

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 14-18	Wellbore No.	
Well Name	KP 14-18	Common Name	KP 14-18
Project	KP 18-06S-91W	Site	KP 34-18 Pad
Vertical Section Azimuth	278.28 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	6/13/2012	UWI	KP 14-18
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	6/13/2012	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 (°)
6/13/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/13/2012	NORMAL	106.0	1.94	291.36	105.98	0.65	-1.67	1.75	1.83	1.83	0.00	291.36
	NORMAL	136.0	2.73	300.41	135.95	1.20	-2.76	2.90	2.90	2.63	30.17	29.59
	NORMAL	166.0	2.99	297.95	165.92	1.93	-4.07	4.30	0.96	0.87	-8.20	333.50
	NORMAL	197.0	4.05	282.74	196.86	2.55	-5.85	6.16	4.53	3.42	-49.06	310.86
	NORMAL	227.0	4.57	283.62	226.77	3.06	-8.04	8.40	1.75	1.73	2.93	7.69
	NORMAL	257.0	5.45	283.27	256.66	3.67	-10.59	11.01	2.94	2.93	-1.17	357.84
	NORMAL	287.0	6.70	288.02	286.49	4.54	-13.64	14.16	4.49	4.17	15.83	24.28
6/14/2012	NORMAL	318.0	7.83	281.16	317.24	5.51	-17.44	18.05	4.59	3.65	-22.13	319.05
	NORMAL	348.0	8.89	280.37	346.92	6.32	-21.72	22.40	3.55	3.53	-2.63	353.42
	NORMAL	378.0	9.94	279.23	376.52	7.15	-26.56	27.31	3.55	3.50	-3.80	349.37
	NORMAL	408.0	11.44	279.20	406.00	8.05	-32.05	32.87	5.00	5.00	-0.10	359.77
	NORMAL	439.0	13.46	277.50	436.27	9.01	-38.66	39.56	6.62	6.52	-5.48	348.89
	NORMAL	469.0	14.87	278.09	465.35	10.01	-45.93	46.90	4.72	4.70	1.97	6.13
	NORMAL	499.0	16.28	277.82	494.25	11.12	-53.91	54.95	4.71	4.70	-0.90	356.93
	NORMAL	530.0	17.16	278.09	523.94	12.35	-62.74	63.87	2.85	2.84	0.87	5.17
	NORMAL	559.0	17.86	276.33	551.60	13.45	-71.40	72.59	3.03	2.41	-6.07	322.05
	NORMAL	590.0	19.18	275.27	580.99	14.44	-81.20	82.43	4.39	4.26	-3.42	345.19
	NORMAL	620.0	19.62	275.45	609.29	15.37	-91.12	92.38	1.48	1.47	0.60	7.82
	NORMAL	651.0	20.67	275.71	638.39	16.41	-101.74	103.05	3.40	3.39	0.84	5.00
