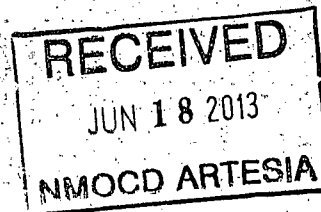


A GYRO TECHNOLOGIES INC. COMPANY

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

November 20, 2012



Devon Energy Production Co., L. P.
333 West Sheridan Ave
Oklahoma City, Oklahoma 73102-5010

Attn: Patti Riechers

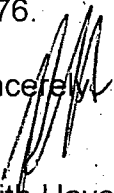
30-015-40627

Re: **Aquila 22 Fed Com No. 001H**

Please find enclosed a copy of the survey from 0.00' to 8475.00' 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,

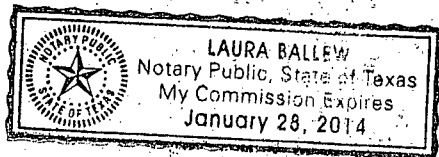

Keith Havelka
Operations

STATE OF TEXAS §

§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 21st day of November, A.D., 2012, by Keith Havelka.



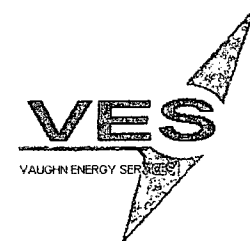


Laura Balley
Notary Public, State of Texas



Company: Devon Energy Production Co., LP
Lease/Well: Aquila 22 Fed Com / No. 001H

Rig Name: H&P 300
State/County: New Mexico / Eddy
Latitude: 32.65, Longitude: -103.85
GRID North is 0.26 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 26'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...2 fed com 1h ha gyro-de_01.ut

Minimum Curvature Method

Report Date/Time: 11/20/2012 / 08:25

Vaughn Energy Services
Midland, Texas
432-563-5444

Surveyor: Troy Hardin
Aquila 22 Fed Com No. 001H / API 30-015-40627

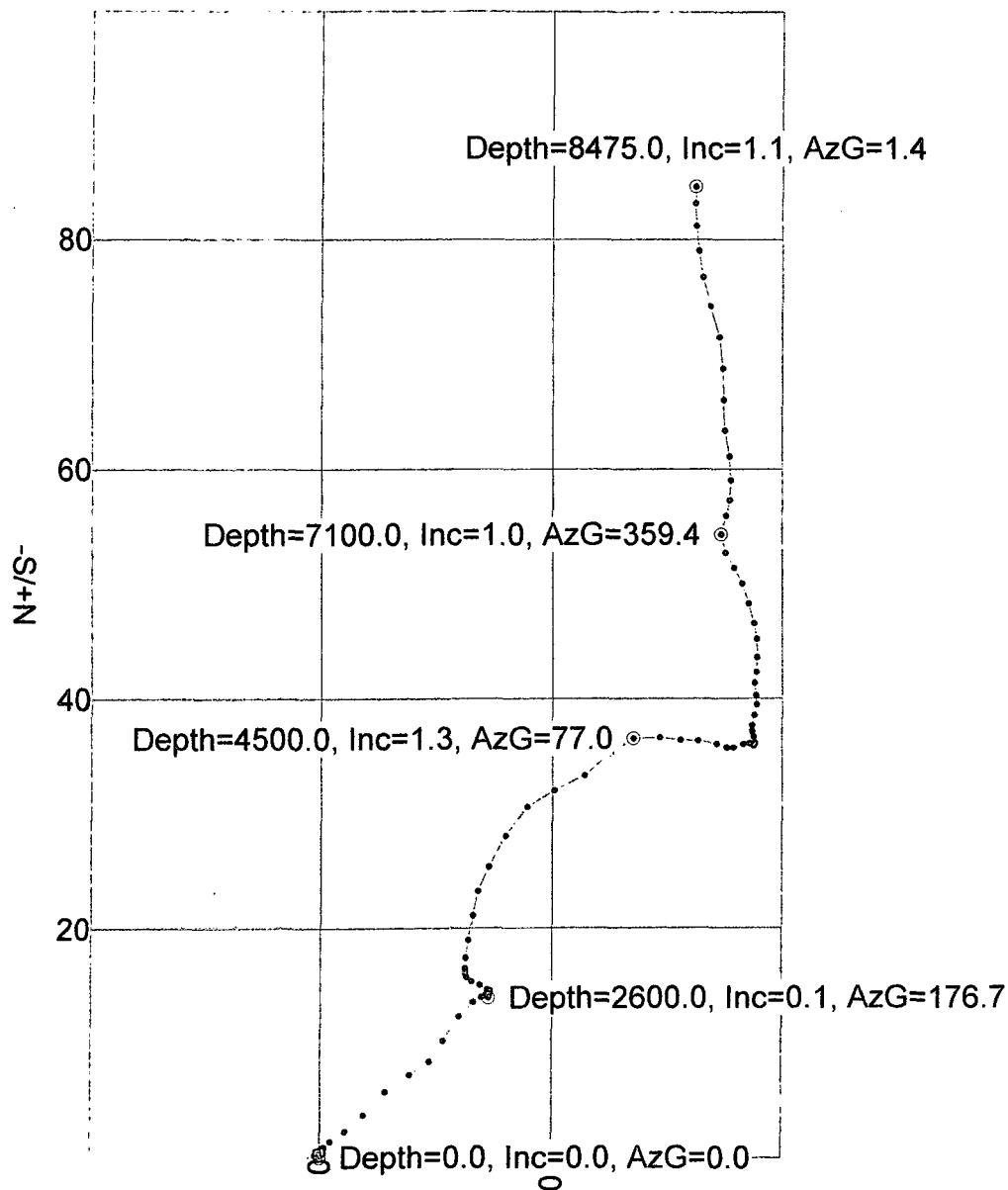


Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.15	289.82	100.00	0.05	-0.13	0.05	0.13	289.82	0.15
200.00	0.10	266.28	200.00	0.09	-0.34	0.09	0.35	284.27	0.08
300.00	0.18	351.30	300.00	0.24	-0.44	0.24	0.50	298.07	0.20
400.00	0.26	39.51	400.00	0.57	-0.32	0.57	0.65	330.49	0.20
500.00	0.28	181.10	500.00	0.50	-0.18	0.50	0.53	340.06	0.51
600.00	0.27	16.08	600.00	0.48	-0.12	0.48	0.50	346.00	0.55
700.00	0.26	107.52	700.00	0.64	0.16	0.64	0.66	13.84	0.38
800.00	0.22	197.07	800.00	0.39	0.32	0.39	0.50	38.79	0.34
900.00	0.21	251.77	900.00	0.15	0.09	0.15	0.18	29.79	0.20
1000.00	0.21	336.99	1000.00	0.27	-0.16	0.27	0.31	329.34	0.28
1100.00	0.22	20.87	1099.99	0.61	-0.16	0.61	0.63	345.09	0.16
1200.00	0.25	88.07	1199.99	0.79	0.13	0.79	0.80	8.97	0.26
1300.00	0.03	217.90	1299.99	0.78	0.33	0.78	0.84	22.86	0.28
1400.00	0.15	20.37	1399.99	0.88	0.35	0.88	0.95	22.04	0.18
1500.00	0.76	53.48	1499.99	1.39	0.93	1.39	1.68	33.83	0.64
1600.00	0.98	56.24	1599.98	2.27	2.18	2.27	3.14	43.89	0.22
1700.00	1.46	41.83	1699.96	3.69	3.74	3.69	5.26	45.39	0.57
1800.00	1.69	44.74	1799.92	5.69	5.63	5.69	8.01	44.70	0.24

