

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

30-015-40134

Well Name and Num: Agate PWU 21-4H
Location: Sec. 21, T19S, R29E
Operator: Devon
Drilling Contractor: McVay Drilling Company

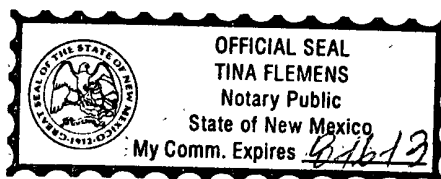
The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
2.00	165	53.76	7758	89.58	11631
2.00	318	53.64	7822	87.97	12010
1.00	509	53.77	7758	88.04	12105
1.30	1505	53.64	7822		
0.50	2000	62.57	7949		
0.85	2402	66.70	8029		
0.25	2888	73.40	8157		
1.25	3625	91.80	8252		
1.26	4016	88.60	8571		
0.80	4667	90.70	8807		
2.60	5060	89.40	9335		
1.20	5462	88.60	9526		
2.10	5916	88.20	9718		
2.42	6700	89.86	9813		
3.54	7242	87.41	10483		
3.40	7281	90.14	10867		
15.54	7376	91.40	11249		

By: *Harold C. ...*

Subscribed and sworn to before me this 3rd day of July, 2012

Tina Flemens
Notary Public, Lea County, New Mexico





Weatherford[®]

Evaluation, Drilling & Intervention
10000 West County Rd. 116
P.O. Box 61028
Midland, TX USA 79711
Tel. (432) 561-8892 Fax (432) 561-8895

Devon Energy
20 North Broadway
Oklahoma City, OK, 73102

Date: May 28, 2012

Attention: Spencer Stuart

Re: Devon Energy
Well: Agate PWU 21 #4H
Eddy County, New Mexico

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

<u>Name & Title Of Surveyor</u>	<u>Well Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Zach Snyder MWD Supervisor	4H	7249' MD 12189' MD	6/15/2012 6/27/2012	Measurement While Drilling

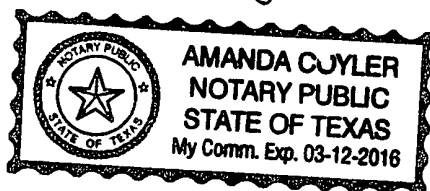
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Jesus Aguilar
Area Manager

On this, the 29th day of June, 2012, before me a notary public, the undersigned officer, personally appeared Jesse Aguilar, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Amanda Cuyler
Notary Public





Weatherford

WFT Survey Report X & Y's



Company: Devon Energy	Date: 6/27/2012	Time: 06:00:42	Page: 1
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: #4H, Grid North		
Site: Agate PWU 21 #4H	Vertical (TVD) Reference: SITE 3340.0		
Well: #4H	Section (VS) Reference: Well (0.00N,0.00E,89.11Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: Wft Svy	Start Date: 6/18/2012
Company: Weatherford	Engineer: Russell W. Joyner
Tool: MWD,MWD - Standard	Tied-to: User Defined

Field: Eddy Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983	Map Zone: New Mexico, Eastern Zone
Geo Datum: GRS 1980	Coordinate System: Well Centre
Sys Datum: Mean Sea Level	Geomagnetic Model: IGRF2010

Site: Agate PWU 21 #4H

Site Position:	Northing: 597210 42 ft	Latitude: 32 38 29.528 N
From: Map	Easting: 617062 42 ft	Longitude: 104 5 14 374 W
Position Uncertainty: 0 00 ft		North Reference: Grid
Ground Level: 3321 00 ft		Grid Convergence: 0 13 deg

Well: #4H	Slot Name:
Well Position: +N/-S 0 00 ft	Latitude: 32 38 29.528 N
+E/-W 0 00 ft	Longitude: 104 5 14 374 W
Position Uncertainty: 0 00 ft	

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 6/30/2012	Above System Datum: Mean Sea Level
Field Strength: 48732 nT	Declination: 7 73 deg
Vertical Section: Depth From (TVD) ft	Mag Dip Angle: 60.46 deg
	+N/-S ft
	+E/-W ft
	Direction deg
0 00	0.00
0 00	89 11

