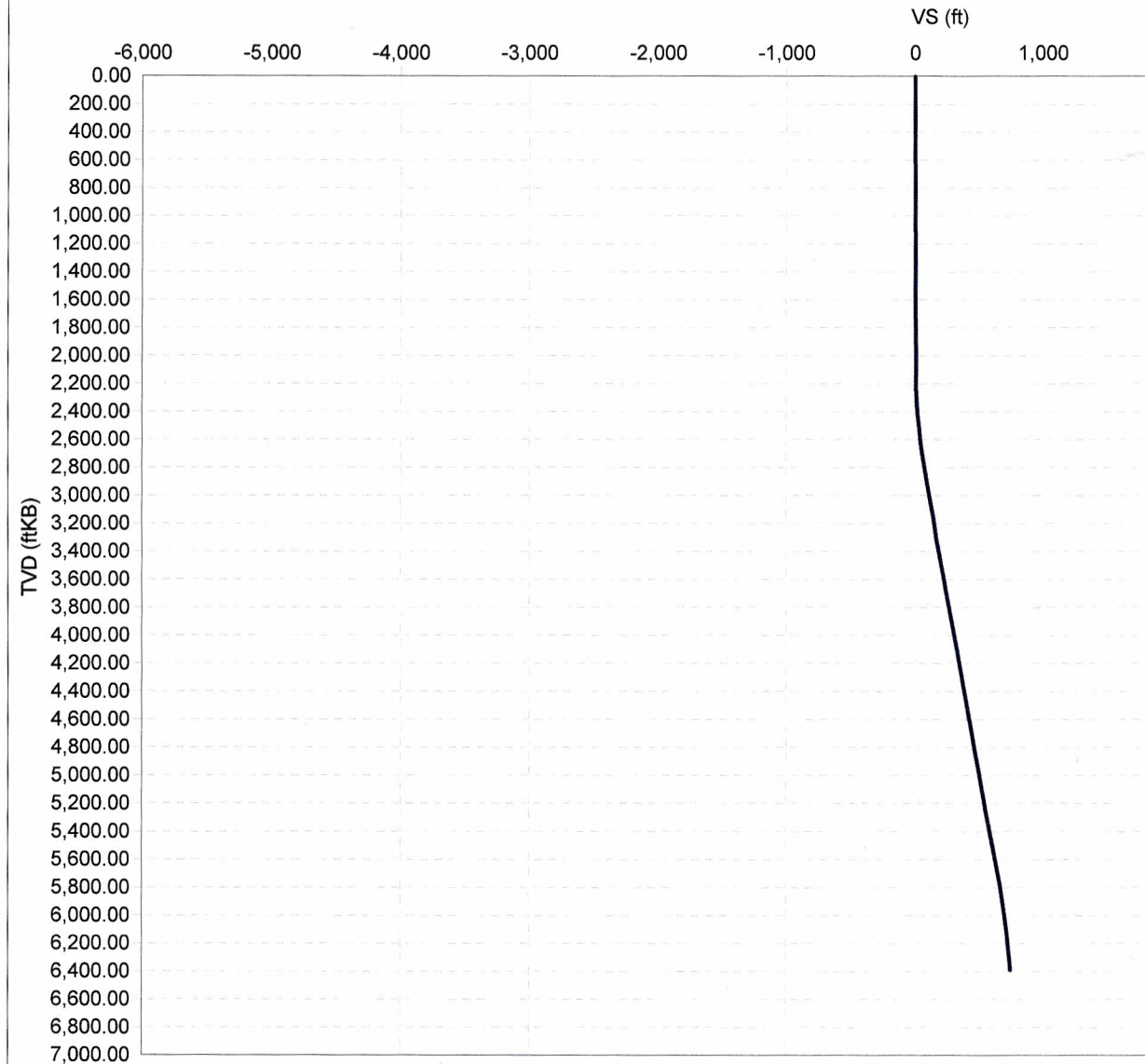




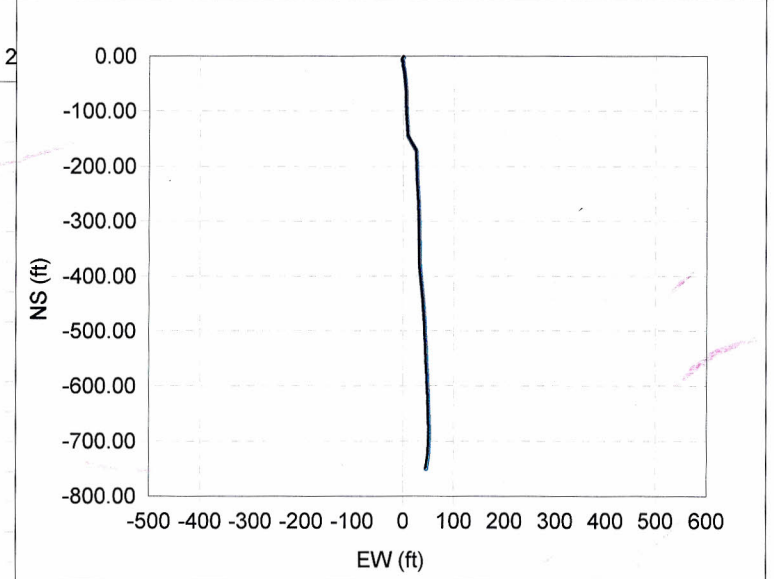
# Directional Plot

Well Name Union Pacific 150X16	Lease Union Pacific	Field Name Rangely	Business Unit Mid-Continent/Alaska	Surface UWI 0510311502	Surface ChevNo MZ1573
Wellbore Name Original Hole	Directional Type Vertical	Kick Off Depth (ftKB)	Total Depth of Wellbore (ftKB) 2,050.00	Wellbore UWI 0510311502-00	Wellbore ChevNo MZ1573-00

Vertical Section



Plan



— VS vs TVD

— VS vs TVD





# Directional Survey Data

Well Name Union Pacific 150X16	Lease Union Pacific	Field Name Rangely	Business Unit Mid-Continent/Alaska	Surface UWI 0510311502	Surface ChevNo MZ1573
Wellbore Name Original Hole	Directional Type Vertical	Wellbore UWI 0510311502-00	Wellbore ChevNo MZ1573-00	Kick Off Depth (ftKB) 2,050.00	Date TD Reached (wellbore) 8/21/2011 06:00
UTM Northing (Y) (ft)	UTM Easting (X) (ft)	UTM Grid Zone	Latitude (DMS)	Longitude (DMS)	Closure Direction (°) 176.57

Directional Surveys			
Description Surveys	Planned? No	Definitive? No	Note Correction

