

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 322-22	Wellbore No.	1
Well Name	KP 322-22	Common Name	KP 322-22
Project	KP 22-06S-091W	Site	KP 22-22 Pad
Vertical Section Azimuth	118.91 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	7/20/2011	UWI	KP 322-22
Active Datum	KB @6,209.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	Scientific Drilling
Date Started	7/20/2011	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 (°)
7/20/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/20/2011	NORMAL	73.0	0.35	152.84	73.00	-0.20	0.10	0.18	0.48	0.48	0.00	152.84
	NORMAL	158.0	2.20	128.85	157.98	-1.45	1.49	2.01	2.22	2.18	-28.22	331.68
	NORMAL	248.0	3.43	119.88	247.87	-3.88	5.17	6.40	1.45	1.37	-9.97	335.78
7/21/2011	NORMAL	340.0	4.93	120.23	339.62	-7.24	10.97	13.11	1.63	1.63	0.38	1.15
	NORMAL	431.0	6.69	117.25	430.15	-11.64	19.06	22.31	1.96	1.93	-3.27	348.79
	NORMAL	512.0	8.02	119.86	510.48	-16.61	28.16	32.68	1.69	1.64	3.22	15.40
	NORMAL	604.0	8.25	121.64	601.55	-23.27	39.35	45.69	0.37	0.25	1.93	48.48
	NORMAL	695.0	8.16	120.80	691.62	-30.00	50.45	58.67	0.16	-0.10	-0.92	232.69
	NORMAL	781.0	8.09	118.41	776.76	-36.00	61.02	70.82	0.40	-0.08	-2.78	257.11
	NORMAL	873.0	8.18	117.86	867.83	-42.14	72.50	83.83	0.13	0.10	-0.60	318.88
	NORMAL	964.0	8.08	117.91	957.92	-48.16	83.87	96.70	0.11	-0.11	0.05	175.98
	NORMAL	1,059.0	8.26	116.15	1,051.95	-54.29	95.90	110.19	0.32	0.19	-1.85	304.87
	NORMAL	1,153.0	7.39	117.13	1,145.08	-60.03	107.34	122.98	0.94	-0.93	1.04	171.77
	NORMAL	1,247.0	7.71	113.81	1,238.26	-65.33	118.49	135.30	0.58	0.34	-3.53	304.61
	NORMAL	1,341.0	7.44	117.80	1,331.44	-70.71	129.64	147.67	0.63	-0.29	4.24	119.14
	NORMAL	1,435.0	7.63	121.89	1,424.63	-76.85	140.32	159.99	0.61	0.20	4.35	72.53
	NORMAL	1,529.0	7.19	124.63	1,517.85	-83.49	150.46	172.07	0.60	-0.47	2.91	142.58
	NORMAL	1,624.0	7.19	122.08	1,612.10	-90.02	160.39	183.92	0.34	0.00	-2.68	268.74
	NORMAL	1,717.0	7.56	119.43	1,704.33	-96.12	170.65	195.85	0.54	0.40	-2.85	316.09
	NORMAL	1,812.0	7.54	120.79	1,798.51	-102.38	181.45	208.33	0.19	-0.02	1.43	97.06

