WELL ANALYSIS CORPORATION

AUDIO DETECTION SURVEY

FILING NO. GS, OG

COMPANY: SOUTHERN CALIF. GAS CO.
WELL: FREW 7
FIELD: ALISO CANYON
COUNTY: LOS ANGELES
STATE: CALIFORNIA
LOCATION: DISTRICT 2
OTHER SVC:

BFW
API NUMBER: 0403700670
SEC: 29 TWN: 3N RNG: 16W

-ELEVATIONS-
KB: Ft.
DF: Ft.
GL: Ft.

PERMANENT DATUM: GROUND LEVEL ELEV:
LOG MEASURED FROM MAT 0' ABOVE PERM DATUM
DRILLING MEASURED FROM

DATE LOG RAN	06-08-2016	PRESSURE	FLOWING	INJECTION	SHUT-IN
RUN NUMBER	ONE	TUBING PSI			0
EFFECTIVE DEPTH	8746' PLUG	CASING PSI			0
PICKUP DEPTH	8389'	INJECTION RATE	N|A		
BOT LOGGED INT	8389'	OBSERVED RATE	N|A		
TOP LOGGED INT	100'	R/A SOURCE	N|A		
TYPE OF INJECT	NONE	ACTIVITY	N|A		
FLUID IN WELL	GAS	HALF LIFE	N|A		
FLUID LEVEL	3980.0'				
WELL STATUS	STATIC	PRODUCTION DATA			
MAX TEMPERATURE	179.7 F	OIL Gr.	N|A	OIL =	N|A
AT DEPTH	8388.5'	GAS Gr.	N|A	GAS=	N|A
TEMPERATURE SENS	1 F/DIV.	MPP	N|A	BHP =	N|A
LOGGING SPEED	100 FPM			WATER=	N|A
RECORDED BY	D.PROKUSKI				
WITNESSED BY	N|A				
EMAIL TO	A.KARGAR				
DEPTH CORRELATION	PACKER				

Equipment Data

Collar Locator ⬛1.375"		
Temperature Tool 🟩1.375"		
Audio Detector 🟥1.375"		

Remarks/Survey Results

07:00AM - ON LOCATION
07:15AM - RAN IN HOLE
07:20AM - BEGIN SURVEY
11:30AM - PULL OUT OF HOLE
12:00PM - OFF LOCATION

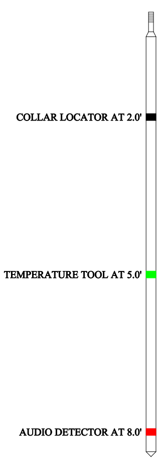
SAND TAG MARKERS: 7813' TOP M-P
8278' TOP S-1
8313' TOP S-2
8856' TOP S-4
8452' TOP S-8
8670' TOP FREW

CASING AND TUBING RECORD

SIZE	WT(#)	FROM	TO	SIZE	WT(#)	FROM	TO
11.75"	47	SURFACE	1977'				
7.000"	26	SURFACE	8750'				
2.875"	6.5	SURFACE	8357'				
2.375"	4.7	8357'	8654'				

STR.	PIPE DIA.	PERFORATIONS
A	7.000"	8383'-8442', 8475'-8618', WSO: 8865',
		8670'-8702', 8730'-8745'.
		PACKERS: 8352', 8465', 8645'.
		GAS LIFT MANDRELS: 8236', 8306'.
		SLIDING SLEEVES: 8399', 8535'.
		NO-GO: 8654'.

