

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 314-18	Wellbore No.	
Well Name	KP 314-18	Common Name	KP 314-18
Project	KP 18-06S-91W	Site	KP 34-18 Pad
Vertical Section Azimuth	271.57 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	6/28/2012	UWI	KP 314-18
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	6/28/2012	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 (°)
6/28/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/28/2012	NORMAL	106.0	1.41	286.61	105.99	0.37	-1.25	1.26	1.33	1.33	0.00	286.61
	NORMAL	136.0	2.20	280.55	135.97	0.58	-2.17	2.18	2.71	2.63	-20.20	343.38
	NORMAL	166.0	2.38	272.46	165.95	0.72	-3.36	3.38	1.23	0.60	-26.97	295.03
	NORMAL	197.0	2.90	264.90	196.92	0.67	-4.78	4.80	2.02	1.68	-24.39	322.38
	NORMAL	227.0	3.70	273.78	226.87	0.67	-6.50	6.52	3.16	2.67	29.60	37.06
	NORMAL	257.0	4.31	271.40	256.79	0.76	-8.60	8.61	2.11	2.03	-7.93	343.57
6/29/2012	NORMAL	287.0	5.54	272.55	286.68	0.85	-11.17	11.19	4.11	4.10	3.83	5.16
	NORMAL	318.0	7.21	276.59	317.49	1.14	-14.60	14.62	5.57	5.39	13.03	17.05
	NORMAL	348.0	7.92	272.46	347.23	1.45	-18.53	18.57	2.98	2.37	-13.77	320.50
	NORMAL	379.0	9.33	273.34	377.88	1.69	-23.18	23.21	4.57	4.55	2.84	5.78
	NORMAL	409.0	10.73	267.19	407.42	1.69	-28.39	28.43	5.87	4.67	-20.50	319.53
	NORMAL	439.0	12.49	270.97	436.80	1.61	-34.43	34.46	6.39	5.87	12.60	25.24
	NORMAL	469.0	13.99	267.89	466.01	1.53	-41.29	41.32	5.52	5.00	-10.27	333.31
	NORMAL	499.0	15.04	271.41	495.05	1.49	-48.81	48.83	4.57	3.50	11.73	41.75
	NORMAL	530.0	15.13	268.33	524.98	1.47	-56.88	56.89	2.60	0.29	-9.94	274.92
	NORMAL	560.0	15.84	269.82	553.89	1.35	-64.88	64.90	2.71	2.37	4.97	29.98
	NORMAL	590.0	16.72	268.86	582.69	1.25	-73.29	73.30	3.07	2.93	-3.20	342.53
	NORMAL	621.0	17.60	270.79	612.31	1.22	-82.44	82.44	3.38	2.84	6.23	33.83
	NORMAL	651.0	18.83	272.02	640.81	1.46	-91.81	91.82	4.30	4.10	4.10	17.94
