

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other		5. Lease Serial No. NM 62171							
b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr., Other _____		6. If Indian, Allottee or Tribe Name N/A							
2. Name of Operator Cabal Energy Corporation		7. Unit or CA Agreement Name and No. N/A							
3. Address 415 West Wall Street, Suite 1700 Midland, Texas 79701		8. Lease Name and Well No. High Hog 9 Federal #1							
3a. Phone No. (include area code) 432-682-0440		9. API Well No. 30-015-33462							
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface 460' FNL & 2450' FEL At top prod. interval reported below 873' FNL & 1651' FWL At total depth 870' FNL & 1650' FWL		10. Field and Pool, or Exploratory Wildcat							
14. Date Spudded 06/28/2004		15. Date T.D. Reached 09/09/2004							
16. Date Completed ☐ D & A ☒ Ready to Prod.		17. Elevations (DF, RKB, RT, GL)* 3565'							
18. Total Depth: MD 11,396' TVD		19. Plug Back T.D.: MD 11,128' TVD							
20. Depth Bridge Plug Set: MD TVD		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) Acoustilog, Gamma Ray, Density/Neutron, Laterlog							
22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit report) Directional Survey? ☐ No ☒ Yes (Submit copy)									
23. Casing and Liner Record (Report all strings set in well)									
Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2	13-3/8 K	64	Surface	1395'		1100 sxs		Surface (Circ)	None
12-1/4	9-5/8pen	53.5 / 47	Surface	8186'	2595'	2750 sxs		Surface (Circ)	None
8-1/2	5-1/2 LN	20	7882'	11,410'		1400 sxs		7523' (TS)	None
24. Tubing Record									
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	
2-7/8"	11,102'	10,945'							
25. Producing Intervals									
Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status			
A) Morrow	11081'	11090'	11224' - 11236'	2 SPF	25	Abandoned			
B)			11149' - 11173'	2 SPF	17	Abandoned			
C)			11081' - 11090'	2 SPF	13	Opened			
D)									
27. Acid, Fracture, Treatment, Cement Squeeze, etc.									
Depth Interval	Amount and Type of Material								
11149' - 11173'	500 gals Clay-Safe 5								
11081' - 11090'	300 gals Clay-Safe 5								
28. Production - Interval A									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03/01/2005	03/02/2005	24	→	0	270	11	N/A		Flowing
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
48/64	SI 590#	0#	→	0	270	11	N/A	Producing	
28a. Production - Interval B									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

*(See instructions and spaces for additional data on page 2)

Amended Report

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28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
	500	1020	Anhydrite	Anhy	500
	1020	1060	Salt	Salt	1020
	1060	1470	Anhydrite	Salt	1050
	1470	1920	Sand	Delaware Sand	1354
	1920	2050	Dolomite	Bone Springs	6197
	2050	5020	Sand	Wolfcamp	8146
	5020	6180	Shale and Lime	Penn	10010
	6180	6490	Pre-Lime with Shale	Strawn	10110
	6490	6570	Shale with Lime	Atoka	10460
	6570	7300	Lime with Shale	Morrow Lime	10567
	7300	7800	Lime and Shale	Morrow Clay	10896
	7800	8110	Sand with Shale and Lime	Middle Morrow Shale	11058
	8110	8700	Shale with Lime	Lower Morrow Shale	11256
	8700	9400	Lime with some Shale		
	9400	10100	Shale		
	10100	10900	Lime with some Shale		
	10900	10920	Sand with Lime		
	10920	11000	Lime with some Shale		
	11000	11060	Shale with Lime		

32. Additional remarks (include plugging procedure):

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☒ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☒ Directional Survey
☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Lindsay TruesdellTitle Consultant

Signature _____

Date 05/10/2005

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
	11060	11100	Continued...		
	11100	11142	Sand with Lime and Shale		
	11142	11170	Shale with Lime and some Sand		
	11170	11210	Sand with Lime		
	11210	11240	Shale and Sand Mix		
	11240	11320	Sand with Shale and Lime		
	11320	11350	Shale, Lime and Sand		
	11350	11396	Lime and Shale		
			Shale		

32. Additional remarks (include plugging procedure):

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☒ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☒ Directional Survey
☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

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Lindsay TruesdellDate 05/10/2005

