



ALLIBURTC
EXCELLENCE
IN LOGGING

HIGH RESOLUTION
INDUCTION LOG

COMPANY BALLARD PETROLEUM

WELL BENNETT #33-5

MAMM CREEK FIELD TYPE LOG 045-07254

COUNTY GARFIELD STATE CO

COMPANY BALLARD PETROLEUM
WELL BENNETT #33-5
FIELD MAMM CREEK
COUNTY GARFIELD
API No. 05-045-07375-00 7254
Location 2290' FWL & 703' FWL SW/NW
Sect 33 Twp 6S Rge 92W
Other Services DSN-SDL

COGCC Document Number 2056191

04-18-2016

STATE CO

Permanent Datum	GL	Elev. 5742'
Log measured from	K.B. 16'	Elev. 5758'
Drilling measured from	K.B.	D.F.
Date	07-01-99	GL 5742'
Run No.	ONE	
Depth - Driller	5900'	
Depth - Logger	5898'	
Bottom - Logged Interval	5891'	
Top - Logged Interval	CASING	
Casing - Driller	8.625 @ 628'	@
Casing - Logger	626'	@
Bit Size	7.875"	
Type Fluid in Hole	FRESH GEL	
Dens. Visc.	11.0 42	
Ph Fluid Loss	9.0 10.6	
Source of Sample	FLOWLINE	
Rm @ Meas. Temp.	3.0 @ 82F	@
Rmf @ Meas. Temp.	2.6 @ 80F	@
Rmc @ Meas. Temp.	3.2 @ 82F	@
Source Rmf Rmc	MEAS MEAS	
Rm @ BHT	1.56 @ 164F	@
Time Since Circ.	7 HOURS	
Time on Bottom	2100 7/1	
Max. Rec. Temp.	164F @ TD	@
Equip. Location	51943 G.J.	
Recorded By	S. GOODENOUGH	
Witnessed By	C. WELTER	

Fold Here

Service Ticket No.:	94518	API Serial No.:	05-045-07375-00	PGM Version:	XL v3.40
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLES			RESISTIVITY SCALE CHANGES		
Date Sample No.		Type Log	Depth	Scale Up Hole	Scale Down Hole
Depth - Driller					
Type Fluid in Hole					
Dens. Visc.					
Ph Fluid Loss					
Source of Sample		RESISTIVITY EQUIPMENT DATA			
Rm @ Meas. Temp.	@	Run No.	Tool Type & No.	Pad Type	Tool Pos.
Rmf @ Meas. Temp.	@	ONE	HRIDE #A205	NA	1.5" SO
Rmc @ Meas. Temp.	@				
Source Rmf Rmc	CALC CALC				
Rm @ BHT	1.56 @ 164F				
Rmf @ BHT	1.32 @ 164F				
Rmc @ BHT	1.66 @ 164F				
EQUIPMENT DATA					
GAMMA		ACOUSTIC		DENSITY	
Run No.	ONE	Run No.		Run No.	ONE
Serial No.	108589	Serial No.		Serial No.	108784
Model No.	NGRT	Model No.		Model No.	SDL
Diameter	3.625"	No. of Cent.		Diameter	4.5"
Detector Model No.	102A	Spacing		Log Type	GAM/GAM
Type	SCINT.			Source Type	CS137
Length	4'	LSA [Y/N]		Serial No.	2189
Distance to Source	10'	FWDA [Y/N]		Strength	1.5 CI
NEUTRON					
Run No.	ONE	Run No.		Run No.	ONE
Serial No.		Serial No.		Serial No.	DSN II
Diameter	3.625"	Diameter		Diameter	3.625"
Log Type	THERMAL	Log Type		Log Type	AM241BE
Source Type	AM241BE	Source Type		Source Type	DSN-80
Serial No.	DSN-80	Serial No.		Serial No.	18.5 CI

LOGGING DATA

GENERAL GAMMA ACOUSTIC DENSITY NEUTRON

Run	Depth		Speed	Scale		Scale			Scale			Scale		
No.	From	To	Ft/Min	L	R	L	R	Matrix	L	R	Matrix	L	R	Matrix
ONE	TD	CSG	REC	0	150				30%	-10%	2.68	30%	-10%	SAND
											GM/CC			

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Remarks:
 HRI SDL DSN GR WERE RUN IN COMBINATION.
 A.H.V. COMPUTED FOR 4.5" CASING.
 A.H.V. = 2545 FT^3 B.H.V. = 3090 FT^3
 MUD CONTAINED BARITE WHICH MAY EFFECT THE DENSITY READINGS.
 CHLORIDES = 500 PPM

