

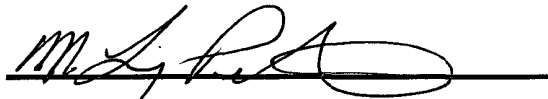
OPERATOR: Marbob Energy Corp.
WELL/LEASE: MunnyNtheBank St #1H
COUNTY: Eddy Co., New Mexico
Sec. 34 - 24 - 27

30-015-36130

STATE OF NEW MEXICO
DEVIATION REPORT

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
200	3/4	2,861	1
582	0	3,084	1
796	1 1/2	3,338	1/2
859	0	3,879	1/4
985	3/4	4,385	1/2
1,176	1/2	4,926	0
1,461	1/4	5,402	1/4
1,620	1 1/2	6,036	1 1/4
1,779	1 1/4	6,327	1 1/4
2,033	3 1/4	6,772	2
2,128	3 1/4	6,898	2
2,281	3	7,025	1 3/4
2,480	1 1/2	7,157	1 3/4
2,670	1 1/4	7,312	1 1/2
		7,565	1

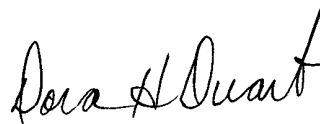
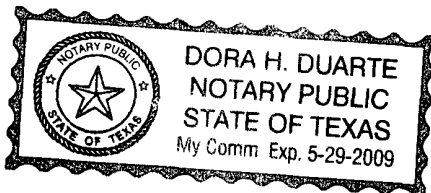
Patriot Drilling, LLC



M. Leroy Peterson, Executive Vice-
President

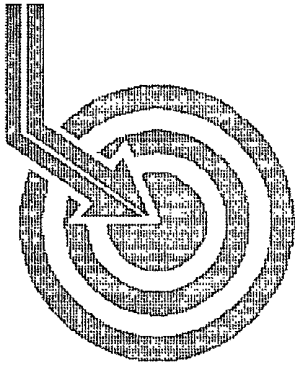
The foregoing instrument was acknowledged before me on this 4th day of
November, 2008 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling,
LLC.

My Commission Expires: 5/29/2009



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





Scientific Drilling

MARBOB ENERGY

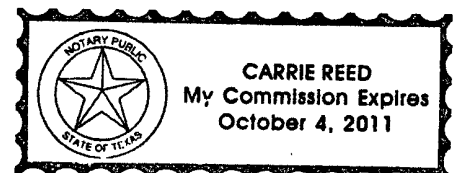
Field: Willow Lake
Site: Eddy County, NM
Well: Munnynthabank State #1H
Wellpath: VH - Job #32K12081043
Survey: 12/30/08

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

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

Notorized this date 16th of January, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: MARBOB ENERGY	Date: 01/16/2009	Time: 10:27:20	Page: 1
Field: Willow Lake	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Munnynthabank State #1H	Section (VS) Reference:	Well (0.00N,0.00E,101.74Azi)	
Wellpath: VH- Job #32K12081043	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 12/30/08	Start Date: 12/30/2008
Company: Scientific Drilling Internatio	Engineer: Melendez w/GeoGyro
Tool: Keeper;Keeper Gyro	Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	359.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1.10	43.51	99.99	0.51	0.70	0.66	1.10	0.96	43.51
200.00	1.35	28.66	199.97	1.35	2.43	1.89	0.40	3.07	37.87
300.00	1.43	10.19	299.94	1.66	4.69	2.67	0.45	5.40	29.69
400.00	1.06	359.50	399.92	1.43	6.84	2.89	0.44	7.42	22.87
500.00	1.18	0.00	499.90	1.03	8.80	2.88	0.12	9.25	18.11
600.00	0.80	358.72	599.88	0.66	10.52	2.86	0.38	10.91	15.21
700.00	0.54	7.14	699.88	0.47	11.69	2.90	0.28	12.04	13.95
800.00	1.45	77.50	799.86	1.58	12.43	4.20	1.37	13.12	18.66
900.00	1.21	97.04	899.84	3.79	12.57	6.48	0.51	14.15	27.27
1000.00	1.03	96.28	999.82	5.73	12.35	8.42	0.18	14.95	34.30
1100.00	0.74	114.07	1099.81	7.26	11.99	9.91	0.40	15.55	39.57
1200.00	0.59	114.03	1199.80	8.39	11.51	10.97	0.15	15.90	43.61
1300.00	0.38	161.14	1299.80	9.07	10.99	11.54	0.43	15.94	46.41
1400.00	0.42	205.42	1399.79	9.15	10.34	11.49	0.30	15.46	48.01
1500.00	0.27	83.01	1499.79	9.28	10.04	11.57	0.61	15.32	49.04
1600.00	1.56	62.38	1599.78	10.56	10.70	13.01	1.31	16.85	50.56
1700.00	1.88	70.34	1699.73	13.01	11.88	15.76	0.40	19.74	52.98
1800.00	1.94	76.89	1799.68	15.95	12.82	18.95	0.23	22.88	55.93
1900.00	2.22	84.16	1899.61	19.33	13.40	22.53	0.38	26.21	59.25
2000.00	2.94	80.80	1999.51	23.57	14.01	26.99	0.74	30.41	62.57
2100.00	3.38	83.03	2099.36	28.76	14.78	32.44	0.46	35.65	65.52
2200.00	2.76	86.64	2199.21	33.88	15.27	37.77	0.65	40.75	67.98
2300.00	2.14	87.23	2299.12	38.01	15.51	42.04	0.62	44.81	69.76
2400.00	1.60	83.89	2399.07	41.15	15.74	45.30	0.55	47.95	70.83
2500.00	1.59	88.55	2499.03	43.83	15.93	48.07	0.13	50.64	71.67
2600.00	1.58	82.77	2598.99	46.48	16.14	50.83	0.16	53.33	72.39
2700.00	1.39	75.17	2698.96	48.87	16.62	53.37	0.27	55.89	72.70
2800.00	1.32	80.65	2798.93	51.03	17.12	55.67	0.15	58.25	72.91
2900.00	1.13	76.89	2898.91	53.00	17.53	57.77	0.21	60.37	73.12
3000.00	0.89	85.44	2998.89	54.64	17.81	59.51	0.28	62.12	73.33
3100.00	0.71	91.75	3098.88	55.99	17.86	60.90	0.20	63.46	73.66
3200.00	0.53	79.18	3198.88	57.03	17.93	61.97	0.22	64.51	73.87
3300.00	0.54	70.93	3298.87	57.86	18.17	62.87	0.08	65.44	73.88
3400.00	0.31	71.46	3398.87	58.50	18.41	63.57	0.23	66.19	73.85
3500.00	0.59	72.59	3498.87	59.18	18.65	64.32	0.28	66.97	73.83
3600.00	0.43	71.85	3598.86	59.96	18.92	65.17	0.16	67.86	73.81
3700.00	0.37	66.39	3698.86	60.55	19.16	65.82	0.07	68.56	73.77
3800.00	0.33	52.19	3798.86	61.00	19.47	66.35	0.10	69.14	73.65
3900.00	0.51	60.43	3898.85	61.52	19.87	66.96	0.19	69.85	73.48
4000.00	0.44	76.47	3998.85	62.20	20.17	67.72	0.15	70.66	73.41
4100.00	0.46	67.30	4098.85	62.88	20.42	68.46	0.07	71.44	73.39
4200.00	0.38	53.35	4198.85	63.43	20.77	69.10	0.13	72.16	73.27
4300.00	0.53	59.32	4298.84	63.99	21.21	69.76	0.16	72.92	73.09
4400.00	0.44	73.80	4398.84	64.67	21.55	70.53	0.15	73.75	73.01
4500.00	0.38	51.20	4498.84	65.22	21.86	71.16	0.17	74.44	72.92
4600.00	0.35	49.42	4598.83	65.62	22.27	71.65	0.03	75.03	72.73
4700.00	0.18	118.33	4698.83	65.96	22.40	72.02	0.33	75.42	72.73
4800.00	0.23	56.18	4798.83	66.25	22.43	72.32	0.22	75.72	72.77



