



Pioneer Energy Services

Microresistivity Log

15-101-22,395-00-00

Company **Larson Engineering, Inc.**
 Well **Joe No. 1 - 21**

Field **Wildcat**

County **Lane** State **Kansas**

Location **SE - SE - SW - NW
 2454' FNL & 1285' FWL**

Sec: **21** Twp: **17 S** Rge: **30 W**

Permanent Datum **Ground Level** Elevation **2873**
 Log Measured From **Kelly Bushing** 7 Ft. Above Perm. Datum
 Drilling Measured From **Kelly Bushing**

Other Services
 CNL/CDL
 DIL
 Elevation
 K.B. 2880
 D.F. 2873
 G.L. 2873

Date	8/18/2012
Run Number	Two
Depth Driller	4630
Depth Logger	4630
Bottom Logged Interval	4629
Top Log Interval	3600
Casing Driller	8.625 @ 261
Casing Logger	258
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	1600
Density / Viscosity	9.1 45
pH / Fluid Loss	10.0 9.2
Source of Sample	Flowline
Rm @ Meas. Temp	.80 @ 63
Rmf @ Meas. Temp	.60 @ 63
Rmc @ Meas. Temp	1.08 @ 63
Source of Rmf / Rmc	Charts
Rm @ BHT	.41 @ 122
Operating Rig Time	4 1/2 Hours
Max Rec. Temp. F	122
Equipment Number	17
Location	Hays
Recorded By	D. Martin
Witnessed By	Bob Lewellyn

