

"As Drilled"

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 October 12, 2005

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

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

RCVD SEP 12 '08
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

OIL CONS. DIV.

¹ API Number 30-039-24405	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 35035	⁵ Property Name Carracas 22A	⁶ Well Number 16
⁷ OGRID No 162928	⁸ Operator Name Energen Resources Corporation	⁹ Elevation 7065'

¹⁰ Surface Location

UL or lot no. P	Section 22	Township 32N	Range 05W	Lot. Idn	Feet from the 790	North/South line South	Feet from the 790	East/West line East	County Rio Arriba
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. I	Section 22	Township 32N	Range 05W	Lot. Idn	Feet from the 2530	North/South line South	Feet from the 81	East/West line East	County Rio Arriba
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¹² Dedicated Acres 1.54	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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

¹⁶				¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division Vicki Donaghey 09/011/08 Signature Date Vicki Donaghey Printed Name
				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 06/06/1988 Date of Survey Signature and Seal of Professional Surveyer original survey conducted and recorded by: Neale C. Edwards 16857 Certificate Number

HOLD C104 FOR 152



RCVD SEP 12 '08
OIL CONS. DIV.
DIST. 3

Energen Resources

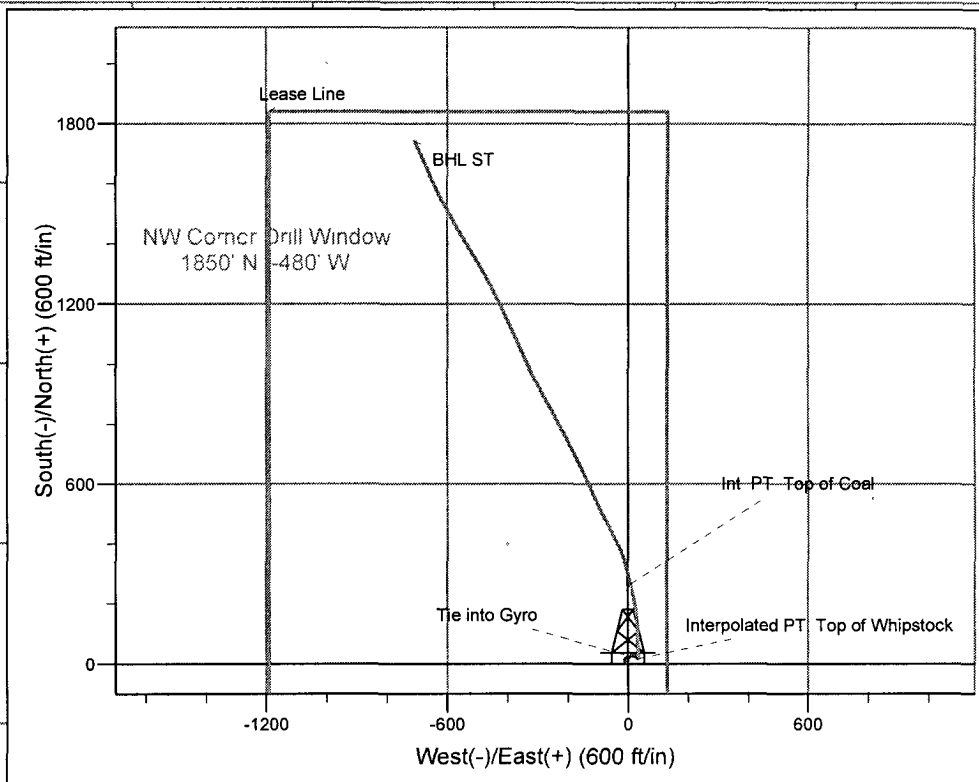
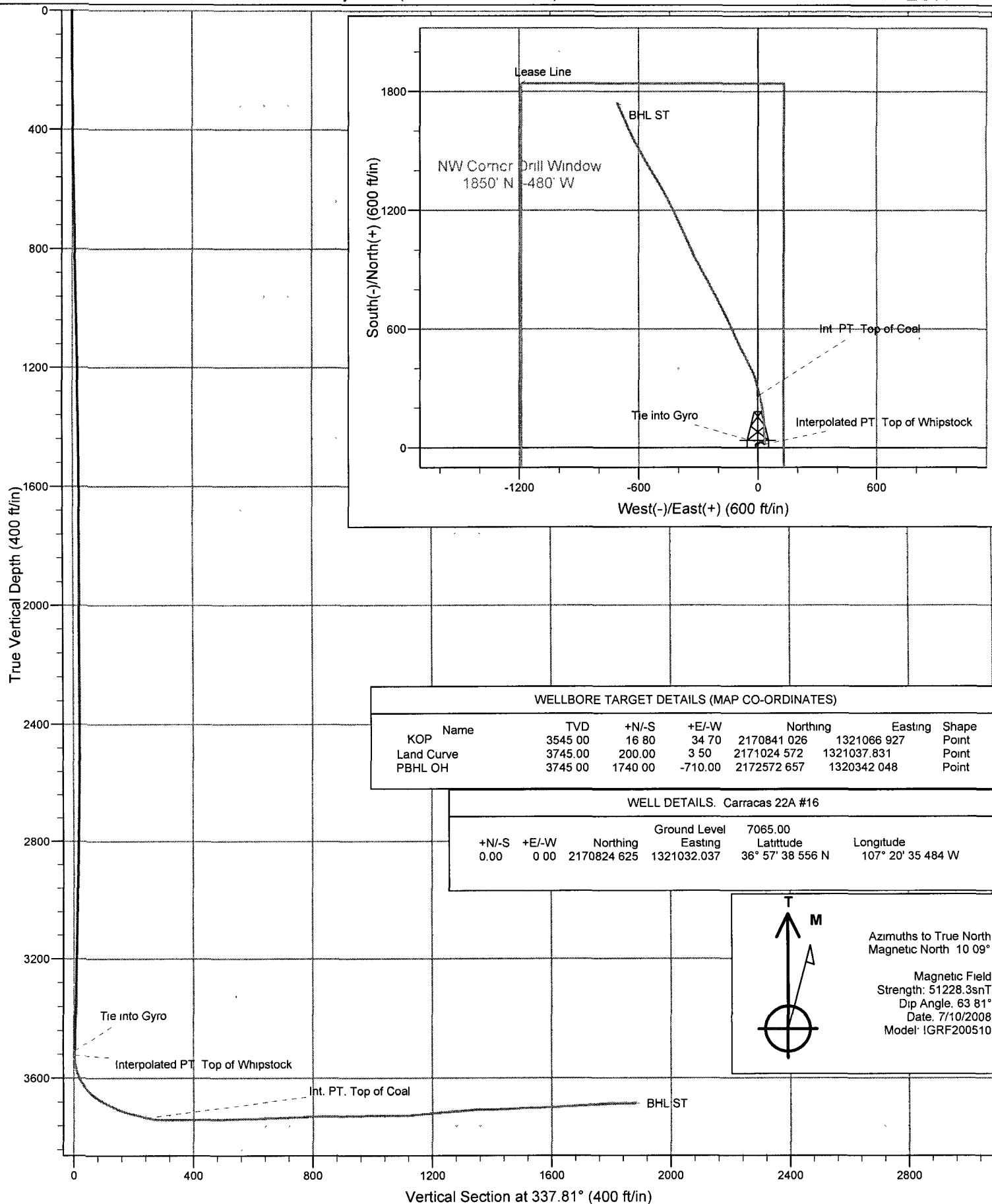
**Carson Nat'l Forest - SE S22, T32N, R5W
Carracas Mesa
Carracas 22A #16
OH**

