

I General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RMV 145-36	Wellbore No.	
Well Name	RMV 145-36	Common Name	RMV 145-36
Project	RU 36-06S-094W	Site	RWF 33-36 Pad
Vertical Section	228.06 (°)	North Reference	True
Azimuth		Origin E/W	
Spud Date	11/5/2012	UWI	RMV 145-36
Active Datum	KB @6,554.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	11/5/2012	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

7342

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 (°)
11/5/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/5/2012	NORMAL	84.0	0.09	159.52	84.00	-0.06	0.02	0.02	0.11	0.11	0.00	159.52
	NORMAL	179.0	4.13	228.60	178.92	-2.40	-2.52	3.47	4.31	4.25	72.72	70.25
	NORMAL	271.0	5.89	227.72	270.56	-7.76	-8.50	11.51	1.91	1.91	-0.96	357.06
	NORMAL	363.0	8.01	229.66	361.88	-15.09	-16.88	22.64	2.32	2.30	2.11	7.28
	NORMAL	455.0	12.05	228.52	452.46	-25.60	-28.96	38.65	4.40	4.39	-1.24	356.62
	NORMAL	545.0	14.78	226.49	539.99	-39.73	-44.33	59.53	3.08	3.03	-2.26	349.22
	NORMAL	637.0	18.91	229.57	628.03	-57.49	-64.20	86.17	4.59	4.49	3.35	13.67
	NORMAL	709.0	21.05	229.48	695.69	-73.46	-82.91	110.76	2.97	2.97	-0.12	359.13
11/6/2012	NORMAL	800.0	23.53	227.70	779.88	-96.30	-108.77	145.27	2.82	2.73	-1.96	343.95
	NORMAL	892.0	26.66	227.19	863.19	-122.70	-137.50	184.28	3.41	3.40	-0.55	355.82
	NORMAL	982.0	30.16	227.89	942.34	-151.59	-169.10	227.10	3.91	3.89	0.78	5.74
	NORMAL	1,073.0	32.19	228.77	1,020.19	-182.89	-204.29	274.20	2.29	2.23	0.97	13.03
	NORMAL	1,167.0	33.03	228.97	1,099.38	-216.21	-242.45	324.85	0.90	0.89	0.21	7.40
	NORMAL	1,262.0	33.45	228.96	1,178.83	-250.40	-281.73	376.92	0.44	0.44	-0.01	359.25
	NORMAL	1,358.0	31.94	226.92	1,259.62	-285.12	-320.23	428.77	1.95	-1.57	-2.13	215.27
	NORMAL	1,453.0	32.89	227.89	1,339.82	-319.58	-357.72	479.69	1.14	1.00	1.02	29.10
	NORMAL	1,548.0	34.67	229.27	1,418.78	-354.51	-397.34	532.50	2.04	1.87	1.45	23.89
	NORMAL	1,644.0	33.04	228.79	1,498.50	-389.57	-437.72	585.97	1.72	-1.70	-0.50	189.12
	NORMAL	1,739.0	30.74	228.49	1,579.15	-422.73	-475.39	636.15	2.43	-2.42	-0.32	183.8
	NORMAL	1,835.0	30.43	230.04	1,661.80	-454.61	-512.40	684.98	0.88	-0.32	1.61	112.12

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 (°)
11/6/2012	NORMAL	1,930.0	30.90	233.01	1,743.52	-484.74	-550.33	733.33	1.67	0.49	3.13	74.04
	NORMAL	2,026.0	31.22	232.46	1,825.76	-514.73	-589.74	782.70	0.45	0.33	-0.57	318.20