CREW: J. BREESE, E. ROBLES RIG: SST #3
 THANK YOU FOR CHOOSING H.E.S. GRAND JUNCTION. (970) 523-1661

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HALLIBURTON

Current EXCELL-2000 Parameter Values
 Depth: 1694.417
 Date: 01-Jul-1999 19:49

Mnemonic	Tool	Parameter Description	Value	Units
PERF	DITSHD	PERFORATED INTERVAL	NO	
TD	DITSHD	TOTAL DEPTH	5900.	FT
GR_OK	GAMMA	DO GAMMA CALCULATIONS?	YES	
CASED	SHARED	CASED HOLE?	NO	
CASEOD	SHARED	CASING DIAMETER (OD)	4.5	Inches
MUDWT	SHARED	BOREHOLE FLUID WEIGHT	11.	Pounds/Gal.
GRSO	GAMMA	GAMMA RAY STANDOFF	0.	Inches
BS	SHARED	BIT SIZE	7.875	Inches
DSN_OK	DSN_II	DO DSN II CALCULATIONS?	YES	
DRILL	DSN_II	TPL - NEUTRON IN SLEEVE?	NO	
BADHOL	DSN_II	DSN BAD HOLE CORRECTION	NO	
NLITH	DSN_II	NEUTRON LITHOLOGY	SAND	
DSNSO	DSN_II	DSN STANDOFF	0.	Inches
DSNTMP	DSN_II	DSN II TEMPERATURE CORRECTION	NONE	
DSNPRS	DSN_II	DSN II PRESSURE CORRECTION	NONE	
SDL_OK	SDL	DO SDL CALCULATIONS?	YES	
BARITE	SDL	ANY BARITE IN MUD?	YES	
AIR	SDL	AIR FILLED BOREHOLE?	NO	
RHOFLU	SDL	FLUID DENSITY	1.	G/CC
RHOMAT	SDL	MATRIX DENSITY	2.68	Grams/CC
CAL_OK	CALSDL	DO CALIPER CALCULATIONS?	YES	
AHVOK	CALSDL	DO ANNULAR VOLUME CALCULATION?	YES	
HRI_OK	HRI	DO HRI INDUCTION CALCULATION?	YES	
DFL_OK	HRI	DO DFL CALCULATIONS?	YES	
PYRITE	HRI	PYRITE SWITCH	NO	OHMM
CASING	HRI	CASING DEPTH	0.	Feet
HRI	HRI	SPIKE REDUCTION FILTER TYPE?	DELT	
HRI	HRI	HRI TEMPERATURE CORRECTION	NONE	
CTEM	HRI	CONST TEMPERATURE	75.	
BHT	HRI	BOTTOM HOLE TEMPERATURE	175.	Degrees F.
TSURF	HRI	SURFACE TEMPERATURE	60.	Degrees F.
BHD	HRI	BOTTOM HOLE DEPTH	10000.	Feet
SP	HRI	USE DIGITAL SP?	NO	
RMUD	HRI	MUD RESIST AT SURFACE (0=Air)	2.	OHMM
TRM	HRI	TEMPERATURE OF MUD	75.	DEGF
RRMIN	HRI	MINIMUM RESISTIVITY FOR MAP?	0.2	OHMM
RRMAX	HRI	MAXIMUM RESISTIVITY FOR MAP?	200.	OHMM

CONDUCTIVITY MAIN PASS 2"=100'



Version No: 1 hc:3.0

Date File: FINAL.cis

Format File: /field_data/data2/ballard_33-5/HRI2IN.spc

Plot Time: 07-02-99 00:50:02

Database Time: 07-01-99 22:24:43

MAMM CREEK FIELD TYPE LOG 045-07254

Top Depth: 601.00

Bottom Depth: 5909.75

GAMMA RAY

AHV

DEEP

TENSION

APICOUNTS
CALIPER
INCHES
SP
-110+

150 50

FTS
BHV

18 0

FTS

1:600

FT

0 0

50 0

0

OHM-M

DFL

OHM-M

100

10000

100

250

FOUNDS

DEEP COND.