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

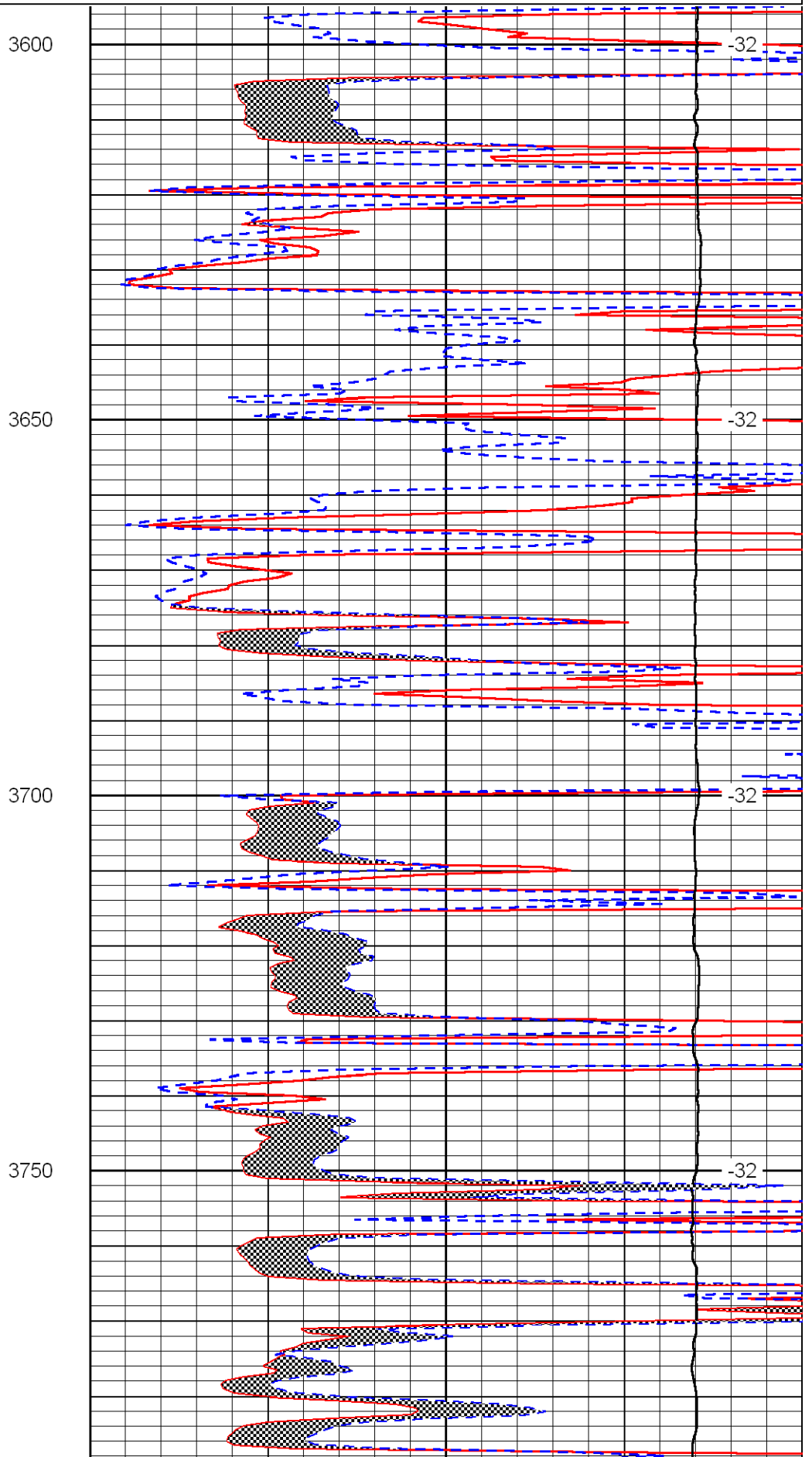
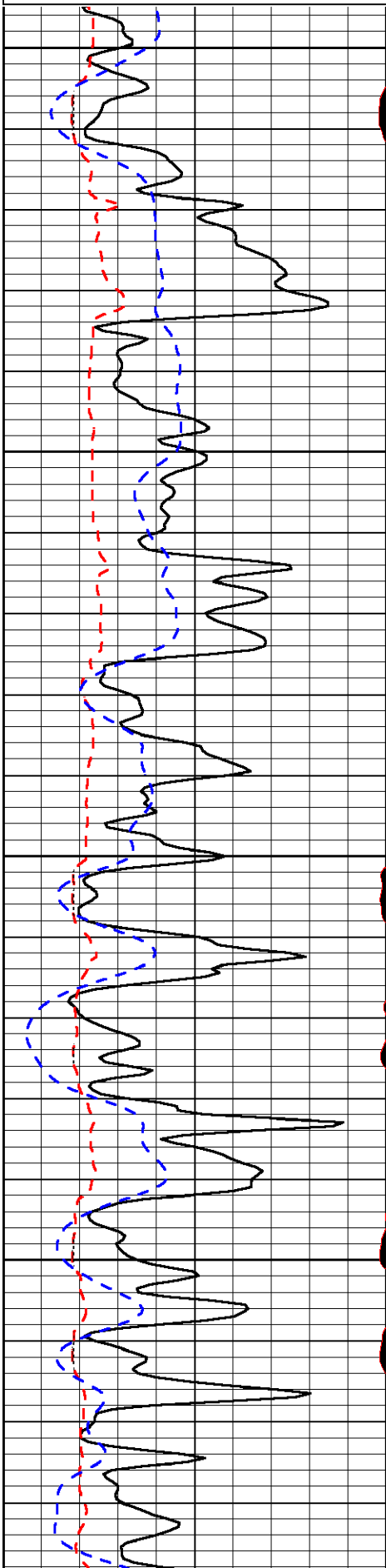
Comments

