

Results of Directional Survey

API number:	30-025-38157		
OGRID:		Operator:	MARBOB ENERGY CORP
		Property:	LPC 31 FEDERAL # 2

surface	ULSTR:	G	31	T 18S	R 32E
			1830 FNL	2280 FEL	

BH Loc	ULSTR:	H	31	T	18S	R	32E
			2293	FNL	349	FEL	

	MD	N/S	E/W	VD
	8747	-141.49	569.16	8360.86
TOP PERFS/OH	8765	-146.76	586.09	8364.02
	8778	-150.56	598.31	8366.30
	10026	-436.21	1810.83	8413.21
BOT PERFS/OH	10050	-441.37	1834.16	8415.49
	10057	-442.88	1840.96	8416.15

NEXT TO LAST	10057	-442.88	1840.96	8416.15
LAST READING	10075	-446.77	1858.47	8417.64
TD	10150	-462.98	1931.43	8423.85

Surface Location	1830	FN	2280	FE
Projected BHL	2293	FN	349	FE
Location of				
Top Perfs/OH	1977	FN	1694	FE
Bottom Perfs/OH	2271	FN	446	FE

SUMMARY of Subsurface Locations

Surface Location	G-31-18S-32E	1830	FN	2280	FE	Vert. Depth
Top Perfs/OH	G-31-18S-32E	1977	FN	1694	FE	8364.02
Bottom Perfs/OH	H-31-18S-32E	2271	FN	446	FE	8415.49
Projected TD	H-31-18S-32E	2293	FN	349	FE	8423.85

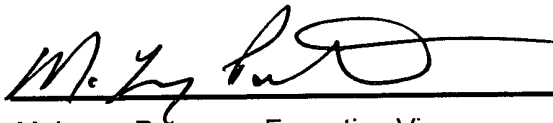
OPERATOR: Marbob Energy Corp.
WELL/LEASE: LPCFED # 2-H
COUNTY: Lea Co., N.M.

STATE OF NEW MEXICO
DEVIATION REPORT

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
480	2/3		
968	1/2		
1,463	0		
2,001	3/4		
2,500	2 1/4		
2,601	1 1/2		
2,793	1 1/2		
2,950	1 3/4		
3,140	2 2/5		

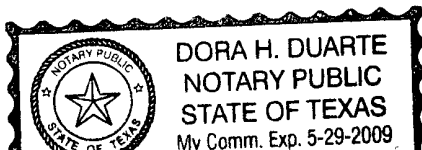
SUR: G-31-18s-32e, 1830/N & 2280/E
BHL: H-31-18s-32e, 2293/N & 349/E
API # 30-025-38157

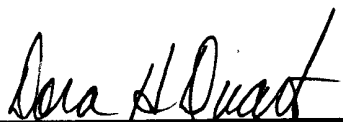
Patriot Drilling, LLC

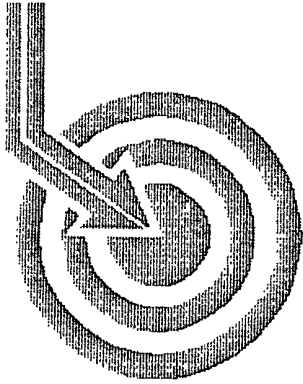

M. Leroy Peterson, Executive Vice-
President

The foregoing instrument was acknowledged before me on this 18th day of August, 2008 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 5/29/2009




Dora H. Duarte
Notary Public for Midland Co., Texas



Scientific Drilling

SUR: G-31-18s-32e, 1830/N & 2280/E
BHL: H-31-18s-32e, 2293/N & 349/E
API # 30-025-38157

MARBOB ENERGY

Field: North Lusk
Site: Lea County, NM
Well: LPC 31 Federal #2
Wellpath: VH - Job #32K0708530
Survey: 07/11/08

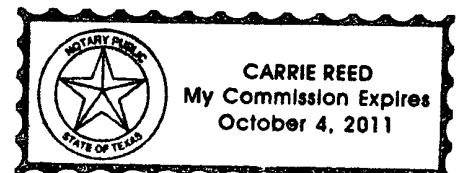
This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*L. Wharton*.....Company Representative

Notorized this date 11th of August, 2008.

Carrie Reed

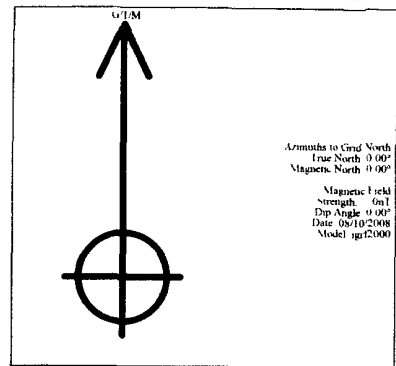
Notary Signature
County of Midland
State of Texas