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	1.32	67.15	1899.88	7.19	7.73	7.19	10.56	47.09	0.69
2000.00	1.07	43.49	1999.86	8.32	9.44	8.32	12.58	48.62	0.55
2100.00	1.46	25.73	2099.84	10.15	10.64	10.15	14.70	46.36	0.55
2200.00	1.44	37.32	2199.81	12.30	11.96	12.30	17.15	44.20	0.29
2300.00	0.63	61.12	2299.79	13.56	13.20	13.56	18.92	44.22	0.90
2400.00	0.33	54.23	2399.79	13.99	13.91	13.99	19.73	44.83	0.30
2500.00	0.23	108.55	2499.79	14.10	14.34	14.10	20.11	45.48	0.27
2600.00	0.13	176.69	2599.78	13.93	14.53	13.93	20.13	46.21	0.21
2700.00	0.51	8.51	2699.78	14.26	14.60	14.26	20.41	45.68	0.64
2800.00	0.13	184.72	2799.78	14.60	14.66	14.60	20.69	45.13	0.64
2900.00	0.34	306.07	2899.78	14.66	14.41	14.66	20.56	44.52	0.42
3000.00	0.53	302.89	2999.78	15.08	13.79	15.08	20.43	42.45	0.19
3100.00	0.40	280.21	3099.78	15.39	13.06	15.39	20.18	40.32	0.22
3200.00	0.37	344.19	3199.77	15.77	12.62	15.77	20.20	38.69	0.41
3300.00	0.03	357.40	3299.77	16.11	12.53	16.11	20.41	37.89	0.34
3400.00	0.42	357.61	3399.77	16.50	12.52	16.50	20.71	37.19	0.39
3500.00	0.67	6.96	3499.77	17.44	12.57	17.44	21.50	35.79	0.27
3600.00	1.13	9.35	3599.76	19.00	12.80	19.00	22.91	33.98	0.46
3700.00	1.39	8.60	3699.73	21.16	13.15	21.16	24.91	31.85	0.26
3800.00	1.07	16.20	3799.71	23.26	13.59	23.26	26.94	30.29	0.36
3900.00	1.63	29.18	3899.68	25.39	14.54	25.39	29.26	29.80	0.63
4000.00	1.87	27.17	3999.63	28.08	15.98	28.08	32.31	29.64	0.25
4100.00	1.75	45.89	4099.58	30.60	17.82	30.60	35.40	30.21	0.60
4200.00	1.49	72.77	4199.55	32.04	20.16	32.04	37.86	32.17	0.79
4300.00	1.88	56.71	4299.50	33.33	22.77	33.33	40.37	34.34	0.61
4400.00	1.57	40.59	4399.46	35.27	25.03	35.27	43.25	35.37	0.57
4500.00	1.33	77.02	4499.43	36.56	27.05	36.56	45.48	36.49	0.93
4600.00	1.36	98.69	4599.40	36.64	29.34	36.64	46.94	38.69	0.50
4700.00	0.75	93.57	4699.38	36.42	31.17	36.42	47.94	40.55	0.61
4800.00	0.98	91.85	4799.37	36.36	32.68	36.36	48.89	41.95	0.23
4900.00	0.93	107.69	4899.36	36.08	34.31	36.08	49.79	43.56	0.27
5000.00	0.16	130.47	4999.35	35.75	35.19	35.75	50.16	44.55	0.78
5100.00	0.57	78.94	5099.35	35.75	35.78	35.75	50.58	45.03	0.48
5200.00	0.47	59.73	5199.35	36.05	36.62	36.05	51.39	45.45	0.20
5300.00	0.27	126.37	5299.35	36.12	37.17	36.12	51.83	45.82	0.44
5400.00	0.23	104.61	5399.35	35.93	37.55	35.93	51.97	46.27	0.10
5500.00	0.35	340.59	5499.34	36.16	37.65	36.16	52.20	46.15	0.51
5600.00	0.30	359.00	5599.34	36.71	37.54	36.71	52.50	45.64	0.12
5700.00	0.31	333.17	5699.34	37.21	37.41	37.21	52.77	45.16	0.14



Vaughn Energy Services
Midland, Texas
432-563-5444
Surveyor: Troy Hardin
Aquila 22 Fed Com No. 001H / API 30-015-40627



-W/+E
VES Survey Date: 11/09/2012

Pathfinder

6213 WCR, 112
Midland, Texas 79705-3725, USA
Tel. (432) 687-1647
Fax (432) 687-1544



January 29, 2013

Devon Energy
20 N. Broadway
Oklahoma City, OK

RE: Devon Energy
AQUILA 22 FEDERAL COM #1H
API: 30-015-40627
Eddy County, NM
RIG: H&P 300
FIELD: Lusk; Bone Spring, West
PES FILE NO.: 12MLD0394

To whom it may concern:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA
1 – Original survey report
2 – Survey report copies

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (432) 687-1647

Sincerely,

A handwritten signature in black ink, appearing to read "M. Mitcham".

MARCUS MITCHAM
M/LWD Service Coordinator
PathFinder Energy Services

ML:sh



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

DEVON ENERGY

AQUILA 22 FEDERAL COM #1H

EDDY, NEW MEXICO

PREPARED BY: MARCUS MITCHAM

Pathfinder

6213 WCR. 112
Midland, Texas. 79706-3725, USA
Tel. (432) 687-1647
Fax (432) 687-1544



DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) ALEX CASTILLO
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 11/10/12 TO 11/17/12
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

DEVON ENERGY
AQUILA 22 FEDERAL COM #1H
EDDY COUNTY, NM
RIG: H&P 300

9. SURVEY CERTIFIED FROM: 8,493 TO 13,724 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4880.77 FEET ON A BEARING OF 270.15 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13,812 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

A handwritten signature in black ink, appearing to read "M. Mitcham".

MARCUS MITCHAM
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 11/10/2012
Date Completed: 11/17/2012

DEVON ENERGY PRODUCTION CO., LP
AQUILA 22 FED COM #1H / 30-015-40627
EDDY COUNTY, NM
Rig:H&P 300
PathFinder Office Supervisor: MARCUS MITCHUM
PathFinder Field Engineers:A.CASTILLO
R.BLANCO

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.39.1.7853 N LON:103.50.55.3662 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 690494.5400 Y: 600721.7000
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.31°EAST TO GRID
Vertical Section Plane: 270.24
Survey Vert. Reference: 25.10' Rotary Table To Ground
Altitude:3535.90' Ground To MSL

Measured Depth	13812.00	(feet)
Inclination	89.16	(deg)
Azimuth	266.57	(deg)
True Vertical Depth	9119.89	(feet)
Vertical Section	4880.77	(feet)
Survey X cord	685613.78	(feet)
Survey Y cord	600734.47	(feet)
Survey Lat	32.65059125 N	(deg)
Survey Lon	103.86457006 W	(deg)
Rectangular Corr. N/S	12.77 N	(feet)
Rectangular Corr. E/W	4880.76 W	(feet)
Closure Distance	4880.77	(feet)
Direction of Closure	270.15	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY PRODUCTION CO., LP
AQUILA 22 FED COM #1H / 30-015-40627