	NORMAL	681.0	22.08	276.42	666.33	17.57	-112.62	113.97	4.78	4.70	2.37	10.73

2.1.2 Survey Stations (Continued)

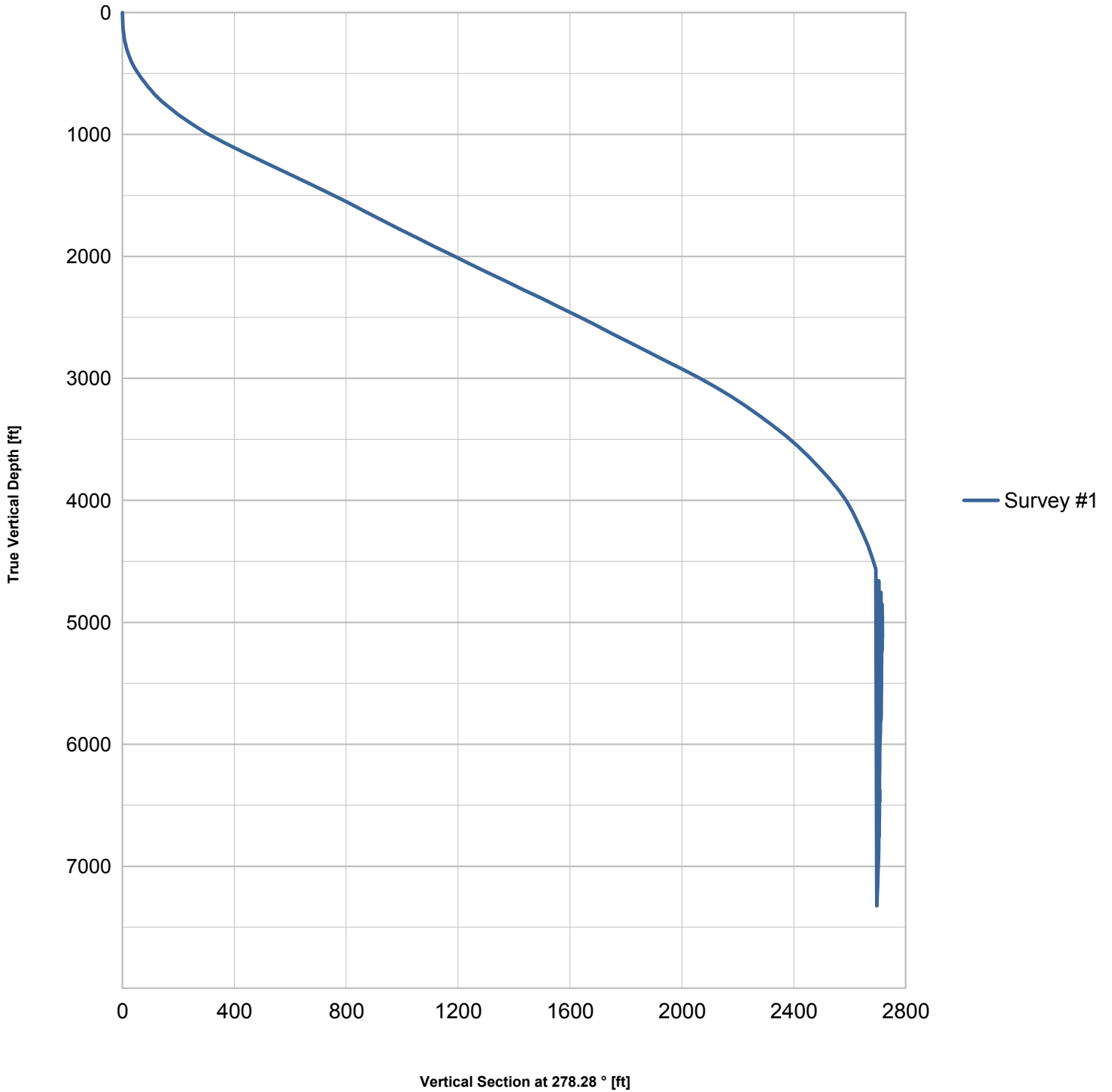
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
6/14/2012	NORMAL	711.0	23.84	277.21	693.95	18.96	-124.23	125.67	5.96	5.87	2.63	10.30
	NORMAL	752.0	26.03	279.95	731.13	21.55	-141.32	142.95	6.04	5.34	6.68	29.06
	NORMAL	782.0	27.17	279.34	757.95	23.80	-154.56	156.38	3.91	3.80	-2.03	346.25
	NORMAL	873.0	30.43	278.19	837.68	30.46	-197.88	200.21	3.63	3.58	-1.26	349.85
	NORMAL	965.0	33.41	277.05	915.76	36.89	-246.09	248.84	3.30	3.24	-1.24	348.08
	NORMAL	1,060.0	37.02	277.75	993.37	43.96	-300.41	303.61	3.82	3.80	0.74	6.67
	NORMAL	1,155.0	40.71	279.60	1,067.32	52.98	-359.31	363.20	4.07	3.88	1.95	18.19
	NORMAL	1,251.0	43.09	279.95	1,138.77	63.87	-422.49	427.28	2.49	2.48	0.36	5.74
	NORMAL	1,325.0	41.86	279.34	1,193.35	72.25	-471.75	477.24	1.75	-1.66	-0.82	198.29
6/15/2012	NORMAL	1,325.0	41.86	279.34	1,193.35	72.25	-471.75	477.24	0.00	0.00	0.00	0.00
	NORMAL	1,435.0	42.03	278.11	1,275.17	83.40	-544.42	550.76	0.76	0.15	-1.12	281.22
	NORMAL	1,529.0	43.17	277.23	1,344.36	91.88	-607.48	614.38	1.37	1.21	-0.94	332.09
	NORMAL	1,624.0	41.77	277.58	1,414.44	100.15	-671.09	678.51	1.49	-1.47	0.37	170.55
	NORMAL	1,719.0	41.94	277.05	1,485.20	108.22	-733.96	741.89	0.41	0.18	-0.56	295.48
	NORMAL	1,814.0	40.45	278.81	1,556.68	116.84	-795.93	804.45	1.99	-1.57	1.85	142.78
	NORMAL	1,910.0	40.19	278.81	1,629.88	126.35	-857.31	866.57	0.27	-0.27	0.00	180.00
	NORMAL	2,006.0	39.83	278.11	1,703.41	135.43	-918.36	928.29	0.60	-0.38	-0.73	231.08
	NORMAL	2,101.0	41.33	277.76	1,775.56	143.96	-979.56	990.08	1.60	1.58	-0.37	351.24
	NORMAL	2,197.0	40.80	277.05	1,847.94	152.09	-1,042.10	1,053.14	0.74	-0.55	-0.74	221.08
	NORMAL	2,292.0	42.03	276.88	1,919.18	159.71	-1,104.48	1,115.96	1.30	1.29	-0.18	354.71