TOOL DIAGRAM



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     Audio Data:  C:\data\NOISE.txt
  ---------------------------------------------------
    DEPTH |   200HZ |   600HZ |  1000HZ |  2000HZ |
  ---------------------------------------------------
      100 |   20.40 |    5.80 |    2.50 |    1.00 |
      250 |   19.70 |    5.90 |    2.50 |    1.00 |
      500 |   19.50 |    5.90 |    2.50 |    1.00 |
      520 |   19.30 |    5.80 |    2.50 |    1.00 |
      540 |   19.50 |    5.90 |    2.50 |    1.00 |
      560 |   19.60 |    5.90 |    2.50 |    1.00 |
      580 |   19.20 |    5.60 |    2.30 |    0.90 |
      600 |   19.30 |    5.60 |    2.40 |    1.00 |
      620 |   19.30 |    5.60 |    2.30 |    1.00 |
      640 |   18.90 |    5.60 |    2.40 |    1.00 |
      660 |   19.10 |    5.60 |    2.30 |    1.00 |
      680 |   19.20 |    5.60 |    2.30 |    1.00 |
      700 |   19.20 |    5.60 |    2.40 |    1.00 |
      720 |   19.10 |    5.60 |    2.30 |    1.00 |
      740 |   19.00 |    5.60 |    2.40 |    1.00 |
      760 |   19.00 |    5.60 |    2.30 |    0.90 |
      780 |   18.90 |    5.60 |    2.40 |    1.00 |
      800 |   19.00 |    5.50 |    2.30 |    1.00 |
      820 |   19.20 |    5.60 |    2.30 |    1.00 |
      840 |   19.20 |    5.60 |    2.30 |    0.90 |
      860 |   19.30 |    5.60 |    2.40 |    1.00 |
      880 |   19.30 |    5.60 |    2.30 |    1.00 |
      900 |   19.20 |    5.60 |    2.40 |    1.00 |
      920 |   19.30 |    5.60 |    2.40 |    1.00 |
      940 |   19.20 |    5.60 |    2.30 |    0.90 |
      960 |   18.80 |    5.60 |    2.40 |    1.00 |
      980 |   19.10 |    5.60 |    2.30 |    1.00 |
     1000 |   19.00 |    5.60 |    2.30 |    1.00 |
     1020 |   19.10 |    5.60 |    2.40 |    1.00 |
     1040 |   18.90 |    5.60 |    2.40 |    1.00 |
     1060 |   18.90 |    5.50 |    2.40 |    1.00 |
     1080 |   19.10 |    5.60 |    2.30 |    1.00 |
     1100 |   19.10 |    5.60 |    2.30 |    1.00 |