2.1.2 Survey Stations (Continued)

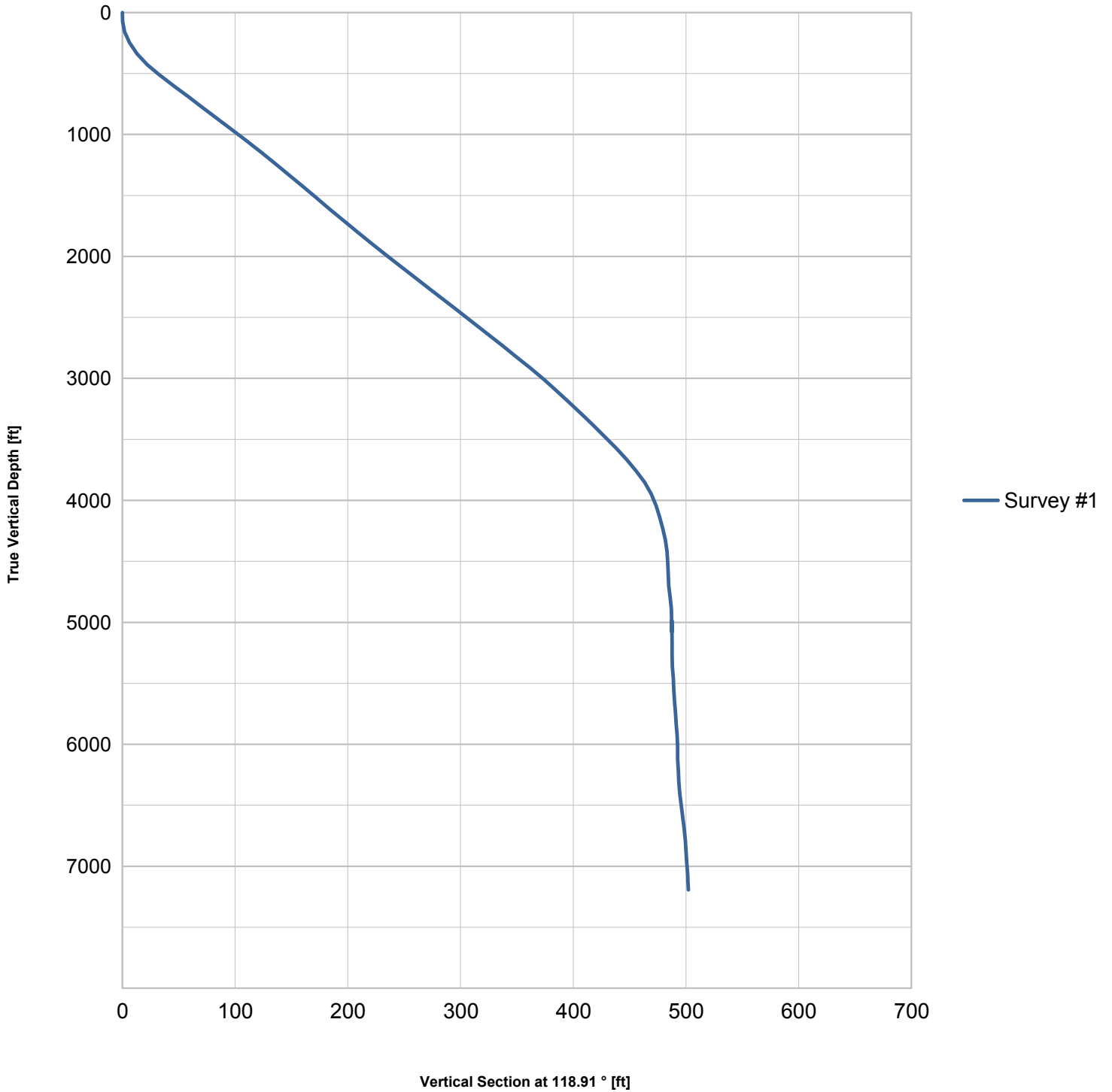
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
7/21/2011	NORMAL	1,906.0	7.77	119.23	1,891.67	-108.64	192.29	220.85	0.33	0.24	-1.66	317.13
7/22/2011	NORMAL	2,000.0	7.56	119.54	1,984.83	-114.79	203.22	233.39	0.23	-0.22	0.33	169.01
	NORMAL	2,094.0	8.22	117.36	2,077.94	-120.93	214.56	246.29	0.77	0.70	-2.32	334.53
	NORMAL	2,188.0	7.91	118.77	2,171.01	-127.13	226.20	259.47	0.39	-0.33	1.50	148.15
	NORMAL	2,281.0	7.90	115.96	2,263.13	-133.01	237.56	272.25	0.42	-0.01	-3.02	267.13
	NORMAL	2,375.0	7.96	116.92	2,356.23	-138.78	249.17	285.21	0.15	0.06	1.02	66.10
	NORMAL	2,470.0	8.03	115.80	2,450.31	-144.65	261.01	298.41	0.18	0.07	-1.18	293.64
	NORMAL	2,565.0	7.80	115.90	2,544.40	-150.35	272.78	311.47	0.24	-0.24	0.11	176.62
	NORMAL	2,659.0	7.83	115.32	2,637.53	-155.88	284.31	324.23	0.09	0.03	-0.62	290.54
	NORMAL	2,753.0	7.84	113.56	2,730.65	-161.18	295.97	337.01	0.26	0.01	-1.87	271.51
	NORMAL	2,847.0	7.61	118.44	2,823.80	-166.71	307.32	349.61	0.74	-0.24	5.19	111.73
	NORMAL	2,941.0	7.74	117.63	2,916.96	-172.61	318.40	362.17	0.18	0.14	-0.86	319.83
	NORMAL	3,036.0	6.86	119.39	3,011.18	-178.36	329.01	374.23	0.96	-0.93	1.85	166.61
	NORMAL	3,130.0	6.95	120.27	3,104.50	-183.98	338.82	385.53	0.15	0.10	0.94	50.05
	NORMAL	3,224.0	6.55	127.30	3,197.85	-190.09	347.99	396.52	0.98	-0.43	7.48	119.29
	NORMAL	3,316.0	6.60	128.52	3,289.25	-196.57	356.30	406.93	0.16	0.05	1.33	70.91
	NORMAL	3,411.0	6.42	128.32	3,383.64	-203.26	364.74	417.55	0.19	-0.19	-0.21	187.08
	NORMAL	3,505.0	6.21	127.06	3,477.06	-209.58	372.92	427.77	0.27	-0.22	-1.34	212.80
	NORMAL	3,600.0	6.22	127.52	3,571.51	-215.81	381.10	437.94	0.05	0.01	0.48	78.87