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
7242 00	3 54	170.05	7238.23	37 81	-69.20	0 00	-68.60	597248.23	616993.22	Tie On VES First Wft Svy
7249 00	3 62	178 05	7245.21	37 38	-69 16	7 22	-68.57	597247 80	616993.26	
7281 00	3 40	174 34	7277 15	35 42	-69.03	0 99	-68 47	597245 84	616993 39	
7312.00	4.76	132 60	7308 08	33 64	-67 99	10 23	-67.46	597244 06	616994.43	
7344 00	10.07	105 77	7339 81	31 98	-64.32	19 38	-63.81	597242.40	616998.10	
7376 00	15 54	101 34	7371 00	30 37	-57 42	17 35	-56 94	597240 79	617005 00	
7408 00	20 84	101 38	7401 39	28 40	-47.63	16.56	-47 18	597238 82	617014 79	
7439 00	25 20	103 42	7429 92	25 78	-35 79	14 30	-35 39	597236 20	617026 63	
7471 00	29.22	100.94	7458.37	22 72	-21.49	13.05	-21.14	597233.14	617040 93	
7503 00	32 78	99 55	7485 80	19 80	-5 28	11 35	-4 97	597230 22	617057 14	
7535 00	36.28	97 77	7512 16	17 08	12 65	11 38	12 92	597227 50	617075.07	
7567.00	39.62	96 18	7537.39	14 70	32 18	10 87	32 41	597225 12	617094 60	
7599.00	43.09	95.13	7561.40	12 62	53.22	11 06	53 41	597223 04	617115.64	
7630.00	45.89	94 29	7583.52	10 84	74 87	9 23	75 03	597221 26	617137.29	
7662.00	48 11	93.35	7605.34	9 29	98 22	7 26	98 35	597219.71	617160.64	
7694.00	50 27	91.88	7626.25	8.19	122.41	7 59	122 52	597218.61	617184 83	
7726.00	52 39	91.28	7646.25	7 50	147 38	6.78	147.48	597217.92	617209 80	
7758.00	53 77	90.78	7665.47	7.04	172.96	4 49	173 05	597217 46	617235 38	
7790 00	53 93	90.45	7684.35	6 77	198 80	0 97	198.88	597217.19	617261 22	
7822 00	53 64	90.21	7703.25	6.62	224 62	1 09	224.69	597217.04	617287 04	
7853 00	54.25	89 75	7721.50	6.63	249.68	2 30	249 75	597217 05	617312 10	
7885 00	56 74	89 58	7739 62	6 78	276 05	7 79	276.12	597217 20	617338.47	
7917 00	59.78	89 32	7756 45	7 04	303 26	9 53	303 33	597217.46	617365 68	
7949 00	62.57	89 70	7771 88	7.28	331.29	8 78	331 36	597217.70	617393.71	



Weatherford

WFT Survey Report X & Y's



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Agate PWU 21 #4H
Well: #4H
Wellpath: 1