     1120 |   18.90 |    5.60 |    2.40 |    1.00 |
     1140 |   18.80 |    5.60 |    2.30 |    1.00 |
     1160 |   19.10 |    5.60 |    2.30 |    1.00 |
     1250 |   18.90 |    5.50 |    2.30 |    1.00 |
     1500 |   18.60 |    5.50 |    2.40 |    1.00 |
     1750 |   18.70 |    5.50 |    2.40 |    1.00 |
     1900 |   18.50 |    5.60 |    2.40 |    1.00 |
     1920 |   18.80 |    5.60 |    2.40 |    0.90 |
     1940 |   18.70 |    5.70 |    2.40 |    1.00 |
     1960 |   18.90 |    5.60 |    2.40 |    1.00 |
     1980 |   18.80 |    5.70 |    2.40 |    1.00 |
     2000 |   18.50 |    5.60 |    2.40 |    1.00 |
     2020 |   18.90 |    5.70 |    2.40 |    1.00 |
     2040 |   18.50 |    5.60 |    2.40 |    1.00 |
     2060 |   18.80 |    5.60 |    2.40 |    1.00 |
     2250 |   18.60 |    5.60 |    2.40 |    1.00 |
     2500 |   18.60 |    5.60 |    2.40 |    1.00 |
     2750 |   18.20 |    5.50 |    2.40 |    0.90 |
     3000 |   18.30 |    5.50 |    2.40 |    0.90 |
     3250 |   15.90 |    4.00 |    1.90 |    0.90 |
     3500 |   15.90 |    4.00 |    1.90 |    0.90 |
     3750 |   15.80 |    4.00 |    1.80 |    0.90 |
     3900 |   15.60 |    3.90 |    1.80 |    0.90 |
     3910 |   15.90 |    3.90 |    1.80 |    0.90 |
     3920 |   15.90 |    4.00 |    1.80 |    0.80 |
     3930 |   15.90 |    4.00 |    1.90 |    0.90 |
     3940 |   15.80 |    4.10 |    2.00 |    0.90 |
     3950 |   15.70 |    4.00 |    1.90 |    0.90 |
     3960 |   15.80 |    4.00 |    1.90 |    0.90 |
     3970 |   15.80 |    4.00 |    1.90 |    0.90 |
     3980 |   15.80 |    4.00 |    1.80 |    0.90 |
     3990 |   15.70 |    4.00 |    1.90 |    0.90 |
     4000 |   15.80 |    4.00 |    1.90 |    0.90 |
     4010 |   15.60 |    4.00 |    1.90 |    0.90 |
     4020 |   15.50 |    3.90 |    1.80 |    0.90 |
     4040 |   15.70 |    4.00 |    1.90 |    0.90 |
     4060 |   15.60 |    4.00 |    1.90 |    0.90 |
     4250 |   15.60 |    3.90 |    1.80 |    0.90 |
     4300 |   15.60 |    4.00 |    1.90 |    0.90 |
