

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 444-8	Wellbore No.	
Well Name	KP 444-8	Common Name	KP 444-8
Project	KP 16-06S-091W	Site	KP 11-16 Pad
Vertical Section Azimuth	305.30 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	10/1/2012	UWI	KP 444-8
Active Datum	KB @6,658.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	10/1/2012	Ended	
Tool Name	MWD	Engineer	

2.1.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
0.0	0.00	0.00	0.00	0.00	0.00

2.1.2 Survey Stations

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
10/1/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/1/2012	NORMAL	106.0	0.44	333.90	106.00	0.37	-0.18	0.36	0.42	0.42	0.00	333.90
	NORMAL	137.0	0.88	325.55	137.00	0.67	-0.37	0.69	1.45	1.42	-26.94	343.47
	NORMAL	168.0	1.50	304.37	167.99	1.09	-0.84	1.31	2.42	2.00	-68.32	313.75
	NORMAL	198.0	2.46	307.00	197.97	1.70	-1.67	2.35	3.21	3.20	8.77	6.72
	NORMAL	229.0	3.61	311.75	228.93	2.75	-2.93	3.99	3.79	3.71	15.32	14.71
	NORMAL	259.0	4.66	313.24	258.85	4.22	-4.53	6.13	3.52	3.50	4.97	6.59
	NORMAL	289.0	6.16	302.78	288.72	5.92	-6.77	8.95	5.96	5.00	-34.87	321.40
	NORMAL	320.0	6.33	312.19	319.53	7.97	-9.43	12.30	3.34	0.55	30.35	85.27
10/2/2012	NORMAL	350.0	6.42	312.98	349.35	10.23	-11.88	15.61	0.42	0.30	2.63	44.66
	NORMAL	378.0	7.04	307.53	377.15	12.34	-14.39	18.87	3.18	2.21	-19.46	311.42
	NORMAL	408.0	8.53	301.64	406.88	14.63	-17.74	22.93	5.63	4.97	-19.63	328.89
	NORMAL	439.0	9.33	304.01	437.50	17.24	-21.78	27.74	2.84	2.58	7.65	25.87
	NORMAL	469.0	10.91	303.84	467.03	20.18	-26.16	33.01	5.27	5.27	-0.57	358.83
	NORMAL	500.0	12.05	302.43	497.41	23.55	-31.33	39.17	3.79	3.68	-4.55	345.48
	NORMAL	530.0	13.64	301.99	526.66	27.10	-36.97	45.83	5.31	5.30	-1.47	356.26
	NORMAL	560.0	15.40	300.94	555.70	31.02	-43.39	53.34	5.93	5.87	-3.50	350.98
	NORMAL	590.0	16.89	301.11	584.52	35.32	-50.53	61.65	4.97	4.97	0.57	1.90
	NORMAL	620.0	18.39	303.05	613.11	40.16	-58.23	70.73	5.37	5.00	6.47	22.33
	NORMAL	651.0	19.97	304.01	642.39	45.78	-66.72	80.91	5.20	5.10	3.10	11.74
	NORMAL	682.0	20.85	302.26	671.44	51.69	-75.77	91.71	3.45	2.84	-5.65	324.44

