

Results of Directional Survey

API number:	30-025-40640		
OGRID:		Operator:	DEVON ENERGY PRODUCTION COMPANY, LP
		Property:	BUTTER CUP 36 STATE COM # 1H

surface	ULSTR:	P	35	T 18S	R 34E
				500 FSL	200 FEL

BH Loc	ULSTR:	P	36	T 18S	R 34E
15580	MD	10698.2	TVD	531 FSL	348 FEL
					4932 FWL

Top Perf/OH	ULSTR:	P	35	T 18S	R 34E
11020	MD	10594.0	TVD	527 FSL	377 FWL

Bot Perf/OH	ULSTR:	P	36	T 18S	R 34E
15506	MD	10697.1	TVD	532 FSL	422 FEL
					4858 FWL

	MD	N/S	E/W	VD
	10929	27.90	486.21	10592.05
TOP PERFS/OH	11020	27.14	577.17	10594.00
	11024	27.11	581.17	10594.09
	15471	32.07	5022.51	10696.61
BOT PERFS/OH	15506	31.71	5057.51	10697.12
	15580	30.94	5131.50	10698.21

NEXT TO LAST	15471	32.07	5022.51	10696.61
LAST READING	15580	30.94	5131.50	10698.21
TD	15580	30.94	5131.50	10698.21

Surface Location	500	FS	200	FE
Projected BHL	531	FS	4932	FW
Location of				
Top Perfs/OH	527	FS	377	FW
Bottom Perfs/OH	532	FS	4858	FW

SUMMARY of Subsurface Locations

Surface Location	P-35-18S-34E	500	FS	200	FE	Vert. Depth
Top Perfs/OH	P-35-18S-34E	527	FS	377	FW	10594.00
Bottom Perfs/OH	P-36-18S-34E	532	FS	4858	FW	10697.12
Projected TD	P-36-18S-34E	531	FS	4932	FW	10698.21

AUG 14 2013



A GYRO TECHNOLOGIES INC. COMPANY

PO Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

HOBBS OCD

January 25, 2013

JUN 03 2013

RECEIVED

Devon Energy Production Company
333 West Sheridan Ave
Oklahoma City, Oklahoma 73102-5010

Attn: Patti Riechers

Re: **Butter Cup 36 State Com No 001H**

Please find enclosed a copy of the survey from 0' to 9,290' ran on the above referenced well.

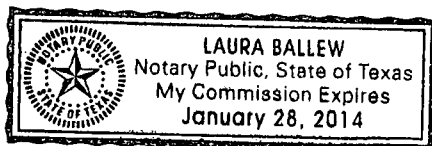
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 25th day of January,
A.D., 2013, by Keith Havelka.



