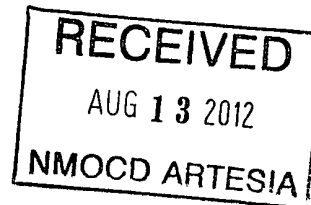


30-015-39163



DEVON ENERGY

Bone Spring
Eddy County, NM
Snapping 2 State #7H
VH - Job #32K11111158

Survey: Gyro

SDI Standard Survey Report

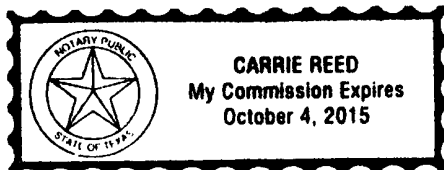
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 12th of December, 2011.

[Signature]

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Snapping 2 State #7H
Project:	Bone Spring	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Snapping 2 State #7H	North Reference:	Grid
Wellbore:	VH - Job #32K11111158	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K11111158	Database:	EDM-Regulatory

Project	Bone Spring		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Eddy County, NM			
Site Position:		Northing:	388,163 48 usft	Latitude:	32° 3' 56 838 N
From:	Lat/Long	Easting:	722,735 73 usft	Longitude:	103° 44' 51 868 W
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0 31 °

Well	Snapping 2 State #7H, Directional (Pathfinder)					
Well Position	+N/-S	0 0 usft	Northing:	388,163 48 usft	Latitude:	32° 3' 56 838 N
	+E/-W	0 0 usft	Easting:	722,735 73 usft	Longitude:	103° 44' 51 868 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore	VH - Job #32K11111158				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/28/2011	7 60	60 00	48,481

Design		VH - Job #32K11111158		
Audit Notes:				
Version:	1 0	Phase:	ACTUAL	Tie On Depth: 0 0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0 0	0 0	0 0	359 91

Survey Program	Date 12/29/2011			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100 0	7,850 0	Gyro (VH - Job #32K11111158)	Keeper	Keeper Gyro

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
0 0	0 00	0 00	0 0	0 0	0 0	0 00	0 0	
100 0	0 28	210 99	100 0	-0 2	-0 1	210 99	0 2	
200 0	0 25	246 41	200 0	-0 5	-0 5	221 73	0 7	
300 0	0 33	236 84	300 0	-0 8	-0 9	229 92	1 2	
400 0	0 23	241 00	400 0	-1 0	-1 3	232 46	1 7	
500 0	0 43	270 17	500 0	-1 1	-1 9	239 35	2 2	
600 0	0 56	314 23	600 0	-0 8	-2 6	253 62	2 7	
700 0	0 89	341 36	700 0	0 3	-3 2	275 68	3 2	
800 0	1 09	338 44	800 0	1 9	-3 8	297 12	4 2	
900 0	1 19	335 26	899 9	3 8	-4 6	309 51	5 9	
1,000 0	1 00	313 92	999 9	5 3	-5 6	313 35	7 7	
1,100 0	1 32	281 55	1,099 9	6 1	-7 4	309 78	9 6	

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Snapping 2 State #7H
Project:	Bone Spring	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Snapping 2 State #7H	North Reference:	Grid
Wellbore:	VH - Job #32K11111158	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K11111158	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,200 0	1 55	263 42	1,199 9	6 2	-9 9	302 27	11 7
1,300 0	1 51	257 95	1,299 8	5 8	-12 5	294 89	13 8
1,400 0	1 57	252 34	1,399 8	5 1	-15 1	288 69	15 9
1,500 0	1 40	242 02	1,499 8	4 1	-17 5	283 26	17 9
1,600 0	1 55	250 08	1,599 7	3 1	-19 8	278 84	20 1
1,700 0	1 43	247 57	1,699 7	2 1	-22 2	275 51	22 3
1,800 0	1 45	246 08	1,799 7	1 2	-24 6	272 69	24 6
1,900 0	1 77	251 72	1,899 6	0 2	-27 2	270 33	27 2
2,000 0	2 27	251 48	1,999 6	-1 0	-30 5	268 21	30 5
2,100 0	2 48	248 27	2,099 5	-2 4	-34 4	266 03	34 5
2,200 0	2 38	247 23	2,199 4	-4 0	-38 3	264 06	38 5
2,300 0	1 97	246 35	2,299 3	-5 5	-41 8	262 53	42 2
2,400 0	2 03	236 74	2,399 3	-7 1	-44 9	260 95	45 4
2,500 0	2 17	228 91	2,499 2	-9 4	-47 8	258 92	48 7
2,600 0	2 28	208 91	2,599 1	-12 3	-50 2	256 18	51 7
2,700 0	2 07	207 34	2,699 1	-15 7	-52 0	253 20	54 3
2,800 0	2 09	204 12	2,799 0	-19 0	-53 5	250 50	56 8
2,900 0	1 95	205 23	2,898 9	-22 2	-55 0	248 06	59 3
3,000 0	1 89	208 09	2,998 9	-25 2	-56 5	246 00	61 9
3,100 0	1 78	204 13	3,098 8	-28 0	-57 9	244 18	64 3
3,200 0	1 41	202 96	3,198 8	-30 6	-59 0	242 62	66 5
3,300 0	1 47	172 82	3,298 7	-33 0	-59 4	240 94	67 9
3,400 0	1 46	166 13	3,398 7	-35 5	-58 9	238 92	68 8
3,500 0	2 08	133 98	3,498 7	-38 0	-57 3	236 45	68 7
3,600 0	3 90	124 32	3,598 5	-41 2	-53 2	232 25	67 2
3,700 0	4 47	118 51	3,698 3	-44 9	-46 9	226 24	65 0
3,800 0	6 20	126 48	3,797 8	-50 0	-39 2	218 06	63 5
3,900 0	7 64	136 57	3,897 1	-58 1	-30 3	207 52	65 5
4,000 0	6 71	134 42	3,996 3	-67 0	-21 5	197 81	70 3
4,100 0	4 63	135 33	4,095 8	-73 9	-14 5	191 10	75 3
4,200 0	3 22	133 77	4,195 6	-78 7	-9 6	186 97	79 3
4,300 0	2 91	136 32	4,295 4	-82 5	-5 9	184 06	82 7
4,400 0	2 65	139 02	4,395 3	-86 1	-2 6	181 72	86 1
4,500 0	2 21	138 85	4,495 2	-89 3	0 2	179 87	89 3
4,600 0	2 16	140 07	4,595 2	-92 2	2 7	178 33	92 2
4,700 0	1 81	147 42	4,695 1	-95 0	4 7	177 14	95 1
4,800 0	1 49	159 83	4,795 1	-97 5	6 0	176 46	97 7
4,900 0	1 37	162 88	4,895 0	-99 9	6 8	176 08	100 1
5,000 0	1 41	165 01	4,995 0	-102 2	7 5	175 80	102 5
5,100 0	1 42	168 23	5,095 0	-104 6	8 1	175 58	104 9
5,200 0	1 12	179 03	5,194 9	-106 8	8 3	175 53	107 1
5,300 0	0 92	170 60	5,294 9	-108 6	8 5	175 53	108 9
5,400 0	0 84	179 94	5,394 9	-110 1	8 6	175 52	110 4
5,500 0	0 75	193 45	5,494 9	-111 5	8 5	175 65	111 8