Date: 6/27/2012 Time: 06:00:42 Page: 2
Co-ordinate(NE) Reference: Well: #4H, Grid North
Vertical (TVD) Reference: SITE 3340.0
Section (VS) Reference: Well (0.00N,0.00E,89.11Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
7998.00	65.86	90.49	7793.19	7.20	375.40	6.87	375.47	597217.62	617437.82	
8029.00	66.67	91.02	7805.67	6.83	403.78	3.05	403.84	597217.25	617466.20	
8061.00	68.01	90.53	7818.00	6.43	433.30	4.42	433.35	597216.85	617495.72	
8093.00	69.69	90.15	7829.55	6.25	463.15	5.37	463.19	597216.67	617525.57	
8125.00	70.77	90.58	7840.37	6.06	493.26	3.60	493.29	597216.48	617555.68	
8157.00	73.40	90.99	7850.21	5.64	523.70	8.31	523.73	597216.06	617586.12	
8189.00	76.35	91.28	7858.56	5.03	554.59	9.26	554.60	597215.45	617617.01	
8220.00	79.51	91.63	7865.04	4.26	584.89	10.25	584.88	597214.68	617647.31	
8252.00	82.43	91.83	7870.06	3.31	616.47	9.15	616.45	597213.73	617678.89	
8284.00	85.23	90.85	7873.50	2.56	648.27	9.26	648.24	597212.98	617710.69	
8316.00	87.27	90.39	7875.60	2.22	680.20	6.53	680.15	597212.64	617742.62	
8380.00	86.92	90.51	7878.84	1.72	744.12	0.58	744.05	597212.14	617806.54	
8475.00	86.64	89.52	7884.18	1.69	838.97	1.08	838.89	597212.11	617901.39	
8571.00	88.60	88.69	7888.16	3.19	934.87	2.22	934.80	597213.61	617997.29	
8666.00	90.77	88.02	7888.68	5.92	1029.82	2.39	1029.79	597216.34	618092.24	
8762.00	89.51	87.60	7888.45	9.59	1125.75	1.38	1125.76	597220.01	618188.17	
8857.00	90.77	87.67	7888.22	13.51	1220.66	1.33	1220.73	597223.93	618283.08	
8953.00	90.70	88.67	7886.99	16.57	1316.61	1.04	1316.70	597226.99	618379.03	
9048.00	89.93	89.02	7886.46	18.49	1411.58	0.89	1411.70	597228.91	618474.00	
9144.00	88.81	89.34	7887.52	19.86	1507.57	1.21	1507.69	597230.28	618569.99	
9240.00	89.72	89.53	7888.75	20.81	1603.55	0.97	1603.68	597231.23	618665.97	
9335.00	89.44	89.88	7889.45	21.30	1698.55	0.47	1698.68	597231.72	618760.97	
9431.00	88.88	89.39	7890.85	21.91	1794.54	0.78	1794.66	597232.33	618856.96	
9526.00	88.60	89.20	7892.94	23.08	1889.51	0.36	1889.64	597233.50	618951.93	
9622.00	87.83	89.08	7895.93	24.52	1985.45	0.81	1985.59	597234.94	619047.87	
9718.00	88.18	88.62	7899.28	26.44	2081.37	0.60	2081.53	597236.86	619143.79	
9813.00	89.86	89.07	7900.90	28.36	2176.33	1.83	2176.51	597238.78	619238.75	
9909.00	90.84	89.35	7900.31	29.68	2272.32	1.06	2272.51	597240.10	619334.74	
10004.00	91.40	89.49	7898.46	30.64	2367.30	0.61	2367.49	597241.06	619429.72	
10101.00	90.00	88.46	7897.27	32.38	2464.27	1.79	2464.48	597242.80	619526.69	
10196.00	89.44	88.62	7897.74	34.80	2559.24	0.61	2559.47	597245.22	619621.66	
10292.00	88.53	88.74	7899.44	37.01	2655.20	0.96	2655.45	597247.43	619717.62	
10387.00	87.90	88.72	7902.40	39.11	2750.13	0.66	2750.40	597249.53	619812.55	
10483.00	87.41	89.28	7906.32	40.79	2846.03	0.77	2846.32	597251.21	619908.45	
10580.00	88.11	89.67	7910.12	41.67	2942.95	0.83	2943.24	597252.09	620005.37	
10675.00	87.69	90.10	7913.60	41.87	3037.89	0.63	3038.17	597252.29	620100.31	
10771.00	88.67	90.68	7916.65	41.21	3133.84	1.19	3134.10	597251.63	620196.26	
10867.00	90.14	91.24	7917.64	39.60	3229.81	1.64	3230.04	597250.02	620292.23	
10962.00	90.35	91.71	7917.24	37.16	3324.78	0.54	3324.96	597247.58	620387.20	
11058.00	90.21	92.64	7916.77	33.52	3420.71	0.98	3420.82	597243.94	620483.13	
11154.00	90.70	91.56	7916.00	30.00	3516.64	1.24	3516.68	597240.42	620579.06	
11249.00	91.40	90.20	7914.26	28.54	3611.61	1.61	3611.62	597238.96	620674.03	
11345.00	91.61	90.13	7911.74	28.26	3707.58	0.23	3707.57	597238.68	620770.00	
11441.00	90.56	89.30	7909.92	28.74	3803.56	1.39	3803.54	597239.16	620865.98	
11536.00	89.72	88.29	7909.69	30.74	3898.53	1.38	3898.54	597241.16	620960.95	
11630.00	89.58	88.40	7910.27	33.45	3992.49	0.19	3992.53	597243.87	621054.91	
11725.00	89.79	88.84	7910.79	35.74	4087.46	0.51	4087.53	597246.16	621149.88	
11820.00	88.53	88.94	7912.18	37.58	4182.43	1.33	4182.51	597248.00	621244.85	
11915.00	87.97	89.62	7915.08	38.77	4277.38	0.93	4277.47	597249.19	621339.80	
12010.00	87.97	89.93	7918.45	39.15	4372.32	0.33	4372.40	597249.57	621434.74	
12105.00	88.04	90.46	7921.75	38.82	4467.26	0.56	4467.33	597249.24	621529.68	
12189.00	87.90	91.09	7924.73	37.69	4551.20	0.77	4551.24	597248.11	621613.62	Last Wft Svy



