



February 17, 2015

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

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 25 2015

Attn: David Cook

30015 41940

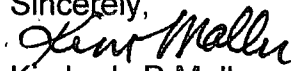
RECEIVED

Re: Big Sinks Draw 25 Fed Com 3H

Please find enclosed a copy of the survey from 0.00' to 9676.00' 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.

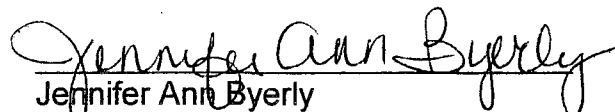
Sincerely,


Kimberly D Moller
Operations

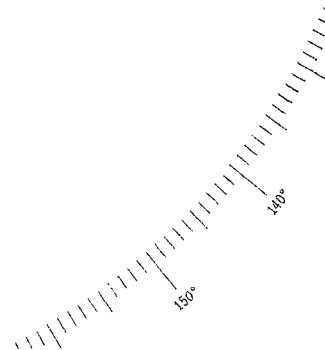
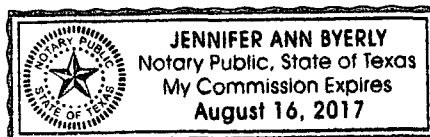
STATE OF TEXAS §

§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 17 day of Feb.,
A.D., 2015, by Kimberly D Moller.


Jennifer Ann Byerly
Notary Public, State of Texas

VES Survey International
P.O. Box 261021 Corpus Christi, TX 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com





Company: Devon Energy
Lease/Well: Big Sinks Draw 25 Fed Com/3H

Rig Name: HP 214
State/County: New Mexico/Eddy
Latitude: 32.10, Longitude: -103.73
GRID North is 0.32 Degrees East of True North
VS-Azi: 359.72 Degrees



Depth Reference : RKB= 25 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: dropfinal_int.ut
Minimum Curvature Method
Report Date/Time: 2/17/2015 / 07:57

VES Survey International
West Texas
(432) 563-5444
Surveyor: Bryan Massey
Big Sinks Draw 25 Fed Com 3H / API 30-015-41940

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	****
111.30	0.62	41.66	111.30	0.45	0.40	0.45	0.60	41.66	0.56
206.00	0.63	60.02	205.99	1.09	1.19	1.08	1.61	47.45	0.21
300.70	0.45	58.87	300.69	1.54	1.96	1.53	2.49	51.75	0.18
395.40	0.64	55.36	395.38	2.04	2.71	2.02	3.39	53.10	0.20
490.10	0.45	60.12	490.08	2.52	3.47	2.51	4.29	53.99	0.20
584.80	0.52	55.34	584.78	2.96	4.15	2.94	5.10	54.55	0.08
679.50	0.52	52.19	679.47	3.47	4.85	3.44	5.96	54.44	0.03
774.20	0.62	40.47	774.17	4.13	5.53	4.10	6.90	53.27	0.16
868.90	0.64	61.61	868.86	4.77	6.33	4.74	7.92	53.00	0.25
963.60	1.00	43.08	963.55	5.62	7.36	5.59	9.26	52.61	0.47
1058.30	0.93	54.74	1058.24	6.67	8.55	6.63	10.84	52.04	0.22
1153.00	1.44	40.06	1152.92	8.03	9.94	7.98	12.78	51.09	0.62
1247.70	1.14	22.12	1247.59	9.81	11.07	9.76	14.79	48.44	0.53
1342.40	0.89	35.48	1342.28	11.28	11.85	11.22	16.36	46.40	0.36
1437.10	0.81	49.27	1436.97	12.32	12.78	12.26	17.76	46.06	0.23
1531.80	0.91	45.22	1531.66	13.29	13.83	13.22	19.18	46.14	0.13
1626.50	0.59	30.52	1626.35	14.24	14.61	14.17	20.40	45.74	0.39
1721.20	0.34	8.11	1721.05	14.94	14.90	14.86	21.10	44.93	0.32