EDDY COUNTY, NM

Rig:H&P 300

PathFinder Office Supervisor: MARCUS MITCHUM

PathFinder Field Engineers: A.CASTILLO

R.BLANCO

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.39.1.7853 N LON:103.50.55.3662 W

GRID Reference:NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 690494.5400 Y: 600721.7000

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.31° EAST TO GRID

Vertical Section Plane: 270.24

Survey Vert. Reference: 25.10' Rotary Table To Ground

Altitude:3535.90' Ground To MSL

Survey Calculations by RX5 V6.04B using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
THE FOLLOWING ARE VAUGHN ENERGY SERVICE GYRO SURVEYS										
100.00	0.15	289.82	100.00	0.00	0.13	0.04 N	0.13 W	0.13@	288.25	0.00
200.00	0.10	266.28	200.00	100.00	0.34	0.08 N	0.34 W	0.35@	283.42	0.07
300.00	0.18	351.30	300.00	100.00	0.45	0.23 N	0.45 W	0.50@	297.22	0.20
400.00	0.26	39.51	400.00	100.00	0.33	0.56 N	0.33 W	0.65@	329.79	0.19
500.00	0.28	181.10	500.00	100.00	0.19	0.49 N	0.19 W	0.53@	339.20	0.51
600.00	0.27	16.08	600.00	100.00	0.13	0.47 N	0.13 W	0.49@	345.10	0.54
700.00	0.26	107.52	700.00	100.00	-0.15	0.63 N	0.16 E	0.65@	13.87	0.38
800.00	0.22	197.07	800.00	100.00	-0.31	0.38 N	0.32 E	0.49@	39.79	0.34
900.00	0.21	251.77	900.00	100.00	-0.08	0.14 N	0.09 E	0.16@	31.68	0.20
1000.00	0.21	336.99	1000.00	100.00	0.16	0.25 N	0.16 W	0.30@	327.30	0.28
1100.00	0.22	20.87	1100.00	100.00	0.17	0.60 N	0.16 W	0.62@	344.70	0.16
1200.00	0.25	88.07	1200.00	100.00	-0.12	0.78 N	0.12 E	0.79@	8.90	0.26
1300.00	0.03	217.90	1300.00	100.00	-0.32	0.77 N	0.32 E	0.84@	22.84	0.27
1400.00	0.15	20.37	1400.00	100.00	-0.35	0.87 N	0.35 E	0.94@	22.08	0.18
1500.00	0.76	53.48	1499.99	100.00	-0.93	1.39 N	0.93 E	1.67@	33.85	0.64
1600.00	0.98	56.24	1599.98	100.00	-2.17	2.26 N	2.18 E	3.14@	43.92	0.22
1700.00	1.46	41.83	1699.96	100.00	-3.72	3.69 N	3.74 E	5.25@	45.40	0.57
1800.00	1.69	44.74	1799.92	100.00	-5.60	5.68 N	5.63 E	8.00@	44.71	0.24
1900.00	1.32	67.15	1899.89	100.00	-7.69	7.18 N	7.72 E	10.54@	47.11	0.69
2000.00	1.07	43.49	1999.87	100.00	-9.39	8.30 N	9.43 E	12.56@	48.64	0.55
2100.00	1.46	25.73	2099.84	100.00	-10.58	10.13 N	10.62 E	14.68@	46.37	0.55
2200.00	1.44	37.32	2199.81	100.00	-11.89	12.27 N	11.94 E	17.12@	44.21	0.29
2300.00	0.63	61.12	2299.79	100.00	-13.13	13.54 N	13.18 E	18.90@	44.24	0.90
2400.00	0.33	54.23	2399.79	100.00	-13.84	13.97 N	13.90 E	19.71@	44.85	0.31
2500.00	0.23	108.55	2499.79	100.00	-14.26	14.08 N	14.32 E	20.08@	45.49	0.27

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY PRODUCTION CO., LP
 AQUILA 22 FED COM #1H / 30-015-40627
 EDDY COUNTY, NM
 RIG:H&P 300

Page 02/06

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
2600.00	0.13	176.69	2599.79	100.00	-14.46	13.90 N	14.52 E	20.10@	46.25	0.22
2700.00	0.51	8.51	2699.79	100.00	-14.53	14.23 N	14.59 E	20.38@	45.72	0.64
2800.00	0.13	184.72	2799.79	100.00	-14.59	14.55 N	14.65 E	20.65@	45.18	0.64
2900.00	0.34	306.07	2899.79	100.00	-14.34	14.61 N	14.40 E	20.52@	44.57	0.42
3000.00	0.53	302.89	2999.78	100.00	-13.71	15.04 N	13.77 E	20.39@	42.47	0.19
3100.00	0.40	280.21	3099.78	100.00	-12.97	15.35 N	13.04 E	20.14@	40.34	0.22
3200.00	0.37	344.19	3199.78	100.00	-12.54	15.73 N	12.61 E	20.16@	38.72	0.41
3300.00	0.03	357.40	3299.78	100.00	-12.45	16.06 N	12.52 E	20.36@	37.93	0.34
3400.00	0.42	357.61	3399.78	100.00	-12.43	16.46 N	12.50 E	20.67@	37.22	0.39
3500.00	0.67	6.96	3499.77	100.00	-12.48	17.40 N	12.56 E	21.46@	35.81	0.26
3600.00	1.13	9.35	3599.76	100.00	-12.71	18.96 N	12.79 E	22.87@	34.00	0.46
3700.00	1.39	8.60	3699.73	100.00	-13.04	21.13 N	13.13 E	24.87@	31.86	0.26
3800.00	1.07	16.20	3799.71	100.00	-13.47	23.22 N	13.57 E	26.90@	30.30	0.36
3900.00	1.63	29.18	3899.68	100.00	-14.42	25.36 N	14.52 E	29.23@	29.80	0.63
4000.00	1.87	27.17	3999.64	100.00	-15.85	28.06 N	15.96 E	32.28@	29.64	0.25
4100.00	1.75	45.89	4099.59	100.00	-17.68	30.57 N	17.80 E	35.38@	30.22	0.60
4200.00	1.49	72.77	4199.55	100.00	-20.01	32.02 N	20.14 E	37.83@	32.17	0.79
4300.00	1.88	56.71	4299.51	100.00	-22.62	33.30 N	22.76 E	40.33@	34.34	0.61
4400.00	1.57	40.59	4399.46	100.00	-24.87	35.24 N	25.02 E	43.22@	35.37	0.57
4500.00	1.33	77.02	4499.43	100.00	-26.89	36.54 N	27.04 E	45.46@	36.50	0.93
4600.00	1.36	98.69	4599.40	100.00	-29.19	36.63 N	29.34 E	46.93@	38.70	0.51
4700.00	0.75	93.57	4699.39	100.00	-31.02	36.41 N	31.17 E	47.93@	40.57	0.62
4800.00	0.98	91.85	4799.38	100.00	-32.53	36.34 N	32.68 E	48.87@	41.97	0.23
4900.00	0.93	107.69	4899.36	100.00	-34.15	36.06 N	34.31 E	49.77@	43.57	0.27
5000.00	0.16	130.47	4999.36	100.00	-35.04	35.73 N	35.19 E	50.14@	44.56	0.78
5100.00	0.57	78.94	5099.35	100.00	-35.63	35.73 N	35.78 E	50.57@	45.04	0.49
5200.00	0.47	59.73	5199.35	100.00	-36.47	36.03 N	36.62 E	51.38@	45.47	0.20
5300.00	0.27	126.37	5299.35	100.00	-37.01	36.10 N	37.17 E	51.81@	45.83	0.44

