

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 24-18	Wellbore No.	
Well Name	KP 24-18	Common Name	KP 24-18
Project	KP 18-06S-91W	Site	KP 34-18 Pad
Vertical Section Azimuth	288.21 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	6/7/2012	UWI	KP 24-18
Active Datum	KB @5,944.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	6/7/2012	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 (°)
6/7/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/7/2012	NORMAL	106.0	1.85	288.02	105.98	0.53	-1.63	1.71	1.75	1.75	0.00	288.02
	NORMAL	106.0	1.85	288.02	105.98	0.53	-1.63	1.71	1.75	1.75	0.00	288.02
	NORMAL	136.0	2.38	291.27	135.96	0.91	-2.67	2.82	1.81	1.77	10.83	14.38
	NORMAL	166.0	2.73	297.95	165.93	1.47	-3.88	4.14	1.53	1.17	22.27	43.76
	NORMAL	197.0	2.82	290.30	196.90	1.76	-5.12	5.42	1.07	1.07	2.51	6.61
	NORMAL	197.0	2.82	290.30	196.90	2.08	-5.25	5.63	1.23	0.29	-24.68	279.82
	NORMAL	227.0	3.43	296.98	226.85	2.74	-6.74	7.26	2.36	2.03	22.27	34.20
	NORMAL	257.0	3.70	293.29	256.79	3.53	-8.43	9.11	1.18	0.90	-12.30	317.79
	NORMAL	287.0	4.22	283.80	286.73	3.32	-10.42	10.93	1.62	1.56	-7.22	340.83
	NORMAL	287.0	4.22	283.80	286.72	4.18	-10.39	11.17	2.78	1.73	-31.63	303.63
	NORMAL	318.0	4.66	285.91	317.63	4.79	-12.71	13.57	1.51	1.42	6.81	21.42
	NORMAL	348.0	5.54	284.06	347.51	5.48	-15.28	16.23	2.98	2.93	-6.17	348.49
	NORMAL	378.0	6.60	287.67	377.32	5.70	-18.65	19.50	2.64	2.62	4.25	10.65
	NORMAL	378.0	6.60	287.67	377.34	6.35	-18.33	19.40	3.75	3.53	12.03	21.61
	NORMAL	408.0	7.92	290.57	407.10	7.60	-21.91	23.19	4.57	4.40	9.67	16.96
	NORMAL	439.0	8.80	285.91	437.77	9.00	-26.19	27.69	3.58	2.84	-15.03	320.09
	NORMAL	469.0	9.68	286.08	467.39	9.41	-30.99	32.38	3.39	3.38	-1.75	355.03
	NORMAL	469.0	9.68	286.08	467.38	10.33	-30.82	32.51	2.93	2.93	0.57	1.86
	NORMAL	499.0	10.47	286.52	496.92	11.81	-35.86	37.75	2.65	2.63	1.47	5.78
	NORMAL	530.0	11.09	287.84	527.37	13.52	-41.40	43.55	2.15	2.00	4.26	22.36

2.1.2 Survey Stations (Continued)

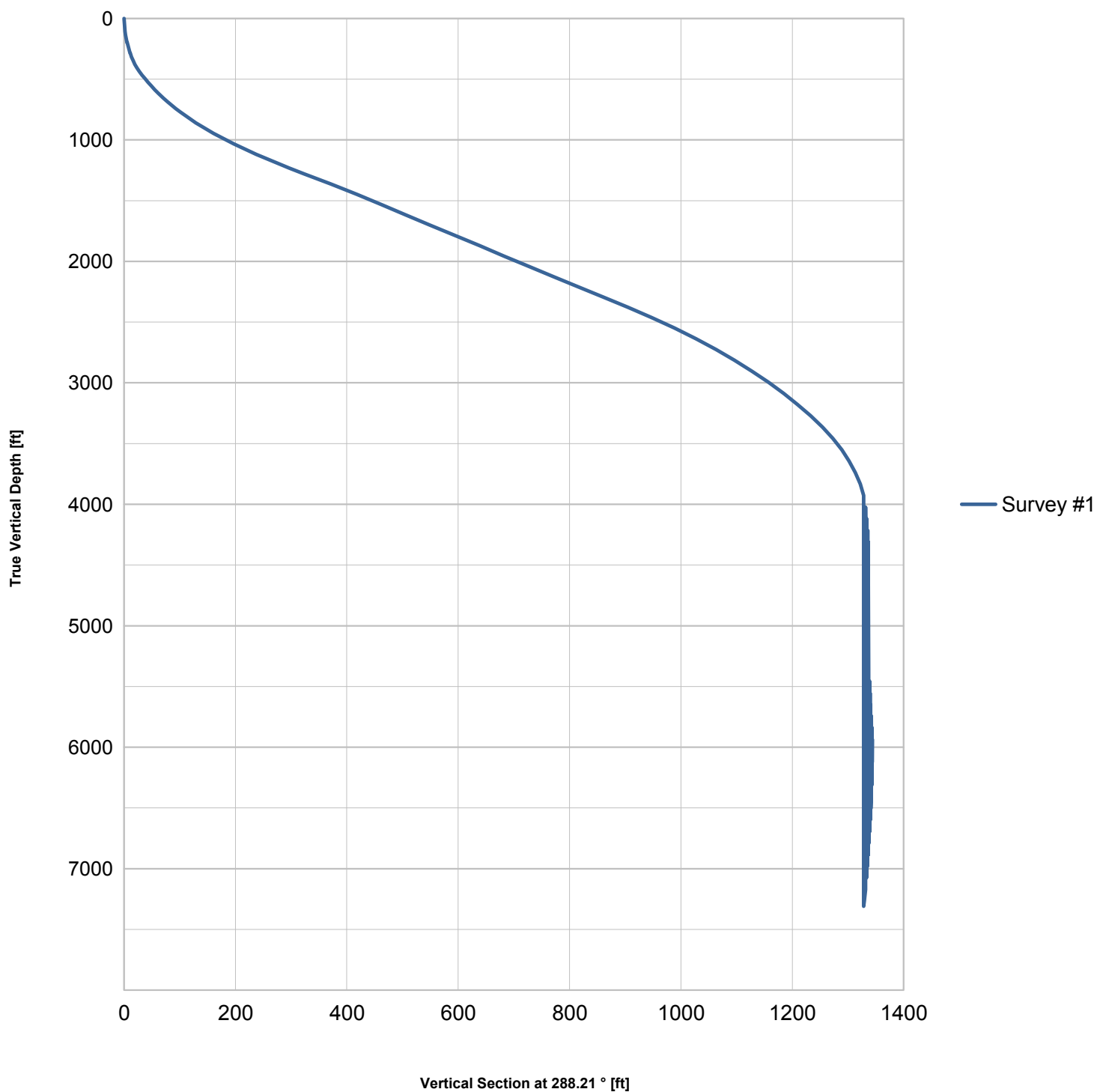
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
6/8/2012	NORMAL	559.0	11.00	288.37	555.83	15.25	-46.68	49.10	0.47	-0.31	1.83	131.81
	NORMAL	590.0	11.52	286.08	586.24	17.04	-52.46	55.15	2.21	1.68	-7.39	318.18
	NORMAL	620.0	12.23	288.90	615.59	18.89	-58.34	61.33	3.06	2.37	9.40	40.65
