

RCVD MAY 14 '08

OIL CONS. DIV.

DIST. 3

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-102
Revised June 10, 2003

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505
AS Drilled

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-27450		² Pool Code 71629		³ Pool Name Basin Fruitland Coal	
⁴ Property Code		⁵ Property Name Elk Horn			⁶ Well Number #101
⁷ OGRID No. 162928		⁸ Operator Name Energen Resources Corporation			⁹ Elevation 6815

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	29	32N	5W		755	North	2375	East	Rio Arriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	29	32N	5W		1175	North	892	East	Rio Arriba

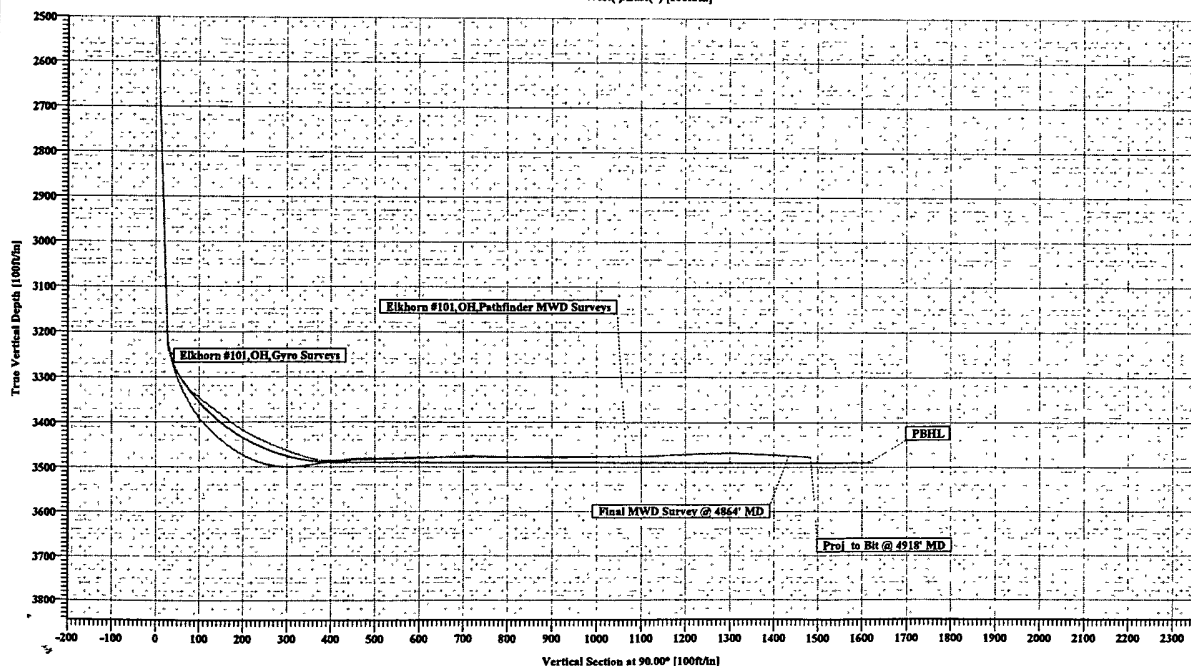
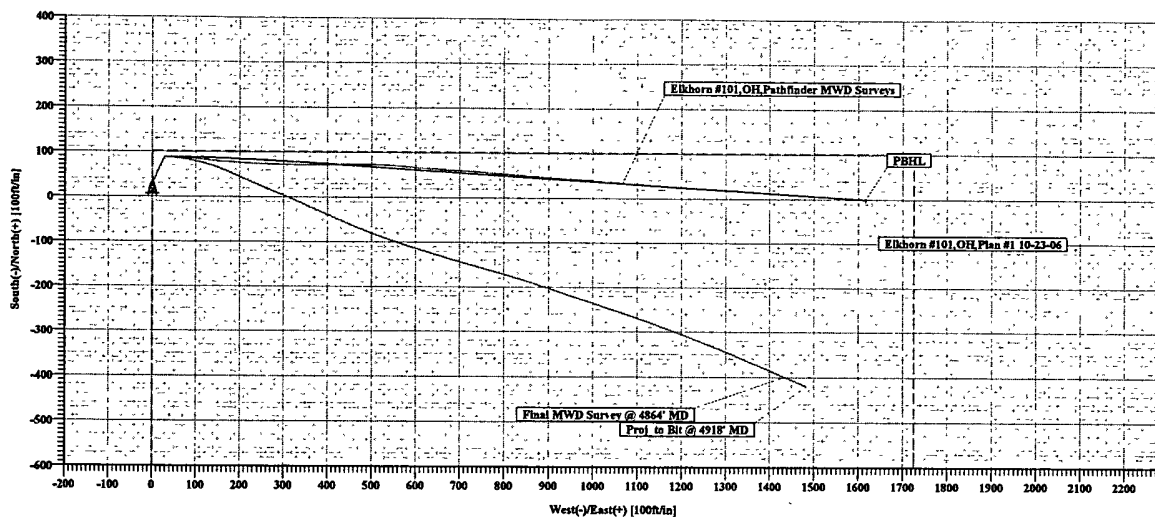
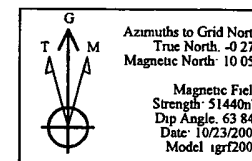
¹² Dedicated Acres E/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature Nathan Smith Printed Name Drilling Engineer Title and E-mail Address 11/3/06 Date
	¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. April 21, 2003 Date of Survey Signature and Seal of Professional Surveyer.
	Original recorded and conducted by Jason C. Edwards. 15269 Certificate Number