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY PRODUCTION CO., LP
 AQUILA 22 FED COM #1H / 30-015-40627
 EDDY COUNTY, NM
 RIG:H&P 300

Page 03/06

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
5400.00	0.23	104.61	5399.35	100.00	-37.40	35.91 N	37.55 E	51.96@ 46.28	0.10
5500.00	0.35	340.59	5499.35	100.00	-37.49	36.15 N	37.64 E	52.19@ 46.16	0.52
5600.00	0.30	359.00	5599.35	100.00	-37.38	36.70 N	37.54 E	52.49@ 45.65	0.12
5700.00	0.31	333.17	5699.34	100.00	-37.25	37.20 N	37.41 E	52.76@ 45.16	0.14
5800.00	0.32	26.86	5799.34	100.00	-37.26	37.69 N	37.41 E	53.11@ 44.79	0.28
5900.00	0.74	2.73	5899.34	100.00	-37.41	38.58 N	37.57 E	53.86@ 44.24	0.47
6000.00	0.37	30.61	5999.33	100.00	-37.60	39.51 N	37.77 E	54.65@ 43.71	0.45
6100.00	0.64	337.15	6099.33	100.00	-37.54	40.30 N	37.71 E	55.19@ 43.10	0.52
6200.00	0.65	8.75	6199.32	100.00	-37.41	41.38 N	37.58 E	55.90@ 42.25	0.35
6300.00	0.45	13.57	6299.32	100.00	-37.58	42.32 N	37.76 E	56.72@ 41.74	0.20
6400.00	1.02	357.26	6399.31	100.00	-37.63	43.59 N	37.81 E	57.70@ 40.94	0.60
6500.00	0.81	2.45	6499.30	100.00	-37.61	45.18 N	37.80 E	58.91@ 39.91	0.23
6600.00	0.82	337.18	6599.29	100.00	-37.36	46.55 N	37.55 E	59.81@ 38.89	0.36
6700.00	1.24	349.32	6699.27	100.00	-36.87	48.27 N	37.07 E	60.87@ 37.52	0.47
6800.00	0.90	333.59	6799.25	100.00	-36.31	50.04 N	36.52 E	61.95@ 36.13	0.45
6900.00	0.84	330.18	6899.24	100.00	-35.59	51.38 N	35.81 E	62.63@ 34.88	0.08
7000.00	0.90	332.59	6999.23	100.00	-34.86	52.71 N	35.08 E	63.32@ 33.65	0.07
7100.00	1.04	359.41	7099.22	100.00	-34.49	54.32 N	34.71 E	64.46@ 32.58	0.47
7200.00	0.97	30.78	7199.20	100.00	-34.90	55.95 N	35.14 E	66.07@ 32.13	0.55
7300.00	0.76	345.06	7299.19	100.00	-35.16	57.32 N	35.40 E	67.37@ 31.70	0.70
7400.00	1.26	14.37	7399.18	100.00	-35.25	59.02 N	35.50 E	68.88@ 31.03	0.70
7500.00	1.21	339.88	7499.16	100.00	-35.15	61.08 N	35.41 E	70.60@ 30.10	0.73
7600.00	1.44	358.13	7599.13	100.00	-34.74	63.33 N	35.01 E	72.36@ 28.93	0.48
7700.00	1.60	356.92	7699.09	100.00	-34.61	65.98 N	34.89 E	74.64@ 27.87	0.16
7800.00	1.56	0.11	7799.06	100.00	-34.53	68.73 N	34.82 E	77.05@ 26.87	0.10
7900.00	1.61	348.48	7899.02	100.00	-34.24	71.47 N	34.54 E	79.38@ 25.79	0.32
8000.00	1.61	338.76	7998.98	100.00	-33.44	74.16 N	33.75 E	81.48@ 24.47	0.27
8100.00	1.40	351.20	8098.94	100.00	-32.73	76.67 N	33.05 E	83.50@ 23.32	0.39

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY PRODUCTION CO., LP
AQUILA 22 FED COM #1H / 30-015-40627
EDDY COUNTY, NM
RIG:H&P 300

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
8200.00	1.28	353.63	8198.92	100.00	-32.41	78.99 N	32.74 E	85.51@	22.52	0.13
8300.00	1.19	354.87	8298.89	100.00	-32.19	81.14 N	32.53 E	87.41@	21.85	0.09
8400.00	1.09	359.22	8398.88	100.00	-32.07	83.12 N	32.42 E	89.22@	21.31	0.13
** TIED-IN TO VAUGHN ENERGY SERVICE GYRO SURVEY AT 8475.00'MD										
8475.00	1.14	1.40	8473.86	75.00	-32.08	84.58 N	32.43 E	90.58@	20.98	0.09
THE FOLLOWING ARE PATHFINDER MWD SURVEYS										
8493.00	1.41	169.03	8491.86	18.00	-32.12	84.54 N	32.48 E	90.56@	21.01	14.08
8524.00	1.23	166.74	8522.85	31.00	-32.27	83.84 N	32.63 E	89.97@	21.26	0.60
8556.00	1.85	243.47	8554.84	32.00	-31.89	83.28 N	32.24 E	89.30@	21.16	6.16
8588.00	6.07	269.58	8586.76	32.00	-29.74	83.03 N	30.09 E	88.32@	19.92	14.01
8619.00	9.67	273.35	8617.46	31.00	-25.50	83.18 N	25.85 E	87.10@	17.26	11.73
8650.00	13.10	277.84	8647.85	31.00	-19.41	83.81 N	19.77 E	86.11@	13.27	11.42
8682.00	16.62	276.96	8678.77	32.00	-11.27	84.86 N	11.63 E	85.65@	7.80	11.02
8713.00	18.11	278.36	8708.36	31.00	-2.10	86.09 N	2.46 E	86.13@	1.64	4.99
8745.00	18.64	278.45	8738.73	32.00	7.89	87.57 N	7.52 W	87.89@	355.09	1.66
8776.00	20.66	276.43	8767.92	31.00	18.23	88.91 N	17.85 W	90.68@	348.64	6.87
8808.00	24.62	274.67	8797.45	32.00	30.49	90.08 N	30.11 W	94.98@	341.52	12.55
8839.00	28.05	274.41	8825.23	31.00	44.20	91.17 N	43.82 W	101.16@	334.33	11.07
8871.00	30.78	272.74	8853.10	32.00	59.89	92.14 N	59.50 W	109.68@	327.15	8.91
8902.00	32.18	273.62	8879.54	31.00	76.05	93.04 N	75.67 W	119.93@	320.88	4.75
8934.00	34.47	273.62	8906.28	32.00	93.60	94.15 N	93.21 W	132.49@	315.29	7.16
8965.00	37.28	273.88	8931.39	31.00	111.73	95.34 N	111.34 W	146.58@	310.57	9.08
8997.00	41.24	273.62	8956.16	32.00	131.94	96.66 N	131.54 W	163.24@	306.31	12.39
9028.00	43.70	272.30	8979.03	31.00	152.85	97.74 N	152.44 W	181.08@	302.67	8.44
9060.00	46.08	273.79	9001.70	32.00	175.40	98.94 N	174.99 W	201.03@	299.49	8.13
9091.00	48.80	273.53	9022.66	31.00	198.19	100.40 N	197.77 W	221.80@	296.91	8.80
9123.00	51.53	273.18	9043.16	32.00	222.73	101.84 N	222.30 W	244.52@	294.61	8.57
9154.00	53.73	272.74	9061.98	31.00	247.33	103.11 N	246.90 W	267.57@	292.67	7.19
9186.00	57.86	273.88	9079.96	32.00	273.75	104.64 N	273.32 W	292.67@	290.95	13.24