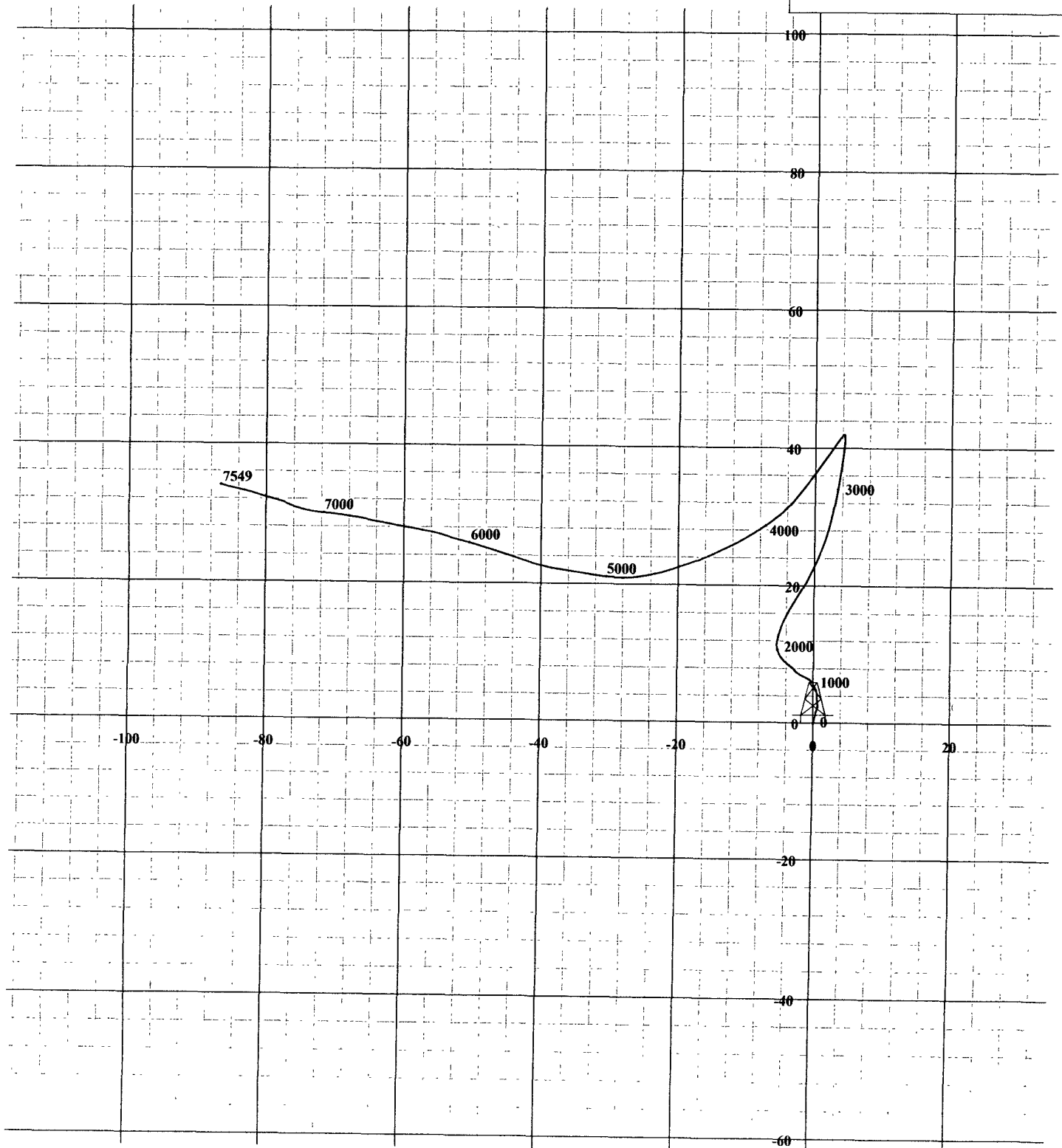


Scientific
Drilling

Field: North Lusk
Site: Lea County, NM
Well: LPC 31 Federal #2
Wellpath: VH - Job #32K0708530
Survey: 07/11/08



South(-)/North(+) [20ft/in]



West(-)/East(+) [20ft/in]



DIRECTIONAL SURVEY REPORT

MARBOB ENERGY

LPC 31 FED #2

LEA COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

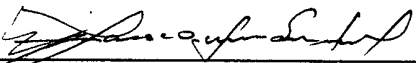
Pathfinder Energy Services, Inc.
6213 W. County Road 112 • Midland, TX • 79706
(432)681-6000

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY: A) P. DAS
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 7/3/08 TO 7/21/08
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: LEA COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

MARBOB ENERGY CORPORATION.
LPC 31 FED #2
LEA COUNTY, NM
RIG: PATRIOT #6
9. SURVEY CERTIFIED FROM: 7575 TO 10075 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 1986.15 FEET ON A BEARING OF 103.47 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 10150 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



FRANCISCO SINISTERRA
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 07/03/2008
Date Completed: 07/21/2008

MARBOB ENERGY CORPORATION
LPC 31 FED #2
LUSK;BONE SPRING NORTH
Rig:PATRIOT 6
PathFinder Office Supervisor: CODY MEBANE
PathFinder Field Engineers:S.ROBERTSON
P.DAS
K.TABOR

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.42.18.3994 N LON:103.47.58.6331 W
GRID Reference:NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 664170.6000 Y: 620643.5000
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.78° EAST TO GRID
Vertical Section Plane: 103.64
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude:3686.00' Ground To MSL

Measured Depth	10150.00	(feet)
Inclination	85.30	(deg)
Azimuth	102.27	(deg)
True Vertical Depth	8423.78	(feet)
Vertical Section	1986.14	(feet)
Survey X cord	666102.12	(feet)
Survey Y cord	620180.84	(feet)
Survey Lat	32.70381236 N	(deg)
Survey Lon	103.79334892 W	(deg)
Rectangular Corr. N/S	462.66 S	(feet)
Rectangular Corr. E/W	1931.52 E	(feet)
Closure Distance	1986.15	(feet)
Direction of Closure	103.47	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

Page 01/06
Tie-in Date: 07/03/2008
Date Completed: 07/21/2008

MARBOB ENERGY CORPORATION
LPC 31 FED #2
LUSK;BONE SPRING NORTH
Rig: PATRIOT 6
PathFinder Office Supervisor: CODY MEBANE
PathFinder Field Engineers: S.ROBERTSON
P.DAS
K.TABOR