Field: Quintana Mesa
 Site: Elkhorn #101
 Well: Elkhorn #101
 Wellpath: OH
 Survey: Pathfinder MWD Surveys

PATHFINDER



SITE DETAILS

Elkhorn #101
 Site Centre Northing: 2167764.37
 Easting: 2854246.07
 Ground Level: 6815.00
 Positional Uncertainty: 0.00
 Convergence: 0.27

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
PBHL	3490.00	0.00	1615.00	Point

WELLPATH DETAILS

Rig	SITE	6815.00ft
Ref Datum	Origin +N/-S	Origin +E/-W
V Section Angle	90.00°	0.00
	0.00	0.00

ANNOTATIONS

No	TVD	MD	Annotation
1	3474.56	4864.00	Final MWD Survey @ 4864' MD
2	3477.50	4918.00	Proj. to BH @ 4918' MD

Pathfinder Energy

Survey Report - Geographic

Company: Energen Resources Corporation	Date: 10/26/2007	Time: 14:52:02	Page: 1
Field: Quintana Mesa	Co-ordinate(NE) Reference: Well: Elkhorn #101 Grid North		
Site: Elkhorn #101	Vertical (TVD) Reference: SITE 6815.0		
Well: Elkhorn #101	Section (VS) Reference: Well: (0.00N,0.00E,90.00Azi)		
Wellpath: OH	Survey Calculation Method: Minimum Curvature		Db: Sybase

Field: Quintana Mesa

Map System: US State Plane Coordinate System 1983
 Geo Datum: GRS 1980
 Sys Datum: Mean Sea Level

Map Zone: New Mexico, Western Zone
 Coordinate System: Well Centre
 Geomagnetic Model: igrf2005

Site: Elkhorn #101

Site Position:	Northing: 2167764.37 ft	Latitude: 36 57 22.957 N
From: Map	Easting: 2854246.07 ft	Longitude: 107 23 4.071 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 6815.00 ft		Grid Convergence: 0.27 deg

Well: Elkhorn #101

Slot Name:

Well Position: +N/-S 0.00 ft	Northing: 2167764.37 ft	Latitude: 36 57 22.957 N
+E/-W 0.00 ft	Easting: 2854246.07 ft	Longitude: 107 23 4.071 W
Position Uncertainty: 0.00 ft		

Wellpath: OH

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 10.32 deg
Mag Dip Angle: 63.84 deg
+E/-W Direction
ft deg

Current Datum: SITE	Height: 6815.00 ft
Magnetic Data: 10/23/2006	
Field Strength: 51440 nT	
Vertical Section: Depth From (TVD)	+N/-S
ft	ft
0.00	0.00

