



GAMMA RAY LOG

$$5'' = 100'$$

FEEET TVD

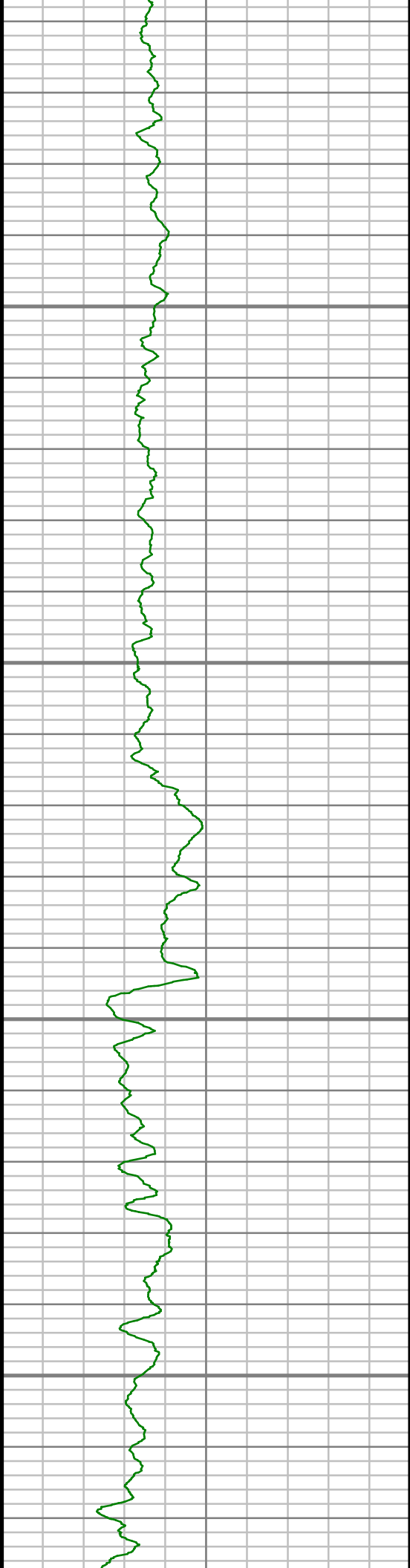
COMPANY : ANADARKO PETROLEUM CORP					
WELL : SPARBOE 26C-26HZ					
FIELD : WATTENBURG					
COUNTY : WELD					
STATE : COLORADO					
COUNTRY : U.S.A.					
UWI : 05-123-36248					
DEPTH REF. : RKB			DIRECTIONAL ROP		
REF. HEIGHT : 25.000 ft			RKB to Ground Level		
GROUND LEVEL : 4946.000 ft			G.L. to Mean Sea Level		
SEC:35			TWP:2N RANGE:65W		
WELL LOCATION			OTHER SERVICES		
LAT:40°5'18.995"N LONG:104°37'28.367"W					
N:1276334.40 ft E:3244938.93 ft					
<div style="display: flex; justify-content: space-between;"> <div> COMPANY : ANADARKO PETROLEUM CORP WELL : SPARBOE 26C-26HZ FIELD : WATTENBURG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-36248 </div> <div> DEPTH REF. : RKB REF. HEIGHT : 25.000 ft GROUND LEVEL : 4946.000 ft </div> <div> DIRECTIONAL ROP </div> </div>					
BOREHOLE RECORD				DEVATION RECORD	
HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft
12.25	0	1818	0 - 2	0	1818
8.675	1818	7456	2 - 10	1818	6823
			10 - 88	6823	7456
CASING RECORD					
CASING SIZE in	FROM ft	TO ft			
9.625	0	1818			
7	0	7441			
DRILLING CO. : H&P			LMD UNIT NO. : C-50/C-46 DISTRICT : Casper		
RIG : 311			SPUD DATE : 02/09/2013		
			LMD START DATE : 02/21/2013		
			LMD END DATE : 02/24/2013		
			DEPTH : 6782 ft		
			DEPTH : 7456 ft		
			TOTAL DEPTH : 7456 ft		

Run Data						
RUN NUMBER	1	2	3			
START DATE	02/19/2013	02/21/2013	02/22/2013			
START TIME	1625	0000	0230			
END DATE	02/21/2013	02/22/2013	02/24/2013			
END TIME	0000	0230	1530			
DEPTH IN (ft)	1818	6823	7108			
DEPTH OUT (ft)	6823	7108	7456			
LOG TOP (ft)	-	6782	7066			
LOG BOTTOM (ft)	-	7066	7412			
HOLE SIZE (in)	8.75	8.75	8.75			
MUD DATA @ (ft)	4410	7108	7132			
MUD TYPE	FRESH-WATER	FRESH-WATER	FRESH-WATER			
DENSITY (lb / gal)	8.5	9.75	9.70			
VISCOSITY (s / qt)	29	38	42			
pH	8.0	9	9			
FLUID LOSS (cm3 / 30)	44	5.2	5.6			
SALINITY (ppm)	1200	1600	1600			
Rm (ohmm @ deg F)	-	-	-			
Rmf (ohmm @ deg F)	-	-	-			
MAX TEMP (deg F)	147	150	165			
Rm @ MAX TEMP (ohmm)	-	-	-			
LWD ENGINEER #1	J. SMITH	J. SMITH	J. SMITH			
LWD ENGINEER #2	J. DENNING	J. DENNING	J. DENNING			
LWD ENGINEER #3	-	-	-			