Survey Calculations by RX5 V5.11i using Minimum Curvature

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.42.18.3994 N LON: 103.47.58.6331 W
Reference: NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 664170.6000 Y: 620643.5000
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.78° EAST TO GRID
Vertical Section Plane: 103.64
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude: 3686.00' Ground To MSL

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)	TEMP (F)
ORIGIN OF WELL AT SURFACE.											
0.00	0.00	359.71	-0.00	-18.00	-0.01	0.01 N	0.00 W	0.01@	343.71	0.00	0.00
THE FOLLOWING ARE SCIENTIFIC GYRO SURVEYS.											
100.00	0.43	14.84	99.99	81.99	0.00	0.38 N	0.09 E	0.39@	13.82	0.43	0.00
200.00	0.51	10.34	199.99	181.99	-0.02	1.18 N	0.27 E	1.21@	12.85	0.09	0.00
300.00	0.46	21.95	299.99	281.99	0.02	1.99 N	0.50 E	2.05@	14.08	0.11	0.00
400.00	0.39	358.57	399.98	381.98	-0.01	2.70 N	0.64 E	2.77@	13.34	0.19	0.00
500.00	0.31	348.79	499.98	481.98	-0.22	3.30 N	0.58 E	3.35@	9.93	0.10	0.00
600.00	0.22	9.03	599.98	581.98	-0.35	3.76 N	0.56 E	3.80@	8.42	0.13	0.00
700.00	0.24	346.83	699.98	681.98	-0.46	4.15 N	0.54 E	4.19@	7.39	0.09	0.00
800.00	0.25	2.76	799.98	781.98	-0.59	4.57 N	0.50 E	4.60@	6.26	0.07	0.00
900.00	0.31	325.71	899.98	881.98	-0.83	5.02 N	0.36 E	5.03@	4.10	0.19	0.00
1000.00	0.27	334.81	999.98	981.98	-1.18	5.45 N	0.11 E	5.45@	1.12	0.06	0.00
1100.00	0.42	330.61	1099.98	1081.98	-1.58	5.99 N	0.17 W	5.99@	358.34	0.15	0.00
1200.00	0.40	299.72	1199.97	1181.97	-2.17	6.48 N	0.66 W	6.51@	354.22	0.22	0.00
1300.00	0.41	295.34	1299.97	1281.97	-2.85	6.80 N	1.28 W	6.92@	349.32	0.03	0.00
1400.00	0.43	297.37	1399.97	1381.97	-3.57	7.13 N	1.94 W	7.39@	344.78	0.02	0.00
1500.00	0.47	313.13	1499.97	1481.97	-4.29	7.58 N	2.57 W	8.01@	341.26	0.13	0.00
1600.00	0.42	308.85	1599.96	1581.96	-4.98	8.09 N	3.16 W	8.69@	338.69	0.06	0.00
1700.00	0.63	310.60	1699.96	1681.96	-5.80	8.68 N	3.86 W	9.50@	336.03	0.21	0.00
1800.00	0.39	315.02	1799.95	1781.95	-6.58	9.28 N	4.52 W	10.32@	334.04	0.24	0.00
1900.00	0.47	329.45	1899.95	1881.95	-7.15	9.87 N	4.97 W	11.05@	333.30	0.13	0.00
2000.00	0.59	339.87	1999.95	1981.95	-7.73	10.71 N	5.35 W	11.97@	333.45	0.15	0.00
2100.00	0.76	9.57	2099.94	2081.94	-8.06	11.85 N	5.42 W	13.03@	335.42	0.38	0.00
2200.00	0.97	16.81	2199.93	2181.93	-8.06	13.31 N	5.06 W	14.24@	339.17	0.24	0.00
2300.00	1.36	24.89	2299.91	2281.91	-7.78	15.20 N	4.32 W	15.80@	344.13	0.42	0.00
2400.00	1.53	31.94	2399.88	2381.88	-7.13	17.41 N	3.11 W	17.68@	349.86	0.25	0.00

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
LPC 31 FED #2
LUSK;BONE SPRING NORTH
RIG:PATRIOT 6