	NORMAL	691.0	19.82	271.58	678.55	1.87	-105.04	105.05	2.50	2.48	-1.10	351.43

2.1.2 Survey Stations (Continued)

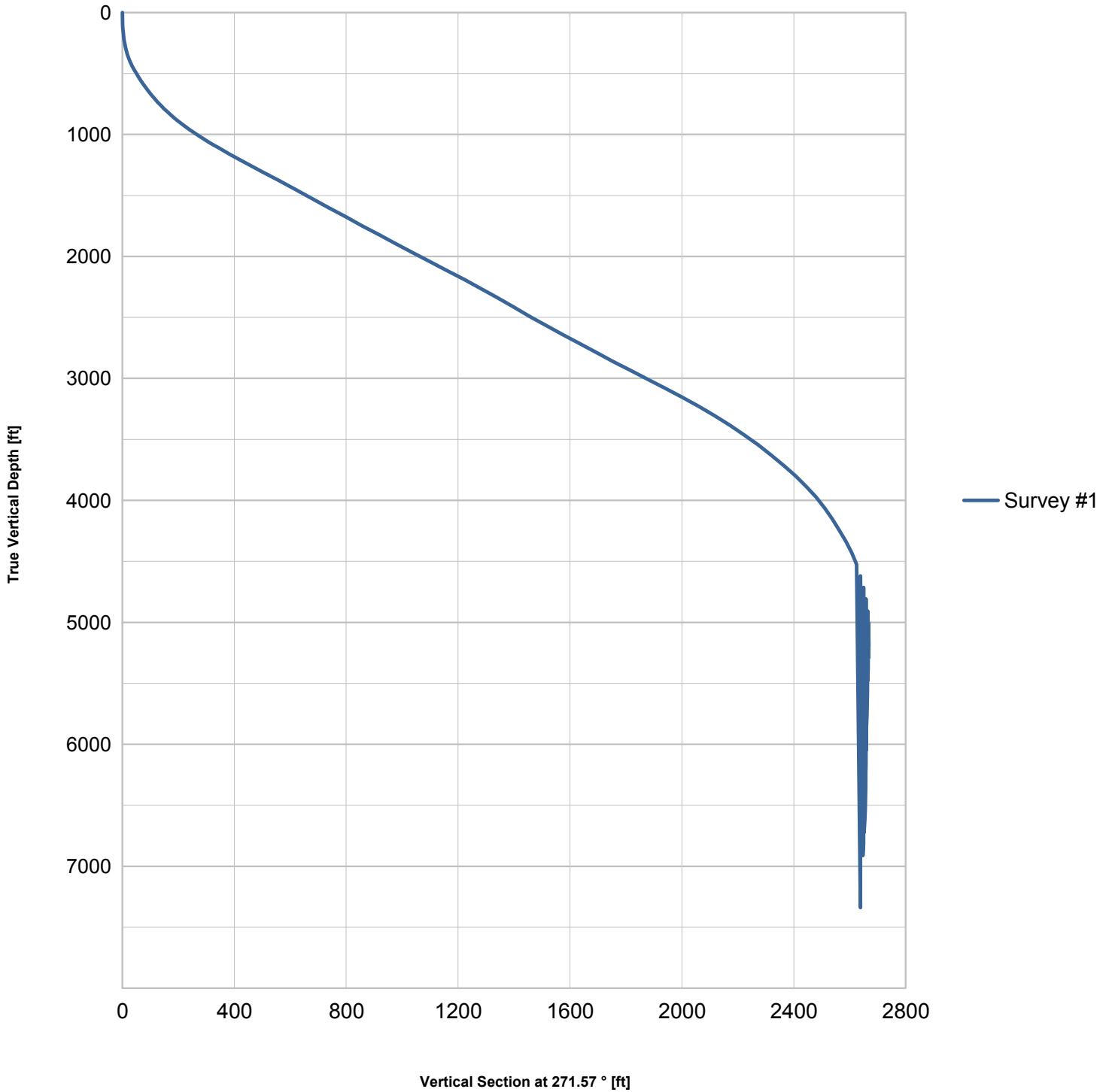
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
6/29/2012	NORMAL	722.0	20.75	272.22	707.63	2.23	-115.78	115.80	3.08	3.00	2.06	13.72
	NORMAL	752.0	21.89	271.84	735.58	2.61	-126.68	126.71	3.83	3.80	-1.27	352.91
	NORMAL	782.0	22.81	272.72	763.32	3.07	-138.08	138.11	3.26	3.07	2.93	20.40
	NORMAL	812.0	24.12	272.53	790.84	3.62	-150.01	150.06	4.37	4.37	-0.63	356.61
	NORMAL	843.0	25.34	273.46	819.00	4.30	-162.96	163.02	4.13	3.94	3.00	18.11
	NORMAL	873.0	26.50	273.33	845.98	5.07	-176.05	176.13	3.87	3.87	-0.43	357.14
	NORMAL	904.0	27.92	272.23	873.55	5.76	-190.21	190.30	4.86	4.58	-3.55	340.01
	NORMAL	935.0	28.99	271.48	900.80	6.23	-204.97	205.07	3.64	3.45	-2.42	341.20
	NORMAL	965.0	30.06	270.99	926.91	6.55	-219.75	219.85	3.66	3.57	-1.63	347.07
	NORMAL	997.0	31.57	271.38	954.39	6.89	-236.14	236.24	4.76	4.72	1.22	7.70
	NORMAL	1,028.0	32.89	270.86	980.61	7.21	-252.67	252.78	4.35	4.26	-1.68	347.91
	NORMAL	1,060.0	33.77	270.79	1,007.35	7.47	-270.25	270.36	2.75	2.75	-0.22	357.47
	NORMAL	1,124.0	35.96	270.94	1,059.86	8.02	-306.83	306.94	3.42	3.42	0.23	2.30
	NORMAL	1,156.0	36.29	271.06	1,085.70	8.35	-325.69	325.80	1.05	1.03	0.38	12.15
	NORMAL	1,187.0	36.88	270.90	1,110.59	8.67	-344.17	344.28	1.93	1.90	-0.52	350.75
	NORMAL	1,219.0	37.70	271.02	1,136.05	8.99	-363.55	363.66	2.57	2.56	0.38	5.11
	NORMAL	1,250.0	38.14	271.78	1,160.51	9.46	-382.60	382.71	2.07	1.42	2.45	47.01
	NORMAL	1,295.0	38.47	271.76	1,195.82	10.32	-410.48	410.61	0.73	0.73	-0.04	357.84
6/30/2012	NORMAL	1,295.0	38.47	271.76	1,195.82	10.32	-410.48	410.61	0.00	0.00	0.00	0.00
	NORMAL	1,435.0	39.39	270.02	1,304.73	11.67	-498.43	498.56	1.02	0.66	-1.24	309.40
	NORMAL	1,530.0	40.27	269.85	1,377.69	11.60	-559.28	559.39	0.93	0.93	-0.18	352.88
	NORMAL	1,625.0	38.43	270.90	1,451.15	11.98	-619.51	619.60	2.06	-1.94	1.11	160.51