Laura Ballew
Notary Public, State of Texas



Stimulations Summary

District PERMIAN BASIN		County LEA		Field Name MESCALERO ESCARPE		Project Group DELAWARE BASIN		State/Province NM													
Surface Legal Location SEC35 T18S R34E		API/UWI 3002540640		Latitude (°) 32° 41' 54.03" N		Longitude (°) 103° 31' 22.9" W		Ground Elev... 3,970.80		KB - GL (ft) 18.00		Orig KB Elev (ft) 3,988.80		Tubing Head Elevation (ft)							
HYDRAULIC FRAC , 2/18/2013 09:50 , BONE SPRINGS, OH , 15,095.0 ftkB - 15,504.0 ftkB, HALLIBURTON , CRC Resin Coated Sand (Borden) 1241																					
Proppant De...		Total Clean Volu...		Pre Trt S/I Prs (psi)		Pst Trt S/I Prs (psi)		P Break (psi)		ISIP (psi)		Avg Treat Pressur...		Q Treat Avg (bbl/...		P Max (psi)		Q Treat Max (bbl/...		Conc Max...	
301,500.0		6361.81				3,960.0				3,960.0		6,127.0		70		7,637.0		71		4.00	
HYDRAULIC FRAC , 2/19/2013 09:53 , BONE SPRINGS, OH , 14,529.0 ftkB - 14,919.0 ftkB, HALLIBURTON , CRC Resin Coated Sand (Borden) 1274																					
Proppant De...		Total Clean Volu...		Pre Trt S/I Prs (psi)		Pst Trt S/I Prs (psi)		P Break (psi)		ISIP (psi)		Avg Treat Pressur...		Q Treat Avg (bbl/...		P Max (psi)		Q Treat Max (bbl/...		Conc Max...	
301,500.0		5626.00				4,038.0				4,038.0		6,485.0		70		8,110.0		71		4.00	
HYDRAULIC FRAC , 2/20/2013 06:54 , BONE SPRINGS, OH , 13,944.0 ftkB - 14,334.0 ftkB, HALLIBURTON , CRC Resin Coated Sand (Borden) 1259																					
Proppant De...		Total Clean Volu...		Pre Trt S/I Prs (psi)		Pst Trt S/I Prs (psi)		P Break (psi)		ISIP (psi)		Avg Treat Pressur...		Q Treat Avg (bbl/...		P Max (psi)		Q Treat Max (bbl/...		Conc Max...	
301,500.0		6534.14				3,838.0				3,838.0		5,964.0		70		6,651.0		72		4.00	
HYDRAULIC FRAC , 2/20/2013 06:54 , BONE SPRINGS, OH , 13,559.0 ftkB - 13,751.0 ftkB, HALLIBURTON , CRC Resin Coated Sand (Borden) 1298																					
Proppant De...		Total Clean Volu...		Pre Trt S/I Prs (psi)		Pst Trt S/I Prs (psi)		P Break (psi)		ISIP (psi)		Avg Treat Pressur...		Q Treat Avg (bbl/...		P Max (psi)		Q Treat Max (bbl/...		Conc Max...	
301,500.0		6534.14				3,838.0				3,838.0		5,964.0		70		6,651.0		72		4.00	
HYDRAULIC FRAC , 2/21/2013 06:48 , BONE SPRINGS, OH , 12,775.0 ftkB - 13,165.0 ftkB, HALLIBURTON , CRC Resin Coated Sand (Borden) 1239																					
Proppant De...		Total Clean Volu...		Pre Trt S/I Prs (psi)		Pst Trt S/I Prs (psi)		P Break (psi)		ISIP (psi)		Avg Treat Pressur...		Q Treat Avg (bbl/...		P Max (psi)		Q Treat Max (bbl/...		Conc Max...	
301,500.0		6314.24				4,047.0				4,047.0		6,110.0		68		7,456.0		71		4.00	
HYDRAULIC FRAC , 2/22/2013 06:54 , BONE SPRINGS, OH , 12,190.0 ftkB - 12,580.0 ftkB, HALLIBURTON , CRC Resin Coated Sand (Borden) 1243																					
Proppant De...		Total Clean Volu...		Pre Trt S/I Prs (psi)		Pst Trt S/I Prs (psi)		P Break (psi)		ISIP (psi)		Avg Treat Pressur...		Q Treat Avg (bbl/...		P Max (psi)		Q Treat Max (bbl/...		Conc Max...	
301,500.0		6000.24				3,904.0				3,904.0		6,071.0		70		7,514.0		71		4.00	
HYDRAULIC FRAC , 2/22/2013 11:44 , BONE SPRINGS, OH , 11,605.0 ftkB - 11,995.0 ftkB, HALLIBURTON , CRC Resin Coated Sand (Borden) 1114																					
Proppant De...		Total Clean Volu...		Pre Trt S/I Prs (psi)		Pst Trt S/I Prs (psi)		P Break (psi)		ISIP (psi)		Avg Treat Pressur...		Q Treat Avg (bbl/...		P Max (psi)		Q Treat Max (bbl/...		Conc Max...	
301,500.0		6100.12				3,769.0				3,769.0		5,651.0		70		6,123.0		71		4.00	
HYDRAULIC FRAC , 2/22/2013 16:54 , BONE SPRINGS, OH , 11,020.0 ftkB - 11,410.0 ftkB, HALLIBURTON , CRC Resin Coated Sand (Borden) 1364																					
Proppant De...		Total Clean Volu...		Pre Trt S/I Prs (psi)		Pst Trt S/I Prs (psi)		P Break (psi)		ISIP (psi)		Avg Treat Pressur...		Q Treat Avg (bbl/...		P Max (psi)		Q Treat Max (bbl/...		Conc Max...	
301,500.0		5370.31				3,959.0				3,959.0		5,583.0		70		6,698.0		71		4.00	



Company: Devon Energy Production Co., LP
Lease/Well: Butter Cup 36 State Com/No 001H

Rig Name: Mcvay #8
State/County: New Mexico/Lea
Latitude: 32.70, Longitude: -103.52
GRID North is 0.44 Degrees East of True North
VS-Azi: 89.49 Degrees



Depth Reference : 18 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: west shinnery 15 fed 2h_ed.ut