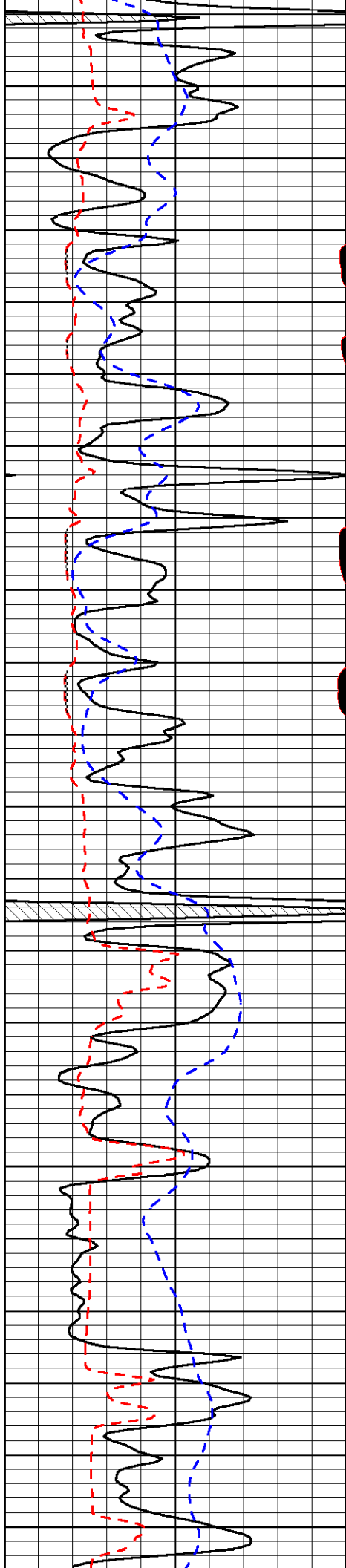
Thank you for using Pioneer Energy Services
www.pioneerres.com
 785 625 3858
 Healy, KS
 2 W to Bison Rd., 2 1/2 S,
 E Into