Remarks
ANADARKO PETROLEUM CORP PRODUCTION AFE# 2069365
SCIENTIFIC DRILLING INTERNATIONAL JOB# 41HMP1302090
SCIENTIFIC DRILLING INTERNATIONAL WO# 161650
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.0 FT. APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.0 FT. APPLIED TO ROP CURVE
RUN #1: MWD/DIRECTIONAL RUN
SENSORS S/N: PULSER = 128-305MH / CONT = 185 / MWD EYE = 0692
BIT TO SENSOR OFFSET: SURVEY = 45.90 FT.
RUN #2: MWD/GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-089MH / CONT = 119 / MWD EYE = 250 / GAMMA RAY = 114
BIT TO SENSOR OFFSETS: SURVEY = 45.90 FT. / GAMMA RAY = 41.90 FT.
RUN #3: MWD/GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-089MH / CONT = 119 / MWD EYE = 250 / GAMMA RAY = 114
BIT TO SENSOR OFFSETS: SURVEY = 53.25 FT. / GAMMA RAY = 44.00 FT.

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 interpretations, 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 as set out in our current price schedule.

ANADARKO PETROLEIUM CORP SPARBOE 26C-26HZ WATTENBERG FIELD WELD COUNTY, COLORADO 05-123-36248				
Gamma Ray (GR) <div>0Unit = aapi200</div>		TRUE VERTICAL DEPTH 1:240 (ft) 		