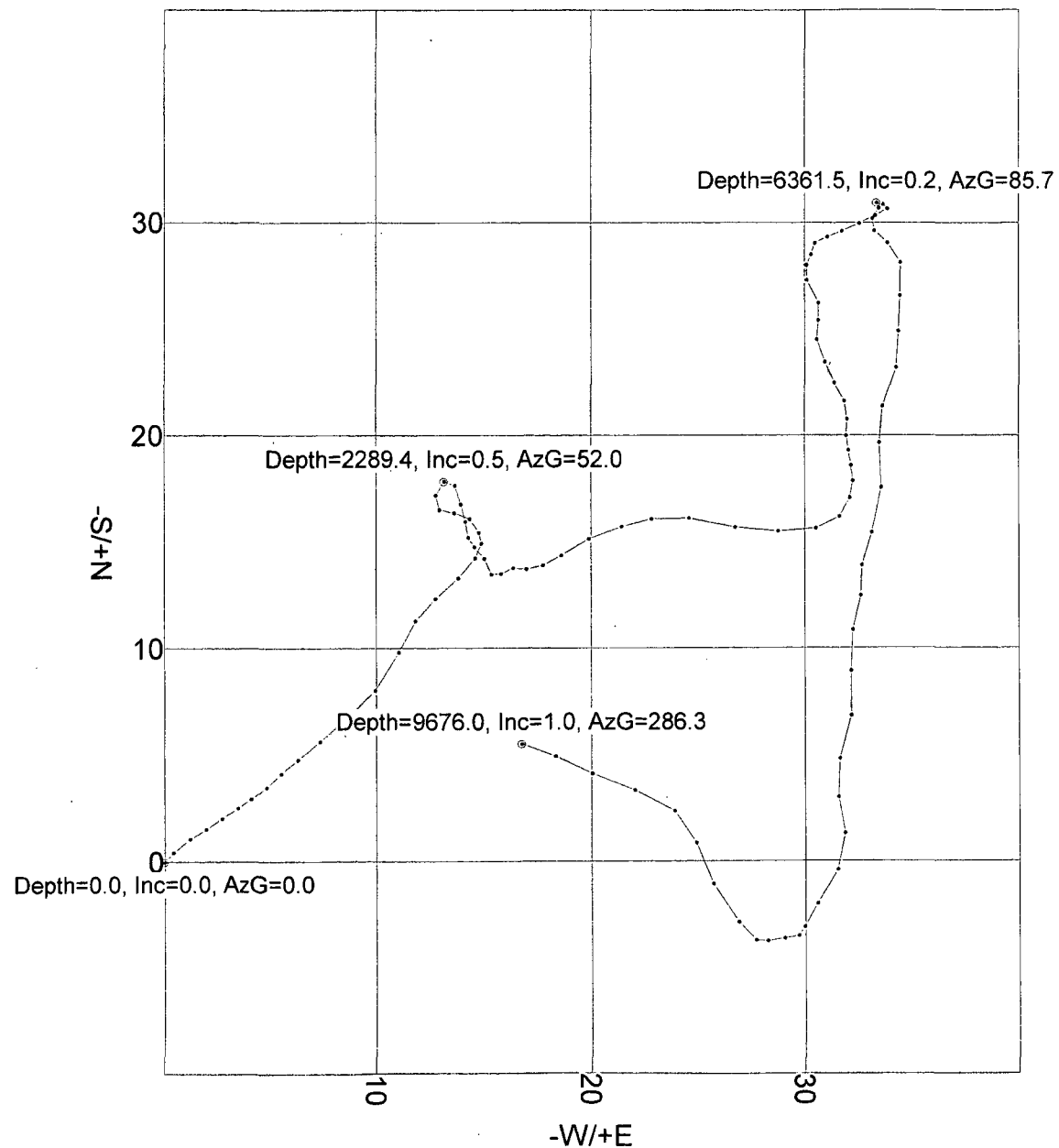
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1815.90	0.35	326.49	1815.75	15.45	14.78	15.38	21.38	43.72	0.26
1910.60	0.58	327.05	1910.44	16.09	14.36	16.02	21.57	41.74	0.24
2005.30	0.57	254.37	2005.14	16.36	13.64	16.30	21.31	39.82	0.72
2100.00	0.44	322.71	2099.84	16.53	12.97	16.46	21.01	38.12	0.61
2194.70	0.48	7.35	2194.53	17.21	12.80	17.14	21.44	36.64	0.37
2289.40	0.52	51.98	2289.23	17.86	13.18	17.80	22.20	36.43	0.40
2384.10	0.59	161.17	2383.93	17.66	13.67	17.60	22.34	37.74	0.95
2478.80	0.54	164.66	2478.62	16.78	13.95	16.71	21.82	39.74	0.07
2573.50	0.48	168.16	2573.32	15.96	14.15	15.89	21.33	41.55	0.06
2668.20	0.43	171.65	2668.02	15.22	14.28	15.15	20.87	43.18	0.06
2762.90	0.31	112.62	2762.71	14.77	14.57	14.69	20.75	44.62	0.40
2857.60	0.60	153.45	2857.41	14.22	15.03	14.15	20.69	46.60	0.44
2952.30	0.39	161.18	2952.11	13.47	15.36	13.39	20.43	48.76	0.24
3047.00	0.57	45.00	3046.81	13.50	15.80	13.42	20.78	49.50	0.87
3141.70	0.31	103.55	3141.50	13.77	16.38	13.69	21.40	49.95	0.51
3236.40	0.43	86.85	3236.20	13.73	16.99	13.64	21.84	51.05	0.17
3331.10	0.54	70.15	3330.90	13.90	17.76	13.81	22.56	51.95	0.19
3425.80	0.66	53.46	3425.59	14.38	18.63	14.29	23.53	52.33	0.22
3520.50	1.14	61.83	3520.28	15.15	19.90	15.05	25.01	52.71	0.53
3615.20	0.87	79.45	3614.97	15.73	21.44	15.62	26.59	53.73	0.43
3709.90	0.87	71.77	3709.66	16.08	22.82	15.97	27.92	54.83	0.12
3804.60	1.34	99.73	3804.34	16.12	24.60	16.00	29.41	56.76	0.74
3899.30	1.32	102.60	3899.01	15.70	26.75	15.57	31.02	59.59	0.07
3994.00	1.15	87.56	3993.69	15.50	28.76	15.36	32.67	61.67	0.39
4088.70	0.99	83.32	4088.38	15.64	30.52	15.49	34.29	62.87	0.18
4183.40	0.67	33.54	4183.07	16.20	31.64	16.04	35.54	62.89	0.80
4278.10	0.55	21.58	4277.76	17.08	32.11	16.93	36.37	61.99	0.19
4372.80	0.45	355.93	4372.46	17.88	32.25	17.72	36.87	61.00	0.26
4467.50	0.43	350.28	4467.15	18.60	32.17	18.44	37.15	59.97	0.05
4562.20	0.44	352.85	4561.85	19.31	32.06	19.15	37.43	58.94	0.02
4656.90	0.40	348.38	4656.55	19.99	31.95	19.84	37.69	57.96	0.05
4751.60	0.56	14.87	4751.25	20.76	32.00	20.61	38.15	57.02	0.28
4846.30	0.58	328.00	4845.94	21.62	31.86	21.46	38.50	55.85	0.48
4941.00	0.62	333.20	4940.64	22.48	31.38	22.33	38.60	54.38	0.07
5035.70	0.67	338.40	5035.33	23.45	30.94	23.30	38.82	52.84	0.08
5130.40	0.71	343.60	5130.02	24.52	30.57	24.38	39.19	51.26	0.08
5225.10	0.48	35.08	5224.72	25.41	30.64	25.26	39.80	50.33	0.59
5319.80	0.65	334.94	5319.42	26.22	30.64	26.07	40.33	49.44	0.62
5414.50	0.80	332.60	5414.11	27.29	30.11	27.14	40.64	47.81	0.16