Database File:	larhd.db
Dataset Pathname:	DIL/larstk
Presentation Format:	micro
Dataset Creation:	Sat Aug 18 06:28:04 2012
Charted by:	Depth in Feet scaled 1:240

0	Gamma Ray	150
6	MCAL (GAPI)	16
2.875	mcal (GAPI)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
15000	Line Weight (lb)	0
	LSPD (ft/min)	





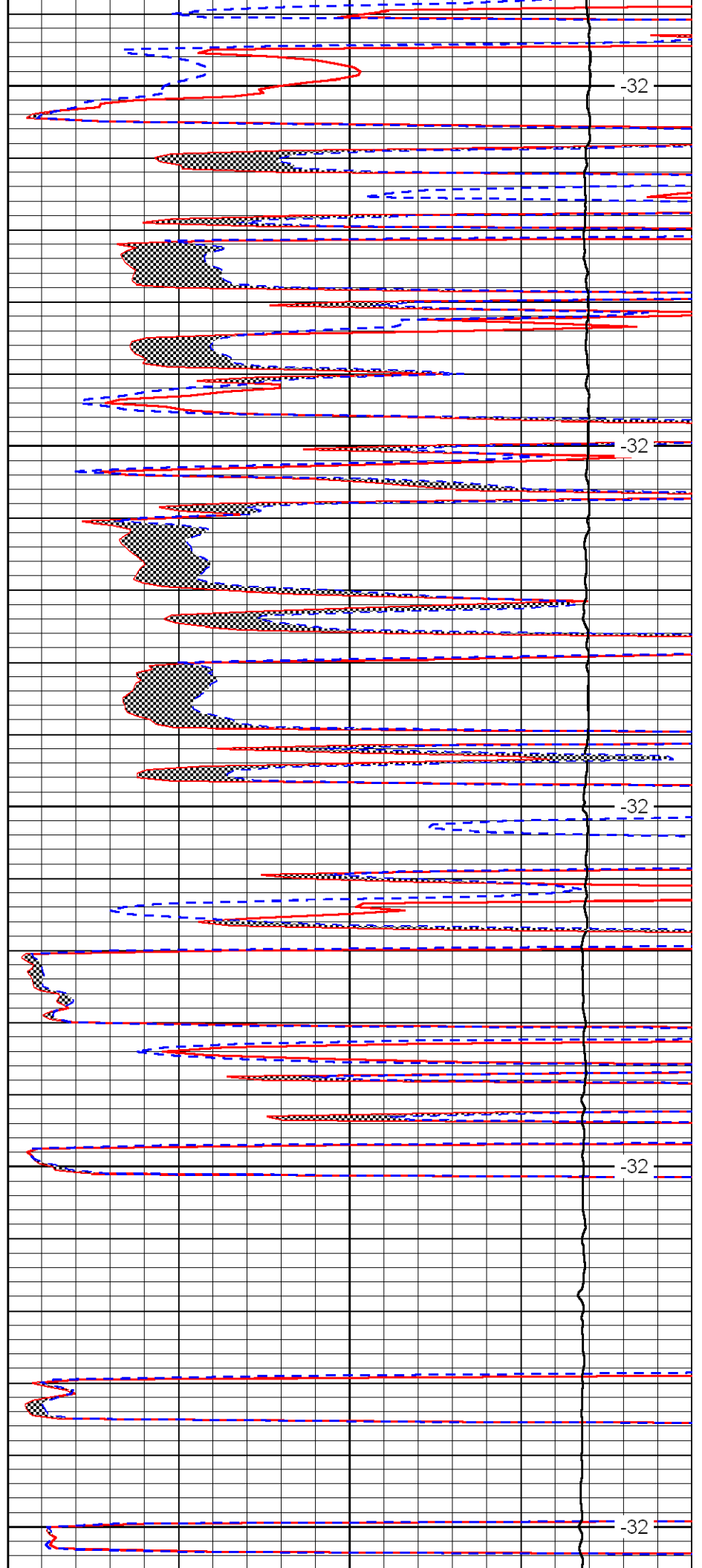
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3850