Minimum Curvature Method

Report Date/Time: 1/25/2013 / 15:32

Vaughn Energy Services
Fort Worth, Texas
817-741-3610

Surveyor: Jason Wilson

Butter Cup 36 State Com No 001H / API 30-025-40640

RECEIVED
JUN 03 2013
HOBBS OGD

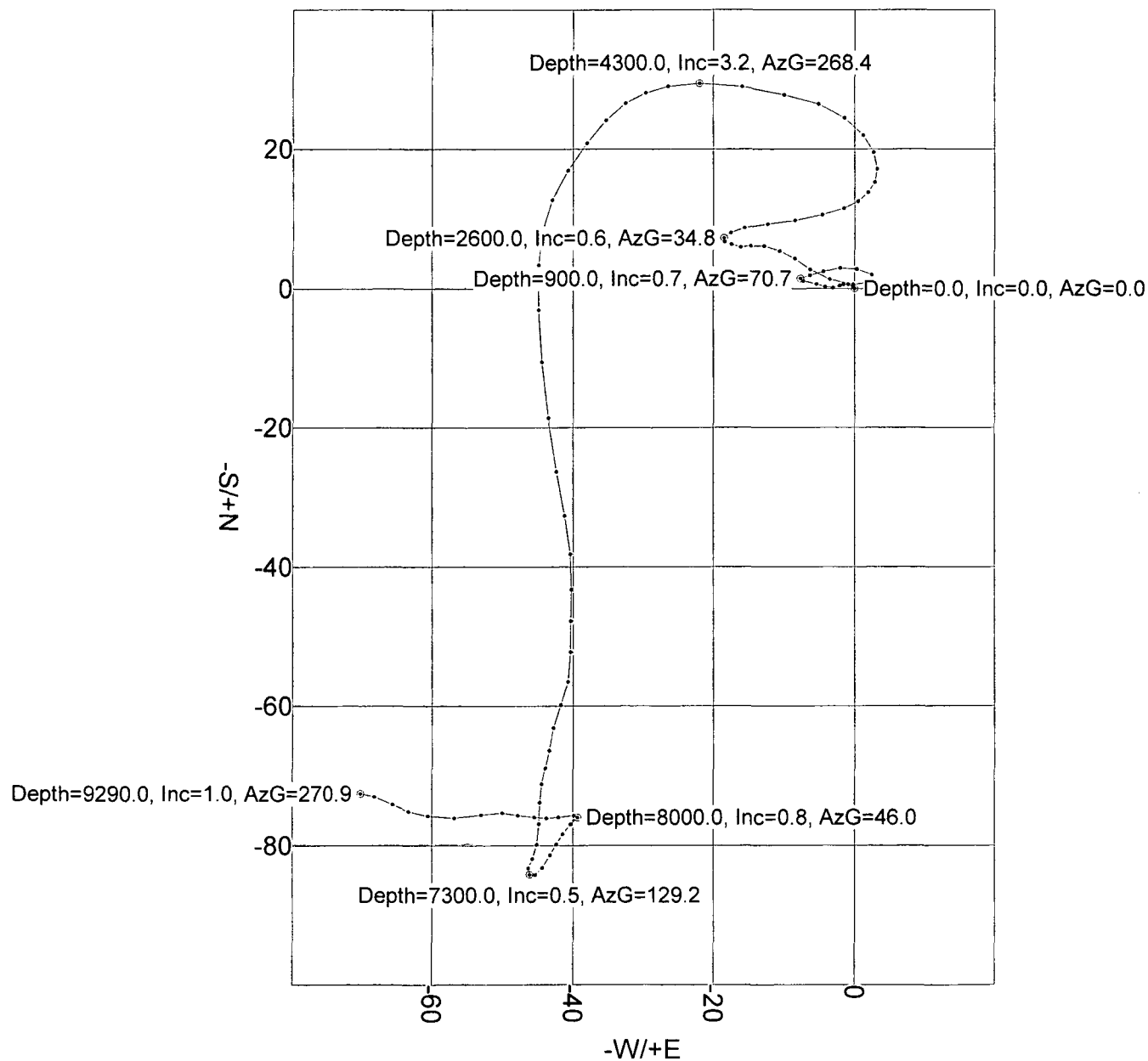
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.46	326.47	100.00	0.34	-0.22	-0.22	0.40	326.47	0.46
200.00	0.50	261.75	200.00	0.61	-0.88	-0.87	1.07	304.86	0.52
300.00	0.31	284.13	299.99	0.61	-1.57	-1.56	1.68	291.38	0.24
400.00	0.44	223.43	399.99	0.40	-2.09	-2.08	2.13	280.91	0.39
500.00	0.83	269.74	499.99	0.12	-3.08	-3.08	3.08	272.28	0.62
600.00	0.46	289.40	599.98	0.25	-4.18	-4.18	4.19	273.45	0.43
700.00	1.01	285.92	699.97	0.63	-5.41	-5.40	5.44	276.62	0.55
800.00	1.16	280.06	799.95	1.05	-7.25	-7.24	7.32	278.21	0.18
900.00	0.72	70.74	899.95	1.43	-7.65	-7.63	7.78	280.59	1.82
1000.00	0.88	71.48	999.94	1.88	-6.32	-6.31	6.60	286.57	0.16
1100.00	1.40	75.29	1099.92	2.44	-4.41	-4.39	5.04	298.93	0.53
1200.00	1.41	81.34	1199.89	2.93	-2.00	-1.98	3.55	325.65	0.15
1300.00	1.35	106.33	1299.86	2.79	0.34	0.37	2.81	7.02	0.60
1400.00	1.25	116.37	1399.83	1.97	2.45	2.47	3.15	51.20	0.25
1500.00	1.31	238.91	1499.82	0.90	2.45	2.46	2.61	69.89	2.24
1600.00	1.94	278.65	1599.78	0.56	-0.20	-0.19	0.60	340.76	1.26
1700.00	1.99	287.48	1699.73	1.34	-3.53	-3.51	3.77	290.82	0.31
1800.00	1.58	308.09	1799.68	2.71	-6.27	-6.24	6.83	293.41	0.75