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Company: CABAL Energy Corporation
 Field: High Hog
 Site: High Hog "9" Federal #1
 Well: High Hog 9 Federal
 Wellpath: High Hog "9" Federal #1

Date: 8/5/2005 Time: 14:19:07 Page: 1
 Co-ordinate(NE) Reference: Site: High Hog "9" Federal #1, Grid Nort
 Vertical (TVD) Reference: System: Mean Sea Level
 Survey (VS) Reference: Well (0.00N,0.00E,245.24Azi)
 Survey Calculation Method: Minimum Curvature Db: Sybase

Field: High Hog
 Eddy County, New Mexico

Map System: US State Plane Coordinate System 1927
 Geo Datum: NAD27 (Clarke 1866)
 Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
 Coordinate System: Site Centre
 Geomagnetic Model: igrf2000

Site: High Hog "9" Federal #1
 T25S & R25E Eddy County, New Mexico
 Section 9,

Site Position: Northing: 418398.30 ft Latitude: 32 9 0.995 N
 From: Map Easting: 479456.60 ft Longitude: 104 23 58.963 W
 Position Uncertainty: 0.00 ft North Reference: Grid
 Ground Level: 0.00 ft Grid Convergence: -0.04 deg

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000-ARTS-01A

Well: High Hog 9 Federal

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 418398.30 ft Latitude: 32 9 0.995 N
 +E/-W 0.00 ft Easting: 479456.60 ft Longitude: 104 23 58.963 W
 Position Uncertainty: 0.00 ft

Wellpath: High Hog "9" Federal #1
 Directional "S" Well

Current Datum: Mean Sea Level

Magnetic Data: 7/6/2004

Field Strength: 49335 nT

Vertical Section: Depth From (TVD)
 ft

Height 0.00 ft

+N/-S
 ft

Drilled From: Surface
 Tie-on Depth: 0.00 ft
 Above System Datum: Mean Sea Level
 Declination: 8.97 deg
 Mag Dip Angle: 60.21 deg
 +E/-W
 ft
 Direction
 deg

0.00

0.00

0.00

245.24

Survey: Bottom Hole Gyro

Start Date: 10/1/2004

Company: PathFinder Energy Services

Engineer: Ron McIntyre
 Tied-to: From: Definitive Path

Survey: Bottom Hole Gyro

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
8142.00	0.18	243.58	8028.56	-434.24	-913.74	1011.61	0.00	0.00	0.00	
8200.00	0.19	295.03	8086.56	-434.24	-913.91	1011.77	0.28	0.02	88.71	
8300.00	0.29	253.56	8186.56	-434.24	-914.31	1012.12	0.19	0.10	-41.47	
8400.00	0.23	252.56	8286.56	-434.38	-914.74	1012.57	0.06	-0.06	-1.00	
8500.00	0.13	26.20	8386.56	-434.33	-914.88	1012.68	0.33	-0.10	133.64	
8600.00	0.28	357.20	8486.56	-433.99	-914.84	1012.50	0.18	0.15	-29.00	
8700.00	0.53	321.22	8586.56	-433.38	-915.14	1012.53	0.35	0.25	-35.98	
8800.00	0.73	339.72	8686.55	-432.43	-915.66	1012.59	0.28	0.20	18.50	
8900.00	0.78	326.99	8786.54	-431.26	-916.25	1012.64	0.17	0.05	-12.73	
9000.00	0.71	328.53	8886.54	-430.16	-916.94	1012.81	0.07	-0.07	1.54	
9100.00	0.55	356.92	8986.53	-429.15	-917.29	1012.70	0.35	-0.16	28.39	
9200.00	0.72	5.49	9086.52	-428.05	-917.26	1012.21	0.19	0.17	8.57	
9300.00	0.70	353.73	9186.52	-426.81	-917.26	1011.70	0.15	-0.02	-11.76	
9400.00	0.31	76.89	9286.51	-426.14	-917.07	1011.24	0.73	-0.39	83.16	
9500.00	0.31	39.68	9386.51	-425.87	-916.63	1010.73	0.20	0.00	-37.21	
9600.00	0.03	271.84	9486.51	-425.67	-916.48	1010.51	0.33	-0.28	-127.84	
9700.00	0.15	359.79	9586.51	-425.53	-916.51	1010.48	0.15	0.12	87.95	
9800.00	0.23	344.53	9686.51	-425.21	-916.56	1010.39	0.09	0.08	-15.26	
9900.00	0.54	289.10	9786.51	-424.86	-917.06	1010.70	0.45	0.31	-55.43	
10000.00	0.54	264.24	9886.50	-424.76	-917.98	1011.48	0.23	0.00	-24.86	
10100.00	0.76	273.03	9986.50	-424.77	-919.11	1012.51	0.24	0.22	8.79	
10200.00	0.88	287.47	10086.49	-424.50	-920.50	1013.67	0.24	0.12	14.44	
10300.00	0.95	278.85	10186.47	-424.14	-922.05	1014.93	0.15	0.07	-8.62	
10400.00	1.05	292.89	10286.46	-423.66	-923.72	1016.24	0.26	0.10	14.04	