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)	TEMP (F)
2500.00	1.53	31.32	2499.84	2481.84	-6.31	19.68 N	1.71 W	19.76@	355.02	0.02	0.00
2600.00	1.68	26.28	2599.80	2581.80	-5.58	22.14 N	0.37 W	22.14@	359.04	0.21	0.00
2700.00	1.64	22.68	2699.76	2681.76	-5.03	24.77 N	0.83 E	24.78@	1.92	0.11	0.00
2800.00	1.78	16.22	2799.71	2781.71	-4.74	27.58 N	1.82 E	27.64@	3.77	0.24	0.00
2900.00	1.91	13.06	2899.66	2881.66	-4.69	30.70 N	2.63 E	30.81@	4.89	0.17	0.00
3000.00	1.97	9.23	2999.61	2981.61	-4.84	34.02 N	3.28 E	34.17@	5.50	0.14	0.00
3100.00	2.07	9.15	3099.54	3081.54	-5.11	37.50 N	3.84 E	37.69@	5.85	0.10	0.00
3200.00	1.88	5.78	3199.48	3181.48	-5.48	40.91 N	4.29 E	41.14@	5.99	0.22	0.00
3300.00	1.06	216.20	3299.47	3281.47	-6.05	41.80 N	3.91 E	41.98@	5.35	2.84	0.00
3400.00	1.35	214.93	3399.45	3381.45	-6.84	40.08 N	2.69 E	40.18@	3.84	0.29	0.00
3500.00	1.50	215.81	3499.42	3481.42	-7.76	38.06 N	1.25 E	38.08@	1.88	0.15	0.00
3600.00	1.58	216.37	3599.38	3581.38	-8.79	35.89 N	0.33 W	35.89@	359.47	0.08	0.00
3700.00	1.41	218.37	3699.35	3681.35	-9.83	33.81 N	1.91 W	33.87@	356.76	0.18	0.00
3800.00	1.39	222.24	3799.32	3781.32	-10.93	31.95 N	3.49 W	32.14@	353.76	0.10	0.00
3900.00	1.39	228.49	3899.29	3881.29	-12.20	30.25 N	5.22 W	30.69@	350.22	0.15	0.00
4000.00	1.48	236.12	3999.26	3981.26	-13.77	28.72 N	7.20 W	29.61@	345.93	0.21	0.00
4100.00	1.30	238.95	4099.23	4081.23	-15.45	27.42 N	9.24 W	28.93@	341.38	0.19	0.00
4200.00	1.37	241.43	4199.20	4181.20	-17.14	26.26 N	11.26 W	28.57@	336.79	0.09	0.00
4300.00	1.49	246.45	4299.17	4281.17	-19.06	25.17 N	13.50 W	28.56@	331.79	0.17	0.00
4400.00	1.42	244.69	4399.14	4381.14	-21.06	24.12 N	15.82 W	28.84@	326.75	0.08	0.00
4500.00	1.43	251.65	4499.10	4481.10	-23.08	23.20 N	18.12 W	29.44@	322.01	0.17	0.00
4600.00	1.50	250.33	4599.07	4581.07	-25.23	22.37 N	20.54 W	30.36@	317.44	0.08	0.00
4700.00	1.67	256.87	4699.03	4681.03	-27.63	21.59 N	23.19 W	31.69@	312.96	0.25	0.00
4800.00	1.72	262.58	4798.99	4780.99	-30.33	21.07 N	26.10 W	33.54@	308.92	0.18	0.00
4900.00	1.11	273.48	4898.96	4880.96	-32.68	20.93 N	28.55 W	35.40@	306.25	0.66	0.00
5000.00	1.03	274.46	4998.94	4980.94	-34.52	21.06 N	30.41 W	36.99@	304.70	0.08	0.00
5100.00	1.17	278.58	5098.92	5080.92	-36.43	21.28 N	32.32 W	38.70@	303.37	0.16	0.00
5200.00	1.18	279.89	5198.90	5180.90	-38.47	21.61 N	34.34 W	40.58@	302.18	0.03	0.00
5300.00	1.20	278.21	5298.88	5280.88	-40.54	21.94 N	36.39 W	42.50@	301.08	0.04	0.00

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
LPC 31 FED #2
LUSK;BONE SPRING NORTH
RIG:PATRIOT 6

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)	TEMP (F)
5400.00	1.23	280.01	5398.86	5380.86	-42.66	22.28 N	38.49 W	44.47@	300.06	0.05	0.00
5500.00	1.32	285.32	5498.83	5480.83	-44.88	22.77 N	40.66 W	46.60@	299.25	0.15	0.00
5600.00	1.22	287.83	5598.81	5580.81	-47.09	23.40 N	42.78 W	48.76@	298.68	0.12	0.00
5700.00	1.17	288.66	5698.79	5680.79	-49.17	24.05 N	44.76 W	50.81@	298.25	0.05	0.00
5800.00	1.15	286.31	5798.77	5780.77	-51.19	24.66 N	46.69 W	52.80@	297.84	0.05	0.00
5900.00	1.18	288.75	5898.75	5880.75	-53.22	25.27 N	48.63 W	54.80@	297.46	0.06	0.00
6000.00	1.02	284.32	5998.73	5980.73	-55.13	25.82 N	50.47 W	56.69@	297.10	0.18	0.00
6100.00	1.02	283.36	6098.71	6080.71	-56.91	26.25 N	52.19 W	58.42@	296.70	0.02	0.00
6200.00	1.12	288.74	6198.69	6180.69	-58.78	26.77 N	53.99 W	60.26@	296.37	0.14	0.00
6300.00	1.26	281.07	6298.67	6280.67	-60.85	27.29 N	55.99 W	62.29@	295.99	0.21	0.00
6400.00	1.14	280.54	6398.65	6380.65	-62.94	27.69 N	58.05 W	64.31@	295.50	0.12	0.00
6500.00	1.28	279.96	6498.63	6480.63	-65.05	28.06 N	60.13 W	66.35@	295.02	0.14	0.00
6600.00	1.20	281.21	6598.61	6580.61	-67.21	28.46 N	62.25 W	68.45@	294.57	0.08	0.00
6700.00	1.31	280.92	6698.58	6680.58	-69.40	28.88 N	64.40 W	70.58@	294.15	0.11	0.00
6800.00	1.28	279.96	6798.56	6780.56	-71.65	29.29 N	66.62 W	72.78@	293.73	0.04	0.00
6900.00	1.45	278.31	6898.53	6880.53	-74.03	29.66 N	68.98 W	75.08@	293.27	0.17	0.00
7000.00	1.62	275.28	6998.49	6980.49	-76.69	29.98 N	71.64 W	77.66@	292.71	0.19	0.00
7100.00	1.39	281.70	7098.46	7080.46	-79.30	30.35 N	74.23 W	80.20@	292.24	0.28	0.00
7200.00	1.32	294.81	7198.43	7180.43	-81.64	31.08 N	76.46 W	82.54@	292.12	0.32	0.00
7300.00	1.41	284.06	7298.40	7280.40	-84.00	31.86 N	78.70 W	84.91@	292.04	0.27	0.00
7400.00	1.51	288.33	7398.37	7380.37	-86.54	32.58 N	81.15 W	87.44@	291.87	0.15	0.00
7500.00	2.48	282.50	7498.31	7480.31	-90.02	33.46 N	84.51 W	90.89@	291.60	0.99	0.00
** TIED INTO SCIENTIFIC GYRO SURVEY @ 7551'MD.											
7551.00	2.41	285.73	7549.26	7531.26	-92.19	33.99 N	86.62 W	93.05@	291.43	0.30	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.											
7575.00	2.20	287.28	7573.24	7555.24	-93.16	34.26 N	87.55 W	94.01@	291.37	0.91	119.09
7607.00	1.93	286.81	7605.22	7587.22	-94.31	34.60 N	88.65 W	95.16@	291.32	0.85	119.09
7650.00	1.41	292.98	7648.20	7630.20	-95.55	35.02 N	89.83 W	96.41@	291.30	1.28	108.25
7681.00	0.97	352.62	7679.20	7661.20	-96.02	35.43 N	90.21 W	96.92@	291.44	4.01	111.87

