

MCELVAIN ENERGY, INC.

HERRICK #1-927

NAD 27
 Lat: 37.4086544°
 Lon: -101.6722355°
 API: 15-187-20913

Location: NENESE Sec. 27, T30S-R27W, Stanton County, KS
 Elevation: 3,272' GL 3,282' KB
 Spud: 11/30/1998 Field: Shore
 TD: 12/8/1998 Sales Meter: 22125
 Complete: 1/18/1999 (Wabaunsee Completion) Flowing
 Recomplete: 10/9/1999 (Frac Wabaunsee) Pumping

Btm Fresh Water 370'
 Btm Use Water 560'

Proposed Cement Plug #4: Perforate Squeeze Holes 600' - 601'. M&P 175 sx down 600' 601' 4-1/2" casing through squeeze holes at 600' and up 8-5/8" x 4-1/2" annulus to surface.

Bs Stone Corral 1,650'
 8-5/8" Shoe 1,731'
 (CBL) TOC 1,750'
 Chase 2,500'



43 jts 8-5/8", 24# Limited Service Casing set @1,731' - 12-1/4" OH
 M&P 600 sx 65/35 Poz/"C" Lead, 150 sx "C" Tail
 Circulated cement (12/01/1998)

Proposed Cement Plug #3: M&P 10 sx (141') "A" Common 1,751' 1,610' In 4.5" casing

Council Grove 2,814'
 Wabaunsee 2,920'



Proposed Cement Plug #2: WL set CIBP @2,875'. Dump bail 4 sx "A" Common on 2,875' 2,825' top of CIBP @2,875'.

CIBP (12-17-12) 3,070'
 (CBL) DV Tool 3,081'



2,928' 2,932' 4' 2 spf 8 Holes Wabaunsee
 2,968' 2,974' 6' 2 spf 12 Holes Perforations

Proposed Cement Plug #1: M&P 12 sx (170') "A" Common on top of CIBP @3,070' 3,070' 2,900'

Topeka 3,283'
 Heebner SH 3,646'
 Toronto 3,653'
 Lansing 3,735'

Possible Casing Leak

Tights Spots 3,952'-75'
 TOC 1st Stage 4,030'

Marmaton 4,307'
 CIBP 4,350'

DB 2 sx (20' Fill) Cement on CIBP (01-13-99)

4,372' 4,382' 10' 2 spf 20 Holes **Marmaton (1-11-99) 100% Water**

Cherokee 4,468'
 PBDT 4,487'
 Atoka 4,736'
 Morrow 4,903'
 Chester 5,262'
 St. Louis 5,394'
 TD 5,575'

112 jts Used 4-1/2", 10.5#, J-55 Casing landed at 4,500' in 7-7/8" OH
 Stage #1: 120 sx AMD, lead & 160 sx ASC + 10% NaCl, tail.
 Stage #2: 265 sx AMD, circ 20 sx to pit (3-24-14).

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HERRICK #1-927

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 Lat: 37°40'86.544"⁰
 Lon: -101.6722355"⁰
 API: 15-187-20913



Location: NENESE Sec. 27, T30S-R27W, Stanton County, KS
 Elevation: 3,272' GL 3,282' KB
 Spud: 11/30/1998 Field: Shore
 TD: 12/8/1998 Sales Meter: 22125
 Complete: 1/18/1999 (Wabaunsee Completion) Flowing
 Recomplete: 10/9/1999 (Frac Wabaunsee) Pumping

Btm Fresh Water 370'
 Btm Use Water 560'

Tubing Detail (12/18/2012)

	Length	Top
KB	6.00'	EWS Rig #6
91 jts	3,020.29'	2-3/8", 4.7#, J-55, 8rd
SN	1.10'	3,026.29'
Perf Sub	4.00'	
MA	31.00'	
EOT	3,062.39'	Estimated

Btm Stone Corral 1,650'
 8-5/8" Shoe 1,731'
 (CBL) TOC 1,750'
 Chase 2,500'
 Council Grove 2,814'
 Wabaunsee 2,920'

43 jts 8-5/8", 24# Limited Service Casing set @1,731' - 12-1/4" OH
 M&P 600 sx 65/35 Poz/"C" Lead, 150 sx "C" Tail
 Circulated cement (12/01/1998)

CBL (01-10-99)

(12-14-12) 2. Set Packer @2,907': test backside 300 psi - good

2,928'	2,932'	4'	2 spf	8 Holes (1) 2,000 gals 15% HCl
2,968'	2,974'	6'	2 spf	12 Holes Fe with 35 RCN balls

CIBP (12-17-12) 3,070'

180 gals: 1,480 psi; 360 gals: 2,100 psi; 380 gals: 1,990 psi; ISIP: 5,560 psi

(12-17-12) 3. Test
 3,011' - 3,075' 350
 psi Good.

2 min SI: Vac. R(avg): 6.4 bpm; P(avg): 1,550 psi; Cl: 93,522 (01-14-99)

(CBL) DV Tool 3,081'

(2) 70Q N2 frac down 4-1/2": (1-3 ppg) 16/30 white, 10 balls, (1-3 ppg) 16/30 Ottawa (Sand Wedge 80) Tail. R(avg): 16.3 bpm; P(avg): 1,225 psi; ISIP: 1,266 psi. 33,200# sand; 290 mcf N2; 270 bbls load (8-25-99)

Topeka 3,283'

(12-14-12) 1. Set Packer @3,117': pump 1 bpm, 0 psi. Leak somewhere from CIBP @4,350' to 2,907'.

Heebner SH 3,646'

Rod/Pump Detail (12/18/2012)

	Length	Top
	14.00' in	1-1/8" x 16' Polish Rod
120 Rods	3,000.00'	5/8" Rods Estimated
Pony	2.00'	5/8" Pony Rod
	10.00'	2" x 1-1/4" x 10' RWBC
	3,026.00'	

Toronto 3,653'

Lansing 3,735'

Tights Spots 3,952'-75'

Casing Leak?