11/7/2012	NORMAL	2,119.0	30.94	230.44	1,905.41	-544.64	-627.29	830.62	1.16	-0.30	-2.17	254.11
	NORMAL	2,215.0	32.53	229.32	1,987.05	-577.18	-665.89	881.08	1.77	1.66	-1.17	339.19
	NORMAL	2,310.0	33.06	227.54	2,066.91	-611.33	-704.38	932.53	1.16	0.56	-1.87	298.05
	NORMAL	2,406.0	33.14	228.40	2,147.33	-646.43	-743.32	984.96	0.50	0.08	0.90	80.69
	NORMAL	2,500.0	33.06	226.83	2,226.08	-681.03	-781.23	1,036.28	0.92	-0.09	-1.67	264.01
	NORMAL	2,596.0	32.74	226.65	2,306.69	-716.76	-819.21	1,088.41	0.35	-0.33	-0.19	196.91
	NORMAL	2,692.0	32.92	227.79	2,387.35	-752.11	-857.41	1,140.45	0.67	0.19	1.19	74.24
	NORMAL	2,788.0	32.91	224.99	2,467.95	-788.08	-895.17	1,192.58	1.58	-0.01	-2.92	268.45
	NORMAL	2,883.0	33.25	226.02	2,547.55	-824.42	-932.16	1,244.38	0.69	0.36	1.08	59.27
	NORMAL	2,979.0	34.07	225.32	2,627.45	-861.60	-970.22	1,297.54	0.94	0.85	-0.73	334.39
	NORMAL	3,043.0	34.29	226.49	2,680.40	-886.62	-996.04	1,333.47	1.08	0.34	1.83	71.98
11/9/2012	NORMAL	3,169.0	34.80	225.98	2,784.18	-936.04	-1,047.63	1,404.88	0.47	0.40	-0.40	330.23
	NORMAL	3,264.0	34.79	225.18	2,862.20	-973.99	-1,086.35	1,459.04	0.48	-0.01	-0.84	268.42
	NORMAL	3,360.0	34.01	226.21	2,941.41	-1,011.87	-1,125.16	1,513.23	1.01	-0.81	1.07	143.70
	NORMAL	3,456.0	34.53	225.86	3,020.74	-1,049.40	-1,164.07	1,567.25	0.58	0.54	-0.36	339.10
11/10/2012	NORMAL	3,552.0	32.59	227.15	3,100.74	-1,085.93	-1,202.55	1,620.30	2.15	-2.02	1.34	160.35
	NORMAL	3,647.0	32.81	228.11	3,180.68	-1,120.52	-1,240.47	1,671.62	0.59	0.23	1.01	67.42
	NORMAL	3,743.0	31.67	227.37	3,261.88	-1,154.95	-1,278.38	1,722.83	1.26	-1.19	-0.77	198.79
	NORMAL	3,837.0	30.89	227.61	3,342.21	-1,187.93	-1,314.35	1,771.63	0.84	-0.83	0.26	171.03
	NORMAL	3,933.0	30.95	228.78	3,424.57	-1,220.81	-1,351.12	1,820.96	0.63	0.06	1.22	84.80
	NORMAL	4,027.0	31.69	229.11	3,504.87	-1,252.91	-1,387.97	1,869.82	0.81	0.79	0.35	13.19
	NORMAL	4,123.0	31.51	229.00	3,586.64	-1,285.87	-1,425.96	1,920.11	0.20	-0.19	-0.11	197.7
	NORMAL	4,218.0	32.60	228.67	3,667.16	-1,319.06	-1,463.92	1,970.53	1.16	1.15	-0.35	350.73
	NORMAL	4,314.0	32.69	228.00	3,747.99	-1,353.48	-1,502.60	2,022.31	0.39	0.09	-0.70	283.70
	NORMAL	4,406.0	32.45	228.77	3,825.52	-1,386.38	-1,539.63	2,071.83	0.52	-0.26	0.84	120.39
	NORMAL	4,502.0	32.57	228.40	3,906.48	-1,420.51	-1,578.32	2,123.43	0.24	0.12	-0.39	300.95
	NORMAL	4,596.0	32.89	228.95	3,985.55	-1,454.07	-1,616.49	2,174.25	0.46	0.34	0.59	43.13