Company: CABAL Energy Corporation
 Field: High Hog
 Site: High Hog "9" Federal #1
 Well: High Hog 9 Federal
 Wellpath: High Hog "9" Federal #1

Date: 8/5/2005 Time: 14:19:07 Page: 2
 Co-ordinate(N/E) Reference: Site: High Hog "9" Federal #1, Grid Nort
 Vertical (TVD) Reference: System: Mean Sea Level
 Section (VS) Reference: Well (0.00N,0.00E,245.24Azi)
 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: Bottom Hole Gyro

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
10500.00	1.03	318.58	10386.44	-422.63	-925.16	1017.11	0.46	-0.02	25.69	
10600.00	0.99	324.93	10486.43	-421.25	-926.25	1017.52	0.12	-0.04	6.35	
10700.00	1.17	329.49	10586.41	-419.66	-927.26	1017.78	0.20	0.18	4.56	
10800.00	1.09	340.73	10686.39	-417.88	-928.09	1017.79	0.24	-0.08	11.24	
10900.00	1.03	343.25	10786.37	-416.13	-928.67	1017.58	0.08	-0.06	2.52	
11000.00	0.87	350.41	10886.36	-414.52	-929.05	1017.25	0.20	-0.16	7.16	
11100.00	0.64	346.95	10986.35	-413.22	-929.31	1016.94	0.23	-0.23	-3.46	
11200.00	0.59	326.31	11086.35	-412.25	-929.72	1016.91	0.23	-0.05	-20.64	
11300.00	0.84	354.79	11186.34	-411.09	-930.07	1016.74	0.43	0.25	28.48	
11359.00	1.01	351.86	11245.33	-410.15	-930.18	1016.45	0.30	0.29	-4.97	

1500

3380

PathFinder Energy Services

Survey Report

Page 1

Job No: J-WT-0407-0088

Date: 9/21/2004

Time: 11:09 am

Wellpath ID: Final Field Reports

Date Created: 7/14/2004

Last Revision: 9/14/2004

Calculated using the Minimum Curvature Method

Computed using PDS VER2.2.6

Vertical Section Plane: 245.23 deg.

