

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 11-17	Wellbore No.	
Well Name	KP 11-17	Common Name	KP 11-17
Project	KP 08-06S-91W	Site	KP 24-8 Pad
Vertical Section Azimuth	257.99 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	4/24/2012	UWI	KP 11-17
Active Datum	KB @6,552.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	4/24/2012	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 (°)
4/24/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/24/2012	NORMAL	75.0	0.79	314.38	75.00	0.36	-0.37	0.29	1.05	1.05	0.00	314.38
	NORMAL	105.0	1.41	274.83	104.99	0.54	-0.89	0.75	3.15	2.07	-131.83	288.32
	NORMAL	135.0	2.87	275.19	134.97	0.64	-2.00	1.82	4.87	4.87	1.20	0.71
	NORMAL	166.0	4.05	257.43	165.91	0.47	-3.84	3.66	5.10	3.81	-57.29	308.66
	NORMAL	196.0	5.01	256.99	195.82	-0.06	-6.15	6.03	3.20	3.20	-1.47	357.71
	NORMAL	226.0	5.54	260.42	225.69	-0.59	-8.86	8.79	2.05	1.77	11.43	32.47
	NORMAL	256.0	6.16	263.94	255.54	-1.00	-11.89	11.83	2.39	2.07	11.73	31.82
	NORMAL	287.0	7.39	263.58	286.32	-1.40	-15.52	15.47	3.97	3.97	-1.16	357.84
	NORMAL	318.0	2.64	317.01	317.20	-1.10	-17.99	17.83	19.97	-15.32	172.35	159.93
	NORMAL	348.0	10.38	262.79	347.01	-0.94	-21.15	20.88	30.30	25.80	-180.73	292.29
	NORMAL	418.0	12.98	259.12	415.55	-3.21	-35.13	35.03	3.86	3.71	-5.24	342.25
	NORMAL	510.0	15.81	260.71	504.65	-7.19	-57.65	57.88	3.11	3.08	1.73	8.72
	NORMAL	601.0	18.33	257.44	591.64	-12.30	-83.85	84.58	2.96	2.77	-3.59	337.58
	NORMAL	692.0	21.67	257.34	677.14	-19.10	-114.22	115.70	3.67	3.67	-0.11	359.37
	NORMAL	784.0	25.81	257.82	761.34	-27.05	-150.39	152.72	4.50	4.50	0.52	2.89
	NORMAL	874.0	27.29	256.76	841.84	-35.91	-189.63	192.95	1.73	1.64	-1.18	341.77
	NORMAL	965.0	28.61	255.14	922.23	-46.27	-230.99	235.57	1.67	1.45	-1.78	329.37
	NORMAL	1,060.0	30.13	254.61	1,005.02	-58.44	-275.97	282.09	1.62	1.60	-0.56	350.06
	NORMAL	1,154.0	29.07	258.81	1,086.76	-69.13	-321.12	328.48	2.48	-1.13	4.47	118.88
	NORMAL	1,249.0	27.21	261.62	1,170.53	-76.77	-365.26	373.24	2.40	-1.96	2.96	145.76

2.1.2 Survey Stations (Continued)

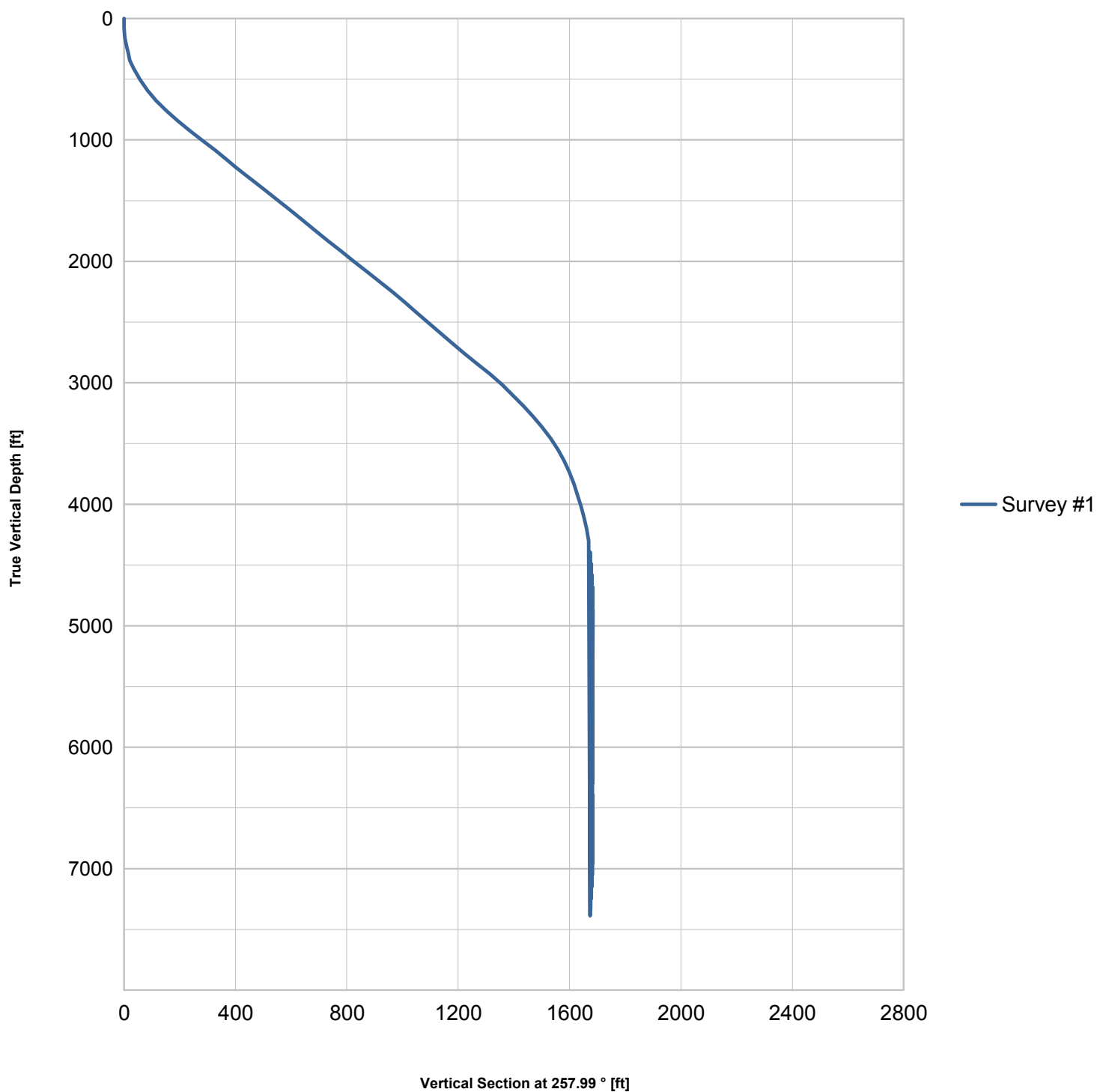
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
