



Directional Survey

Well Name: THISTLE UNIT 72H

Sub-Division		Region		Field Name			County		State/Province			
DELAWARE BASIN EAST		BASIN EAST		JOHNSON RANCH			LEA		NM			
Surface Legal Location		API/UMI		Latitude (°)		Longitude (°)		Orig KB Elevation (ft)		Ground Elev MSL (ft)		KB - GL (ft)
SEC27 T23S R33E		3002542486		32° 16' 9.608" N		103° 33' 36.628" W		3,692.30		3,667.30		25.00
Wellbores												
Wellbore Name		Parent Wellbore				SAP Well ID			Vertical Section Direction (°)			
OH		OH				38501						
Kick Offs & Key Depths												
Date				Type					Top Depth (ftKB)			
6/22/2015				CURVE					10,444.0			
Actual Deviation Survey				Definitive?		Proposed?		Proposed Deviation Survey				
GYRO, Proposed? No				No		No						
Deviation Survey												
Date		Description										
6/22/2015		GYRO										
MD Tie In (ftKB)		TVD Tie In (ftKB)		Inclination Tie In (°)			Azimuth Tie In (°)			NSTie In (ft)		EWTie In (ft)
Survey Data												
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company		
6/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	62.21	0.38	302.65	62.21	0.11	0.11	-0.17	0.61	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	156.98	0.50	291.20	156.98	0.43	0.43	-0.82	0.16	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	251.75	0.46	274.00	251.74	0.61	0.61	-1.59	0.16	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	346.52	0.51	268.63	346.51	0.62	0.62	-2.39	0.07	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	441.29	0.51	240.15	441.28	0.40	0.40	-3.18	0.26	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	536.06	0.43	225.07	536.04	-0.06	-0.06	-3.80	0.15	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	630.83	0.42	203.18	630.81	-0.63	-0.63	-4.18	0.17	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	725.60	0.32	249.67	725.58	-1.04	-1.04	-4.57	0.32	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	820.37	0.13	223.41	820.35	-1.21	-1.21	-4.89	0.22	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	915.14	0.21	198.24	915.12	-1.46	-1.45	-5.02	0.11	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,009.91	0.41	156.16	1,009.89	-1.93	-1.93	-4.94	0.31	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,104.68	0.43	133.16	1,104.65	-2.49	-2.48	-4.54	0.18	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,199.45	0.56	125.74	1,199.42	-3.00	-3.00	-3.90	0.15	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,294.22	0.37	133.74	1,294.19	-3.48	-3.48	-3.31	0.21	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,388.99	0.42	135.70	1,388.96	-3.94	-3.94	-2.84	0.05	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,483.76	0.57	132.74	1,483.72	-4.51	-4.51	-2.25	0.16	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,578.53	0.45	129.39	1,578.49	-5.06	-5.06	-1.62	0.13	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,673.30	0.28	118.50	1,673.26	-5.41	-5.41	-1.13	0.19	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,768.07	0.25	128.19	1,768.02	-5.65	-5.65	-0.76	0.06	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,862.84	0.37	146.61	1,862.79	-6.03	-6.03	-0.43	0.16	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	1,957.61	0.38	151.20	1,957.56	-6.56	-6.56	-0.11	0.03	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,052.38	0.11	120.22	2,052.33	-6.88	-6.88	0.12	0.31	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,147.15	0.15	142.73	2,147.10	-7.03	-7.03	0.27	0.07	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,241.92	0.08	67.44	2,241.87	-7.10	-7.10	0.41	0.16	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,336.69	0.03	319.86	2,336.64	-7.06	-7.06	0.45	0.10	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,431.46	0.14	324.94	2,431.41	-6.94	-6.94	0.37	0.12	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,526.23	0.32	319.86	2,526.18	-6.65	-6.65	0.13	0.19	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,621.00	0.30	315.23	2,620.95	-6.27	-6.27	-0.21	0.03	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,715.77	0.23	302.90	2,715.72	-5.99	-5.99	-0.55	0.09	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,810.54	0.20	272.97	2,810.49	-5.88	-5.88	-0.87	0.12	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	