Survey Data											
Survey Company	Date	MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)
Scientific Drilling	8/20/2011	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scientific Drilling	8/20/2011	130.00	130.00	0.12	177.66	0.14	-0.14	0.01	0.09	0.09	136.66
Scientific Drilling	8/20/2011	191.00	191.00	0.44	221.49	0.37	-0.38	-0.15	0.60	0.52	71.85
Scientific Drilling	8/20/2011	252.00	252.00	0.43	231.09	0.66	-0.69	-0.48	0.12	-0.02	15.74
Scientific Drilling	8/20/2011	345.00	344.99	0.53	225.53	1.15	-1.22	-1.06	0.12	0.11	-5.98
Scientific Drilling	8/20/2011	437.00	436.99	0.26	162.69	1.63	-1.71	-1.30	0.51	-0.29	-68.30
Scientific Drilling	8/20/2011	529.00	528.99	0.26	184.84	2.04	-2.12	-1.26	0.11	0.00	24.08
Scientific Drilling	8/20/2011	621.00	620.99	0.53	226.15	2.52	-2.62	-1.58	0.41	0.29	44.90
Scientific Drilling	8/20/2011	713.00	712.99	0.52	217.26	3.12	-3.25	-2.14	0.09	-0.01	-9.66
Scientific Drilling	8/20/2011	834.00	833.98	0.15	81.44	3.52	-3.66	-2.32	0.53	-0.31	-112.25
Scientific Drilling	8/20/2011	924.00	923.98	0.29	210.61	3.70	-3.84	-2.32	0.45	0.16	143.52
Scientific Drilling	8/20/2011	1,015.00	1,014.98	0.48	214.59	4.19	-4.35	-2.65	0.21	0.21	4.37
Scientific Drilling	8/20/2011	1,105.00	1,104.98	0.87	208.18	5.07	-5.27	-3.19	0.44	0.43	-7.12
Scientific Drilling	8/20/2011	1,195.00	1,194.97	0.27	72.27	5.60	-5.80	-3.31	1.20	-0.67	-151.01
Scientific Drilling	8/20/2011	1,285.00	1,284.97	0.32	143.79	5.75	-5.94	-2.96	0.39	0.06	79.47
Scientific Drilling	8/20/2011	1,375.00	1,374.97	0.41	171.87	6.29	-6.46	-2.76	0.22	0.10	31.20
Scientific Drilling	8/20/2011	1,465.00	1,464.97	0.97	19.54	5.91	-6.06	-2.46	1.50	0.62	-169.26
Scientific Drilling	8/20/2011	1,555.00	1,554.96	0.44	137.65	5.47	-5.60	-1.97	1.38	-0.59	131.23
Scientific Drilling	8/21/2011	1,645.00	1,644.96	0.59	178.53	6.21	-6.32	-1.73	0.43	0.17	45.42
Scientific Drilling	8/21/2011	1,735.00	1,734.95	1.06	193.54	7.46	-7.59	-1.91	0.57	0.52	16.68
Scientific Drilling	8/21/2011	1,825.00	1,824.94	0.44	162.52	8.60	-8.73	-2.00	0.80	-0.69	-34.47
Scientific Drilling	8/21/2011	1,915.00	1,914.94	0.62	142.48	9.33	-9.45	-1.60	0.28	0.20	-22.27
Scientific Drilling	8/21/2011	1,996.00	1,995.93	0.44	113.56	9.84	-9.92	-1.05	0.39	-0.22	-35.70
Scientific Drilling	8/23/2011	2,065.00	2,064.93	0.54	117.49	10.13	-10.18	-0.52	0.15	0.14	5.70
Scientific Drilling	8/23/2011	2,155.00	2,154.92	1.14	205.93	11.12	-11.18	-0.53	1.39	0.67	98.27
Scientific Drilling	8/23/2011	2,245.00	2,244.90	1.74	190.76	13.23	-13.32	-1.18	0.78	0.67	-16.86
Scientific Drilling	8/23/2011	2,335.00	2,334.79	3.70	164.67	17.40	-17.47	-0.67	2.52	2.18	-28.99
Scientific Drilling	8/23/2011	2,425.00	2,424.48	5.84	170.66	24.79	-24.79	0.84	2.44	2.38	6.66
Scientific Drilling	8/23/2011	2,515.00	2,513.95	6.60	172.18	34.50	-34.43	2.29	0.86	0.84	1.69
Scientific Drilling	8/23/2011	2,605.00	2,603.27	7.48	173.29	45.51	-45.37	3.68	0.99	0.98	1.23
Scientific Drilling	8/23/2011	2,695.00	2,692.22	9.96	177.12	59.14	-58.97	4.75	2.83	2.76	4.26
Scientific Drilling	8/23/2011	2,785.00	2,780.88	9.85	180.09	74.61	-74.44	5.13	0.58	-0.12	3.30
Scientific Drilling	8/23/2011	2,875.00	2,869.35	11.30	176.57	91.11	-90.94	5.65	1.76	1.61	-3.91
Scientific Drilling	8/23/2011	2,960.00	2,952.87	10.11	177.72	106.90	-106.71	6.44	1.42	-1.40	1.35
Scientific Drilling	8/23/2011	3,056.00	3,047.12	11.78	176.75	125.13	-124.91	7.33	1.75	1.74	-1.01
Scientific Drilling	8/23/2011	3,146.00	3,135.12	12.40	176.67	143.98	-143.73	8.42	0.69	0.69	-0.09
Scientific Drilling	8/23/2011	3,236.00	3,223.49	11.44	117.20	158.24	-157.50	16.95	13.10	-1.07	-66.08
Scientific Drilling	8/23/2011	3,326.00	3,312.00	11.44	177.66	171.75	-170.55	25.28	12.74	0.00	67.18
Scientific Drilling	8/23/2011	3,416.00	3,400.17	11.70	177.87	189.80	-188.58	25.98	0.29	0.29	0.23





