

Results of Directional Survey

DD

API number:	30-009-20025			
OGRID:		Operator:	ALTA MESA SERVICES LP	
		Property:	PULLAM FARMS 27 P	# 1

surface	ULSTR:	P	27	T 08N	R 35E
				358 FSL	827 FEL

BH Loc	ULSTR:	A	34	T 08N	R 35E
9303	MD	9275.9	TVD	92 FNL	463 FEL

Top Perf/OH	ULSTR:				

Bot Perf/OH	ULSTR:				

	MD	N/S	E/W	VD
TOP PERFS/OH				
BOT PERFS/OH				

NEXT TO LAST	9042	-425.95	347.63	9016.43
LAST READING	9303	-449.78	363.52	9275.86
TD	9303	-449.78	363.52	9275.86

Surface Location	358	FS	827	FE
Projected BHL	92	FN	463	FE
Location of				
Top Perfs/OH	358	FS	827	FE
Bottom Perfs/OH	358	FS	827	FE

SUMMARY of Subsurface Locations

Surface Location	P-27-08N-35E	358	FS	827	FE	Vert. Depth
Top Perfs/OH	P-27-08N-35E	358	FS	827	FE	0.00
Bottom Perfs/OH	A-34-08N-35E	358	FS	827	FE	0.00
Projected TD	A-34-08N-35E	92	FN	463	FE	9275.86

FEB 03 2015



A GYRO TECHNOLOGIES INC. COMPANY

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

May 5, 2014

HOBBS OCD

Alta Mesa Services
15021 Katy Freeway, Suite 400
Houston, TX 77094

JUN 05 2014

RECEIVED

Attn: Drilling Department

Re: **Drilling Department**

Please find enclosed a copy of the survey from 0.00' to 6,669.00 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.

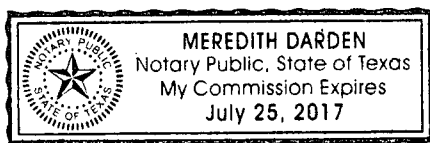
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 5th day of May, A.D., 2014, by Keith Havelka.


Meredith Darden
Notary Public, State of Texas





Company: ALTA MESA
Lease/Well: PULLIAM FARMS 27-P/No 001

Rig Name: AZTEC 673
State/County: NEW MEXICO/CURRY
Latitude: 34.88, Longitude: -103.22
GRID North is 0.64 Degrees East of True North
VS-Azi: 0.00 Degrees



HOBBS OCD

JUN 05 2014

RECEIVED

Depth Reference : RKB 14.5

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: e-line-de_01.ut
Minimum Curvature Method
Report Date/Time: 5/5/2014 / 11:03

