



Directional Survey

Well Name: NEW POTATO 11 FED COM 1H

Sub-Division DELAWARE BASIN WEST		Region BASIN WEST		Field Name PIERCE CROSSING EAST			County EDDY		State/Province NM	
Surface Legal Location SEC11 T24S R29E		API/UWI 3001543169		Latitude (") 32° 13' 58.917" N	Longitude (") 103° 57' 42.121" W	Orig KB Elevation (ft) 3,058.40	Ground Elev MSL (ft) 3,033.40	KB - GL (ft) 25.00		
Survey Data										
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS ("'/100ft)	Survey Tool	Survey Company
6/30/2015	6,171.00	1.41	148.95	6,163.46	-35.31	36.61	189.92	0.05	MWD	EXTREME
6/30/2015	6,260.00	1.71	151.46	6,252.42	-33.20	34.50	191.12	0.35	MWD	EXTREME
6/30/2015	6,349.00	1.71	155.15	6,341.38	-30.82	32.13	192.32	0.12	MWD	EXTREME
6/30/2015	6,438.00	1.80	153.04	6,430.34	-28.36	29.68	193.51	0.12	MWD	EXTREME
6/30/2015	6,528.00	2.02	156.15	6,520.29	-25.64	26.97	194.79	0.27	MWD	EXTREME
6/30/2015	6,617.00	1.89	152.87	6,609.24	-22.89	24.23	196.09	0.19	MWD	EXTREME
6/30/2015	6,707.00	1.80	157.83	6,699.19	-20.26	21.60	197.30	0.20	MWD	EXTREME
6/30/2015	6,796.00	1.89	163.76	6,788.15	-17.55	18.90	198.24	0.24	MWD	EXTREME
6/30/2015	6,885.00	2.02	171.76	6,877.10	-14.58	15.93	198.88	0.34	MWD	EXTREME
6/30/2015	6,975.00	1.80	184.33	6,967.05	-11.60	12.95	199.00	0.52	MWD	EXTREME
6/30/2015	7,064.00	1.89	193.56	7,056.00	-8.78	10.13	198.55	0.35	MWD	EXTREME
6/30/2015	7,154.00	1.80	214.96	7,145.95	-6.19	7.53	197.39	0.77	MWD	EXTREME
6/30/2015	7,243.00	2.02	203.36	7,234.91	-3.61	4.95	195.97	0.50	MWD	EXTREME
6/30/2015	7,332.00	2.68	176.55	7,323.83	-0.10	1.43	195.47	1.42	MWD	EXTREME
6/30/2015	7,422.00	4.22	176.55	7,413.67	5.31	-3.98	195.80	1.71	MWD	EXTREME
6/30/2015	7,511.00	4.79	166.75	7,502.39	12.20	-10.86	196.84	1.07	MWD	EXTREME
6/30/2015	7,600.00	3.52	171.63	7,591.16	18.53	-17.18	198.09	1.48	MWD	EXTREME
6/30/2015	7,690.00	2.81	179.76	7,681.02	23.47	-22.12	198.51	0.93	MWD	EXTREME
6/30/2015	7,779.00	1.89	195.23	7,769.94	27.07	-25.72	198.13	1.25	MWD	EXTREME
6/30/2015	7,868.00	1.89	218.17	7,858.90	29.63	-28.29	196.84	0.84	MWD	EXTREME
6/30/2015	7,958.00	2.11	222.03	7,948.84	32.01	-30.69	194.81	0.29	MWD	EXTREME
6/30/2015	8,047.00	2.02	228.85	8,037.79	34.25	-32.94	192.53	0.29	MWD	EXTREME
6/30/2015	8,136.00	1.71	226.74	8,126.74	36.17	-34.88	190.38	0.36	MWD	EXTREME
6/30/2015	8,220.00	1.76	215.27	8,210.70	38.07	-36.79	188.73	0.42	MWD	PRECISION DRILLING
6/30/2015	8,309.00	2.02	223.36	8,299.65	40.32	-39.05	186.86	0.42	MWD	PRECISION DRILLING
6/30/2015	8,339.00	2.99	202.09	8,329.62	41.42	-40.16	186.20	4.43	MWD	PRECISION DRILLING
6/30/2015	8,369.00	5.89	187.33	8,359.53	43.67	-42.41	185.71	10.31	MWD	PRECISION DRILLING
6/30/2015	8,399.00	8.97	183.28	8,389.28	47.53	-46.27	185.38	10.41	MWD	PRECISION DRILLING
6/30/2015	8,429.00	12.84	182.40	8,418.73	53.20	-51.94	185.11	12.91	MWD	PRECISION DRILLING