	NORMAL	661.0	13.72	289.71	655.55	21.94	-67.03	70.53	3.66	3.63	1.98	7.35
	NORMAL	691.0	14.33	290.24	684.65	24.43	-73.86	77.80	2.08	2.03	1.77	12.15
	NORMAL	722.0	14.77	289.88	714.66	27.10	-81.18	85.58	1.45	1.42	-1.16	348.21
	NORMAL	752.0	15.39	289.27	743.62	29.71	-88.53	93.38	2.13	2.07	-2.03	345.35
	NORMAL	782.0	16.27	289.62	772.49	32.44	-96.25	101.56	2.95	2.93	1.17	6.36
	NORMAL	873.0	18.91	287.95	859.22	41.26	-122.29	129.06	2.95	2.90	-1.84	348.38
	NORMAL	965.0	21.46	286.28	945.57	50.58	-152.63	160.79	2.84	2.77	-1.82	346.48
	NORMAL	1,060.0	23.65	287.86	1,033.30	61.29	-187.45	197.22	2.39	2.31	1.66	16.20
	NORMAL	1,155.0	26.73	287.95	1,119.25	73.72	-225.92	237.65	3.24	3.24	0.09	0.75
	NORMAL	1,249.0	28.05	287.77	1,202.71	86.98	-267.08	280.89	1.41	1.40	-0.19	356.33
	NORMAL	1,282.0	28.49	287.60	1,231.78	91.73	-281.97	296.52	1.36	1.33	-0.52	349.56
6/9/2012	NORMAL	1,339.0	29.28	286.54	1,281.69	99.81	-308.29	324.04	1.65	1.39	-1.86	326.59
	NORMAL	1,434.0	30.51	288.13	1,364.04	113.93	-353.48	371.38	1.54	1.29	1.67	33.48
	NORMAL	1,529.0	28.23	288.65	1,446.83	128.62	-397.70	417.97	2.41	-2.40	0.55	173.84
	NORMAL	1,625.0	26.64	289.53	1,532.03	143.08	-439.50	462.20	1.71	-1.66	0.92	166.08
	NORMAL	1,721.0	27.17	289.18	1,617.64	157.47	-480.48	505.63	0.58	0.55	-0.36	343.21
	NORMAL	1,816.0	27.79	288.65	1,701.92	171.68	-521.95	549.46	0.70	0.65	-0.56	338.24
	NORMAL	1,911.0	28.14	286.90	1,785.83	185.28	-564.37	594.00	0.94	0.37	-1.84	292.32
	NORMAL	2,007.0	27.00	287.77	1,870.93	198.51	-606.78	638.43	1.26	-1.19	0.91	160.93
	NORMAL	2,103.0	27.70	286.19	1,956.19	211.38	-648.96	682.52	1.05	0.73	-1.65	313.26
	NORMAL	2,199.0	27.79	286.54	2,041.16	223.97	-691.85	727.19	0.19	0.09	0.36	61.24
	NORMAL	2,294.0	27.26	287.77	2,125.40	236.92	-733.79	771.08	0.82	-0.56	1.29	133.54
	NORMAL	2,389.0	27.70	290.59	2,209.69	251.32	-775.18	814.90	1.45	0.46	2.97	72.57
	NORMAL	2,485.0	28.75	289.18	2,294.27	266.76	-817.88	860.28	1.30	1.09	-1.47	326.96
	NORMAL	2,580.0	27.35	291.47	2,378.12	282.25	-859.77	904.91	1.86	-1.47	2.41	143.44
	NORMAL	2,675.0	25.94	290.06	2,463.03	297.37	-899.60	947.47	1.63	-1.48	-1.48	203.53
	NORMAL	2,771.0	24.80	288.48	2,549.77	310.95	-938.42	988.59	1.38	-1.19	-1.65	209.99
