

5" = 100'

FEET MD

COMPANY : ANADARKO PETROLEUM CORP
 WELL : SPARBOE 26C-26HZ
 FIELD : WATTENBURG
 COUNTY : WELD
 STATE : COLORADO
 COUNTRY : U.S.A.
 UWI : 05-123-36248

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WELL LOCATION
 LAT:40°5'18.995"N LONG:104°37'28.367"W
 N:1276334.40 Ft E:3244938.93 Ft
 SEC:35 TWP:2N RANGE:65W

OTHER SERVICES

DIRECTIONAL
 ROP

DEPTH REF. : RKB
 REF. HEIGHT : 25,000 Ft
 GROUND LEVEL : 4946.000 Ft
 RKB to Ground Level
 G.L. to Mean Sea Level

BOREHOLE RECORD

DEVIATION RECORD

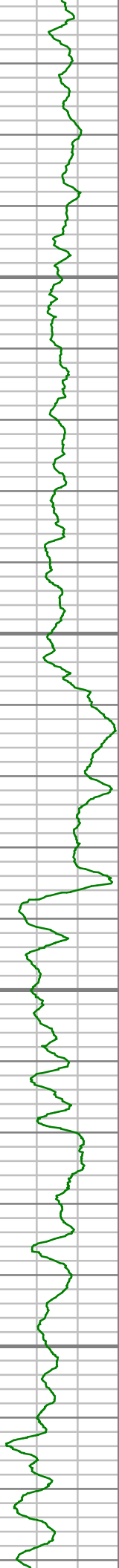
HOLE SIZE in	FROM Ft	TO Ft	INCLINATION deg	FROM Ft	TO Ft
12.25	0	1818	0 - 2	0	1818
8.675	1818	7456	2 - 10	1818	6823
			10 - 88	6823	7456
CASING RECORD					
CASING SIZE in	FROM Ft	TO Ft			
9.625	0	1818			
7	0	7441			

DRILLING CO. : H&P
 RIG : 311

LWD UNIT NO. : C-50/C-46 DISTRICT : Casper
 SPUD DATE : 02/09/2013
 LWD START DATE : 02/21/2013
 LWD 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	-	-	-		