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Snapping 2 State #7H
Project:	Bone Sprng	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Snapping 2 State #7H	North Reference:	Grid
Wellbore:	VH - Job #32K11111158	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K11111158	Database:	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600 0	0 74	183 82	5,594 9	-112 8	8 3	175 80	113 1
5,700 0	0 67	187 62	5,694 9	-114 0	8 2	175 90	114 3
5,800 0	0 50	195 46	5,794 9	-115 0	8 0	176 04	115 3
5,900 0	0 36	184 00	5,894 9	-115 7	7 8	176 13	116 0
6,000 0	0 60	195 62	5,994 9	-116 5	7 7	176 24	116 8
6,100 0	0 67	181 48	6,094 9	-117 6	7 5	176 35	117 9
6,200 0	0 85	182 92	6,194 9	-118 9	7 5	176 41	119 2
6,300 0	1 31	190 37	6,294 8	-120 8	7 2	176 58	121 0
6,400 0	1 48	189 79	6,394 8	-123 2	6 8	176 85	123 4
6,500 0	1 53	190 33	6,494 8	-125 8	6 3	177 12	126 0
6,600 0	1 97	205 70	6,594 7	-128 7	5 3	177 62	128 8
6,700 0	1 75	209 46	6,694 7	-131 5	3 8	178 32	131 6
6,800 0	1 48	215 42	6,794 6	-133 9	2 3	178 99	133 9
6,900 0	1 47	214 34	6,894 6	-136 0	0 9	179 63	136 0
7,000 0	1 50	207 88	6,994 6	-138 2	-0 5	180 19	138 2
7,100 0	1 74	205 40	7,094 5	-140 8	-1 7	180 70	140 8
7,200 0	1 84	211 41	7,194 5	-143 5	-3 2	181 28	143 6
7,300 0	1 71	212 83	7,294 4	-146 1	-4 9	181 90	146 2
7,400 0	1 92	216 86	7,394 4	-148 7	-6 7	182 57	148 9
7,500 0	2 20	213 86	7,494 3	-151 7	-8 7	183 30	151 9
7,600 0	2 15	204 04	7,594 3	-155 0	-10 6	183 90	155 3
7,700 0	2 45	203 26	7,694 2	-158 7	-12 2	184 39	159 1
7,800 0	2 30	205 36	7,794 1	-162 4	-13 9	184 89	163 0
7,850 0	1 97	208 32	7,844 1	-164 1	-14 7	185 13	164 7



Project: Bone Spring
Eddy County, NM
Well: Snapping 2 State #7H
Wellbore: VH - Job #32K11111158
Design: VH - Job #32K11111158