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	1.46	303.91	1899.64	4.28	-8.41	-8.37	9.44	296.95	0.16
2000.00	1.37	287.35	1999.61	5.35	-10.62	-10.57	11.89	296.74	0.42
2100.00	1.34	289.74	2099.58	6.10	-12.86	-12.81	14.24	295.37	0.06
2200.00	0.99	242.62	2199.57	6.10	-14.73	-14.68	15.95	292.49	0.99
2300.00	0.83	287.48	2299.55	5.92	-16.19	-16.14	17.24	290.09	0.71
2400.00	0.71	288.90	2399.54	6.34	-17.47	-17.42	18.59	289.94	0.13
2500.00	0.45	287.76	2499.54	6.66	-18.44	-18.38	19.60	289.87	0.26
2600.00	0.61	34.80	2599.54	7.22	-18.51	-18.45	19.87	291.31	0.86
2700.00	0.85	63.02	2699.53	7.99	-17.55	-17.48	19.28	294.49	0.42
2800.00	1.50	74.44	2799.51	8.68	-15.62	-15.55	17.87	299.06	0.69
2900.00	2.31	84.48	2899.45	9.23	-12.35	-12.27	15.42	306.76	0.87
3000.00	2.21	80.56	2999.37	9.74	-8.45	-8.36	12.89	319.06	0.18
3100.00	2.31	75.68	3099.30	10.55	-4.59	-4.50	11.51	336.47	0.21
3200.00	1.35	69.24	3199.24	11.47	-1.54	-1.44	11.57	352.33	0.98
3300.00	1.22	57.57	3299.22	12.45	0.45	0.56	12.46	2.09	0.29
3400.00	1.03	37.39	3399.20	13.74	1.90	2.02	13.87	7.86	0.43
3500.00	1.00	28.10	3499.18	15.22	2.86	2.99	15.49	10.62	0.17
3600.00	1.28	356.37	3599.17	17.11	3.20	3.35	17.41	10.58	0.68
3700.00	1.55	341.37	3699.14	19.51	2.69	2.87	19.70	7.86	0.46
3800.00	1.85	318.34	3799.09	22.00	1.19	1.39	22.03	3.09	0.74
3900.00	2.29	309.57	3899.03	24.48	-1.42	-1.20	24.52	356.67	0.54
4000.00	2.59	288.28	3998.94	26.46	-5.11	-4.88	26.95	349.07	0.95
4100.00	3.19	282.83	4098.81	27.79	-9.97	-9.73	29.53	340.26	0.66
4200.00	3.77	279.86	4198.63	28.97	-15.93	-15.67	33.06	331.20	0.60
4300.00	3.19	268.36	4298.44	29.45	-21.95	-21.69	36.73	323.31	0.90
4400.00	1.99	257.80	4398.34	29.01	-26.43	-26.17	39.24	317.66	1.29
4500.00	1.78	247.85	4498.28	28.06	-29.57	-29.31	40.76	313.50	0.39
4600.00	1.98	239.04	4598.23	26.58	-32.49	-32.25	41.97	309.29	0.35
4700.00	2.34	220.30	4698.16	24.13	-35.29	-35.07	42.75	304.37	0.79
4800.00	2.52	218.83	4798.07	20.86	-37.99	-37.80	43.34	298.78	0.19
4900.00	3.03	211.49	4897.95	16.90	-40.75	-40.59	44.11	292.53	0.62
5000.00	2.46	203.14	4997.84	12.68	-42.97	-42.85	44.80	286.44	0.69
5100.00	2.64	191.67	5097.74	8.45	-44.28	-44.20	45.08	280.81	0.54
5200.00	3.25	182.75	5197.61	3.37	-44.88	-44.84	45.00	274.29	0.77
5300.00	4.14	178.15	5297.40	-3.07	-44.90	-44.92	45.00	266.09	0.93
5400.00	4.46	175.18	5397.12	-10.55	-44.45	-44.55	45.69	256.65	0.39
5500.00	4.88	172.07	5496.79	-18.63	-43.54	-43.70	47.36	246.83	0.49
5600.00	4.05	170.19	5596.48	-26.32	-42.35	-42.58	49.86	238.14	0.84
5700.00	3.33	168.62	5696.28	-32.65	-41.18	-41.47	52.55	231.59	0.72

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	3.09	175.45	5796.12	-38.19	-40.39	-40.73	55.58	226.60	0.45
5900.00	2.76	181.56	5895.99	-43.29	-40.24	-40.62	59.10	222.91	0.45
6000.00	2.40	180.76	5995.89	-47.79	-40.33	-40.76	62.54	220.16	0.37
6100.00	2.72	179.65	6095.79	-52.25	-40.35	-40.81	66.02	217.68	0.32
6200.00	2.20	191.19	6195.70	-56.50	-40.71	-41.21	69.64	215.77	0.71
6300.00	1.85	204.75	6295.63	-59.85	-41.75	-42.28	72.97	214.90	0.59
6400.00	2.15	191.21	6395.57	-63.15	-42.79	-43.35	76.29	214.12	0.56
6500.00	1.63	190.09	6495.52	-66.40	-43.41	-44.00	79.33	213.18	0.52
6600.00	1.35	194.05	6595.48	-68.94	-43.94	-44.55	81.75	212.51	0.30
6700.00	1.34	190.79	6695.46	-71.23	-44.45	-45.08	83.96	211.96	0.08
6800.00	1.70	181.37	6795.42	-73.86	-44.70	-45.36	86.34	211.18	0.44
6900.00	1.80	184.16	6895.37	-76.91	-44.85	-45.53	89.04	210.25	0.13
7000.00	1.58	187.48	6995.33	-79.85	-45.14	-45.85	91.73	209.48	0.24
7100.00	0.92	211.60	7095.31	-81.90	-45.74	-46.47	93.81	209.18	0.83
7200.00	0.78	193.71	7195.30	-83.24	-46.33	-47.06	95.27	209.10	0.30
7300.00	0.48	129.16	7295.29	-84.17	-46.16	-46.91	96.00	208.74	0.72
7400.00	0.59	63.23	7395.29	-84.20	-45.38	-46.13	95.65	208.32	0.59
7500.00	1.08	34.33	7495.28	-83.19	-44.39	-45.13	94.29	208.08	0.63
7600.00	1.39	30.18	7595.25	-81.36	-43.24	-43.97	92.14	207.99	0.33
7700.00	0.67	28.44	7695.24	-79.79	-42.35	-43.06	90.34	207.96	0.73
7800.00	1.25	33.89	7795.22	-78.37	-41.46	-42.16	88.67	207.88	0.59
7900.00	0.82	45.62	7895.21	-76.96	-40.34	-41.03	86.90	207.66	0.48
8000.00	0.76	46.03	7995.20	-76.00	-39.36	-40.03	85.59	207.38	0.06
8100.00	1.14	260.39	8095.19	-75.71	-39.86	-40.53	85.56	207.77	1.82
8200.00	1.39	265.23	8195.17	-75.98	-42.05	-42.72	86.84	208.96	0.27
8300.00	0.58	269.26	8295.15	-76.08	-43.76	-44.44	87.77	209.91	0.81
8400.00	1.40	275.24	8395.14	-75.98	-45.49	-46.16	88.55	210.91	0.82
8500.00	1.27	278.68	8495.11	-75.70	-47.80	-48.47	89.53	212.27	0.16
8600.00	1.29	280.32	8595.08	-75.33	-50.00	-50.67	90.42	213.58	0.04
8700.00	2.26	256.46	8695.03	-75.59	-53.03	-53.70	92.34	215.05	1.20
8800.00	2.14	269.60	8794.96	-76.07	-56.81	-57.49	94.94	216.76	0.52
8900.00	2.17	279.24	8894.89	-75.77	-60.55	-61.22	96.99	218.63	0.36
9000.00	1.12	290.88	8994.85	-75.12	-63.33	-63.99	98.25	220.13	1.10
9100.00	1.69	297.12	9094.82	-74.10	-65.55	-66.21	98.94	221.49	0.59
9200.00	1.60	288.94	9194.78	-72.98	-68.19	-68.83	99.88	223.06	0.25
9290.00	1.04	270.93	9284.75	-72.56	-70.20	-70.84	100.95	224.05	0.77