     4320 |   15.60 |    3.90 |    1.80 |    0.90 |
     4340 |   15.60 |    3.90 |    1.80 |    0.80 |
     4350 |   15.60 |    3.90 |    1.80 |    0.80 |
     4360 |   15.50 |    3.90 |    1.80 |    0.90 |
     4370 |   15.60 |    3.90 |    1.90 |    0.90 |
     4380 |   15.70 |    3.90 |    1.80 |    0.80 |
     4390 |   15.60 |    3.90 |    1.80 |    0.80 |
     4400 |   15.50 |    3.80 |    1.80 |    0.80 |
     4410 |   15.60 |    3.90 |    1.80 |    0.90 |
     4420 |   15.30 |    3.90 |    1.80 |    0.90 |
     4430 |   15.50 |    3.90 |    1.80 |    0.90 |
     4440 |   15.50 |    3.90 |    1.90 |    0.90 |
     4450 |   15.60 |    3.80 |    1.80 |    0.80 |
     4460 |   15.50 |    3.90 |    1.90 |    0.90 |
     4480 |   15.50 |    3.80 |    1.80 |    0.80 |
     4500 |   15.50 |    3.90 |    1.80 |    0.90 |
     4520 |   15.60 |    3.90 |    1.80 |    0.90 |
     4540 |   15.50 |    3.80 |    1.80 |    0.90 |
     4560 |   15.40 |    3.80 |    1.80 |    0.90 |
     4580 |   15.50 |    3.80 |    1.80 |    0.80 |
     4600 |   15.40 |    3.80 |    1.80 |    0.80 |
     4750 |   15.30 |    3.80 |    1.80 |    0.80 |
     5000 |   15.30 |    3.80 |    1.80 |    0.80 |
     5250 |   15.20 |    3.80 |    1.80 |    0.90 |
     5500 |   15.30 |    3.80 |    1.80 |    0.90 |
     5750 |   15.20 |    3.80 |    1.80 |    0.90 |
     6000 |   14.90 |    3.70 |    1.80 |    0.90 |
     6250 |   14.70 |    3.70 |    1.90 |    0.90 |
     6500 |   14.20 |    3.70 |    1.80 |    0.90 |
     6750 |   14.20 |    3.70 |    1.90 |    0.90 |
     7000 |   14.30 |    3.70 |    1.90 |    0.90 |
     7250 |   14.30 |    3.80 |    1.90 |    0.90 |
     7500 |   13.80 |    3.70 |    1.90 |    0.90 |
     7750 |   13.80 |    3.80 |    1.90 |    0.90 |
     8000 |   13.70 |    3.80 |    1.90 |    0.90 |
     8010 |   13.70 |    3.80 |    1.90 |    0.90 |
     8020 |   13.60 |    3.80 |    2.00 |    0.90 |
     8030 |   13.70 |    3.80 |    1.90 |    0.90 |