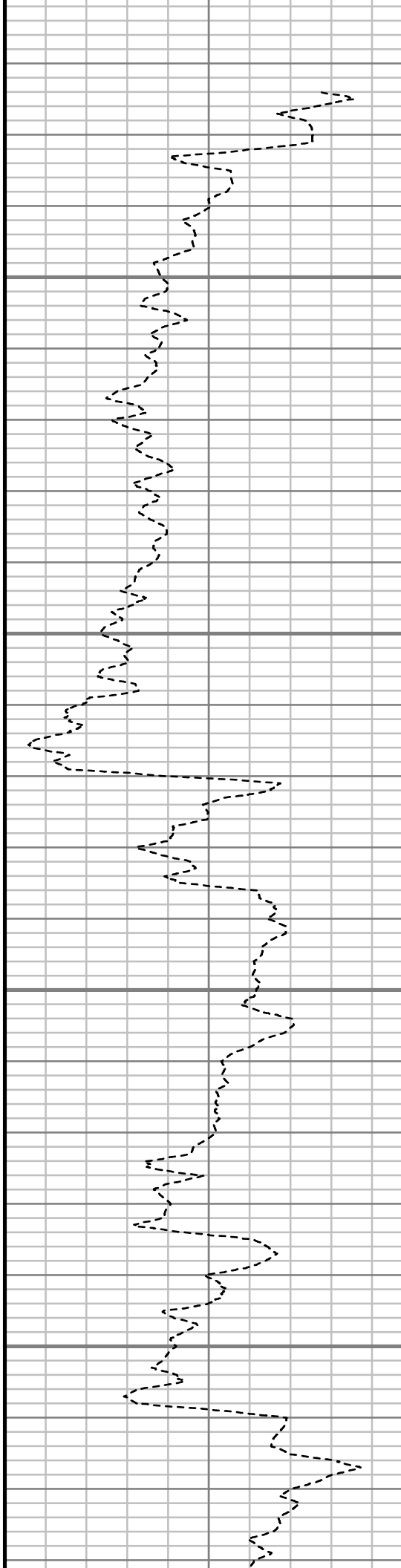


6850

6900

6950

7000



S: 47 MD: 6866.00 ft Inc: 4.91
deg Az: 330.91 deg TVD:
6826.02 ft

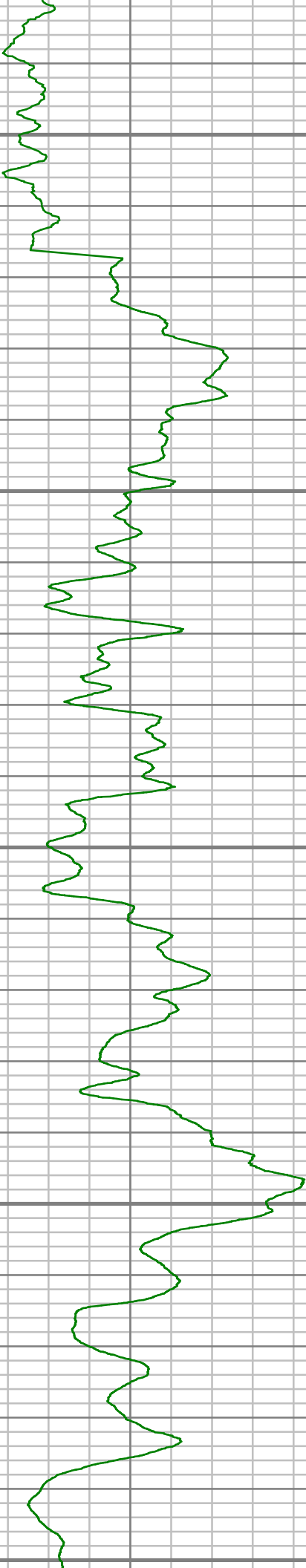
S: 48 MD: 6897.00 ft Inc: 8.74
deg Az: 347.90 deg TVD:
6856.80 ft

S: 49 MD: 6929.00 ft Inc: 12.49
deg Az: 355.98 deg TVD:
6888.25 ft

S: 50 MD: 6960.00 ft Inc: 16.40
deg Az: 358.76 deg TVD:
6918.26 ft

S: 51 MD: 6992.00 ft Inc: 19.80
deg Az: 359.26 deg TVD:
6948.67 ft

S: 52 MD: 7024.00 ft Inc: 23.43
deg Az: 359.28 deg TVD:
6978.42 ft



7050

7100

7150

7200

7250

S: 53 MD: 7055.00 ft Inc: 26.87
deg Az: 359.32 deg TVD:
7006.48 ft

S: 54 MD: 7087.00 ft Inc: 30.10
deg Az: 359.35 deg TVD:
7034.60 ft

S: 55 MD: 7118.00 ft Inc: 34.64
deg Az: 358.28 deg TVD:
7060.78 ft

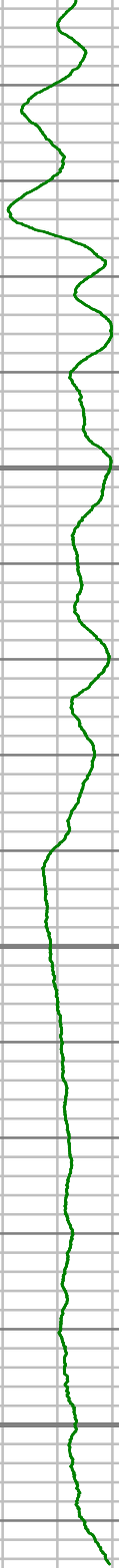
S: 56 MD: 7150.00 ft Inc: 39.77
deg Az: 357.39 deg TVD:
7086.25 ft

S: 57 MD: 7181.00 ft Inc: 45.50
deg Az: 356.09 deg TVD:
7109.05 ft

S: 58 MD: 7213.00 ft Inc: 51.12
deg Az: 355.80 deg TVD:
7130.33 ft

S: 59 MD: 7244.00 ft Inc: 56.40
deg Az: 356.97 deg TVD:
7148.65 ft





7300

7350

7400

7450

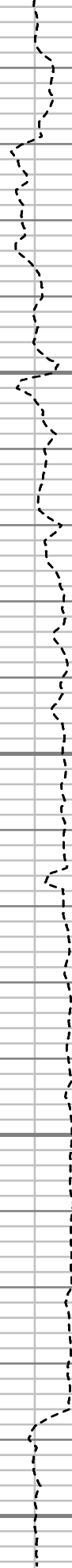
S: 60 MD: 7276.00 ft Inc: 60.74
deg Az: 359.95 deg TVD:
7165.33 ft