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
5509.20	0.39	66.66	5508.80	28.01	30.10	27.86	41.12	47.07	0.97
5603.90	0.46	345.66	5603.50	28.50	30.30	28.35	41.60	46.76	0.58
5698.60	0.39	57.39	5698.20	29.04	30.48	28.89	42.10	46.39	0.53
5793.30	0.41	69.30	5792.90	29.33	31.07	29.18	42.73	46.64	0.09
5888.00	0.48	67.99	5887.60	29.60	31.75	29.45	43.41	47.01	0.08
5982.70	0.60	63.87	5982.29	29.97	32.56	29.81	44.25	47.38	0.13
6077.40	0.41	60.28	6076.99	30.35	33.30	30.19	45.06	47.65	0.20
6172.10	0.37	64.74	6171.69	30.65	33.87	30.49	45.68	47.85	0.05
6266.80	0.58	278.28	6266.38	30.85	33.67	30.69	45.67	47.50	0.96
6361.50	0.21	85.75	6361.08	30.93	33.37	30.77	45.50	47.17	0.83
6456.20	0.33	196.34	6455.78	30.69	33.46	30.52	45.40	47.48	0.47
6550.90	0.37	223.90	6550.48	30.20	33.17	30.04	44.86	47.68	0.18
6645.60	0.56	139.94	6645.18	29.63	33.26	29.47	44.54	48.30	0.68
6740.30	0.45	125.55	6739.87	29.06	33.86	28.89	44.62	49.37	0.18
6835.00	0.92	158.32	6834.57	28.13	34.45	27.96	44.47	50.76	0.63
6929.70	1.09	199.31	6929.25	26.57	34.43	26.40	43.49	52.34	0.76
7024.40	1.01	164.69	7023.94	24.91	34.35	24.74	42.43	54.05	0.67
7119.10	1.16	200.09	7118.62	23.20	34.24	23.03	41.36	55.88	0.72
7213.80	1.16	196.67	7213.30	21.38	33.64	21.21	39.86	57.56	0.07
7308.50	0.98	171.35	7307.99	19.66	33.48	19.50	38.83	59.58	0.53
7403.20	1.57	181.64	7402.66	17.56	33.57	17.40	37.89	62.38	0.67
7497.90	1.11	206.50	7497.34	15.44	33.12	15.28	36.54	65.01	0.77
7592.60	0.87	183.25	7592.02	13.90	32.67	13.74	35.50	66.96	0.49
7687.30	0.87	181.06	7686.71	12.46	32.62	12.30	34.92	69.09	0.04
7782.00	1.17	201.56	7781.40	10.85	32.25	10.69	34.02	71.41	0.49
7876.70	1.27	165.63	7876.08	8.93	32.15	8.78	33.37	74.47	0.80
7971.40	1.35	192.70	7970.75	6.83	32.17	6.68	32.89	78.01	0.65
8066.10	1.20	197.07	8065.43	4.80	31.63	4.65	32.00	81.37	0.19
8160.80	1.07	165.24	8160.11	3.00	31.57	2.85	31.71	84.57	0.67
8255.50	1.02	175.12	8254.80	1.31	31.86	1.15	31.89	87.65	0.20
8350.20	1.17	205.35	8349.48	-0.40	31.52	-0.55	31.53	90.73	0.62
8444.90	1.08	216.59	8444.16	-1.99	30.58	-2.14	30.65	93.72	0.25
8539.60	0.47	190.81	8538.85	-3.08	29.98	-3.23	30.14	95.86	0.73
8634.30	0.26	259.56	8633.55	-3.50	29.69	-3.64	29.90	96.72	0.47
8729.00	0.56	260.41	8728.25	-3.61	29.02	-3.75	29.24	97.10	0.31
8823.70	0.40	260.05	8822.95	-3.75	28.24	-3.89	28.49	97.56	0.17
8918.40	0.29	295.92	8917.65	-3.70	27.70	-3.84	27.95	97.61	0.25
9013.10	1.16	321.10	9012.34	-2.85	26.89	-2.99	27.04	96.06	0.96
9107.80	1.46	331.36	9107.01	-1.05	25.71	-1.18	25.73	92.34	0.41

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
9202.50	1.08	345.73	9201.69	0.87	24.91	0.75	24.93	88.00	0.53
9297.20	1.25	308.87	9296.37	2.38	23.89	2.26	24.01	84.31	0.79
9391.90	1.35	286.38	9391.05	3.34	22.02	3.23	22.27	81.37	0.54
9486.60	1.23	297.06	9485.72	4.12	20.05	4.02	20.46	78.39	0.28
9581.30	1.05	293.79	9580.41	4.93	18.35	4.84	19.00	74.96	0.20
9676.00	0.99	286.30	9675.09	5.51	16.77	5.43	17.65	71.81	0.15