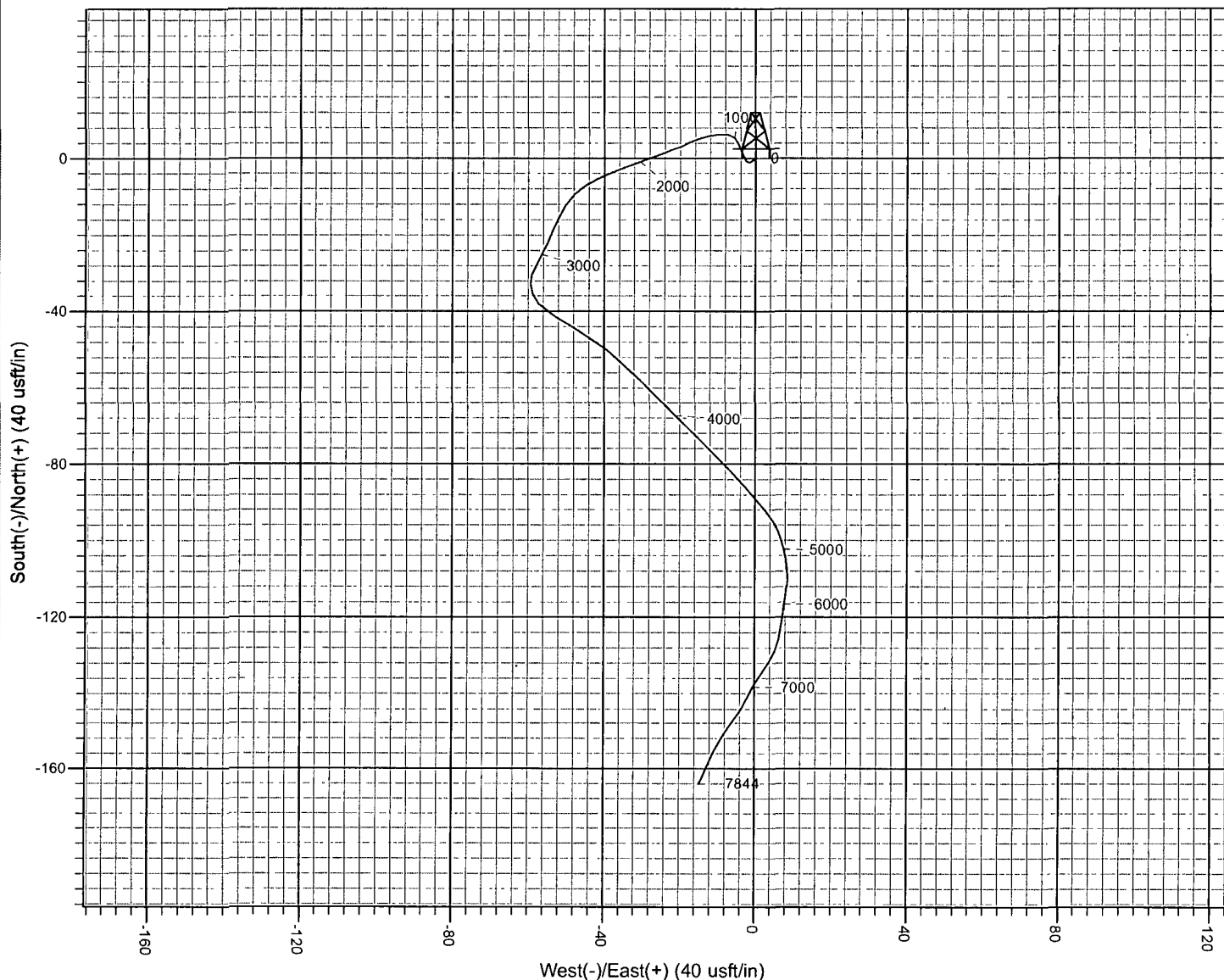


Azimuths to Grid North
True North -0 31°
Magnetic North: 7 29°

Magnetic Field
Strength 48481 4snT
Dip Angle. 60 00°
Date 11/28/2011
Model IGRF2010

WELL DETAILS: Snapping 2 State #7H
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	388163.48	722735.73	32° 3' 56.838 N	103° 44' 51.868 W	



PROJECT DETAILS: Bone Spring
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

SITE DETAILS: Eddy County, NM
Site Centre Latitude: 32° 3' 56.838 N
Longitude: 103° 44' 51.868 W
Positional Uncertainty: 0.0
Convergence: 0.31
Local North: Grid

Pathfinder

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



December 15, 2011

Devon Energy
20 N. Broadway
Oklahoma City, OK

RE: Devon Energy
Snapping 2 State #7H
API: 30-015-39163
Eddy County, NM
RIG: H & P 416
FIELD: Wildcat; Bone Spring
PES FILE NO.: 700004427-WT-WT

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 "S. Bibb".

STEVE BIBB
M/LWD Service Coordinator
PathFinder Energy Services

ML:sh



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

DEVON ENERGY

SNAPPING 2 STATE #7H

EDDY COUNTY, NEW MEXICO

PREPARED BY: STEVE BIBB

Pathfinder

6213 WCN 112
Midland, Texas 79706
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) JAMES BURLESON
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 11-28-11 TO 12-04-11
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

DEVON ENERGY
SNAPPING 2 STATE #7H
EDDY COUNTY, NM
RIG: H&P 416

9. SURVEY CERTIFIED FROM: 7961 TO 13047 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4652.03 FEET ON A BEARING OF .24 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13102 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

A handwritten signature in black ink, appearing to read "Steve Bibb".

STEVE BIBB
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 11/28/2011
Date Completed: 12/04/2011

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #7H
EDDY COUNTY, NM
Rig:H&P 416
PathFinder Office Supervisor: STEVE BIBB
PathFinder Field Engineers:J.BURLESON
K.THURMAN

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.3.56.8380 N LON:103.44.51.8683 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 722735.7300 Y: 388163.4900
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.29° EAST TO GRID
Vertical Section Plane: 359.91
Survey Vert. Reference: 22.00' Rotary Table To Ground
Altitude:3267.20' Ground To MSL

Measured Depth	13102.00	(feet)
Inclination	91.89	(deg)
Azimuth	4.48	(deg)
True Vertical Depth	8550.81	(feet)
Vertical Section	4651.95	(feet)
Survey X cord	722755.38	(feet)
Survey Y cord	392815.48	(feet)
Survey Lat	32.07857554 N	(deg)
Survey Lon	103.74759623 W	(deg)
Rectangular Corr. N/S	4651.99 N	(feet)
Rectangular Corr. E/W	19.65 E	(feet)
Closure Distance	4652.03	(feet)
Direction of Closure	0.24	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION

SNAPPING 2 STATE #7H

EDDY COUNTY, NM

Rig:H&P 416

PathFinder Office Supervisor: STEVE BIBB

PathFinder Field Engineers: J.BURLESON

K.THURMAN

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.3.56.8380 N LON:103.44.51.8683 W