	NORMAL	1,721.0	38.16	270.20	1,526.49	12.56	-679.00	679.09	0.53	-0.28	-0.73	237.83
	NORMAL	1,816.0	38.95	271.25	1,600.78	13.31	-738.20	738.29	1.08	0.83	1.11	40.05
	NORMAL	1,911.0	38.69	270.72	1,674.80	14.33	-797.74	797.84	0.44	-0.27	-0.56	231.75
	NORMAL	2,005.0	39.04	271.95	1,747.99	15.71	-856.71	856.82	0.90	0.37	1.31	66.09
	NORMAL	2,101.0	39.48	274.24	1,822.32	19.00	-917.36	917.54	1.58	0.46	2.39	74.00
	NORMAL	2,196.0	39.22	273.01	1,895.79	22.81	-977.48	977.73	0.87	-0.27	-1.29	251.09
	NORMAL	2,291.0	39.48	272.13	1,969.25	25.51	-1,037.65	1,037.96	0.65	0.27	-0.93	294.64
	NORMAL	2,386.0	40.10	270.72	2,042.25	27.01	-1,098.42	1,098.75	1.15	0.65	-1.48	303.95
	NORMAL	2,482.0	40.36	270.02	2,115.54	27.41	-1,160.42	1,160.74	0.54	0.27	-0.73	299.64
	NORMAL	2,578.0	39.43	273.19	2,189.20	29.12	-1,221.96	1,222.30	2.33	-0.97	3.30	115.79
	NORMAL	2,673.0	37.72	273.19	2,263.47	32.42	-1,281.10	1,281.51	1.80	-1.80	0.00	180.00
	NORMAL	2,769.0	38.16	271.08	2,339.18	34.61	-1,340.07	1,340.52	1.43	0.46	-2.20	287.90
7/1/2012	NORMAL	4,010.0	35.88	272.13	3,306.64	55.16	-2,116.52	2,117.24	1.44	-1.38	0.71	163.22
7/1/2012	NORMAL	2,865.0	36.98	272.83	2,415.27	36.59	-1,398.57	1,399.05	1.66	-1.23	1.82	138.57
	NORMAL	2,960.0	37.02	272.83	2,491.14	39.42	-1,455.67	1,456.20	0.04	0.04	0.00	0.00
	NORMAL	3,056.0	38.78	271.95	2,566.89	41.87	-1,514.59	1,515.17	1.92	1.83	-0.92	342.58
	NORMAL	3,151.0	38.87	269.85	2,640.91	42.80	-1,574.13	1,574.71	1.39	0.09	-2.21	273.09
	NORMAL	3,246.0	39.31	271.60	2,714.65	43.56	-1,634.02	1,634.60	1.25	0.46	1.84	68.94
	NORMAL	3,342.0	39.22	270.02	2,788.97	44.42	-1,694.77	1,695.35	1.05	-0.09	-1.65	264.25
	NORMAL	3,437.0	39.48	270.90	2,862.44	44.91	-1,755.00	1,755.58	0.65	0.27	0.93	65.36
	NORMAL	3,532.0	40.45	271.95	2,935.25	46.43	-1,816.00	1,816.59	1.24	1.02	1.11	35.21
	NORMAL	3,628.0	40.19	272.31	3,008.44	48.74	-1,878.08	1,878.71	0.36	-0.27	0.38	138.28