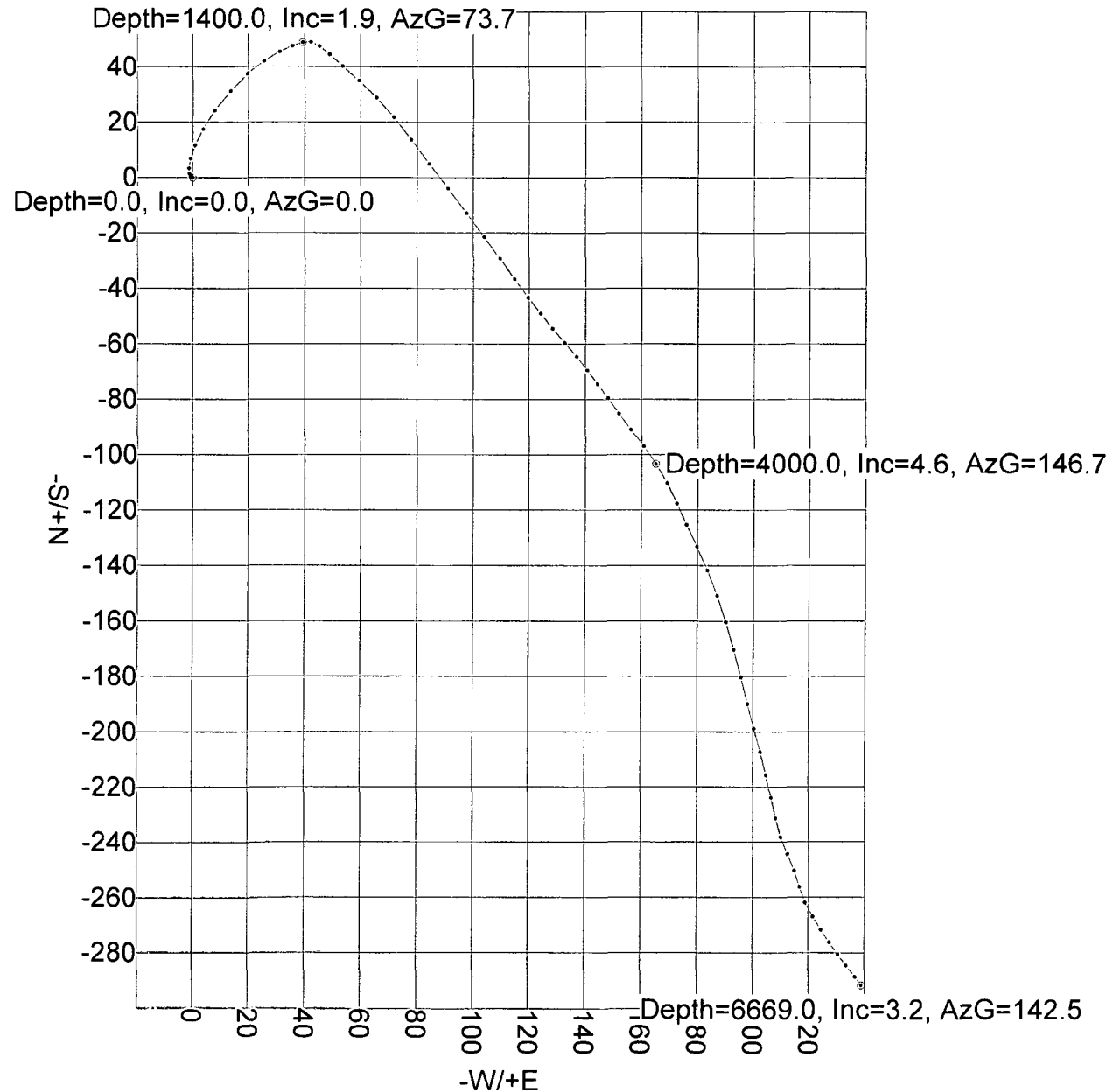
Vaughn Energy Services
Woodward, OK
800-606-4976

Surveyor: Andrew Meadville
Pulliam Farms 27-P No 001 / API 30-009-20025

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	0.41	307.76	100.00	0.22	-0.28	0.22	0.36	307.76	0.41
200.00	0.24	313.04	200.00	0.58	-0.72	0.58	0.93	308.94	0.18
300.00	0.80	335.46	299.99	1.36	-1.16	1.36	1.79	319.48	0.59
400.00	1.58	4.62	399.97	3.37	-1.34	3.37	3.63	338.31	0.96
500.00	2.51	12.63	499.91	6.89	-0.75	6.89	6.93	353.77	0.97
600.00	3.25	23.53	599.78	11.62	0.86	11.62	11.65	4.23	0.92
700.00	4.20	28.28	699.57	17.44	3.72	17.44	17.84	12.05	0.99
800.00	5.01	35.11	799.25	24.24	7.97	24.24	25.51	18.20	0.98
900.00	5.38	42.05	898.84	31.29	13.62	31.29	34.13	23.52	0.73
1000.00	4.60	48.91	998.46	37.41	19.79	37.41	42.32	27.87	0.98
1100.00	4.07	55.97	1098.17	42.03	25.75	42.03	49.29	31.49	0.76
1200.00	3.30	63.03	1197.96	45.32	31.25	45.32	55.05	34.59	0.89
1300.00	2.39	66.81	1297.84	47.45	35.74	47.45	59.40	36.98	0.92
1400.00	1.94	73.69	1397.77	48.75	39.28	48.75	62.61	38.86	0.52
1500.00	1.69	103.73	1497.72	48.88	42.34	48.88	64.67	40.90	0.97
1600.00	2.25	125.75	1597.66	47.38	45.37	47.38	65.59	43.76	0.94
1700.00	3.12	132.74	1697.55	44.38	48.96	44.38	66.08	47.81	0.93
1800.00	4.05	131.41	1797.35	40.20	53.61	40.20	67.01	53.14	0.93