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
LPC 31 FED #2
LUSK;BONE SPRING NORTH
RIG:PATRIOT 6

Page 04/06

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)	TEMP (F)
7712.00	2.29	72.72	7710.19	7692.19	-95.59	35.87 N	89.66 W	96.57@	291.81	7.51	111.87
7742.00	4.48	86.26	7740.13	7722.13	-93.95	36.13 N	87.91 W	95.05@	292.34	7.72	111.87
7774.00	6.51	91.61	7771.98	7753.98	-90.99	36.16 N	84.85 W	92.23@	293.08	6.53	111.87
7806.00	8.44	96.76	7803.71	7785.71	-86.88	35.83 N	80.71 W	88.30@	293.94	6.38	111.87
7838.00	10.90	99.26	7835.25	7817.25	-81.53	35.07 N	75.39 W	83.14@	294.94	7.80	115.48
7869.00	13.81	100.78	7865.53	7847.53	-74.91	33.90 N	68.86 W	76.75@	296.21	9.44	115.48
7901.00	16.97	102.23	7896.38	7878.38	-66.43	32.20 N	60.54 W	68.57@	298.01	9.95	115.48
7933.00	20.40	103.21	7926.69	7908.69	-56.18	29.93 N	50.54 W	58.74@	300.63	10.76	115.48
7965.00	23.83	104.53	7956.33	7938.33	-44.13	27.04 N	38.85 W	47.33@	304.83	10.83	115.48
7997.00	27.08	104.73	7985.22	7967.22	-30.38	23.56 N	25.55 W	34.75@	312.68	10.16	115.48
8029.00	30.25	104.67	8013.30	7995.30	-15.04	19.67 N	10.70 W	22.39@	331.45	9.91	115.48
8060.00	33.33	104.15	8039.64	8021.64	1.29	15.61 N	5.11 E	16.42@	18.14	9.98	115.48
8092.00	36.67	103.35	8065.85	8047.85	19.64	11.25 N	22.94 E	25.55@	63.88	10.54	115.48
8124.00	39.31	102.33	8091.07	8073.07	39.33	6.88 N	42.14 E	42.70@	80.73	8.48	115.48
8156.00	42.30	102.39	8115.29	8097.29	60.24	2.40 N	62.57 E	62.61@	87.80	9.34	115.48
8187.00	45.64	103.63	8137.60	8119.60	81.75	2.45 S	83.53 E	83.57@	91.68	11.13	115.48
8218.00	49.59	104.57	8158.49	8140.49	104.65	8.03 S	105.73 E	106.04@	94.34	12.94	115.48
8249.00	53.55	107.21	8177.76	8159.76	128.90	14.69 S	129.08 E	129.91@	96.49	14.41	119.09
8280.00	56.10	108.33	8195.61	8177.61	154.17	22.43 S	153.20 E	154.84@	98.33	8.74	119.09
8311.00	58.48	106.08	8212.37	8194.37	180.20	30.14 S	178.12 E	180.65@	99.60	9.81	119.09
8342.00	60.15	106.08	8228.19	8210.19	206.84	37.52 S	203.73 E	207.16@	100.43	5.39	119.09
8373.00	61.55	106.05	8243.29	8225.29	233.89	45.01 S	229.75 E	234.12@	101.08	4.52	119.09
8404.00	62.52	104.91	8257.82	8239.82	261.25	52.32 S	256.14 E	261.43@	101.54	4.51	119.09
8436.00	65.25	104.38	8271.91	8253.91	289.98	59.58 S	283.93 E	290.12@	101.85	8.66	122.71
8467.00	67.01	104.88	8284.45	8266.45	318.32	66.74 S	311.36 E	318.44@	102.10	5.87	119.09
8498.00	67.44	105.17	8296.45	8278.45	346.89	74.15 S	338.97 E	346.98@	102.34	1.63	115.48
8529.00	67.62	105.18	8308.30	8290.30	375.53	81.65 S	366.62 E	375.60@	102.56	0.58	115.48
8560.00	71.31	105.60	8319.17	8301.17	404.54	89.35 S	394.60 E	404.59@	102.76	11.97	119.09
8591.00	75.89	106.36	8327.92	8309.92	434.25	97.54 S	423.18 E	434.28@	102.98	14.96	119.09

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
LPC 31 FED #2
LUSK;BONE SPRING NORTH
RIG:PATRIOT 6