	NORMAL	3,724.0	40.36	271.60	3,081.69	50.86	-1,940.10	1,940.77	0.51	0.18	-0.74	290.05
	NORMAL	3,819.0	39.04	270.90	3,154.78	52.19	-2,000.77	2,001.45	1.47	-1.39	-0.74	198.44
	NORMAL	3,914.0	37.20	271.45	3,229.51	53.38	-2,059.40	2,060.09	1.97	-1.94	0.58	169.76
	NORMAL	4,105.0	34.03	269.67	3,384.50	56.04	-2,170.93	2,171.65	2.45	-1.95	-2.59	216.30
	NORMAL	4,200.0	32.01	269.67	3,464.16	55.75	-2,222.70	2,223.39	2.13	-2.13	0.00	180.00
	NORMAL	4,296.0	30.16	269.32	3,546.37	55.31	-2,272.26	2,272.92	1.94	-1.93	-0.36	185.43
	NORMAL	4,392.0	28.75	269.32	3,629.96	54.75	-2,319.46	2,320.09	1.47	-1.47	0.00	180.00
	NORMAL	4,487.0	27.00	270.90	3,713.93	54.82	-2,363.87	2,364.49	2.00	-1.84	1.66	157.81
	NORMAL	4,583.0	25.24	271.95	3,800.12	55.86	-2,406.12	2,406.75	1.90	-1.83	1.09	165.75
	NORMAL	4,676.0	22.69	271.60	3,885.10	57.03	-2,443.87	2,444.52	2.75	-2.74	-0.38	183.03
	NORMAL	4,771.0	20.05	270.20	3,973.56	57.60	-2,478.48	2,479.13	2.83	-2.78	-1.47	190.29
	NORMAL	4,865.0	18.03	270.72	4,062.41	57.84	-2,509.14	2,509.79	2.16	-2.15	0.55	175.45
	NORMAL	4,960.0	15.74	274.94	4,153.32	59.14	-2,536.69	2,537.35	2.73	-2.41	4.44	153.85

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 (°)
7/2/2012	NORMAL	5,056.0	15.39	273.19	4,245.80	60.97	-2,562.38	2,563.09	0.61	-0.36	-1.82	232.46
	NORMAL	5,151.0	13.72	276.35	4,337.74	62.91	-2,586.16	2,586.92	1.95	-1.76	3.33	156.09
	NORMAL	5,247.0	11.17	273.54	4,431.48	64.75	-2,606.76	2,607.56	2.73	-2.66	-2.93	191.99
	NORMAL	5,343.0	9.23	274.24	4,525.96	65.89	-2,623.72	2,624.54	2.02	-2.02	0.73	176.69
	NORMAL	5,438.0	7.91	270.02	4,619.90	66.46	-2,637.86	2,638.69	1.54	-1.39	-4.44	203.40
	NORMAL	5,533.0	5.72	259.30	4,714.23	65.58	-2,649.05	2,649.85	2.66	-2.31	-11.28	204.90
	NORMAL	5,629.0	4.31	259.12	4,809.86	64.01	-2,657.29	2,658.05	1.47	-1.47	-0.19	180.55
	NORMAL	5,725.0	2.37	269.32	4,905.69	63.31	-2,662.82	2,663.56	2.11	-2.02	10.63	168.02