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	4.87	133.75	1897.05	34.93	59.32	34.93	68.84	59.51	0.84
2000.00	5.10	135.20	1996.67	28.84	65.52	28.84	71.59	66.24	0.26
2100.00	5.62	142.04	2096.24	21.83	71.66	21.83	74.91	73.06	0.83
2200.00	6.11	143.56	2195.71	13.69	77.84	13.69	79.03	80.03	0.51
2300.00	6.39	143.93	2295.12	4.91	84.27	4.91	84.42	86.67	0.29
2400.00	6.33	142.04	2394.50	-3.94	90.95	-3.94	91.03	92.48	0.22
2500.00	6.49	144.04	2493.88	-12.86	97.66	-12.86	98.50	97.50	0.27
2600.00	5.64	143.31	2593.32	-21.38	103.91	-21.38	106.09	101.63	0.85
2700.00	5.39	145.06	2692.85	-29.17	109.54	-29.17	113.36	104.91	0.30
2800.00	5.01	144.73	2792.44	-36.59	114.75	-36.59	120.44	107.68	0.39
2900.00	4.39	141.95	2892.11	-43.16	119.63	-43.16	127.18	109.84	0.65
3000.00	4.07	143.36	2991.83	-49.03	124.11	-49.03	133.44	111.56	0.34
3100.00	3.83	139.55	3091.59	-54.42	128.39	-54.42	139.45	112.97	0.35
3200.00	3.79	140.03	3191.37	-59.50	132.69	-59.50	145.42	114.15	0.05
3300.00	3.74	139.54	3291.16	-64.51	136.93	-64.51	151.36	115.23	0.07
3400.00	3.48	143.71	3390.96	-69.44	140.84	-69.44	157.02	116.25	0.37
3500.00	3.61	144.84	3490.77	-74.46	144.45	-74.46	162.51	117.27	0.15
3600.00	3.63	144.55	3590.57	-79.61	148.09	-79.61	168.14	118.26	0.02
3700.00	4.12	145.44	3690.34	-85.14	151.96	-85.14	174.19	119.26	0.50
3800.00	4.24	141.86	3790.07	-91.01	156.29	-91.01	180.85	120.21	0.29
3900.00	4.23	145.09	3889.80	-96.94	160.68	-96.94	187.66	121.10	0.24
4000.00	4.63	146.65	3989.50	-103.34	165.01	-103.34	194.70	122.06	0.42
4100.00	4.56	151.79	4089.18	-110.22	169.11	-110.22	201.86	123.09	0.42
4200.00	4.83	157.74	4188.85	-117.62	172.59	-117.62	208.85	124.27	0.55
4300.00	4.87	155.68	4288.49	-125.38	175.93	-125.38	216.03	125.48	0.18
4400.00	5.13	152.08	4388.11	-133.19	179.76	-133.19	223.73	126.53	0.41
4500.00	5.59	159.07	4487.67	-141.69	183.60	-141.69	231.91	127.66	0.80
4600.00	5.66	160.07	4587.19	-150.87	187.02	-150.87	240.29	128.89	0.12
4700.00	5.86	163.37	4686.69	-160.40	190.16	-160.40	248.77	130.15	0.39
4800.00	6.00	164.87	4786.15	-170.34	192.98	-170.34	257.41	131.43	0.21
4900.00	5.78	165.04	4885.62	-180.24	195.65	-180.24	266.02	132.65	0.22
5000.00	5.59	167.25	4985.13	-189.86	198.02	-189.86	274.33	133.79	0.28
5100.00	5.07	164.25	5084.70	-198.87	200.30	-198.87	282.26	134.80	0.59
5200.00	5.02	164.48	5184.31	-207.34	202.67	-207.34	289.94	135.65	0.06
5300.00	4.87	167.74	5283.94	-215.70	204.74	-215.70	297.40	136.49	0.32
5400.00	4.62	168.75	5383.60	-223.81	206.43	-223.81	304.47	137.31	0.26
5500.00	4.26	166.07	5483.30	-231.37	208.11	-231.37	311.19	138.03	0.42
5600.00	3.90	162.27	5583.04	-238.21	210.04	-238.21	317.58	138.60	0.45
5700.00	3.82	155.43	5682.82	-244.48	212.46	-244.48	323.90	139.01	0.47