Vaughn Energy Services
Fort Worth, Texas
817-741-3610
Surveyor: Jason Wilson
Butter Cup 36 State Com No 001H / API 30-025-40640



VES Survey Date: 01/18/2013



BUTTER CUP 36 STATE COM 1H

JUN 03 2013 WEST UNRESTRICTED

Directional Survey

District PERMIAN BASIN	County LEA	Field Name MESCALERO ESCARPE	Project Group PB NEW MEXICO	State/Province NM	RECORD		
Surface Legal Location SEC35 T18S R34E	API/UWI 3002540640	Latitude (°) 32° 41' 54.03" N	Longitude (°) 103° 31' 22.9" W	Ground Elev... 3,970.80	KB - GL (ft) 18.00	Orig KB Elev (ft) 3,988.80	Tubing Head Elevation (ft)

Wellbores

Wellbore Name OH	Parent Wellbore	Kick Off Depth (ftKB)	Vertical Section Direction (°)
Actual Deviation Survey MWD, Proposed? No	Definitive? No	Proposed? No	Proposed Deviation Survey

Deviation Survey

Date 1/2/2013		Description MWD			
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NSTie In (ft)	EW Tie 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
1/2/2013	190.00	0.18	283.30	190.00	-0.29	0.07	-0.29	0.09	MWD	PATHFINDER ENERGY SE...
1/2/2013	376.00	0.18	226.12	376.00	-0.79	-0.07	-0.79	0.09	MWD	PATHFINDER ENERGY SE...
1/2/2013	554.00	0.79	292.61	553.99	-2.12	0.21	-2.12	0.41	MWD	PATHFINDER ENERGY SE...
1/2/2013	642.00	0.97	257.37	641.98	-3.40	0.28	-3.41	0.64	MWD	PATHFINDER ENERGY SE...
1/2/2013	727.00	1.23	239.29	726.97	-4.90	-0.34	-4.89	0.51	MWD	PATHFINDER ENERGY SE...
1/2/2013	815.00	0.79	247.20	814.95	-6.27	-1.06	-6.26	0.52	MWD	PATHFINDER ENERGY SE...
1/2/2013	909.00	0.44	286.34	908.95	-7.22	-1.21	-7.21	0.56	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,002.00	0.88	53.63	1,001.94	-6.98	-0.68	-6.98	1.29	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,096.00	0.79	79.90	1,095.94	-5.76	-0.14	-5.76	0.41	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,188.00	1.14	82.81	1,187.92	-4.22	0.08	-4.22	0.38	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,280.00	1.06	85.07	1,279.90	-2.47	0.27	-2.47	0.10	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,373.00	0.70	104.56	1,372.89	-1.06	0.20	-1.06	0.50	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,435.00	0.44	131.55	1,434.89	-0.52	-0.05	-0.52	0.59	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,467.00	0.44	283.00	1,466.89	-0.55	-0.11	-0.54	2.67	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,498.00	0.35	292.46	1,497.89	-0.75	-0.04	-0.75	0.36	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,560.00	1.41	289.65	1,559.88	-1.64	0.29	-1.64	1.71	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,621.00	1.49	289.74	1,620.86	-3.09	0.81	-3.09	0.13	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,683.00	1.67	299.61	1,682.84	-4.63	1.53	-4.64	0.53	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,745.00	1.58	278.07	1,744.81	-6.26	2.09	-6.27	0.99	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,807.00	1.41	280.79	1,806.79	-7.85	2.35	-7.87	0.30	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,869.00	2.02	281.12	1,868.77	-9.67	2.71	-9.69	0.98	MWD	PATHFINDER ENERGY SE...