6/30/2015	8,459.00	16.62	179.77	8,447.74	60.82	-59.56	184.99	12.79	MWD	PRECISION DRILLING
6/30/2015	8,488.00	20.05	178.19	8,475.26	69.94	-68.68	185.16	11.95	MWD	PRECISION DRILLING
6/30/2015	8,518.00	23.39	178.36	8,503.13	81.04	-79.78	185.49	11.14	MWD	PRECISION DRILLING
6/30/2015	8,548.00	24.97	178.36	8,530.49	93.32	-92.06	185.84	5.27	MWD	PRECISION DRILLING
6/30/2015	8,578.00	26.38	179.24	8,557.53	106.32	-105.05	186.11	4.87	MWD	PRECISION DRILLING
6/30/2015	8,608.00	28.58	179.59	8,584.14	120.16	-118.90	186.25	7.35	MWD	PRECISION DRILLING
6/30/2015	8,638.00	31.57	179.24	8,610.10	135.19	-133.93	186.41	9.98	MWD	PRECISION DRILLING
6/30/2015	8,667.00	34.73	178.89	8,634.38	151.05	-149.78	186.67	10.92	MWD	PRECISION DRILLING
6/30/2015	8,697.00	37.90	179.59	8,658.55	168.81	-167.54	186.90	10.66	MWD	PRECISION DRILLING
6/30/2015	8,727.00	40.80	181.17	8,681.75	187.83	-186.56	186.77	10.23	MWD	PRECISION DRILLING
6/30/2015	8,757.00	43.00	182.40	8,704.08	207.85	-206.58	186.14	7.83	MWD	PRECISION DRILLING
6/30/2015	8,787.00	45.46	183.46	8,725.57	228.73	-227.48	185.07	8.56	MWD	PRECISION DRILLING
6/30/2015	8,817.00	47.75	183.46	8,746.18	250.48	-249.24	183.75	7.63	MWD	PRECISION DRILLING
6/30/2015	8,846.00	50.03	183.63	8,765.25	272.28	-271.04	182.40	7.87	MWD	PRECISION DRILLING
6/30/2015	8,876.00	52.41	183.11	8,784.03	295.61	-294.39	181.03	8.05	MWD	PRECISION DRILLING
6/30/2015	8,906.00	55.57	182.58	8,801.67	319.84	-318.62	179.82	10.63	MWD	PRECISION DRILLING
6/30/2015	8,936.00	58.30	182.05	8,818.04	344.95	-343.74	178.81	9.22	MWD	PRECISION DRILLING
6/30/2015	8,966.00	61.91	181.00	8,832.99	370.94	-369.74	178.12	12.41	MWD	PRECISION DRILLING
6/30/2015	8,996.00	65.25	180.29	8,846.33	397.80	-396.60	177.82	11.33	MWD	PRECISION DRILLING
6/30/2015	9,025.00	67.80	179.77	8,857.88	424.40	-423.20	177.81	8.95	MWD	PRECISION DRILLING
6/30/2015	9,055.00	70.35	179.24	8,868.60	452.41	-451.21	178.05	8.66	MWD	PRECISION DRILLING
6/30/2015	9,085.00	73.16	179.06	8,877.99	480.90	-479.70	178.48	9.38	MWD	PRECISION DRILLING
6/30/2015	9,115.00	75.45	179.24	8,886.10	509.78	-508.58	178.90	7.66	MWD	PRECISION DRILLING
6/30/2015	9,145.00	77.47	180.47	8,893.13	538.95	-537.74	178.98	7.82	MWD	PRECISION DRILLING
6/30/2015	9,175.00	79.40	180.29	8,899.14	568.33	-567.13	178.78	6.46	MWD	PRECISION DRILLING
6/30/2015	9,204.00	80.99	180.12	8,904.08	596.91	-595.70	178.68	5.51	MWD	PRECISION DRILLING
6/30/2015	9,234.00	83.71	179.94	8,908.07	626.64	-625.43	178.66	9.09	MWD	PRECISION DRILLING
6/30/2015	9,315.00	90.22	179.24	8,912.36	707.48	-706.27	179.24	8.08	MWD	PRECISION DRILLING
6/30/2015	9,405.00	92.68	180.47	8,910.08	797.44	-796.24	179.47	3.06	MWD	PRECISION DRILLING
6/30/2015	9,494.00	92.42	180.82	8,906.12	886.34	-885.14	178.47	0.49	MWD	PRECISION DRILLING