Survey: EOW

End of Well Survey

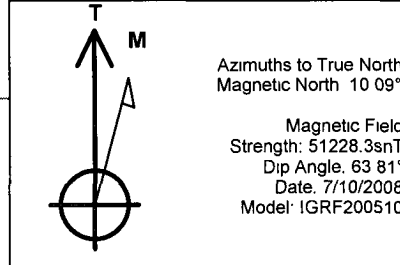
18 July, 2008

PATHFINDER
ENERGY SERVICES



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
KOP	Name	TVD	+N/-S	+E/-W	Northing	Easting
	KOP	3545.00	16.80	34.70	2170841.026	1321066.927
	Land Curve	3745.00	200.00	3.50	2171024.572	1321037.831
	PBHL OH	3745.00	1740.00	-710.00	2172572.657	1320342.048

WELL DETAILS: Carracas 22A #16						
+N/-S	+E/-W	Northing	Ground Level	7065.00	Latitude	Longitude
0.00	0.00	2170824.625	1321032.037		36° 57' 38.556 N	107° 20' 35.484 W



Vertical Section at 337.81° (400 ft/in)

Company: Energen Resources
Project: Carson Nat'l Forest - SE S22, T32N, R5W
Site: Carracas Mesa
Well: Carracas 22A #16
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Carracas 22A #16
TVD Reference: WELL @ 7080.00ft (AWS #289)
MD Reference: WELL @ 7080.00ft (AWS #289)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Project: Carson Nat'l Forest - SE S22, T32N, R5W

