

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 523-8	Wellbore No.	
Well Name	KP 523-8	Common Name	KP 523-8
Project	KP 08-06S-91W	Site	KP 24-8 Pad
Vertical Section Azimuth	345.20 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	4/14/2012	UWI	KP 523-8
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	4/14/2012	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 (°)
4/14/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/14/2012	NORMAL	84.0	1.23	284.41	83.99	0.22	-0.87	0.44	1.46	1.46	0.00	284.41
	NORMAL	115.0	1.85	298.30	114.98	0.54	-1.64	0.94	2.32	2.00	44.81	38.12
	NORMAL	145.0	2.11	310.78	144.96	1.13	-2.48	1.73	1.67	0.87	41.60	65.25
	NORMAL	176.0	1.94	312.80	175.95	1.86	-3.30	2.64	0.59	-0.55	6.52	158.23
	NORMAL	206.0	2.46	336.18	205.92	2.80	-3.93	3.71	3.42	1.73	77.93	71.94
	NORMAL	237.0	3.96	338.55	236.87	4.40	-4.59	5.43	4.86	4.84	7.65	6.24
	NORMAL	267.0	5.28	334.60	266.78	6.61	-5.56	7.82	4.52	4.40	-13.17	344.47
	NORMAL	297.0	5.81	334.86	296.64	9.24	-6.80	10.67	1.77	1.77	0.87	2.84
4/15/2012	NORMAL	327.0	5.89	328.54	326.48	11.92	-8.25	13.63	2.16	0.27	-21.07	273.93
	NORMAL	358.0	7.04	319.57	357.28	14.73	-10.31	16.87	4.93	3.71	-28.94	314.19
	NORMAL	388.0	8.45	320.36	387.01	17.82	-12.91	20.53	4.71	4.70	2.63	4.71
	NORMAL	418.0	9.85	320.01	416.63	21.49	-15.96	24.85	4.67	4.67	-1.17	357.55
	NORMAL	510.0	13.81	326.90	506.66	36.72	-27.02	42.41	4.56	4.30	7.49	23.03
	NORMAL	601.0	16.01	333.63	594.60	57.07	-38.53	65.02	3.07	2.42	7.40	41.49
	NORMAL	631.0	16.54	337.32	623.39	64.71	-42.01	73.30	3.87	1.77	12.30	64.64
	NORMAL	662.0	17.07	340.05	653.07	73.06	-45.27	82.20	3.07	1.71	8.81	57.43
	NORMAL	692.0	17.42	339.87	681.72	81.42	-48.32	91.06	1.18	1.17	-0.60	351.25
	NORMAL	783.0	18.73	346.07	768.24	108.39	-56.52	119.23	2.56	1.44	6.81	58.72
	NORMAL	874.0	21.02	345.10	853.81	138.35	-64.24	150.17	2.54	2.52	-1.07	351.35
	NORMAL	964.0	23.30	345.10	937.16	171.15	-72.96	184.11	2.53	2.53	0.00	0.00

2.1.2 Survey Stations (Continued)

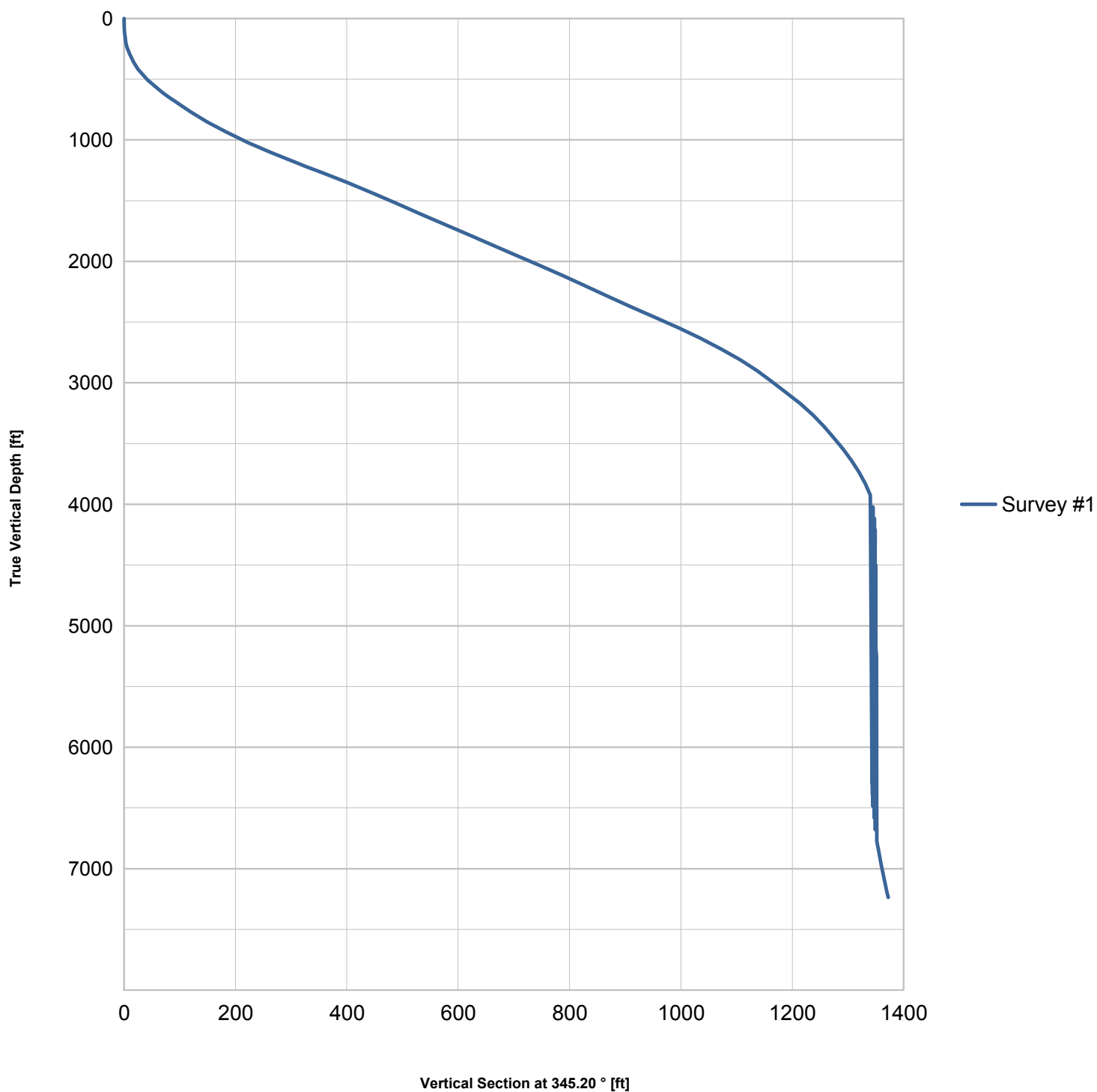
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