VES Survey International
West Texas
(432) 563-5444
Surveyor: Bryan Massey
Big Sinks Draw 25 Fed Com 3H / API 30-015-41940



VES Survey Date: 02/05/2015



Directional Survey

Well Name: BIG SINKS DRAW 25 FED COM 3H

Sub-Division DELAWARE BASIN		Region DELAWARE BASIN WEST		Field Name PADUCA		County EDDY		State/Province NM			
Surface Legal Location SEC25.T2SS.R31E		API/UWI 3001541940		Latitude (°) 32° 6' 6.602" N		Longitude (°) 103° 43' 46.01" W		Ground Elev MSL (ft) 3,329.40		Orig KB Elevation (ft) 3,354.40	
Wellbores											
Wellbore Name OH		Parent Wellbore OH			SAP Well ID 37827			Vertical Section Direction (°)			
Kick Offs & Key Depths											
Date 2/7/2015				Type Kick Off				Top Depth (ftKB) 9,781.0			
Actual Deviation Survey GYRO & MWD, Proposed? No				Definitive? Yes		Proposed? No		Proposed Deviation Survey			
Deviation Survey											
Date 2/7/2015		Description GYRO & MWD									
MD Tie In (ftKB) 0.00		TVD Tie In (ftKB) 0.00		Inclination Tie In (°) 0.00		Azimuth Tie In (°) 0.00		NSTie In (ft) 0.00		EWtie In (ft) 0.00	
Survey Data											
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company	
2/7/2015	111.30	0.62	41.66	111.30	0.45	0.45	0.40	0.56	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	206.00	0.63	60.02	205.99	1.09	1.09	1.19	0.21	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	300.70	0.45	58.87	300.69	1.53	1.55	1.96	0.19	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	395.40	0.64	55.36	395.38	2.02	2.04	2.71	0.20	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	490.10	0.45	60.12	490.08	2.50	2.52	3.47	0.21	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	584.80	0.52	55.34	584.78	2.93	2.95	4.15	0.09	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	679.50	0.52	52.19	679.47	3.43	3.46	4.84	0.03	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	774.20	0.62	40.47	774.17	4.08	4.11	5.51	0.16	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	868.90	0.64	61.61	868.86	4.72	4.76	6.31	0.24	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	963.60	1.00	43.08	963.55	5.57	5.61	7.34	0.47	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,058.30	0.93	54.74	1,058.24	6.61	6.66	8.53	0.22	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,153.00	1.44	40.06	1,152.92	7.95	8.01	9.93	0.62	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,247.70	1.14	22.12	1,247.59	9.73	9.80	11.05	0.53	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,342.40	0.89	35.48	1,342.28	11.20	11.27	11.83	0.36	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,437.10	0.81	49.27	1,436.97	12.23	12.30	12.76	0.23	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,531.80	0.91	45.22	1,531.66	13.19	13.27	13.80	0.12	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,626.50	0.59	30.52	1,626.35	14.13	14.22	14.58	0.39	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,721.20	0.34	8.11	1,721.05	14.83	14.92	14.87	0.32	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,815.90	0.35	326.49	1,815.75	15.35	15.44	14.75	0.26	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	1,910.60	0.58	327.05	1,910.44	16.00	16.08	14.33	0.24	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,005.30	0.57	254.37	2,005.14	16.27	16.36	13.62	0.72	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,100.00	0.44	322.71	2,099.84	16.44	16.52	12.94	0.61	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,194.70	0.48	7.35	2,194.53	17.12	17.20	12.77	0.37	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,289.40	0.52	51.98	2,289.23	17.78	17.86	13.16	0.40	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,384.10	0.59	161.17	2,383.93	17.58	17.66	13.66	0.96	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,478.80	0.54	164.66	2,478.62	16.69	16.77	13.93	0.06	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,573.50	0.48	168.16	2,573.32	15.87	15.95	14.13	0.07	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,668.20	0.43	171.65	2,668.02	15.13	15.21	14.27	0.06	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,762.90	0.31	112.62	2,762.71	14.68	14.76	14.55	0.40	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,857.60	0.60	153.45	2,857.41	14.13	14.22	15.01	0.44	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	2,952.30	0.39	161.18	2,952.11	13.38	13.47	15.34	0.23	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,047.00	0.57	45.00	3,046.81	13.41	13.50	15.78	0.87	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,141.70	0.31	103.55	3,141.50	13.68	13.77	16.36	0.51	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,236.40	0.43	86.85	3,236.20	13.63	13.73	16.96	0.17	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,331.10	0.54	70.15	3,330.90	13.80	13.90	17.74	0.19	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,425.80	0.66	53.46	3,425.59	14.27	14.38	18.59	0.22	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,520.50	1.14	61.83	3,520.28	15.03	15.15	19.86	0.52	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,615.20	0.87	79.45	3,614.97	15.60	15.72	21.40	0.43	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,709.90	0.87	71.77	3,709.66	15.95	16.08	22.79	0.12	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,804.60	1.34	99.73	3,804.34	15.97	16.12	24.56	0.74	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,899.30	1.32	102.60	3,899.01	15.54	15.69	26.72	0.07	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	3,994.00	1.15	87.56	3,993.69	15.33	15.50	28.73	0.38	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,088.70	0.99	83.32	4,088.38	15.45	15.63	30.50	0.19	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,183.40	0.67	33.54	4,183.07	16.00	16.19	31.61	0.80	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,278.10	0.55	21.58	4,277.76	16.88	17.07	32.09	0.18	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,372.80	0.45	355.93	4,372.46	17.68	17.87	32.23	0.26	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,467.50	0.43	350.28	4,467.15	18.40	18.59	32.14	0.05	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,562.20	0.44	352.85	4,561.85	19.11	19.30	32.04	0.02	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,656.90	0.40	348.38	4,656.55	19.79	19.98	31.92	0.05	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,751.60	0.56	14.87	4,751.25	20.56	20.75	31.98	0.28	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,846.30	0.58	328.00	4,845.94	21.42	21.61	31.84	0.48	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	4,941.00	0.62	333.20	4,940.64	22.29	22.47	31.36	0.07	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,035.70	0.67	338.40	5,035.33	23.26	23.44	30.92	0.08	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,130.40	0.71	343.60	5,130.02	24.34	24.52	30.55	0.08	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,225.10	0.48	35.08	5,224.72	25.23	25.41	30.61	0.59	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,319.80	0.65	334.94	5,319.42	26.04	26.22	30.62	0.62	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,414.50	0.80	332.60	5,414.11	27.12	27.29	30.08	0.16	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,509.20	0.39	66.66	5,508.80	27.83	28.01	30.08	0.97	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,603.90	0.46	345.66	5,603.50	28.32	28.50	30.28	0.59	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,698.60	0.39	57.39	5,698.20	28.87	29.05	30.45	0.53	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,793.30	0.41	69.30	5,792.90	29.16	29.34	31.04	0.09	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,888.00	0.48	67.99	5,887.60	29.42	29.61	31.73	0.07	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	5,982.70	0.60	63.87	5,982.29	29.78	29.98	32.54	0.13	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,077.40	0.41	60.28	6,076.99	30.16	30.36	33.28	0.20	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,172.10	0.37	64.74	6,171.69	30.46	30.66	33.85	0.05	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,266.80	0.58	278.28	6,266.38	30.66	30.86	33.65	0.96	GYRO	VAUHGN ENERGY SERVICES	