GRID Reference:NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 722735.7300 Y: 388163.4900

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.29° EAST TO GRID

Vertical Section Plane: 359.91

Survey Vert. Reference: 22.00' Rotary Table To Ground

Altitude:3267.20' Ground To MSL

Survey Calculations by RX5 V6.03E using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL		Closure		DLS
						Rectangular (ft)	Offsets (ft)	Dist (ft)	Dir (deg)	
THE FOLLOWING ARE SCIENTIFIC GYRO SURVEYS:										
0.00	0.00	0.00	-0.00	0.00	0.37	0.37 N	0.58 E	0.68@	57.61	0.00
100.00	0.28	210.99	100.00	100.00	0.16	0.16 N	0.45 E	0.48@	70.86	0.28
200.00	0.25	246.41	200.00	100.00	-0.14	0.14 S	0.13 E	0.19@	138.12	0.16
300.00	0.33	236.84	300.00	100.00	-0.38	0.38 S	0.32 W	0.50@	219.33	0.09
400.00	0.23	241.00	399.99	100.00	-0.64	0.64 S	0.73 W	0.97@	228.85	0.10
500.00	0.43	270.17	499.99	100.00	-0.73	0.74 S	1.28 W	1.48@	240.16	0.25
600.00	0.56	314.24	599.99	100.00	-0.39	0.39 S	2.01 W	2.05@	258.90	0.39
700.00	0.89	314.36	699.98	100.00	0.49	0.49 N	2.91 W	2.95@	279.55	0.33
800.00	1.09	338.44	799.97	100.00	1.92	1.92 N	3.82 W	4.27@	296.67	0.46
900.00	1.19	335.26	899.95	100.00	3.75	3.75 N	4.60 W	5.93@	309.14	0.12
1000.00	1.00	313.92	999.93	100.00	5.30	5.29 N	5.67 W	7.75@	313.06	0.45
1100.00	1.32	281.55	1099.91	100.00	6.14	6.13 N	7.42 W	9.63@	309.55	0.72
1200.00	1.55	263.42	1199.88	100.00	6.22	6.21 N	9.89 W	11.68@	302.09	0.51
1300.00	1.51	257.95	1299.84	100.00	5.79	5.78 N	12.53 W	13.79@	294.75	0.15
1400.00	1.57	252.34	1399.81	100.00	5.11	5.08 N	15.12 W	15.95@	288.59	0.16
1500.00	1.40	242.02	1499.77	100.00	4.12	4.10 N	17.50 W	17.98@	283.17	0.32
1600.00	1.55	250.08	1599.74	100.00	3.09	3.06 N	19.86 W	20.09@	278.77	0.25
1700.00	1.43	247.57	1699.71	100.00	2.16	2.13 N	22.28 W	22.38@	275.45	0.14
1800.00	1.45	246.08	1799.67	100.00	1.17	1.14 N	24.59 W	24.62@	272.64	0.04
1900.00	1.77	251.72	1899.63	100.00	0.18	0.14 N	27.21 W	27.21@	270.29	0.36
2000.00	2.27	251.48	1999.57	100.00	-0.93	0.97 S	30.56 W	30.57@	268.17	0.50
2100.00	2.48	248.27	2099.49	100.00	-2.35	2.41 S	34.45 W	34.53@	266.01	0.25
2200.00	2.38	247.23	2199.40	100.00	-3.95	4.01 S	38.37 W	38.58@	264.03	0.11
2300.00	1.97	246.35	2299.32	100.00	-5.44	5.50 S	41.86 W	42.22@	262.51	0.41
2400.00	2.03	236.74	2399.26	100.00	-7.09	7.16 S	44.91 W	45.48@	260.94	0.34

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #7H
EDDY COUNTY, NM
RIG:H&P 416

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)
2500.00	2.17	228.91	2499.20	100.00	-9.30	9.38 S	47.82 W	48.73@	258.90	0.32
2600.00	2.28	208.91	2599.12	100.00	-12.29	12.36 S	50.21 W	51.71@	256.17	0.78
2700.00	2.07	207.34	2699.05	100.00	-15.63	15.71 S	52.00 W	54.32@	253.19	0.22
2800.00	2.09	204.12	2798.98	100.00	-18.89	18.98 S	53.58 W	56.84@	250.49	0.12
2900.00	1.95	205.23	2898.92	100.00	-22.10	22.18 S	55.05 W	59.35@	248.05	0.14
3000.00	1.89	208.09	2998.87	100.00	-25.09	25.18 S	56.55 W	61.90@	246.00	0.11
3100.00	1.78	204.13	3098.82	100.00	-27.96	28.05 S	57.96 W	64.39@	244.18	0.17
3200.00	1.41	202.96	3198.78	100.00	-30.51	30.60 S	59.07 W	66.53@	242.62	0.37
3300.00	1.47	172.82	3298.75	100.00	-32.91	33.00 S	59.39 W	67.95@	240.94	0.75
3400.00	1.46	166.13	3398.71	100.00	-35.42	35.51 S	58.93 W	68.80@	238.92	0.17
3500.00	2.08	133.98	3498.67	100.00	-37.92	38.01 S	57.32 W	68.78@	236.45	1.15
3600.00	3.90	124.32	3598.53	100.00	-41.10	41.19 S	53.20 W	67.28@	232.25	1.88
3700.00	4.47	118.51	3698.26	100.00	-44.89	44.97 S	46.97 W	65.02@	226.25	0.71
3800.00	6.20	126.48	3797.83	100.00	-49.98	50.04 S	39.20 W	63.56@	218.08	1.88
3900.00	7.64	136.57	3897.10	100.00	-58.03	58.08 S	30.29 W	65.50@	207.54	1.88
4000.00	6.71	134.42	3996.31	100.00	-66.96	66.99 S	21.55 W	70.37@	197.83	0.97
4100.00	4.63	135.33	4095.82	100.00	-73.93	73.95 S	14.54 W	75.37@	191.12	2.08
4200.00	3.22	133.77	4195.58	100.00	-78.75	78.77 S	9.67 W	79.36@	187.00	1.41
4300.00	2.91	136.32	4295.44	100.00	-82.54	82.54 S	5.89 W	82.75@	184.08	0.34
4400.00	2.65	139.02	4395.32	100.00	-86.12	86.13 S	2.62 W	86.17@	181.74	0.29
4500.00	2.21	138.85	4495.23	100.00	-89.32	89.32 S	0.17 E	89.32@	179.89	0.44
4600.00	2.16	140.07	4595.16	100.00	-92.22	92.22 S	2.64 E	92.26@	178.36	0.07
4700.00	1.81	147.42	4695.10	100.00	-95.00	95.00 S	4.70 E	95.11@	177.17	0.43
4800.00	1.49	159.83	4795.06	100.00	-97.56	97.55 S	6.00 E	97.73@	176.48	0.48
4900.00	1.37	162.88	4895.03	100.00	-99.92	99.91 S	6.80 E	100.14@	176.11	0.14
5000.00	1.41	165.01	4995.00	100.00	-102.25	102.24 S	7.47 E	102.51@	175.82	0.06
5100.00	1.42	168.23	5094.97	100.00	-104.65	104.64 S	8.04 E	104.95@	175.60	0.08
5200.00	1.12	179.03	5194.94	100.00	-106.84	106.83 S	8.31 E	107.15@	175.55	0.38