4/24/2012	NORMAL	1,308.0	27.86	261.14	1,222.84	-80.86	-392.22	400.47	1.16	1.10	-0.81	340.94
4/26/2012	NORMAL	1,308.0	27.86	261.54	1,222.84	-80.86	-392.22	400.47	0.00	0.00	0.00	0.00
	NORMAL	1,377.0	29.37	264.93	1,283.42	-84.73	-425.03	433.36	3.21	2.19	4.91	48.57
	NORMAL	1,431.0	29.55	260.19	1,330.44	-88.17	-451.34	459.81	4.33	0.33	-8.78	272.35
	NORMAL	1,527.0	29.11	257.90	1,414.14	-97.10	-497.51	506.82	1.26	-0.46	-2.39	247.59
	NORMAL	1,623.0	28.75	255.09	1,498.16	-107.94	-542.65	553.23	1.46	-0.38	-2.93	253.94
	NORMAL	1,718.0	28.40	254.74	1,581.59	-119.76	-586.52	598.61	0.41	-0.37	-0.37	205.41
	NORMAL	1,814.0	28.05	254.39	1,666.18	-131.84	-630.29	643.93	0.40	-0.36	-0.36	205.16
	NORMAL	1,910.0	28.14	256.14	1,750.87	-143.34	-674.01	689.08	0.86	0.09	1.82	84.54
	NORMAL	2,005.0	28.75	257.55	1,834.40	-153.63	-718.07	734.32	0.95	0.64	1.48	48.37
	NORMAL	2,101.0	28.93	257.55	1,918.49	-163.62	-763.29	780.62	0.19	0.19	0.00	0.00
	NORMAL	2,196.0	28.93	257.37	2,001.64	-173.59	-808.15	826.58	0.09	0.00	-0.19	269.92
	NORMAL	2,292.0	28.67	258.08	2,085.76	-183.43	-853.34	872.82	0.45	-0.27	0.74	127.55
	NORMAL	2,387.0	29.19	257.02	2,168.91	-193.34	-898.21	918.78	0.77	0.55	-1.12	314.94
	NORMAL	2,482.0	28.31	258.78	2,252.20	-202.92	-942.88	964.47	1.29	-0.93	1.85	136.88
	NORMAL	2,578.0	26.47	257.73	2,337.43	-211.90	-986.12	1,008.63	1.98	-1.92	-1.09	194.24
	NORMAL	2,674.0	26.73	257.20	2,423.27	-221.23	-1,028.08	1,051.61	0.37	0.27	-0.55	317.37
	NORMAL	2,769.0	26.73	256.85	2,508.12	-230.82	-1,069.72	1,094.33	0.17	0.00	-0.37	269.84
	NORMAL	2,864.0	27.00	255.97	2,592.87	-240.91	-1,111.44	1,137.24	0.51	0.28	-0.93	303.78
4/27/2012	NORMAL	2,959.0	27.26	259.84	2,677.42	-249.98	-1,153.78	1,180.54	1.88	0.27	4.07	83.34
	NORMAL	3,054.0	26.91	258.60	2,762.00	-258.07	-1,196.27	1,223.79	0.70	-0.37	-1.31	237.65
	NORMAL	3,149.0	29.90	257.90	2,845.56	-267.28	-1,240.51	1,268.97	3.17	3.15	-0.74	353.34
	NORMAL	3,244.0	27.87	258.43	2,928.73	-276.70	-1,285.42	1,314.86	2.15	-2.14	0.56	173.04
	NORMAL	3,340.0	24.97	258.96	3,014.70	-285.08	-1,327.30	1,357.57	3.03	-3.02	0.55	175.59