     8040 |   13.50 |    3.80 |    1.90 |    0.90 |
     8050 |   13.50 |    3.80 |    1.90 |    0.90 |
     8060 |   13.80 |    3.90 |    2.00 |    0.90 |
     8070 |   13.50 |    3.80 |    2.00 |    0.90 |
     8080 |   13.50 |    3.90 |    2.00 |    0.90 |
     8090 |   13.70 |    3.90 |    2.00 |    0.90 |
     8100 |   13.50 |    3.90 |    2.00 |    0.90 |
     8110 |   13.50 |    3.90 |    2.00 |    0.90 |
     8120 |   13.30 |    3.90 |    2.00 |    0.90 |
     8130 |   13.70 |    3.90 |    2.00 |    0.90 |
     8140 |   13.40 |    4.00 |    2.00 |    0.90 |
     8150 |   13.40 |    4.00 |    2.00 |    0.90 |
     8160 |   13.20 |    3.90 |    2.00 |    0.90 |
     8170 |   13.30 |    3.90 |    2.00 |    0.90 |
     8180 |   13.30 |    3.90 |    2.00 |    0.90 |
     8190 |   13.20 |    3.90 |    2.00 |    0.90 |
     8200 |   13.10 |    3.90 |    2.00 |    0.90 |
     8210 |   13.10 |    3.80 |    1.90 |    0.90 |
     8220 |   13.30 |    4.00 |    2.00 |    0.90 |
     8230 |   13.20 |    3.90 |    2.00 |    0.90 |
     8240 |   13.20 |    3.90 |    2.00 |    0.90 |
     8250 |   13.20 |    4.00 |    2.00 |    0.90 |
     8260 |   13.40 |    4.00 |    2.00 |    0.90 |
     8270 |   13.20 |    3.90 |    2.00 |    0.90 |
     8280 |   13.10 |    3.90 |    2.00 |    0.90 |
     8290 |   13.20 |    3.90 |    2.00 |    0.90 |
     8300 |   13.00 |    4.00 |    2.00 |    0.90 |
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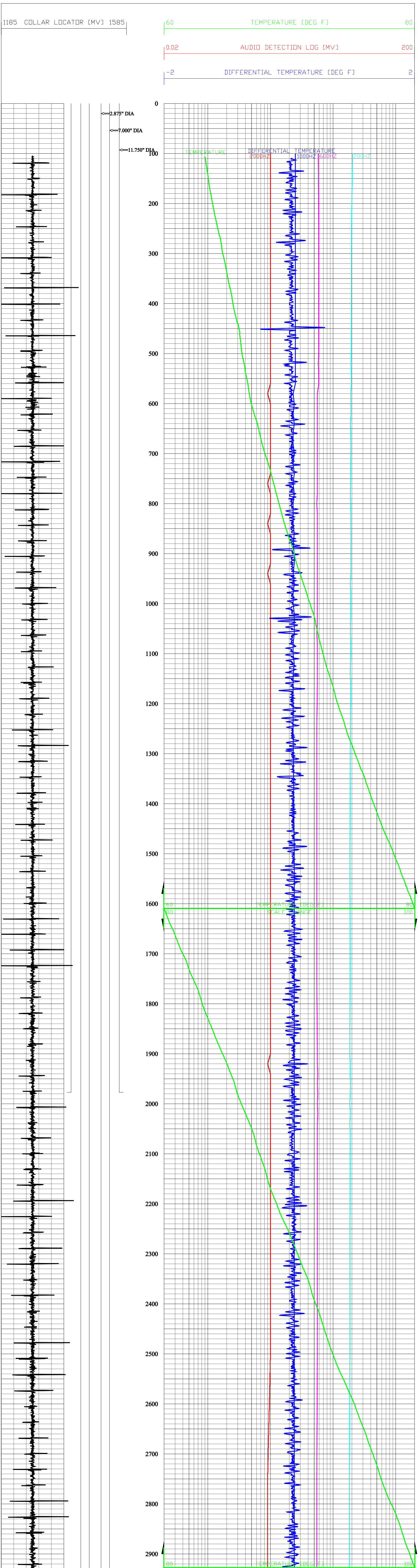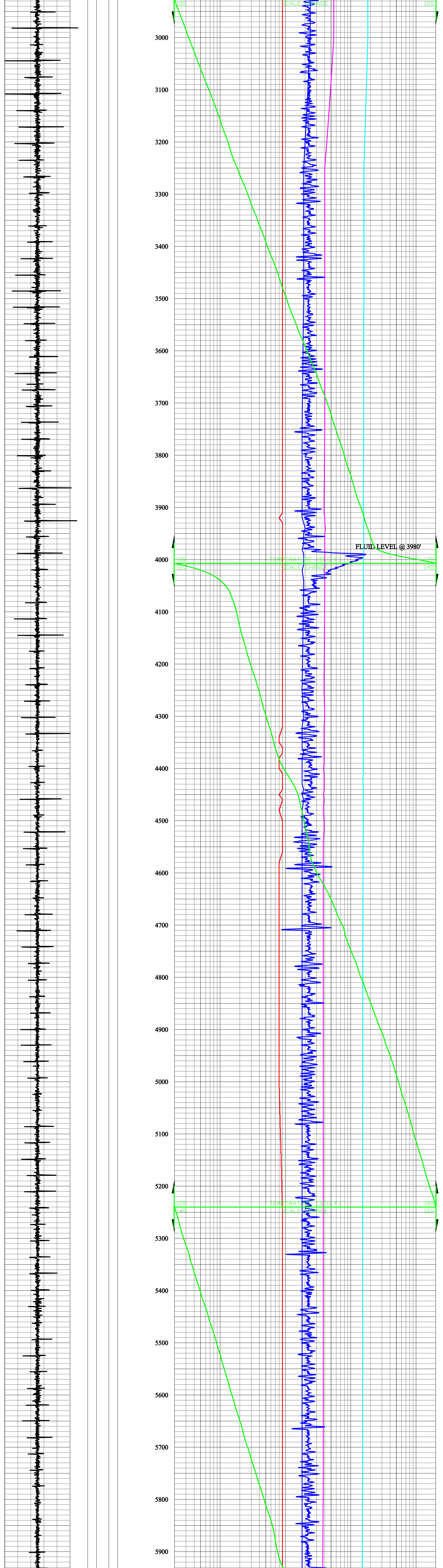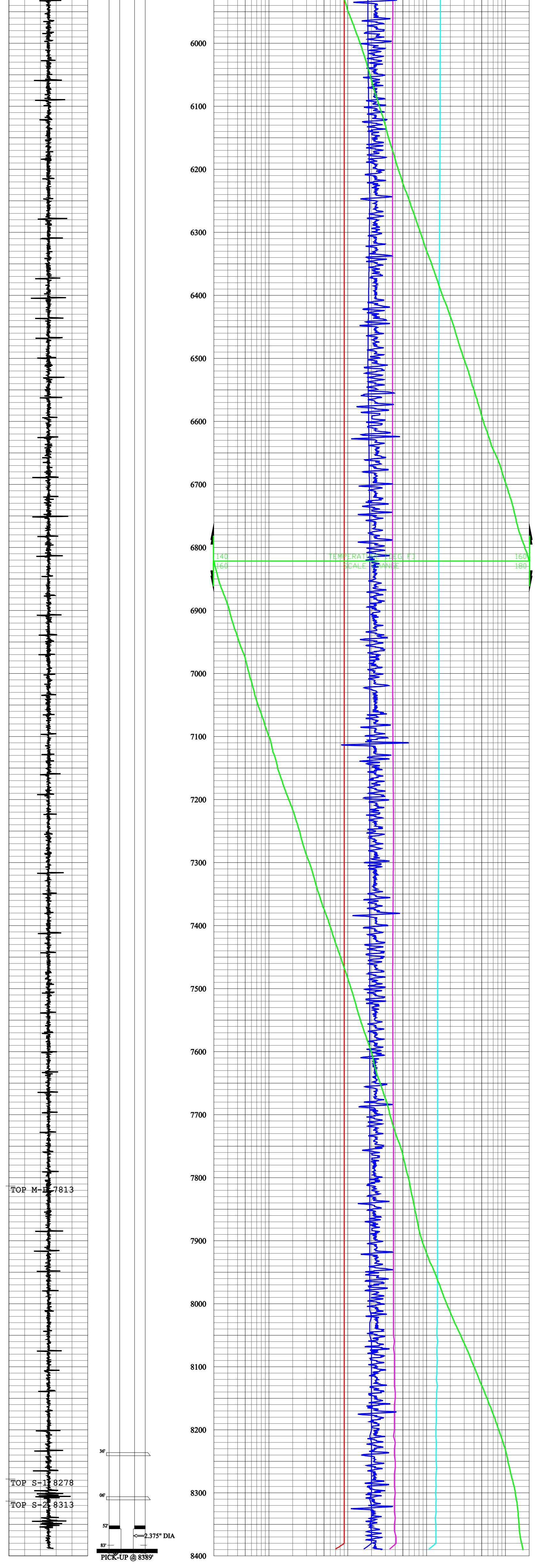```
8310 |   13.20 |    3.90 |    1.90 |    0.90 |
8320 |   13.10 |    3.90 |    2.00 |    0.90 |
8330 |   13.20 |    3.90 |    2.00 |    0.90 |
8340 |   12.90 |    4.00 |    2.00 |    0.90 |
8350 |   13.10 |    3.90 |    1.90 |    0.90 |
8360 |   13.10 |    3.90 |    2.00 |    0.90 |
8370 |   13.10 |    4.10 |    2.00 |    0.90 |
8380 |   13.10 |    4.10 |    2.00 |    0.90 |
8389 |   10.70 |    3.40 |    1.60 |    0.70 |
```