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Agate PWU 21 #4H
Well: #4H
Wellpath: 1

Date: 6/27/2012 Time: 06 00 42 Page: 3
Co-ordinate(NE) Reference: Well: #4H, Grid North
Vertical (TVD) Reference: SITE 3340.0
Section (VS) Reference: Well (0 00N,0 00E,89 11Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
12258 00	87 90	91 09	7927 26	36 38	4620.14	0 00	4620 15	597246 80	621682 56	Proj To Bit

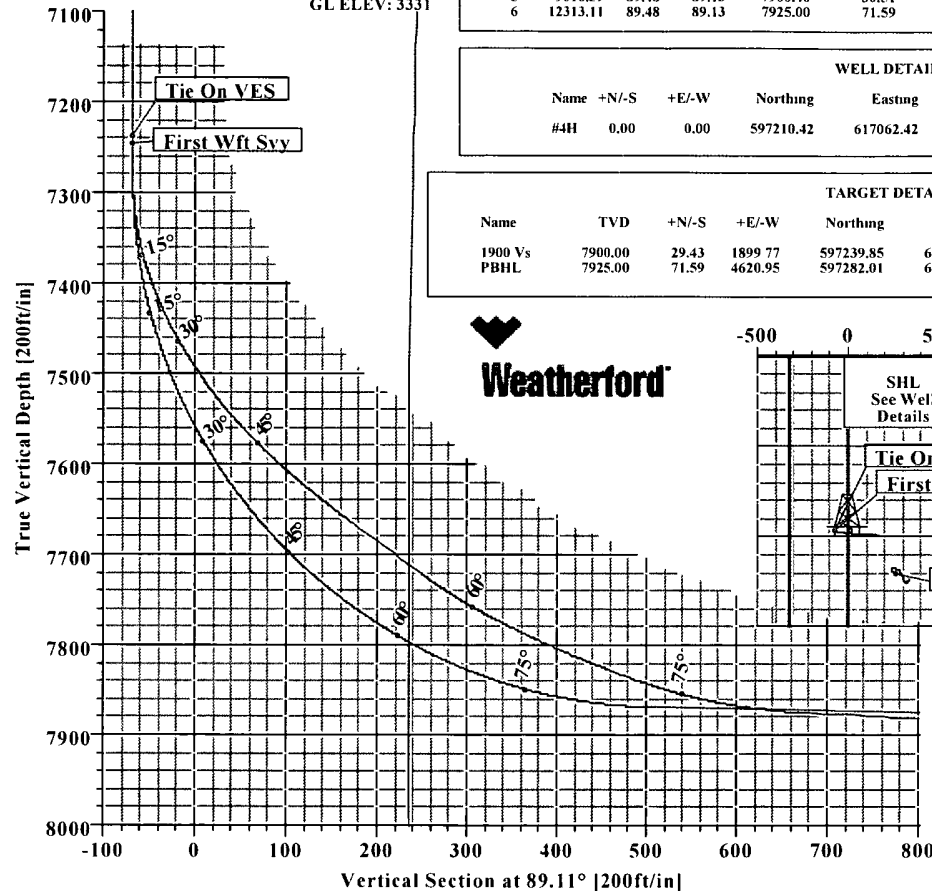
Annotation

MD ft	TVD ft	
7242.00	7238.23	Tie On VES
7249 00	7245.21	First Wft Svy
12189 00	7924.73	Last Wft Svy
12258 00	7927 26	Proj To Bit