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Central Zone

System Datum: Mean Sea Level

Site: Carracas Mesa

Site Position: Northing: 2,170,824.625 ft Latitude: 36° 57' 38.556 N
From: Lat/Long Easting: 1,321,032.037 ft Longitude: 107° 20' 35.484 W
Position Uncertainty: 0.00 ft Slot Radius: " Grid Convergence: -0.66 °

Well: Carracas 22A #16

Well Position +N/-S 0.00 ft Northing: 2,170,824.625 ft Latitude: 36° 57' 38.556 N
 +E/-W 0.00 ft Easting: 1,321,032.037 ft Longitude: 107° 20' 35.484 W
Position Uncertainty 0.00 ft Wellhead Elevation: ft Ground Level: 7,065.00 ft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	7/10/2008	10.09	63.81	51,228

Design: OH

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	63.16

Survey Program Date: 7/18/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
200.00	3,510.00	Gyro Survey (OH)	UNKNOWN	Unknown survey
3,523.45	5,526.00	EOW (OH)	UNKNOWN	Unknown survey

Survey:

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
3,510.00	1.23	126.77	3,509.17	17.25	34.10	0.00	38.21
Tie into Gyro							
3,523.45	1.23	126.77	3,522.62	17.08	34.33	0.00	38.34
Interpolated PT.: Top of Whipstock							
3,577.70	16.88	3.10	3,576.12	24.65	35.23	32.43	42.56
3,609.40	28.05	357.29	3,605.37	36.73	35.12	35.89	47.92
3,641.30	40.36	358.13	3,631.70	54.62	34.43	38.62	55.38
3,672.50	50.83	359.17	3,653.50	76.87	33.92	33.64	64.97
3,703.70	58.30	357.45	3,671.58	102.26	33.15	24.36	75.75
3,735.30	64.19	355.63	3,686.78	129.90	31.47	19.31	86.72
3,766.00	65.07	354.68	3,699.93	157.54	29.13	4.00	97.11

Company: Energen Resources
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Design: OH

Local Co-ordinate Reference: Well Carracas 22A #16
TVD Reference: WELL @ 7080.00ft (AWS #289)
MD Reference: WELL @ 7080.00ft (AWS #289)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
3,796.70	71.75	351.59	3,711.22	185.86	25.70	23.68	106.83
3,828.10	75.10	348.88	3,720.18	215.51	20.59	13.50	115.66
3,859.70	75.10	347.90	3,728.30	245.42	14.45	3.00	123.68
3,882.00	77.06	347.10	3,733.67	266.55	9.76	9.45	129.04
Int. PT. Top of Coal							
3,890.60	77.82	346.79	3,735.54	274.73	7.86	9.51	131.04
3,922.00	86.09	346.08	3,739.93	304.92	0.58	26.43	138.16
3,954.00	90.57	342.24	3,740.86	335.68	-8.15	18.43	144.26
3,985.00	88.55	337.15	3,741.10	364.74	-18.91	17.66	147.79
4,016.00	90.84	335.63	3,741.27	393.14	-31.32	8.87	149.53
4,047.00	91.10	333.47	3,740.74	421.13	-44.64	7.02	150.28
4,079.00	90.84	332.78	3,740.20	449.67	-59.10	2.30	150.26
4,110.00	90.92	333.33	3,739.72	477.30	-73.15	1.79	150.20
4,142.00	90.92	333.99	3,739.21	505.98	-87.34	2.06	150.47
4,174.00	91.80	334.55	3,738.45	534.79	-101.23	3.26	151.09
4,204.00	91.71	335.84	3,737.53	562.01	-113.81	4.31	152.15
4,236.00	91.70	335.80	3,736.58	591.19	-126.91	0.13	153.63
4,267.00	91.80	334.89	3,735.63	619.35	-139.84	2.95	154.81
4,298.00	92.33	334.41	3,734.52	647.35	-153.10	2.31	155.62
4,329.00	91.80	333.98	3,733.40	675.24	-166.59	2.20	156.17
4,361.00	91.28	333.37	3,732.54	703.91	-180.77	2.50	156.46
4,392.00	92.33	332.87	3,731.56	731.55	-194.78	3.75	156.43
4,424.00	92.33	332.40	3,730.26	759.94	-209.48	1.47	156.14
4,455.00	91.98	331.91	3,729.10	787.33	-223.95	1.94	155.59
4,487.00	89.87	332.26	3,728.58	815.60	-238.93	6.68	154.99
4,518.00	90.13	332.28	3,728.58	843.04	-253.35	0.84	154.51
4,550.00	91.19	331.69	3,728.21	871.29	-268.38	3.79	153.85
4,581.00	91.98	332.25	3,727.35	898.65	-282.94	3.12	153.20
4,613.00	91.28	331.47	3,726.44	926.85	-298.03	3.27	152.47
4,645.00	88.99	332.64	3,726.37	955.12	-313.02	8.04	151.85
4,676.00	89.16	333.74	3,726.87	982.78	-327.00	3.59	151.87
4,708.00	89.78	335.21	3,727.16	1,011.66	-340.79	4.99	152.60
4,739.00	92.51	335.50	3,726.54	1,039.82	-353.71	8.86	153.78
4,771.00	94.70	336.55	3,724.53	1,069.00	-366.69	7.59	155.38
4,802.00	94.79	335.76	3,721.97	1,097.26	-379.18	2.56	156.99
4,834.00	94.88	335.48	3,719.27	1,126.30	-392.34	0.92	158.35
4,865.00	95.14	335.25	3,716.56	1,154.37	-405.21	1.12	159.54
4,896.00	94.70	334.50	3,713.90	1,182.34	-418.33	2.80	160.46
4,928.00	94.62	334.15	3,711.30	1,211.08	-432.15	1.12	161.11
4,959.00	94.62	333.38	3,708.81	1,238.80	-445.81	2.48	161.43
4,991.00	91.89	332.47	3,706.99	1,267.24	-460.35	8.99	161.30
5,022.00	90.31	331.20	3,706.40	1,294.56	-474.97	6.54	160.58
5,054.00	91.36	330.60	3,705.93	1,322.52	-490.54	3.78	159.31
5,085.00	92.51	330.09	3,704.88	1,349.44	-505.86	4.06	157.79