3900

3950

4000



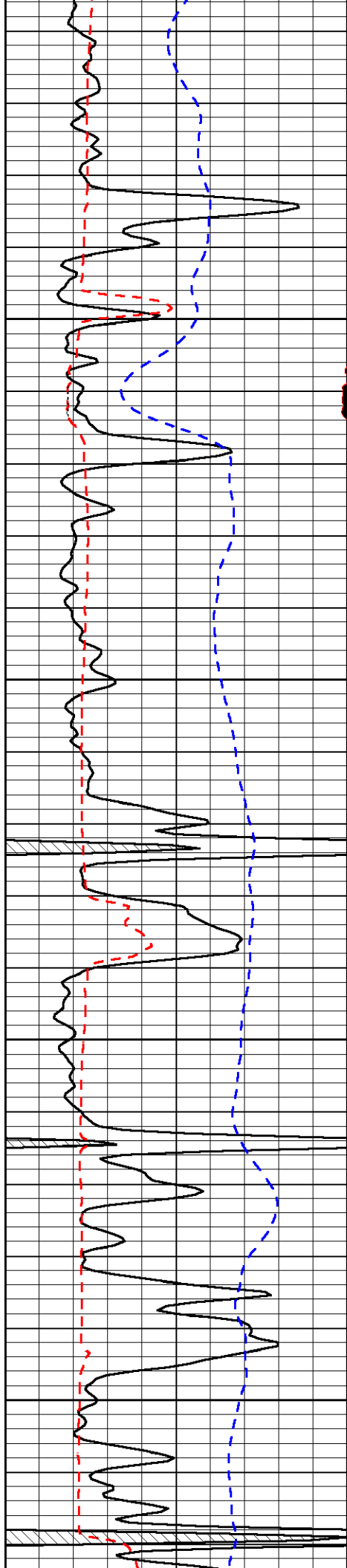
-32

-32

-32

-32

-32

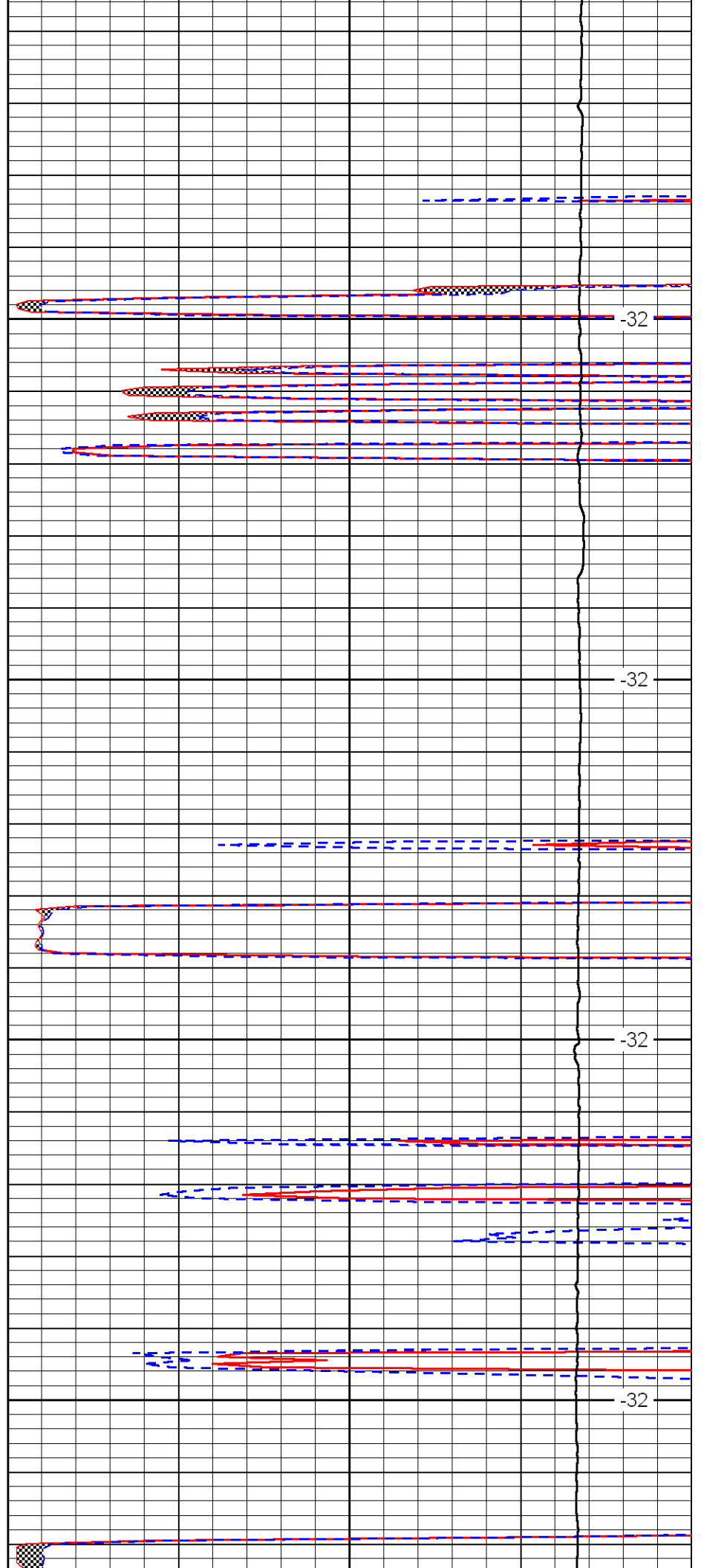


4050

4100

4150

