Case No
6562

Large Exhibits

Form P&S (Rev. 6/75)

The Western Company
of North America
TREATMENT REPORT

Date 8-22-79 Western District Hobbs NM F. Receipt 216989
Operator Orla Petco, Inc.
Lease Gorley Federal Well No. 4
Field Herraoura Bend Delaware Location 6-15S-22E
County Eddy State New Mexico
Stage Number 1, This Zone ☒ This Well ☐

WELL DATA: OG ☐ NG ☐ NO ☒ OO ☐ WD ☐ Misc. ☐ Depth TD/PB 2612 Formation Delaware
Size Tubing 2 3/8" Tubing Perf. ----- Type Packer Baker Set At 2300
Size Casing 4½" Wt. 9.5# Set From Surface To 2486' Size Liner 2 7/8" Wt. N/A
Liner Set From 2434' To 2600' Open Hole: Size ----- From ----- To ------
Casing Perforations: Size 0.42 Holes Per Foot 2 intervals 2556-2566 10Ft.

Previous Treatment N/A Prior Production N/A

TREATMENT DATA: Pad Used: Yes ☐ No ☒ Pad Type none
Treating Fluid Type: Oil ☐ Water ☐ Acid ☒ Misc. ☐ Foam ☐ Emulsion ☐
Treating Fluid Volume Gals. 500 Fluid Description 15% DS-30
Total Prop Quantity ------- Lbs. Prop Type: Sand ☐ Beads ☐ Special ☐ None ☒
Prop Mesh Sizes, Types and Quantities ------
Hole Loaded With Formation fluid Treat Via: Tubing ☒ Casing ☐ Anul ☐ Tubing & Anul. ☐
Ball Sealers: ---- In ---- Stages of -----
Types and Number of Pumps Used 1 HHP Acidmaster
Auxiliary Materials ½ gallon I-15

Procedure Acidize casing perfs with 12 BBls. 15% DS-30, flush with 11 BBls. 2% KCL water.

FLUID PUMPED AND CAPACITIES IN BBLS.