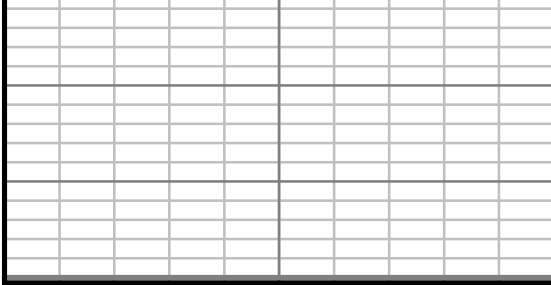
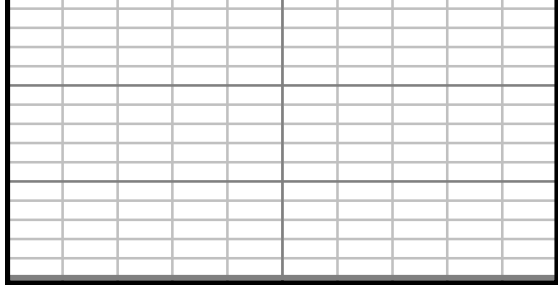
S: 61 MD: 7307.00 ft Inc: 65.61
deg Az: 1.68 deg TVD: 7179.32
ft

S: 62 MD: 7339.00 ft Inc: 70.41
deg Az: 1.87 deg TVD: 7191.30
ft

S: 63 MD: 7370.00 ft Inc: 75.96
deg Az: 0.80 deg TVD: 7200.26
ft

S: 64 MD: 7401.00 ft Inc: 81.06
deg Az: 0.89 deg TVD: 7206.43
ft





7500
MEASURED DEPTH
1,240 (ft)

Gamma Ray (GR)		
0	Unit = aapi	200

Rate of Penetration (ROP)		
200	Unit = ft/hr	0

Comments



5" = 100'

FEET MD



MWD Survey Report
for
ANADARKO PETROLEUM CORP
P.O. BOX 4995
THE WOODLANDS, TX 77387

Well Location	SPARBOE 37-365HZ
Well Name	SPARBOE 26C-26HZ
Rig Name	H&P 311
Survey Date	2/19/2013
Latitude	40°5'18.995"N
B Total	52839 NT
Dip	66.67 deg
Magnetic Declination	8.41 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (25.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 359.96Azim (deg)
Definitive Survey	SPARBOE 26C-26HZ
Operator(s)	J. DENNING, J. SMITH

Well Notes

SURVEYS FROM 0 FT. - 1765 FT. WERE ACQUIRED BY MULTISHOT ENERGY SERVICES.

SURVEYS FROM 1765 FT. - 7401 FT. WERE ACQUIRED BY SCIENTIFIC DRILLING INTERNATIONAL MWD.



Well Name: SPARBOE 26C-26HZ
 Survey: SPARBOE 26C-26HZ
 Survey Date: 2/19/2013

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft	Course Length ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	Invalid
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	25.00
125.00	0.41	236.75	125.00	-0.20	-0.20	-0.30	0.41	100.00
225.00	0.61	200.74	225.00	-0.89	-0.89	-0.79	0.37	100.00
325.00	0.65	224.93	324.99	-1.79	-1.79	-1.38	0.27	100.00
425.00	0.59	261.17	424.98	-2.27	-2.27	-2.29	0.39	100.00
525.00	0.80	288.47	524.98	-2.13	-2.13	-3.46	0.39	100.00
625.00	1.08	281.05	624.96	-1.72	-1.73	-5.04	0.30	100.00
725.00	0.89	272.65	724.95	-1.50	-1.51	-6.74	0.24	100.00
825.00	0.84	295.21	824.94	-1.16	-1.16	-8.18	0.34	100.00
925.00	0.73	306.30	924.93	-0.47	-0.47	-9.36	0.19	100.00
1025.00	0.85	312.65	1024.92	0.41	0.41	-10.42	0.15	100.00
1125.00	0.78	342.15	1124.91	1.57	1.56	-11.17	0.42	100.00
1225.00	1.09	15.75	1224.90	3.13	3.12	-11.12	0.62	100.00
1325.00	1.23	15.59	1324.88	5.08	5.07	-10.58	0.14	100.00
1425.00	1.21	30.90	1424.85	7.02	7.01	-9.75	0.33	100.00
1525.00	1.45	53.45	1524.83	8.68	8.67	-8.19	0.57	100.00
1625.00	1.34	59.61	1624.80	10.02	10.01	-6.16	0.19	100.00
1725.00	1.49	81.59	1724.77	10.80	10.80	-3.87	0.56	100.00
1765.00	1.73	93.71	1764.75	10.84	10.83	-2.75	1.04	40.00
1886.00	1.14	115.48	1885.71	10.20	10.20	0.16	0.65	121.00
2070.00	2.92	76.69	2069.60	10.48	10.49	6.39	1.17	184.00
2254.00	5.28	100.20	2253.13	10.05	10.07	19.29	1.55	184.00
2438.00	6.14	73.54	2436.24	11.33	11.36	37.07	1.50	184.00
2622.00	7.42	82.79	2618.96	15.60	15.64	58.30	0.91	184.00
2806.00	10.33	105.68	2800.79	12.61	12.67	85.97	2.46	184.00
2995.00	10.70	106.36	2986.62	3.06	3.15	119.12	0.21	189.00
3184.00	10.63	98.65	3172.36	-4.53	-4.42	153.19	0.76	189.00
3373.00	10.35	94.85	3358.20	-8.61	-8.48	187.34	0.39	189.00
3562.00	9.90	94.66	3544.26	-11.38	-11.23	220.45	0.24	189.00
3751.00	10.87	110.33	3730.20	-18.92	-18.74	253.36	1.58	189.00
3940.00	9.81	109.08	3916.13	-30.40	-30.20	285.29	0.57	189.00
4129.00	10.26	109.04	4102.23	-41.18	-40.96	316.43	0.24	189.00
4318.00	11.82	102.79	4287.74	-50.98	-50.74	351.22	1.04	189.00
4507.00	12.88	93.77	4472.38	-56.68	-56.41	391.12	1.16	189.00
4696.00	9.01	80.52	4657.94	-55.66	-55.36	426.76	2.43	189.00
4885.00	4.18	79.86	4845.63	-52.02	-51.71	448.15	2.55	189.00