Page 05/06

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)	TEMP (F)
8622.00	77.29	106.60	8335.11	8317.11	464.36	106.10 S	452.10 E	464.38@	103.21	4.58	122.71
8654.00	77.21	106.40	8342.17	8324.17	495.54	114.96 S	482.02 E	495.54@	103.41	0.66	122.71
8685.00	77.65	106.71	8348.92	8330.92	525.75	123.58 S	511.02 E	525.75@	103.59	1.72	122.71
8716.00	79.14	107.10	8355.16	8337.16	556.07	132.41 S	540.08 E	556.07@	103.78	4.96	122.71
8747.00	79.67	107.57	8360.86	8342.86	586.48	141.49 S	569.16 E	586.49@	103.96	2.27	119.09
8778.00	80.11	106.99	8366.30	8348.30	616.94	150.56 S	598.31 E	616.96@	104.12	2.33	119.09
8810.00	83.62	106.82	8370.83	8352.83	648.56	159.77 S	628.61 E	648.60@	104.26	10.98	119.09
8841.00	86.44	106.70	8373.51	8355.51	679.39	168.67 S	658.18 E	679.45@	104.37	9.11	122.71
8872.00	88.99	106.49	8374.75	8356.75	710.32	177.52 S	687.86 E	710.40@	104.47	8.25	122.71
8903.00	88.81	106.34	8375.34	8357.34	741.28	186.28 S	717.59 E	741.37@	104.55	0.76	122.71
8934.00	87.93	105.19	8376.22	8358.22	772.25	194.69 S	747.41 E	772.36@	104.60	4.67	122.71
8966.00	89.25	104.42	8377.01	8359.01	804.23	202.87 S	778.34 E	804.34@	104.61	4.77	126.32
8997.00	89.78	104.44	8377.27	8359.27	835.23	210.59 S	808.36 E	835.34@	104.60	1.71	126.32
9028.00	90.31	104.12	8377.25	8359.25	866.22	218.24 S	838.40 E	866.34@	104.59	2.00	126.32
9059.00	90.66	103.95	8376.99	8358.99	897.22	225.76 S	868.48 E	897.34@	104.57	1.26	126.32
9090.00	88.81	103.29	8377.13	8359.13	928.22	233.06 S	898.60 E	928.33@	104.54	6.34	126.32
9121.00	86.35	102.83	8378.44	8360.44	959.19	240.06 S	928.77 E	959.29@	104.49	8.07	126.32
9152.00	86.44	101.98	8380.39	8362.39	990.12	246.70 S	958.99 E	990.21@	104.43	2.75	126.32
9184.00	89.52	102.81	8381.52	8363.52	1022.09	253.57 S	990.22 E	1022.17@	104.36	9.97	129.94
9215.00	90.13	102.80	8381.61	8363.61	1053.08	260.44 S	1020.45 E	1053.16@	104.32	1.97	129.94
9246.00	89.69	102.51	8381.66	8363.66	1084.08	267.23 S	1050.69 E	1084.14@	104.27	1.70	129.94
9278.00	88.99	101.46	8382.03	8364.03	1116.06	273.87 S	1081.99 E	1116.12@	104.20	3.94	129.94
9309.00	88.72	101.05	8382.65	8364.65	1147.03	279.92 S	1112.39 E	1147.07@	104.12	1.58	129.94
9340.00	87.58	100.55	8383.65	8365.65	1177.97	285.73 S	1142.83 E	1178.00@	104.04	4.01	129.94
9371.00	86.44	100.81	8385.26	8367.26	1208.89	291.46 S	1173.25 E	1208.91@	103.95	3.77	129.94
9402.00	85.65	100.70	8387.40	8369.40	1239.78	297.24 S	1203.63 E	1239.79@	103.87	2.57	129.94
9433.00	85.74	100.73	8389.73	8371.73	1270.65	302.98 S	1234.00 E	1270.65@	103.79	0.31	129.94
9464.00	85.56	101.32	8392.08	8374.08	1301.53	308.89 S	1264.34 E	1301.53@	103.73	1.98	129.94
9495.00	86.17	102.19	8394.32	8376.32	1332.43	315.19 S	1294.61 E	1332.43@	103.68	3.42	129.94

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
LPC 31 FED #2
LUSK;BONE SPRING NORTH
RIG:PATRIOT 6

Page 06/06

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS (dg/100ft)	TEMP (F)
						(ft)	(ft)	(ft)	(deg)		
9526.00	89.16	103.44	8395.58	8377.58	1363.40	322.06 S	1324.81 E	1363.40@	103.66	10.45	129.94
9557.00	90.13	103.44	8395.77	8377.77	1394.40	329.27 S	1354.96 E	1394.40@	103.66	3.13	126.32
9588.00	90.13	103.62	8395.70	8377.70	1425.40	336.52 S	1385.10 E	1425.40@	103.66	0.58	126.32
9619.00	90.75	103.56	8395.46	8377.46	1456.39	343.80 S	1415.23 E	1456.39@	103.65	2.01	126.32
9651.00	91.19	103.95	8394.92	8376.92	1488.39	351.41 S	1446.31 E	1488.39@	103.66	1.84	126.32
9682.00	90.48	103.51	8394.47	8376.47	1519.39	358.77 S	1476.42 E	1519.39@	103.66	2.69	129.94
9713.00	88.72	102.78	8394.69	8376.69	1550.38	365.82 S	1506.61 E	1550.38@	103.65	6.15	129.94
9744.00	88.29	102.63	8395.49	8377.49	1581.37	372.63 S	1536.84 E	1581.37@	103.63	1.47	129.94
9775.00	87.76	102.28	8396.56	8378.56	1612.34	379.32 S	1567.09 E	1612.34@	103.61	2.05	129.94
9807.00	87.76	102.83	8397.81	8379.81	1644.31	386.27 S	1598.30 E	1644.31@	103.59	1.72	129.94
9838.00	87.85	103.34	8399.00	8381.00	1675.29	393.28 S	1628.47 E	1675.29@	103.58	1.67	129.94
9869.00	87.93	103.50	8400.14	8382.14	1706.27	400.47 S	1658.61 E	1706.27@	103.57	0.58	129.94
9900.00	88.55	103.75	8401.10	8383.10	1737.25	407.77 S	1688.72 E	1737.25@	103.58	2.16	129.94
9932.00	84.15	103.37	8403.13	8385.13	1769.18	415.25 S	1719.76 E	1769.18@	103.57	13.80	129.94
9963.00	83.54	103.06	8406.46	8388.46	1800.00	422.30 S	1749.76 E	1800.00@	103.57	2.20	126.32
9994.00	83.98	103.02	8409.83	8391.83	1830.81	429.25 S	1779.78 E	1830.82@	103.56	1.43	129.94
10026.00	83.89	102.23	8413.21	8395.21	1862.63	436.21 S	1810.83 E	1862.63@	103.54	2.47	133.55
10057.00	85.21	102.76	8416.15	8398.15	1893.48	442.88 S	1840.96 E	1893.49@	103.53	4.59	133.55
10075.00	85.30	102.27	8417.64	8399.64	1911.42	446.77 S	1858.47 E	1911.42@	103.52	2.76	133.55
STRAIGHT LINE PROJECTION TO BIT DEPTH @ 10150'MD.											
10150.00	85.30	102.27	8423.78	8405.78	1986.14	462.66 S	1931.52 E	1986.15@	103.47	0.00	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.