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY PRODUCTION CO., LP
 AQUILA 22 FED COM #1H / 30-015-40627
 EDDY COUNTY, NM
 RIG:H&P 300

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
9217.00	61.29	273.53	9095.66	31.00	300.43	106.37 N	299.99 W	318.29@	289.52	11.11
9249.00	63.93	272.65	9110.38	32.00	328.81	107.90 N	328.36 W	345.63@	288.19	8.60
9280.00	66.83	272.95	9123.29	31.00	356.96	109.27 N	356.50 W	372.87@	287.04	9.40
9312.00	69.91	272.91	9135.09	32.00	386.67	110.79 N	386.21 W	401.79@	286.01	9.63
9343.00	74.22	273.06	9144.63	31.00	416.12	112.33 N	415.65 W	430.57@	285.12	13.91
9375.00	79.32	273.33	9151.95	32.00	447.22	114.07 N	446.75 W	461.08@	284.32	15.96
9406.00	84.33	273.50	9156.36	31.00	477.85	115.89 N	477.37 W	491.23@	283.65	16.17
9437.00	88.29	273.27	9158.35	31.00	508.73	117.72 N	508.24 W	521.70@	283.04	12.80
9532.00	90.22	269.66	9159.59	95.00	603.68	120.15 N	603.18 W	615.03@	281.27	4.31
9626.00	90.84	268.79	9158.72	94.00	697.66	118.88 N	697.17 W	707.23@	279.68	1.14
9721.00	91.36	268.70	9156.89	95.00	792.61	116.80 N	792.13 W	800.69@	278.39	0.56
9816.00	91.71	268.96	9154.35	95.00	887.55	114.86 N	887.07 W	894.48@	277.38	0.46
9910.00	90.40	268.26	9152.62	94.00	981.49	112.58 N	981.03 W	987.47@	276.55	1.58
10005.00	90.84	268.79	9151.59	95.00	1076.44	110.13 N	1075.99 W	1081.61@	275.84	0.72
10099.00	91.45	269.84	9149.71	94.00	1170.41	109.01 N	1169.96 W	1175.03@	275.32	1.29
10194.00	89.87	267.47	9148.62	95.00	1265.36	106.78 N	1264.92 W	1269.42@	274.83	3.00
10288.00	89.25	267.03	9149.34	94.00	1359.23	102.27 N	1358.81 W	1362.65@	274.30	0.81
10383.00	89.52	267.82	9150.36	95.00	1454.10	98.00 N	1453.71 W	1457.01@	273.86	0.88
10478.00	91.01	267.73	9149.92	95.00	1549.01	94.31 N	1548.63 W	1551.50@	273.49	1.57
10572.00	91.10	267.29	9148.19	94.00	1642.89	90.23 N	1642.53 W	1645.00@	273.14	0.48
10667.00	90.31	268.17	9147.02	95.00	1737.79	86.47 N	1737.44 W	1739.59@	272.85	1.25
10761.00	91.01	268.87	9145.94	94.00	1831.74	84.04 N	1831.41 W	1833.33@	272.63	1.05
10856.00	91.01	268.43	9144.26	95.00	1926.69	81.80 N	1926.36 W	1928.10@	272.43	0.46
10950.00	91.01	267.65	9142.61	94.00	2020.60	78.59 N	2020.29 W	2021.82@	272.23	0.83
11045.00	90.40	268.30	9141.44	95.00	2115.52	75.23 N	2115.23 W	2116.56@	272.04	0.94
11139.00	90.40	268.92	9140.78	94.00	2209.48	72.95 N	2209.20 W	2210.40@	271.89	0.66
11234.00	90.31	269.37	9140.19	95.00	2304.46	71.53 N	2304.18 W	2305.29@	271.78	0.48
11328.00	90.04	269.60	9139.91	94.00	2398.45	70.69 N	2398.18 W	2399.22@	271.69	0.38

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AQUILA 22 FED COM #1H / 30-015-40627
EDDY COUNTY, NM
RIG:H&P 300

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist. Dir (ft) (deg)		DLS (dg/100ft)
11423.00	90.40	269.03	9139.54	95.00	2493.44	69.55 N	2493.17 W	2494.14@	271.60	0.71
11517.00	91.54	268.75	9137.95	94.00	2587.40	67.73 N	2587.14 W	2588.02@	271.50	1.25
11612.00	91.54	268.58	9135.40	95.00	2682.33	65.52 N	2682.08 W	2682.88@	271.40	0.18
11706.00	91.19	269.12	9133.16	94.00	2776.27	63.63 N	2776.03 W	2776.76@	271.31	0.68
11801.00	90.66	269.02	9131.62	95.00	2871.24	62.09 N	2871.01 W	2871.68@	271.24	0.57
11896.00	90.84	269.21	9130.38	95.00	2966.21	60.62 N	2965.99 W	2966.61@	271.17	0.28
11990.00	90.84	269.27	9129.00	94.00	3060.19	59.38 N	3059.97 W	3060.54@	271.11	0.06
12085.00	91.28	269.79	9127.24	95.00	3155.17	58.60 N	3154.95 W	3155.49@	271.06	0.72
12179.00	91.01	269.85	9125.37	94.00	3249.14	58.30 N	3248.93 W	3249.45@	271.03	0.29
12273.00	90.66	269.56	9124.00	94.00	3343.13	57.82 N	3342.92 W	3343.42@	270.99	0.48
12368.00	89.87	268.75	9123.56	95.00	3438.11	56.42 N	3437.90 W	3438.37@	270.94	1.19
12462.00	89.96	269.72	9123.70	94.00	3532.09	55.16 N	3531.89 W	3532.33@	270.89	1.04
12557.00	89.78	269.72	9123.91	95.00	3627.09	54.70 N	3626.89 W	3627.31@	270.86	0.19
12651.00	88.99	269.98	9124.92	94.00	3721.08	54.45 N	3720.89 W	3721.28@	270.84	0.89
12746.00	89.34	269.47	9126.31	95.00	3816.07	54.00 N	3815.87 W	3816.26@	270.81	0.65
12841.00	90.84	269.59	9126.16	95.00	3911.06	53.22 N	3910.87 W	3911.23@	270.78	1.58
12936.00	90.57	269.20	9124.99	95.00	4006.04	52.21 N	4005.86 W	4006.20@	270.75	0.50
13030.00	91.19	269.07	9123.54	94.00	4100.01	50.79 N	4099.83 W	4100.15@	270.71	0.67
13124.00	90.57	268.59	9122.10	94.00	4193.97	48.88 N	4193.80 W	4194.09@	270.67	0.83
13219.00	91.28	268.07	9120.57	95.00	4288.90	46.11 N	4288.75 W	4289.00@	270.62	0.93
13314.00	90.92	267.13	9118.74	95.00	4383.78	42.13 N	4383.65 W	4383.85@	270.55	1.06
13408.00	90.13	267.05	9117.88	94.00	4477.64	37.36 N	4477.52 W	4477.68@	270.48	0.85
13503.00	89.69	266.56	9118.03	95.00	4572.47	32.06 N	4572.37 W	4572.49@	270.40	0.69
13597.00	90.22	266.30	9118.10	94.00	4666.26	26.21 N	4666.19 W	4666.26@	270.32	0.63
13692.00	89.60	266.25	9118.25	95.00	4761.03	20.04 N	4760.99 W	4761.03@	270.24	0.65
13724.00	89.16	266.57	9118.60	32.00	4792.96	18.03 N	4792.92 W	4792.96@	270.22	1.70
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 13812.00'MD										
13812.00	89.16	266.57	9119.89	88.00	4880.77	12.77 N	4880.76 W	4880.77@	270.15	0.00