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #7H
EDDY COUNTY, NM
RIG:H&P 416

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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)
5300.00	0.92	170.60	5294.93	100.00	-108.61	108.60 S	8.46 E	108.93@	175.55	0.25
5400.00	0.84	179.84	5394.91	100.00	-110.14	110.13 S	8.59 E	110.46@	175.54	0.16
5500.00	0.75	193.45	5494.91	100.00	-111.51	111.50 S	8.44 E	111.81@	175.67	0.21
5600.00	0.74	183.82	5594.90	100.00	-112.79	112.78 S	8.25 E	113.08@	175.82	0.13
5700.00	0.67	187.62	5694.89	100.00	-114.01	114.00 S	8.13 E	114.29@	175.92	0.08
5800.00	0.50	195.46	5794.88	100.00	-115.01	115.00 S	7.93 E	115.27@	176.05	0.19
5900.00	0.36	184.00	5894.88	100.00	-115.75	115.73 S	7.80 E	116.00@	176.15	0.16
6000.00	0.60	195.62	5994.88	100.00	-116.56	116.55 S	7.63 E	116.80@	176.25	0.26
6100.00	0.67	181.48	6094.87	100.00	-117.65	117.64 S	7.48 E	117.88@	176.36	0.17
6200.00	0.85	182.92	6194.86	100.00	-118.98	118.97 S	7.42 E	119.20@	176.43	0.18
6300.00	1.31	190.37	6294.84	100.00	-120.84	120.83 S	7.18 E	121.04@	176.60	0.48
6400.00	1.48	189.79	6394.81	100.00	-123.24	123.23 S	6.75 E	123.41@	176.86	0.17
6500.00	1.53	190.33	6494.78	100.00	-125.82	125.81 S	6.30 E	125.97@	177.14	0.05
6600.00	1.97	205.70	6594.73	100.00	-128.68	128.68 S	5.31 E	128.79@	177.64	0.64
6700.00	1.75	209.46	6694.68	100.00	-131.56	131.55 S	3.81 E	131.61@	178.34	0.25
6800.00	1.48	215.42	6794.64	100.00	-133.94	133.94 S	2.32 E	133.96@	179.01	0.32
6900.00	1.47	214.34	6894.61	100.00	-136.05	136.05 S	0.84 E	136.05@	179.64	0.03
7000.00	1.50	207.88	6994.58	100.00	-138.26	138.26 S	0.49 W	138.26@	180.20	0.17
7100.00	1.74	205.40	7094.54	100.00	-140.79	140.79 S	1.76 W	140.80@	180.71	0.25
7200.00	1.84	211.41	7194.49	100.00	-143.53	143.53 S	3.24 W	143.57@	181.29	0.21
7300.00	1.71	212.83	7294.44	100.00	-146.15	146.16 S	4.89 W	146.24@	181.92	0.14
7400.00	1.92	216.86	7394.39	100.00	-148.74	148.75 S	6.70 W	148.90@	182.58	0.25
7500.00	2.20	213.86	7494.32	100.00	-151.67	151.69 S	8.78 W	151.94@	183.31	0.30
7600.00	2.15	204.04	7594.25	100.00	-154.98	154.99 S	10.61 W	155.36@	183.92	0.38
7700.00	2.45	203.26	7694.17	100.00	-158.65	158.67 S	12.22 W	159.14@	184.40	0.30
7800.00	2.30	205.36	7794.08	100.00	-162.42	162.45 S	13.92 W	163.04@	184.90	0.17
** TIED INTO SCIENTIFIC DRILLING GYRO SURVEY @ 7850.00' MD.										
7850.00	1.97	208.32	7844.05	50.00	-164.09	164.11 S	14.76 W	164.77@	185.14	0.70

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #7H
EDDY COUNTY, NM
RIG:H&P 416