4/15/2012	NORMAL	1,060.0	25.44	345.74	1,024.60	209.49	-82.93	223.72	2.25	2.23	0.67	7.33
	NORMAL	1,154.0	28.05	346.77	1,108.54	250.58	-92.96	266.01	2.82	2.78	1.10	10.53
	NORMAL	1,248.0	29.19	346.77	1,191.05	294.41	-103.26	311.02	1.21	1.21	0.00	0.00
4/16/2012	NORMAL	1,278.0	29.63	347.30	1,217.18	308.76	-106.57	325.74	1.70	1.47	1.77	30.84
	NORMAL	1,336.0	29.99	348.26	1,267.51	336.94	-112.67	354.55	1.03	0.62	1.66	53.39
	NORMAL	1,430.0	28.49	345.98	1,349.53	381.70	-122.88	400.43	1.99	-1.60	-2.43	215.60
	NORMAL	1,527.0	26.82	345.45	1,435.45	425.33	-133.99	445.44	1.74	-1.72	-0.55	188.15
	NORMAL	1,622.0	26.56	345.10	1,520.33	466.60	-144.83	488.12	0.32	-0.27	-0.37	211.00
	NORMAL	1,718.0	26.20	343.87	1,606.33	507.70	-156.24	530.76	0.68	-0.38	-1.28	236.08
	NORMAL	1,814.0	26.73	346.51	1,692.27	549.05	-167.16	573.54	1.34	0.55	2.75	66.93
	NORMAL	1,909.0	27.35	345.10	1,776.89	590.92	-177.76	616.72	0.94	0.65	-1.48	313.42
	NORMAL	2,005.0	26.56	347.91	1,862.46	633.22	-187.92	660.21	1.56	-0.82	2.93	123.06
	NORMAL	2,100.0	26.38	348.26	1,947.50	674.65	-196.67	702.50	0.25	-0.19	0.37	139.24
	NORMAL	2,195.0	27.36	347.03	2,032.25	716.59	-205.86	745.40	1.19	1.03	-1.29	329.89
	NORMAL	2,291.0	25.76	347.91	2,118.11	758.48	-215.18	788.29	1.72	-1.67	0.92	166.58
	NORMAL	2,387.0	25.41	347.38	2,204.70	798.98	-224.05	829.71	0.44	-0.36	-0.55	212.94
	NORMAL	2,482.0	25.50	346.33	2,290.48	838.74	-233.34	870.52	0.48	0.09	-1.11	280.80
	NORMAL	2,578.0	25.94	346.33	2,376.97	879.22	-243.18	912.17	0.46	0.46	0.00	0.00
	NORMAL	2,673.0	26.73	346.15	2,462.11	920.16	-253.21	954.31	0.84	0.83	-0.19	354.15
	NORMAL	2,769.0	25.41	346.68	2,548.34	961.16	-263.12	996.49	1.40	-1.38	0.55	170.23
	NORMAL	2,863.0	23.65	344.22	2,633.85	998.94	-272.90	1,035.50	2.16	-1.87	-2.62	209.01
	NORMAL	2,958.0	22.07	344.75	2,721.39	1,034.49	-282.77	1,072.41	1.68	-1.66	0.56	172.82
	NORMAL	3,053.0	20.22	347.56	2,809.99	1,067.75	-291.01	1,106.66	2.22	-1.95	2.96	152.59
	NORMAL	3,149.0	16.80	351.60	2,901.01	1,097.68	-296.61	1,137.03	3.80	-3.56	4.21	161.35
	NORMAL	3,244.0	15.83	348.09	2,992.19	1,123.94	-301.29	1,163.62	1.46	-1.02	-3.69	223.79