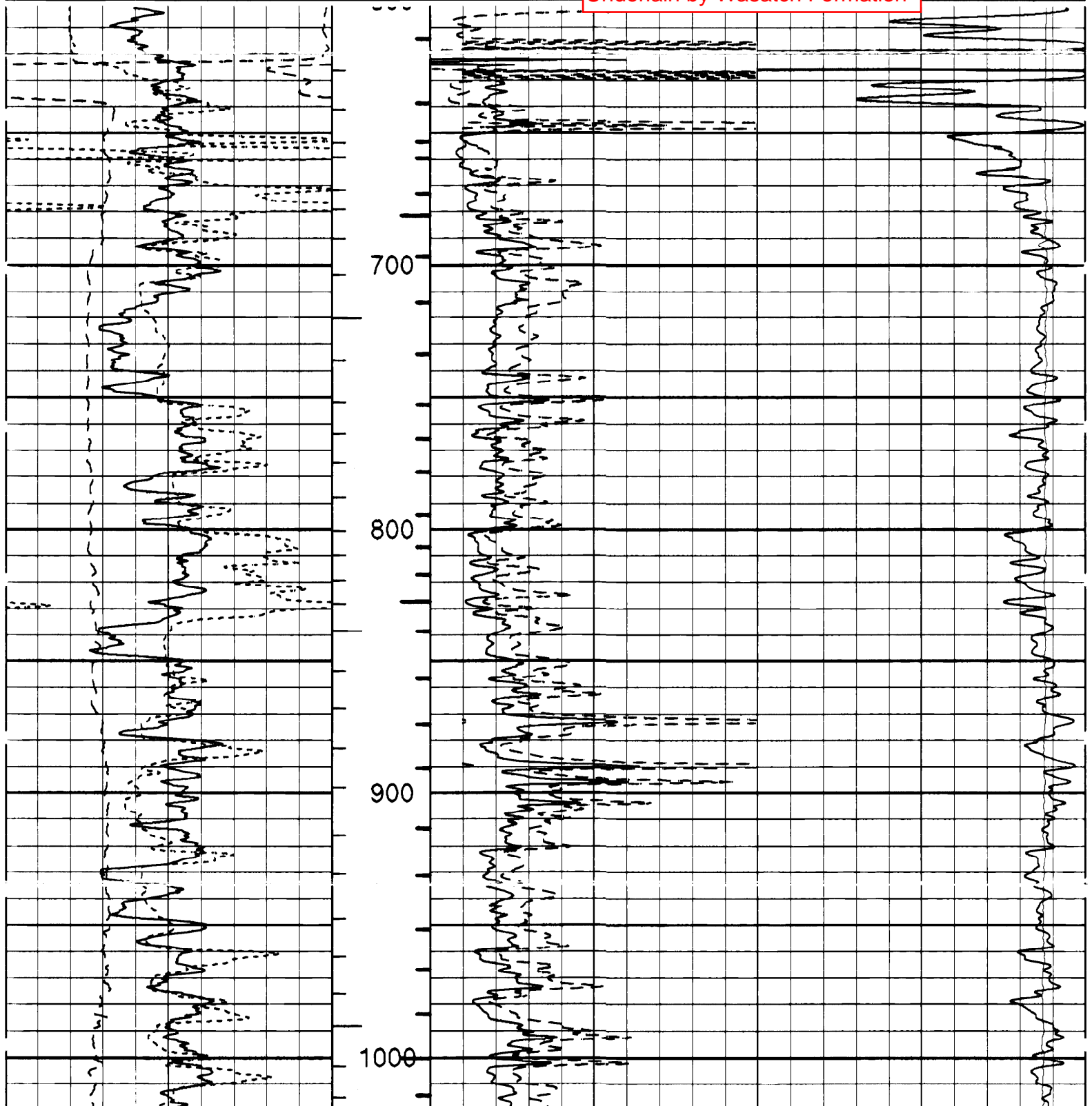
MMHO

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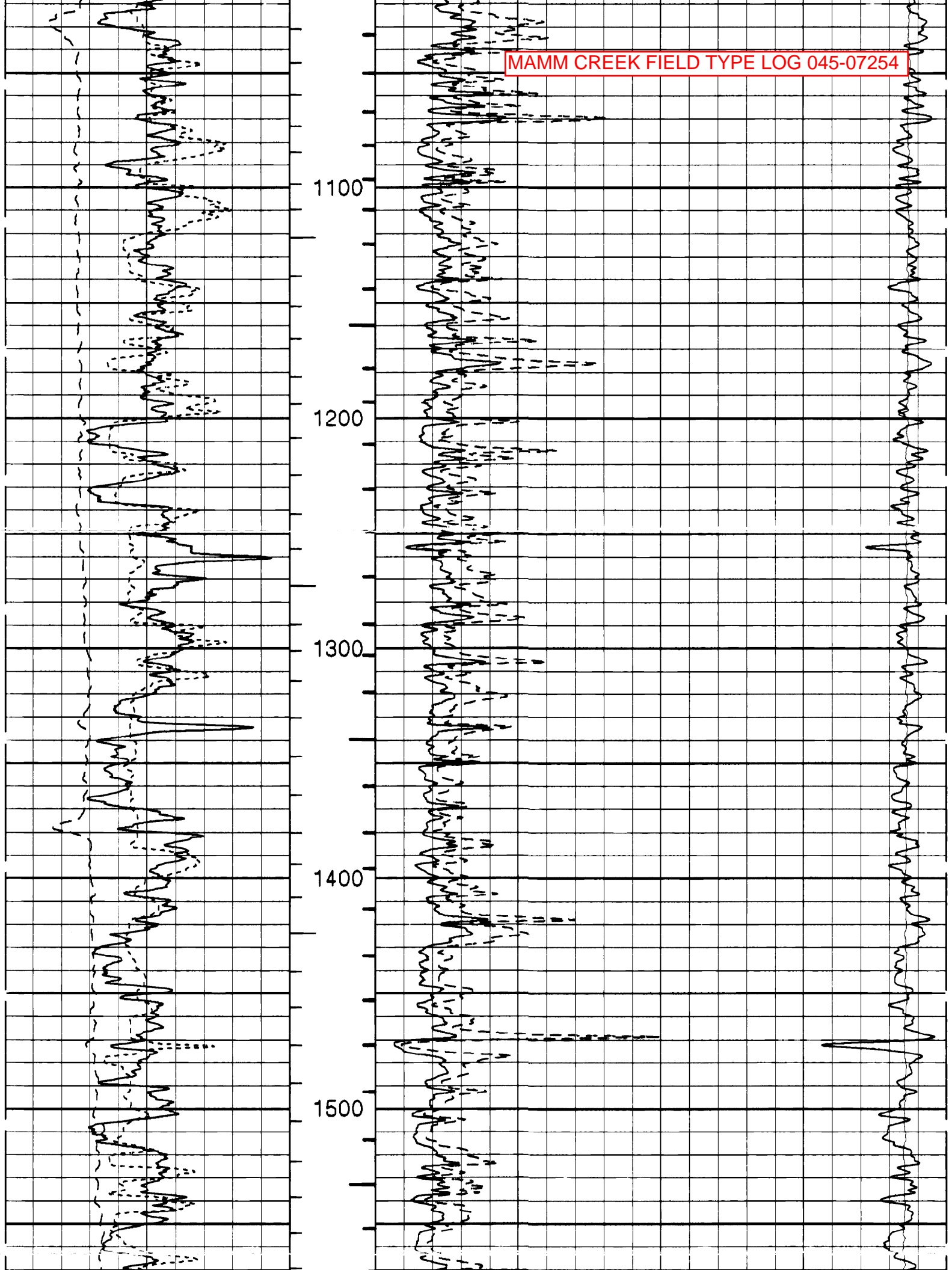