Survey Reference: WELLHEAD
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

Cabal Energy
High Hog #9 Fed. #1
Eddy County, N.M.
Rig : Key # 34

Decl : 9.00° East to Grid
KBH = 32' Rotary to Ground

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Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft) (ft)		Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
TIED INTO GYRO-DATA SURVEY @ 1298' MD									
1298.00	1.13	322.71	1297.19	0.00	14.18	30.35 N	29.62W	42.41@315.70	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS									
1431.00	1.14	288.67	1430.17	133.00	15.42	31.82 N	31.67W	44.89@315.13	0.50
1463.00	1.23	282.17	1462.16	32.00	15.93	31.99 N	32.31W	45.47@314.72	0.51
1494.00	1.49	266.26	1493.15	31.00	16.57	32.04 N	33.03W	46.02@314.12	1.47
1526.00	2.02	262.92	1525.13	32.00	17.50	31.94 N	34.01W	46.65@313.20	1.69
1557.00	2.55	256.33	1556.11	31.00	18.69	31.71 N	35.22W	47.39@312.00	1.91
1590.00	3.34	252.19	1589.07	33.00	20.37	31.24 N	36.85W	48.31@310.29	2.48
1622.00	4.13	249.12	1621.00	32.00	22.44	30.54 N	38.81W	49.39@308.20	2.55
1653.00	5.01	248.94	1651.90	31.00	24.91	29.66 N	41.12W	50.70@305.80	2.84
1685.00	5.89	247.45	1683.75	32.00	27.94	28.53 N	43.94W	52.39@302.99	2.79
1716.00	6.60	245.60	1714.57	31.00	31.31	27.18 N	47.03W	54.32@300.03	2.38
1748.00	7.47	243.14	1746.33	32.00	35.23	25.48 N	50.56W	56.62@296.75	2.88
1779.00	8.18	241.65	1777.04	31.00	39.45	23.53 N	54.30W	59.18@293.42	2.38
1811.00	8.97	240.59	1808.68	32.00	44.21	21.22 N	58.48W	62.21@289.94	2.52
1843.00	9.76	239.27	1840.26	32.00	49.39	18.61 N	62.98W	65.67@286.46	2.56
1875.00	10.46	239.89	1871.76	32.00	54.98	15.77 N	67.83W	69.63@283.09	2.21
1907.00	11.34	239.63	1903.18	32.00	61.00	12.72 N	73.05W	74.15@279.88	2.75
1938.00	12.13	240.07	1933.53	31.00	67.28	9.55 N	78.51W	79.08@276.94	2.56
2002.00	13.54	239.89	1995.93	64.00	81.44	2.44 N	90.81W	90.85@271.54	2.20
2033.00	14.42	239.27	2026.01	31.00	88.89	1.36 S	97.27W	97.28@269.20	2.88
2065.00	14.60	239.01	2056.99	32.00	96.86	5.47 S	104.15W	104.30@266.99	0.60
2128.00	14.86	237.60	2117.92	63.00	112.76	13.89 S	117.78W	118.60@263.28	0.70
2190.00	14.86	237.69	2177.85	62.00	128.52	22.39 S	131.21W	133.11@260.31	0.04
2254.00	15.04	238.22	2239.68	64.00	144.90	31.15 S	145.21W	148.51@257.89	0.35
2317.00	15.65	239.89	2300.44	63.00	161.48	39.72 S	159.51W	164.38@256.02	1.20
2380.00	15.92	239.36	2361.06	63.00	178.53	48.39 S	174.29W	180.89@254.48	0.49
2444.00	16.09	239.01	2422.58	64.00	196.08	57.43 S	189.45W	197.96@253.14	0.31
2507.00	16.09	240.77	2483.11	63.00	213.46	66.19 S	204.55W	214.99@252.07	0.77
2570.00	16.00	241.65	2543.66	63.00	230.83	74.57 S	219.81W	232.12@251.26	0.41