# Directional Survey Data

Well Name Union Pacific 150X16	Lease Union Pacific	Field Name Rangely	Business Unit Mid-Continent/Alaska	Surface UWI 0510311502	Surface ChevNo MZ1573						
Survey Data											
Survey Company	Date	MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)
Scientific Drilling	8/23/2011	3,506.00	3,488.31	11.63	177.47	207.99	-206.76	26.72	0.12	-0.08	-0.44
Scientific Drilling	8/23/2011	3,596.00	3,576.45	11.70	176.40	226.19	-224.93	27.69	0.25	0.08	-1.19
Scientific Drilling	8/23/2011	3,686.00	3,664.64	11.34	175.87	244.16	-242.87	28.90	0.42	-0.40	-0.59
Scientific Drilling	8/23/2011	3,776.00	3,752.92	11.08	178.25	261.66	-260.34	29.80	0.59	-0.29	2.64
Scientific Drilling	8/23/2011	3,866.00	3,841.12	11.87	177.19	279.56	-278.23	30.52	0.91	0.88	-1.18
Scientific Drilling	8/23/2011	3,957.00	3,930.15	12.05	178.69	298.41	-297.07	31.20	0.39	0.20	1.65
Scientific Drilling	8/23/2011	4,047.00	4,018.21	11.77	179.48	316.96	-315.64	31.50	0.36	-0.31	0.88
Scientific Drilling	8/23/2011	4,137.00	4,106.39	11.34	179.48	334.97	-333.67	31.66	0.48	-0.48	0.00
Scientific Drilling	8/23/2011	4,227.00	4,194.68	10.99	180.71	352.36	-351.09	31.63	0.47	-0.39	1.37
Scientific Drilling	8/23/2011	4,317.00	4,283.00	11.23	178.21	369.68	-368.43	31.80	0.60	0.27	-2.78
Scientific Drilling	8/23/2011	4,407.00	4,371.28	11.17	174.20	387.15	-385.86	32.96	0.87	-0.07	-4.46
Scientific Drilling	8/23/2011	4,497.00	4,459.60	11.06	172.46	404.47	-403.10	34.97	0.39	-0.12	-1.93
Scientific Drilling	8/23/2011	4,587.00	4,547.88	11.32	174.12	421.90	-420.44	37.01	0.46	0.29	1.84
Scientific Drilling	8/23/2011	4,678.00	4,637.18	10.90	174.29	439.42	-437.89	38.78	0.46	-0.46	0.19
Scientific Drilling	8/23/2011	4,768.00	4,725.64	10.29	177.10	455.96	-454.38	40.03	0.89	-0.68	3.12
Scientific Drilling	8/23/2011	4,858.00	4,814.08	11.10	176.00	472.66	-471.05	41.04	0.93	0.90	-1.22
Scientific Drilling	8/23/2011	4,948.00	4,902.29	11.81	176.45	490.54	-488.89	42.22	0.80	0.79	0.50
Scientific Drilling	8/23/2011	5,038.00	4,990.39	11.76	176.58	508.92	-507.23	43.33	0.06	-0.06	0.14
Scientific Drilling	8/23/2011	5,128.00	5,078.64	10.85	178.21	526.56	-524.86	44.15	1.07	-1.01	1.81
Scientific Drilling	8/23/2011	5,218.00	5,167.08	10.57	176.07	543.28	-541.56	44.98	0.54	-0.31	-2.38
Scientific Drilling	8/23/2011	5,308.00	5,255.46	11.17	177.90	560.25	-558.51	45.86	0.77	0.67	2.03
Scientific Drilling	8/23/2011	5,398.00	5,343.70	11.52	176.49	577.95	-576.19	46.73	0.50	0.39	-1.57
Scientific Drilling	8/23/2011	5,488.00	5,431.82	11.96	177.37	596.26	-594.47	47.71	0.53	0.49	0.98
Scientific Drilling	8/23/2011	5,579.00	5,520.82	12.13	177.28	615.25	-613.44	48.60	0.19	0.19	-0.10
Scientific Drilling	8/23/2011	5,669.00	5,608.82	12.05	177.98	634.10	-632.28	49.38	0.19	-0.09	0.78
Scientific Drilling	8/23/2011	5,759.00	5,696.82	12.13	177.90	652.94	-651.11	50.05	0.09	0.09	-0.09
Scientific Drilling	8/23/2011	5,849.00	5,785.19	9.72	179.55	669.99	-668.16	50.46	2.70	-2.68	1.83
Scientific Drilling	8/23/2011	5,939.00	5,873.96	9.23	179.39	684.78	-682.98	50.60	0.55	-0.54	-0.18
Scientific Drilling	8/23/2011	6,029.00	5,962.86	8.69	181.60	698.76	-696.99	50.48	0.71	-0.60	2.46
Scientific Drilling	8/23/2011	6,119.00	6,051.91	7.99	181.19	711.77	-710.04	50.16	0.78	-0.78	-0.46
Scientific Drilling	8/23/2011	6,209.00	6,141.17	6.68	186.42	723.16	-721.50	49.45	1.63	-1.46	5.81
Scientific Drilling	8/23/2011	6,299.00	6,230.60	6.16	186.60	733.08	-731.50	48.31	0.58	-0.58	0.20
Scientific Drilling	8/23/2011	6,400.00	6,330.98	6.60	193.13	743.98	-742.53	46.37	0.84	0.44	6.47
Scientific Drilling	8/23/2011	6,455.00	6,385.62	6.60	193.19	750.04	-748.69	44.93	0.01	0.00	0.11