	NORMAL	2,388.0	41.68	276.00	1,990.68	166.89	-1,168.13	1,179.99	0.71	-0.36	-0.92	238.87
	NORMAL	2,484.0	41.59	276.70	2,062.43	173.95	-1,231.52	1,243.73	0.49	-0.09	0.73	101.21
	NORMAL	2,579.0	42.03	277.40	2,133.24	181.72	-1,294.37	1,307.05	0.68	0.46	0.74	46.95
	NORMAL	2,674.0	42.30	277.76	2,203.66	190.14	-1,357.58	1,370.81	0.38	0.28	0.38	41.96
	NORMAL	2,770.0	42.30	278.63	2,274.66	199.34	-1,421.53	1,435.42	0.61	0.00	0.91	90.32
	NORMAL	2,865.0	42.21	277.23	2,344.98	208.16	-1,484.80	1,499.30	1.00	-0.09	-1.47	264.02
	NORMAL	2,961.0	41.59	277.93	2,416.44	216.61	-1,548.35	1,563.40	0.81	-0.65	0.73	143.24
	NORMAL	3,056.0	41.33	279.69	2,487.63	226.24	-1,610.50	1,626.29	1.26	-0.27	1.85	103.24
	NORMAL	3,151.0	40.10	278.28	2,559.64	235.93	-1,671.70	1,688.25	1.62	-1.29	-1.48	216.25
	NORMAL	3,247.0	40.27	280.04	2,632.98	245.79	-1,732.85	1,750.19	1.20	0.18	1.83	82.16
6/16/2012	NORMAL	3,342.0	41.24	280.92	2,704.95	257.84	-1,793.73	1,812.16	1.19	1.02	0.93	30.97
	NORMAL	3,438.0	40.63	278.99	2,777.47	268.72	-1,855.68	1,875.03	1.46	-0.64	-2.01	243.52
	NORMAL	3,533.0	40.63	277.40	2,849.57	277.54	-1,916.90	1,936.89	1.09	0.00	-1.67	269.40
	NORMAL	3,629.0	41.33	276.00	2,922.05	284.88	-1,979.43	1,999.82	1.20	0.73	-1.46	306.79
	NORMAL	3,724.0	38.78	278.46	2,994.76	292.54	-2,040.06	2,060.93	3.16	-2.68	2.59	149.10
	NORMAL	3,820.0	36.76	278.63	3,070.64	301.27	-2,098.21	2,119.72	2.11	-2.10	0.18	177.12
	NORMAL	3,915.0	35.09	276.70	3,147.57	308.72	-2,153.44	2,175.45	2.12	-1.76	-2.03	213.36
	NORMAL	4,011.0	32.45	276.88	3,227.37	315.03	-2,206.42	2,228.79	2.75	-2.75	0.19	177.90
	NORMAL	4,106.0	30.34	279.69	3,308.46	322.12	-2,255.39	2,278.26	2.70	-2.22	2.96	146.44
	NORMAL	4,200.0	30.69	278.11	3,389.44	329.50	-2,302.54	2,325.99	0.93	0.37	-1.68	292.89
	NORMAL	4,294.0	27.70	277.76	3,471.49	335.84	-2,347.94	2,371.83	3.19	-3.18	-0.37	183.12
	NORMAL	4,389.0	25.68	278.63	3,556.36	341.91	-2,390.18	2,414.50	2.17	-2.13	0.92	169.44