Directional Survey

Well Name: BIG SINKS DRAW 25 FED COM 3H

Sub-Division: DELAWARE BASIN		Region: DELAWARE BASIN WEST		Field Name: PADUCA				County: EDDY		State/Province: NM	
Surface Legal Location: SEC25 T25S R31E		API/UWI: 3001541940		Latitude (°): 32° 6' 6.602" N		Longitude (°): 103° 43' 46.01" W		Ground Elev MSL (ft): 3,329.40		Orig KB Elevation (ft): 3,354.40	
Survey Data											
Date	MD (RKB)	Incl (°)	Azm (°)	TVD (RKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company	
2/7/2015	6,361.50	0.21	85.75	6,361.08	30.74	30.94	33.35	0.83	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,456.20	0.33	196.34	6,455.78	30.49	30.69	33.45	0.47	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,550.90	0.37	223.90	6,550.48	30.01	30.21	33.16	0.18	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,645.60	0.56	139.94	6,645.18	29.44	29.64	33.24	0.67	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,740.30	0.45	125.55	6,739.87	28.87	29.07	33.85	0.18	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,835.00	0.92	158.32	6,834.57	27.94	28.14	34.43	0.63	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	6,929.70	1.09	199.31	6,929.25	26.38	26.59	34.41	0.76	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,024.40	1.01	164.69	7,023.94	24.73	24.93	34.33	0.66	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,119.10	1.16	200.09	7,118.62	23.02	23.23	34.23	0.71	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,213.80	1.16	196.67	7,213.30	21.21	21.41	33.62	0.07	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,308.50	0.98	171.35	7,307.99	19.49	19.69	33.47	0.53	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,403.20	1.57	181.64	7,402.66	17.39	17.59	33.55	0.67	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,497.90	1.11	206.50	7,497.34	15.28	15.47	33.11	0.77	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,592.60	0.87	183.25	7,592.02	13.74	13.94	32.66	0.49	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,687.30	0.87	181.06	7,686.71	12.31	12.50	32.60	0.04	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,782.00	1.17	201.56	7,781.40	10.69	10.88	32.23	0.49	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,876.70	1.27	165.63	7,876.08	8.77	8.96	32.14	0.80	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	7,971.40	1.35	192.70	7,970.75	6.67	6.86	32.15	0.65	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,066.10	1.20	197.07	8,065.43	4.64	4.82	31.62	0.19	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,160.80	1.07	165.24	8,160.11	2.83	3.02	31.55	0.67	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,255.50	1.02	175.12	8,254.80	1.14	1.33	31.85	0.20	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,350.20	1.17	205.35	8,349.48	-0.57	-0.39	31.51	0.62	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,444.90	1.08	216.59	8,444.16	-2.16	-1.98	30.56	0.25	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,539.60	0.47	190.81	8,538.85	-3.25	-3.08	29.96	0.73	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,634.30	0.26	259.56	8,633.55	-3.67	-3.50	29.67	0.47	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,729.00	0.56	260.41	8,728.25	-3.78	-3.61	29.00	0.32	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,823.70	0.40	260.05	8,822.95	-3.91	-3.75	28.22	0.17	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	8,918.40	0.29	295.92	8,917.65	-3.86	-3.70	27.68	0.25	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,013.10	1.16	321.10	9,012.34	-3.01	-2.85	26.86	0.96	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,107.80	1.46	331.36	9,107.01	-1.20	-1.04	25.68	0.40	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,202.50	1.08	345.73	9,201.69	0.73	0.88	24.88	0.52	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,297.20	1.25	308.87	9,296.37	2.25	2.39	23.86	0.80	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,391.90	1.35	286.38	9,391.05	3.23	3.36	21.99	0.55	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,486.60	1.23	297.06	9,485.72	4.01	4.13	20.01	0.28	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,581.30	1.05	293.79	9,580.40	4.84	4.95	18.31	0.20	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,676.00	0.99	286.30	9,675.09	5.43	5.53	16.73	0.15	GYRO	VAUHGN ENERGY SERVICES	