	NORMAL	4,692.0	32.36	228.38	4,066.41	-1,488.25	-1,655.35	2,226.00	0.64	-0.55	-0.59	209.87
	NORMAL	4,787.0	32.36	228.42	4,146.65	-1,522.01	-1,693.38	2,276.85	0.02	0.00	0.04	90.02
	NORMAL	4,883.0	32.01	227.72	4,227.90	-1,556.18	-1,731.42	2,327.98	0.53	-0.36	-0.73	226.52
	NORMAL	4,979.0	30.20	226.11	4,310.10	-1,590.03	-1,767.65	2,377.56	2.07	-1.89	-1.68	203.99
	NORMAL	5,074.0	28.86	228.57	4,392.76	-1,621.77	-1,802.06	2,424.37	1.90	-1.41	2.59	138.93
	NORMAL	5,169.0	28.54	228.14	4,476.09	-1,652.09	-1,836.15	2,469.99	0.40	-0.34	-0.45	212.65
	NORMAL	5,264.0	27.02	227.88	4,560.13	-1,681.71	-1,869.06	2,514.27	1.61	-1.60	-0.27	184.44
	NORMAL	5,360.0	25.82	224.66	4,646.11	-1,711.20	-1,899.94	2,556.95	1.95	-1.25	-3.35	228.62
	NORMAL	5,455.0	23.73	230.42	4,732.38	-1,738.11	-1,929.22	2,596.71	3.36	-2.20	6.06	133.48
	NORMAL	5,551.0	22.56	228.22	4,820.65	-1,762.69	-1,957.84	2,634.42	1.52	-1.22	-2.29	215.46
11/11/2012	NORMAL	5,647.0	21.56	227.73	4,909.62	-1,786.82	-1,984.63	2,670.48	1.06	-1.04	-0.51	190.20
	NORMAL	5,742.0	20.32	229.15	4,998.34	-1,809.35	-2,010.02	2,704.43	1.41	-1.31	1.49	158.40
	NORMAL	5,837.0	18.78	229.90	5,087.86	-1,829.99	-2,034.20	2,736.20	1.64	-1.62	0.79	171.10
	NORMAL	5,933.0	16.88	228.33	5,179.25	-1,849.21	-2,056.43	2,765.59	2.04	-1.98	-1.64	193.45
	NORMAL	6,028.0	14.51	228.07	5,270.70	-1,866.34	-2,075.59	2,791.29	2.50	-2.49	-0.27	181.57
	NORMAL	6,124.0	14.51	228.07	5,363.64	-1,882.41	-2,093.48	2,815.34	0.00	0.00	0.00	0.00
11/12/2012	NORMAL	6,220.0	12.75	229.82	5,456.93	-1,897.28	-2,110.53	2,837.96	1.88	-1.83	1.82	167.66
	NORMAL	6,316.0	10.67	231.03	5,550.93	-1,909.71	-2,125.53	2,857.42	2.18	-2.17	1.26	173.86
	NORMAL	6,412.0	9.23	227.81	5,645.48	-1,920.47	-2,138.15	2,874.00	1.61	-1.50	-3.35	199.54
	NORMAL	6,507.0	8.27	231.94	5,739.38	-1,929.80	-2,149.17	2,888.43	1.21	-1.01	4.35	148.83
	NORMAL	6,603.0	7.21	228.24	5,834.50	-1,938.07	-2,159.10	2,901.35	1.22	-1.10	-3.85	203.35
	NORMAL	6,697.0	6.24	226.66	5,927.85	-1,945.50	-2,167.22	2,912.35	1.05	-1.03	-1.68	190.02
	NORMAL	6,792.0	4.13	224.20	6,022.46	-1,951.50	-2,173.36	2,920.93	2.23	-2.22	-2.59	184.79
	NORMAL	6,888.0	2.27	238.10	6,118.31	-1,954.98	-2,177.38	2,926.25	2.09	-1.94	14.48	164.19
	NORMAL	6,981.0	1.32	251.95	6,211.26	-1,956.29	-2,179.96	2,929.04	1.12	-1.02	14.89	162.27
	NORMAL	7,077.0	0.57	247.23	6,307.25	-1,956.81	-2,181.46	2,930.51	0.78	-0.78	-4.92	183.57