PathFinder Energy Services, Inc.

Survey Report

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AQUILA 22 FED COM #1H / 30-015-40627
EDDY COUNTY, NM
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- ** The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder Energy Services, Inc. and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	DEVON ENERGY PRODUCTION CO.,LP		
LEASE / WELL No.:	AQUILA 22 FED COM	#1H	
WELL LOCATION:	EDDY COUNTY, NEW MEXICO		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	H&P 300		
API WELL No:	30-015-40627		
JOB No:	12MLD0394		
P.O. / AFE No.	98-51302		
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.38	LWD Calculated:	7.311698
		Agreed Upon:	7.31
X =	690494.540000	Feet	Y = 600721.700000
			Feet
SITE LATITUDE:	32.650496 N	SITE LONGITUDE:	103.848713 W
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☒	ZONE:	New Mexico East
PROPOSED DRIFT DIRECTION:	269.09		
KELLY BUSHING ELEVATION:	25.1		
ALTITUDE:	3535.9	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	8475		
DRIFT ANGLE:	1.14		
DRIFT DIRECTION:	1.4		
TRUE VERTICAL DEPTH:	8473.86		
VERTICAL SECTION:	84.66		
RECTANGULAR COORDINATE (N / S):	84.66		
RECTANGULAR COORDINATE (E / W):	32.43		
CLOSURE DISTANCE / DIRECTION:	90.66	20.96	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	VAUGHN ENERGY SERVICES		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	8674	TOTAL DEPTH:	13795
KICKOFF ANGLE:	0	MAX ANGLE:	92

PES Engineers: ALEX CASTILLO
REYDEL BLANCO

**Signature of both field engineers required if applicable

Directional Driller: JORDAN WILLIAMS

DATE: 10-Nov-2012



Company: Devon Energy
Lease/Well: Aquila 22 Fed Com /1H

Rig Name: H&P 300
State/County: New Mexico/Eddy
Latitude: 32.65, Longitude: -103.85
GRID North is 0.26 Degrees East of True North
VS-Azi: 0.00 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB=26 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...2 fed com 1h ha gyro-de_01.ut

Minimum Curvature Method

Report Date/Time: 11/10/2012 / 02:52

Vaughn Energy Services
Midland, Texas
Office 432-563-5444
Troy Hardin

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	0.15	289.82	100.00	0.05	-0.13	0.05	0.13	289.82	0.15
200.00	0.10	266.28	200.00	0.09	-0.34	0.09	0.35	284.27	0.08
300.00	0.18	351.30	300.00	0.24	-0.44	0.24	0.50	298.07	0.20
400.00	0.26	39.51	400.00	0.57	-0.32	0.57	0.65	330.49	0.20
500.00	0.28	181.10	500.00	0.50	-0.18	0.50	0.53	340.06	0.51
600.00	0.27	16.08	600.00	0.48	-0.12	0.48	0.50	346.00	0.55
700.00	0.26	107.52	700.00	0.64	0.16	0.64	0.66	13.84	0.38
800.00	0.22	197.07	800.00	0.39	0.32	0.39	0.50	38.79	0.34
900.00	0.21	251.77	900.00	0.15	0.09	0.15	0.18	29.79	0.20
1000.00	0.21	336.99	1000.00	0.27	-0.16	0.27	0.31	329.34	0.28
1100.00	0.22	20.87	1099.99	0.61	-0.16	0.61	0.63	345.09	0.16
1200.00	0.25	88.07	1199.99	0.79	0.13	0.79	0.80	8.97	0.26
1300.00	0.03	217.90	1299.99	0.78	0.33	0.78	0.84	22.86	0.28
1400.00	0.15	20.37	1399.99	0.88	0.35	0.88	0.95	22.04	0.18
1500.00	0.76	53.48	1499.99	1.39	0.93	1.39	1.68	33.83	0.64
1600.00	0.98	56.24	1599.98	2.27	2.18	2.27	3.14	43.89	0.22
1700.00	1.46	41.83	1699.96	3.69	3.74	3.69	5.26	45.39	0.57
1800.00	1.69	44.74	1799.92	5.69	5.63	5.69	8.01	44.70	0.24
1900.00	1.32	67.15	1899.88	7.19	7.73	7.19	10.56	47.09	0.69
2000.00	1.07	43.49	1999.86	8.32	9.44	8.32	12.58	48.62	0.55
2100.00	1.46	25.73	2099.84	10.15	10.64	10.15	14.70	46.36	0.55
2200.00	1.44	37.32	2199.81	12.30	11.96	12.30	17.15	44.20	0.29
2300.00	0.63	61.12	2299.79	13.56	13.20	13.56	18.92	44.22	0.90
2400.00	0.33	54.23	2399.79	13.99	13.91	13.99	19.73	44.83	0.30
2500.00	0.23	108.55	2499.79	14.10	14.34	14.10	20.11	45.48	0.27
2600.00	0.13	176.69	2599.78	13.93	14.53	13.93	20.13	46.21	0.21
2700.00	0.51	8.51	2699.78	14.26	14.60	14.26	20.41	45.68	0.64
2800.00	0.13	184.72	2799.78	14.60	14.66	14.60	20.69	45.13	0.64
2900.00	0.34	306.07	2899.78	14.66	14.41	14.66	20.56	44.52	0.42
3000.00	0.53	302.89	2999.78	15.08	13.79	15.08	20.43	42.45	0.19
3100.00	0.40	280.21	3099.78	15.39	13.06	15.39	20.18	40.32	0.22
3200.00	0.37	344.19	3199.77	15.77	12.62	15.77	20.20	38.69	0.41
3300.00	0.03	357.40	3299.77	16.11	12.53	16.11	20.41	37.89	0.34
3400.00	0.42	357.61	3399.77	16.50	12.52	16.50	20.71	37.19	0.39