	NORMAL	3,694.0	5.36	129.09	3,665.03	-221.68	388.55	447.30	0.93	-0.91	1.67	170.35
	NORMAL	3,788.0	5.24	134.45	3,758.62	-227.46	395.02	455.76	0.54	-0.13	5.70	106.28
	NORMAL	3,883.0	4.19	131.75	3,853.30	-232.81	400.71	463.32	1.13	-1.11	-2.84	190.59
	NORMAL	3,977.0	3.10	136.67	3,947.11	-236.94	405.01	469.09	1.21	-1.16	5.23	166.43
	NORMAL	4,072.0	2.28	140.77	4,042.01	-240.27	407.97	473.29	0.89	-0.86	4.32	168.84
	NORMAL	4,166.0	1.98	137.37	4,135.94	-242.92	410.26	476.56	0.35	-0.32	-3.62	201.15
	NORMAL	4,261.0	1.68	136.31	4,230.89	-245.13	412.33	479.45	0.32	-0.32	-1.12	185.91
	NORMAL	4,355.0	1.35	153.79	4,324.86	-247.12	413.77	481.67	0.60	-0.35	18.60	134.05
	NORMAL	4,450.0	0.63	128.82	4,419.84	-248.45	414.67	483.11	0.87	-0.76	-26.28	198.85
7/23/2011	NORMAL	4,544.0	0.31	140.83	4,513.84	-248.97	415.23	483.85	0.35	-0.34	12.78	168.83
	NORMAL	4,639.0	0.61	59.56	4,608.84	-248.92	415.83	484.35	0.67	0.32	-85.55	250.17
	NORMAL	4,733.0	1.02	41.88	4,702.83	-248.04	416.82	484.79	0.51	0.44	-18.81	319.43
	NORMAL	4,826.0	1.29	88.28	4,795.81	-247.39	418.42	485.88	1.01	0.29	49.89	97.94
	NORMAL	4,921.0	0.44	145.80	4,890.80	-247.66	419.70	487.12	1.18	-0.89	60.55	160.59
	NORMAL	5,014.0	0.26	211.30	4,983.80	-248.14	419.79	487.43	0.44	-0.19	70.43	144.54
	NORMAL	5,109.0	0.03	288.58	5,078.80	-248.32	419.65	487.40	0.27	-0.24	81.35	173.41
	NORMAL	5,204.0	0.36	72.33	5,173.80	-248.22	419.91	487.58	0.40	0.35	151.32	146.39
	NORMAL	5,297.0	0.27	331.64	5,266.80	-247.94	420.09	487.60	0.53	-0.10	-108.27	212.90
	NORMAL	5,391.0	0.70	83.18	5,360.80	-247.67	420.55	487.87	0.89	0.46	118.66	128.99
	NORMAL	5,486.0	0.55	82.20	5,455.79	-247.54	421.58	488.71	0.16	-0.16	-1.03	183.59