PATHFINDER

ENERGY SERVICES

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	MARBOB ENERGY		
LEASE / WELL No.:	LPC 31 FED	#2	
WELL LOCATION:	LEA COUNTY		
COUNTY / STATE / COUNTRY:	LEA	NM	U.S.A
RIG:	PATRIOT # 6		
API WELL No:	30-025-38157		
JOB No:	101007640 WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER ENERGY SERVICE		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.78	LWD Calculated:	7.78
		Agreed Upon:	7.78
X =	664170.600000	Feet	Y = 620643.500000
			Feet
SITE LATITUDE:	32.70511 N	SITE LONGITUDE:	103.799620 W
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☒	ZONE:	
PROPOSED DRIFT DIRECTION:	103.64		
KELLY BUSHING ELEVATION:	18		
ALTITUDE:	3686	Feet	WATER DEPTH:
			0
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	7551		
DRIFT ANGLE:	2.41		
DRIFT DIRECTION:	285.73		
TRUE VERTICAL DEPTH:	7549.26		
VERTICAL SECTION:	-92.19		
RECTANGULAR COORDINATE (N / S) :	33.99		
RECTANGULAR COORDINATE (E / W) :	-86.62		
CLOSURE DISTANCE / DIRECTION:	93.05	291.42	
SURVEY CALCULATION METHOD:	AA ☐	MC ☐	RC ☒ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	SCIENTIFIC DRILLING CONTROLS		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	7757.04	TOTAL DEPTH:	10093.42
KICKOFF ANGLE:	0	MAX ANGLE:	90

PES Engineers:

**Signature of both field engineers required if applicable

Directional Driller:

DATE:

00708530

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Inrun Survey
for
MARBOB ENERGY

Page 1

Well No.: LPC FEDERAL #2H

Date : 11-JUL-2008

Job No. : 32K0708530

Proposal : 103.64

Depth (Feet)	T.V.D. (Feet)	V.S. (Feet)	Inc Deg.	GRID Azimuth Deg.	Latitude (Feet)	Departure (Feet)	D-leg /100
0.00	0.00	0.00	0.00	359.71	0.00	0.00	0.00
100.00	100.00	0.01	0.43	14.84	0.36	0.10	0.43
200.00	200.00	-0.01	0.51	10.34	1.16	0.27	0.09
300.00	299.99	0.02	0.46	21.95	1.97	0.50	0.11
400.00	399.99	-0.01	0.39	358.57	2.69	0.64	0.19
500.00	499.99	-0.21	0.31	348.79	3.29	0.58	0.10
600.00	599.99	-0.34	0.22	9.03	3.75	0.56	0.13
700.00	699.99	-0.45	0.24	346.83	4.14	0.54	0.09
800.00	799.98	-0.58	0.25	2.76	4.56	0.51	0.07
900.00	899.98	-0.83	0.31	325.71	5.00	0.36	0.19
1000.00	999.98	-1.18	0.27	334.81	5.44	0.11	0.06
1100.00	1099.98	-1.57	0.42	330.61	5.97	-0.17	0.15
1200.00	1199.98	-2.16	0.40	299.72	6.46	-0.65	0.22
1300.00	1299.97	-2.84	0.41	295.34	6.79	-1.28	0.03
1400.00	1399.97	-3.56	0.43	297.37	7.12	-1.94	0.02
1500.00	1499.97	-4.28	0.47	313.13	7.57	-2.57	0.13
1600.00	1599.97	-4.97	0.42	308.85	8.08	-3.15	0.06
1700.00	1699.96	-5.79	0.63	310.60	8.67	-3.86	0.21
1800.00	1799.96	-6.57	0.39	315.02	9.27	-4.51	0.24
1900.00	1899.95	-7.15	0.47	329.45	9.86	-4.96	0.13
2000.00	1999.95	-7.72	0.59	339.87	10.70	-5.35	0.15
2100.00	2099.94	-8.05	0.76	9.57	11.83	-5.42	0.38
2200.00	2199.93	-8.05	0.97	16.81	13.30	-5.06	0.24
2300.00	2299.91	-7.78	1.36	24.89	15.19	-4.32	0.42
2400.00	2399.88	-7.12	1.53	31.94	17.39	-3.11	0.25
2500.00	2499.84	-6.30	1.53	31.32	19.67	-1.71	0.02
2600.00	2599.80	-5.57	1.68	26.28	22.12	-0.37	0.21
2700.00	2699.76	-5.03	1.64	22.68	24.76	0.83	0.11
2800.00	2799.72	-4.73	1.78	16.22	27.57	1.82	0.24
2900.00	2899.66	-4.68	1.91	13.06	30.68	2.63	0.17
3000.00	2999.61	-4.83	1.97	9.23	34.00	3.28	0.14
3100.00	3099.55	-5.10	2.07	9.15	37.48	3.85	0.10
3200.00	3199.49	-5.47	1.88	5.78	40.90	4.30	0.22
3300.00	3299.47	-6.05	1.06	216.20	41.78	3.92	2.85
3400.00	3399.45	-6.83	1.35	214.93	40.07	2.69	0.29
3500.00	3499.42	-7.75	1.50	215.81	38.05	1.25	0.15
3600.00	3599.38	-8.78	1.58	216.37	35.87	-0.33	0.08
3700.00	3699.35	-9.83	1.41	218.37	33.80	-1.91	0.18
3800.00	3799.32	-10.92	1.39	222.24	31.94	-3.49	0.10
3900.00	3899.29	-12.20	1.39	228.49	30.23	-5.21	0.15