PathFinder Energy Services

Survey Report

Page 2
Date: 9/21/2004
Wellpath ID: Final Field Reports

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft)		Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
2634.00	15.92	241.03	2605.19	64.00	248.39	83.01 S	235.25W	249.47@250.56	0.29
2697.00	15.92	240.77	2665.77	63.00	265.62	91.42 S	250.35W	266.52@249.94	0.11
2761.00	16.00	239.89	2727.31	64.00	283.15	100.13 S	265.64W	283.88@249.35	0.40
2824.00	15.74	241.21	2787.91	63.00	300.32	108.60 S	280.64W	300.92@248.85	0.71
2888.00	15.56	241.74	2849.53	64.00	317.55	116.84 S	295.81W	318.05@248.45	0.36
2950.00	15.92	240.33	2909.21	62.00	334.32	124.99 S	310.52W	334.73@248.07	0.85
3013.00	16.09	240.42	2969.77	63.00	351.63	133.58 S	325.62W	351.95@247.70	0.27
3077.00	15.30	240.07	3031.38	64.00	368.88	142.17 S	340.65W	369.13@247.35	1.24
3140.00	14.42	240.86	3092.27	63.00	384.98	150.13 S	354.71W	385.17@247.06	1.43
3204.00	14.16	239.89	3154.29	64.00	400.72	157.94 S	368.44W	400.87@246.80	0.55
3269.00	14.25	239.68	3217.31	65.00	416.60	165.97 S	382.22W	416.70@246.53	0.16
3331.00	13.98	240.94	3277.43	62.00	431.66	173.46 S	395.36W	431.74@246.31	0.66
3394.00	13.98	242.18	3338.57	63.00	446.85	180.71 S	408.74W	446.90@246.15	0.48
3456.00	14.07	242.70	3398.72	62.00	461.85	187.66 S	422.06W	461.90@246.03	0.25
3519.00	14.51	242.35	3459.77	63.00	477.39	194.83 S	435.86W	477.42@245.91	0.71
3583.00	14.68	242.70	3521.70	64.00	493.50	202.27 S	450.16W	493.52@245.80	0.30
3646.00	14.77	243.32	3582.64	63.00	509.50	209.54 S	464.43W	509.51@245.72	0.29
3709.00	14.33	244.99	3643.62	63.00	525.32	216.44 S	478.67W	525.33@245.67	0.96
3772.00	14.42	245.16	3704.64	63.00	540.96	223.03 S	492.86W	540.97@245.65	0.16
3835.00	14.25	243.85	3765.68	63.00	556.56	229.75 S	506.94W	556.57@245.62	0.58
3898.00	13.81	243.58	3826.80	63.00	571.82	236.51 S	520.63W	571.83@245.57	0.71
3962.00	13.54	244.28	3888.99	64.00	586.95	243.16 S	534.22W	586.96@245.53	0.49
4025.00	13.63	246.13	3950.23	63.00	601.75	249.36 S	547.65W	601.75@245.52	0.70
4089.00	13.37	246.48	4012.46	64.00	616.68	255.37 S	561.33W	616.69@245.54	0.43
4152.00	13.10	246.31	4073.78	63.00	631.10	261.14 S	574.55W	631.11@245.56	0.43
4215.00	12.66	244.99	4135.20	63.00	645.15	266.93 S	587.35W	645.16@245.56	0.84
4279.00	13.28	243.58	4197.57	64.00	659.51	273.17 S	600.28W	659.52@245.53	1.09
4342.00	13.19	243.58	4258.89	63.00	673.92	279.58 S	613.20W	673.93@245.49	0.14
4405.00	12.93	242.88	4320.26	63.00	688.15	286.00 S	625.91W	688.16@245.44	0.48
4469.00	12.57	243.58	4382.69	64.00	702.27	292.36 S	638.52W	702.27@245.40	0.61
4532.00	12.75	244.99	4444.15	63.00	716.07	298.35 S	650.96W	716.07@245.38	0.57
4596.00	12.57	246.83	4506.60	64.00	730.10	304.07 S	663.76W	730.10@245.39	0.69
4659.00	12.84	246.57	4568.06	63.00	743.95	309.56 S	676.49W	743.95@245.41	0.44
4723.00	12.75	245.78	4630.47	64.00	758.12	315.28 S	689.46W	758.12@245.43	0.31
4786.00	12.57	245.34	4691.93	63.00	771.93	320.99 S	702.03W	771.93@245.43	0.32
4849.00	13.01	245.78	4753.37	63.00	785.87	326.76 S	714.72W	785.88@245.43	0.72
4912.00	12.66	244.20	4814.80	63.00	799.87	332.68 S	727.41W	799.87@245.42	0.79
4976.00	12.84	243.23	4877.22	64.00	813.98	338.93 S	740.07W	813.99@245.39	0.44
5039.00	12.40	243.76	4938.70	63.00	827.74	345.07 S	752.39W	827.75@245.36	0.72
5103.00	11.87	243.58	5001.27	64.00	841.19	351.04 S	764.44W	841.19@245.33	0.83
5162.00	11.26	241.38	5059.07	59.00	853.00	356.50 S	774.94W	853.01@245.30	1.28
5226.00	10.55	242.18	5121.91	64.00	865.09	362.23 S	785.60W	865.09@245.25	1.13
5289.00	9.94	243.49	5183.91	63.00	876.28	367.35 S	795.57W	876.28@245.22	1.04
5352.00	9.67	245.07	5245.99	63.00	887.01	372.00 S	805.23W	887.01@245.20	0.61
5416.00	8.97	245.78	5309.14	64.00	897.37	376.32 S	814.66W	897.37@245.21	1.11