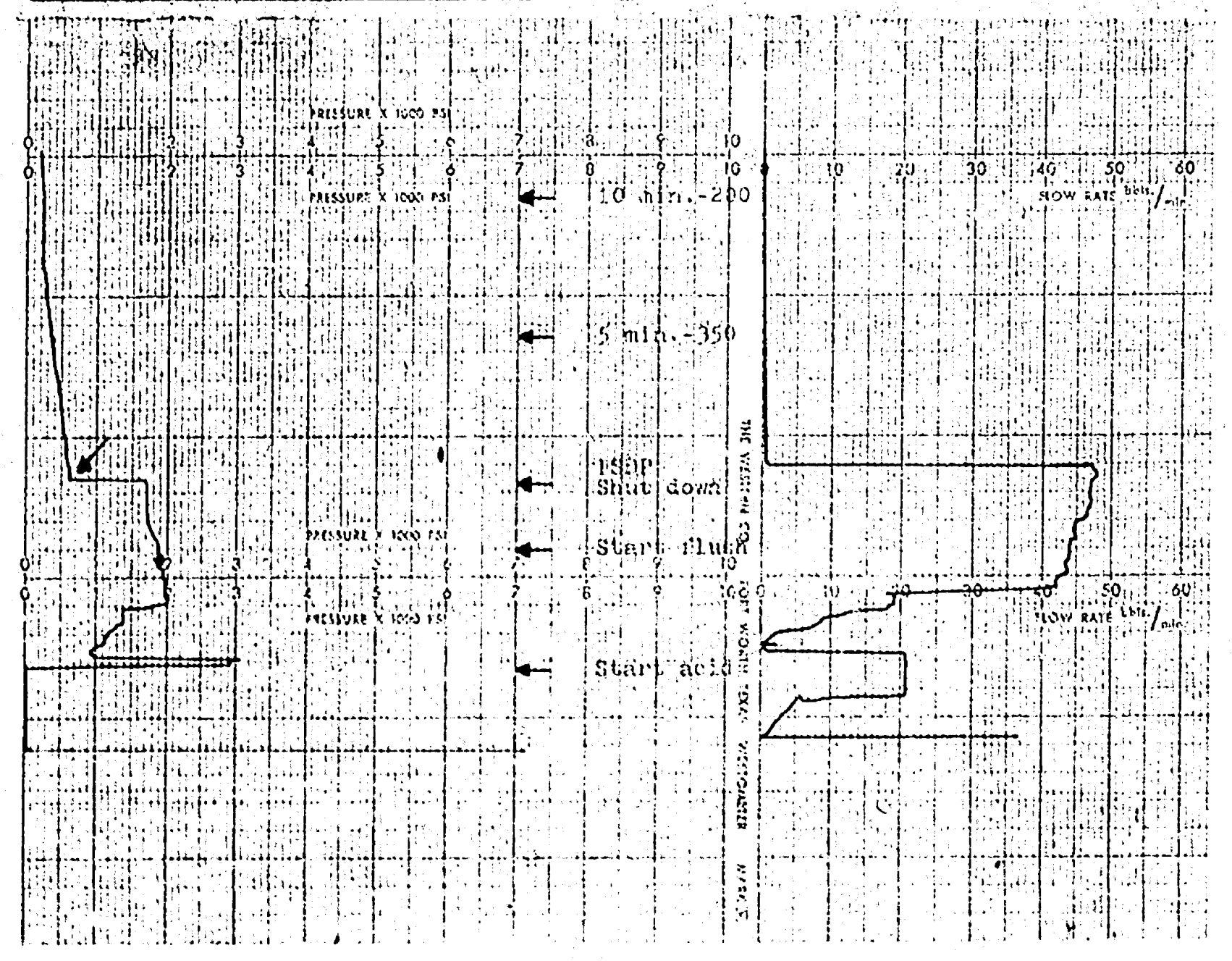
Tubing Cap.	8.29
Casing Cap.	5.0
Annular Cap.	24
Open Hole Cap.	------
Fluid to Load	0
Pad Volume	0
Treating Fluid	12
Flush	11
Overflush	-----
Total to Recover	39

Time ~~AM~~/PM	Treating Pressure-Psi Tubing	Treating Pressure-Psi Casing	Barrels Fluid Pumped	Inj. Rate BPM	REMARKS— Safety Meeting & Test Lines
1:46+	0	open	0	0	Start 12 BBls. acid.
1:51	1900	open	12	4.4	Acid Complete- Start flush.
1:53+	1700	open	23	4.7	Flush complete. Shut down.
					ISDP- 600
					5 min.-450
					10 min.-200

Treating Pressure: Min. 1000 Max. 1900 Avg. 1850
Inj. Rate on Treating Fluid 3 Rate on Flush 4.7
Avg. Inj. Rate 3.2 I.S.D.P. 600 Flush Dens. lb/gal 8.43
Final Shut-In Pressure 200 in 10 Minutes.
Operator's Maximum Pressure ------

Customer Representative Mr. Ritchie
Western Representative Chenault
Distribution
3cc: Box 1383, Midland, Texas 79702
1cc: Hobbs District Office

Job Number
570759



Welex

ACOUSTIC VELOCITY LOG

COMPANY Orla Petco Inc.
WELL Gourley - Federal # 4
FIELD Herradura Bend
County Eddy State N.M.

COMPANY ORLA PETCO INC.
WELL GOURLEY - FEDERAL # 4
FIELD HERRADURA BEND
COUNTY EDDY STATE NEW MEXICO
Location 2310' FSL & 1650' FEL
Sec. 31 Twp. 22-S Rge. 28-E
Other Services

Permanent Datum Ground Level Elev. 3068'
Log Measured From D. F. - 2 Ft. Above Perm. Datum
Drilling Measured From Derrick Floor
Elev.: K.B.
D.F. 3070'
G.L. 3068'