	NORMAL	5,820.0	1.14	300.96	5,000.64	63.77	-2,665.60	2,666.34	1.60	-1.29	33.31	156.86
	NORMAL	5,916.0	0.79	289.01	5,096.63	64.48	-2,667.04	2,667.81	0.42	-0.36	-12.45	204.02
	NORMAL	6,012.0	0.53	51.70	5,192.63	64.97	-2,667.32	2,668.10	1.21	-0.27	127.80	157.49
	NORMAL	6,107.0	1.14	23.40	5,287.62	66.11	-2,666.60	2,667.41	0.76	0.64	-29.79	311.24
	NORMAL	6,202.0	1.41	49.77	5,382.59	67.73	-2,665.33	2,666.19	0.67	0.28	27.76	78.86
	NORMAL	6,298.0	1.50	49.94	5,478.56	69.30	-2,663.47	2,664.37	0.09	0.09	0.18	2.83
	NORMAL	6,394.0	0.44	61.37	5,574.55	70.29	-2,662.18	2,663.11	1.12	-1.10	11.91	175.34
	NORMAL	6,490.0	0.44	99.51	5,670.55	70.40	-2,661.49	2,662.42	0.30	0.00	39.73	109.07
7/3/2012	NORMAL	6,585.0	0.70	75.96	5,765.54	70.48	-2,660.57	2,661.50	0.36	0.27	-24.79	305.80
	NORMAL	6,681.0	1.14	56.27	5,861.53	71.15	-2,659.21	2,660.16	0.56	0.46	-20.51	314.19
	NORMAL	6,777.0	0.62	89.67	5,957.52	71.69	-2,657.89	2,658.86	0.74	-0.54	34.79	151.26
	NORMAL	6,872.0	0.70	172.46	6,052.51	71.12	-2,657.30	2,658.26	0.92	0.08	87.15	127.46
	NORMAL	6,968.0	0.62	132.56	6,148.51	70.18	-2,656.85	2,657.77	0.48	-0.08	-41.56	240.57
	NORMAL	7,063.0	0.26	140.64	6,243.50	69.67	-2,656.33	2,657.24	0.38	-0.38	8.51	174.24
	NORMAL	7,159.0	1.05	165.78	6,339.50	68.65	-2,655.98	2,656.86	0.86	0.82	26.19	32.86
7/4/2012	NORMAL	7,254.0	1.14	167.36	6,434.48	66.88	-2,655.55	2,656.39	0.10	0.09	1.66	19.34
	NORMAL	7,350.0	1.05	132.73	6,530.46	65.35	-2,654.70	2,655.49	0.68	-0.09	-36.07	245.18
	NORMAL	7,446.0	1.50	104.08	6,626.44	64.45	-2,652.83	2,653.60	0.80	0.47	-29.84	290.33
	NORMAL	7,542.0	1.50	119.20	6,722.41	63.53	-2,650.52	2,651.26	0.41	0.00	15.75	97.56
	NORMAL	7,636.0	1.41	125.35	6,816.38	62.26	-2,648.50	2,649.21	0.19	-0.10	6.54	123.01
	NORMAL	7,731.0	1.23	95.29	6,911.35	61.49	-2,646.53	2,647.22	0.74	-0.19	-31.64	240.72
7/6/2012	NORMAL	8,158.0	1.23	95.29	7,338.26	60.65	-2,637.41	2,638.08	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

