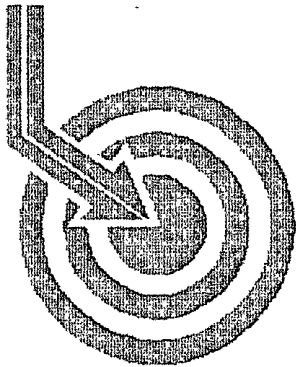


30.015. 36563



Scientific Drilling

MARBOB ENERGY

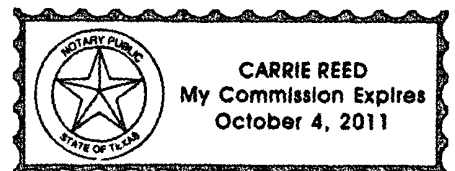
Field: Loco Hills
Site: Eddy County, NM
Well: Loco Federal #5
Wellpath: VH - Job #32K1008859
Survey: 10/31/08

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

.....*Richard*.....Company Representative

Notorized this date 24th of November, 2008.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Marbob

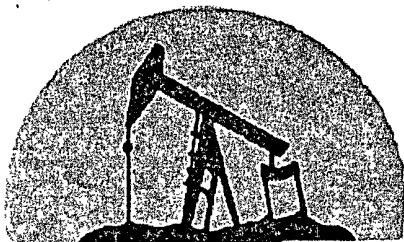
**Eddy County
S21, T17S, R30E
Loco Federal #5
Loco Federal #5**

Survey: MWD #1

Pathfinder X & Y Survey Report

18 November, 2008

PATHFINDER
ENERGY SERVICES



marbob
energy corporation
Artesia, N.M.



Azimuths to Grid North
True North: -0.19°
Magnetic North: 7.97°

Magnetic Field
Strength: 49278.2anT
Dip Angle: 60.76°
Date: 07/08/2008
Model: IGRF200510

PATHFINDER
ENERGY SERVICES

Project: Eddy County
Site: S21, T17S, R30E
Well: Loco Federal #5
Wellbore: Loco Federal #5
Plan: Plan #2 (Loco Federal #5/Loco Federal #5)

WELL DETAILS Loco Federal #5

Ground Elevation: 0.00
RKB Elevation: WELL @ 0.00ft (Original Well Elev)
Rig Name: Original Well Elev

+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	664489.000	609860.100	32° 49' 34.522 N	103° 58' 32.508 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	2522.00	2.83	339.17	2520.84	44.44	-11.82	0.00	0.00	-21.55	
2	3201.51	2.83	117.00	3200.00	52.51	-2.83	0.78	158.89	-14.62	
3	3603.44	8.00	117.00	3600.00	35.29	30.95	1.29	0.00	22.18	
4	3628.44	8.00	117.00	3624.78	33.71	34.05	0.00	0.00	25.55	
5	6041.52	0.00	0.00	6030.00	-42.64	183.91	0.33	180.00	186.79	

