

## SCHLUMBERGER

Survey report

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Client.....: Beach Petroleum Ltd  
Field.....: Fermat

Well.....: Fermat-1  
Job number.....: 08ASQ0034  
Engineer.....: Joshua Seevaratnam

West Triton.....: West Triton  
State.....: Victoria

Spud date.....: 13-Dec-2008  
Last survey date.....: 14-Jan-09  
Total accepted surveys...: 104  
MD of first survey.....: 0.00 m  
MD of last survey.....: 3585.00 m

----- Survey calculation methods-----  
Method for positions.....: Minimum curvature  
Method for DLS.....: Mason & Taylor

----- Depth reference -----  
Permanent datum.....: Mean Sea Level  
Depth reference.....: Driller's Depth  
GL above permanent.....: -38.00 m  
KB above permanent.....: 42.85 m  
DF above permanent.....: 42.85 m

----- Vertical section origin-----  
Latitude (+N/S-).....: 0.00 m  
Departure (+E/W-).....: 0.00 m

----- Platform reference point-----  
Latitude (+N/S-).....: 0.00 m  
Departure (+E/W-).....: 0.00 m

Azimuth from Vsect Origin to target: 0.00 degrees

----- Geomagnetic data -----  
Magnetic model.....: BGGM version 2008  
Magnetic date.....: 15-Dec-2008  
Magnetic field strength...: 1214.44 HCNT  
Magnetic dec (+E/W-).....: 9.87 degrees  
Magnetic dip.....: -69.62 degrees

----- MWD survey Reference Criteria -----  
Reference G.....: 1000.02 mGal  
Reference H.....: 1214.44 HCNT  
Reference Dip.....: -69.62 degrees  
Tolerance of G.....: (+/-) 2.50 mGal  
Tolerance of H.....: (+/-) 6.00 HCNT  
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----  
Magnetic dec (+E/W-).....: 9.87 degrees  
Grid convergence (+E/W-)..: -0.03 degrees  
Total az corr (+E/W-).....: 9.90 degrees  
(Total az corr = magnetic dec - grid conv)  
Survey Correction Type ...:  
I=Sag Corrected Inclination  
M=Schlumberger Magnetic Correction  
S=Shell Magnetic Correction  
F=Failed Axis Correction  
R=Magnetic Resonance Tool Correction  
D=Dmag Magnetic Correction