6/30/2015	9,583.00	91.28	181.35	8,903.25	975.26	-974.08	176.79	1.41	MWD	PRECISION DRILLING
6/30/2015	9,672.00	89.25	180.29	8,902.84	1,064.23	-1,063.06	175.51	2.57	MWD	PRECISION DRILLING
6/30/2015	9,762.00	89.69	180.29	8,903.67	1,154.22	-1,153.06	175.06	0.49	MWD	PRECISION DRILLING
6/30/2015	9,852.00	91.19	180.65	8,902.98	1,244.21	-1,243.05	174.32	1.71	MWD	PRECISION DRILLING
7/8/2015	9,941.00	90.40	181.17	8,901.75	1,333.17	-1,332.03	172.91	1.06	MWD	PRECISION DRILLING
7/8/2015	10,031.00	91.36	181.88	8,900.36	1,423.11	-1,421.98	170.51	1.33	MWD	PRECISION DRILLING
7/8/2015	10,120.00	90.40	181.88	8,899.00	1,512.03	-1,510.92	167.59	1.08	MWD	PRECISION DRILLING
7/8/2015	10,210.00	87.93	181.52	8,900.31	1,601.95	-1,600.87	164.92	2.77	MWD	PRECISION DRILLING
7/8/2015	10,299.00	88.55	181.88	8,903.04	1,690.85	-1,689.79	162.28	0.81	MWD	PRECISION DRILLING
7/8/2015	10,389.00	89.96	181.88	8,904.21	1,780.77	-1,779.73	159.33	1.57	MWD	PRECISION DRILLING
7/8/2015	10,478.00	88.37	182.05	8,905.51	1,869.68	-1,868.66	156.28	1.80	MWD	PRECISION DRILLING
7/8/2015	10,567.00	88.99	182.23	8,907.56	1,958.57	-1,957.58	152.96	0.73	MWD	PRECISION DRILLING
7/8/2015	10,657.00	90.13	182.76	8,908.25	2,048.45	-2,047.49	149.04	1.40	MWD	PRECISION DRILLING
7/8/2015	10,746.00	89.43	181.70	8,908.59	2,137.36	-2,136.42	145.58	1.43	MWD	PRECISION DRILLING
7/8/2015	10,835.00	90.04	182.23	8,909.00	2,226.28	-2,225.36	142.52	0.91	MWD	PRECISION DRILLING
7/8/2015	10,925.00	90.13	181.52	8,908.87	2,316.21	-2,315.31	139.58	0.80	MWD	PRECISION DRILLING
7/8/2015	11,014.00	89.08	180.65	8,909.48	2,405.18	-2,404.29	137.89	1.53	MWD	PRECISION DRILLING
7/8/2015	11,104.00	90.04	180.82	8,910.17	2,495.16	-2,494.28	136.74	1.08	MWD	PRECISION DRILLING
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Directional Survey

Well Name: NEW POTATO 11 FED COM 1H

Sub-Division DELAWARE BASIN WEST		Region BASIN WEST		Field Name PIERCE CROSSING EAST				County EDDY		State/Province NM			
Surface Legal Location SEC11 T24S R29E		API/UWI 3001543169		Latitude (°) 32° 13' 58.917" N		Longitude (°) 103° 57' 42.121" W		Orig KB Elevation (ft) 3,058.40		Ground Elev MSL (ft) 3,033.40		KB - GL (ft) 25.00	
Survey Data													
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company			
7/8/2015	11,193.00	91.01	181.35	8,909.36	2,584.12	-2,583.26	135.05	1.24	MWD	PRECISION DRILLING			
7/8/2015	11,282.00	90.75	181.17	8,907.99	2,673.07	-2,672.23	133.10	0.36	MWD	PRECISION DRILLING			
7/8/2015	11,372.00	89.78	181.00	8,907.58	2,763.04	-2,762.21	131.39	1.09	MWD	PRECISION DRILLING			
7/8/2015	11,461.00	90.13	181.70	8,907.65	2,852.00	-2,851.19	129.30	0.88	MWD	PRECISION DRILLING			
7/8/2015	11,551.00	88.90	179.59	8,908.41	2,941.98	-2,941.17	128.28	2.71	MWD	PRECISION DRILLING			