4200

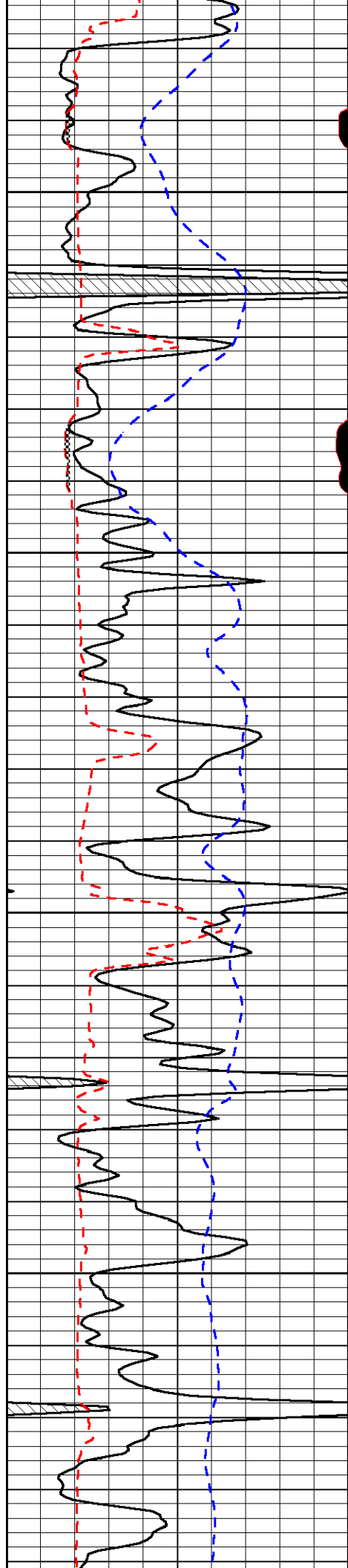


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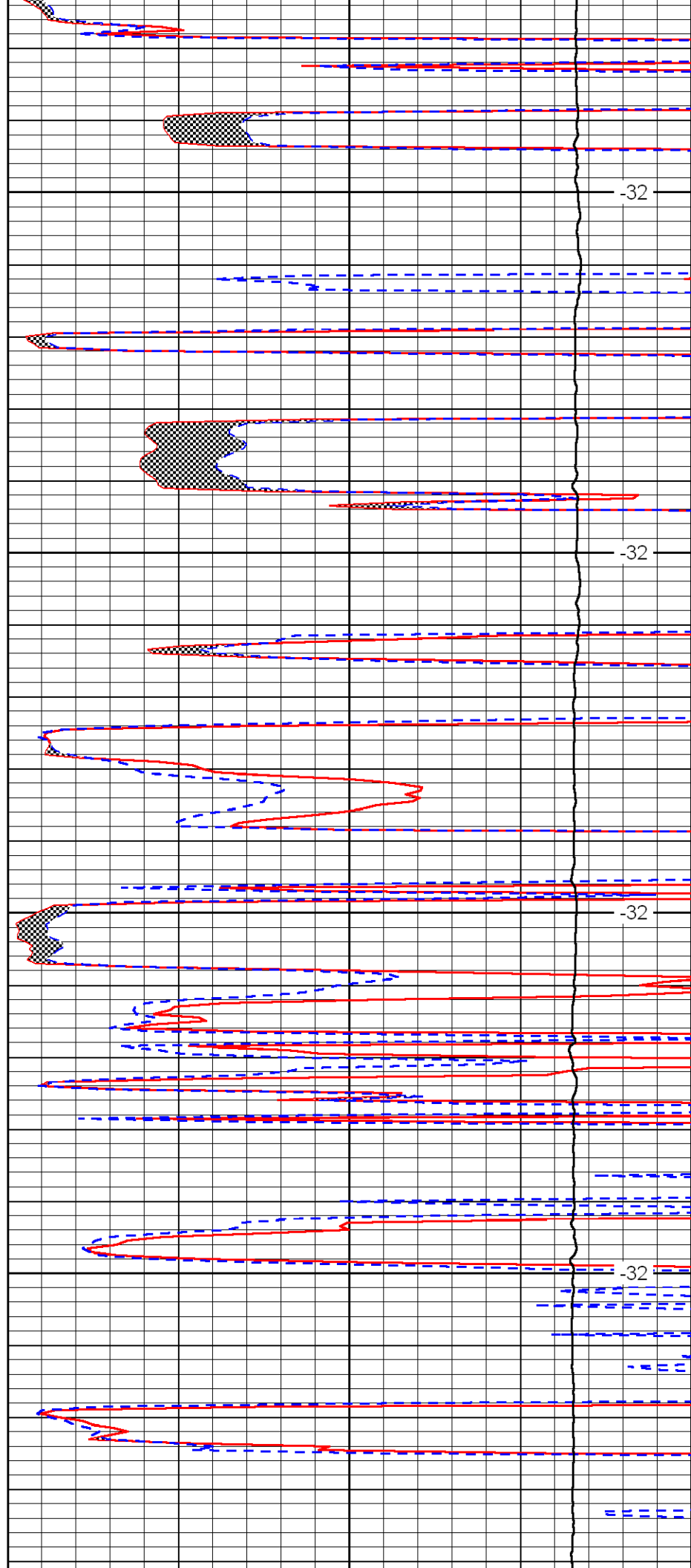