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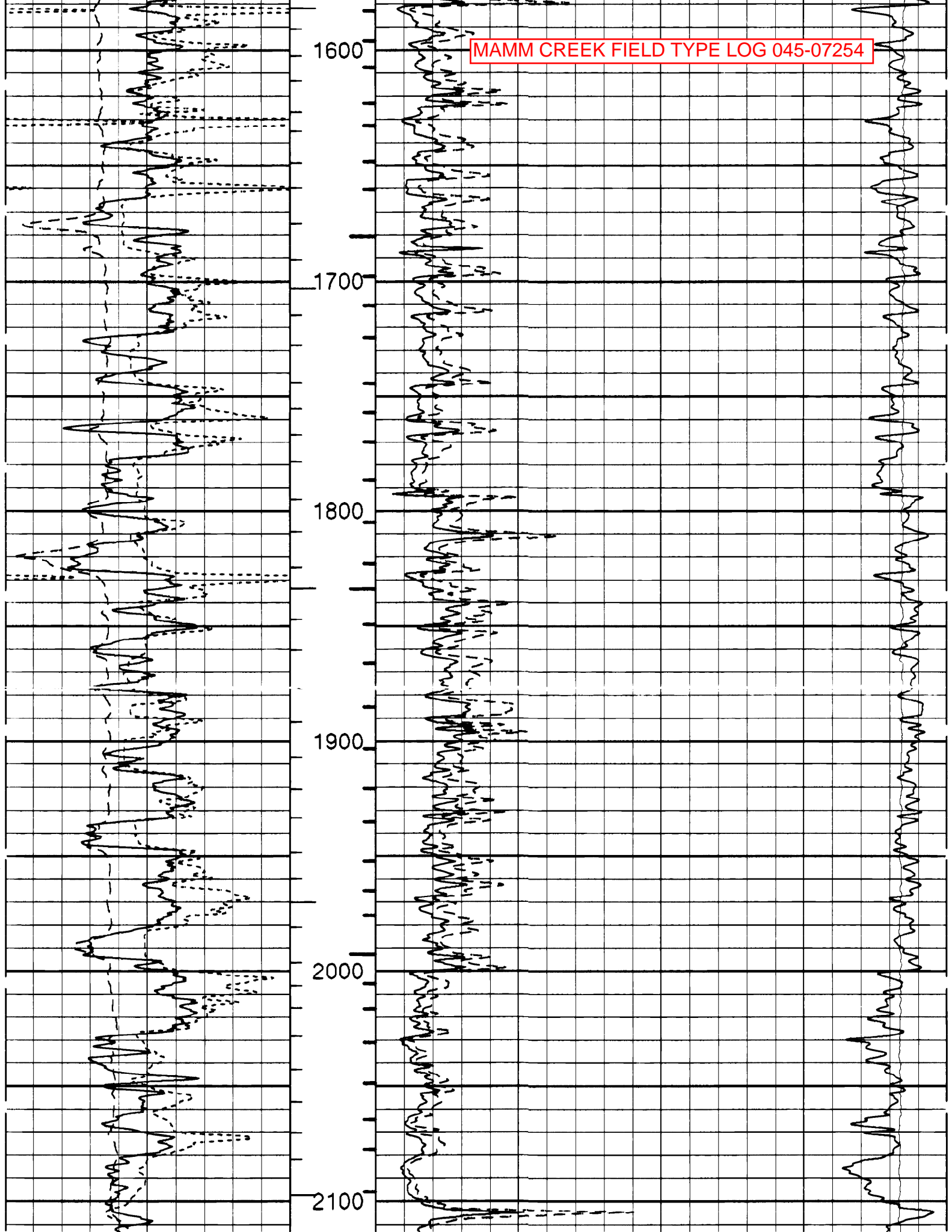
Alluvium at Surface
Underlain by Wasatch Formation