7/8/2015	11,640.00	89.96	180.12	8,909.29	3,030.97	-3,030.16	128.51	1.33	MWD	PRECISION DRILLING			
7/8/2015	11,729.00	88.64	180.29	8,910.38	3,119.96	-3,119.16	128.19	1.50	MWD	PRECISION DRILLING			
7/9/2015	11,818.00	89.43	180.82	8,911.88	3,208.93	-3,208.14	127.33	1.07	MWD	PRECISION DRILLING			
7/9/2015	11,907.00	90.84	181.17	8,911.67	3,297.90	-3,297.12	125.78	1.63	MWD	PRECISION DRILLING			
7/9/2015	11,997.00	90.22	181.88	8,910.84	3,387.85	-3,387.08	123.39	1.05	MWD	PRECISION DRILLING			
7/9/2015	12,086.00	90.04	181.70	8,910.63	3,476.78	-3,476.04	120.61	0.29	MWD	PRECISION DRILLING			
7/9/2015	12,176.00	90.92	182.40	8,909.88	3,566.70	-3,565.98	117.39	1.25	MWD	PRECISION DRILLING			
7/9/2015	12,265.00	90.04	181.88	8,909.14	3,655.60	-3,654.91	114.07	1.15	MWD	PRECISION DRILLING			
7/9/2015	12,354.00	89.34	181.35	8,909.62	3,744.55	-3,743.87	111.56	0.99	MWD	PRECISION DRILLING			
7/9/2015	12,444.00	92.07	181.88	8,908.51	3,834.48	-3,833.82	109.02	3.09	MWD	PRECISION DRILLING			
7/9/2015	12,533.00	90.48	182.40	8,906.53	3,923.36	-3,922.74	105.70	1.88	MWD	PRECISION DRILLING			
7/9/2015	12,623.00	88.20	181.70	8,907.57	4,013.27	-4,012.67	102.48	2.65	MWD	PRECISION DRILLING			
7/9/2015	12,712.00	87.32	181.17	8,911.04	4,102.16	-4,101.57	100.25	1.15	MWD	PRECISION DRILLING			
7/9/2015	12,801.00	86.61	181.70	8,915.76	4,190.99	-4,190.42	98.03	1.00	MWD	PRECISION DRILLING			
7/9/2015	12,891.00	86.53	182.40	8,921.14	4,280.74	-4,280.20	94.81	0.78	MWD	PRECISION DRILLING			
7/9/2015	12,980.00	87.14	183.46	8,926.06	4,369.46	-4,368.94	90.27	1.37	MWD	PRECISION DRILLING			
7/9/2015	13,069.00	88.64	183.81	8,929.33	4,458.17	-4,457.70	84.63	1.73	MWD	PRECISION DRILLING			
7/9/2015	13,159.00	88.55	183.81	8,931.54	4,547.90	-4,547.47	78.65	0.10	MWD	PRECISION DRILLING			
7/9/2015	13,248.00	88.99	184.34	8,933.45	4,636.61	-4,636.23	72.33	0.77	MWD	PRECISION DRILLING			
7/9/2015	13,337.00	89.43	183.81	8,934.68	4,725.33	-4,724.99	66.01	0.77	MWD	PRECISION DRILLING			
7/9/2015	13,426.00	89.16	182.05	8,935.77	4,814.17	-4,813.87	61.46	2.00	MWD	PRECISION DRILLING			
7/10/2015	13,516.00	89.25	181.00	8,937.02	4,904.11	-4,903.83	59.06	1.17	MWD	PRECISION DRILLING			
7/10/2015	13,605.00	90.04	179.59	8,937.57	4,993.10	-4,992.82	58.60	1.82	MWD	PRECISION DRILLING			
7/10/2015	13,694.00	90.57	179.77	8,937.10	5,082.10	-5,081.82	59.10	0.63	MWD	PRECISION DRILLING			
7/10/2015	13,784.00	92.59	181.00	8,934.62	5,172.05	-5,171.77	58.50	2.63	MWD	PRECISION DRILLING			
7/10/2015	13,873.00	92.15	181.17	8,930.94	5,260.95	-5,260.68	56.81	0.53	MWD	PRECISION DRILLING			
7/10/2015	13,962.00	92.07	181.88	8,927.66	5,349.84	-5,349.59	54.45	0.80	MWD	PRECISION DRILLING			
7/10/2015	14,052.00	91.45	180.82	8,924.89	5,439.75	-5,439.52	52.33	1.36	MWD	PRECISION DRILLING			
7/10/2015	14,141.00	89.25	179.24	8,924.35	5,528.74	-5,528.51	52.28	3.04	MWD	PRECISION DRILLING			