	NORMAL	2,866.0	22.86	287.25	2,636.66	322.74	-974.94	1,026.97	2.11	-2.04	-1.29	193.81
	NORMAL	2,962.0	21.28	287.25	2,725.63	333.44	-1,009.39	1,063.03	1.65	-1.65	0.00	180.00
	NORMAL	3,057.0	19.52	288.13	2,814.67	343.49	-1,040.94	1,096.14	1.88	-1.85	0.93	170.53
	NORMAL	3,153.0	18.99	286.90	2,905.30	353.02	-1,071.13	1,127.80	0.70	-0.55	-1.28	216.85
	NORMAL	3,248.0	17.15	286.54	2,995.61	361.50	-1,099.34	1,157.25	1.94	-1.94	-0.38	183.30
	NORMAL	3,344.0	15.92	286.19	3,087.63	369.20	-1,125.56	1,184.56	1.29	-1.28	-0.36	184.46
	NORMAL	3,438.0	14.60	286.54	3,178.32	376.17	-1,149.30	1,209.29	1.41	-1.40	0.37	176.18
	NORMAL	3,534.0	13.72	284.44	3,271.40	382.45	-1,171.92	1,232.74	1.06	-0.92	-2.19	209.26
	NORMAL	3,630.0	12.22	288.83	3,364.95	388.57	-1,192.56	1,254.26	1.87	-1.56	4.57	148.83
	NORMAL	3,725.0	10.38	287.60	3,458.11	394.40	-1,210.24	1,272.88	1.95	-1.94	-1.29	186.86
	NORMAL	3,821.0	8.97	285.31	3,552.74	398.99	-1,225.70	1,289.00	1.52	-1.47	-2.39	194.14
6/10/2012	NORMAL	3,914.0	7.30	283.91	3,644.80	402.33	-1,238.43	1,302.13	1.81	-1.80	-1.51	186.07
	NORMAL	4,009.0	6.07	283.03	3,739.15	404.91	-1,249.18	1,313.16	1.30	-1.29	-0.93	184.32
	NORMAL	4,104.0	4.75	274.24	3,833.73	406.34	-1,258.00	1,321.98	1.64	-1.39	-9.25	207.80
	NORMAL	4,198.0	2.99	268.61	3,927.51	406.57	-1,264.33	1,328.06	1.91	-1.87	-5.99	189.38
	NORMAL	4,294.0	1.76	258.24	4,023.43	406.20	-1,268.28	1,331.70	1.35	-1.28	-10.80	194.13
	NORMAL	4,390.0	1.41	245.59	4,119.39	405.42	-1,270.80	1,333.84	0.51	-0.36	-13.18	218.79
	NORMAL	4,485.0	1.05	236.80	4,214.37	404.46	-1,272.59	1,335.25	0.43	-0.38	-9.25	203.31
	NORMAL	4,581.0	0.70	225.55	4,310.36	403.56	-1,273.74	1,336.07	0.40	-0.36	-11.72	200.59
	NORMAL	4,676.0	0.53	194.08	4,405.35	402.73	-1,274.27	1,336.30	0.39	-0.18	-33.13	228.14
	NORMAL	4,772.0	0.44	162.27	4,501.35	401.95	-1,274.26	1,336.05	0.29	-0.09	-33.14	236.06
	NORMAL	4,867.0	0.53	131.51	4,596.35	401.31	-1,273.82	1,335.43	0.29	0.09	-32.38	273.26
	NORMAL	4,963.0	0.70	120.43	4,692.34	400.72	-1,272.98	1,334.45	0.22	0.18	-11.54	319.40
	NORMAL	5,059.0	0.79	111.82	4,788.33	400.18	-1,271.86	1,333.22	0.15	0.09	-8.97	304.44
	NORMAL	5,154.0	0.70	346.13	4,883.33	400.50	-1,271.39	1,332.87	1.40	-0.09	-132.31	205.38
	NORMAL	5,250.0	1.14	350.88	4,979.32	402.01	-1,271.69	1,333.62	0.46	0.46	4.95	12.21