Agate PWU 21 #4H Eddy Co, NM

KB ELEV: 3340
GL ELEV: 3331



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	7242.00	3.54	170.05	7238.23	37.81	-69.20	0.00	0.00	-68.60	
2	7295.00	3.54	170.05	7291.13	34.59	-68.63	0.00	0.00	-68.09	
3	8194.68	88.72	89.12	7868.91	8.80	503.46	9.80	-91.02	503.53	
4	9591.50	88.72	89.12	7900.00	30.13	1899.76	0.00	0.00	1900.00	
5	9616.59	89.48	89.13	7900.40	30.51	1924.85	3.00	0.17	1925.09	
6	12313.11	89.48	89.13	7925.00	71.59	4620.95	0.00	0.00	4621.50	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#4H	0.00	0.00	597210.42	617062.42	32°38'29.528N	104°05'14.374W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
1900 Vs	7900.00	29.43	1899.77	597239.85	618962.19	32°38'29.775N	104°04'52.154W	Point
PBHL	7925.00	71.59	4620.95	597282.01	621683.37	32°38'30.127N	104°04'20.328W	Point

FIELD DETAILS

Eddy Co., NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

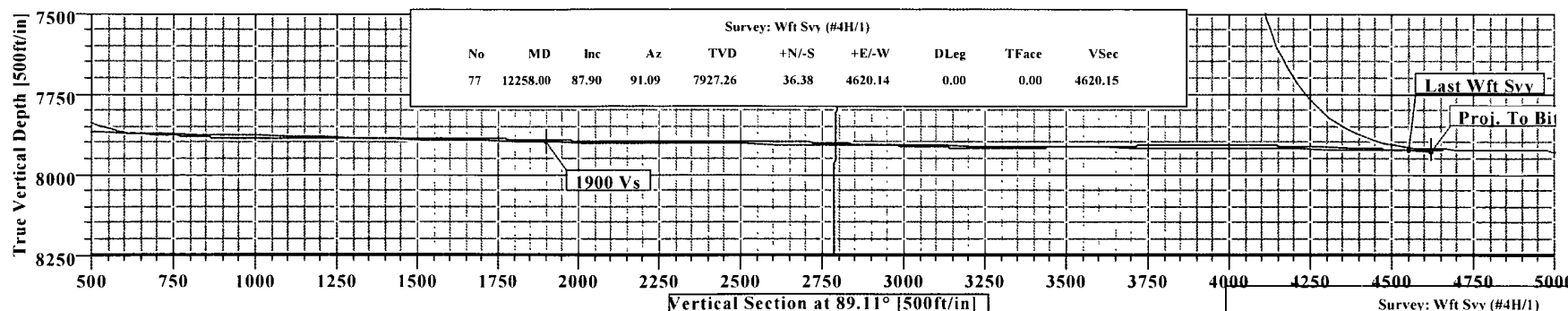
System Datum: Mean Sea Level
Local North: Grid North

SITE DETAILS

Agate PWU 21 #4H

Site Centre Northing: 597210.42
Easting: 617062.42

Ground Level: 3321.00
Positional Uncertainty: 0.00
Convergence: 0.13

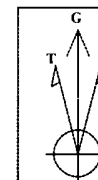


Survey: Wft Svy (#4H/1)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
77	12258.00	87.90	91.09	7927.26	36.38	4620.14	0.00	0.00	4620.15

LEGEND

- #4H.1 Gyro
- #4H.1 Plan #4
- PWU 22 #4H (1)
- Parkway West Unit #24 (1)
- Parkway West Ut 6 (1)
- 1
- Wft Svy



Azimuths to Grid North
True North: -0.13°
Magnetic North: 7.60°

Magnetic Field
Strength: 48732nT
Dip Angle: 60.46°
Date: 6/30/2012
Model: IGRF2010

Total Correction to Grid North: 7.60°

Survey: Wft Svy (#4H/1)

Created By: Russell W. Joyner

Date: 6/27/2012



A GYRO TECHNOLOGIES INC. COMPANY

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

June 26, 2012

Devon Energy Production Company
20 North Broadway
Oklahoma City, OK 73102

Attn: Mark Cooper

Re: **Agate PWU 21-4H**

Please find enclosed a copy of the survey from 0' to 7,242' ran on the above referenced well.