TOC 1st Stage 4,030'

Marmaton 4,307'

CIBP 4,350'

DB 2 sx (20' Fill) Cement on CIBP (01-13-99)

4,372'	4,382'	10'	2 spf	20 Holes Marmaton (1-11-99) 100% Water
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Cherokee 4,468'

PBTD 4,487'

112 jts Used 4-1/2", 10.5#, J-55 Casing landed at 4,500' in 7-7/8" OH

Atoka 4,736'

Stage #1: 120 sx AMD, lead & 160 sx ASC + 10% NaCl, tail.

Morrow 4,903'

Stage #2: 265 sx AMD, circ 20 sx to pit (3-24-14).

Chester 5,262'

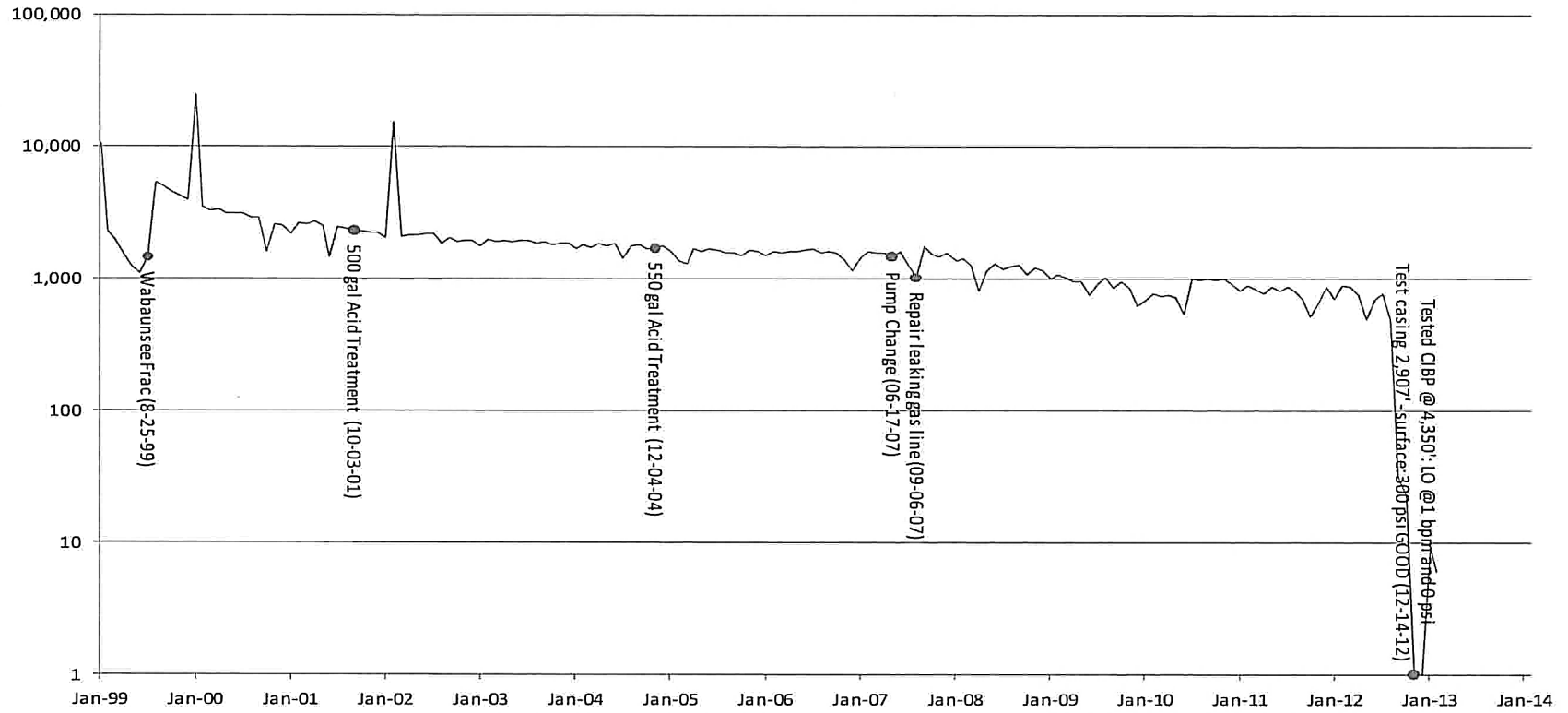
St. Louis 5,394'

TD 5,575'

Herrick #1-927

Cummulative Production: 312,893 mcf

Last Production: May, 2013



Herrick # 1 - 927
NENESE Sec. 27, T30S-R27W
Stanton County, Kansas
API # 15-187-20913

Plug & Abandon Proposal
October 30, 2014

Directions to Location: From Ulysses, KS; 11 miles west on 180; 11 miles south on Big Bow Grade; 6 miles west on Rd 23; 5/8 mile south on Rd H and west into.

Drill TD: 5,569' (Logger) KB: 10' PBSD: 3,070' (CIBP – No cmt 12/17/12)

CASING:

8.625", 24#, Limited Service, (Tested to 2,000 psi) set @ 1,731' in 12.25" hole.
Cemented w/600 sacks 65/35 Class 'C' POZ Lead and 150 sacks Class 'C' Tail

4.5", 10.5#, Used J-55 (Tested to 500 psi 'surface pressure') Casing set at 4,500' in 7.875" hole. Stage Tool @ 3,081'. 1st Stage Cemented w/120 sacks AMD, lead & 160 sx ASC + 10% NaCl, tail. 2nd Stage Cemented w/265 sacks AMD with 20 sx circulated to pit.

CBL dated January 10, 1999 Indicates Good Bond on 1st Stage from PBSD at 4,475' to TOC at 4,030'. Good Bond on 2nd Stage from DVT at 3,081' to 2,600' and good to fair bond from 2,600' to TOC at 1,750'.