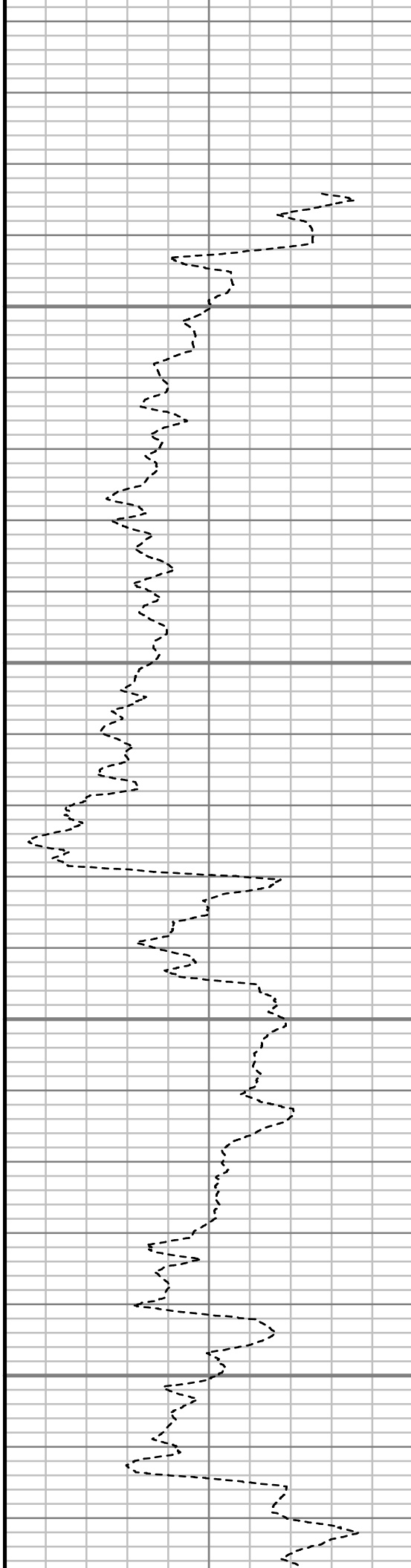


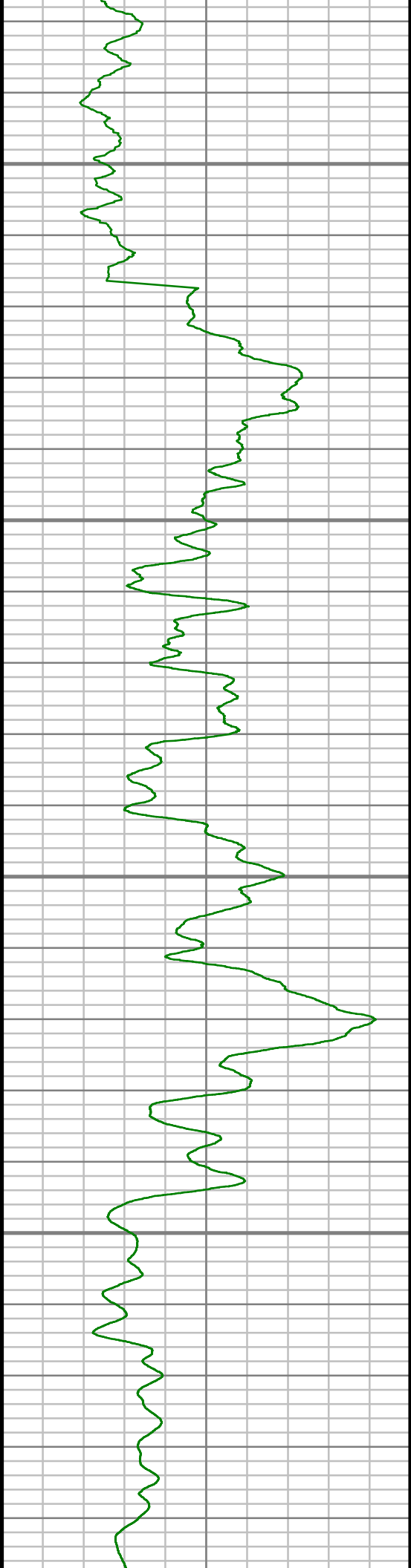
6800

6850

6900

6950



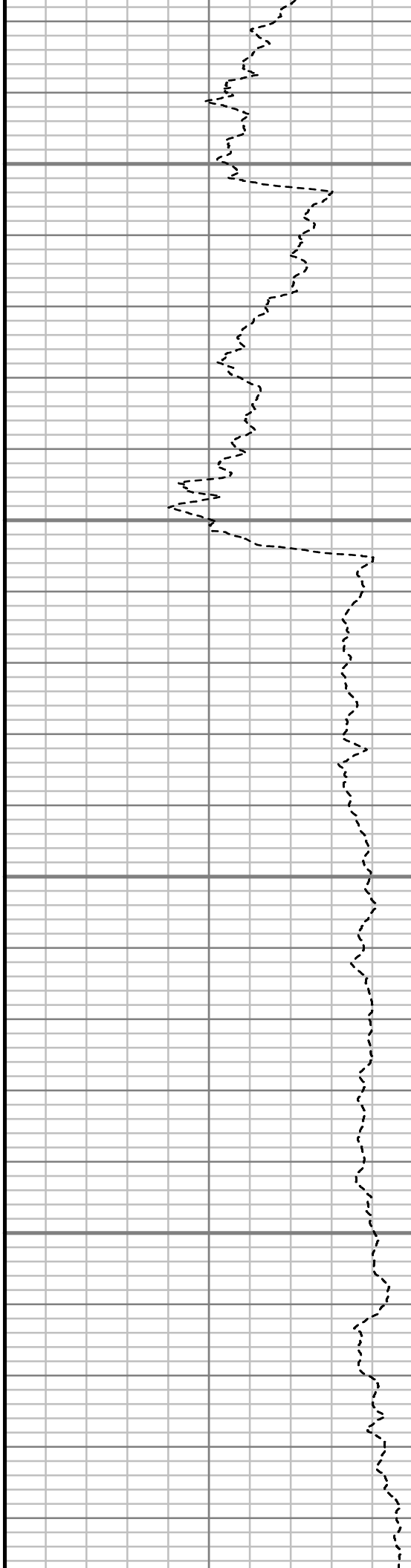


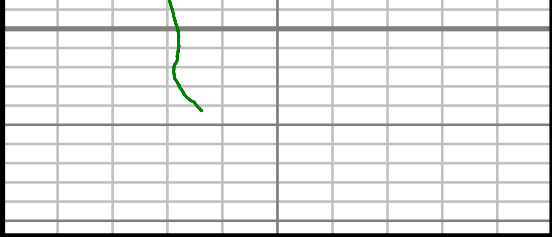
7000

7050

7100

7150



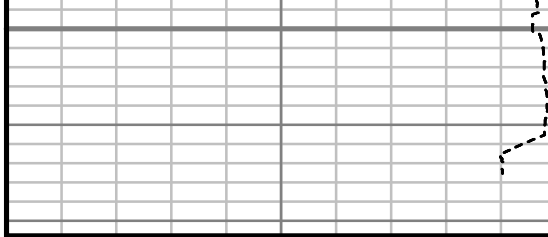


Gamma Ray (GR)

0 Unit = aapi 200

7200

TRUE VERTICAL DEPTH
1:240 (ft)



Rate of Penetration (ROP)

200 Unit = ft/hr 0

Comments



Scientific Drilling

5" = 100'

FEET TVD