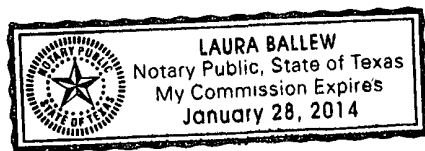
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

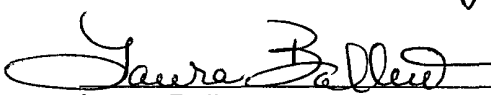
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 27th day of June,
A.D., 2012, by Keith Havelka.





Laura Ballew
Notary Public, State of Texas



Company: DEVON ENERGY PRODUCTION CO., INC

Lease/Well: AGATE/PWU 21-4H

Rig Name: MCVAY 6

State/County: NEW MEXICO/EDDY

Latitude: 32.39

GRID North is 0.15 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : 18 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: a gate pwu 21-4h_ed.ut

Minimum Curvature Method

Report Date/Time: 6/26/2012 / 10:47

Vaughn Energy Services

Woodward, OK

580-254-5000

Surveyor: Nick Harding

Agate PWU 21-4H / API 30-015-40134

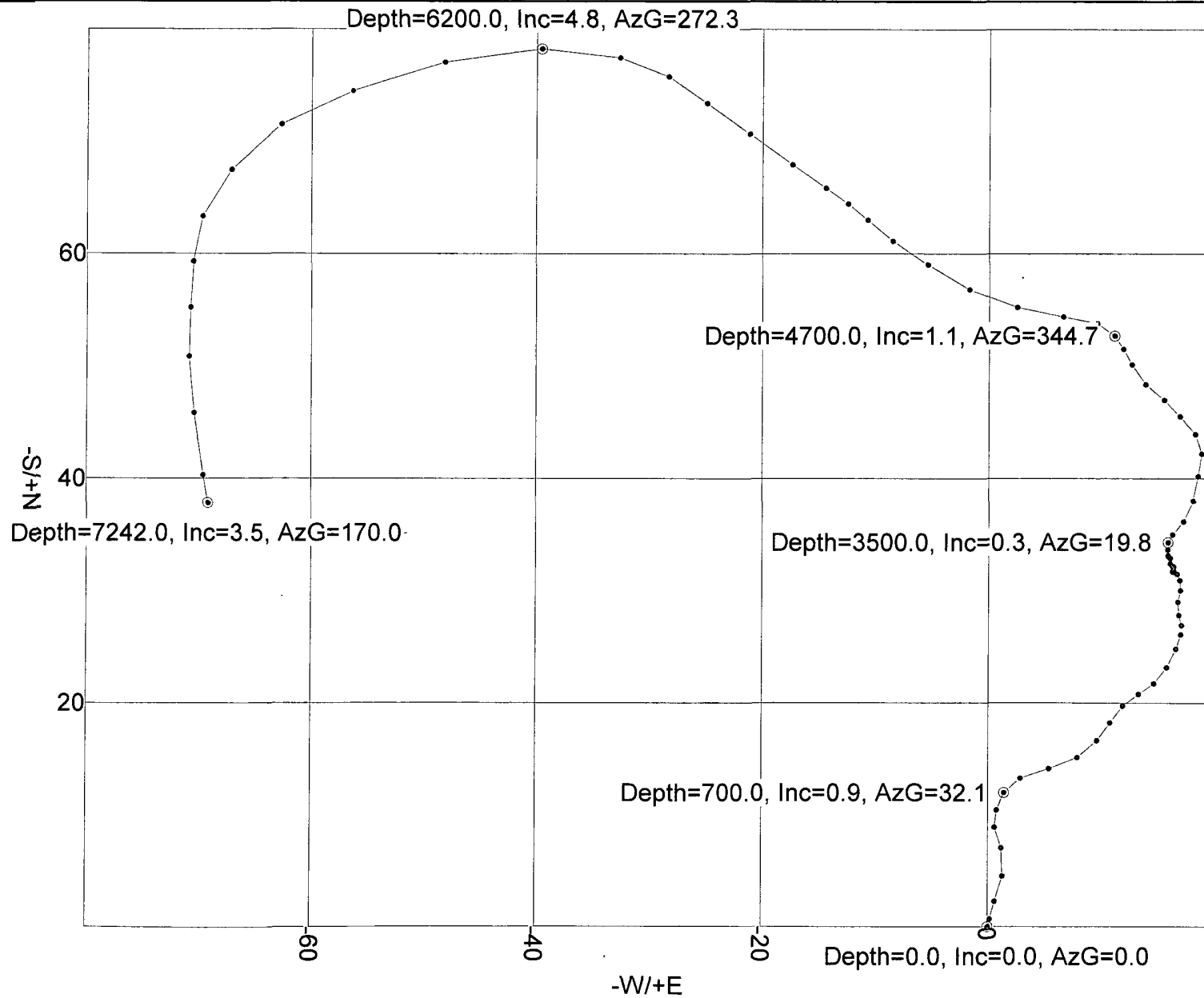
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.79	14.71	100.00	0.67	0.17	0.67	0.69	14.71	0.79
200.00	1.08	15.54	199.98	2.24	0.60	2.24	2.32	15.05	0.30
300.00	1.60	17.58	299.96	4.48	1.28	4.48	4.66	15.91	0.52
400.00	1.49	335.85	399.92	7.00	1.17	7.00	7.09	9.48	1.10
500.00	0.75	354.46	499.90	8.83	0.58	8.83	8.85	3.73	0.81
600.00	1.07	15.10	599.89	10.38	0.75	10.38	10.41	4.16	0.45
700.00	0.90	32.07	699.88	11.95	1.42	11.95	12.03	6.76	0.33
800.00	1.37	58.44	799.86	13.24	2.85	13.24	13.54	12.15	0.69
900.00	1.74	81.31	899.82	14.09	5.37	14.09	15.08	20.85	0.72
1000.00	1.45	51.83	999.78	15.10	7.86	15.10	17.03	27.50	0.86
1100.00	1.22	44.59	1099.76	16.64	9.60	16.64	19.21	29.99	0.28
1200.00	1.07	26.01	1199.74	18.24	10.76	18.24	21.18	30.54	0.40
1300.00	1.12	46.58	1299.72	19.75	11.88	19.75	23.04	31.03	0.39
1400.00	0.88	61.07	1399.70	20.79	13.26	20.79	24.66	32.54	0.35
1500.00	1.01	48.77	1499.69	21.74	14.60	21.74	26.19	33.88	0.24
1600.00	1.10	28.79	1599.67	23.16	15.72	23.16	28.00	34.16	0.38
1700.00	1.01	23.84	1699.66	24.81	16.54	24.81	29.82	33.69	0.13
1800.00	0.55	6.86	1799.65	26.09	16.95	26.09	31.11	33.01	0.51