	NORMAL	4,484.0	23.21	277.76	3,642.84	347.53	-2,429.08	2,453.81	2.63	-2.60	-0.92	187.90
	NORMAL	4,579.0	22.07	278.11	3,730.52	352.57	-2,465.30	2,490.38	1.21	-1.20	0.37	173.42
	NORMAL	4,675.0	21.28	277.40	3,819.73	357.36	-2,500.43	2,525.83	0.87	-0.82	-0.74	198.03
	NORMAL	4,770.0	18.64	277.58	3,909.02	361.58	-2,532.58	2,558.25	2.78	-2.78	0.19	178.75
	NORMAL	4,866.0	15.83	273.19	4,000.70	364.34	-2,560.87	2,586.64	3.22	-2.93	-4.57	202.75
	NORMAL	4,961.0	12.31	275.12	4,092.84	365.96	-2,583.90	2,609.67	3.74	-3.71	2.03	173.34
	NORMAL	5,057.0	11.61	277.40	4,186.75	368.12	-2,603.67	2,629.55	0.88	-0.73	2.38	147.09
	NORMAL	5,153.0	11.34	280.22	4,280.84	371.04	-2,622.54	2,648.64	0.65	-0.28	2.94	117.08
	NORMAL	5,248.0	9.41	279.51	4,374.28	373.98	-2,639.40	2,665.74	2.04	-2.03	-0.75	183.44
	NORMAL	5,344.0	8.18	278.99	4,469.15	376.34	-2,653.88	2,680.42	1.28	-1.28	-0.54	183.44
	NORMAL	5,440.0	7.21	281.62	4,564.28	378.62	-2,666.53	2,693.26	1.07	-1.01	2.74	161.35
	NORMAL	5,535.0	5.54	281.62	4,658.69	380.75	-2,676.86	2,703.79	1.76	-1.76	0.00	180.00
6/17/2012	NORMAL	5,630.0	2.99	281.45	4,753.42	382.16	-2,683.78	2,710.84	2.68	-2.68	-0.18	180.20
	NORMAL	5,726.0	1.23	265.63	4,849.35	382.58	-2,687.26	2,714.35	1.91	-1.83	-16.48	190.52
	NORMAL	5,822.0	0.70	261.94	4,945.34	382.42	-2,688.87	2,715.92	0.56	-0.55	-3.84	184.85

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 (°)
6/17/2012	NORMAL	5,917.0	0.35	319.94	5,040.33	382.56	-2,689.63	2,716.69	0.63	-0.37	61.05	150.02
	NORMAL	6,013.0	0.44	64.36	5,136.33	382.95	-2,689.49	2,716.60	0.65	0.09	108.77	137.16
6/18/2012	NORMAL	6,107.0	0.88	75.08	5,230.33	383.29	-2,688.47	2,715.64	0.48	0.47	11.40	21.08
	NORMAL	6,202.0	1.05	84.04	5,325.31	383.57	-2,686.90	2,714.12	0.24	0.18	9.43	46.13
	NORMAL	6,298.0	1.58	191.45	5,421.30	382.36	-2,686.28	2,713.35	2.23	0.55	111.89	135.28