2,905.31	0.24	317.72	2,905.26	-5.72	-5.72	-1.17	0.18	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,000.08	0.31	323.08	3,000.02	-5.37	-5.37	-1.46	0.08	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,094.85	0.24	349.35	3,094.79	-4.97	-4.97	-1.65	0.15	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,189.62	0.14	323.65	3,189.56	-4.68	-4.68	-1.75	0.14	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,284.39	0.11	252.65	3,284.33	-4.62	-4.61	-1.91	0.16	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,379.16	0.14	9.13	3,379.10	-4.53	-4.53	-1.98	0.22	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,473.93	0.28	13.94	3,473.87	-4.19	-4.19	-1.90	0.15	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,568.70	0.22	40.50	3,568.64	-3.83	-3.82	-1.73	0.14	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,663.47	0.33	354.84	3,663.41	-3.42	-3.41	-1.64	0.25	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,758.24	0.49	0.87	3,758.18	-2.74	-2.74	-1.66	0.17	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,853.01	0.69	338.46	3,852.94	-1.80	-1.80	-1.86	0.32	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	3,947.78	0.20	344.56	3,947.71	-1.11	-1.11	-2.11	0.52	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,042.55	0.10	3.40	4,042.48	-0.87	-0.87	-2.15	0.12	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,137.32	0.31	3.33	4,137.25	-0.53	-0.53	-2.13	0.22	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,232.09	0.34	23.68	4,232.02	-0.02	-0.02	-2.00	0.13	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,326.86	0.42	32.68	4,326.78	0.53	0.53	-1.70	0.11	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,421.63	0.50	91.03	4,421.55	0.82	0.82	-1.10	0.48	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,516.40	1.14	104.50	4,516.31	0.57	0.57	0.22	0.70	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,611.17	1.51	95.12	4,611.06	0.23	0.23	2.38	0.45	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,705.94	1.81	100.73	4,705.79	-0.16	-0.16	5.09	0.36	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,800.71	2.16	108.63	4,800.50	-1.01	-1.01	8.26	0.47	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,895.48	2.77	106.94	4,895.18	-2.24	-2.25	12.14	0.65	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	4,990.25	3.27	106.24	4,989.82	-3.66	-3.67	16.93	0.53	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,085.02	3.39	108.58	5,084.43	-5.30	-5.32	22.18	0.19	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,179.79	3.15	105.52	5,179.05	-6.89	-6.91	27.34	0.31	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,274.56	2.98	104.67	5,273.68	-8.21	-8.23	32.23	0.19	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,369.33	2.95	107.33	5,368.32	-9.55	-9.58	36.95	0.15	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,464.10	2.88	115.24	5,462.97	-11.29	-11.32	41.43	0.43	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,558.87	2.90	108.12	5,557.62	-13.05	-13.08	45.86	0.38	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,653.64	2.86	104.69	5,652.27	-14.39	-14.43	50.42	0.19	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,748.41	2.94	95.54	5,746.92	-15.22	-15.26	55.13	0.50	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,843.18	3.00	110.52	5,841.56	-16.32	-16.37	59.87	0.82	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	5,937.95	2.96	107.50	5,936.21	-17.92	-17.97	64.53	0.17	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	6,032.72	2.84	99.10	6,030.86	-19.03	-19.08	69.18	0.47	GYRO	VAUHG N ENERGY SERVICES		
6/22/2015	6,127.49	2.81	97.66	6,125.51	-19.70	-19.76	73.80	0.08	GYRO	VAUHG N ENERGY SERVICES		

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Directional Survey

Well Name: THISTLE UNIT 72H

Sub-Division DELAWARE BASIN EAST		Region BASIN EAST		Field Name JOHNSON RANCH				County LEA		State/Province NM			
Surface Legal Location SEC27 T23S R33E		API/UWI 3002542486		Latitude (°) 32° 16' 9.608" N		Longitude (°) 103° 33' 36.628" W		Orig KB Elevation (ft) 3,692.30		Ground Elev MSL (ft) 3,667.30		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			