2.1.2 Survey Stations (Continued)

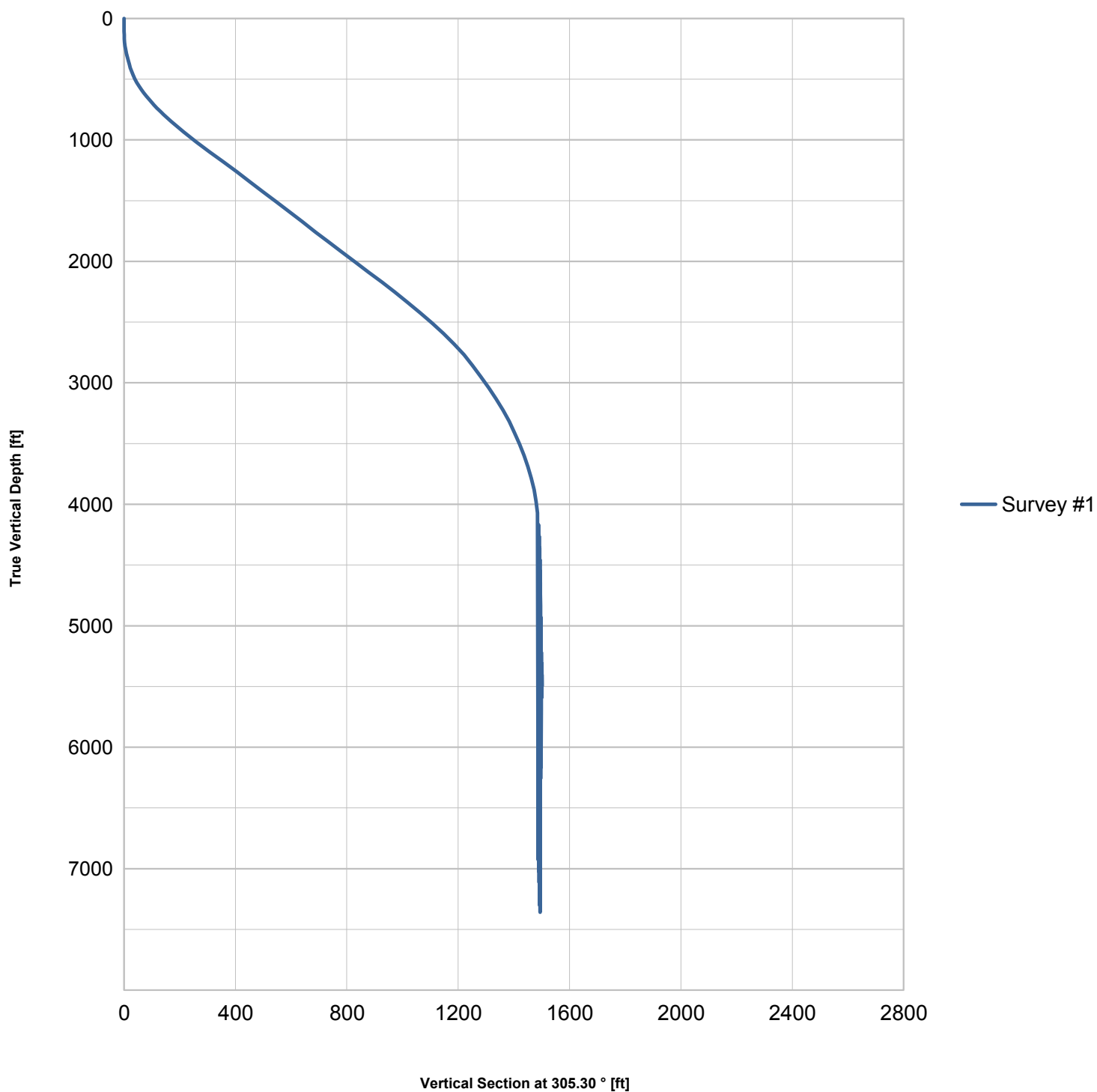
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
10/2/2012	NORMAL	712.0	21.82	303.49	699.38	57.62	-84.94	102.62	3.56	3.23	4.10	25.34
	NORMAL	723.0	22.16	303.12	709.58	59.88	-88.38	106.73	3.34	3.09	-3.36	337.66
	NORMAL	753.0	22.99	304.61	737.28	66.30	-97.94	118.24	3.36	2.77	4.97	35.26
	NORMAL	784.0	23.72	305.55	765.74	73.36	-108.00	130.53	2.64	2.35	3.03	27.48
	NORMAL	814.0	24.75	305.91	793.10	80.55	-117.99	142.85	3.47	3.43	1.20	8.33
	NORMAL	875.0	26.32	304.89	848.14	95.78	-139.43	169.14	2.67	2.57	-1.67	343.89
	NORMAL	971.0	28.31	305.23	933.43	121.09	-175.48	213.19	2.08	2.07	0.35	4.63
	NORMAL	1,067.0	29.83	305.41	1,017.34	148.05	-213.54	259.83	1.59	1.58	0.19	3.37
	NORMAL	1,162.0	30.59	305.02	1,099.43	175.62	-252.59	307.63	0.83	0.80	-0.41	345.35
	NORMAL	1,257.0	31.26	304.33	1,180.93	203.39	-292.75	356.45	0.80	0.71	-0.73	331.81
10/3/2012	NORMAL	1,353.0	29.71	304.72	1,263.65	230.99	-332.87	405.15	1.63	-1.61	0.41	172.89
	NORMAL	1,445.0	30.07	303.18	1,343.42	256.59	-370.90	450.98	0.92	0.39	-1.67	294.46
	NORMAL	1,540.0	30.16	301.61	1,425.60	282.12	-411.15	498.58	0.83	0.09	-1.65	275.84
	NORMAL	1,636.0	30.07	304.95	1,508.64	308.54	-451.40	546.70	1.75	-0.09	3.48	94.52
	NORMAL	1,731.0	29.55	304.78	1,591.07	335.54	-490.15	593.92	0.55	-0.55	-0.18	189.16
	NORMAL	1,827.0	29.37	307.76	1,674.66	363.46	-528.21	641.12	1.54	-0.19	3.10	98.30
	NORMAL	1,922.0	29.02	308.29	1,757.60	392.00	-564.71	687.40	0.46	-0.37	0.56	143.78
	NORMAL	2,018.0	30.34	305.13	1,841.01	420.39	-602.82	734.91	2.13	1.38	-3.29	308.77
	NORMAL	2,113.0	29.90	303.90	1,923.18	447.40	-642.10	782.57	0.80	-0.46	-1.29	233.99
	NORMAL	2,209.0	29.72	304.07	2,006.48	474.08	-681.67	830.29	0.21	-0.19	0.18	154.92
10/4/2012	NORMAL	2,304.0	30.60	305.48	2,088.62	501.30	-720.87	878.01	1.19	0.93	1.48	39.45
	NORMAL	2,400.0	30.43	304.95	2,171.32	529.41	-760.69	926.75	0.33	-0.18	-0.55	237.49
	NORMAL	2,495.0	28.23	304.60	2,254.14	555.96	-798.91	973.28	2.32	-2.32	-0.37	184.30
	NORMAL	2,591.0	27.70	304.95	2,338.93	581.63	-835.89	1,018.30	0.58	-0.55	0.36	162.95
	NORMAL	2,687.0	27.79	305.30	2,423.89	607.35	-872.44	1,062.99	0.19	0.09	0.36	61.24
	NORMAL	2,782.0	26.64	305.48	2,508.37	632.51	-907.86	1,106.44	1.21	-1.21	0.19	175.99
	NORMAL	2,877.0	24.89	304.42	2,593.92	656.17	-941.70	1,147.73	1.90	-1.84	-1.12	194.27
	NORMAL	2,973.0	22.60	304.42	2,681.79	678.02	-973.58	1,186.38	2.39	-2.39	0.00	180.00