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
3500.00	0.67	6.96	3499.77	17.44	12.57	17.44	21.50	35.79	0.27
3600.00	1.13	9.35	3599.76	19.00	12.80	19.00	22.91	33.98	0.46
3700.00	1.39	8.60	3699.73	21.16	13.15	21.16	24.91	31.85	0.26
3800.00	1.07	16.20	3799.71	23.26	13.59	23.26	26.94	30.29	0.36
3900.00	1.63	29.18	3899.68	25.39	14.54	25.39	29.26	29.80	0.63
4000.00	1.87	27.17	3999.63	28.08	15.98	28.08	32.31	29.64	0.25
4100.00	1.75	45.89	4099.58	30.60	17.82	30.60	35.40	30.21	0.60
4200.00	1.49	72.77	4199.55	32.04	20.16	32.04	37.86	32.17	0.79
4300.00	1.88	56.71	4299.50	33.33	22.77	33.33	40.37	34.34	0.61
4400.00	1.57	40.59	4399.46	35.27	25.03	35.27	43.25	35.37	0.57
4500.00	1.33	77.02	4499.43	36.56	27.05	36.56	45.48	36.49	0.93
4600.00	1.36	98.69	4599.40	36.64	29.34	36.64	46.94	38.69	0.50
4700.00	0.75	93.57	4699.38	36.42	31.17	36.42	47.94	40.55	0.61
4800.00	0.98	91.85	4799.37	36.36	32.68	36.36	48.89	41.95	0.23
4900.00	0.93	107.69	4899.36	36.08	34.31	36.08	49.79	43.56	0.27
5000.00	0.16	130.47	4999.35	35.75	35.19	35.75	50.16	44.55	0.78
5100.00	0.57	78.94	5099.35	35.75	35.78	35.75	50.58	45.03	0.48
5200.00	0.47	59.73	5199.35	36.05	36.62	36.05	51.39	45.45	0.20
5300.00	0.27	126.37	5299.35	36.12	37.17	36.12	51.83	45.82	0.44
5400.00	0.23	104.61	5399.35	35.93	37.55	35.93	51.97	46.27	0.10
5500.00	0.35	340.59	5499.34	36.16	37.65	36.16	52.20	46.15	0.51
5600.00	0.30	359.00	5599.34	36.71	37.54	36.71	52.50	45.64	0.12
5700.00	0.31	333.17	5699.34	37.21	37.41	37.21	52.77	45.16	0.14
5800.00	0.32	26.86	5799.34	37.70	37.42	37.70	53.12	44.78	0.29
5900.00	0.74	2.73	5899.34	38.60	37.57	38.60	53.87	44.23	0.47
6000.00	0.37	30.61	5999.33	39.52	37.77	39.52	54.67	43.70	0.45
6100.00	0.64	337.15	6099.33	40.32	37.71	40.32	55.21	43.09	0.52
6200.00	0.65	8.75	6199.32	41.40	37.58	41.40	55.91	42.24	0.35
6300.00	0.45	13.57	6299.32	42.35	37.76	42.35	56.74	41.73	0.21
6400.00	1.02	357.26	6399.31	43.62	37.81	43.62	57.73	40.92	0.60
6500.00	0.81	2.45	6499.30	45.22	37.80	45.22	58.94	39.90	0.23
6600.00	0.82	337.18	6599.29	46.58	37.55	46.58	59.83	38.88	0.36
6700.00	1.24	349.32	6699.27	48.31	37.07	48.31	60.90	37.50	0.47
6800.00	0.90	333.59	6799.25	50.08	36.52	50.08	61.98	36.11	0.45
6900.00	0.84	330.18	6899.24	51.41	35.81	51.41	62.66	34.86	0.08
7000.00	0.90	332.59	6999.23	52.74	35.09	52.74	63.35	33.63	0.07
7100.00	1.04	359.41	7099.21	54.35	34.72	54.35	64.49	32.57	0.47
7200.00	0.97	30.78	7199.20	55.99	35.14	55.99	66.10	32.12	0.55
7300.00	0.76	345.06	7299.19	57.36	35.41	57.36	67.41	31.69	0.70
7400.00	1.26	14.37	7399.17	59.07	35.51	59.07	68.92	31.01	0.71
7500.00	1.21	339.88	7499.15	61.13	35.42	61.13	70.65	30.08	0.74
7600.00	1.44	358.13	7599.13	63.39	35.01	63.39	72.41	28.91	0.48
7700.00	1.60	356.92	7699.09	66.05	34.90	66.05	74.70	27.85	0.16
7800.00	1.56	0.11	7799.05	68.80	34.82	68.80	77.11	26.85	0.10
7900.00	1.61	348.48	7899.01	71.54	34.54	71.54	79.44	25.77	0.33
8000.00	1.61	338.76	7998.98	74.23	33.75	74.23	81.55	24.45	0.27
8100.00	1.40	351.20	8098.94	76.75	33.06	76.75	83.57	23.30	0.39
8200.00	1.28	353.63	8198.91	79.07	32.74	79.07	85.58	22.50	0.13
8300.00	1.19	354.87	8298.89	81.22	32.53	81.22	87.49	21.83	0.10
8400.00	1.09	359.22	8398.87	83.20	32.42	83.20	89.30	21.29	0.14
8475.00	1.14	1.40	8473.86	84.66	32.43	84.66	90.66	20.96	0.10

HORIZONTAL DISPLACEMENT IS
90.66 FEET AT 20.96 DEGREES

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

DEVON
AQUILA 22 FED COM 1H, API 30-015-40627
EDDY COUNTY, NEW MEXICO
Rig:HP 300

Tue Oct 23 11:25:37 2012

Coordinates

Latitude: 32.650496 N (32 deg. 39 min. 1.7853 sec.)
Longitude: 103.848713 W (-103 deg. 50 min. 55.3662 sec.)
Elevation: 3561.00 feet.
Calculation Date: Oct/23/2012