Survey: ST Surveys

Start Date: 11/10/2006

Company: Pathfinder Energy

Engineer: Midwellplan
 Tied-to: From: Definitive Path

Survey: ST Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec			Longitude Deg Min Sec		
3200.00	4.31	23.16	3197.25	86.03	27.07	2167850.40	2854273.14	36	57	23.807 N	107	23	3.732 W
3256.00	12.31	87.38	3252.70	88.25	33.89	2167852.62	2854279.96	36	57	23.828 N	107	23	3.648 W
3288.00	19.70	98.37	3283.45	87.62	42.64	2167851.99	2854288.71	36	57	23.822 N	107	23	3.540 W
3320.00	23.57	94.59	3313.19	86.32	54.36	2167850.69	2854300.43	36	57	23.808 N	107	23	3.396 W
3351.00	27.52	96.52	3341.15	85.01	67.66	2167849.38	2854313.73	36	57	23.795 N	107	23	3.232 W
3383.00	32.71	99.60	3368.82	82.73	83.54	2167847.10	2854329.61	36	57	23.772 N	107	23	3.036 W
3414.00	40.10	102.50	3393.76	79.17	101.58	2167843.54	2854347.65	36	57	23.735 N	107	23	2.814 W
3445.00	47.22	104.35	3416.17	74.18	122.37	2167838.55	2854368.44	36	57	23.685 N	107	23	2.559 W
3477.00	51.79	109.88	3436.96	66.99	145.59	2167831.36	2854391.66	36	57	23.613 N	107	23	2.273 W
3508.00	56.81	112.35	3455.04	57.91	169.06	2167822.28	2854415.13	36	57	23.522 N	107	23	1.984 W
3540.00	63.14	112.61	3471.05	47.31	194.65	2167811.68	2854440.72	36	57	23.416 N	107	23	1.670 W
3571.00	69.12	113.05	3483.59	36.32	220.76	2167800.69	2854466.83	36	57	23.306 N	107	23	1.348 W
3591.03	73.52	112.94	3490.00	28.91	238.23	2167793.28	2854484.30	36	57	23.232 N	107	23	1.134 W
3603.00	76.15	112.87	3493.13	24.41	248.87	2167788.78	2854494.94	36	57	23.187 N	107	23	1.003 W
3634.00	83.71	111.73	3498.55	12.84	277.09	2167777.21	2854523.16	36	57	23.071 N	107	23	0.656 W
3664.00	91.01	111.90	3499.93	1.71	304.89	2167766.08	2854550.96	36	57	22.960 N	107	23	0.314 W
3696.00	96.46	113.31	3497.84	-10.55	334.36	2167753.82	2854580.43	36	57	22.837 N	107	22	59.952 W
3727.00	97.43	113.05	3494.10	-22.67	362.65	2167741.70	2854608.72	36	57	22.716 N	107	22	59.604 W
3759.00	96.20	113.40	3490.30	-35.20	391.84	2167729.17	2854637.91	36	57	22.591 N	107	22	59.245 W
3791.00	94.35	113.22	3487.36	-47.80	421.11	2167716.57	2854667.18	36	57	22.465 N	107	22	58.885 W
3822.00	92.86	113.05	3485.41	-59.96	449.56	2167704.41	2854695.63	36	57	22.344 N	107	22	58.535 W
3854.00	91.10	111.73	3484.30	-72.14	479.13	2167692.23	2854725.20	36	57	22.222 N	107	22	58.171 W
3885.00	90.66	109.53	3483.83	-83.06	508.13	2167681.31	2854754.20	36	57	22.112 N	107	22	57.815 W

Pathfinder Energy

Survey Report - Geographic

Company: Energen Resources Corporation	Date: 10/26/2007	Time: 14:52:02	Page: 2
Field: Quintana Mesa	Co-ordinate(NE) Reference: Well: Elkhorn #101, Grid North		
Site: Elkhorn #101	Vertical (TVD) Reference: SITE 6815.0		
Well: Elkhorn #101	Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)		
Wellpath: OH	Survey Calculation Method: Minimum Curvature		Db: Sybase