	NORMAL	3,068.0	20.30	304.50	2,770.21	697.67	-1,002.23	1,221.11	2.42	-2.42	0.08	179.31
	NORMAL	3,162.0	18.29	305.30	2,858.92	715.43	-1,027.70	1,252.17	2.16	-2.14	0.85	172.88
	NORMAL	3,258.0	17.23	303.02	2,950.35	731.89	-1,051.92	1,281.44	1.32	-1.10	-2.38	212.19
	NORMAL	3,353.0	17.15	303.55	3,041.10	747.30	-1,075.39	1,309.50	0.19	-0.08	0.56	117.31
	NORMAL	3,449.0	15.74	304.42	3,133.17	762.48	-1,097.93	1,336.67	1.49	-1.47	0.91	170.51
	NORMAL	3,544.0	13.89	302.49	3,225.01	775.89	-1,118.18	1,360.94	2.02	-1.95	-2.03	194.01
	NORMAL	3,640.0	12.93	306.36	3,318.39	788.45	-1,136.55	1,383.19	1.37	-1.00	4.03	138.80
	NORMAL	3,735.0	10.90	306.88	3,411.34	800.14	-1,152.29	1,402.80	2.14	-2.14	0.55	177.23
	NORMAL	3,830.0	10.25	306.00	3,504.73	810.50	-1,166.32	1,420.23	0.70	-0.68	-0.93	193.52
	NORMAL	3,925.0	9.59	311.63	3,598.31	820.72	-1,179.07	1,436.55	1.23	-0.69	5.93	126.99
	NORMAL	4,020.0	7.74	306.88	3,692.22	829.82	-1,190.10	1,450.81	2.09	-1.95	-5.00	198.81
	NORMAL	4,115.0	6.86	305.83	3,786.45	836.98	-1,199.82	1,462.88	0.94	-0.93	-1.11	188.10
	NORMAL	4,210.0	5.19	299.68	3,880.92	842.43	-1,208.15	1,472.83	1.88	-1.76	-6.47	198.09
	NORMAL	4,306.0	3.69	313.21	3,976.64	846.70	-1,214.18	1,480.21	1.90	-1.56	14.09	151.69
	NORMAL	4,401.0	2.46	311.10	4,071.50	850.13	-1,217.94	1,485.26	1.30	-1.29	-2.22	184.20
	NORMAL	4,497.0	2.20	254.85	4,167.43	851.00	-1,221.28	1,488.49	2.30	-0.27	-58.59	235.93
	NORMAL	4,592.0	2.11	261.71	4,262.36	850.27	-1,224.77	1,490.91	0.29	-0.09	7.22	112.64
	NORMAL	4,688.0	1.58	227.26	4,358.32	849.12	-1,227.49	1,492.47	1.25	-0.55	-35.89	227.92
	NORMAL	4,783.0	1.32	240.62	4,453.29	847.70	-1,229.40	1,493.21	0.45	-0.27	14.06	134.12
	NORMAL	4,878.0	1.14	267.69	4,548.26	847.12	-1,231.30	1,494.43	0.63	-0.19	28.49	120.44
	NORMAL	4,973.0	0.26	23.52	4,643.26	847.28	-1,232.16	1,495.22	1.34	-0.93	121.93	169.42
	NORMAL	5,068.0	0.62	13.15	4,738.26	847.98	-1,231.96	1,495.46	0.39	0.38	-10.92	342.31
	NORMAL	5,163.0	1.05	4.37	4,833.25	849.35	-1,231.77	1,496.10	0.47	0.45	-9.24	339.01
	NORMAL	5,259.0	0.18	313.92	4,929.24	850.33	-1,231.81	1,496.70	0.99	-0.91	-52.55	188.44
	NORMAL	5,354.0	0.44	341.16	5,024.24	850.78	-1,232.04	1,497.14	0.31	0.27	28.67	43.64
	NORMAL	5,450.0	0.70	338.70	5,120.23	851.67	-1,232.37	1,497.93	0.27	0.27	-2.56	353.39
	NORMAL	5,546.0	1.14	355.05	5,216.22	853.17	-1,232.67	1,499.04	0.53	0.46	17.03	39.17
	NORMAL	5,639.0	1.32	349.73	5,309.20	855.15	-1,232.94	1,500.40	0.23	0.19	-5.72	324.93
	NORMAL	5,734.0	0.35	262.94	5,404.19	856.19	-1,233.42	1,501.39	1.42	-1.02	-91.36	195.04