PathFinder Energy Services

Survey Report

Page 3

Date: 9/21/2004

Wellpath ID: Final Field Reports

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft)		Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
5479.00	8.53	243.85	5371.41	63.00	906.96	380.39 S	823.33W	906.96@245.20	0.84
5543.00	7.83	243.58	5434.76	64.00	916.06	384.42 S	831.50W	916.06@245.19	1.10
5606.00	7.56	239.27	5497.19	63.00	924.47	388.45 S	838.90W	924.47@245.15	1.01
5670.00	6.86	238.92	5560.68	64.00	932.46	392.57 S	845.79W	932.46@245.10	1.10
5733.00	6.60	239.63	5623.25	63.00	939.80	396.35 S	852.14W	939.80@245.06	0.43
5797.00	5.89	239.19	5686.87	64.00	946.73	399.89 S	858.13W	946.73@245.01	1.11
5860.00	5.54	234.62	5749.56	63.00	952.93	403.30 S	863.39W	952.94@244.96	0.91
5924.00	5.63	233.21	5813.25	64.00	959.04	406.97 S	868.42W	959.05@244.89	0.26
5987.00	5.63	233.56	5875.95	63.00	965.09	410.66 S	873.38W	965.11@244.82	0.05
6049.00	4.57	231.28	5937.70	62.00	970.46	414.01 S	877.76W	970.50@244.75	1.74
6113.00	3.87	234.62	6001.53	64.00	975.06	416.86 S	881.51W	975.10@244.69	1.16
6176.00	3.08	230.31	6064.41	63.00	978.78	419.17 S	884.54W	978.84@244.64	1.32
6240.00	3.52	228.99	6128.31	64.00	982.33	421.56 S	887.35W	982.39@244.59	0.70
6303.00	3.61	226.00	6191.18	63.00	986.06	424.20 S	890.23W	986.14@244.52	0.33
6369.00	3.69	234.97	6257.05	66.00	990.11	426.87 S	893.47W	990.20@244.46	0.87
6440.00	3.34	234.18	6327.92	71.00	994.39	429.39 S	897.02W	994.49@244.42	0.50
6504.00	3.61	191.81	6391.81	64.00	997.42	432.45 S	898.94W	997.55@244.31	3.94
6568.00	4.22	192.87	6455.66	64.00	1000.06	436.72 S	899.88W	1000.25@244.11	0.96
6632.00	4.57	187.95	6519.47	64.00	1002.88	441.54 S	900.75W	1003.15@243.89	0.80
6696.00	4.66	154.72	6583.28	64.00	1004.23	446.42 S	900.00W	1004.63@243.62	4.12
6760.00	4.31	138.55	6647.08	64.00	1003.52	450.57 S	897.29W	1004.07@243.34	2.04
6824.00	1.49	119.92	6711.00	64.00	1002.35	452.79 S	894.98W	1003.00@243.16	4.59
6888.00	1.67	328.40	6774.99	64.00	1001.98	452.41 S	894.75W	1002.62@243.18	4.79
6952.00	2.73	324.70	6838.94	64.00	1002.37	450.37 S	896.12W	1002.93@243.32	1.67
7017.00	2.46	316.53	6903.87	65.00	1003.10	448.09 S	897.97W	1003.57@243.48	0.70
7081.00	2.20	309.50	6967.82	64.00	1004.07	446.32 S	899.87W	1004.47@243.62	0.60
7145.00	2.55	327.08	7031.76	64.00	1004.81	444.34 S	901.59W	1005.14@243.76	1.26
7209.00	2.20	308.27	7095.71	64.00	1005.56	442.38 S	903.32W	1005.83@243.91	1.33
7306.00	1.85	309.59	7192.65	97.00	1007.09	440.23 S	905.99W	1007.29@244.08	0.36
7402.00	1.06	316.71	7288.62	96.00	1008.04	438.60 S	907.80W	1008.20@244.21	0.84
7498.00	0.97	341.49	7384.60	96.00	1008.23	437.18 S	908.66W	1008.36@244.31	0.46
7594.00	0.79	319.61	7480.59	96.00	1008.32	435.91 S	909.35W	1008.43@244.39	0.39
7690.00	0.79	302.20	7576.58	96.00	1008.86	435.05 S	910.34W	1008.95@244.46	0.25
7786.00	0.70	305.46	7672.57	96.00	1009.51	434.36 S	911.38W	1009.59@244.52	0.10
7882.00	0.62	292.89	7768.57	96.00	1010.15	433.82 S	912.33W	1010.22@244.57	0.17
7977.00	0.18	313.98	7863.57	95.00	1010.55	433.51 S	912.91W	1010.62@244.60	0.48
8072.00	0.09	162.02	7958.57	95.00	1010.62	433.48 S	913.00W	1010.68@244.60	0.28
8142.00	0.18	243.58	8028.57	70.00	1010.73	433.58 S	913.08W	1010.79@244.60	0.27
Projected to TD for 9 5/8" Casing									
8188.00	0.18	243.58	8074.57	46.00	1010.88	433.65 S	913.21W	1010.94@244.60	0.00