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/10m)	Srvy tool type	Tool Corr (deg)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	None
2	167.75	1.24	1.78	167.75	167.74	1.81	1.81	0.06	1.82	1.78	0.07	PUP	None
3	197.16	0.28	58.77	29.41	197.14	2.17	2.17	0.13	2.17	3.37	0.38	PUP	None
4	256.53	0.60	153.30	59.37	256.51	1.97	1.97	0.39	2.01	11.25	0.11	PUP	None
5	286.11	2.77	188.85	29.58	286.08	1.12	1.12	0.35	1.18	17.37	0.78	PUP	None
6	315.55	1.66	227.88	29.44	315.50	0.13	0.13	-0.07	0.15	330.76	0.62	PUP	None
7	345.27	0.27	15.10	29.72	345.21	-0.09	-0.09	-0.38	0.39	256.86	0.64	PUP	None
8	374.62	0.25	25.51	29.35	374.56	0.04	0.04	-0.33	0.33	276.37	0.02	PUP	None
9	404.16	1.88	211.90	29.54	404.10	-0.32	-0.32	-0.56	0.64	240.47	0.72	PUP	None
10	463.95	0.32	269.03	59.79	463.88	-1.15	-1.15	-1.24	1.70	227.20	0.29	PUP	None
11	493.39	0.43	249.60	29.44	493.32	-1.19	-1.19	-1.43	1.86	230.18	0.06	PUP	None
12	523.07	0.44	347.74	29.68	523.00	-1.12	-1.12	-1.56	1.92	234.31	0.22	PUP	None
13	552.74	0.22	270.06	29.67	552.67	-1.01	-1.01	-1.64	1.92	238.42	0.15	PUP	None
14	582.42	0.09	59.69	29.68	582.35	-1.00	-1.00	-1.68	1.95	239.28	0.10	PUP	None
15	611.99	0.51	339.54	29.57	611.92	-0.86	-0.86	-1.70	1.91	243.17	0.17	PUP	None
16	641.40	0.19	327.69	29.41	641.32	-0.70	-0.70	-1.77	1.91	248.54	0.11	PUP	None
17	670.88	0.49	288.55	29.48	670.80	-0.62	-0.62	-1.92	2.02	252.21	0.12	PUP	None
18	700.49	0.33	247.43	29.61	700.41	-0.61	-0.61	-2.12	2.20	253.98	0.11	PUP	None
19	729.55	0.46	275.90	29.06	729.47	-0.63	-0.63	-2.31	2.40	254.79	0.08	PUP	None
20	759.18	0.36	241.87	29.63	759.10	-0.66	-0.66	-2.51	2.60	255.28	0.09	PUP	None
21	788.76	0.65	163.00	29.58	788.68	-0.86	-0.86	-2.54	2.69	251.24	0.23	PUP	None
22	818.32	0.12	122.27	29.56	818.24	-1.04	-1.04	-2.47	2.68	247.14	0.19	PUP	None
23	848.13	0.24	67.63	29.81	848.05	-1.03	-1.03	-2.39	2.60	246.57	0.07	PUP	None
24	877.69	0.50	112.18	29.56	877.61	-1.06	-1.06	-2.21	2.45	244.38	0.13	PUP	None
25	906.92	0.33	214.11	29.23	906.84	-1.18	-1.18	-2.14	2.44	241.17	0.22	PUP	None
26	936.44	1.52	212.18	29.52	936.35	-1.58	-1.58	-2.39	2.87	236.60	0.40	PUP	None
27	966.55	2.74	216.55	30.11	966.44	-2.49	-2.49	-3.04	3.93	230.58	0.41	PUP	None
28	990.90	2.28	226.38	24.35	990.77	-3.30	-3.30	-3.73	4.98	228.55	0.26	PUP	None
29	1023.76	2.63	224.84	32.86	1023.60	-4.28	-4.28	-4.74	6.39	227.89	0.11	PUP	None
30	1053.62	2.63	224.67	29.86	1053.43	-5.26	-5.26	-5.70	7.75	227.34	0.00	PUP	None

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/10m)	Srvy tool type	Tool Corr (deg)
31	1083.09	2.60	225.86	29.47	1082.87	-6.20	-6.20	-6.66	9.10	227.03	0.02	PUP	None
32	1112.27	2.75	224.69	29.18	1112.02	-7.16	-7.16	-7.62	10.46	226.80	0.05	PUP	None
33	1141.71	2.61	223.95	29.44	1141.42	-8.14	-8.14	-8.59	11.83	226.51	0.05	PUP	None
34	1171.39	2.66	223.44	29.68	1171.07	-9.13	-9.13	-9.53	13.20	226.22	0.02	PUP	None
35	1200.78	2.64	223.80	29.39	1200.43	-10.12	-10.12	-10.47	14.56	225.98	0.01	PUP	None
36	1230.79	2.72	225.15	30.01	1230.41	-11.12	-11.12	-11.45	15.96	225.85	0.03	PUP	None