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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)
THE FOLLOWING ARE PATHFINDER MWD SURVEYS:										
7961.00	0.44	334.68	7955.03	111.00	-165.38	165.40 S	15.85 W	166.16@	185.47	2.03
7992.00	3.52	7.47	7986.01	31.00	-164.33	164.35 S	15.77 W	165.11@	185.48	10.19
8024.00	8.00	12.21	8017.84	32.00	-161.18	161.20 S	15.18 W	161.91@	185.38	14.07
8055.00	12.66	13.53	8048.33	31.00	-155.76	155.79 S	13.92 W	156.41@	185.11	15.05
8087.00	16.36	11.33	8079.30	32.00	-147.94	147.96 S	12.22 W	148.46@	184.72	11.69
8118.00	20.93	8.61	8108.67	31.00	-138.18	138.19 S	10.53 W	138.60@	184.36	15.00
8150.00	25.06	8.17	8138.12	32.00	-125.82	125.83 S	8.71 W	126.13@	183.96	12.92
8181.00	27.79	8.61	8165.88	31.00	-112.17	112.18 S	6.70 W	112.38@	183.42	8.83
8213.00	29.37	7.11	8193.98	32.00	-97.01	97.02 S	4.61 W	97.13@	182.72	5.42
8244.00	29.90	4.57	8220.92	31.00	-81.77	81.77 S	3.05 W	81.83@	182.14	4.40
8276.00	31.39	2.54	8248.45	32.00	-65.49	65.50 S	2.05 W	65.53@	181.79	5.67
8308.00	34.47	2.19	8275.31	32.00	-48.12	48.12 S	1.33 W	48.14@	181.58	9.64
8339.00	37.90	2.72	8300.33	31.00	-29.83	29.84 S	0.54 W	29.84@	181.04	11.11
8371.00	41.33	2.46	8324.97	32.00	-9.46	9.46 S	0.38 E	9.46@	177.71	10.73
8402.00	44.32	359.03	8347.71	31.00	11.61	11.61 N	0.63 E	11.62@	3.13	12.23
8434.00	46.52	357.10	8370.17	32.00	34.38	34.38 N	0.14 W	34.38@	359.76	8.11
8465.00	48.10	355.25	8391.19	31.00	57.12	57.12 N	1.67 W	57.14@	358.33	6.72
8497.00	51.09	354.02	8411.93	32.00	81.38	81.37 N	3.95 W	81.47@	357.22	9.79
8528.00	54.52	354.28	8430.67	31.00	105.94	105.93 N	6.47 W	106.13@	356.51	11.08
8560.00	57.68	354.90	8448.51	32.00	132.39	132.37 N	8.97 W	132.68@	356.12	10.00
8591.00	61.20	355.86	8464.27	31.00	158.99	158.98 N	11.11 W	159.36@	356.00	11.66
8623.00	63.93	356.22	8479.02	32.00	187.33	187.31 N	13.07 W	187.76@	356.01	8.59
8654.00	66.57	356.65	8491.99	31.00	215.42	215.40 N	14.82 W	215.91@	356.06	8.61
8686.00	68.41	356.83	8504.24	32.00	244.94	244.91 N	16.50 W	245.47@	356.14	5.77
8717.00	71.23	357.71	8514.94	31.00	274.00	273.98 N	17.89 W	274.56@	356.26	9.48
8749.00	73.60	358.94	8524.60	32.00	304.49	304.46 N	18.78 W	305.04@	356.47	8.26
8780.00	75.62	0.26	8532.83	31.00	334.38	334.35 N	18.98 W	334.89@	356.75	7.70

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #7H
EDDY COUNTY, NM
RIG:H&P 416

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS (dg/100ft)
(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(dg/100ft)
8812.00	77.82	0.96	8540.18	32.00	365.52	365.49 N	18.65 W	365.96@	357.08	7.20
8843.00	80.55	1.31	8546.00	31.00	395.96	395.93 N	18.05 W	396.34@	357.39	8.88
8875.00	85.12	0.96	8549.99	32.00	427.69	427.67 N	17.42 W	428.02@	357.67	14.32
8906.00	87.14	0.17	8552.08	31.00	458.62	458.59 N	17.11 W	458.91@	357.86	6.99
8938.00	87.23	0.35	8553.65	32.00	490.58	490.55 N	16.97 W	490.85@	358.02	0.63
8969.00	87.23	0.35	8555.15	31.00	521.54	521.52 N	16.78 W	521.79@	358.16	0.00
9001.00	88.37	360.00	8556.38	32.00	553.52	553.49 N	16.68 W	553.74@	358.27	3.73
9026.00	88.55	0.79	8557.05	25.00	578.51	578.48 N	16.51 W	578.72@	358.37	3.24
9121.00	90.31	359.82	8558.00	95.00	673.50	673.47 N	16.01 W	673.66@	358.64	2.11
9216.00	90.40	0.26	8557.41	95.00	768.49	768.47 N	15.94 W	768.63@	358.81	0.47
9311.00	90.31	0.79	8556.82	95.00	863.48	863.46 N	15.07 W	863.59@	359.00	0.57
9406.00	90.13	0.79	8556.45	95.00	958.47	958.45 N	13.76 W	958.55@	359.18	0.19
9501.00	90.48	0.87	8555.95	95.00	1053.46	1053.44 N	12.38 W	1053.51@	359.33	0.38
9596.00	89.78	0.70	8555.73	95.00	1148.45	1148.43 N	11.08 W	1148.49@	359.45	0.76
9690.00	89.87	0.52	8556.02	94.00	1242.44	1242.43 N	10.08 W	1242.47@	359.54	0.21
9785.00	89.96	0.61	8556.16	95.00	1337.43	1337.42 N	9.14 W	1337.45@	359.61	0.13
9879.00	89.87	1.23	8556.30	94.00	1431.42	1431.41 N	7.63 W	1431.43@	359.69	0.67
9974.00	90.31	1.84	8556.15	95.00	1526.38	1526.37 N	5.09 W	1526.38@	359.81	0.79
10068.00	87.76	0.08	8557.73	94.00	1620.34	1620.34 N	3.51 W	1620.34@	359.88	3.30
10163.00	87.76	0.17	8561.45	95.00	1715.27	1715.26 N	3.31 W	1715.27@	359.89	0.09
10257.00	87.85	0.61	8565.05	94.00	1809.19	1809.19 N	2.67 W	1809.19@	359.92	0.48
10352.00	88.46	0.52	8568.11	95.00	1904.14	1904.14 N	1.73 W	1904.14@	359.95	0.65
10446.00	90.22	359.29	8569.19	94.00	1998.13	1998.12 N	1.89 W	1998.13@	359.95	2.28
10541.00	90.75	0.26	8568.38	95.00	2093.12	2093.12 N	2.26 W	2093.12@	359.94	1.16
10636.00	91.89	0.87	8566.20	95.00	2188.09	2188.09 N	1.32 W	2188.09@	359.97	1.36
10730.00	90.75	359.47	8564.03	94.00	2282.06	2282.06 N	1.05 W	2282.06@	359.97	1.92
10825.00	90.84	359.56	8562.71	95.00	2377.05	2377.05 N	1.85 W	2377.05@	359.96	0.13
10919.00	90.66	359.56	8561.48	94.00	2471.04	2471.03 N	2.57 W	2471.04@	359.94	0.19