	NORMAL	3,340.0	15.92	347.74	3,084.53	1,149.62	-306.79	1,189.85	0.14	0.09	-0.36	313.06
	NORMAL	3,434.0	15.12	346.68	3,175.10	1,174.15	-312.35	1,214.98	0.90	-0.85	-1.13	199.01
4/17/2012	NORMAL	3,530.0	12.57	343.52	3,268.30	1,196.36	-318.20	1,237.95	2.77	-2.66	-3.29	194.99
	NORMAL	3,625.0	10.99	344.22	3,361.30	1,214.98	-323.59	1,257.33	1.67	-1.66	0.74	175.17
	NORMAL	3,720.0	10.38	341.76	3,454.65	1,231.83	-328.73	1,274.93	0.80	-0.64	-2.59	215.58
	NORMAL	3,815.0	9.76	345.80	3,548.19	1,247.76	-333.39	1,291.53	0.99	-0.65	4.25	133.25
	NORMAL	3,910.0	8.71	344.92	3,641.96	1,262.51	-337.23	1,306.77	1.12	-1.11	-0.93	187.23
	NORMAL	4,006.0	7.12	345.63	3,737.04	1,275.30	-340.60	1,319.99	1.66	-1.66	0.74	176.83
	NORMAL	4,101.0	6.51	338.77	3,831.37	1,286.02	-344.01	1,331.23	1.07	-0.64	-7.22	229.78
	NORMAL	4,196.0	4.20	338.42	3,925.95	1,294.27	-347.24	1,340.04	2.43	-2.43	-0.37	180.64
	NORMAL	4,291.0	1.85	327.17	4,020.81	1,298.80	-349.35	1,344.95	2.54	-2.47	-11.84	188.60
	NORMAL	4,386.0	1.41	339.40	4,115.77	1,301.18	-350.60	1,347.57	0.59	-0.46	12.87	147.67
	NORMAL	4,481.0	0.35	237.17	4,210.76	1,302.12	-351.25	1,348.64	1.60	-1.12	-107.61	192.98
	NORMAL	4,576.0	0.53	261.25	4,305.76	1,301.89	-351.93	1,348.60	0.27	0.19	25.35	58.24
	NORMAL	4,671.0	0.53	302.56	4,400.76	1,302.06	-352.74	1,348.97	0.39	0.00	43.48	110.65
	NORMAL	4,765.0	0.26	224.51	4,494.75	1,302.15	-353.25	1,349.18	0.57	-0.29	-83.03	208.11
	NORMAL	4,861.0	1.06	188.13	4,590.75	1,301.11	-353.53	1,348.25	0.90	0.83	-37.90	313.35
	NORMAL	4,955.0	0.62	190.94	4,684.74	1,299.75	-353.75	1,346.99	0.47	-0.47	2.99	176.06
	NORMAL	5,049.0	0.35	221.17	4,778.73	1,299.04	-354.03	1,346.37	0.39	-0.29	32.16	150.98
	NORMAL	5,145.0	0.26	14.28	4,874.73	1,299.03	-354.17	1,346.40	0.62	-0.09	159.49	168.57
4/18/2012	NORMAL	5,238.0	0.70	11.47	4,967.73	1,299.79	-354.01	1,347.09	0.47	0.47	-3.02	355.53
	NORMAL	5,333.0	0.79	9.53	5,062.72	1,301.00	-353.78	1,348.21	0.10	0.09	-2.04	343.37
	NORMAL	5,429.0	1.32	18.85	5,158.70	1,302.70	-353.32	1,349.74	0.58	0.55	9.71	22.64