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4300

4350

4400

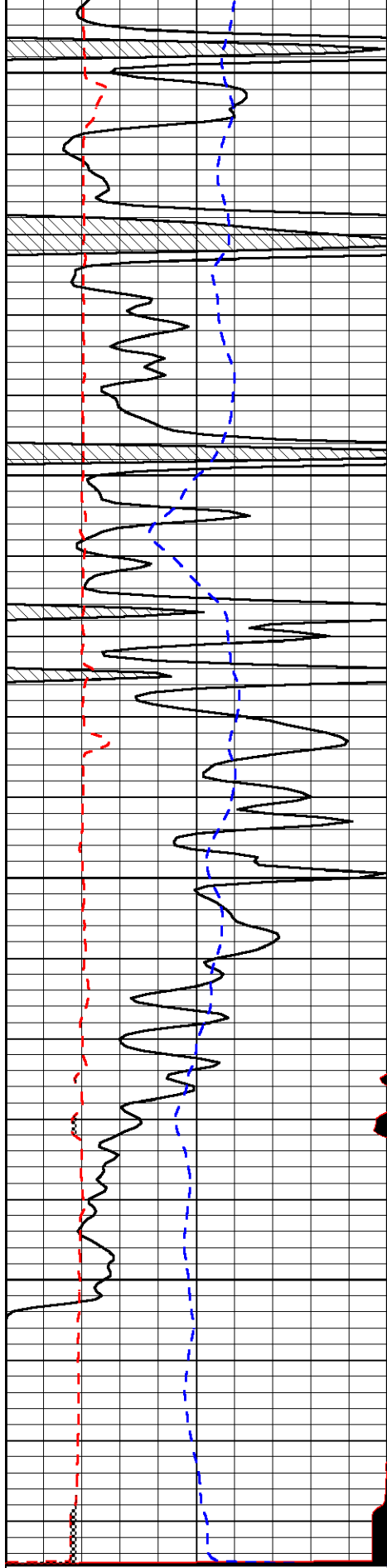


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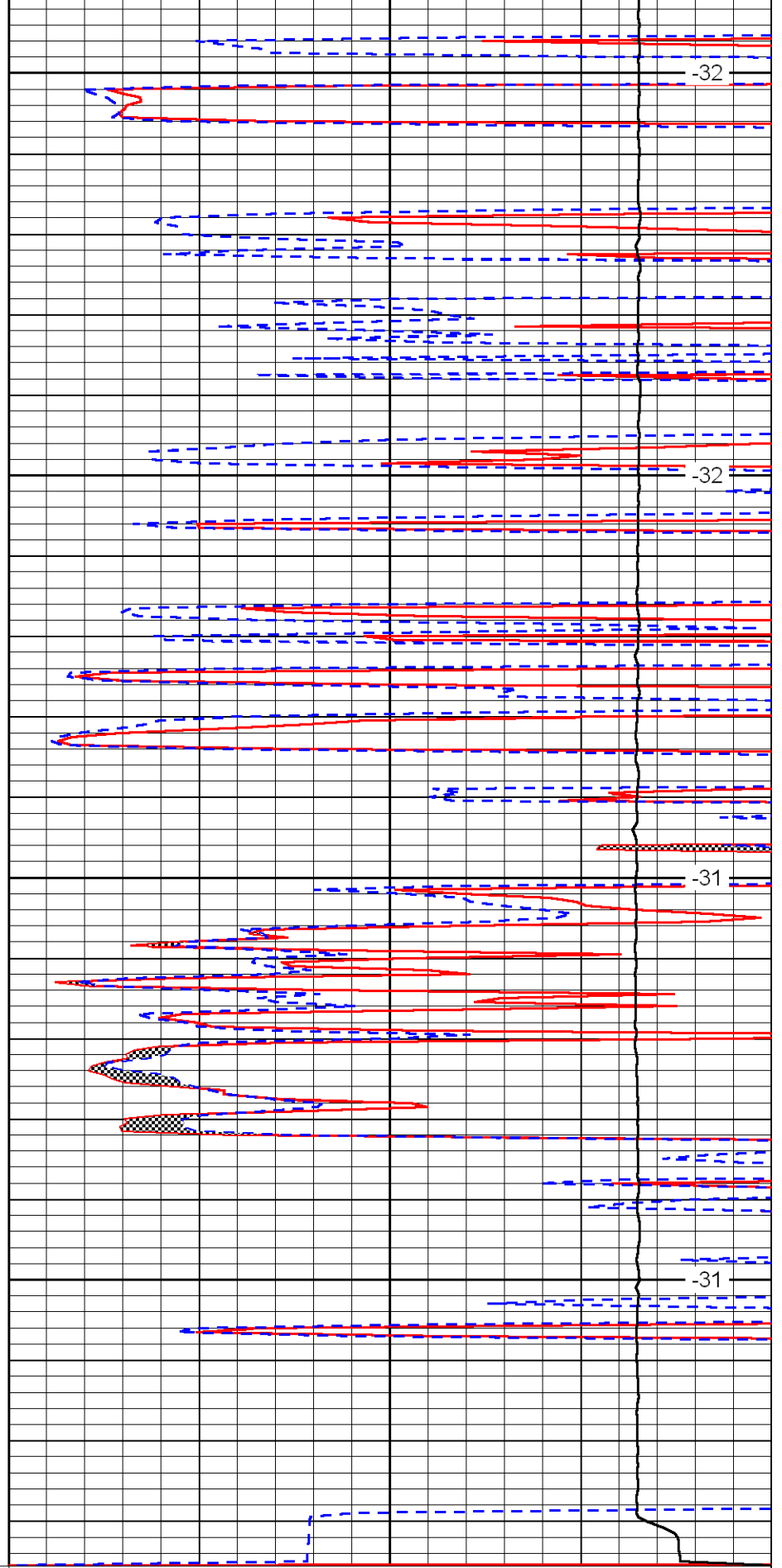
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4500

4550

4600

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-200	SP (mV)	0



-32

-32

-31

-31

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LSPD
(ft/min)