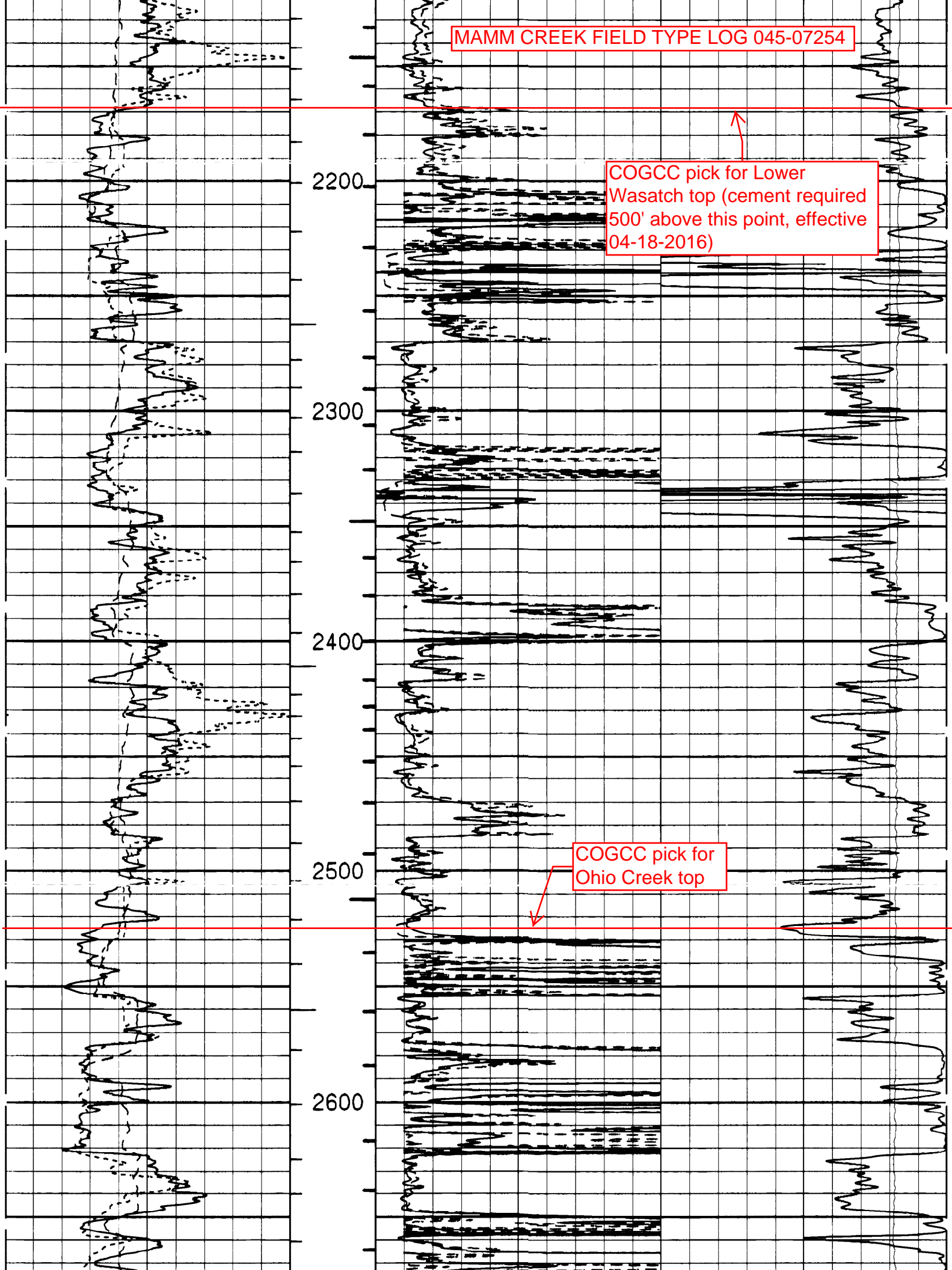


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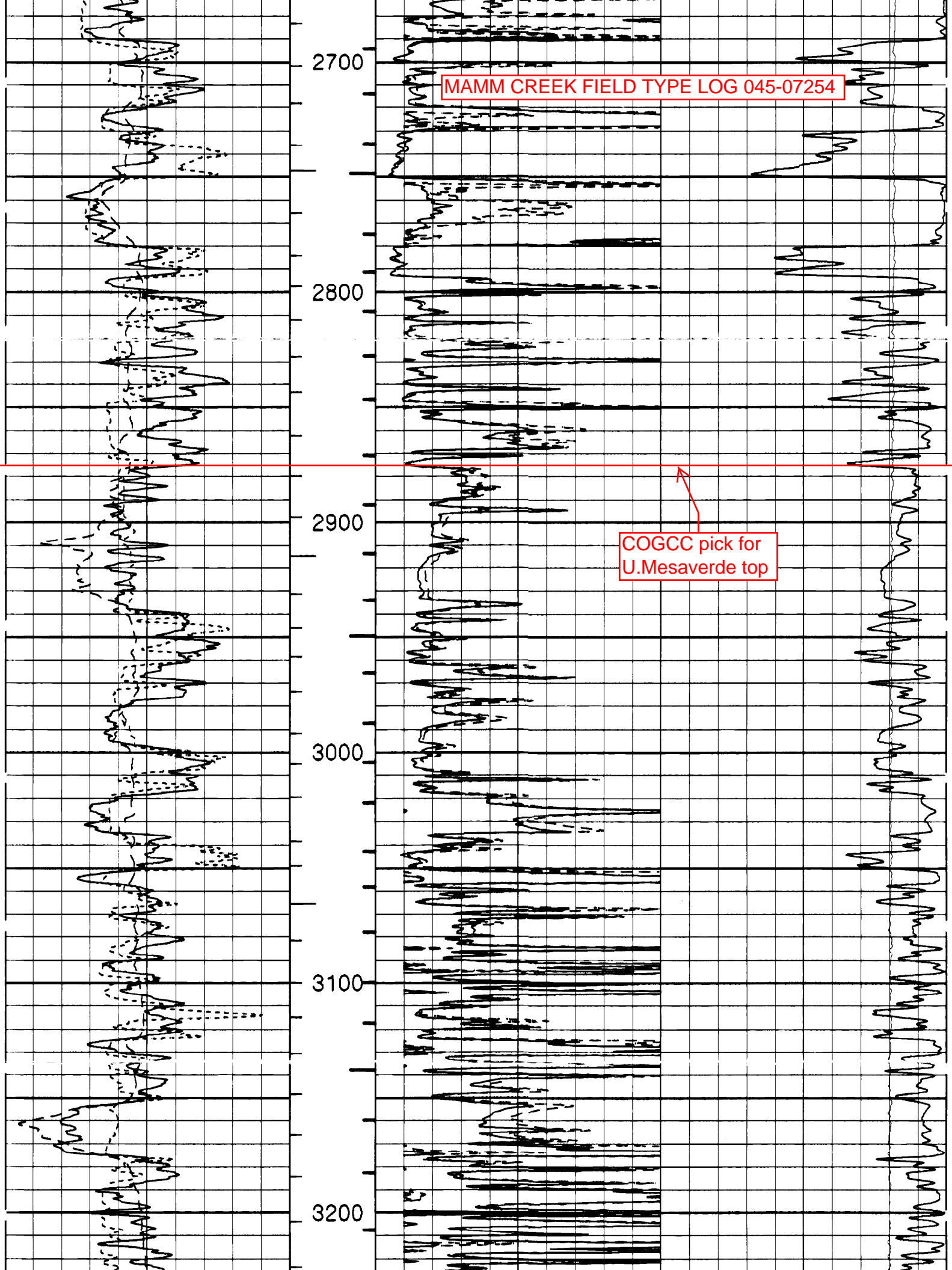




COGCC pick for Lower Wasatch top (cement required 500' above this point, effective 04-18-2016)