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	3.55	160.51	5782.61	-250.43	214.88	-250.43	329.98	139.37	0.42
5900.00	3.47	164.43	5882.42	-256.26	216.72	-256.26	335.62	139.78	0.25
6000.00	3.42	154.55	5982.24	-261.87	218.82	-261.87	341.26	140.12	0.59
6100.00	3.20	148.29	6082.07	-266.94	221.56	-266.94	346.91	140.31	0.42
6200.00	3.14	148.25	6181.92	-271.64	224.47	-271.64	352.38	140.43	0.06
6300.00	3.15	144.65	6281.77	-276.21	227.50	-276.21	357.83	140.52	0.20
6400.00	2.93	144.57	6381.63	-280.53	230.57	-280.53	363.12	140.58	0.22
6500.00	2.71	142.31	6481.51	-284.48	233.49	-284.48	368.03	140.62	0.25
6600.00	3.10	143.83	6581.38	-288.53	236.53	-288.53	373.09	140.66	0.40
6669.00	3.21	142.51	6650.28	-291.57	238.81	-291.57	376.88	140.68	0.19





Alta Mesa
Directional Survey Report

HOBBS OGD

JUN 05 2014

WELL
PULLIAMFARMS 27-P_A

Page 1
05-May-2014

Operator	Alta Mesa Services	Country	United States
Field	Lobo	Block	T8N-R35E
Platform	Lobo 27-P	Rig	Rig 673
Well Location	Onshore	Well Type	Actual

VERTICAL SECTION AZIMUTH : 0.00 deg
Calculation using the minimum Radius of Curvature
Coordinates referenced to WellHead, MD and TVD are from RKB