	NORMAL	3,435.0	22.86	256.32	3,101.54	-293.29	-1,364.91	1,396.06	2.49	-2.22	-2.78	205.69
	NORMAL	3,530.0	23.04	257.20	3,189.02	-301.77	-1,400.97	1,433.10	0.41	0.19	0.93	62.73
	NORMAL	3,626.0	21.46	256.32	3,277.87	-310.09	-1,436.36	1,469.44	1.68	-1.65	-0.92	191.50
	NORMAL	3,720.0	19.35	253.51	3,365.97	-318.57	-1,468.00	1,502.16	2.47	-2.24	-2.99	203.59
	NORMAL	3,816.0	17.15	256.50	3,457.14	-326.39	-1,497.02	1,532.17	2.49	-2.29	3.11	158.36
	NORMAL	3,911.0	14.60	255.62	3,548.50	-332.64	-1,522.24	1,558.13	2.70	-2.68	-0.93	184.97
	NORMAL	4,006.0	12.13	258.96	3,640.93	-337.52	-1,543.64	1,580.08	2.72	-2.60	3.52	164.26
	NORMAL	4,102.0	10.90	257.90	3,734.99	-341.36	-1,562.41	1,599.24	1.30	-1.28	-1.10	189.24
	NORMAL	4,197.0	8.35	265.11	3,828.65	-343.83	-1,578.07	1,615.07	2.96	-2.68	7.59	158.22
	NORMAL	4,292.0	8.09	265.81	3,922.67	-344.91	-1,591.61	1,628.54	0.29	-0.27	0.74	159.29
	NORMAL	4,387.0	7.21	258.43	4,016.83	-346.59	-1,604.12	1,641.12	1.39	-0.93	-7.77	224.53
4/28/2012	NORMAL	4,482.0	6.60	251.40	4,111.14	-349.53	-1,615.13	1,652.51	1.10	-0.64	-7.40	230.72
	NORMAL	4,577.0	4.57	238.57	4,205.69	-353.24	-1,623.54	1,661.50	2.50	-2.14	-13.51	205.32
	NORMAL	4,672.0	4.08	238.39	4,300.42	-356.99	-1,629.65	1,668.26	0.52	-0.52	-0.19	181.50
	NORMAL	4,765.0	3.25	244.54	4,393.23	-359.85	-1,634.84	1,673.94	0.99	-0.89	6.61	157.70
	NORMAL	4,861.0	2.46	237.69	4,489.11	-362.13	-1,639.04	1,678.52	0.89	-0.82	-7.14	199.96
	NORMAL	4,955.0	0.79	255.97	4,583.07	-363.36	-1,641.38	1,681.06	1.84	-1.78	19.45	171.75
	NORMAL	5,050.0	0.79	277.24	4,678.06	-363.44	-1,642.66	1,682.33	0.31	0.00	22.39	100.63
	NORMAL	5,146.0	0.62	297.98	4,774.05	-363.11	-1,643.78	1,683.35	0.32	-0.18	21.60	133.75
	NORMAL	5,239.0	0.70	332.08	4,867.05	-362.37	-1,644.49	1,683.89	0.42	0.09	36.67	95.87
	NORMAL	5,333.0	0.97	7.59	4,961.04	-361.08	-1,644.65	1,683.78	0.61	0.29	37.78	80.96
	NORMAL	5,429.0	0.35	77.55	5,057.03	-360.21	-1,644.26	1,683.22	0.95	-0.65	72.88	158.85
	NORMAL	5,524.0	0.53	208.16	5,152.03	-360.53	-1,644.18	1,683.21	0.85	0.19	137.48	149.93
	NORMAL	5,619.0	0.53	191.46	5,247.03	-361.35	-1,644.47	1,683.67	0.16	0.00	-17.58	261.65