Survey: ST Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec			Longitude Deg Min Sec		
3916.00	91.71	108.83	3483.18	-93.24	537.40	2167671.13	2854783.47	36	57	22.010 N	107	22	57.455 W
3948.00	92.24	107.86	3482.08	-103.31	567.76	2167661.06	2854813.83	36	57	21.909 N	107	22	57.081 W
3979.00	92.07	107.25	3480.92	-112.65	597.29	2167651.72	2854843.36	36	57	21.816 N	107	22	56.718 W
4011.00	92.68	106.63	3479.59	-121.97	627.88	2167642.40	2854873.95	36	57	21.722 N	107	22	56.342 W
4042.00	93.56	106.46	3477.90	-130.78	657.55	2167633.59	2854903.62	36	57	21.634 N	107	22	55.977 W
4073.00	92.86	106.28	3476.17	-139.51	687.25	2167624.86	2854933.32	36	57	21.546 N	107	22	55.611 W
4105.00	89.43	105.67	3475.53	-148.31	718.00	2167616.06	2854964.07	36	57	21.457 N	107	22	55.233 W
4137.00	88.02	105.49	3476.24	-156.90	748.82	2167607.47	2854994.89	36	57	21.371 N	107	22	54.854 W
4168.00	88.46	106.10	3477.19	-165.34	778.63	2167599.03	2855024.70	36	57	21.286 N	107	22	54.487 W
4199.00	88.99	106.19	3477.88	-173.95	808.40	2167590.42	2855054.47	36	57	21.200 N	107	22	54.120 W
4231.00	89.60	106.81	3478.28	-183.04	839.08	2167581.33	2855085.15	36	57	21.108 N	107	22	53.743 W
4263.00	89.60	107.95	3478.50	-192.60	869.62	2167571.77	2855115.69	36	57	21.012 N	107	22	53.367 W
4294.00	90.04	108.39	3478.60	-202.27	899.07	2167562.10	2855145.14	36	57	20.915 N	107	22	53.005 W
4325.00	90.92	108.39	3478.34	-212.05	928.49	2167552.32	2855174.56	36	57	20.817 N	107	22	52.643 W
4357.00	91.19	108.48	3477.75	-222.16	958.84	2167542.21	2855204.91	36	57	20.716 N	107	22	52.270 W
4389.00	90.84	108.30	3477.18	-232.26	989.20	2167532.11	2855235.27	36	57	20.615 N	107	22	51.896 W
4420.00	91.36	108.48	3476.59	-242.04	1018.61	2167522.33	2855264.68	36	57	20.517 N	107	22	51.534 W
4452.00	90.75	108.39	3476.00	-252.15	1048.97	2167512.22	2855295.04	36	57	20.415 N	107	22	51.161 W
4484.00	89.78	108.48	3475.85	-262.27	1079.32	2167502.10	2855325.39	36	57	20.314 N	107	22	50.788 W
4516.00	90.48	109.00	3475.78	-272.55	1109.63	2167491.82	2855355.70	36	57	20.210 N	107	22	50.415 W
4547.00	92.51	110.24	3474.97	-282.96	1138.82	2167481.41	2855384.89	36	57	20.106 N	107	22	50.056 W
4579.00	93.30	110.50	3473.34	-294.08	1168.78	2167470.29	2855414.85	36	57	19.995 N	107	22	49.687 W
4610.00	93.21	110.32	3471.58	-304.88	1197.78	2167459.49	2855443.85	36	57	19.887 N	107	22	49.331 W
4642.00	92.07	110.94	3470.11	-316.14	1227.70	2167448.23	2855473.77	36	57	19.774 N	107	22	48.963 W
4673.00	91.36	111.11	3469.18	-327.26	1256.62	2167437.11	2855502.69	36	57	19.663 N	107	22	48.607 W
4705.00	91.01	111.20	3468.52	-338.80	1286.46	2167425.57	2855532.53	36	57	19.547 N	107	22	48.240 W
4737.00	88.81	112.26	3468.57	-350.65	1316.18	2167413.72	2855562.25	36	57	19.429 N	107	22	47.874 W
4769.00	86.97	112.43	3469.75	-362.81	1345.76	2167401.56	2855591.83	36	57	19.307 N	107	22	47.511 W
4800.00	87.32	112.08	3471.29	-374.53	1374.41	2167389.84	2855620.48	36	57	19.190 N	107	22	47.158 W
4832.00	87.05	112.52	3472.87	-386.66	1403.98	2167377.71	2855650.05	36	57	19.068 N	107	22	46.795 W
4864.00	86.88	112.87	3474.56	-398.99	1433.46	2167365.38	2855679.53	36	57	18.945 N	107	22	46.432 W
4918.00	86.88	112.87	3477.50	-419.94	1483.15	2167344.43	2855729.22	36	57	18.736 N	107	22	45.821 W

Targets

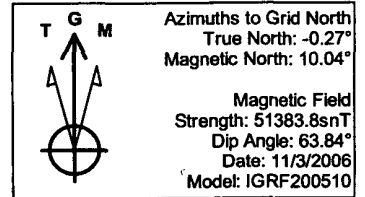
Name	Description Dip Dir	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec			Longitude Deg Min Sec		
PBHL		3490.00	0.00	1615.00	2167764.37	2855861.07	36	57	22.882 N	107	22	44.172 W

Annotation

MD ft	TVD ft	
4864.00	3474.56	Final MWD Survey @ 4864' MD
4918.00	3477.50	Proj. to Bit @ 4918' MD



Project: Quintana Mesa
Site: Elkhorn #101
Well: Elkhorn #101 Sidetrack
Wellbore: Side Lateral
Plan: Plan #1 (Elkhorn #101 Sidetrack/Side Lateral)



Azimuths to Grid North
True North: -0.27°
Magnetic North: 10.04°

Magnetic Field
Strength: 51383.8snT
Dip Angle: 63.84°
Date: 11/3/2006
Model: IGRF200510

PROJECT DETAILS: Quintana Mesa

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone

System Datum: Mean Sea Level

SURFACE LOCATION

Easting: 2854246.07
Northing: 2167764.37