37	1288.88	2.77	225.56	58.09	1288.43	-13.07	-13.07	-13.43	18.74	225.77	0.01	PUP	None
38	1318.86	2.69	226.89	29.98	1318.38	-14.06	-14.06	-14.46	20.17	225.81	0.03	PUP	None
39	1407.48	2.91	229.04	88.62	1406.89	-16.95	-16.95	-17.68	24.49	226.19	0.03	PUP	None
40	1436.37	2.94	228.54	28.89	1435.74	-17.93	-17.93	-18.79	25.97	226.34	0.01	PUP	None
41	1465.90	3.02	227.97	29.53	1465.23	-18.95	-18.95	-19.93	27.50	226.45	0.03	PUP	None
42	1495.44	3.02	228.27	29.54	1494.73	-19.99	-19.99	-21.09	29.06	226.54	0.01	PUP	None
43	1525.13	3.06	228.31	29.69	1524.38	-21.03	-21.03	-22.27	30.63	226.63	0.01	PUP	None
44	1554.71	3.12	227.55	29.58	1553.92	-22.10	-22.10	-23.45	32.22	226.69	0.02	PUP	None
45	1584.40	3.16	227.33	29.69	1583.56	-23.20	-23.20	-24.65	33.85	226.73	0.01	PUP	None
46	1614.18	3.15	227.26	29.78	1613.30	-24.31	-24.31	-25.85	35.49	226.75	0.00	PUP	None
47	1643.45	3.22	227.15	29.27	1642.52	-25.42	-25.42	-27.04	37.12	226.77	0.02	PUP	None
48	1732.53	3.23	229.06	89.08	1731.46	-28.77	-28.77	-30.77	42.12	226.93	0.01	PUP	None
49	1761.71	3.31	229.32	29.18	1760.59	-29.85	-29.85	-32.03	43.79	227.02	0.03	PUP	None
50	1791.33	3.27	229.40	29.62	1790.17	-30.96	-30.96	-33.32	45.49	227.11	0.01	PUP	None
51	1820.98	3.35	229.44	29.65	1819.77	-32.07	-32.07	-34.62	47.20	227.19	0.03	PUP	None
52	1880.19	3.46	227.97	59.21	1878.87	-34.40	-34.40	-37.27	50.71	227.29	0.02	PUP	None
53	1939.47	3.51	227.37	59.28	1938.04	-36.82	-36.82	-39.93	54.32	227.32	0.01	PUP	None
54	2028.16	3.39	229.51	88.69	2026.57	-40.36	-40.36	-43.92	59.65	227.42	0.02	PUP	None
55	2057.35	3.37	231.70	29.19	2055.71	-41.46	-41.46	-45.25	61.37	227.51	0.04	PUP	None
56	2086.92	3.34	227.82	29.57	2085.23	-42.57	-42.57	-46.57	63.10	227.57	0.08	PUP	None
57	2116.75	3.44	227.04	29.83	2115.01	-43.77	-43.77	-47.87	64.86	227.56	0.04	PUP	None
58	2146.40	3.29	227.47	29.65	2144.61	-44.95	-44.95	-49.15	66.60	227.56	0.05	PUP	None
59	2175.52	3.42	228.06	29.12	2173.68	-46.09	-46.09	-50.41	68.31	227.56	0.05	PUP	None
60	2235.00	3.46	227.38	59.48	2233.05	-48.49	-48.49	-53.05	71.87	227.57	0.01	PUP	None