	NORMAL	5,714.0	0.35	159.46	5,342.02	-362.05	-1,644.46	1,683.80	0.31	-0.19	-33.68	218.50
4/29/2012	NORMAL	5,810.0	0.35	90.91	5,438.02	-362.33	-1,644.06	1,683.47	0.41	0.00	-71.41	235.73
	NORMAL	5,904.0	0.79	97.06	5,532.02	-362.42	-1,643.13	1,682.58	0.47	0.47	6.54	11.00
	NORMAL	5,999.0	0.44	67.00	5,627.01	-362.35	-1,642.15	1,681.60	0.49	-0.37	-31.64	208.31
	NORMAL	6,094.0	0.70	42.92	5,722.01	-361.79	-1,641.42	1,680.77	0.37	0.27	-25.35	304.88
	NORMAL	6,190.0	0.62	256.32	5,818.00	-361.48	-1,641.52	1,680.81	1.32	-0.08	-152.71	195.66
	NORMAL	6,285.0	0.79	277.41	5,913.00	-361.52	-1,642.67	1,681.94	0.32	0.18	22.20	67.61
	NORMAL	6,380.0	0.53	217.30	6,007.99	-361.78	-1,643.59	1,682.89	0.74	-0.27	-63.27	221.15
	NORMAL	6,475.0	0.18	238.74	6,102.99	-362.21	-1,643.98	1,683.37	0.39	-0.37	22.57	169.71

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 (°)
4/30/2012	NORMAL	6,570.0	0.35	54.52	6,197.99	-362.12	-1,643.87	1,683.24	0.56	0.18	185.03	177.21
	NORMAL	6,666.0	0.70	56.81	6,293.99	-361.63	-1,643.14	1,682.42	0.37	0.36	2.39	4.58
	NORMAL	6,761.0	0.79	55.05	6,388.98	-360.93	-1,642.12	1,681.28	0.10	0.09	-1.85	344.85
	NORMAL	6,856.0	1.41	56.81	6,483.96	-359.92	-1,640.61	1,679.59	0.65	0.65	1.85	4.00
	NORMAL	6,952.0	0.62	56.81	6,579.94	-358.99	-1,639.18	1,678.00	0.82	-0.82	0.00	180.00
	NORMAL	7,046.0	0.44	265.11	6,673.94	-358.74	-1,639.12	1,677.89	1.09	-0.19	-161.38	191.70
	NORMAL	7,141.0	1.06	247.00	6,768.93	-359.11	-1,640.29	1,679.11	0.69	0.65	-19.06	329.86
	NORMAL	7,236.0	0.79	269.83	6,863.92	-359.46	-1,641.75	1,680.61	0.48	-0.28	24.03	137.28
5/1/2012	NORMAL	7,331.0	0.62	324.52	6,958.92	-359.04	-1,642.71	1,681.46	0.70	-0.18	57.57	130.47
	NORMAL	7,426.0	1.49	8.47	7,053.90	-357.40	-1,642.82	1,681.23	1.19	0.92	46.26	66.35
	NORMAL	7,522.0	1.93	19.54	7,149.86	-354.65	-1,642.10	1,679.95	0.57	0.46	11.53	42.52
	NORMAL	7,617.0	2.29	28.16	7,244.79	-351.46	-1,640.67	1,677.89	0.50	0.38	9.07	45.76
	NORMAL	7,712.0	2.55	32.73	7,339.71	-348.01	-1,638.63	1,675.18	0.34	0.27	4.81	38.88
5/2/2012	NORMAL	7,761.0	2.55	32.73	7,388.66	-346.18	-1,637.45	1,673.64	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

