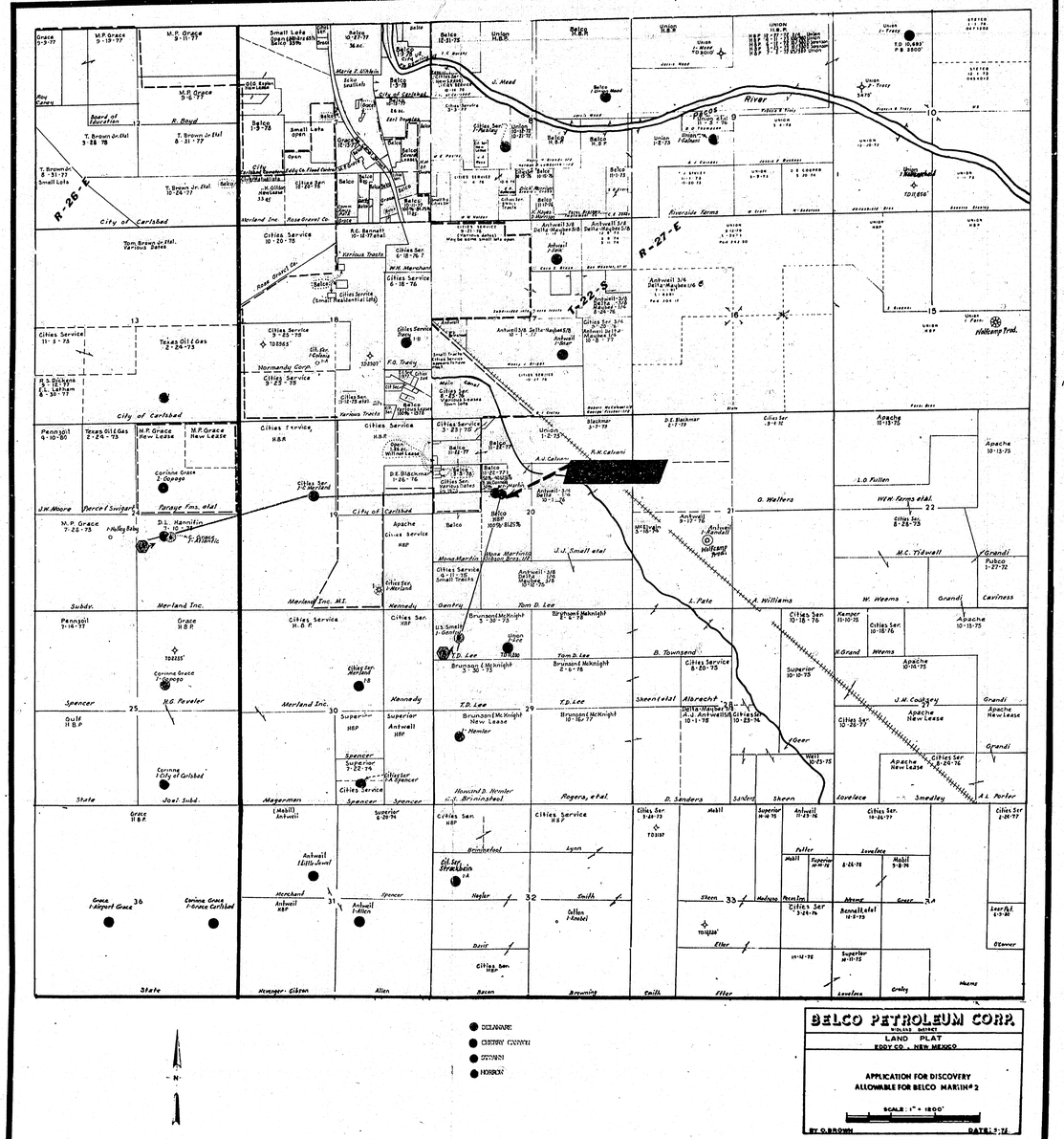
32-25-
16-21-25

BELCO PETROLEUM CORP.
MIDLAND DISTRICT

Structural Cross-Section
For
Martin #1 Discovery Allowable

Vertical Scale - 1" = 200'

By: D.C. Boundy



W.N.M.G.P. MICROGRAPHICS
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