1/2/2013	1,992.00	1.67	261.44	1,991.70	-13.57	2.86	-13.59	0.58	MWD	PATHFINDER ENERGY SE...
1/2/2013	2,115.00	1.06	268.93	2,114.67	-16.48	2.57	-16.50	0.52	MWD	PATHFINDER ENERGY SE...
1/2/2013	2,272.00	1.32	267.22	2,271.63	-19.74	2.46	-19.76	0.17	MWD	PATHFINDER ENERGY SE...
1/2/2013	2,461.00	1.23	246.95	2,460.59	-23.79	1.56	-23.80	0.24	MWD	PATHFINDER ENERGY SE...
1/2/2013	2,651.00	0.62	85.43	2,650.58	-24.64	0.84	-24.65	0.96	MWD	PATHFINDER ENERGY SE...
1/2/2013	2,840.00	1.76	91.12	2,839.53	-20.72	0.86	-20.73	0.61	MWD	PATHFINDER ENERGY SE...
1/2/2013	3,029.00	2.20	0.00	3,028.46	-17.80	4.44	-17.82	1.50	MWD	PATHFINDER ENERGY SE...
1/2/2013	3,218.00	1.32	37.26	3,217.37	-16.45	9.80	-16.51	0.74	MWD	PATHFINDER ENERGY SE...
1/2/2013	3,408.00	1.58	28.85	3,407.31	-13.83	13.83	-13.92	0.18	MWD	PATHFINDER ENERGY SE...
1/2/2013	3,597.00	2.29	353.91	3,596.21	-12.94	19.87	-13.06	0.71	MWD	PATHFINDER ENERGY SE...
1/2/2013	3,786.00	2.55	311.38	3,785.05	-16.46	26.40	-16.62	0.94	MWD	PATHFINDER ENERGY SE...
1/2/2013	3,975.00	2.99	284.01	3,973.84	-24.37	30.38	-24.55	0.73	MWD	PATHFINDER ENERGY SE...
1/2/2013	4,166.00	4.31	272.09	4,164.45	-36.37	31.85	-36.56	0.79	MWD	PATHFINDER ENERGY SE...
1/2/2013	4,355.00	2.37	254.77	4,353.13	-47.24	31.08	-47.43	1.15	MWD	PATHFINDER ENERGY SE...
1/2/2013	4,544.00	2.46	233.14	4,541.96	-54.28	27.62	-54.45	0.48	MWD	PATHFINDER ENERGY SE...
1/2/2013	4,639.00	2.81	223.54	4,636.86	-57.53	24.71	-57.68	0.59	MWD	PATHFINDER ENERGY SE...
1/2/2013	4,765.00	3.43	212.41	4,762.68	-61.71	19.29	-61.83	0.69	MWD	PATHFINDER ENERGY SE...
1/2/2013	4,924.00	2.46	198.47	4,921.47	-65.39	12.03	-65.46	0.75	MWD	PATHFINDER ENERGY SE...
1/2/2013	5,113.00	3.52	179.65	5,110.21	-66.69	2.38	-66.71	0.76	MWD	PATHFINDER ENERGY SE...
1/2/2013	5,202.00	4.75	171.05	5,198.98	-66.14	-3.99	-66.12	1.54	MWD	PATHFINDER ENERGY SE...
1/2/2013	5,410.00	4.90	170.50	5,406.24	-63.44	-21.26	-63.31	0.08	MWD	PATHFINDER ENERGY SE...
1/2/2013	5,604.00	3.80	170.30	5,599.68	-61.08	-35.77	-60.86	0.57	MWD	PATHFINDER ENERGY SE...
1/2/2013	5,788.00	2.70	167.50	5,783.38	-59.17	-46.01	-58.90	0.60	MWD	PATHFINDER ENERGY SE...
1/2/2013	6,038.00	2.30	172.70	6,033.14	-57.33	-56.73	-56.98	0.18	MWD	PATHFINDER ENERGY SE...
1/2/2013	6,287.00	1.50	181.00	6,282.00	-56.80	-64.95	-56.41	0.34	MWD	PATHFINDER ENERGY SE...
1/2/2013	6,546.00	1.20	174.50	6,540.93	-56.63	-71.04	-56.21	0.13	MWD	PATHFINDER ENERGY SE...



BUTTER CUP 36 STATE COM 1H

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Directional Survey

District PERMIAN BASIN	County LEA	Field Name MESCALERO ESCARPE	Project Group PB NEW MEXICO	State/Province NM
Surface Legal Location SEC35 T18S R34E	API/UWI 3002540640	Latitude (") 32° 41' 54.03" N	Longitude (") 103° 31' 22.9" W	Ground Elev... 3,970.80
				KB - GL (ft) 18.00
				Orig KB Elev (ft) 3,988.80
				Tubing Head Elevation (ft)