Date	8/24/79			
Run No.	- One -			
Depth—Driller	2602			
Depth—Welex	2618			
Btm. Log Inter.	2615			
Top Log Inter.	2150			
Casing—Driller	4-1/2" @ 2486	@	@	@
Casing—Welex				
Bit Size	2486			
Type Fluid in Hole	Brine			
Dens. | Visc.	10.1 |	|	|	|
pH | Fluid Loss	| ml	| ml	| ml	| ml
Source of Sample				
R_m @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
Source R_{mf} R_{mc}	|	|	|	|
R_m @ BHT	@ °F	@ °F	@ °F	@ °F
Time Since Circ.	2 Hours			
Max. Rec. Temp.	81 °F @	°F @	°F @	°F @
Equip. | Location	| Hobbs	|	|	|
Recorded By	K. Herriage			
Witnessed By	Mr. Eschberger			

Fold Here

Service Ticket No. 0420-10 Remarks:

Change in Mud Type or Additional Samples

Date | Sample No.	|	|
Depth—Driller		
Type Fluid in Hole		
Dens. | Visc.	|	|
pH | Fluid Loss	| ml	|
Source of Sample		
R_m @ Meas. Temp.	@ °F	@ °F
R_{mf} @ Meas. Temp.	@ °F	@ °F
R_{mc} @ Meas. Temp.	@ °F	@ °F
Source: R_{mf} | R_{mc}	|	|
R_m @ BHT	@ °F	@ °F
R_{mf} BHT	@ °F	@ °F
R_{mc} BHT	@ °F	@ °F

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

EQUIPMENT DATA

Run No.	Tool Type and No.	Pad Type	Tool Position	Other
-1-	AVL 304A	2-1/8" OD & 501 GR		

Welex does not guarantee the accuracy of any interpretation of log data, conversion of log data to physical rock parameters, or recommendations which may be given by Welex personnel or which may appear on the log or in any other form. Any user of such data, interpretations, conversions, or recommendations agrees that Welex is not responsible, except where due to gross negligence or wilful misconduct, for any loss, damages, or expenses resulting from the use thereof.

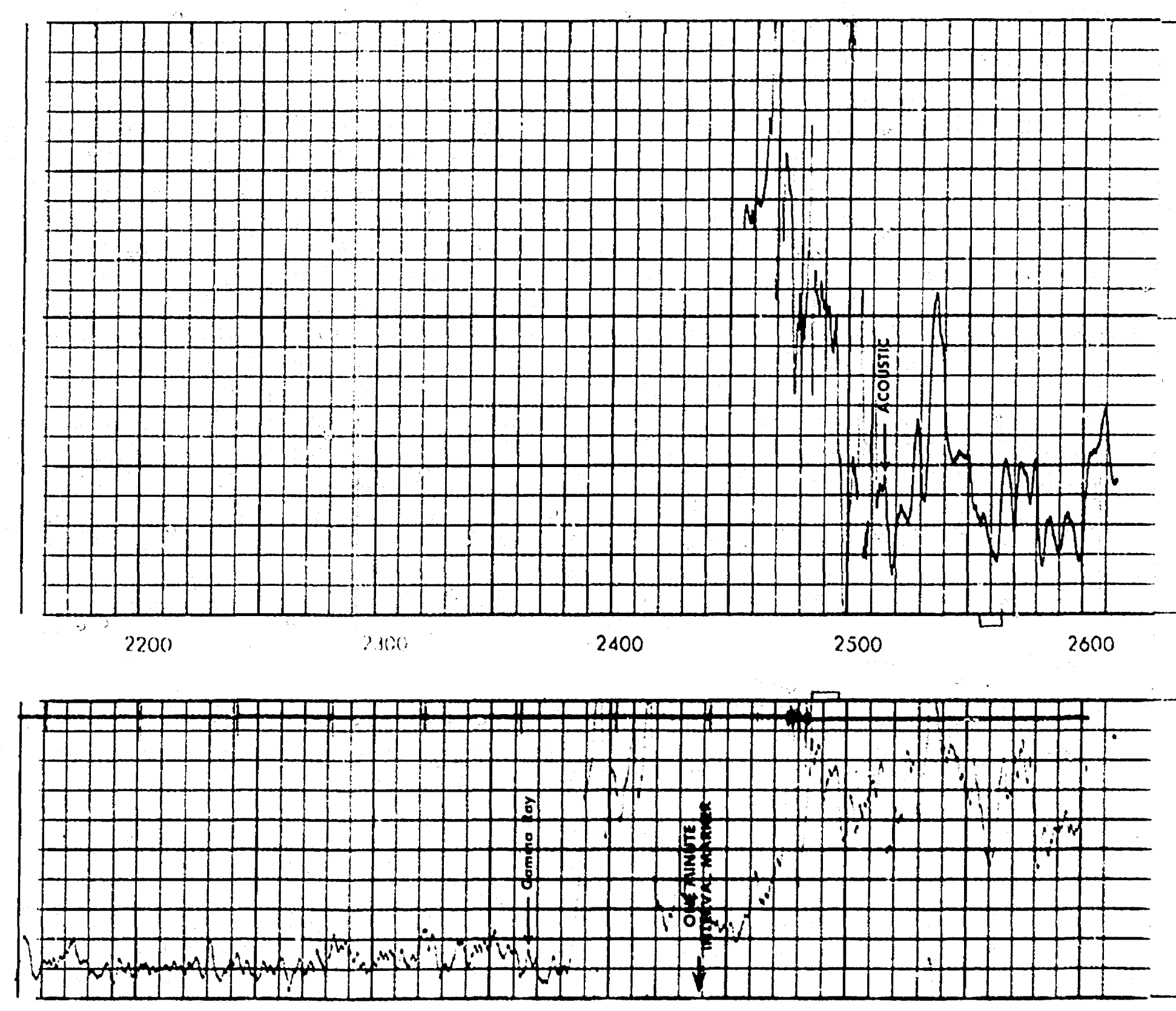
2" = 100'