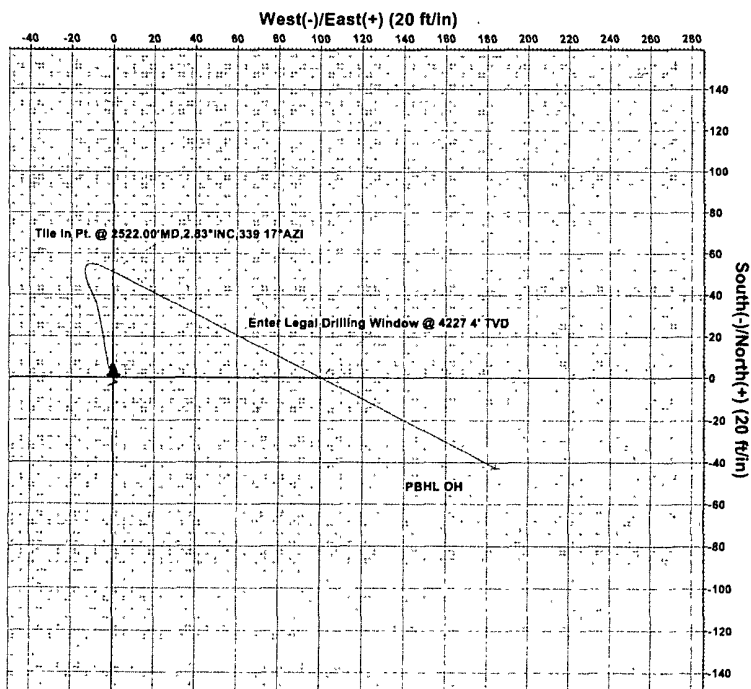
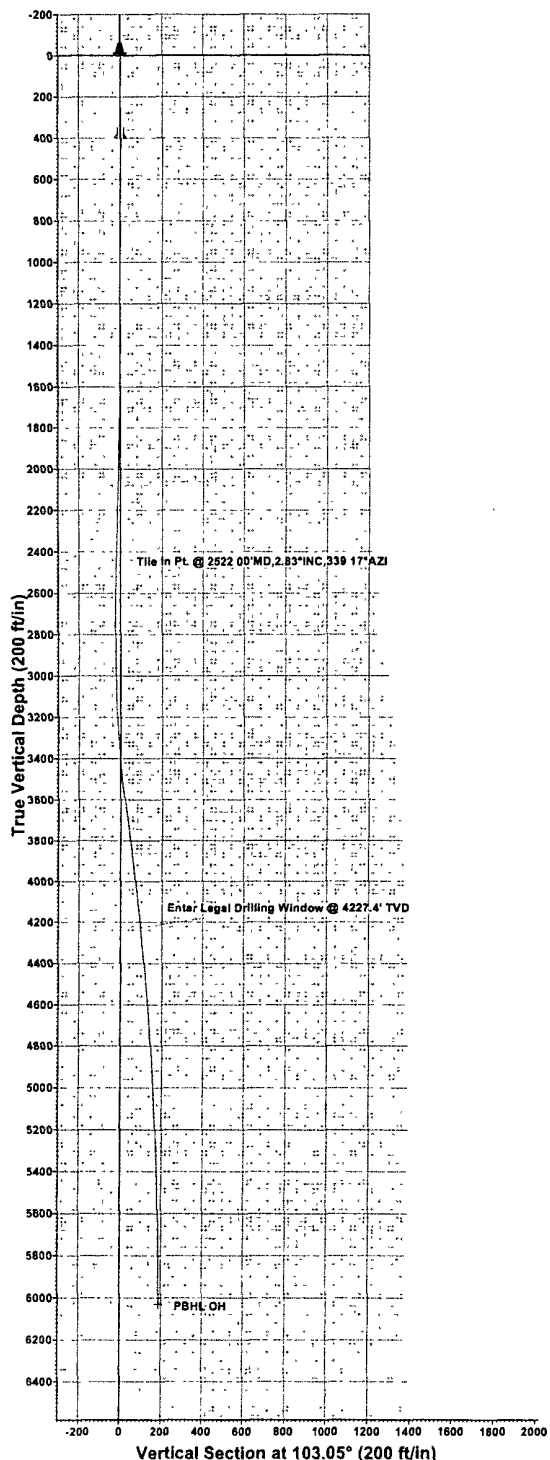
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
PBHL OH	6030.00	-42.64	183.91	664448.380	610044.010	Point

CASING DETAILS

TVD	MD	Name	Size
399.98	400.00	8 5/8"	8-5/8"

PROJECT DETAILS: Eddy County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid



Plan: Plan #2 (Loco Federal #5/Loco Federal #5)

Created By: Nate Blingham Date: 15-17, November 18 2008

Checked: _____ Date: _____



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company:	Marbob	Local Co-ordinate Reference:	Well Loco Federal #5
Project:	Eddy County	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	S21, T17S, R30E	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	Loco Federal #5	North Reference:	Grid
Wellbore:	Loco Federal #5	Survey Calculation Method:	Minimum Curvature
Design:	Loco Federal #5	Database:	Midland DB

Project Eddy County			
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		S21, T17S, R30E			
Site Position:		Northing:		Latitude:	
From:	Map	664,489.000 ft		32° 49' 34.522 N	
Position Uncertainty:		Easting:		Longitude:	
0.00 ft		609,860.100 ft		103° 58' 32.508 W	
		Slot Radius:		Grid Convergence:	
		"		0.19 °	