COGCC pick for Ohio Creek top

MAMM CREEK FIELD TYPE LOG 045-07254



2700

2800

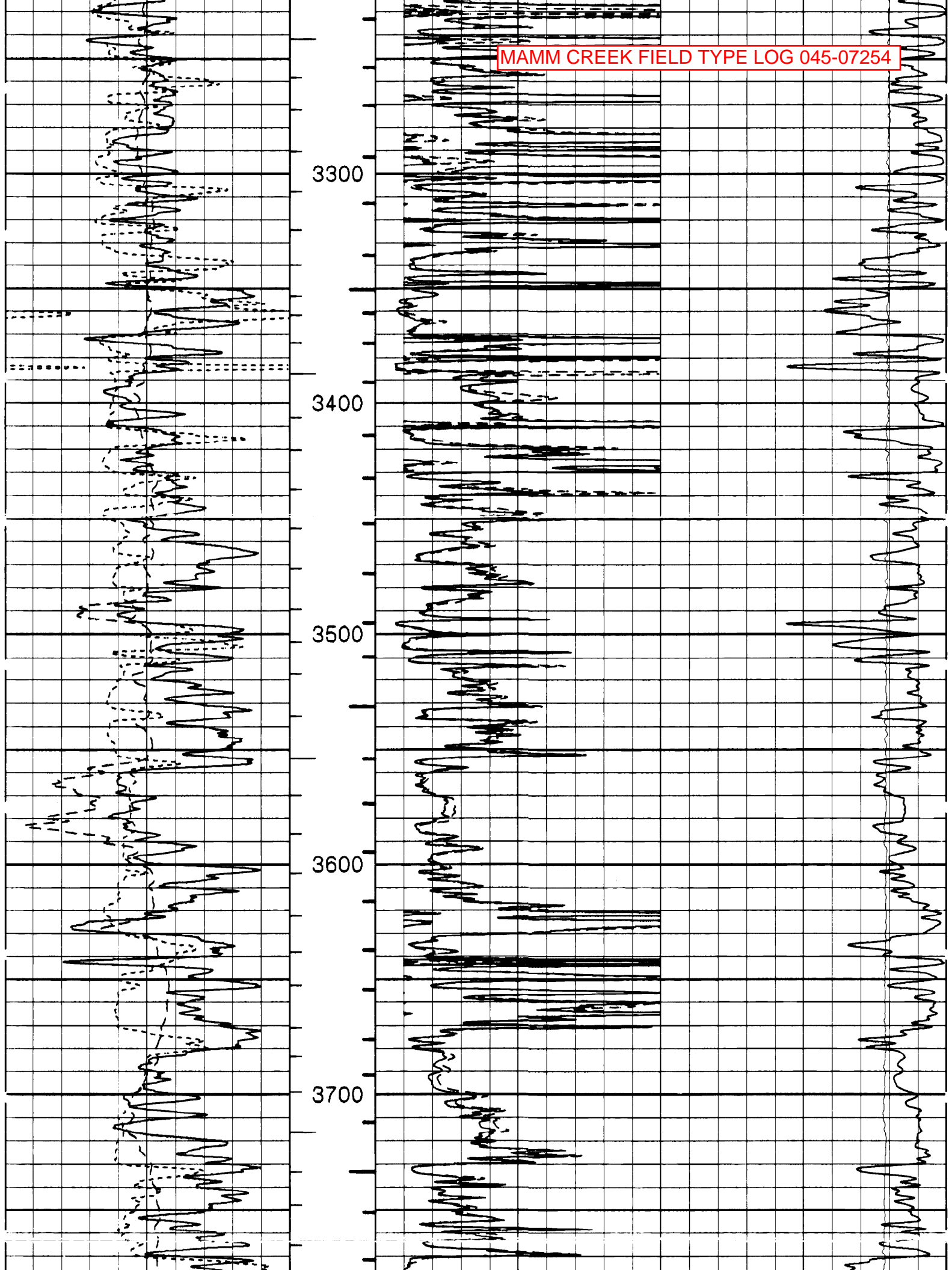
2900

3000

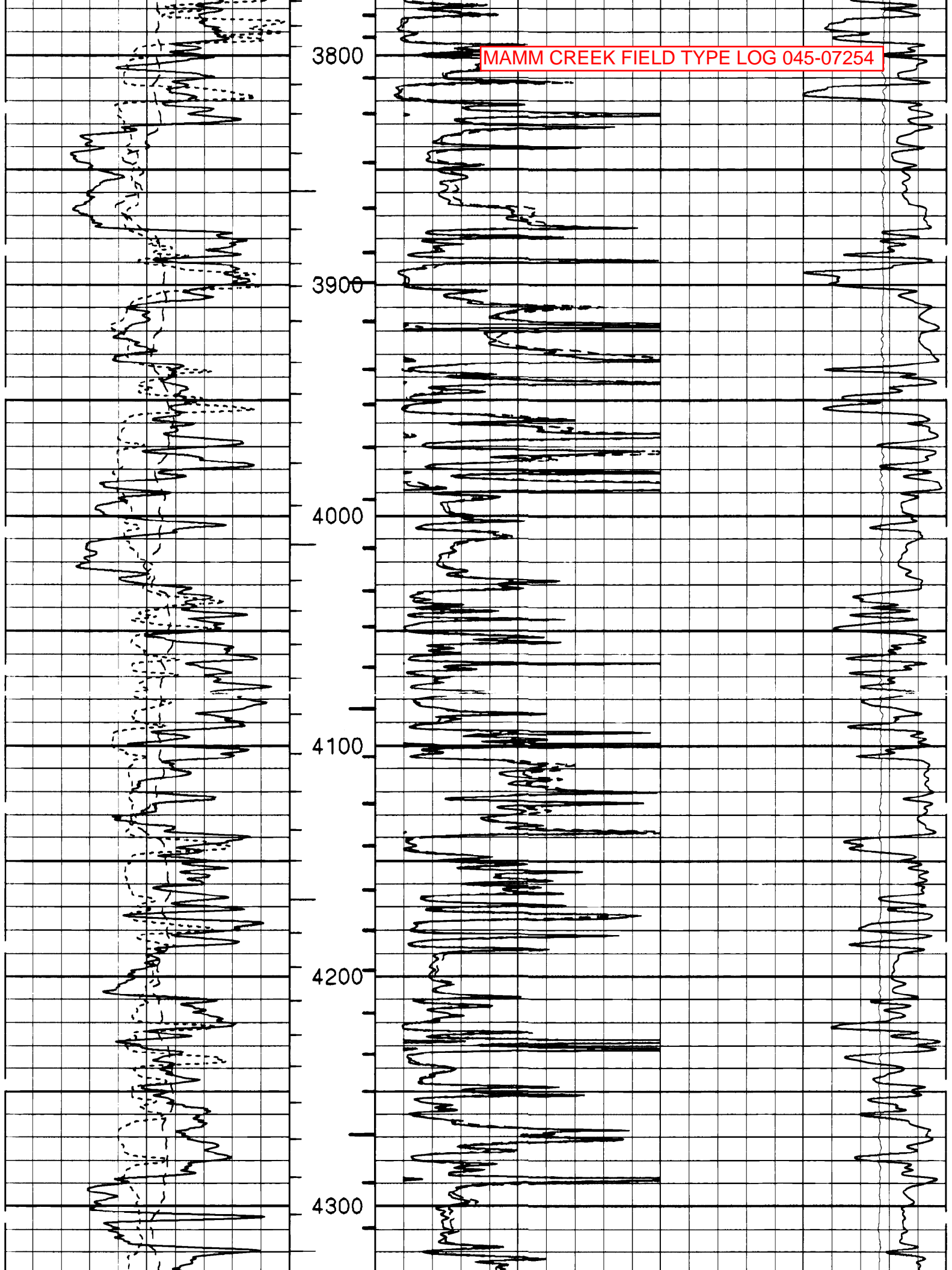
3100

3200

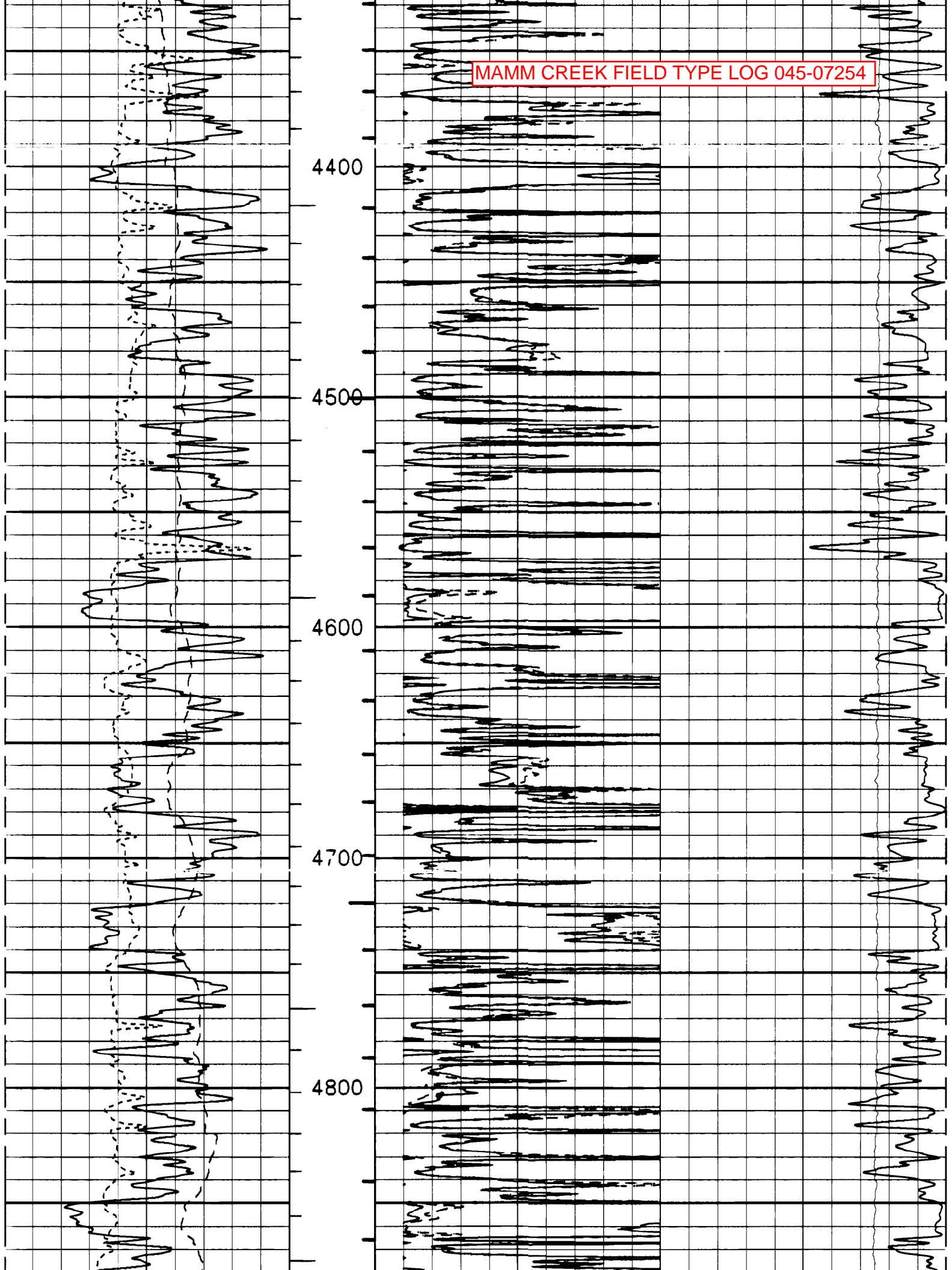