DEPTHS/TOPS of NOTE:

Bottom Fresh Water	370'
Bottom Useable Water	560'
Base of Stone Corral	1,650' KB
Surface Casing Shoe	1,734' KB
Red Beds (Glorietta)	1,734-2,500' KB
(CBL) TOC 2 nd Stage	1,750' KB
Wabaunsee Perfs	2,928' – 2,932' KB
	2,968' – 2,974' KB
CIBP	3,070' (No Cement)
DV Tool	3,077' KB
Heebner	3,646' KB
"Tight" Spot in Csg	3,952 – 3,972' KB (Possible Casing Leak)
TOC 1 st Stage	4,030' KB
CIBP	4,350' (Capped w/2x (~20') cement)
Marmaton Perfs	4,372' – 4,382' KB
Cherokee	4,468' KB
Original PBSD	4,475' KB (CBL) (1/10/1999)
St. Louis	5,394' KB
Total Depth	5,569' KB

TUBING CONFIGURATION:

Tubing Assembly: MA (31'), Perf Sub (4'), SN (1.1'), 91 jts, 2-3/8", 4.7 #/ tubing, SN @ 3,026' KB, EOT ± 3,062' KB

ROD CONFIGURATION:

Rod Assembly: 2" x 1-1/4" x 10' RWBC Pump, 5/8" Pony (2'), ~120 5/8" Rods (3,000'), 1-1/8" x 16' Polish Rod.

VARIOUS PIPE CAPACITIES & ASSUMED CEMENT YIELDS

4.50", 10.5 #/ft = 0.0895 ft³/ft capacity
8.625", 24 #/ft = 0.3576 ft³/ft capacity
8.625", 24 #/ft x 4.5" = 0.2471 ft³/ft annular capacity
2-3/8", 4.7 #/ft = 0.02171 ft³/ft capacity
4.50", 10.5#/ft x 2-3/8" 4.7 #/ft = 0.0588 ft³/ft annular capacity
8.625", 24 #/ft x 2-3/8" 4.7 #/ft = 0.3268 ft³/ft annular capacity

Type 'A' Common Cement: 1.18 ft³/sk YIELD, 15.8 ppg, Water: 5.2 gal/sk

Proposed Plugs

PLUG # 1 (3,070' – 2,900' In 4-1/2" Casing) – RIH with tbg and Cap CIBP @3,070' (12/17/2012) with 12 sx "A" Common. Est. TOC: 2,900' in 4-1/2" casing

PLUG # 2 (2,875' – 2,825' In 4-1/2" Casing) – WL set CIBP @2,875'. Dump bail 4 sx "A" Common (~50') cement (2 dump-bailer runs). Est. TOC: 2,825' in 4-1/2" casing

PLUG # 3 (1,751' – 1,650' In 4-1/2" Casing; 1,751' – 1,450' In 8-5/8" x 4-1/2" Annulus) – RIH with tbg to 1,751'. M&P 10 sx "A" common (141' balanced plug). Est. TOC: 1,610' in 4-1/2" casing

PLUG # 4 (600' – Surface In 4-1/2" Casing and In 8-5/8" x 4-1/2" Annulus) – Shoot squeeze holes in 4.5" casing @600'. M&P 175 sx "A" Common down 4-1/2" casing and out squeeze holes @600' (600' plug inside 4.5" & ±600' plug in 8-5/8" x 4-1/2" annulus).

PROPOSED PROCEDURE:

1. Notify Kansas Conservation Commission, District Office # 1 in Dodge City (620) 225-8888 at least 5 working days prior to the start of plugging operations.
2. Set temporary anchors. MIRU service rig. **Dig working pit (see CDP1 – pit application).** Deliver necessary tubing, pump & tank, pipe racks or tubing float, trash trailer, toilet, sugar & stripping head. Shoot fluid level.
3. Obtain bradenhead pressure. Bleed off & perform pump-in test.
4. NU BOPE.
5. PU tubing to tag CIBP @3,070'.
6. PU off CIBP. Mix & pump 12 sx cement above CIBP.
7. PU ± 100' above TOC & circulate hole until clean with water.
8. Standback a total of 1,700' of tubing & laydown remainder.
9. RU WL. MU & RIH w/CIBP, setting same @ 2,875'.
10. Load casing with water.
11. MU dump-bailer & place 4 sacks cement on top of CIBP.

12. TIH with tubing to 1,750'.
13. Mix, pump and displace a 10 sx balanced cement plug from 1,750' to ~1,600' inside 4-1/2" casing. TOH with tubing.
14. RU wireline. MU squeeze gun. RIH & shoot squeeze holes @ 600'. RD wireline.
15. Tie onto 4-1/2" casing & establish circulation through squeeze holes.
16. Mix, pump & circulate 175 sx cement, leaving 600' cement inside 4.5" casing and 600' inside 8-5/8" x 4-1/2" casing annulus.
17. Washout BOP. RD cementers. ND BOP.
18. Dig out & Cut-off wellhead.
19. RDMO service rig.
20. Install dry-hole plate. Drain, Break-out & haul off battery equipment.
21. Notify gas purchaser of abandonment.
22. Reclaim location & access road.