TRAVEL TIME
MICROSECONDS PER FT.
T 3' R. 1' R.
100 70 40
160 130 100

POTENTIAL MILLIVOLTS

GAMMA
API Gamma Ray Units
0 100
100 200

CALIPER
Average Diameter In.



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0 100

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API Gamma Ray Units
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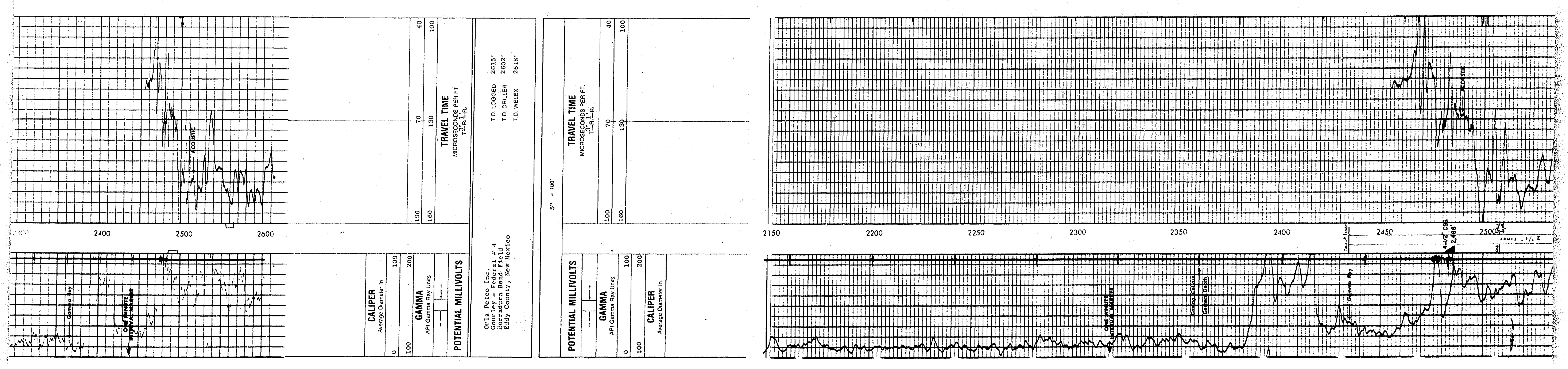
POTENTIAL MILLIVOLTS