Survey Data

Date	MD (ftKB)	Incl (")	Azm (")	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS ("/100ft)	Survey Tool	Survey Company
1/2/2013	6,795.00	1.20	169.30	6,789.88	-55.93	-76.19	-55.47	0.04	MWD	PATHFINDER ENERGY SE...
1/2/2013	7,092.00	0.40	190.10	7,086.85	-55.56	-80.27	-55.08	0.28	MWD	PATHFINDER ENERGY SE...
1/2/2013	7,341.00	0.40	4.70	7,335.84	-55.64	-80.26	-55.16	0.32	MWD	PATHFINDER ENERGY SE...
1/2/2013	7,595.00	1.00	353.90	7,589.82	-55.78	-77.17	-55.32	0.24	MWD	PATHFINDER ENERGY SE...
1/2/2013	7,843.00	1.00	7.50	7,837.79	-55.71	-72.87	-55.27	0.10	MWD	PATHFINDER ENERGY SE...
1/2/2013	8,061.00	0.07	307.60	8,055.78	-55.55	-70.91	-55.13	0.44	MWD	PATHFINDER ENERGY SE...
1/2/2013	8,346.00	0.70	281.10	8,340.77	-57.39	-70.47	-56.97	0.22	MWD	PATHFINDER ENERGY SE...
1/2/2013	8,594.00	2.00	283.90	8,588.69	-63.07	-69.13	-62.66	0.52	MWD	PATHFINDER ENERGY SE...
1/2/2013	8,807.00	2.20	289.90	8,801.55	-70.51	-66.85	-70.11	0.14	MWD	PATHFINDER ENERGY SE...
1/2/2013	9,001.00	1.30	283.90	8,995.46	-76.14	-65.05	-75.75	0.47	MWD	PATHFINDER ENERGY SE...
1/2/2013	9,250.00	0.90	254.00	9,244.41	-80.76	-64.91	-80.37	0.28	MWD	PATHFINDER ENERGY SE...
1/2/2013	9,417.00	2.90	36.61	9,411.35	-79.48	-61.88	-79.11	2.19	MWD	PATHFINDER ENERGY SE...
1/2/2013	9,606.00	3.25	41.91	9,600.08	-73.01	-54.06	-72.68	0.24	MWD	PATHFINDER ENERGY SE...
1/2/2013	9,795.00	2.99	44.92	9,788.80	-65.90	-46.58	-65.62	0.16	MWD	PATHFINDER ENERGY SE...
1/2/2013	9,985.00	3.78	34.41	9,978.47	-58.81	-37.90	-58.58	0.53	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,079.00	3.69	32.77	10,072.27	-55.39	-32.81	-55.20	0.15	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,110.00	3.34	32.48	10,103.21	-54.36	-31.20	-54.17	1.13	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,141.00	4.57	47.98	10,134.14	-52.95	-29.62	-52.77	5.22	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,173.00	7.39	60.20	10,165.96	-50.20	-27.74	-50.03	9.62	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,205.00	11.08	68.01	10,197.54	-45.55	-25.56	-45.40	12.15	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,236.00	14.86	71.51	10,227.75	-39.00	-23.19	-38.86	12.45	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,268.00	18.20	74.12	10,258.42	-30.28	-20.52	-30.16	10.69	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,299.00	21.98	76.34	10,287.53	-19.97	-17.82	-19.86	12.44	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,362.00	30.25	75.66	10,344.05	6.95	-11.10	7.01	13.14	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,394.00	34.82	74.56	10,371.02	23.60	-6.66	23.64	14.40	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,425.00	39.39	74.34	10,395.74	41.64	-1.65	41.65	14.75	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,457.00	43.44	75.38	10,419.73	62.10	3.87	62.08	12.84	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,488.00	48.10	77.69	10,441.35	83.73	9.02	83.68	15.95	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,520.00	51.88	81.05	10,461.92	107.84	13.52	107.76	14.29	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,552.00	55.49	85.08	10,480.88	133.44	16.61	133.35	15.17	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,583.00	58.56	88.94	10,497.75	159.41	17.95	159.31	14.39	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,615.00	60.41	89.57	10,514.00	186.98	18.31	186.87	6.02	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,647.00	61.47	89.77	10,529.54	214.95	18.47	214.84	3.36	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,678.00	64.37	89.46	10,543.65	242.55	18.66	242.44	9.40	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,710.00	68.24	88.72	10,556.51	271.84	19.13	271.73	12.28	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,742.00	71.93	87.86	10,567.41	301.92	20.03	301.80	11.80	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,773.00	76.06	87.15	10,575.95	331.69	21.32	331.56	13.50	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,805.00	80.11	86.67	10,582.56	362.95	23.01	362.82	12.74	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,818.00	82.13	86.38	10,584.57	375.78	23.79	375.64	15.69	MWD	PATHFINDER ENERGY SE...
1/2/2013	10,929.00	90.13	89.35	10,592.05	486.37	27.90	486.21	7.68	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,024.00	87.41	91.60	10,594.09	581.32	27.11	581.17	3.72	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,118.00	85.30	91.92	10,600.07	675.06	24.23	674.93	2.27	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,213.00	84.77	92.12	10,608.29	769.63	20.90	769.51	0.60	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,308.00	83.71	91.24	10,617.82	864.09	18.13	863.99	1.45	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,402.00	82.66	91.89	10,628.98	957.37	15.58	957.29	1.31	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,497.00	82.92	89.87	10,640.90	1,051.59	14.13	1,051.52	2.13	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,591.00	84.77	89.77	10,650.98	1,145.04	14.42	1,144.98	1.97	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,686.00	86.26	90.17	10,658.41	1,239.75	14.47	1,239.68	1.62	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,780.00	87.32	90.17	10,663.67	1,333.60	14.19	1,333.53	1.13	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,875.00	86.70	90.84	10,668.63	1,428.45	13.36	1,428.40	0.96	MWD	PATHFINDER ENERGY SE...
1/2/2013	11,970.00	85.82	90.48	10,674.83	1,523.24	12.27	1,523.19	1.00	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,064.00	87.05	89.58	10,680.67	1,617.05	12.22	1,617.01	1.62	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,159.00	88.02	88.15	10,684.76	1,711.95	14.10	1,711.90	1.82	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,254.00	87.76	88.04	10,688.25	1,806.85	17.25	1,806.78	0.30	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,348.00	87.67	88.23	10,692.00	1,900.74	20.31	1,900.65	0.22	MWD	PATHFINDER ENERGY SE...



