

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 323-8	Wellbore No.	
Well Name	KP 323-8	Common Name	KP 323-8
Project	KP 08-06S-91W	Site	KP 24-8 Pad
Vertical Section Azimuth	349.89 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	3/2/2012	UWI	KP 323-8
Active Datum	KB @6,552.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Started	3/2/2012	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)	DLeg (°/100ft)	Bulld (°/100ft)	Turn (°/100ft)	TFace (°)
3/2/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/2/2012	NORMAL	106.0	0.70	337.24	106.00	0.60	-0.25	0.63	0.66	0.66	0.00	337.24
	NORMAL	136.0	1.67	336.97	135.99	1.17	-0.49	1.24	3.23	3.23	-0.90	359.54
	NORMAL	166.0	2.64	337.32	165.97	2.21	-0.93	2.34	3.23	3.23	1.17	0.95
	NORMAL	197.0	3.08	357.36	196.93	3.70	-1.24	3.86	3.50	1.42	64.65	76.47
	NORMAL	227.0	4.22	0.70	226.87	5.61	-1.27	5.74	3.86	3.80	11.13	12.24
	NORMAL	258.0	4.93	358.77	257.77	8.08	-1.28	8.18	2.34	2.29	-6.23	346.80
	NORMAL	288.0	5.98	0.18	287.63	10.93	-1.30	10.99	3.53	3.50	4.70	7.98
	NORMAL	318.0	6.51	356.48	317.46	14.19	-1.40	14.22	2.22	1.77	-12.33	320.94
	NORMAL	348.0	6.77	350.86	347.26	17.64	-1.79	17.68	2.33	0.87	-18.73	289.00
	NORMAL	379.0	7.65	347.87	378.01	21.46	-2.51	21.56	3.09	2.84	-9.65	335.42
	NORMAL	409.0	9.24	346.29	407.68	25.75	-3.50	25.96	5.36	5.30	-5.27	350.91
	NORMAL	439.0	10.56	348.84	437.24	30.79	-4.61	31.12	4.64	4.40	8.50	19.63
3/3/2012	NORMAL	470.0	11.96	348.13	467.64	36.72	-5.82	37.17	4.54	4.52	-2.29	354.00
	NORMAL	501.0	13.72	347.87	497.86	43.45	-7.25	44.05	5.68	5.68	-0.84	357.99
	NORMAL	531.0	14.87	348.05	526.93	50.70	-8.80	51.46	3.84	3.83	0.60	2.30
	NORMAL	622.0	18.56	351.21	614.08	76.44	-13.43	77.61	4.17	4.05	3.47	15.36
	NORMAL	713.0	22.08	350.77	699.40	107.65	-18.39	109.20	3.87	3.87	-0.48	357.31
	NORMAL	783.0	23.13	350.03	764.02	134.18	-22.88	136.11	1.55	1.50	-1.06	344.50
	NORMAL	874.0	25.59	350.73	846.91	171.18	-29.14	173.64	2.72	2.70	0.77	7.01
	NORMAL	964.0	29.43	349.20	926.72	212.10	-36.41	215.20	4.34	4.27	-1.70	348.89

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Buile (°/100ft)	Turn (°/100ft)	TFace (°)
3/3/2012	NORMAL	1,060.0	32.80	349.38	1,008.90	260.84	-45.63	264.80	3.51	3.51	0.19	1.66
	NORMAL	1,156.0	36.72	349.11	1,087.75	314.60	-55.85	319.52	4.09	4.08	-0.28	357.64
	NORMAL	1,251.0	38.90	348.80	1,162.80	371.75	-67.01	377.74	2.30	2.29	-0.33	354.89
3/4/2012	NORMAL	1,346.0	40.86	348.51	1,235.70	431.47	-78.99	438.64	2.07	2.06	-0.31	354.47
	NORMAL	1,404.0	42.31	349.07	1,279.08	469.23	-86.47	477.13	2.58	2.50	0.97	14.59
	NORMAL	1,528.0	42.60	348.60	1,370.57	551.35	-102.68	560.81	0.35	0.23	-0.38	312.26
	NORMAL	1,622.0	41.60	350.00	1,440.32	613.27	-114.39	623.83	1.46	-1.06	1.49	137.33
	NORMAL	1,718.0	39.60	350.60	1,513.20	674.85	-124.92	686.30	2.12	-2.08	0.63	169.18
	NORMAL	1,813.0	39.80	350.00	1,586.30	734.66	-135.15	746.98	0.46	0.21	-0.63	297.33