Well	Loco Federal #5					
Well Position	+N/-S	0.00 ft	Northing:	664,489.000 ft	Latitude:	32° 49' 34.522 N
	+E/-W	0.00 ft	Easting:	609,860.100 ft	Longitude:	103° 58' 32.508 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	0.00 ft

Wellbore:	Loco Federal #5
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	07/08/2008	8.16	60.76	49,278

Design: Loco Federal #5				
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	103.05



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
Project: Eddy County
Site: S21, T17S, R30E
Well: Loco Federal #5
Wellbore: Loco Federal #5
Design: Loco Federal #5

Local Co-ordinate Reference: Well Loco Federal #5
TVD Reference: WELL @ 0.00ft (Original Well Elev)
MD Reference: WELL @ 0.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland DB

Survey Program Date 11/18/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.00	2,522.00	GYRO (Loco Federal #5)	CT_GYRO_MS	Continuous Gyro Multishot
2,589.00	6,100.00	MWD #1 (Loco Federal #5)	MWD	MWD - Standard

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
2,522.00	2.83	339.17	2,520.84	2,520.84	44.44	-11.82	-21.55	0.00	664,533.44	609,848.28
2,589.00	1.85	351.11	2,587.78	2,587.78	47.05	-12.58	-22.88	1.63	664,536.05	609,847.52
2,652.00	1.76	349.86	2,650.75	2,650.75	49.01	-12.91	-23.64	0.16	664,538.01	609,847.19
2,715.00	1.85	350.21	2,713.72	2,713.72	50.96	-13.25	-24.41	0.14	664,539.96	609,846.85
2,778.00	1.49	30.60	2,776.69	2,776.69	52.67	-13.00	-24.56	1.91	664,541.67	609,847.10
2,872.00	2.46	78.65	2,870.64	2,870.64	54.12	-10.40	-22.36	1.95	664,543.12	609,849.70
2,965.00	2.73	100.44	2,963.55	2,963.55	54.11	-6.27	-18.33	1.09	664,543.11	609,853.83
3,059.00	2.99	108.83	3,057.43	3,057.43	52.91	-1.75	-13.65	0.52	664,541.91	609,858.35
3,154.00	2.02	79.59	3,152.34	3,152.34	52.42	2.24	-9.65	1.66	664,541.42	609,862.34
3,218.00	3.17	94.71	3,216.28	3,216.28	52.48	5.12	-6.86	2.08	664,541.48	609,865.22
3,283.00	4.48	109.89	3,281.13	3,281.13	51.46	9.30	-2.56	2.53	664,540.46	609,869.40
3,346.00	5.89	117.09	3,343.87	3,343.87	49.15	14.49	3.01	2.46	664,538.15	609,874.59
3,444.00	7.30	118.91	3,441.22	3,441.22	43.85	24.42	13.88	1.45	664,532.85	609,884.52
3,535.00	7.56	120.78	3,531.46	3,531.46	38.00	34.62	25.15	0.39	664,527.00	609,894.72
3,628.00	8.00	115.94	3,623.60	3,623.60	32.03	45.70	37.28	0.85	664,521.03	609,905.80
3,724.00	8.18	117.75	3,718.65	3,718.65	25.93	57.75	50.40	0.32	664,514.93	609,917.85
3,819.00	7.12	117.44	3,812.80	3,812.80	20.07	68.95	62.64	1.12	664,509.07	609,929.05
3,883.00	7.30	117.08	3,876.30	3,876.30	16.39	76.09	70.43	0.29	664,505.39	609,936.19
3,978.00	5.63	122.54	3,970.69	3,970.69	11.14	85.40	80.68	1.87	664,500.14	609,945.50
4,073.00	5.63	127.42	4,065.23	4,065.23	5.80	93.03	89.31	0.50	664,494.80	609,953.13
4,137.00	5.19	114.97	4,128.95	4,128.95	2.67	98.14	95.01	1.95	664,491.67	609,958.24