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
10/6/2012	NORMAL	5,829.0	0.97	168.72	5,499.19	855.36	-1,233.55	1,501.03	1.11	0.65	-99.18	246.46
	NORMAL	5,923.0	0.88	172.94	5,593.17	853.87	-1,233.31	1,499.96	0.12	-0.10	4.49	144.97
	NORMAL	6,018.0	0.62	154.48	5,688.16	852.68	-1,233.00	1,499.02	0.37	-0.27	-19.43	213.92
	NORMAL	6,114.0	0.70	137.97	5,784.16	851.77	-1,232.38	1,497.99	0.21	0.08	-17.20	284.42
	NORMAL	6,209.0	0.18	257.67	5,879.16	851.31	-1,232.14	1,497.53	0.85	-0.55	126.00	168.79
	NORMAL	6,305.0	0.18	340.11	5,975.16	851.42	-1,232.34	1,497.75	0.25	0.00	85.87	131.22
10/7/2012	NORMAL	6,399.0	0.70	359.97	6,069.15	852.13	-1,232.39	1,498.21	0.57	0.55	21.13	26.43
	NORMAL	6,494.0	0.97	81.71	6,164.15	852.83	-1,231.59	1,497.96	1.17	0.28	86.04	120.28
	NORMAL	6,589.0	1.67	156.06	6,259.13	851.68	-1,230.23	1,496.19	1.78	0.74	78.26	107.90
	NORMAL	6,685.0	1.67	160.99	6,355.08	849.08	-1,229.21	1,493.85	0.15	0.00	5.14	92.46
	NORMAL	6,780.0	1.32	155.36	6,450.05	846.78	-1,228.30	1,491.78	0.40	-0.37	-5.93	199.97
	NORMAL	6,876.0	0.79	129.52	6,546.04	845.35	-1,227.33	1,490.16	0.73	-0.55	-26.92	209.48
	NORMAL	6,970.0	0.70	97.00	6,640.03	844.87	-1,226.26	1,489.01	0.45	-0.10	-34.60	242.04
	NORMAL	7,066.0	0.97	66.77	6,736.02	845.12	-1,224.93	1,488.07	0.53	0.28	-31.49	285.79
	NORMAL	7,161.0	0.97	66.77	6,831.01	845.75	-1,223.45	1,487.23	0.00	0.00	0.00	0.00
10/8/2012	NORMAL	7,257.0	2.37	19.13	6,926.97	847.95	-1,222.06	1,487.36	1.94	1.46	-49.63	289.71
	NORMAL	7,352.0	2.99	5.77	7,021.86	852.27	-1,221.16	1,489.13	0.92	0.65	-14.06	307.98
	NORMAL	7,446.0	3.17	13.68	7,115.73	857.23	-1,220.30	1,491.29	0.49	0.19	8.41	71.03
	NORMAL	7,542.0	3.25	21.77	7,211.58	862.34	-1,218.67	1,492.91	0.48	0.08	8.43	84.04
	NORMAL	7,637.0	3.78	27.04	7,306.40	867.63	-1,216.24	1,493.99	0.65	0.56	5.55	34.02
	NORMAL	7,690.0	3.78	27.04	7,359.28	870.74	-1,214.66	1,494.49	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