SURVEY	DEPTH ft	INCL. deg	AZIMUTH deg	TVD ft	NORTHING ft	EASTING ft	VERT. SEC ft	CLOS.DIST ft	CLOS.DIR deg	DOG LEG deg/100ft	TOOL
Tie In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1	100.00	0.41	307.76	100.00	0.22	-0.28	0.22	0.36	307.76	0.41	GWS
2	200.00	0.24	313.04	200.00	0.58	-0.72	0.58	0.92	308.95	0.17	GWS
3	300.00	0.80	335.46	299.99	1.36	-1.16	1.36	1.79	319.48	0.59	GWS
4	400.00	1.58	4.62	399.97	3.37	-1.34	3.37	3.63	338.30	0.96	GWS
5	500.00	2.51	12.63	499.91	6.88	-0.75	6.88	6.92	353.77	0.97	GWS
6	600.00	3.25	23.53	599.78	11.62	0.86	11.62	11.65	4.23	0.92	GWS
7	700.00	4.20	28.28	699.57	17.44	3.73	17.44	17.83	12.06	1.00	GWS
8	800.00	5.01	35.11	799.25	24.24	7.97	24.24	25.51	18.21	0.98	GWS
9	900.00	5.38	42.05	898.84	31.29	13.62	31.29	34.13	23.53	0.73	GWS
10	1000.00	4.60	48.91	998.46	37.41	19.79	37.41	42.32	27.88	0.98	GWS
11	1100.00	4.07	55.97	1098.17	42.03	25.75	42.03	49.29	31.50	0.75	GWS
12	1200.00	3.30	63.03	1197.96	45.32	31.26	45.32	55.05	34.59	0.89	GWS
13	1300.00	2.39	66.81	1297.84	47.45	35.74	47.45	59.40	36.99	0.93	GWS
14	1400.00	1.94	73.69	1397.77	48.74	39.28	48.74	62.60	38.86	0.52	GWS
15	1500.00	1.69	103.73	1497.72	48.87	42.34	48.87	64.66	40.90	0.97	GWS
16	1600.00	2.25	125.75	1597.66	47.37	45.36	47.37	65.59	43.76	0.93	GWS
17	1700.00	3.12	132.74	1697.55	44.38	48.95	44.38	66.07	47.81	0.93	GWS
18	1800.00	4.05	131.41	1797.36	40.19	53.60	40.19	67.00	53.13	0.93	GWS
19	1900.00	4.87	133.75	1897.05	34.92	59.32	34.92	68.83	59.51	0.84	GWS
20	2000.00	5.10	135.20	1996.67	28.83	65.51	28.83	71.58	66.25	0.26	GWS
21	2100.00	5.62	142.04	2096.24	21.82	71.66	21.82	74.91	73.07	0.82	GWS
22	2200.00	6.11	143.56	2195.71	13.68	77.83	13.68	79.02	80.03	0.51	GWS
23	2300.00	6.39	143.93	2295.12	4.90	84.27	4.90	84.41	86.67	0.28	GWS
24	2400.00	6.33	142.04	2394.50	-3.95	90.94	-3.95	91.02	92.49	0.22	GWS
25	2500.00	6.49	144.04	2493.88	-12.87	97.65	-12.87	98.49	97.51	0.27	GWS
26	2600.00	5.64	143.31	2593.32	-21.38	103.90	-21.38	106.08	101.63	0.85	GWS
27	2700.00	5.39	145.06	2692.85	-29.17	109.53	-29.17	113.34	104.92	0.30	GWS
28	2800.00	5.01	144.73	2792.44	-36.59	114.74	-36.59	120.43	107.69	0.38	GWS
29	2900.00	4.39	141.95	2892.11	-43.17	119.62	-43.17	127.17	109.84	0.66	GWS
30	3000.00	4.07	143.36	2991.83	-49.03	124.09	-49.03	133.43	111.56	0.34	GWS
31	3100.00	3.83	139.55	3091.60	-54.42	128.38	-54.42	139.44	112.97	0.36	GWS
32	3200.00	3.79	140.03	3191.38	-59.49	132.67	-59.49	145.40	114.15	0.05	GWS
33	3300.00	3.74	139.54	3291.16	-64.51	136.91	-64.51	151.34	115.23	0.06	GWS
34	3400.00	3.48	143.71	3390.96	-69.43	140.82	-69.43	157.01	116.25	0.37	GWS
35	3500.00	3.61	144.84	3490.77	-74.45	144.43	-74.45	162.49	117.27	0.15	GWS
36	3600.00	3.63	144.55	3590.57	-79.61	148.08	-79.61	168.12	118.26	0.03	GWS
37	3700.00	4.12	145.44	3690.34	-85.14	151.95	-85.14	174.18	119.26	0.49	GWS
38	3800.00	4.24	141.86	3790.08	-91.01	156.27	-91.01	180.84	120.22	0.29	GWS
39	3900.00	4.23	145.09	3889.80	-96.94	160.67	-96.94	187.65	121.11	0.24	GWS
40	4000.00	4.63	146.65	3989.50	-103.34	165.00	-103.34	194.69	122.06	0.42	GWS
41	4100.00	4.56	151.79	4089.18	-110.21	169.10	-110.21	201.84	123.10	0.42	GWS
42	4200.00	4.83	157.74	4188.85	-117.61	172.57	-117.61	208.84	124.28	0.56	GWS
43	4300.00	4.87	155.68	4288.49	-125.38	175.91	-125.38	216.02	125.48	0.18	GWS
44	4400.00	5.13	152.08	4388.11	-133.19	179.75	-133.19	223.72	126.54	0.41	GWS
45	4500.00	5.59	159.07	4487.67	-141.69	183.59	-141.69	231.91	127.66	0.80	GWS
46	4600.00	5.66	160.07	4587.19	-150.88	187.01	-150.88	240.28	128.90	0.12	GWS
47	4700.00	5.86	163.37	4686.69	-160.41	190.15	-160.41	248.77	130.15	0.39	GWS
48	4800.00	6.00	164.87	4786.15	-170.34	192.97	-170.34	257.40	131.44	0.21	GWS
49	4900.00	5.78	165.04	4885.62	-180.25	195.64	-180.25	266.02	132.66	0.22	GWS
50	5000.00	5.59	167.25	4985.13	-189.87	198.01	-189.87	274.33	133.80	0.29	GWS