2/7/2015	9,753.00	1.12	280.45	9,752.08	5.76	5.85	15.35	0.22	MWD	WEATHERFORD	
2/7/2015	9,784.00	1.59	310.96	9,783.07	6.10	6.19	14.73	2.73	MWD	WEATHERFORD	
2/7/2015	9,825.00	3.43	345.33	9,824.03	7.66	7.74	13.99	5.61	MWD	WEATHERFORD	
2/7/2015	9,857.00	4.71	354.45	9,855.95	9.90	9.98	13.62	4.47	MWD	WEATHERFORD	
2/7/2015	9,888.00	6.71	356.41	9,886.79	12.97	13.05	13.38	6.48	MWD	WEATHERFORD	
2/7/2015	9,920.00	9.10	354.24	9,918.49	17.36	17.44	13.01	7.53	MWD	WEATHERFORD	
2/7/2015	9,952.00	11.28	352.89	9,949.98	22.99	23.06	12.37	6.85	MWD	WEATHERFORD	
2/7/2015	9,983.00	13.97	350.55	9,980.23	29.69	29.76	11.38	8.83	MWD	WEATHERFORD	
2/7/2015	10,015.00	16.80	350.55	10,011.08	38.08	38.14	9.99	8.84	MWD	WEATHERFORD	
2/7/2015	10,047.00	18.86	350.58	10,041.54	47.75	47.80	8.38	6.44	MWD	WEATHERFORD	
2/7/2015	10,078.00	21.41	350.52	10,070.64	58.29	58.33	6.63	8.23	MWD	WEATHERFORD	
2/7/2015	10,109.00	24.46	350.87	10,099.19	70.22	70.25	4.68	9.85	MWD	WEATHERFORD	
2/7/2015	10,141.00	28.16	352.24	10,127.87	84.26	84.27	2.61	11.72	MWD	WEATHERFORD	
2/7/2015	10,173.00	31.83	352.59	10,155.58	100.13	100.13	0.50	11.48	MWD	WEATHERFORD	
2/7/2015	10,204.00	35.85	352.97	10,181.32	117.26	117.25	-1.67	12.99	MWD	WEATHERFORD	
2/7/2015	10,236.00	40.01	353.33	10,206.56	136.80	136.78	-4.01	13.02	MWD	WEATHERFORD	
2/7/2015	10,268.00	44.24	353.84	10,230.28	158.14	158.10	-6.40	13.26	MWD	WEATHERFORD	
2/7/2015	10,299.00	48.55	355.23	10,251.66	180.49	180.44	-8.53	14.28	MWD	WEATHERFORD	
2/7/2015	10,331.00	52.58	357.05	10,271.98	205.15	205.10	-10.18	13.34	MWD	WEATHERFORD	
2/7/2015	10,363.00	56.44	359.25	10,290.56	231.19	231.13	-11.01	13.30	MWD	WEATHERFORD	
2/7/2015	10,394.00	60.49	1.11	10,306.77	257.61	257.55	-10.92	14.03	MWD	WEATHERFORD	
2/7/2015	10,426.00	65.00	1.66	10,321.42	286.03	285.98	-10.23	14.18	MWD	WEATHERFORD	
2/7/2015	10,457.00	69.62	1.63	10,333.38	314.61	314.56	-9.41	14.90	MWD	WEATHERFORD	
2/7/2015	10,489.00	73.01	1.56	10,343.63	344.90	344.86	-8.56	10.60	MWD	WEATHERFORD	
2/7/2015	10,521.00	76.03	1.49	10,352.17	375.72	375.68	-7.74	9.44	MWD	WEATHERFORD	
2/7/2015	10,552.00	78.52	1.35	10,358.99	405.94	405.91	-7.00	8.04	MWD	WEATHERFORD	
2/7/2015	10,584.00	81.16	1.45	10,364.64	437.42	437.39	-6.23	8.26	MWD	WEATHERFORD	
2/7/2015	10,616.00	83.34	1.54	10,368.95	469.11	469.09	-5.40	6.82	MWD	WEATHERFORD	
2/7/2015	10,650.00	85.66	1.42	10,372.21	502.94	502.92	-4.52	6.83	MWD	WEATHERFORD	
2/7/2015	10,681.00	86.86	1.21	10,374.23	533.86	533.84	-3.81	3.93	MWD	WEATHERFORD	
2/7/2015	10,713.00	87.76	0.39	10,375.74	565.81	565.80	-3.37	3.80	MWD	WEATHERFORD	
2/7/2015	10,744.00	87.62	359.90	10,376.99	596.79	596.78	-3.29	1.64	MWD	WEATHERFORD	
2/7/2015	10,839.00	88.11	359.80	10,380.52	691.72	691.71	-3.54	0.53	MWD	WEATHERFORD	
2/7/2015	10,933.00	88.18	359.49	10,383.57	785.67	785.66	-4.12	0.34	MWD	WEATHERFORD	
2/7/2015	11,028.00	89.44	358.90	10,385.54	880.65	880.63	-5.45	1.46	MWD	WEATHERFORD	
2/7/2015	11,122.00	89.72	358.94	10,386.23	974.64	974.61	-7.23	0.30	MWD	WEATHERFORD	
2/7/2015	11,217.00	89.86	358.34	10,386.58	1,069.62	1,069.58	-9.48	0.65	MWD	WEATHERFORD	
2/7/2015	11,311.00	89.79	358.65	10,386.86	1,163.60	1,163.55	-11.95	0.34	MWD	WEATHERFORD	
2/7/2015	11,406.00	90.56	359.58	10,386.57	1,258.59	1,258.54	-13.42	1.27	MWD	WEATHERFORD	
2/7/2015	11,501.00	90.70	359.57	10,385.53	1,353.59	1,353.53	-14.12	0.15	MWD	WEATHERFORD	
2/7/2015	11,595.00	91.12	359.59	10,384.04	1,447.57	1,447.51	-14.81	0.45	MWD	WEATHERFORD	