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WEST UNRESTRICTED

Directional Survey

District PERMIAN BASIN	County LEA	Field Name MESCALERO ESCARPE	Project Group PB NEW MEXICO	State/Province NM
Surface Legal Location SEC35 T18S R34E	API/UWI 3002540640	Latitude (") 32° 41' 54.03" N	Longitude (") 103° 31' 22.9" W	Ground Elev... 3,970.80
				KB - GL (ft) 18.00
				Orig KB Elev (ft) 3,988.80
				Tubing Head Elevation (ft)

Survey Data

Date	MD (ftKB)	Incl (")	Azm (")	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS ("/100ft)	Survey Tool	Survey Company
1/2/2013	12,443.00	87.41	88.66	10,696.08	1,995.63	22.89	1,995.53	0.53	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,538.00	88.46	89.08	10,699.50	2,090.56	24.76	2,090.45	1.19	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,632.00	90.75	88.88	10,700.15	2,184.55	26.43	2,184.43	2.45	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,727.00	91.01	89.39	10,698.69	2,279.53	27.87	2,279.40	0.60	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,822.00	90.75	89.62	10,697.23	2,374.52	28.69	2,374.39	0.37	MWD	PATHFINDER ENERGY SE...
1/2/2013	12,916.00	90.31	89.97	10,696.36	2,468.51	29.02	2,468.38	0.60	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,011.00	89.96	90.63	10,696.14	2,563.51	28.53	2,563.38	0.79	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,105.00	89.69	90.90	10,696.43	2,657.49	27.27	2,657.37	0.41	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,200.00	88.55	90.28	10,697.89	2,752.46	26.29	2,752.35	1.37	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,295.00	89.52	88.87	10,699.49	2,847.45	27.00	2,847.33	1.80	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,389.00	91.10	87.75	10,698.98	2,941.41	29.77	2,941.29	2.06	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,484.00	91.01	88.04	10,697.23	3,036.35	33.26	3,036.21	0.32	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,579.00	91.10	88.55	10,695.48	3,131.31	36.08	3,131.15	0.55	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,673.00	91.01	89.16	10,693.75	3,225.28	37.96	3,225.11	0.66	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,768.00	90.75	90.14	10,692.29	3,320.27	38.54	3,320.10	1.07	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,863.00	89.08	89.89	10,692.43	3,415.27	38.52	3,415.10	1.78	MWD	PATHFINDER ENERGY SE...
1/2/2013	13,957.00	88.81	90.38	10,694.16	3,509.25	38.30	3,509.08	0.60	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,052.00	88.72	89.67	10,696.21	3,604.22	38.25	3,604.06	0.75	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,147.00	88.37	89.86	10,698.62	3,699.19	38.64	3,699.03	0.42	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,241.00	88.64	88.93	10,701.07	3,793.16	39.64	3,792.99	1.03	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,336.00	87.85	89.34	10,703.98	3,888.11	41.07	3,887.93	0.94	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,430.00	89.43	89.73	10,706.21	3,982.08	41.83	3,981.90	1.73	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,525.00	89.69	90.11	10,706.94	4,077.07	41.96	4,076.89	0.48	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,619.00	89.16	90.51	10,707.89	4,171.06	41.46	4,170.89	0.71	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,714.00	88.90	90.72	10,709.49	4,266.03	40.44	4,265.87	0.35	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,809.00	89.69	90.73	10,710.66	4,361.01	39.23	4,360.85	0.83	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,903.00	90.40	91.22	10,710.59	4,454.98	37.64	4,454.84	0.92	MWD	PATHFINDER ENERGY SE...
1/2/2013	14,998.00	92.33	90.16	10,708.33	4,549.94	36.49	4,549.80	2.32	MWD	PATHFINDER ENERGY SE...
1/2/2013	15,093.00	92.33	90.61	10,704.46	4,644.85	35.85	4,644.72	0.47	MWD	PATHFINDER ENERGY SE...
1/2/2013	15,187.00	92.51	91.28	10,700.50	4,738.74	34.30	4,738.62	0.74	MWD	PATHFINDER ENERGY SE...
1/2/2013	15,282.00	91.98	90.24	10,696.77	4,833.65	33.05	4,833.54	1.23	MWD	PATHFINDER ENERGY SE...
1/2/2013	15,377.00	89.52	90.18	10,695.53	4,928.63	32.70	4,928.52	2.59	MWD	PATHFINDER ENERGY SE...
1/2/2013	15,471.00	89.16	90.59	10,696.61	5,022.62	32.07	5,022.51	0.58	MWD	PATHFINDER ENERGY SE...
1/2/2013	15,560.00	89.16	90.59	10,698.21	5,131.59	30.94	5,131.50	0.00	BIT	PATHFINDER ENERGY SE...