	NORMAL	6,394.0	1.50	173.87	5,517.26	379.81	-2,686.41	2,713.11	0.50	-0.08	-18.31	251.68
	NORMAL	6,490.0	1.23	164.20	5,613.24	377.57	-2,686.00	2,712.37	0.37	-0.28	-10.07	215.70
	NORMAL	6,585.0	1.14	170.88	5,708.22	375.66	-2,685.57	2,711.67	0.17	-0.09	7.03	126.39
	NORMAL	6,680.0	1.14	155.41	5,803.20	373.87	-2,685.03	2,710.88	0.32	0.00	-16.28	262.27
6/19/2012	NORMAL	6,775.0	0.79	112.70	5,898.19	372.75	-2,684.03	2,709.73	0.82	-0.37	-44.96	223.76
	NORMAL	6,869.0	1.14	105.66	5,992.17	372.25	-2,682.53	2,708.18	0.39	0.37	-7.49	337.74
	NORMAL	6,965.0	0.88	20.76	6,088.16	372.68	-2,681.35	2,707.07	1.43	-0.27	-88.44	219.54
	NORMAL	7,061.0	1.05	28.67	6,184.15	374.14	-2,680.67	2,706.60	0.22	0.18	8.24	42.08
	NORMAL	7,156.0	0.09	355.45	6,279.14	374.98	-2,680.25	2,706.32	1.03	-1.01	-34.97	182.90
	NORMAL	7,251.0	0.35	17.42	6,374.14	375.33	-2,680.17	2,706.29	0.28	0.27	23.13	29.17
	NORMAL	7,347.0	0.70	1.43	6,470.14	376.20	-2,680.07	2,706.31	0.39	0.36	-16.66	329.16
	NORMAL	7,442.0	1.14	25.68	6,565.13	377.63	-2,679.65	2,706.10	0.61	0.46	25.53	54.06
	NORMAL	7,538.0	1.23	31.84	6,661.10	379.37	-2,678.69	2,705.40	0.16	0.09	6.42	57.87
	NORMAL	7,635.0	1.50	31.48	6,758.08	381.33	-2,677.48	2,704.48	0.28	0.28	-0.37	358.00
	6/20/2012	NORMAL	7,728.0	1.58	36.06	6,851.04	383.41	-2,676.09	2,703.41	0.16	0.09	4.92
NORMAL		7,824.0	1.50	32.72	6,947.01	385.54	-2,674.63	2,702.27	0.13	-0.08	-3.48	226.63
NORMAL		7,919.0	1.41	38.16	7,041.98	387.50	-2,673.24	2,701.17	0.17	-0.09	5.73	125.79
NORMAL		8,014.0	1.50	37.11	7,136.95	389.41	-2,671.76	2,699.99	0.10	0.09	-1.11	342.97
NORMAL		8,109.0	1.76	40.63	7,231.91	391.51	-2,670.06	2,698.61	0.29	0.27	3.71	22.83
NORMAL		8,158.0	1.76	47.31	7,280.89	392.59	-2,669.02	2,697.74	0.42	0.00	13.63	93.34
NORMAL		8,203.0	1.76	47.31	7,325.86	393.53	-2,668.00	2,696.87	0.00	0.00	0.00	0.00

### 3 Charts

#### 3.1 Vertical Section View



3.2 Plan View