6/22/2015	6,222.26	2.76	102.45	6,220.17	-20.50	-20.56	78.33	0.25	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	6,317.03	2.66	107.36	6,314.83	-21.65	-21.71	82.66	0.27	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	6,411.80	2.62	102.95	6,409.50	-22.79	-22.85	86.87	0.22	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	6,506.57	2.65	103.32	6,504.17	-23.77	-23.84	91.11	0.04	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	6,601.34	2.61	101.66	6,598.84	-24.71	-24.78	95.36	0.09	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	6,696.11	2.56	102.37	6,693.52	-25.60	-25.67	99.54	0.06	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	6,790.88	2.55	105.20	6,788.19	-26.60	-26.68	103.64	0.13	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	6,885.65	2.54	105.77	6,882.87	-27.72	-27.80	107.69	0.03	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	6,980.42	2.25	112.00	6,977.56	-28.98	-29.07	111.44	0.41	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,075.19	2.11	114.68	7,072.26	-30.41	-30.50	114.75	0.18	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,169.96	2.07	108.43	7,166.96	-31.67	-31.77	117.96	0.24	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,264.73	1.99	106.24	7,261.67	-32.67	-32.77	121.16	0.12	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,359.50	1.84	101.00	7,356.39	-33.42	-33.52	124.24	0.24	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,454.27	1.79	98.22	7,451.11	-33.92	-34.02	127.19	0.11	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,549.04	1.89	98.42	7,545.84	-34.36	-34.46	130.20	0.11	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,643.81	2.10	97.50	7,640.55	-34.81	-34.91	133.47	0.22	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,738.58	2.16	102.80	7,735.25	-35.43	-35.54	136.94	0.22	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,833.35	2.16	102.12	7,829.95	-36.20	-36.31	140.42	0.03	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	7,928.12	2.31	103.04	7,924.65	-37.00	-37.11	144.03	0.16	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,022.89	2.35	103.56	8,019.34	-37.89	-38.00	147.78	0.05	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,117.66	2.28	111.74	8,114.04	-39.04	-39.15	151.42	0.36	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,212.43	2.38	105.34	8,208.73	-40.25	-40.37	155.07	0.29	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,307.20	2.37	103.67	8,303.42	-41.23	-41.36	158.87	0.07	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,401.97	2.13	111.38	8,398.11	-42.34	-42.46	162.41	0.41	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,496.74	2.01	111.55	8,492.82	-43.59	-43.71	165.60	0.13	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,591.51	1.97	104.71	8,587.54	-44.61	-44.74	168.72	0.25	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,686.28	1.93	113.79	8,682.25	-45.66	-45.80	171.76	0.33	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,781.05	1.78	127.30	8,776.97	-47.20	-47.33	174.39	0.49	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,875.82	1.52	121.45	8,871.70	-48.74	-48.88	176.63	0.33	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	8,970.59	1.57	120.76	8,966.44	-50.06	-50.20	178.82	0.06	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,065.36	1.35	119.77	9,061.18	-51.28	-51.42	180.90	0.23	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,160.13	1.05	136.77	9,155.93	-52.46	-52.60	182.47	0.49	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,254.90	0.92	137.72	9,250.68	-53.66	-53.80	183.57	0.14	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,349.67	0.56	148.72	9,345.44	-54.62	-54.76	184.33	0.41	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,444.44	0.41	185.30	9,440.21	-55.35	-55.49	184.53	0.35	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,539.21	0.37	198.97	9,534.98	-55.98	-56.12	184.40	0.11	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,633.98	0.51	209.38	9,629.75	-56.63	-56.78	184.10	0.17	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,728.75	0.69	202.55	9,724.51	-57.53	-57.67	183.67	0.20	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,823.52	0.43	223.27	9,819.28	-58.31	-58.46	183.21	0.34	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	