	NORMAL	1,908.0	40.70	349.00	1,658.80	795.01	-146.34	808.35	1.17	0.95	-1.05	323.94
	NORMAL	2,004.0	39.50	349.70	1,732.24	855.78	-157.77	870.19	1.34	-1.25	0.73	159.67
	NORMAL	2,099.0	38.20	350.60	1,806.22	914.49	-167.97	929.77	1.49	-1.37	0.95	156.88
	NORMAL	2,193.0	37.90	350.70	1,880.24	971.66	-177.38	987.71	0.33	-0.32	0.11	168.43
	NORMAL	2,287.0	39.90	349.80	1,953.39	1,029.83	-187.39	1,046.73	2.21	2.13	-0.96	343.87
	NORMAL	2,383.0	39.90	349.30	2,027.04	1,090.38	-198.56	1,108.31	0.33	0.00	-0.52	269.81
	NORMAL	2,478.0	39.80	349.00	2,099.98	1,150.17	-210.02	1,169.18	0.23	-0.11	-0.32	242.40
	NORMAL	2,573.0	40.10	348.80	2,172.80	1,210.03	-221.76	1,230.17	0.34	0.32	-0.21	336.75
	NORMAL	2,668.0	40.40	348.60	2,245.31	1,270.22	-233.79	1,291.54	0.34	0.32	-0.21	336.62
3/5/2012	NORMAL	2,763.0	38.90	349.50	2,318.45	1,329.73	-245.31	1,352.15	1.69	-1.58	0.95	159.40
	NORMAL	2,859.0	36.80	351.40	2,394.26	1,387.81	-255.10	1,411.04	2.50	-2.19	1.98	151.71
	NORMAL	2,954.0	34.60	350.70	2,471.40	1,442.57	-263.72	1,466.46	2.36	-2.32	-0.74	190.23
	NORMAL	3,049.0	32.00	350.90	2,550.80	1,494.05	-272.06	1,518.61	2.74	-2.74	0.21	177.67
	NORMAL	3,144.0	30.30	352.00	2,632.10	1,542.64	-279.38	1,567.73	1.89	-1.79	1.16	161.96
	NORMAL	3,239.0	28.70	350.60	2,714.78	1,588.88	-286.44	1,614.49	1.83	-1.68	-1.47	202.70
	NORMAL	3,334.0	25.60	350.40	2,799.30	1,631.63	-293.59	1,657.83	3.26	-3.26	-0.21	181.60
	NORMAL	3,429.0	23.50	349.00	2,885.71	1,670.46	-300.63	1,697.30	2.29	-2.21	-1.47	194.85
	NORMAL	3,524.0	23.20	348.60	2,972.93	1,707.40	-307.94	1,734.94	0.36	-0.32	-0.42	207.67
	NORMAL	3,619.0	21.30	350.20	3,060.85	1,742.75	-314.57	1,770.91	2.10	-2.00	1.68	163.05
	NORMAL	3,714.0	19.40	351.30	3,149.92	1,775.35	-319.90	1,803.94	2.04	-2.00	1.16	169.13
	NORMAL	3,808.0	16.70	348.60	3,239.28	1,804.03	-324.93	1,833.05	3.01	-2.87	-2.87	195.94
	NORMAL	3,904.0	14.30	352.00	3,331.79	1,829.29	-329.31	1,858.69	2.67	-2.50	3.54	160.90
	NORMAL	3,998.0	12.80	352.50	3,423.17	1,851.11	-332.28	1,880.70	1.60	-1.60	0.53	175.78
	NORMAL	4,094.0	11.40	347.20	3,517.04	1,870.91	-335.77	1,900.80	1.86	-1.46	-5.52	215.86
	NORMAL	4,189.0	9.70	348.80	3,610.43	1,887.92	-339.41	1,918.18	1.82	-1.79	1.68	171.01
	NORMAL	4,285.0	7.70	334.60	3,705.33	1,901.66	-343.74	1,932.48	3.04	-2.08	-14.79	220.17
	NORMAL	4,380.0	6.20	344.80	3,799.63	1,912.36	-347.81	1,943.73	2.04	-1.58	10.74	145.54
	NORMAL	4,477.0	3.90	344.90	3,896.25	1,920.61	-350.05	1,952.23	2.37	-2.37	0.10	179.83
	NORMAL	4,572.0	1.20	322.30	3,991.15	1,924.51	-351.50	1,956.33	2.98	-2.84	-23.79	189.38
	NORMAL	4,477.0	3.90	344.90	3,896.25	1,920.61	-350.05	1,952.23	0.00	0.00	0.00	0.00
3/6/2012	NORMAL	4,572.0	1.20	322.20	3,991.15	1,924.51	-351.50	1,956.33	0.00	0.00	0.00	0.00
	NORMAL	4,666.0	1.10	322.60	4,085.13	1,926.01	-352.65	1,958.01	0.11	-0.11	0.43	175.61
	NORMAL	4,761.0	1.40	337.90	4,180.11	1,927.81	-353.64	1,959.95	0.47	0.32	16.11	55.87