										Water	Slurry
Cement Calculations Plug #4		172 sx									
Type 'A' Common Cement:	1.18 ft3/sk	Mix Water:	5.20 gal/sk								
Perforate	600'	601'									
Capacity 4-1/2"	0.0895 ft3/ft	601' cmt	0.09 gal/sk	= 53.8 ft3	1.18 ft3/sk	45.6 sx	46.0 sx				
Annular 8-5/8" x 4-1/2"	0.2471 ft3/ft	601' cmt	0.25 gal/sk	= 148.5 ft3	1.18 ft3/sk	125.9 sx	126.0 sx				
							172.0 sx	894.4 gals	21 bbls	36.0 bbls	
Cement Calculations Plug #3		11 sx									
Type 'A' Common Cement:	1.18 ft3/sk	Mix Water:	5.20 gal/sk								
Capacity 4-1/2"	0.0895 ft3/ft										
(CBL) TOC	1,750'	141' cmt	0.09 gal/sk	= 12.6 ft3	1.18 ft3/sk	10.7 sx	11.0 sx	57.2 gals	1 bbls	2.2 bbls	
Cement Calculations Plug #2		4 sx									
Type 'A' Common Cement:	1.18 ft3/sk	Mix Water:	5.20 gal/sk								
Capacity 4-1/2"	0.0895 ft3/ft										
Perfs	2,968'	2,974'									
CIBP @	3,070'	50' cmt	0.09 gal/sk	= 4.5 ft3	1.18 ft3/sk	3.8 sx	4.0 sx	20.8 gals	0.5 bbls	0.8 bbls	
Cement Calculations Plug #1		13 sx									
Type 'A' Common Cement:	1.18 ft3/sk	Mix Water:	5.20 gal/sk								
Capacity 4-1/2"	0.0895 ft3/ft										
Perfs	2,968'	2,974'									
CIBP @	3,070'	170' cmt	0.09 gal/sk	= 15.2 ft3	1.18 ft3/sk	12.9 sx	13.0 sx	67.6 gals	2 bbls	2.7 bbls	
Total Cement				234.6 ft3				200.0 sx	1,040.0 gals	25 bbls	41.8 bbls

October 28, 2014



McElvain Energy, Inc.
Denver, Colorado 80265-0914

Herrick # 1-927
Sec: 27 - T30S - R27W
Stanton County, Kansas
API Number:

Cementing Proposal 2 3/8 " Plug

Prepared For: Jim McKinney
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Mobile Phone: 316-250-7057
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Service Point: Liberal, KS
Business Phone 620-624-5937
Manager Kenny Baeza
Mobile Phone 620-482-0055
E-mail kenny.baeza@alliedservices.com

Fields Sales Coordinator: Max Ball
Mobil Phone: 785-324-2754
E-Mail: max.ball@alliedservices.com
Liberal, Kansas

Cement Coordinator: Kirby Harper
Mobil Phone: 620-655-5137
E-Mail: kirby.harper@alliedservices.com
Liberal, Kansas

THANK YOU FOR YOUR BUSINESS!

Operator Name: McElvain Energy, Inc.
 Well Name: Herrick # 1-927
 October 28, 2014



Job Information

2 3/8 " Plug

1st Plug:	CIPB	3,070 ft. MD
2nd Plug	Dump Bailer / CIBP	2,875 ft. MD
3rd Plug	Base Surface	1,750 ft. MD
4th Plug	Casing	600 ft. MD
Previous Casing		4,500 ft. MD
Outer Diameter		4 1/2 in.
Inner Diameter		4.052 in.
Linear Weight		10.50 lbs/ft
Casing Grade		J-55
Drill Pipe or Tubing		3,070 ft. MD
Outer Diameter		2 3/8 in.
Inner Diameter		1.867 in.
Linear Weight		5.80 lbs/ft
Pipe Grade		N-80

Job Calculations

2 3/8 " Plug

1st Plug: 2 3/8 Tubing 12sk @ 3070 ft. 2.5 Slurry (170 ft pipe in) Displace 11.3 bbls

2nd Plug: 4 1/2 Casing 4sk @2875 ft(CIPB) / Dump Bailer .85 Slurry

3rd Plug: 2 3/8 Tubing 10sk @ 1751 ft. 2.1 Slurry(141 ft Pipe in) Displace 6.3 bbls

4th Plug: 4 1/5 Casing 175sk @ 600 ft perfs / Down Casing - 36.5 bbls Slurry - Clear Line Shut in

Lead Cement

235.03 ft³

41.86 bbls

200.00 sks

375.20 ft of fill

Operator Name: McElvain Energy, Inc.
 Well Name: Herrick # 1-927
 October 28, 2014