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #7H
EDDY COUNTY, NM
RIG:H&P 416

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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)
11014.00	91.19	0.08	8559.95	95.00	2566.02	2566.02 N	2.87 W	2566.02@	359.94	0.78
11108.00	89.08	357.71	8559.73	94.00	2660.00	2659.99 N	4.68 W	2660.00@	359.90	3.38
11203.00	89.08	357.80	8561.25	95.00	2754.92	2754.91 N	8.40 W	2754.92@	359.83	0.09
11298.00	90.48	357.53	8561.62	95.00	2849.84	2849.82 N	12.27 W	2849.85@	359.75	1.50
11392.00	91.71	358.05	8559.82	94.00	2943.76	2943.73 N	15.90 W	2943.78@	359.69	1.42
11486.00	89.96	358.15	8558.45	94.00	3037.70	3037.67 N	19.01 W	3037.73@	359.64	1.87
11581.00	90.31	359.03	8558.23	95.00	3132.67	3132.64 N	21.35 W	3132.71@	359.61	1.00
11676.00	92.07	359.82	8556.25	95.00	3227.64	3227.61 N	22.31 W	3227.69@	359.60	2.03
11770.00	90.57	358.85	8554.09	94.00	3321.61	3321.58 N	23.40 W	3321.66@	359.60	1.90
11865.00	91.63	358.85	8552.27	95.00	3416.57	3416.54 N	25.30 W	3416.63@	359.58	1.12
11960.00	89.16	359.91	8551.61	95.00	3511.56	3511.52 N	26.33 W	3511.62@	359.57	2.83
12054.00	88.72	359.38	8553.35	94.00	3605.54	3605.50 N	26.91 W	3605.60@	359.57	0.73
12149.00	88.55	0.52	8555.61	95.00	3700.51	3700.47 N	27.00 W	3700.57@	359.58	1.21
12243.00	88.99	1.75	8557.63	94.00	3794.47	3794.43 N	25.13 W	3794.51@	359.62	1.39
12338.00	88.99	1.49	8559.31	95.00	3889.41	3889.38 N	22.45 W	3889.44@	359.67	0.27
12432.00	88.90	2.37	8561.04	94.00	3983.33	3983.31 N	19.28 W	3983.36@	359.72	0.94
12527.00	90.75	3.77	8561.33	95.00	4078.18	4078.16 N	14.20 W	4078.19@	359.80	2.44
12621.00	89.69	2.19	8560.96	94.00	4172.04	4172.03 N	9.31 W	4172.04@	359.87	2.02
12716.00	90.31	2.81	8560.96	95.00	4266.94	4266.94 N	5.17 W	4266.94@	359.93	0.92
12811.00	91.45	3.69	8559.51	95.00	4361.77	4361.77 N	0.22 E	4361.77@	0.00	1.52
12905.00	91.63	3.34	8556.98	94.00	4455.55	4455.56 N	5.98 E	4455.57@	0.08	0.42
13000.00	91.80	3.86	8554.14	95.00	4550.31	4550.33 N	11.94 E	4550.35@	0.15	0.58
13047.00	91.89	4.48	8552.62	47.00	4597.16	4597.18 N	15.36 E	4597.21@	0.19	1.33
STRAIGHT LINE PROJECTION TO BIT @ 13102.00' MD.										
13102.00	91.89	4.48	8550.81	55.00	4651.95	4651.99 N	19.65 E	4652.03@	0.24	0.00

** 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 COMPANY, L.P		
LEASE / WELL No.:	SNAPPING 2 STATE	#7H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	TX	USA
RIG:	H&P 416		
API WELL No:	30-015-39163		
JOB No:	700004427 WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.29	LWD Calculated:	Agreed Upon:
X =	722735.730000	Feet	Y = 388163.490000 Feet
SITE LATITUDE:		SITE LONGITUDE:	
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	
PROPOSED DRIFT DIRECTION:	359.91		
KELLY BUSHING ELEVATION:	22		
ALTITUDE:	3267.2	Feet	WATER DEPTH: 0 Feet