	NORMAL	4,857.0	0.30	269.70	4,276.10	1,928.89	-354.33	1,961.14	1.37	-1.15	-71.04	192.20
	NORMAL	4,952.0	0.30	341.60	4,371.09	1,929.13	-354.66	1,961.43	0.37	0.00	75.68	125.95
	NORMAL	5,047.0	1.00	351.80	4,466.09	1,930.18	-354.85	1,962.50	0.74	0.74	10.74	14.51
	NORMAL	5,143.0	0.60	57.50	4,562.08	1,931.28	-354.55	1,963.53	0.97	-0.42	68.44	144.01
	NORMAL	5,238.0	1.10	53.30	4,657.07	1,932.09	-353.40	1,964.13	0.53	0.53	-4.42	350.79
	NORMAL	5,333.0	0.10	330.20	4,752.06	1,932.71	-352.71	1,964.62	1.15	-1.05	-87.47	185.21
	NORMAL	5,428.0	0.30	350.40	4,847.06	1,933.03	-352.79	1,964.94	0.22	0.21	21.26	29.71
	NORMAL	5,523.0	0.50	5.30	4,942.06	1,933.69	-352.80	1,965.59	0.24	0.21	15.68	35.06
	NORMAL	5,618.0	0.70	263.40	5,037.06	1,934.03	-353.33	1,966.03	0.99	0.21	-107.26	226.75
	NORMAL	5,714.0	0.80	338.10	5,133.05	1,934.59	-354.17	1,966.72	0.95	0.10	77.81	122.36
	NORMAL	5,809.0	1.10	353.90	5,228.04	1,936.11	-354.51	1,968.28	0.42	0.32	16.63	49.21
	NORMAL	5,905.0	0.30	266.50	5,324.03	1,937.01	-354.86	1,969.23	1.17	-0.83	-91.04	195.42
	NORMAL	6,000.0	0.60	319.10	5,419.03	1,937.37	-355.43	1,969.68	0.51	0.32	55.37	82.30
	NORMAL	6,094.0	1.20	199.90	5,513.02	1,936.82	-356.09	1,969.25	1.68	0.64	-126.81	221.47
	NORMAL	6,194.0	1.00	203.60	5,613.00	1,935.03	-356.80	1,967.62	0.21	-0.20	3.70	162.29

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
3/7/2012	NORMAL	6,290.0	0.20	31.90	5,709.00	1,934.41	-357.04	1,967.05	1.25	-0.83	-178.85	181.38
	NORMAL	6,385.0	0.60	226.50	5,804.00	1,934.21	-357.32	1,966.90	0.84	0.42	-174.11	190.97
	NORMAL	6,480.0	2.50	195.30	5,898.96	1,931.87	-358.22	1,964.75	2.12	2.00	-32.84	319.91
	NORMAL	6,575.0	1.70	201.00	5,993.90	1,928.55	-359.28	1,961.67	0.87	-0.84	6.00	168.20
	NORMAL	6,670.0	0.80	218.00	6,088.87	1,926.71	-360.19	1,960.02	1.01	-0.95	17.89	165.95
	NORMAL	6,765.0	0.50	268.30	6,183.87	1,926.18	-361.01	1,959.64	0.65	-0.32	52.95	141.32
3/8/2012	NORMAL	6,861.0	0.80	340.70	6,279.86	1,926.80	-361.65	1,960.36	0.84	0.31	75.42	108.70
	NORMAL	6,956.0	1.50	353.00	6,374.84	1,928.66	-362.02	1,962.26	0.78	0.74	12.95	25.64
	NORMAL	7,051.0	1.90	33.80	6,469.80	1,931.20	-361.30	1,964.64	1.31	0.42	42.95	92.84
	NORMAL	7,146.0	0.50	113.60	6,564.78	1,932.34	-360.04	1,965.54	1.98	-1.47	84.00	164.80
	NORMAL	7,240.0	0.80	53.80	6,658.78	1,932.57	-359.14	1,965.60	0.74	0.32	-63.62	261.97
	NORMAL	7,336.0	1.60	15.00	6,754.76	1,934.26	-358.25	1,967.11	1.14	0.83	-40.42	294.03
	NORMAL	7,431.0	2.60	18.70	6,849.69	1,937.58	-357.21	1,970.20	1.06	1.05	3.89	9.57
	NORMAL	7,526.0	3.30	25.20	6,944.57	1,942.10	-355.36	1,974.32	0.82	0.74	6.84	28.81
	NORMAL	7,621.0	3.50	23.80	7,039.40	1,947.22	-353.02	1,978.96	0.23	0.21	-1.47	336.75
	NORMAL	7,716.0	4.60	23.80	7,134.16	1,953.36	-350.32	1,984.52	1.16	1.16	0.00	0.00
	NORMAL	7,760.0	4.60	23.80	7,178.02	1,956.59	-348.89	1,987.45	0.00	0.00	0.00	0.00