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company:	Marbob	Local Co-ordinate Reference:	Well Loco Federal #5
Project:	Eddy County	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	S21, T17S, R30E	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	Loco Federal #5	North Reference:	Grid
Wellbore:	Loco Federal #5	Survey Calculation Method:	Minimum Curvature
Design:	Loco Federal #5	Database:	Midland DB

Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V-Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
4,231.00	5.63	108.77	4,222.53	4,222.53	-0.61	106.36	103.75	0.78	664,488.39	609,966.46	
4,326.00	5.10	116.54	4,317.12	4,317.12	-3.99	114.55	112.50	0.95	664,485.01	609,974.65	
4,421.00	5.28	120.31	4,411.73	4,411.73	-8.09	122.10	120.78	0.41	664,480.91	609,982.20	
4,516.00	5.01	127.95	4,506.34	4,506.34	-12.84	129.15	128.71	0.77	664,476.16	609,989.25	
4,611.00	3.69	116.97	4,601.07	4,601.07	-16.78	135.15	135.44	1.64	664,472.22	609,995.25	
4,706.00	3.34	118.43	4,695.89	4,695.89	-19.48	140.30	141.08	0.38	664,469.52	610,000.40	
4,770.00	3.52	116.14	4,759.78	4,759.78	-21.24	143.71	144.79	0.35	664,467.76	610,003.81	
4,865.00	3.43	122.07	4,854.60	4,854.60	-24.03	148.73	150.32	0.39	664,464.97	610,008.83	
4,960.00	3.34	114.71	4,949.44	4,949.44	-26.70	153.66	155.72	0.47	664,462.30	610,013.76	
5,055.00	3.25	115.70	5,044.28	5,044.28	-29.02	158.60	161.05	0.11	664,459.98	610,018.70	
5,165.00	3.34	116.37	5,154.10	5,154.10	-31.80	164.28	167.21	0.09	664,457.20	610,024.38	
5,245.00	3.34	117.90	5,233.96	5,233.96	-33.92	168.42	171.73	0.11	664,455.08	610,028.52	
5,340.00	2.37	113.02	5,328.84	5,328.84	-35.99	172.68	176.34	1.05	664,453.01	610,032.78	
5,436.00	2.02	106.95	5,424.77	5,424.77	-37.26	176.12	179.99	0.44	664,451.74	610,036.22	
5,531.00	1.93	105.93	5,519.72	5,519.72	-38.18	179.26	183.25	0.10	664,450.82	610,039.36	
5,625.00	1.41	124.28	5,613.68	5,613.68	-39.27	181.74	185.91	0.79	664,449.73	610,041.84	
5,720.00	1.41	117.07	5,708.65	5,708.65	-40.46	183.75	188.14	0.19	664,448.54	610,043.85	
5,815.00	0.62	22.87	5,803.64	5,803.64	-40.52	184.99	189.36	1.66	664,448.48	610,045.09	
5,909.00	0.70	349.15	5,897.63	5,897.63	-39.48	185.08	189.21	0.42	664,449.52	610,045.18	
6,004.00	0.62	344.84	5,992.62	5,992.62	-38.42	184.83	188.74	0.10	664,450.58	610,044.93	
6,100.00	0.62	344.84	6,088.62	6,088.62	-37.42	184.56	188.24	0.00	664,451.58	610,044.66	

BHL-6100.00°MD,0.62°INC,344.84°AZI



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
Project: Eddy County
Site: S21, T17S, R30E
Well: Loco Federal #5
Wellbore: Loco Federal #5
Design: Loco Federal #5

Local Co-ordinate Reference: Well Loco Federal #5
TVD Reference: WELL @ 0.00ft (Original Well Elev)
MD Reference: WELL @ 0.00ft (Original Well Elev)
North Reference: Grid
Survey/Calculation Method: Minimum Curvature
Database: Midland DB

Targets

Target Name	hit/miss target	Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL OH			0.00	0.00	6,030.00	-42.64	183.91	664,446 360	610,044.010	32° 49' 34.094 N	103° 58' 30.354 W
- survey misses by 37 62ft at 6004.00ft MD (5992.62 TVD, -38.42 N, 184.83 E)											
- Point											

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
6,100.00	6,088.62	-37.42	184.56	BHL-6100.00'MD,0.62°INC,344.84°AZI

Checked By: _____ Approved By: _____ Date: _____