11/13/2012	NORMAL	7,173.0	0.90	234.85	6,403.24	-1,957.43	-2,182.51	2,931.71	0.38	0.34	-12.90	328.02
	NORMAL	7,268.0	0.37	87.96	6,498.24	-1,957.85	-2,182.82	2,932.21	1.29	-0.56	-154.62	189.48

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 (°)
11/13/2012	NORMAL	7,364.0	0.63	105.13	6,594.23	-1,957.98	-2,182.00	2,931.69	0.31	0.27	17.89	38.73
	NORMAL	7,457.0	0.44	147.56	6,687.23	-1,958.41	-2,181.31	2,931.47	0.46	-0.20	45.62	135.80
	NORMAL	7,553.0	0.34	145.52	6,783.23	-1,958.96	-2,180.95	2,931.57	0.11	-0.10	-2.13	186.89
	NORMAL	7,648.0	0.35	101.33	6,878.23	-1,959.25	-2,180.51	2,931.43	0.27	0.01	-46.52	249.95
	NORMAL	7,744.0	0.18	114.87	6,974.22	-1,959.37	-2,180.08	2,931.19	0.19	-0.18	14.10	166.46
	NORMAL	7,839.0	0.26	157.76	7,069.22	-1,959.63	-2,179.87	2,931.21	0.19	0.08	45.15	86.61
	NORMAL	7,935.0	0.66	211.88	7,165.22	-1,960.30	-2,180.08	2,931.81	0.57	0.42	56.37	76.66
	NORMAL	8,031.0	0.96	222.82	7,261.21	-1,961.36	-2,180.92	2,933.14	0.35	0.31	11.40	32.81
	NORMAL	8,126.0	0.76	289.60	7,356.20	-1,961.73	-2,182.05	2,934.24	1.01	-0.21	70.29	133.39
11/14/2012	NORMAL	8,222.0	1.37	355.15	7,452.19	-1,960.38	-2,182.75	2,933.85	1.31	0.64	68.28	98.79
	NORMAL	8,317.0	1.25	359.79	7,547.16	-1,958.21	-2,182.85	2,932.47	0.17	-0.13	4.88	140.83
	NORMAL	8,413.0	1.23	339.25	7,643.14	-1,956.20	-2,183.22	2,931.40	0.46	-0.02	-21.40	257.18
	NORMAL	8,509.0	1.14	330.37	7,739.12	-1,954.41	-2,184.05	2,930.83	0.21	-0.09	-9.25	239.50
	NORMAL	8,604.0	1.23	300.67	7,834.10	-1,953.06	-2,185.40	2,930.93	0.65	0.09	-31.26	263.30
	NORMAL	8,700.0	1.58	275.09	7,930.07	-1,952.42	-2,187.60	2,932.14	0.74	0.36	-26.65	285.97
11/15/2012	NORMAL	8,795.0	1.04	236.72	8,025.05	-1,952.78	-2,189.63	2,933.89	1.05	-0.57	-40.39	220.18
	NORMAL	8,891.0	1.49	148.62	8,121.03	-1,954.32	-2,189.71	2,934.98	1.86	0.47	-91.77	236.38
	NORMAL	8,986.0	1.23	162.68	8,216.01	-1,956.35	-2,188.76	2,935.63	0.44	-0.27	14.80	134.87
	NORMAL	9,082.0	1.23	184.39	8,311.99	-1,958.36	-2,188.53	2,936.80	0.48	0.00	22.61	100.85
	NORMAL	9,178.0	0.88	180.08	8,407.97	-1,960.12	-2,188.61	2,938.04	0.37	-0.36	-4.49	190.63
	NORMAL	9,273.0	1.28	193.07	8,502.95	-1,961.89	-2,188.85	2,939.40	0.49	0.42	13.67	38.07
	NORMAL	9,369.0	1.68	205.30	8,598.92	-1,964.20	-2,189.70	2,941.57	0.53	0.42	12.74	44.52
	NORMAL	9,445.0	1.93	203.55	8,674.88	-1,966.39	-2,190.68	2,943.77	0.34	0.33	-2.30	346.68
	NORMAL	9,500.0	1.93	203.55	8,729.85	-1,968.08	-2,191.42	2,945.45	0.00	0.00	0.00	0.00