COGCC pick for
U. Mesaverde top



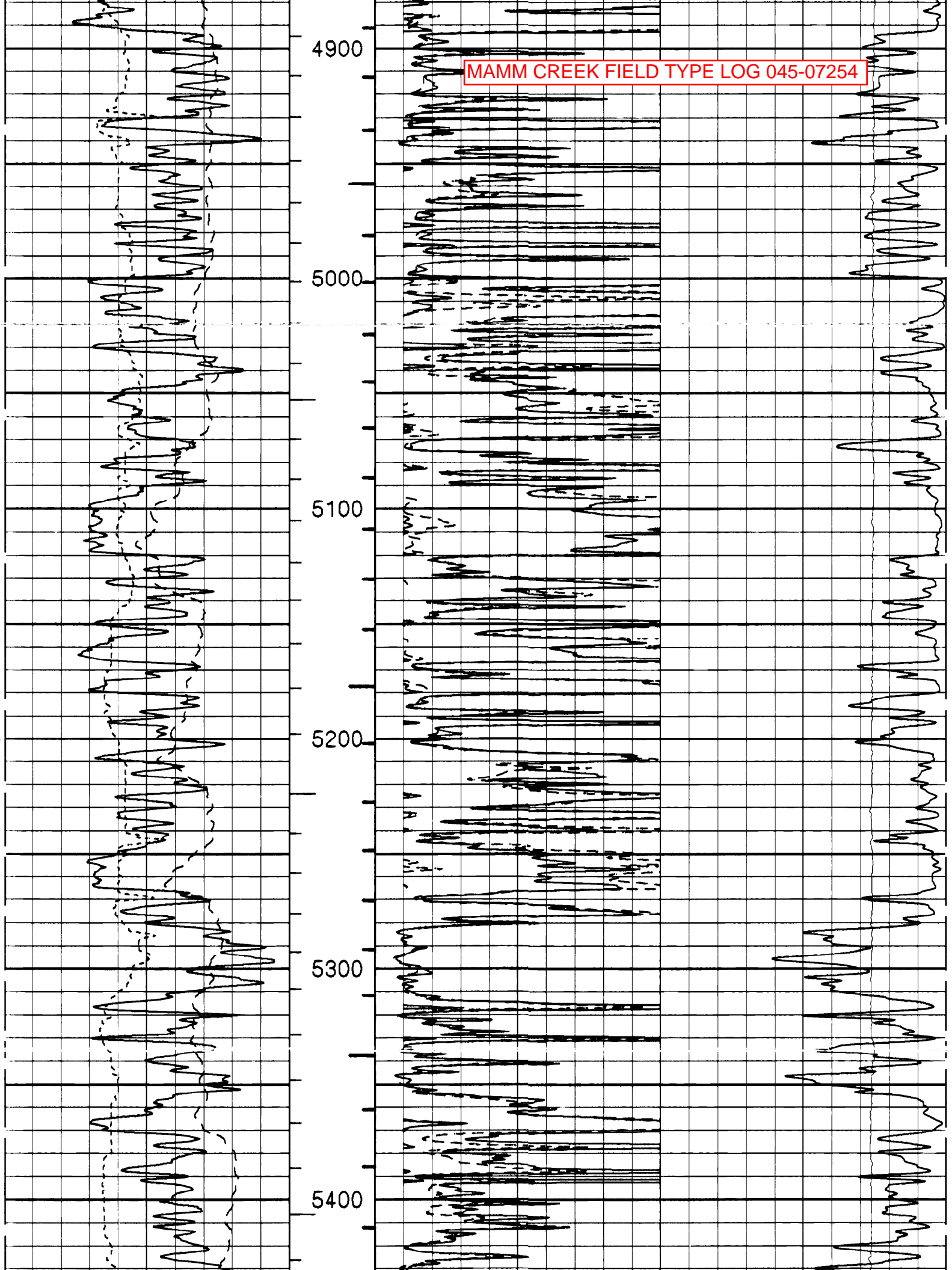
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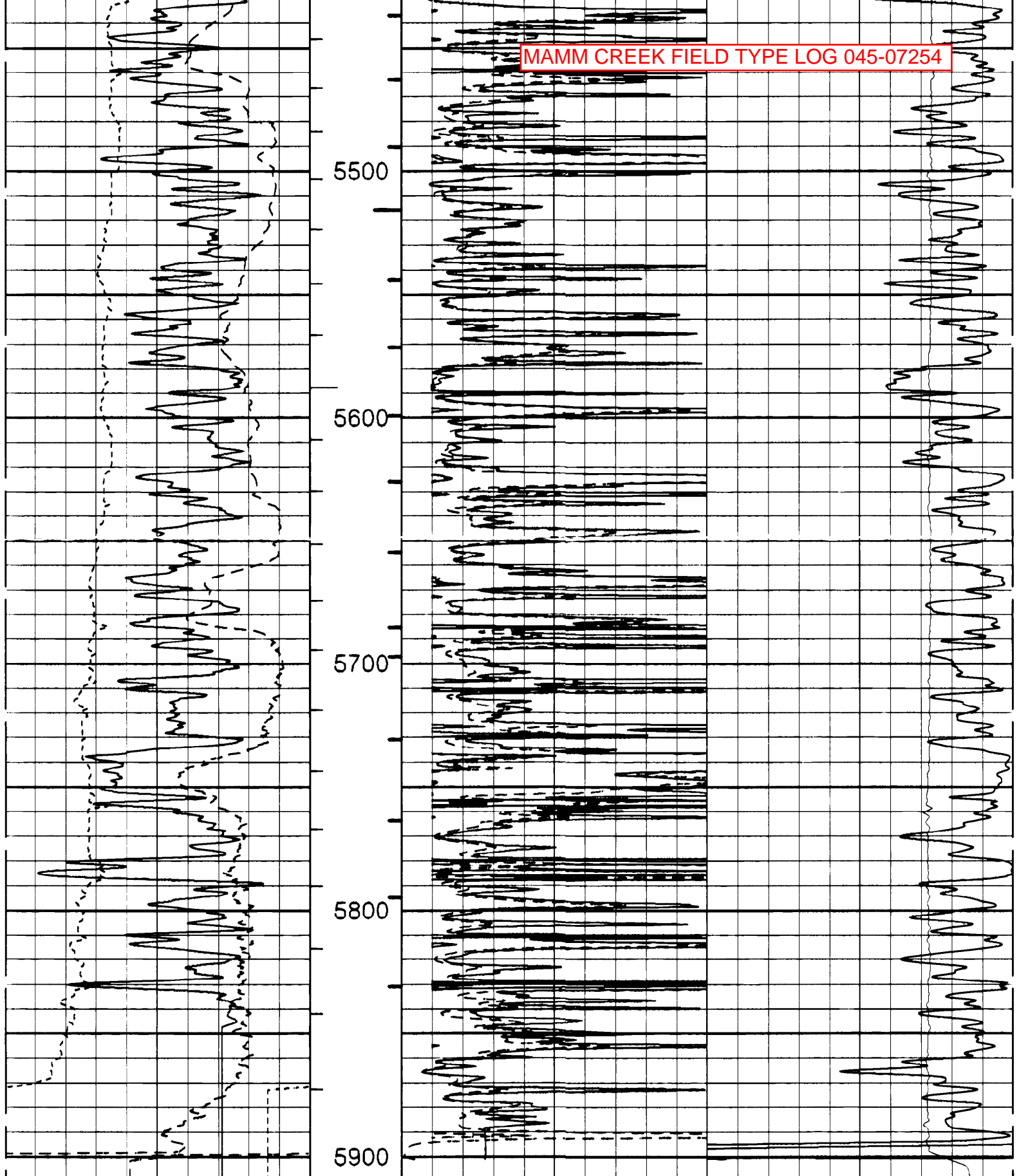
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SP -J10+	1:600 FT.		
CALIPER INCHES	BHV	DFL	DEEP COND.
GAMMA RAY	FT3 AHV	OHM-M	MMHO
APICOUNTS	FT3	DEEP OHM-M	TENSION
			POUNDS



Data File: FINAL.cls
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