7/10/2015	14,230.00	89.60	179.59	8,925.24	5,617.73	-5,617.50	53.19	0.56	MWD	PRECISION DRILLING			
7/10/2015	14,320.00	89.25	179.42	8,926.15	5,707.73	-5,707.49	53.97	0.43	MWD	PRECISION DRILLING			
7/11/2015	14,409.00	89.69	179.59	8,926.97	5,796.72	-5,796.49	54.74	0.53	MWD	PRECISION DRILLING			
7/11/2015	14,499.00	90.57	180.12	8,926.77	5,886.72	-5,886.48	54.96	1.14	MWD	PRECISION DRILLING			
7/11/2015	14,588.00	89.87	179.42	8,926.42	5,975.72	-5,975.48	55.32	1.11	MWD	PRECISION DRILLING			
7/11/2015	14,678.00	90.48	178.71	8,926.15	6,065.71	-6,065.47	56.79	1.04	MWD	PRECISION DRILLING			
7/11/2015	14,767.00	90.66	178.01	8,925.26	6,154.69	-6,154.43	59.34	0.81	MWD	PRECISION DRILLING			
7/11/2015	14,857.00	90.48	177.48	8,924.37	6,244.64	-6,244.35	62.88	0.62	MWD	PRECISION DRILLING			
7/11/2015	14,946.00	90.57	177.66	8,923.55	6,333.58	-6,333.27	66.65	0.23	MWD	PRECISION DRILLING			
7/11/2015	15,036.00	89.87	177.31	8,923.21	6,423.51	-6,423.18	70.60	0.87	MWD	PRECISION DRILLING			
7/11/2015	15,125.00	90.22	177.66	8,923.14	6,512.45	-6,512.09	74.51	0.56	MWD	PRECISION DRILLING			
7/11/2015	15,214.00	91.54	177.66	8,921.77	6,601.39	-6,601.01	78.14	1.48	MWD	PRECISION DRILLING			
7/11/2015	15,303.00	92.24	178.01	8,918.84	6,690.29	-6,689.90	81.50	0.88	MWD	PRECISION DRILLING			
7/11/2015	15,393.00	92.24	178.71	8,915.32	6,780.20	-6,779.79	84.07	0.78	MWD	PRECISION DRILLING			
7/11/2015	15,482.00	91.89	179.24	8,912.11	6,869.14	-6,868.72	85.66	0.71	MWD	PRECISION DRILLING			
7/11/2015	15,571.00	91.80	178.36	8,909.25	6,958.08	-6,957.65	87.53	0.99	MWD	PRECISION DRILLING			
7/12/2015	15,660.00	92.51	179.24	8,905.90	7,047.01	-7,046.57	89.39	1.27	MWD	PRECISION DRILLING			
7/12/2015	15,750.00	91.89	179.94	8,902.44	7,136.94	-7,136.50	90.03	1.04	MWD	PRECISION DRILLING			
7/12/2015	15,839.00	91.19	180.12	8,900.05	7,225.91	-7,225.46	89.99	0.81	MWD	PRECISION DRILLING			
7/12/2015	15,928.00	90.66	180.12	8,898.62	7,314.89	-7,314.45	89.80	0.60	MWD	PRECISION DRILLING			
7/12/2015	16,018.00	90.40	181.00	8,897.78	7,404.88	-7,404.44	88.92	1.02	MWD	PRECISION DRILLING			
7/12/2015	16,107.00	89.78	180.47	8,897.64	7,493.86	-7,493.43	87.78	0.92	MWD	PRECISION DRILLING			
7/12/2015	16,196.00	89.69	181.70	8,898.06	7,582.83	-7,582.42	86.09	1.39	MWD	PRECISION DRILLING			
7/12/2015	16,286.00	89.52	182.23	8,898.68	7,672.75	-7,672.36	83.01	0.62	MWD	PRECISION DRILLING			
7/12/2015	16,375.00	90.04	183.63	8,899.02	7,761.59	-7,761.24	78.46	1.68	MWD	PRECISION DRILLING			
7/12/2015	16,464.00	88.72	183.81	8,899.98	7,850.36	-7,850.05	72.69	1.50	MWD	PRECISION DRILLING			
7/12/2015	16,506.00	88.64	183.99	8,900.95	7,892.23	-7,891.94	69.83	0.47	MWD	PRECISION DRILLING			
7/12/2015	16,576.00	88.64	183.99	8,902.61	7,962.01	-7,961.75	64.96	0.00	BIT	PRECISION DRILLING			