	NORMAL	5,580.0	0.20	68.91	5,549.79	-247.42	422.18	489.18	0.38	-0.37	-14.14	187.37
	NORMAL	5,675.0	0.60	99.05	5,644.79	-247.44	422.82	489.75	0.46	0.42	31.73	43.37
	NORMAL	5,769.0	0.63	86.09	5,738.78	-247.48	423.83	490.65	0.15	0.03	-13.79	275.64
7/24/2011	NORMAL	5,863.0	0.48	66.31	5,832.78	-247.29	424.70	491.32	0.26	-0.16	-21.04	222.33
	NORMAL	5,957.0	0.71	146.62	5,926.77	-247.62	425.38	492.08	0.84	0.24	85.44	117.25
	NORMAL	6,052.0	0.35	219.06	6,021.77	-248.33	425.52	492.55	0.73	-0.38	76.25	151.10
	NORMAL	6,149.0	0.21	134.75	6,118.77	-248.69	425.46	492.67	0.40	-0.14	-86.92	212.41
	NORMAL	6,244.0	0.40	91.25	6,213.77	-248.82	425.92	493.13	0.30	0.20	-45.79	286.23
	NORMAL	6,339.0	0.57	52.52	6,308.76	-248.54	426.63	493.61	0.38	0.18	-40.77	277.14
	NORMAL	6,434.0	0.90	101.84	6,403.76	-248.40	427.73	494.51	0.72	0.35	51.92	88.60
7/25/2011	NORMAL	6,530.0	0.93	81.61	6,499.75	-248.44	429.24	495.85	0.34	0.03	-21.07	265.14
	NORMAL	6,624.0	1.14	73.32	6,593.73	-248.06	430.89	497.12	0.27	0.22	-8.82	320.32
	NORMAL	6,719.0	1.41	57.07	6,688.71	-247.16	432.78	498.33	0.47	0.28	-17.11	298.44
	NORMAL	6,814.0	1.68	46.60	6,783.67	-245.57	434.77	499.30	0.41	0.28	-11.02	308.41
	NORMAL	6,908.0	1.85	39.40	6,877.63	-243.45	436.73	500.00	0.30	0.18	-7.66	303.84
7/26/2011	NORMAL	7,004.0	2.19	43.28	6,973.57	-240.91	438.97	500.74	0.38	0.35	4.04	23.86
	NORMAL	7,098.0	2.13	36.63	7,067.50	-238.20	441.25	501.42	0.27	-0.06	-7.07	253.23
	NORMAL	7,158.0	2.34	37.81	7,127.46	-236.34	442.66	501.76	0.36	0.35	1.97	12.95

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 (°)
7/26/2011	NORMAL	7,223.0	2.57	39.09	7,192.40	-234.16	444.40	502.22	0.36	0.35	1.97	14.05

3 Charts

3.1 Vertical Section View



3.2 Plan View