Pump Schedule

2 3/8 " Plug

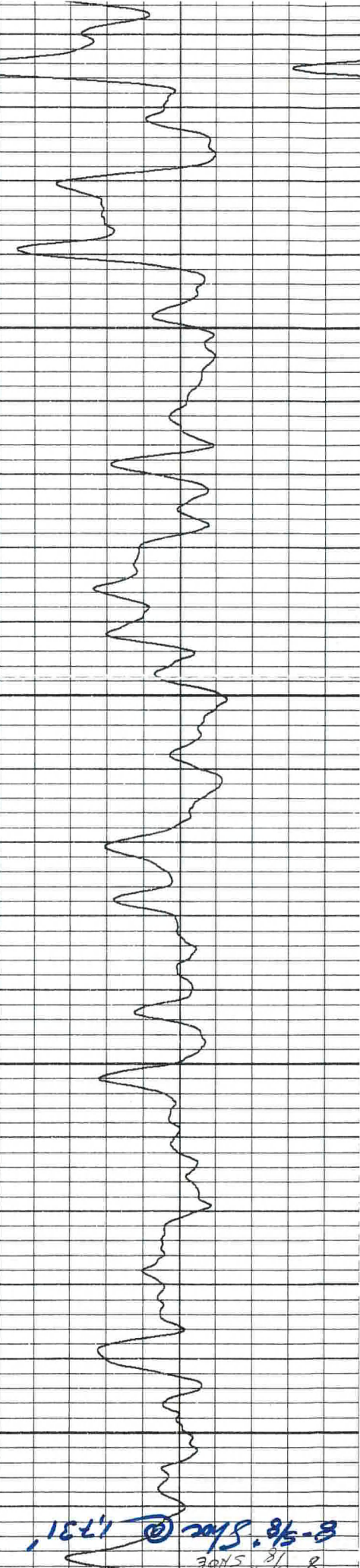
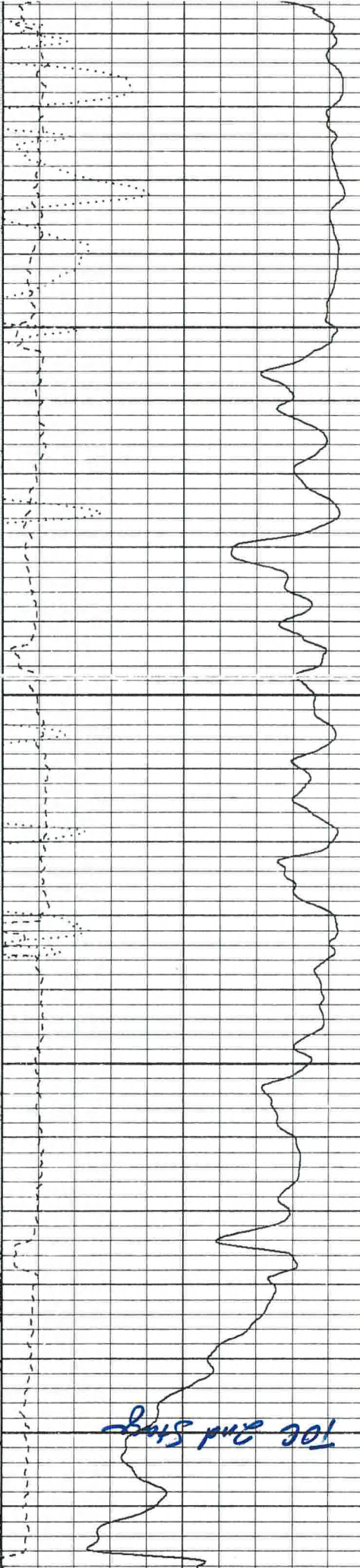
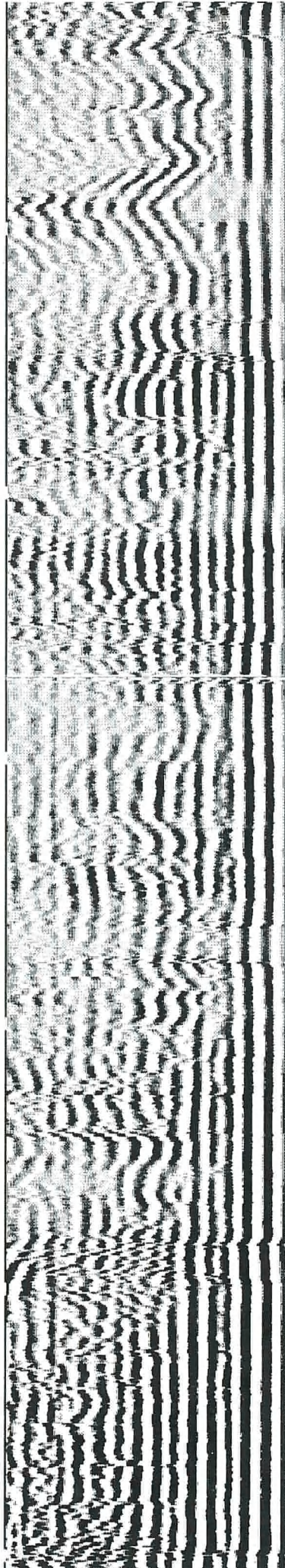
Fluid #	Fluid Type - Name	Surface Density (lb/gal)	Estimated Avg. Rate (bbl/min)	Downhole Volume (bbl)	Water Required (bbl.)
Load Hole	Fresh Water	8.34	5	20.0	20.0
Plug 1	CLASS A COMMON	15.80	5	2.5	1.5
Displacement	Fresh Water	8.34	5	11.3	11.3
Plug 2	CLASS A COMMON / dump bailer	15.80		0.8	0.5
Load Hole	Fresh Water	8.34	5	10.0	10.0
Plug 3	CLASS A COMMON	15.80	5	2.1	1.3
Displacement	Fresh Water	8.34	5	6.3	6.3
Load Hole	Fresh Water	8.34	5	10.0	10.0
Plug 4	CLASS A COMMON	15.80	5	36.5	21.7
Clear Line	Fresh Water	8.33	1	0.5	0.5