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Report Printed: 6/24/2015



Directional Survey

Well Name: BIG SINKS DRAW 25 FED COM 3H

Sub-Division	Region	Field Name	County	State/Province
DELAWARE BASIN	DELAWARE BASIN WEST	PADUCA	EDDY	NM
Surface Legal Location	API/UWI	Latitude (°)	Longitude (°)	Ground Elev MSL (ft)
SEC25-T25S-R31E	3001541940	32° 6' 6.602" N	103° 43' 46.01" W	3,329.40
				Orig KB Elevation (ft)
				3,354.40

Survey Data										
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
2/7/2015	11,690.00	90.49	0.73	10,382.70	1,542.56	1,542.50	14.55	1.37	MWD	WEATHERFORD
2/7/2015	11,784.00	90.49	1.31	10,381.90	1,636.53	1,636.48	12.87	0.62	MWD	WEATHERFORD
2/7/2015	11,879.00	88.95	0.02	10,382.36	1,731.51	1,731.47	11.77	2.11	MWD	WEATHERFORD
2/7/2015	11,973.00	89.79	0.45	10,383.40	1,825.50	1,825.46	11.38	1.00	MWD	WEATHERFORD
2/7/2015	12,068.00	90.70	1.13	10,382.99	1,920.48	1,920.45	10.07	1.20	MWD	WEATHERFORD
2/7/2015	12,163.00	90.98	1.64	10,381.60	2,015.42	2,015.41	7.78	0.61	MWD	WEATHERFORD
2/7/2015	12,257.00	90.84	2.22	10,380.10	2,109.34	2,109.35	4.61	0.63	MWD	WEATHERFORD
2/7/2015	12,352.00	89.86	2.01	10,379.52	2,204.25	2,204.28	1.11	1.05	MWD	WEATHERFORD
2/7/2015	12,447.00	87.90	0.44	10,381.38	2,299.19	2,299.23	0.92	2.64	MWD	WEATHERFORD
2/7/2015	12,541.00	87.97	359.13	10,384.77	2,393.12	2,393.17	0.57	1.39	MWD	WEATHERFORD
2/7/2015	12,636.00	89.09	359.10	10,387.21	2,488.08	2,488.12	0.90	1.18	MWD	WEATHERFORD
2/7/2015	12,730.00	88.95	359.64	10,388.81	2,582.07	2,582.10	1.93	0.59	MWD	WEATHERFORD
2/7/2015	12,825.00	90.63	359.95	10,389.16	2,677.07	2,677.10	2.27	1.80	MWD	WEATHERFORD
2/7/2015	12,919.00	90.77	0.72	10,388.01	2,771.05	2,771.09	1.72	0.83	MWD	WEATHERFORD
2/7/2015	13,014.00	90.63	0.02	10,386.85	2,866.04	2,866.08	1.11	0.75	MWD	WEATHERFORD
2/7/2015	13,108.00	91.12	358.85	10,385.42	2,960.02	2,960.06	2.03	1.35	MWD	WEATHERFORD
2/7/2015	13,203.00	91.54	359.60	10,383.21	3,054.99	3,055.03	3.32	0.90	MWD	WEATHERFORD
2/7/2015	13,297.00	91.68	359.19	10,380.57	3,148.95	3,148.98	4.31	0.46	MWD	WEATHERFORD
2/7/2015	13,392.00	90.70	359.73	10,378.60	3,243.93	3,243.96	5.20	1.18	MWD	WEATHERFORD
2/7/2015	13,486.00	89.44	359.66	10,378.48	3,337.93	3,337.95	5.71	1.34	MWD	WEATHERFORD
2/7/2015	13,581.00	88.74	359.13	10,379.99	3,432.92	3,432.94	6.71	0.92	MWD	WEATHERFORD
2/7/2015	13,675.00	89.16	359.31	10,381.71	3,526.90	3,526.91	7.99	0.49	MWD	WEATHERFORD
2/7/2015	13,770.00	87.34	359.71	10,384.62	3,621.85	3,621.86	8.80	1.96	MWD	WEATHERFORD
2/7/2015	13,865.00	87.76	0.52	10,388.68	3,716.76	3,716.77	8.61	0.96	MWD	WEATHERFORD
2/7/2015	13,960.00	89.44	0.68	10,391.00	3,811.71	3,811.73	7.61	1.78	MWD	WEATHERFORD
2/7/2015	14,055.00	88.62	359.86	10,392.61	3,906.69	3,906.72	7.17	1.22	MWD	WEATHERFORD
2/7/2015	14,151.00	89.44	359.22	10,394.23	4,002.68	4,002.70	7.94	1.08	MWD	WEATHERFORD
2/7/2015	14,245.00	89.44	359.82	10,395.15	4,096.67	4,096.69	8.72	0.64	MWD	WEATHERFORD
2/7/2015	14,343.00	89.51	359.97	10,396.05	4,194.67	4,194.69	8.90	0.17	MWD	WEATHERFORD