	NORMAL	5,345.0	1.23	355.27	5,074.30	403.96	-1,271.92	1,334.46	0.13	0.09	4.62	47.46

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 (°)
6/10/2012	NORMAL	5,441.0	1.41	357.56	5,170.27	406.16	-1,272.05	1,335.27	0.20	0.19	2.39	17.48
	NORMAL	5,536.0	1.58	5.47	5,265.24	408.64	-1,271.98	1,335.97	0.28	0.18	8.33	54.52
	NORMAL	5,632.0	1.32	324.34	5,361.21	410.85	-1,272.50	1,337.16	1.09	-0.27	-42.84	236.00
6/11/2012	NORMAL	5,728.0	0.79	263.34	5,457.20	411.67	-1,273.80	1,338.65	1.21	-0.55	-63.54	216.41
	NORMAL	5,824.0	0.70	261.23	5,553.19	411.51	-1,275.04	1,339.78	0.10	-0.09	-2.20	195.90
	NORMAL	5,918.0	0.62	281.80	5,647.18	411.52	-1,276.10	1,340.79	0.26	-0.09	21.88	118.75
	NORMAL	6,013.0	0.79	291.47	5,742.17	411.87	-1,277.22	1,341.96	0.22	0.18	10.18	39.89
	NORMAL	6,109.0	0.70	336.82	5,838.17	412.65	-1,278.06	1,343.01	0.60	-0.09	47.24	120.90
	NORMAL	6,203.0	1.05	200.06	5,932.16	412.37	-1,278.58	1,343.41	1.74	0.37	-145.49	206.15
	NORMAL	6,298.0	0.88	199.88	6,027.15	410.87	-1,279.13	1,343.46	0.18	-0.18	-0.19	180.93
	NORMAL	6,392.0	0.35	210.26	6,121.14	409.94	-1,279.52	1,343.54	0.57	-0.56	11.04	173.29
	NORMAL	6,488.0	0.35	101.80	6,217.14	409.63	-1,279.38	1,343.31	0.59	0.00	-112.98	215.77
	NORMAL	6,584.0	0.70	72.09	6,313.14	409.75	-1,278.54	1,342.55	0.45	0.36	-30.95	306.64
6/12/2012	NORMAL	6,680.0	0.62	158.22	6,409.13	409.44	-1,277.79	1,341.74	0.94	-0.08	89.72	136.77
	NORMAL	6,775.0	0.53	165.26	6,504.13	408.54	-1,277.48	1,341.17	0.12	-0.09	7.41	145.35
	NORMAL	6,870.0	0.79	137.31	6,599.12	407.63	-1,276.93	1,340.36	0.43	0.27	-29.42	294.39
	NORMAL	6,966.0	0.97	124.82	6,695.11	406.68	-1,275.81	1,339.00	0.27	0.19	-13.01	306.82
	NORMAL	7,062.0	0.97	141.70	6,791.10	405.58	-1,274.64	1,337.55	0.30	0.00	17.58	98.44
	NORMAL	7,158.0	0.97	142.23	6,887.08	404.30	-1,273.64	1,336.20	0.01	0.00	0.55	90.26
	NORMAL	7,251.0	0.79	128.16	6,980.07	403.28	-1,272.65	1,334.94	0.30	-0.19	-15.13	223.31
	NORMAL	7,347.0	1.05	110.41	7,076.06	402.57	-1,271.31	1,333.44	0.40	0.27	-18.49	303.27
	NORMAL	7,442.0	1.23	91.07	7,171.04	402.25	-1,269.47	1,331.60	0.44	0.19	-20.36	285.19
	NORMAL	7,535.0	1.67	84.57	7,264.01	402.36	-1,267.13	1,329.40	0.50	0.47	-6.99	336.23
	NORMAL	7,580.0	1.67	84.57	7,308.99	402.48	-1,265.82	1,328.20	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