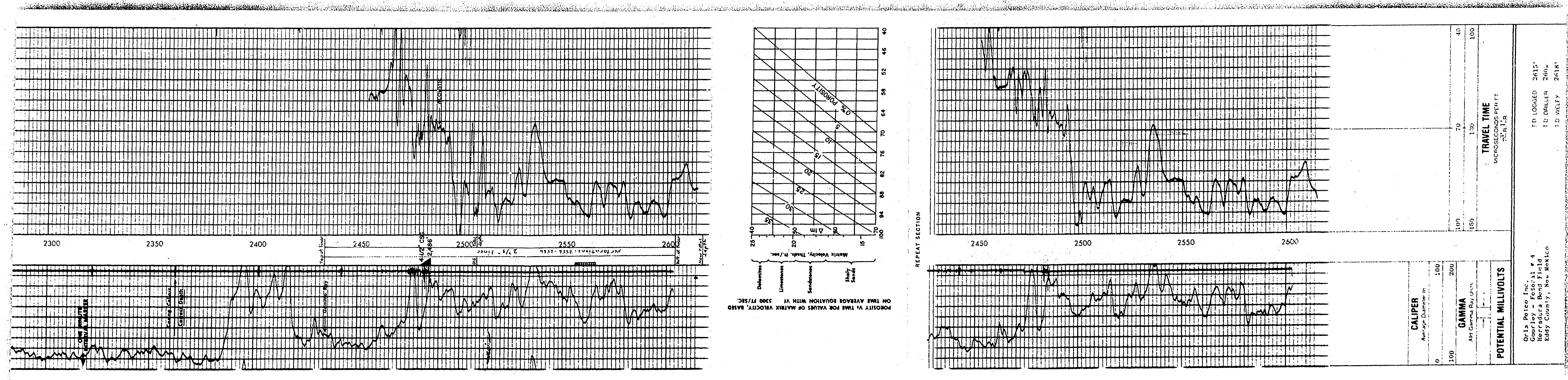
TRAVEL TIME
MICROSECONDS PER FT.
T 3' R. 1' R.
100 70 40
160 130 100