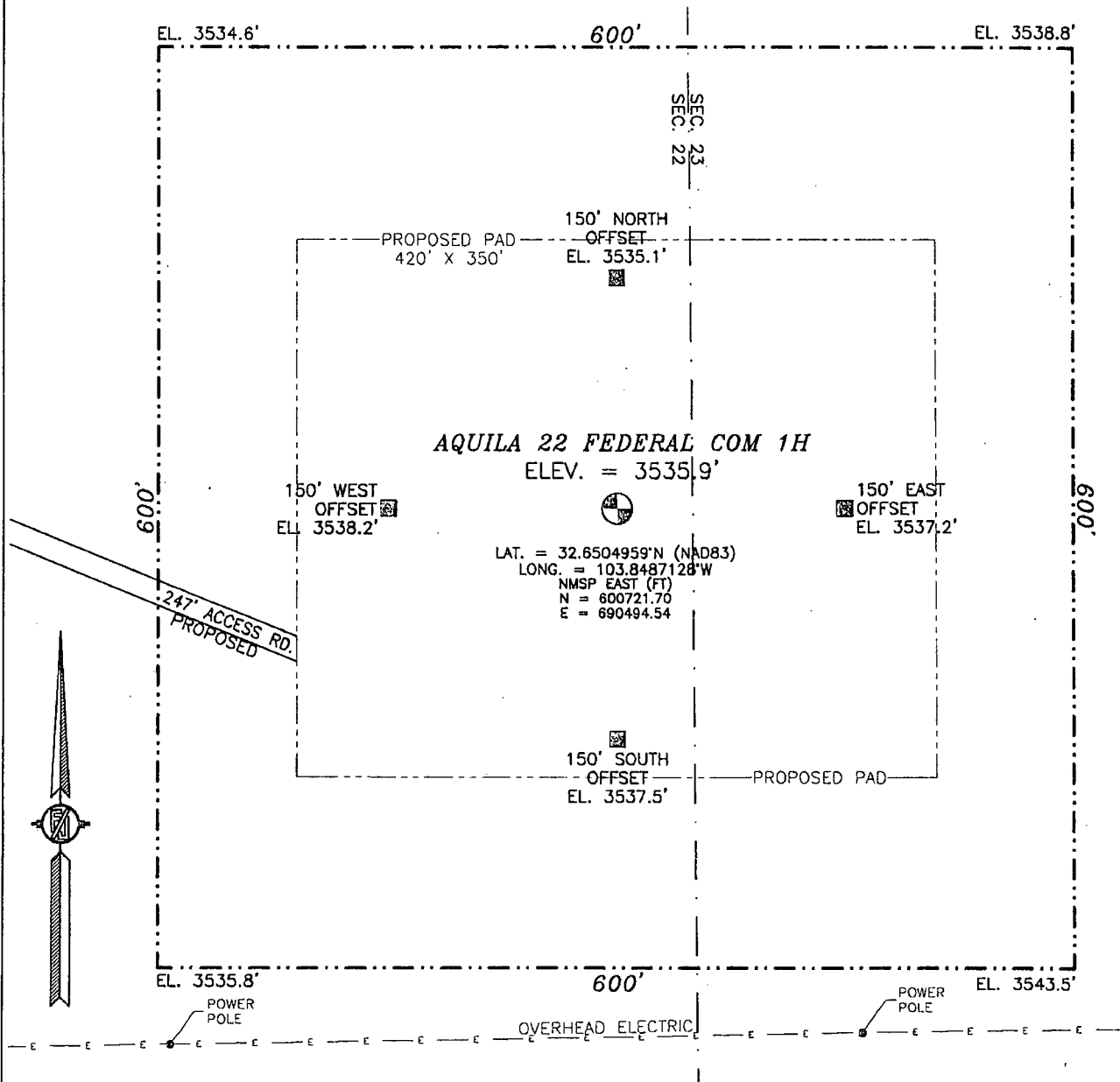
Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.5003 degrees
Total Magnetic Field: 0.48706 gauss
Magnetic Declination: 7.579234 degrees
Horizontal Intensity: 0.239838 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.579234 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 690494.5400 feet
Y: 600721.7000 feet
True to Grid: (convergence) -0.261464 degrees
Magnetic to Grid: 7.317771 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.317771 Degr.

SECTION 22, TOWNSHIP 19 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM INTERSECTION OF CR 222 (SHUGART) AND CR 248 (LUSK
PLANT RD) GO SOUTH ON CR 222 1.1 MILES TURN LEFT (EAST) ON
CALICHE ROAD GO 0.85 MILES, SITE IS ON THE LEFT 300' +/-
(EAST)

DEVON ENERGY PRODUCTION COMPANY, L.P.

AQUILA 22 FEDERAL COM 1H

LOCATED 990 FT. FROM THE NORTH LINE
AND 50 FT. FROM THE EAST LINE OF
SECTION 22, TOWNSHIP 19 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SURVEY NO. 853A

AUGUST 9, 2012

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

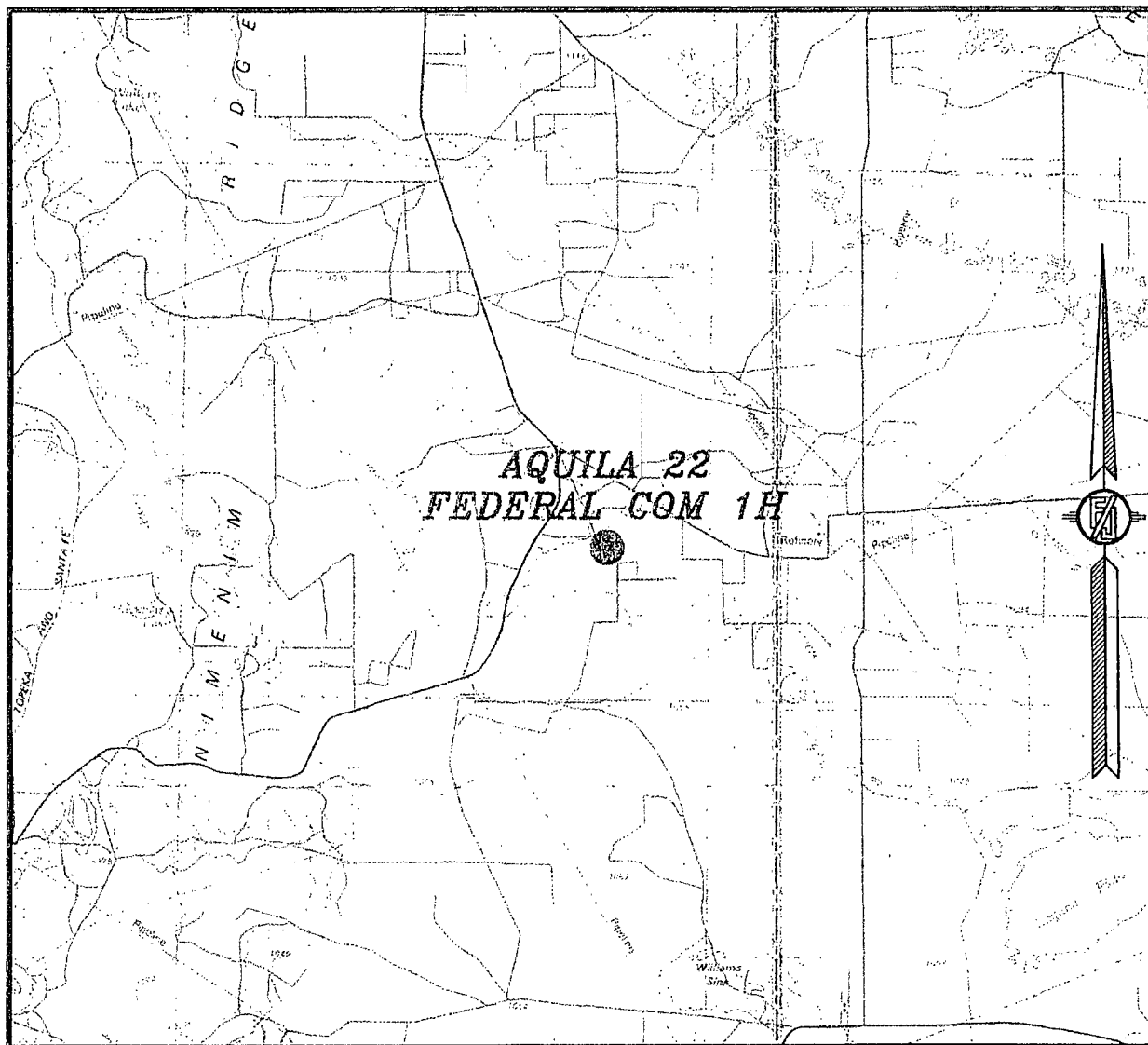
NOT TO SCALE

AUGUST 9, 2012

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 **CARLSBAD, NEW MEXICO**

301 SOUTH CANAL
(575) 234-3341

SECTION 22, TOWNSHIP 19 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
AQUILA 22 FEDERAL COM 1H
LOCATED 990 FT. FROM THE NORTH LINE
AND 50 FT. FROM THE EAST LINE OF
SECTION 22, TOWNSHIP 19 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AUGUST 9, 2012

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