Well Name: SPARBOE 26C-26HZ
Survey: SPARBOE 26C-26HZ
Survey Date: 2/19/2013

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft	Course Length ft
5074.00	0.60	130.82	5034.44	-51.46	-51.15	455.69	2.03	189.00
5263.00	0.83	146.15	5223.43	-53.25	-52.93	457.20	0.16	189.00
5453.00	0.95	194.64	5413.41	-55.92	-55.60	457.57	0.39	190.00
5642.00	0.26	185.18	5602.40	-57.87	-57.55	457.13	0.37	189.00
5831.00	1.25	133.60	5791.38	-59.72	-59.40	458.58	0.58	189.00
6020.00	0.74	174.39	5980.35	-62.36	-62.04	460.19	0.44	189.00
6209.00	1.24	210.98	6169.32	-65.33	-65.01	459.26	0.41	189.00
6398.00	1.19	280.48	6358.29	-66.73	-66.41	456.28	0.73	189.00
6587.00	1.49	215.80	6547.25	-68.36	-68.05	452.90	0.77	189.00
6776.00	2.52	209.39	6736.13	-73.98	-73.67	449.42	0.56	189.00
6866.00	4.91	330.91	6826.02	-72.34	-72.03	446.58	7.32	90.00
6897.00	8.74	347.90	6856.80	-68.88	-68.57	445.44	13.84	31.00
6929.00	12.49	355.98	6888.25	-63.05	-62.74	444.68	12.59	32.00
6960.00	16.40	358.76	6918.26	-55.32	-55.01	444.35	12.80	31.00
6992.00	19.80	359.26	6948.67	-45.39	-45.08	444.19	10.62	32.00
7024.00	23.43	359.28	6978.42	-33.60	-33.29	444.04	11.36	32.00
7055.00	26.87	359.32	7006.48	-20.43	-20.12	443.88	11.09	31.00
7087.00	30.10	359.35	7034.60	-5.17	-4.86	443.70	10.10	32.00
7118.00	34.64	358.28	7060.78	11.41	11.72	443.35	14.76	31.00
7150.00	39.77	357.39	7086.25	30.74	31.05	442.61	16.13	32.00
7181.00	45.50	356.09	7109.05	51.70	52.00	441.40	18.69	31.00
7213.00	51.12	355.80	7130.33	75.52	75.83	439.71	17.57	32.00
7244.00	56.40	356.97	7148.65	100.47	100.77	438.15	17.30	31.00
7276.00	60.74	359.95	7165.33	127.75	128.06	437.43	15.72	32.00
7307.00	65.61	1.68	7179.32	155.40	155.71	437.83	16.47	31.00
7339.00	70.41	1.87	7191.30	185.05	185.36	438.75	15.03	32.00
7370.00	75.96	0.80	7200.26	214.71	215.01	439.44	18.20	31.00
7401.00	81.06	0.89	7206.43	245.07	245.38	439.89	16.45	31.00