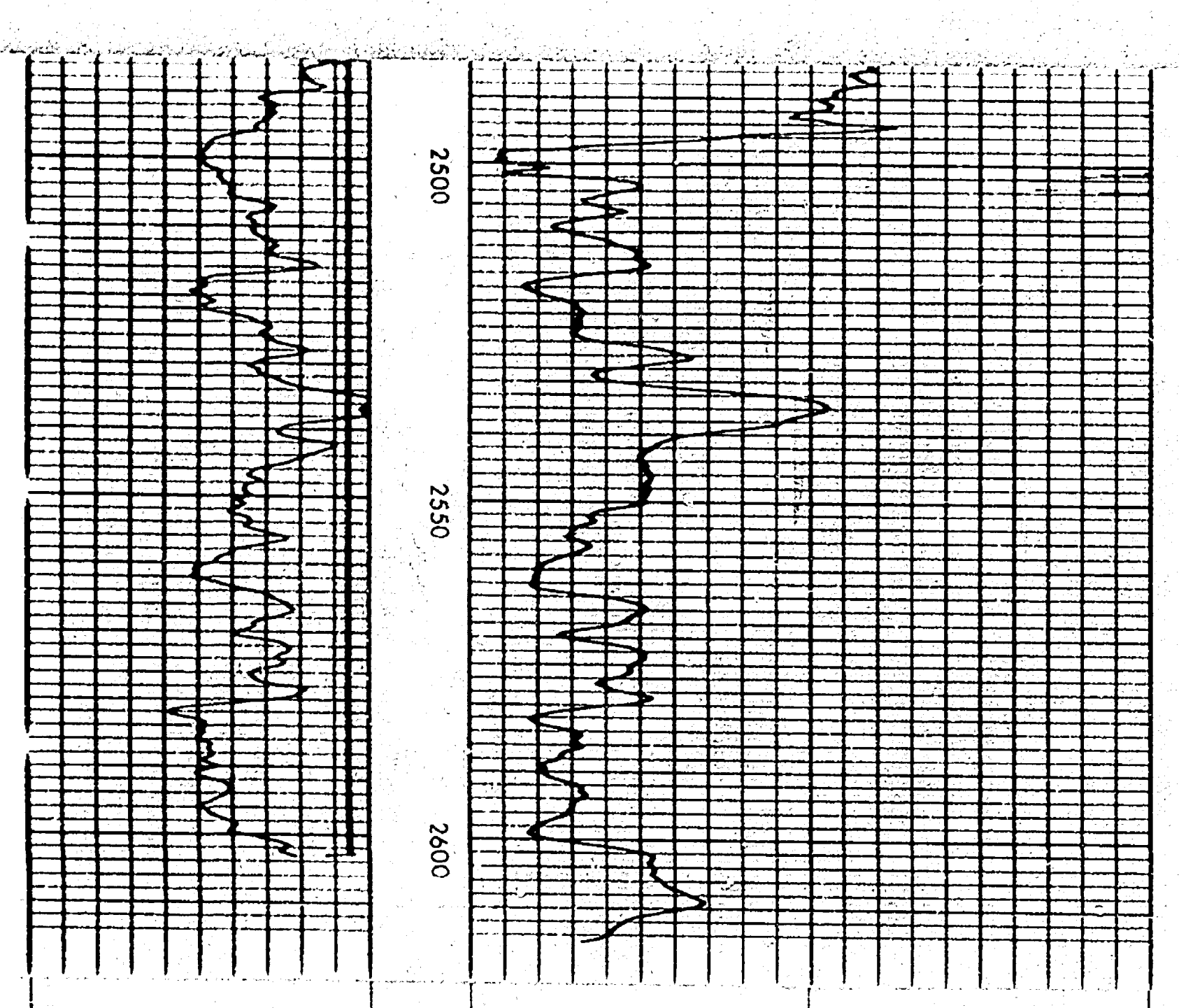
Orla Petco Inc.
Gourley - Federal # 4
Herradura Bend Field
Eddy County, New Mexico

T.D. LOGGED 2615'
T.D. DRILLER 2602'
T.D. WELEX 2618'



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


2300
2350
2400
2450
2500
2550
2600
ONE MINUTE INTERVAL MARKER
Casing Caliper
Casing Depth
Gamma Ray
Top of liner
4-1/2" CSG 2,486'
old Total depth
2 7/8" liner
perforations: 2556 - 2566
Bott. of liner
New Total depth
POROSITY
0% POROSITY
5
10
15
20
25
30
35
40
46
52
58
64
70
76
82
88
94
100
Δtm
25
20
15
40
50
60
70
Matrix Velocity, Thous. ft./sec.
Dolomites
Limestones
Sandstones
Shaly Sands
POROSITY Vs TIME FOR VALUES OF MATRIX VELOCITY, BASED ON TIME AVERAGE EQUATION WITH Vf 5300 FT/SEC.
REPEAT SECTION
CALIPER
Average Diameter in
0
100
GAMMA
API Gamma Ray Units
100
200
POTENTIAL MILLIVOLTS
TRAVEL TIME
MICROSECONDS PER FT
100
70
40
150
130
100
Orla Petco Inc.
Gourley - Federal # 4
Herradura Bend Field
Eddy County, New Mexico
T.D. LOGGED 2615'
T.D. DRILLER 2604
T.D. WELEX 2618'



CALIPER
Average Diameter In.