9,918.29	0.51	242.94	9,914.04	-58.77	-58.91	182.59	0.19	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	10,013.06	0.86	225.33	10,008.81	-59.46	-59.60	181.71	0.43	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	10,107.83	0.65	214.40	10,103.57	-60.40	-60.54	180.90	0.27	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	10,202.60	0.75	246.29	10,198.33	-61.10	-61.24	180.03	0.42	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	10,297.37	1.08	258.80	10,293.09	-61.52	-61.66	178.58	0.41	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	10,392.14	1.10	276.01	10,387.84	-61.60	-61.74	176.80	0.34	GYRO	VAUHGN ENERGY SERVICES			
6/22/2015	10,428.00	1.30	282.90	10,423.70	-61.47	-61.61	176.06	0.69	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,460.00	3.10	335.80	10,455.67	-60.60	-60.74	175.36	7.93	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,491.00	6.30	348.10	10,486.57	-58.17	-58.31	174.66	10.76	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,523.00	9.30	351.80	10,518.27	-53.90	-54.03	173.93	9.50	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,555.00	12.40	351.20	10,549.69	-47.94	-48.08	173.03	9.69	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,586.00	15.30	350.90	10,579.79	-40.61	-40.75	171.88	9.36	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,618.00	17.60	349.70	10,610.47	-31.68	-31.82	170.35	7.27	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,649.00	19.80	348.80	10,639.84	-21.92	-22.05	168.49	7.16	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,681.00	22.40	348.60	10,669.69	-10.63	-10.76	166.23	8.13	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,712.00	25.90	349.50	10,697.97	1.82	1.69	163.83	11.35	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,743.00	29.60	349.80	10,725.40	16.01	15.89	161.24	11.94	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,775.00	32.80	350.40	10,752.77	32.34	32.22	158.39	10.05	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,806.00	36.00	351.80	10,778.34	49.64	49.52	155.69	10.63	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,838.00	38.90	354.40	10,803.75	68.95	68.83	153.37	10.32	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,869.00	41.40	355.60	10,827.44	88.86	88.74	151.63	8.44	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,901.00	44.10	356.25	10,850.94	110.52	110.41	150.09	8.55	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,933.00	46.50	356.20	10,873.44	133.22	133.10	148.59	7.50	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,964.00	48.40	355.30	10,894.41	155.99	155.88	146.90	6.49	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	10,996.00	50.60	354.00	10,915.19	180.21	180.10	144.63	7.54	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,027.00	54.10	354.20	10,934.12	204.62	204.51	142.10	11.30	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,059.00	58.40	354.80	10,951.89	231.10	230.99	139.56	13.53	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,091.00	61.90	356.30	10,967.82	258.76	258.66	137.41	11.67	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,122.00	63.90	357.00	10,981.94	286.31	286.20	135.80	6.76	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,154.00	66.20	358.10	10,995.44	315.29	315.19	134.56	7.83	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,186.00	69.00	359.10	11,007.63	344.86	344.76	133.84	9.21	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,218.00	71.70	0.00	11,018.39	375.00	374.89	133.61	8.84	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,249.00	73.20	0.90	11,027.74	404.55	404.45	133.84	5.57	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,280.00	76.00	1.40	11,035.97	434.43	434.33	134.44	9.17	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,312.00	78.80	1.80	11,042.95	465.64	465.54	135.31	8.83	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,344.00	80.50	1.40	11,048.70	497.11	497.01	136.19	5.45	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,375.00	83.00	1.60	11,053.15	527.78	527.67	137.00	8.09	MWD	LEAM DRILLING SYSTEMS			
6/22/2015	11,407.00	85.60	1.30	11,056.33	559.61	559.50	137.80	8.18	MWD	LEAM DRILLING SYSTEMS			
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