	NORMAL	5,524.0	0.88	20.26	5,253.69	1,304.42	-352.71	1,351.24	0.46	-0.46	1.48	177.18
	NORMAL	5,618.0	1.32	225.00	5,347.68	1,304.33	-353.23	1,351.29	2.29	0.47	-165.17	194.88
	NORMAL	5,713.0	2.02	181.27	5,442.64	1,301.88	-354.04	1,349.13	1.48	0.74	-46.03	275.72
	NORMAL	5,806.0	1.23	184.44	5,535.60	1,299.25	-354.15	1,346.61	0.85	-0.85	3.41	175.09
	NORMAL	5,953.0	0.62	197.27	5,682.59	1,296.92	-354.51	1,344.45	0.44	-0.41	8.73	167.59
	NORMAL	5,996.0	0.18	212.56	5,725.58	1,296.64	-354.62	1,344.21	1.04	-1.02	35.56	173.93
	NORMAL	6,091.0	0.35	39.06	5,820.58	1,296.74	-354.51	1,344.28	0.56	0.18	-182.63	184.29
	NORMAL	6,186.0	0.97	32.74	5,915.58	1,297.64	-353.90	1,344.99	0.66	0.65	-6.65	350.14
	NORMAL	6,282.0	0.18	189.36	6,011.57	1,298.18	-353.48	1,345.40	1.18	-0.82	163.15	176.40

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 (°)
4/19/2012	NORMAL	6,377.0	1.49	220.29	6,106.56	1,297.09	-354.30	1,344.56	1.41	1.38	32.56	34.89
	NORMAL	6,472.0	1.23	234.71	6,201.53	1,295.55	-355.93	1,343.49	0.45	-0.27	15.18	134.29
	NORMAL	6,567.0	0.53	273.20	6,296.52	1,294.99	-357.21	1,343.27	0.93	-0.74	40.52	157.97
	NORMAL	6,663.0	0.62	311.17	6,392.52	1,295.36	-358.04	1,343.84	0.40	0.09	39.55	96.17
	NORMAL	6,758.0	0.97	336.84	6,487.51	1,296.43	-358.74	1,345.06	0.52	0.37	27.02	58.82
4/20/2012	NORMAL	6,853.0	1.23	344.92	6,582.49	1,298.16	-359.32	1,346.88	0.32	0.27	8.51	34.90
	NORMAL	6,948.0	1.49	345.80	6,677.47	1,300.34	-359.89	1,349.13	0.27	0.27	0.93	5.03
	NORMAL	7,043.0	1.85	353.01	6,772.42	1,303.06	-360.38	1,351.89	0.44	0.38	7.59	33.91
	NORMAL	7,138.0	2.49	359.69	6,867.36	1,306.65	-360.58	1,355.40	0.72	0.67	7.03	24.92
	NORMAL	7,233.0	2.64	7.07	6,962.26	1,310.88	-360.32	1,359.43	0.38	0.16	7.77	69.29
	NORMAL	7,328.0	2.81	7.95	7,057.15	1,315.36	-359.73	1,363.61	0.18	0.18	0.93	14.27
	NORMAL	7,423.0	2.99	11.11	7,152.03	1,320.10	-358.93	1,367.99	0.25	0.19	3.33	43.20
	NORMAL	7,462.0	3.25	13.05	7,190.97	1,322.17	-358.49	1,369.88	0.72	0.67	4.97	23.07
	NORMAL	7,507.0	3.25	13.05	7,235.90	1,324.66	-357.91	1,372.13	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