0	100
100	200

GAMMA
API Gamma Ray Units

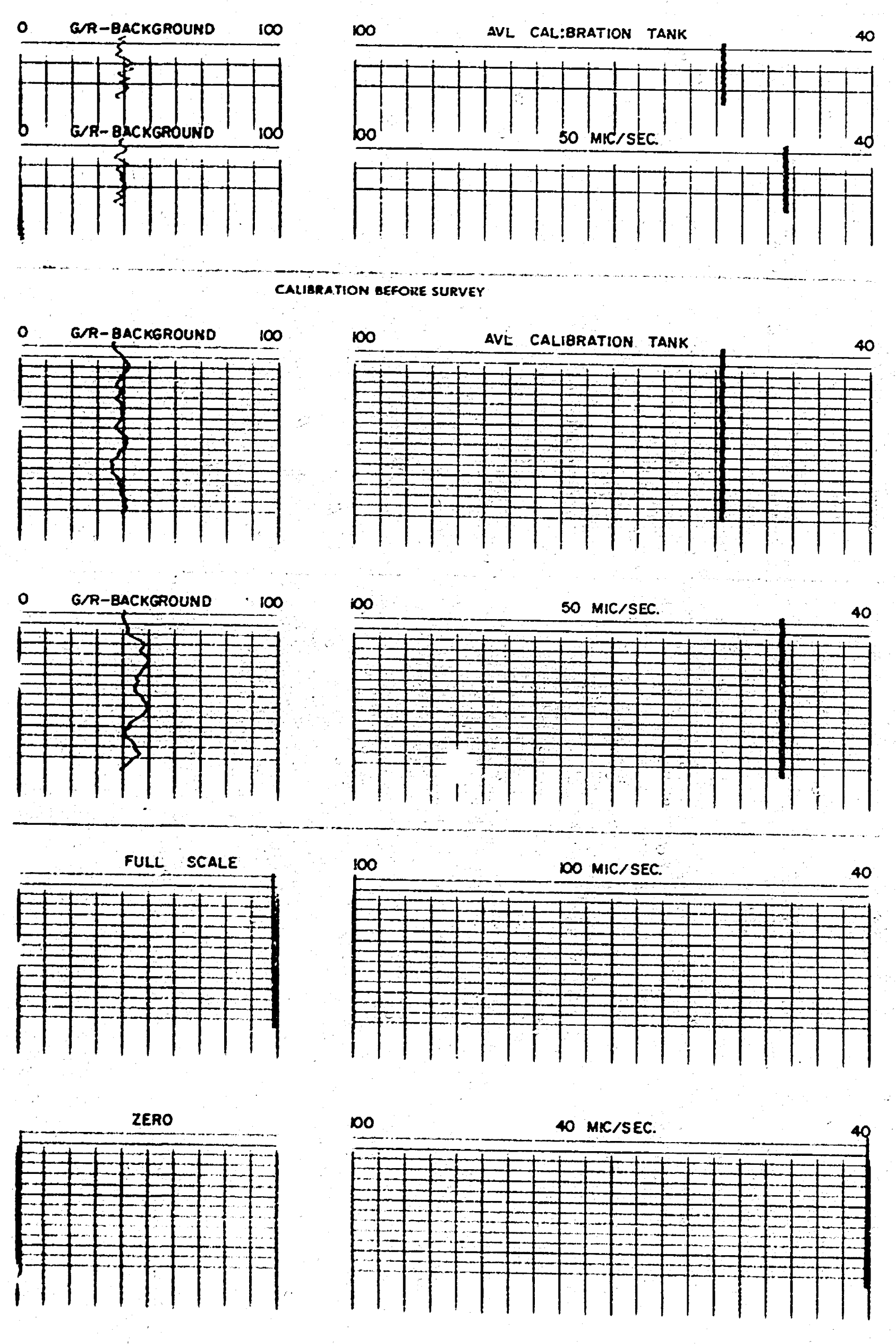
POTENTIAL MILLIVOLTS

100	70	40
160	130	100

TRAVEL TIME
MICROSECONDS PER FT.
T3'R.1'R.

Orla Petco Inc.
Gourley - Federal # 4
Herradura Bend Field
Eddy County, New Mexico

T.D. LOGGED 2615'
T.D. DRILLER 2602'
T.D. WELEX 2618'

CALIBRATION AFTER SURVEY