Company: Energen Resources
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Design: OH

Local Co-ordinate Reference: Well Carracas 22A #16
TVD Reference: WELL @ 7080.00ft (AWS #289)
MD Reference: WELL @ 7080 00ft (AWS #289)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
5,117.00	92.77	329.53	3,703.41	1,377.07	-521.94	1.93	155.92
5,148.00	93.12	328.07	3,701.82	1,403.56	-537.98	4.84	153.56
5,180.00	91.45	329.71	3,700.54	1,430.93	-554.50	7.31	151.18
5,212.00	92.15	331.09	3,699.53	1,458.74	-570.29	4.83	149.64
5,243.00	92.95	331.89	3,698.16	1,485.95	-585.08	3.65	148.73
5,274.00	93.39	331.36	3,696.44	1,513.19	-599.79	2.22	147.90
5,305.00	94.00	331.97	3,694.44	1,540.41	-614.47	2.78	147.09
5,337.00	92.86	333.08	3,692.53	1,568.75	-629.20	4.97	146.73
5,368.00	93.74	334.57	3,690.74	1,596.53	-642.86	5.58	147.09
5,399.00	94.26	334.57	3,688.58	1,624.46	-656.14	1.68	147.85
5,430.00	91.36	336.04	3,687.06	1,652.58	-669.07	10.49	149.00
5,461.00	90.92	335.49	3,686.45	1,680.84	-681.79	2.27	150.41
5,526.00	90.92	335.49	3,685.40	1,739.98	-708.75	0.00	153.05

BHL ST

Targets
Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Land Curve	0.00	0.00	3,745.00	200.00	3.50	2,171,024.572	1,321,037.831	36° 57' 40.533 N	107° 20' 35.441 W
- survey misses by 33.51ft at 3823.32ft MD (3718.93 TVD, 210.97 N, 21.47 E)									
- Point									
KOP	0.00	0.00	3,545.00	16.80	34.70	2,170,841.026	1,321,066.927	36° 57' 38.722 N	107° 20' 35.056 W
- survey misses by 1.40ft at 3545.66ft MD (3544.78 TVD, 18.19 N, 34.70 E)									
- Point									
PBHL OH	0.00	0.00	3,745.00	1,740.00	-710.00	2,172,572.657	1,320,342.048	36° 57' 55.760 N	107° 20' 44.232 W
- survey misses by 59.61ft at 5525.58ft MD (3685.41 TVD, 1739.60 N, -708.58 E)									
- Point									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,510.00	3,509.17	17.25	34.10	Tie into Gyro
3,523.45	3,522.62	17.08	34.33	Interpolated PT. Top of Whipstock
3,882.00	3,733.67	266.55	9.76	Int. PT Top of Coal
5,526.00	3,685.40	1,739.98	-708.75	BHL ST

Checked By: _____ Approved By: _____ Date: _____