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61	2264.44	3.46	226.56	29.44	2262.44	-49.71	-49.71	-54.35	73.65	227.56	0.02	PUP	None
62	2323.60	3.26	226.76	59.16	2321.49	-52.09	-52.09	-56.87	77.12	227.51	0.03	PUP	None
63	2382.70	3.36	228.47	59.10	2380.49	-54.39	-54.39	-59.39	80.53	227.52	0.02	PUP	None
64	2412.00	2.64	231.24	29.30	2409.75	-55.38	-55.38	-60.56	82.06	227.56	0.25	DMAG	None
65	2441.90	1.53	213.40	29.90	2439.63	-56.14	-56.14	-61.32	83.14	227.52	0.43	DMAG	None
66	2471.60	0.60	128.24	29.70	2469.33	-56.57	-56.57	-61.41	83.50	227.35	0.54	DMAG	None
67	2500.84	1.41	69.21	29.24	2498.57	-56.54	-56.54	-60.96	83.14	227.15	0.42	DMAG	None
68	2530.68	2.34	71.20	29.84	2528.39	-56.21	-56.21	-60.04	82.24	226.89	0.31	DMAG	None
69	2559.85	2.34	72.69	29.17	2557.54	-55.84	-55.84	-58.90	81.17	226.53	0.02	DMAG	None
70	2589.92	2.25	73.44	30.07	2587.58	-55.49	-55.49	-57.75	80.09	226.15	0.03	DMAG	None
71	2648.85	2.04	82.16	58.93	2646.47	-55.02	-55.02	-55.60	78.22	225.30	0.07	DMAG	None
72	2678.97	2.05	86.30	30.12	2676.57	-54.91	-54.91	-54.54	77.39	224.81	0.05	DMAG	None
73	2708.38	2.63	86.65	29.41	2705.96	-54.84	-54.84	-53.34	76.50	224.21	0.20	DMAG	None
74	2737.95	2.75	86.68	29.57	2735.49	-54.75	-54.75	-51.95	75.48	223.50	0.04	DMAG	None
75	2767.46	3.28	73.47	29.51	2764.96	-54.47	-54.47	-50.44	74.24	222.80	0.29	DMAG	None
76	2783.95	3.22	72.34	16.49	2781.43	-54.20	-54.20	-49.54	73.43	222.43	0.05	DMAG	None
77	2816.25	3.18	78.94	32.30	2813.68	-53.75	-53.75	-47.80	71.93	221.65	0.11	PUP	None
78	2845.87	3.21	82.42	29.62	2843.25	-53.48	-53.48	-46.17	70.66	220.80	0.07	PUP	None
79	2875.23	3.12	85.48	29.36	2872.57	-53.31	-53.31	-44.56	69.48	219.89	0.07	PUP	None
80	2904.72	3.04	88.56	29.49	2902.01	-53.23	-53.23	-42.98	68.41	218.92	0.06	PUP	None
81	2934.24	2.89	94.43	29.52	2931.49	-53.27	-53.27	-41.45	67.50	217.89	0.11	PUP	None
82	2963.69	2.77	103.77	29.45	2960.91	-53.49	-53.49	-40.02	66.81	216.80	0.16	PUP	None
83	2992.79	2.65	116.56	29.10	2989.98	-53.96	-53.96	-38.74	66.43	215.67	0.21	PUP	None
84	3022.28	2.80	118.01	29.49	3019.43	-54.61	-54.61	-37.49	66.24	214.47	0.06	PUP	None
85	3051.99	2.87	121.90	29.71	3049.11	-55.34	-55.34	-36.22	66.14	213.20	0.07	PUP	None
86	3081.57	2.92	130.18	29.58	3078.65	-56.22	-56.22	-35.01	66.23	211.92	0.14	PUP	None
87	3111.25	3.10	139.57	29.68	3108.29	-57.32	-57.32	-33.92	66.60	210.62	0.18	PUP	None
88	3140.79	3.39	147.97	29.54	3137.78	-58.66	-58.66	-32.94	67.28	209.31	0.19	PUP	None
89	3170.28	3.47	152.03	29.49	3167.22	-60.19	-60.19	-32.05	68.19	208.04	0.09	PUP	None
90	3199.75	3.55	146.04	29.47	3196.63	-61.74	-61.74	-31.13	69.14	206.76	0.13	PUP	None

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91	3229.40	3.69	145.49	29.65	3226.22	-63.28	-63.28	-30.07	70.07	205.42	0.05	PUP	None
92	3259.28	3.79	146.43	29.88	3256.04	-64.90	-64.90	-28.98	71.08	204.06	0.04	PUP	None
93	3288.90	3.91	148.34	29.62	3285.59	-66.57	-66.57	-27.91	72.19	202.75	0.06	PUP	None
94	3318.10	4.02	150.54	29.20	3314.72	-68.31	-68.31	-26.89	73.41	201.48	0.06	PUP	None
95	3347.40	4.21	152.14	29.30	3343.95	-70.16	-70.16	-25.88	74.78	200.25	0.08	PUP	None
96	3376.97	4.39	156.43	29.57	3373.43	-72.15	-72.15	-24.92	76.34	199.05	0.12	PUP	None
97	3406.76	4.66	160.95	29.79	3403.13	-74.34	-74.34	-24.07	78.14	197.94	0.15	PUP	None
98	3436.14	5.16	162.03	29.38	3432.40	-76.73	-76.73	-23.27	80.18	196.87	0.17	PUP	None
99	3465.57	5.58	159.59	29.43	3461.70	-79.33	-79.33	-22.36	82.42	195.74	0.16	PUP	None
100	3495.57	6.02	157.91	30.00	3491.55	-82.15	-82.15	-21.26	84.86	194.51	0.16	PUP	None
101	3525.24	6.42	158.39	29.67	3521.05	-85.14	-85.14	-20.07	87.47	193.26	0.14	PUP	None
102	3555.17	6.99	159.59	29.93	3550.77	-88.40	-88.40	-18.81	90.38	192.02	0.20	PUP	None
103	3569.38	7.28	160.29	14.21	3564.87	-90.06	-90.06	-18.21	91.88	191.43	0.21	PUP	None
104	3585.00	7.28	160.29	15.62	3580.37	-91.92	-91.92	-17.54	93.58	190.80	0.00	Projection to TD	

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