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	0.41	1.48	1899.64	26.92	17.02	26.92	31.85	32.30	0.15
2000.00	0.70	336.35	1999.64	27.84	16.78	27.84	32.51	31.08	0.38
2100.00	0.71	15.26	2099.63	29.00	16.70	29.00	33.46	29.93	0.47
2200.00	0.49	8.50	2199.63	30.02	16.92	30.02	34.46	29.41	0.23
2300.00	0.56	344.35	2299.62	30.91	16.86	30.91	35.21	28.60	0.23
2400.00	0.15	312.95	2399.62	31.48	16.63	31.48	35.60	27.84	0.44
2500.00	0.26	295.14	2499.62	31.66	16.33	31.66	35.62	27.28	0.12
2600.00	0.11	119.44	2599.62	31.71	16.21	31.71	35.61	27.08	0.37
2700.00	0.18	350.71	2699.62	31.81	16.27	31.81	35.73	27.09	0.26
2800.00	0.22	18.76	2799.62	32.14	16.31	32.14	36.04	26.90	0.10
2900.00	0.24	240.68	2899.62	32.22	16.18	32.22	36.06	26.67	0.43
3000.00	0.35	0.81	2999.62	32.42	16.00	32.42	36.15	26.27	0.52
3100.00	0.19	2.38	3099.62	32.89	16.01	32.89	36.58	25.96	0.16
3200.00	0.14	257.15	3199.62	33.02	15.90	33.02	36.65	25.71	0.27
3300.00	0.17	16.96	3299.62	33.14	15.82	33.14	36.72	25.52	0.27
3400.00	0.43	348.56	3399.61	33.65	15.79	33.65	37.17	25.13	0.29
3500.00	0.33	19.80	3499.61	34.30	15.81	34.30	37.77	24.75	0.23
3600.00	0.59	37.21	3599.61	34.98	16.22	34.98	38.56	24.88	0.30
3700.00	1.14	39.81	3699.60	36.16	17.17	36.16	40.03	25.41	0.55
3800.00	1.24	11.05	3799.58	37.99	18.02	37.99	42.05	25.38	0.60
3900.00	1.32	12.24	3899.55	40.18	18.47	40.18	44.22	24.69	0.08
4000.00	1.03	4.33	3999.53	42.20	18.78	42.20	46.19	23.99	0.33
4100.00	1.20	323.05	4099.51	43.93	18.22	43.93	47.56	22.53	0.80
4200.00	1.20	314.46	4199.49	45.50	16.85	45.50	48.52	20.32	0.18
4300.00	1.12	318.82	4299.47	46.98	15.45	46.98	49.45	18.21	0.12
4400.00	1.34	303.74	4399.45	48.37	13.83	48.37	50.31	15.96	0.39
4500.00	1.32	348.30	4499.42	50.14	12.62	50.14	51.71	14.13	1.01
4600.00	0.67	295.90	4599.41	51.52	11.87	51.52	52.87	12.97	1.05
4700.00	1.09	344.69	4699.40	52.70	11.09	52.70	53.85	11.88	0.82
4800.00	1.50	277.87	4799.38	53.80	9.54	53.80	54.64	10.06	1.47
4900.00	2.05	283.78	4899.33	54.40	6.52	54.40	54.79	6.83	0.58
5000.00	2.70	279.80	4999.24	55.23	2.46	55.23	55.28	2.55	0.67
5100.00	2.57	301.73	5099.14	56.81	-1.76	56.81	56.83	358.22	1.01
5200.00	2.37	300.27	5199.05	59.03	-5.45	59.03	59.28	354.72	0.21
5300.00	1.89	309.47	5298.98	61.11	-8.51	61.11	61.70	352.07	0.59
5400.00	1.42	311.09	5398.94	62.98	-10.72	62.98	63.88	350.34	0.47
5500.00	1.17	307.69	5498.91	64.42	-12.46	64.42	65.61	349.05	0.27
5600.00	1.60	303.62	5598.88	65.81	-14.43	65.81	67.37	347.64	0.45
5700.00	2.56	306.79	5698.81	67.92	-17.38	67.92	70.11	345.65	0.97