TOTALS 100.0 83.1
 Estimated pump time @ 4 bpm 0.42 hrs

Fluids Design

2 3/8 " Plug

Load Hole Fresh Water	Fluid Density:	8.34 lb/gal
	Fluid Volume:	20.0 bbls
<hr/>		
Plug 1 CLASS A COMMON	Slurry Density:	15.80 lb/gal
	Slurry Yield:	1.18 ft ³ /sk
	Mixing Water	5.20 gal/sk
	Total sacks	12 sks
	Total barrels	2.5 bbls
<hr/>		
Displacement Fresh Water	Fluid Density:	8.34 lb/gal
	Fluid Volume:	11.3 bbls
<hr/>		
Plug 2 Class A Common / Dump Bailer	Slurry Density:	15.80 lb/gal
	Slurry Yield:	1.18 ft ³ /sk
	Mixing Water	5.20 gal/sk
	Total sacks	4 sks
	Total barrels	0.8 bbls
<hr/>		
Load Hole	Fluid Density:	8.34 lb/gal
	Fluid Volume:	10.0 bbls
<hr/>		
Plug 3 CLASS A COMMON	Slurry Density:	15.80 lb/gal
	Slurry Yield:	1.18 ft ³ /sk
	Mixing Water	5.20 gal/sk
	Total sacks	10 sks
	Total barrels	2.1 bbls
<hr/>		
	Fluid Density:	8.34 lb/gal
	Fluid Volume:	6.3 bbls
<hr/>		
Load Hole	Fluid Density:	8.34 lb/gal
	Fluid Volume:	10.0 bbls
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Plug 4 CLASS A COMMON	Slurry Density:	15.80 lb/gal
	Slurry Yield:	1.18 ft ³ /sk
	Mixing Water	5.20 gal/sk
	Total sacks	175 sks
	Total barrels	36.8 bbls
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Clear Line Fresh Water	Fluid Density:	8.33 lb/gal
	Fluid Volume:	0.5 bbls
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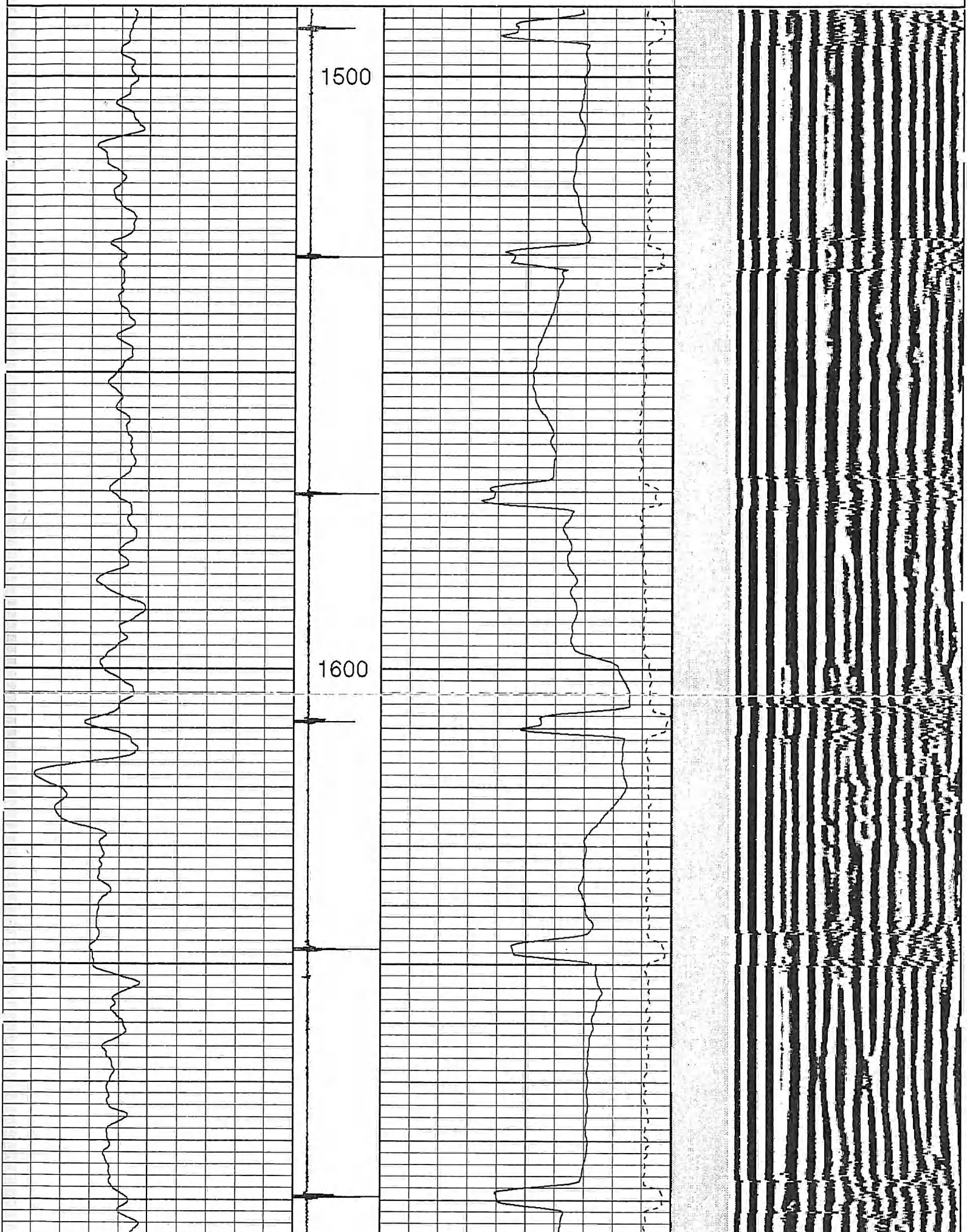