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Date : 11-JUL-2008

Proposal : 103.64

[illegible]

4000.00	3999.26	-13.76	1.48	236.12	28.71	-7.19	0.21
4100.00	4099.23	-15.44	1.30	238.95	27.41	-9.24	0.19
4200.00	4199.20	-17.13	1.37	241.43	26.25	-11.26	0.09
4300.00	4299.17	-19.05	1.49	246.45	25.16	-13.50	0.17
4400.00	4399.14	-21.05	1.42	244.69	24.11	-15.81	0.08
4500.00	4499.10	-23.07	1.43	251.65	23.19	-18.12	0.17
4600.00	4599.07	-25.23	1.50	250.53	22.36	-20.54	0.08
4700.00	4699.03	-27.62	1.67	256.87	21.59	-23.19	0.24
4800.00	4798.99	-30.33	1.72	262.58	21.07	-26.09	0.18
4900.00	4898.96	-32.68	1.11	273.48	20.93	-28.55	0.66
5000.00	4998.94	-34.52	1.03	274.46	21.06	-30.41	0.08
5100.00	5098.92	-36.43	1.17	278.58	21.28	-32.32	0.16
5200.00	5198.90	-38.47	1.18	279.89	21.61	-34.34	0.03
5300.00	5298.88	-40.54	1.20	278.21	21.94	-36.39	0.04
5400.00	5398.86	-42.65	1.23	280.01	22.27	-38.49	0.05
5500.00	5498.83	-44.88	1.32	285.32	22.76	-40.66	0.15
5600.00	5598.81	-47.09	1.22	287.83	23.39	-42.78	0.11
5700.00	5698.79	-49.17	1.17	288.66	24.05	-44.76	0.05
5800.00	5798.77	-51.19	1.15	286.31	24.65	-46.69	0.05
5900.00	5898.75	-53.22	1.18	288.75	25.27	-48.63	0.06
6000.00	5998.73	-55.13	1.02	284.32	25.82	-50.47	0.18
6100.00	6098.71	-56.91	1.02	283.36	26.24	-52.19	0.02
6200.00	6198.69	-58.77	1.12	288.74	26.76	-53.98	0.14
6300.00	6298.67	-60.85	1.26	281.07	27.29	-55.99	0.21
6400.00	6398.65	-62.94	1.14	280.54	27.68	-58.05	0.12
6500.00	6498.63	-65.05	1.28	279.96	28.06	-60.12	0.14
6600.00	6598.60	-67.21	1.20	281.21	28.45	-62.25	0.08
6700.00	6698.58	-69.39	1.31	280.92	28.87	-64.40	0.11
6800.00	6798.56	-71.65	1.28	279.96	29.28	-66.62	0.04
6900.00	6898.53	-74.03	1.45	278.31	29.66	-68.98	0.17
7000.00	6998.49	-76.68	1.62	275.28	29.97	-71.64	0.19
7100.00	7098.46	-79.29	1.39	281.70	30.35	-74.23	0.28
7200.00	7198.43	-81.64	1.32	294.81	31.08	-76.46	0.32
7300.00	7298.40	-84.00	1.41	284.06	31.86	-78.70	0.27
7400.00	7398.37	-86.54	1.51	288.33	32.57	-81.15	0.15
7500.00	7498.31	-90.02	2.48	282.50	33.46	-84.51	0.99
7551.00	7549.26	-92.19	2.41	285.73	33.99	-86.62	0.30

The Horizontal Displacement (in Feet) at
Measured Depth 7551.00 is 93.05 in a Direction of 291.42 Degrees

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

MARBOB ENERGY
LPC 31 FED #2H
LEA COUNTY, NM
Rig: PATRIOT 6

Wed Jul 02 14:49:49 2008

Coordinates

Latitude: 32.705111 N (32 deg. 42 min. 18.3994 sec.)
Longitude: 103.799620 W (-103 deg. 47 min. 58.6331 sec.)
Elevation: 0.00 feet.
Calculation Date: Jul/02/2008

Magnetic Calculations

Model: IGRF2005
Dip Angle: 60.6798 degrees
Total Magnetic Field: 0.49228 gauss
Magnetic Declination: 8.071593 degrees
Horizontal Intensity: 0.241066 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 8.071593 Degr

Transverse Mercator Grid Calculations NAD27

Grid System: Transverse Mercator: new mexico east
Ellipsoid: Clarke 1866
X: 664170.6000 feet
Y: 620643.5000 feet
True to Grid: (convergence) -0.288379 degrees
Magnetic to Grid: 7.783214 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.783214 Degr.