TIE-IN SURVEY

MEASURED DEPTH:	7850		
DRIFT ANGLE:	1.97		
DRIFT DIRECTION:	208.32		
TRUE VERTICAL DEPTH:	7844.05		
VERTICAL SECTION:	-164.08		
RECTANGULAR COORDINATE (N / S) :	-164.11		
RECTANGULAR COORDINATE (E / W) :	-14.76		
CLOSURE DISTANCE / DIRECTION:	164.77	185.14	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	SCIENTIFIC DRILLING		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	7950	TOTAL DEPTH:	12967
KICKOFF ANGLE:	1.97	MAX ANGLE:	90

PES Engineers:

**Signature of both field engineers required if applicable

Directional Driller:

DATE: 11/28/11

PathFinder Energy Services, Inc. Magnetic & Grid Calculations

Devon Energy Production Company, L.P.
Snapping 2 State #7H
Eddy County, NM
Rig:HP 416

Tue Nov 22 10:10:23 2011

Coordinates

Latitude: 32.065788 N (32 deg. 3 min. 56.8380 sec.)
Longitude: 103.747741 W (-103 deg. 44 min. 51.8683 sec.)
Elevation: 3267.20 feet.
Calculation Date: Nov/22/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9985 degrees
Total Magnetic Field: 0.48459 gauss
Magnetic Declination: 7.601121 degrees
Horizontal Intensity: 0.242304 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.601121 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 722735.7300 feet
Y: 388163.4900 feet
True to Grid: (convergence) -0.310894 degrees
Magnetic to Grid: 7.290227 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.290227 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Tue Nov 29 12:58:33 2011

Coordinates

Latitude: 32.065788 N (32 deg. 3 min. 56.8380 sec.)
Longitude: 103.747741 W (-103 deg. 44 min. 51.8683 sec.)
Elevation: 3267.20 feet.
Calculation Date: Nov/22/2011

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Dip Angle: 59.9985 degrees
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Magnetic Declination: 7.601121 degrees
Horizontal Intensity: 0.242304 gauss
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Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 722735.7300 feet
Y: 388163.4900 feet
True to Grid: (convergence) -0.310894 degrees
Magnetic to Grid: 7.290227 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.290227 Degr.



Stimulations Summary

District	County		Field Name		Project Group		State/Province			
PERMIAN BASIN	EDDY		AVALON SHALE		PB NEW MEXICO		NM			
Surface Legal Location		API/UWI	Latitude (DMS)	Longitude (DMS)	Ground Elev	KB - GL (ft)	Orig KB Elev (ft)	TH Elev (ft)		
SEC2 T26S R31E		3001539163	32° 3' 56.838" N	103° 44' 51.868" ...	3,241.00	26.20	3,267.20			
HYDRAULIC FRAC, 2/28/2012 06:00, AVALON SHALE, OH, 12,762.0 ftKB - 13,090.0 ftKB, BHI, White 468647.206 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	8099.50	0.0	1,752.0	0.0		4,774.0	70	5,265.0	80	3.00
HYDRAULIC FRAC, 2/28/2012 10:00, <Zone?>, 12,328.0 ftKB - 12,656.0 ftKB, BJ Services, 213196.195 LBS; OTTAWA 170315.501 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7991.40	741.0	1,456.0	4,726.0		4,723.0	78	5,272.0	80	2.50
HYDRAULIC FRAC, 2/29/2012 06:00, <Zone?>, 11,893.0 ftKB - 12,221.0 ftKB, BJ Services, 212891.697 LBS; OTTAWA 170311.804 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7960.70	318.0	1,578.0	5,146.0		4,741.0	80	5,406.0	80	2.50
HYDRAULIC FRAC, 2/29/2012 10:00, <Zone?>, 11,459.0 ftKB - 11,787.0 ftKB, BJ Services, 213058.398 LBS; OTTAWA 170273.904 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7925.00	0.0	1,748.0	4,057.0		4,590.0	76	5,009.0	77	2.50
HYDRAULIC FRAC, 3/2/2012 06:00, AVALON SHALE, OH, 11,025.0 ftKB - 11,352.0 ftKB, BHI, White 170226 LBS; 212815 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7950.00	0.0	1,743.0	5,616.0		4,678.0	78	5,965.0	81	2.50
HYDRAULIC FRAC, 3/2/2012 11:00, AVALON SHALE, OH, 10,590.0 ftKB - 10,918.0 ftKB, BHI, 212741 LBS; White 170288 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7953.30	0.0	1,489.0	3,785.0		4,885.0	78	5,609.0	81	2.50
HYDRAULIC FRAC, 3/2/2012 13:00, AVALON SHALE, OH, 10,156.0 ftKB - 10,484.0 ftKB, BHI, 212753 LBS; White 170233 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7890.20	0.0	1,670.0	3,408.0		5,164.0	79	5,605.0	81	2.50
HYDRAULIC FRAC, 3/3/2012 11:00, AVALON SHALE, OH, 9,287.0 ftKB - 9,615.0 ftKB, BHI, White 170204 LBS; 212743 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7895.20	0.0	1,793.0	3,607.0		5,080.0	79	5,483.0	80	2.50
HYDRAULIC FRAC, 3/4/2012 06:00, AVALON SHALE, OH, 9,721.0 ftKB - 10,049.0 ftKB, BHI, 211998 LBS; White 170255 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7877.40	0.0	1,601.0	4,248.0		4,816.0	79	5,752.0	81	2.50
HYDRAULIC FRAC, 3/5/2012 06:00, AVALON SHALE, OH, 8,853.0 ftKB - 9,180.0 ftKB, BHI, 211959 LBS; White 170196 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
	7840.30	0.0	1,932.0	4,180.0		5,311.0	0	5,685.0	0	2.50