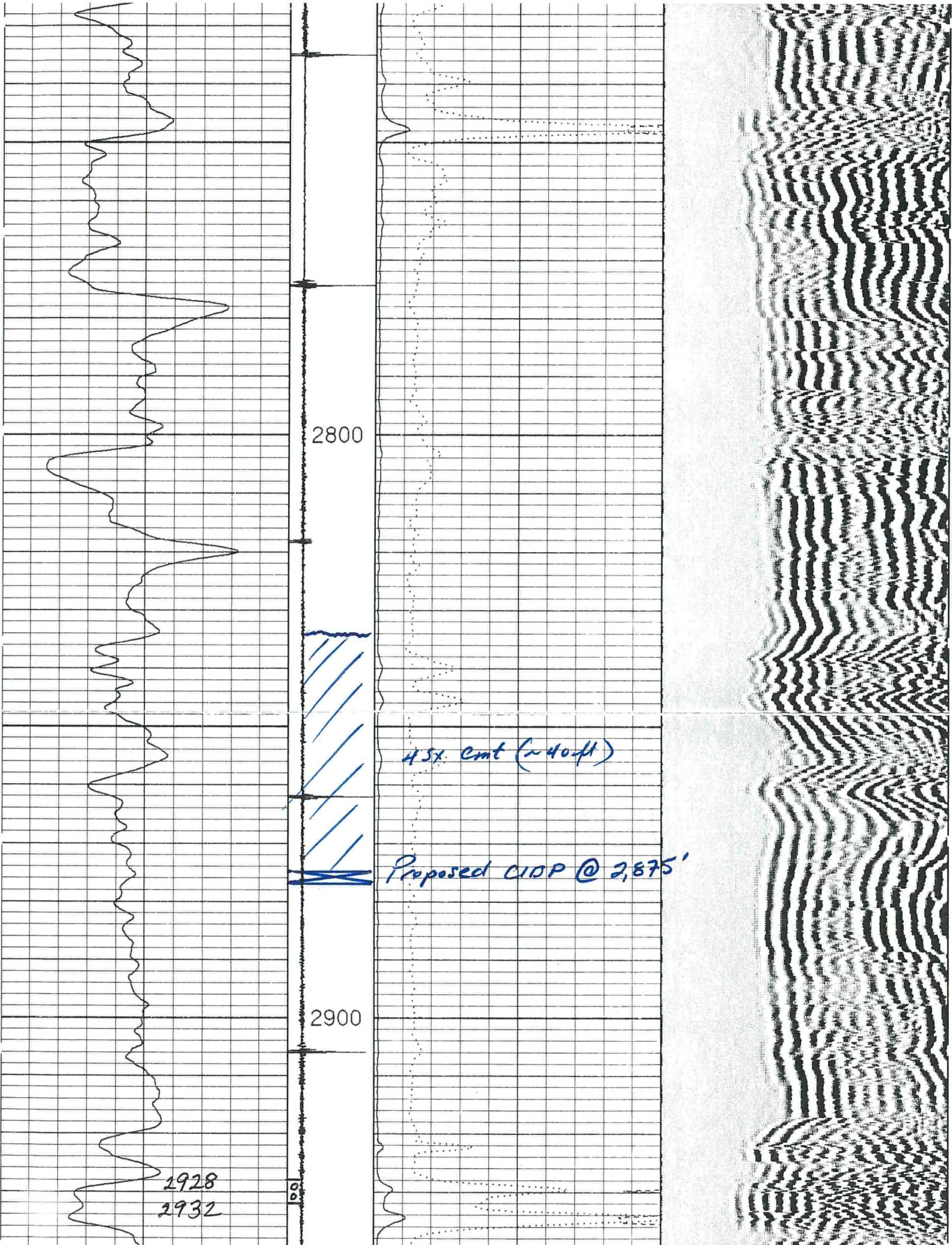
100 and 500

58
5 Shots
??

8-58 Shot @ 1731'

8/18/87





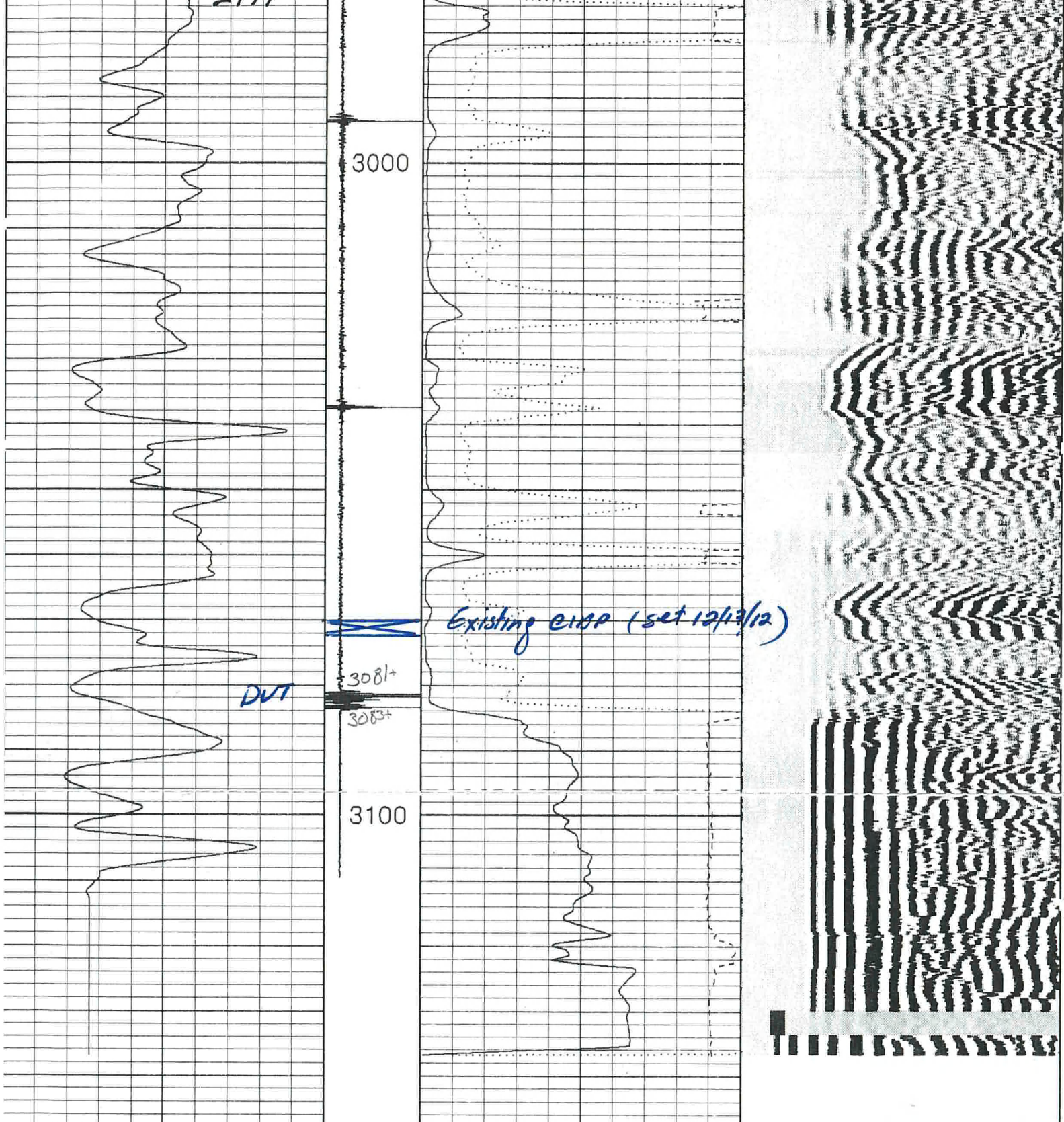
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45% cmt (~40ft)

Proposed CIOP @ 2875'