Company: CABAL Energy Corporation	Date: 8/5/2005	Time: 14:16:31	Page: 1
Field: High Hog	Co-ordinate(NE) Reference:	Site: High Hog "9" Federal #1, Grid Nort	
Site: High Hog "9" Federal #1	Vertical (TVD) Reference:	System: Mean Sea Level	
Well: High Hog 9 Federal	Section (VS) Reference:	Well (0.00N,0.00E,245.24Azi)	
Wellpath: High Hog "9" Federal #1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Field: High Hog
Eddy County, New Mexico

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Site Centre
Geomagnetic Model: igrf2000

Site: High Hog "9" Federal #1
T25S & R25E Eddy County, New Mexico
Section 9,

Site Position:	Northing: 418398.30 ft	Latitude: 32 9 0.995 N
From: Map	Easting: 479456.60 ft	Longitude: 104 23 58.963 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 0.00 ft		Grid Convergence: -0.04 deg

Well: High Hog 9 Federal

Slot Name:

Well Position: +N/-S 0.00 ft	Northing: 418398.30 ft	Latitude: 32 9 0.995 N
+E/-W 0.00 ft	Easting: 479456.60 ft	Longitude: 104 23 58.963 W
Position Uncertainty: 0.00 ft		

Wellpath: High Hog "9" Federal #1
Directional "S" Well

Current Datum: Mean Sea Level

Magnetic Data: 7/6/2004

Field Strength: 49335 nT

Vertical Section: Depth From (TVD)
ft

Height 0.00 ft

+N/-S
ft

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 8.97 deg
Mag Dip Angle: 60.21 deg
+E/-W
Direction
deg

0.00

0.00

0.00

245.24

RECEIVED

OCT 06 2005

OCU-ARTS/SEA

Survey: Top Hole Gyro

Start Date: 10/1/2004

Company: PathFinder Energy Services
Tool:

Engineer: Ron McIntyre
Tied-to: User Defined

Survey: Top Hole Gyro

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.83	346.10	100.00	0.70	-0.17	-0.14	0.83	0.83	0.00	
200.00	1.90	310.78	199.97	2.49	-1.60	0.41	1.31	1.07	-35.32	
300.00	2.87	303.73	299.88	4.96	-4.94	2.41	1.01	0.97	-7.05	
400.00	3.07	305.12	399.75	7.89	-9.21	5.06	0.21	0.20	1.39	
500.00	3.00	307.04	499.61	11.01	-13.49	7.64	0.12	-0.07	1.92	
600.00	2.01	317.06	599.51	13.87	-16.78	9.42	1.08	-0.99	10.02	
700.00	1.49	325.95	699.46	16.23	-18.70	10.18	0.59	-0.52	8.89	
800.00	1.64	332.43	799.43	18.58	-20.09	10.46	0.23	0.15	6.48	
900.00	1.95	323.07	899.38	21.20	-21.77	10.89	0.43	0.31	-9.36	
1000.00	2.12	317.28	999.31	23.92	-24.05	11.82	0.27	0.17	-5.79	
1100.00	1.84	316.07	1099.25	26.44	-26.42	12.91	0.28	-0.28	-1.21	
1200.00	1.46	302.47	1199.21	28.28	-28.61	14.13	0.54	-0.38	-13.60	
1298.00	1.13	321.49	1297.19	29.71	-30.26	15.04	0.55	-0.34	19.41	