Alta Mesa
Directional Survey Report

WELL
PULLIAMFARMS 27-P_A

Page 2
05-May-2014

SURVEY	DEPTH ft	INCL. deg	AZIMUTH deg	TVD ft	NORTHING ft	EASTING ft	VERT. SEC ft	CLOS.DIST ft	CLOS.DIR de	DOG LEG deg/100ft	TOOL
51	5100.00	5.07	164.25	5084.70	-198.87	200.29	-198.87	282.25	134.80	0.59	GWS
52	5200.00	5.02	164.48	5184.31	-207.34	202.66	-207.34	289.93	135.65	0.05	GWS
53	5300.00	4.87	167.74	5283.94	-215.70	204.73	-215.70	297.39	136.50	0.32	GWS
54	5400.00	4.62	168.75	5383.60	-223.80	206.42	-223.80	304.46	137.31	0.26	GWS
55	5500.00	4.26	166.07	5483.30	-231.36	208.10	-231.36	311.18	138.03	0.42	GWS
56	5600.00	3.90	162.27	5583.04	-238.20	210.03	-238.20	317.57	138.60	0.45	GWS
57	5700.00	3.82	155.43	5682.82	-244.47	212.45	-244.47	323.88	139.01	0.47	GWS
58	5800.00	3.55	160.51	5782.61	-250.42	214.87	-250.42	329.96	139.37	0.42	GWS
59	5900.00	3.47	164.43	5882.42	-256.25	216.71	-256.25	335.60	139.78	0.25	GWS
60	6000.00	3.42	154.55	5982.24	-261.86	218.80	-261.86	341.24	140.12	0.60	GWS
61	6100.00	3.20	148.29	6082.08	-266.93	221.55	-266.93	346.90	140.31	0.42	GWS
62	6200.00	3.14	148.25	6181.92	-271.63	224.46	-271.63	352.37	140.43	0.06	GWS
63	6300.00	3.15	144.65	6281.77	-276.20	227.49	-276.20	357.83	140.52	0.20	GWS
64	6400.00	2.93	144.57	6381.63	-280.52	230.56	-280.52	363.12	140.58	0.22	GWS
65	6500.00	2.71	142.31	6481.51	-284.48	233.49	-284.48	368.03	140.62	0.25	GWS
66	6600.00	3.10	143.83	6581.38	-288.53	236.53	-288.53	373.09	140.66	0.40	GWS
67	6669.00	3.21	142.51	6650.28	-291.57	238.81	-291.57	376.89	140.68	0.19	GWS
68	7055.00	2.30	143.80	7035.83	-306.40	249.96	-306.40	395.42	140.79	0.24	MSS
69	7661.00	3.70	136.80	7640.98	-330.46	270.53	-330.46	427.07	140.70	0.24	MSS
70	8038.00	5.40	136.10	8016.78	-352.11	291.16	-352.11	456.90	140.41	0.45	MSS
71	8540.00	4.80	143.80	8516.80	-386.08	319.94	-386.08	501.42	140.35	0.18	MSS
72	9042.00	6.30	146.30	9016.43	-425.95	347.63	-425.95	549.80	140.78	0.30	MSS
73	9303.00	6.30	146.30	9275.86	-449.78	363.52	-449.78	578.32	141.05	0.00	MSS

DSP-ONE/W VER. 6.00 s

SIGNED BY:

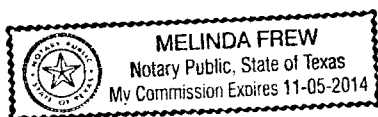
ALEX HUSSER - DRLG ENG

STATE OF TEXAS

COUNTY OF HARRIS

ON THIS 6th DAY OF May, 2014, BEFORE ME,

A NOTARY PUBLIC, PERSONALLY APPEARED ALEX HUSSER, WHO ACKNOWLEDGED AND
EXECUTED THIS DOCUMENT. WITNESS MY HAND AND OFFICIAL SEAL.



MELINDA FREW
Notary Public, State of Texas
My Commission Expires 11-05-2014