2/7/2015	14,437.00	88.25	0.87	10,397.88	4,288.64	4,288.66	8.22	1.65	MWD	WEATHERFORD
2/7/2015	14,532.00	87.48	0.10	10,401.42	4,383.56	4,383.59	7.41	1.15	MWD	WEATHERFORD
2/7/2015	14,626.00	87.13	0.29	10,405.84	4,477.45	4,477.49	7.09	0.42	MWD	WEATHERFORD
2/7/2015	14,721.00	86.71	0.23	10,410.95	4,572.31	4,572.35	6.66	0.45	MWD	WEATHERFORD
2/7/2015	14,816.00	86.08	359.54	10,416.92	4,667.12	4,667.16	6.85	0.98	MWD	WEATHERFORD
2/7/2015	14,910.00	86.85	358.18	10,422.72	4,760.93	4,760.96	8.72	1.66	MWD	WEATHERFORD
2/7/2015	15,004.00	88.25	356.10	10,426.74	4,854.74	4,854.75	13.41	2.67	MWD	WEATHERFORD
2/7/2015	15,099.00	91.61	357.09	10,426.85	4,949.59	4,949.57	19.05	3.69	MWD	WEATHERFORD
2/7/2015	15,193.00	92.38	358.19	10,423.58	5,043.48	5,043.43	22.92	1.43	MWD	WEATHERFORD
2/7/2015	15,288.00	92.17	359.96	10,419.81	5,138.39	5,138.34	24.45	1.87	MWD	WEATHERFORD
2/7/2015	15,383.00	91.26	2.28	10,416.96	5,233.31	5,233.27	22.59	2.62	MWD	WEATHERFORD
2/7/2015	15,478.00	90.14	4.45	10,415.80	5,328.10	5,328.09	17.02	2.57	MWD	WEATHERFORD
2/7/2015	15,574.00	88.88	7.17	10,416.63	5,423.53	5,423.58	7.30	3.12	MWD	WEATHERFORD
2/7/2015	15,669.00	86.50	8.65	10,420.45	5,517.46	5,517.59	5.76	2.95	MWD	WEATHERFORD
2/7/2015	15,763.00	85.09	7.55	10,427.35	5,610.19	5,610.40	18.97	1.90	MWD	WEATHERFORD
2/7/2015	15,858.00	83.41	5.64	10,436.87	5,704.01	5,704.29	29.83	2.67	MWD	WEATHERFORD
2/7/2015	15,952.00	83.77	3.13	10,447.36	5,797.10	5,797.42	36.97	2.68	MWD	WEATHERFORD
2/7/2015	16,047.00	84.89	0.76	10,456.75	5,891.55	5,891.89	40.17	2.75	MWD	WEATHERFORD
2/7/2015	16,142.00	84.61	358.12	10,465.44	5,986.15	5,986.48	39.25	2.78	MWD	WEATHERFORD
2/7/2015	16,236.00	86.64	355.41	10,472.61	6,079.74	6,080.05	33.96	3.60	MWD	WEATHERFORD
2/7/2015	16,331.00	89.02	356.03	10,476.21	6,174.44	6,174.71	26.88	2.59	MWD	WEATHERFORD
2/7/2015	16,425.00	88.39	358.65	10,478.34	6,268.33	6,268.57	22.51	2.87	MWD	WEATHERFORD
2/7/2015	16,519.00	89.72	359.13	10,479.89	6,362.30	6,362.54	20.69	1.50	MWD	WEATHERFORD
2/7/2015	16,614.00	90.56	357.82	10,479.65	6,457.28	6,457.50	18.17	1.64	MWD	WEATHERFORD
2/7/2015	16,708.00	92.73	356.38	10,476.96	6,551.14	6,551.34	13.41	2.77	MWD	WEATHERFORD
2/7/2015	16,803.00	91.68	356.21	10,473.30	6,645.91	6,646.07	7.28	1.12	MWD	WEATHERFORD
2/7/2015	16,897.00	91.61	356.51	10,470.60	6,739.71	6,739.84	1.31	0.33	MWD	WEATHERFORD
2/7/2015	16,992.00	91.75	355.90	10,467.82	6,834.50	6,834.59	4.97	0.66	MWD	WEATHERFORD
2/7/2015	17,086.00	91.40	356.09	10,465.23	6,928.27	6,928.32	11.53	0.42	MWD	WEATHERFORD
2/7/2015	17,181.00	90.98	355.97	10,463.26	7,023.06	7,023.07	18.11	0.46	MWD	WEATHERFORD
2/7/2015	17,275.00	90.21	355.55	10,462.28	7,116.83	7,116.81	25.06	0.93	MWD	WEATHERFORD
2/7/2015	17,370.00	91.54	355.69	10,460.83	7,211.58	7,211.52	32.31	1.41	MWD	WEATHERFORD
2/7/2015	17,492.00	93.07	356.72	10,455.93	7,333.26	7,333.15	40.38	1.51	MWD	WEATHERFORD
2/7/2015	17,552.00	93.07	356.72	10,452.71	7,393.09	7,392.96	43.81	0.00	BIT	WEATHERFORD