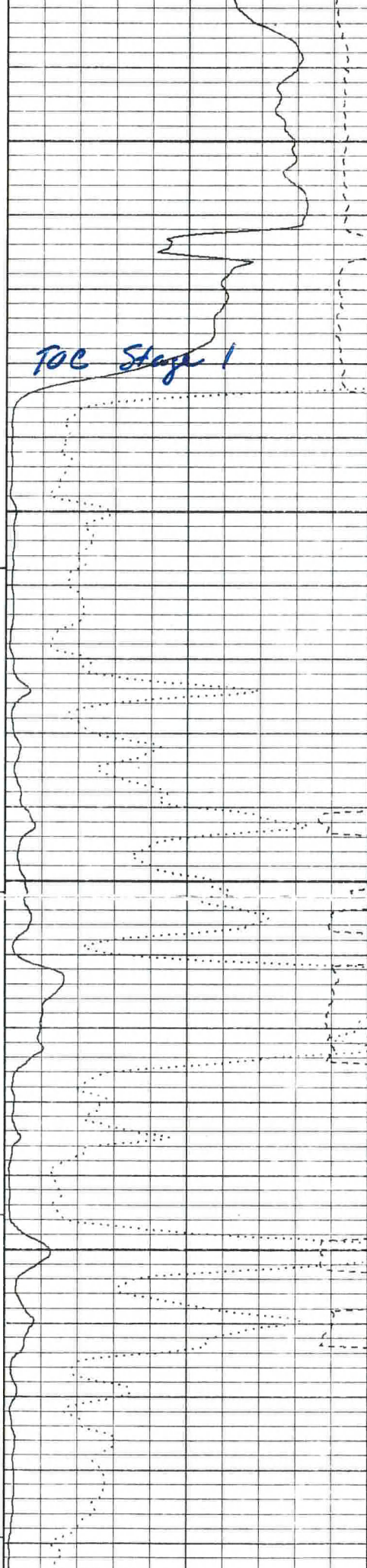
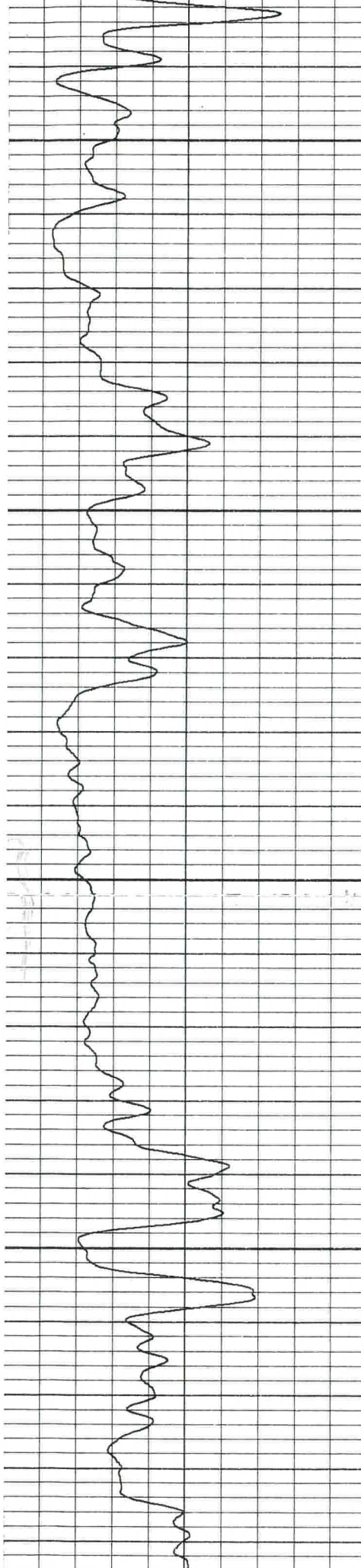
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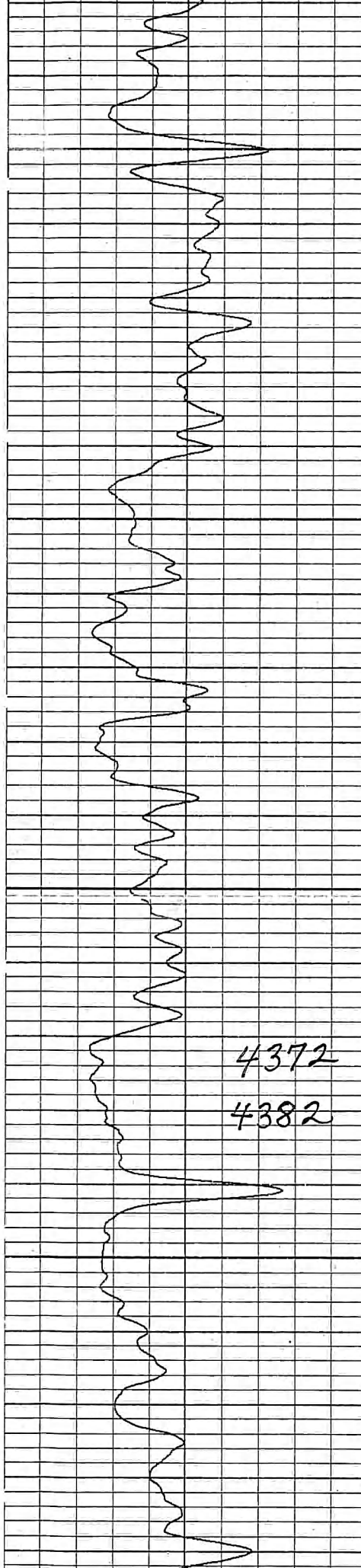
1928
1932



300 -50

GAMMA GAMMA API		150	2000	2000	120	220	100	MSG 4-uSEC	1100
		1:240 Ft.	CCL (S904)		TT US		AMP PIPE AMP PIPE AMPL		
			0	10	0	100	0	10	





4233
4277
4300
4315F
4355+
4372
4382
4395
4400