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	2.80	305.21	5798.71	70.67	-21.16	70.67	73.77	343.33	0.25
5900.00	2.58	305.87	5898.60	73.40	-24.98	73.40	77.53	341.20	0.21
6000.00	2.17	303.51	5998.51	75.76	-28.39	75.76	80.91	339.46	0.42
6100.00	3.19	283.15	6098.40	77.44	-32.68	77.44	84.06	337.12	1.38
6200.00	4.76	272.26	6198.16	78.24	-39.54	78.24	87.66	333.19	1.74
6300.00	5.34	252.93	6297.78	77.04	-48.14	77.04	90.84	328.00	1.79
6400.00	4.46	252.15	6397.41	74.48	-56.29	74.48	93.36	322.92	0.88
6500.00	3.73	236.41	6497.16	71.49	-62.71	71.49	95.09	318.74	1.33
6600.00	3.23	218.26	6596.97	67.47	-67.16	67.47	95.20	315.13	1.20
6700.00	2.42	203.68	6696.85	63.33	-69.75	63.33	94.21	312.24	1.08
6800.00	2.40	179.27	6796.77	59.30	-70.57	59.30	92.18	310.04	1.02
6900.00	2.30	188.29	6896.68	55.22	-70.84	55.22	89.82	307.94	0.38
7000.00	2.73	176.05	6996.59	50.86	-70.96	50.86	87.31	305.63	0.68
7100.00	3.05	173.30	7096.46	45.85	-70.49	45.85	84.09	303.04	0.35
7200.00	3.38	169.61	7196.30	40.31	-69.65	40.31	80.47	300.06	0.39
7242.00	3.54	170.05	7238.23	37.81	-69.20	37.81	78.86	298.65	0.40



Vaughn Energy Services
Woodward, OK
580-254-5000
Surveyor: Nick Harding
Agate PWU 21-4H / API 30-015-40134



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