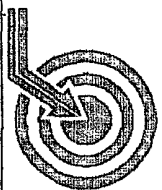
Scientific Drilling International

Survey Report

Company: MARBOB ENERGY	Date: 01/16/2009	Time: 10:27:20	Page: 2
Field: Willow Lake	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Munnynthabank State #1H	Section (VS) Reference:	Well (0.00N,0.00E,101.74Azi)	
Wellpath: VH- Job #32K12081043	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

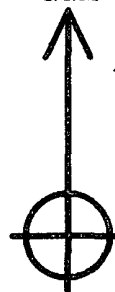
MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	0.27	99.51	4898.83	66.62	22.51	72.72	0.19	76.13	72.80
5000.00	0.13	162.31	4998.83	66.92	22.36	72.99	0.24	76.34	72.97
5100.00	0.14	68.83	5098.83	67.07	22.29	73.14	0.20	76.46	73.05
5200.00	0.12	118.17	5198.83	67.28	22.29	73.34	0.11	76.66	73.10
5300.00	0.13	153.41	5298.83	67.45	22.14	73.49	0.08	76.75	73.24
5400.00	0.10	199.15	5398.83	67.51	21.95	73.51	0.09	76.72	73.37
5500.00	0.26	226.97	5498.83	67.36	21.72	73.32	0.18	76.46	73.50
5600.00	0.37	199.84	5598.83	67.19	21.26	73.04	0.18	76.07	73.77
5700.00	0.33	207.51	5698.83	67.06	20.70	72.80	0.06	75.68	74.13
5800.00	0.31	217.11	5798.83	66.87	20.23	72.50	0.06	75.27	74.41
5900.00	0.46	157.11	5898.82	66.98	19.64	72.49	0.41	75.11	74.84
6000.00	0.96	172.18	5998.82	67.49	18.44	72.76	0.53	75.07	75.78
6100.00	1.03	160.16	6098.80	68.24	16.77	73.18	0.22	75.08	77.10
6200.00	1.26	149.60	6198.78	69.45	14.97	74.04	0.31	75.54	78.57
6300.00	1.19	150.10	6298.76	70.88	13.12	75.12	0.07	76.26	80.09
6400.00	1.26	141.31	6398.74	72.42	11.37	76.32	0.20	77.17	81.53
6500.00	1.84	143.82	6498.70	74.45	9.21	77.96	0.58	78.50	83.26
6600.00	2.02	144.70	6598.64	76.94	6.48	79.92	0.18	80.19	85.37
6700.00	1.98	146.25	6698.58	79.46	3.60	81.90	0.07	81.98	87.48
6800.00	2.11	151.15	6798.52	81.89	0.55	83.75	0.22	83.75	89.62
6900.00	2.00	157.13	6898.45	84.08	-2.67	85.32	0.24	85.36	91.79
7000.00	2.06	159.56	6998.39	86.02	-5.96	86.62	0.10	86.83	93.93
7100.00	2.02	161.25	7098.33	87.88	-9.31	87.82	0.07	88.31	96.05
7200.00	2.05	157.07	7198.26	89.79	-12.63	89.08	0.15	89.97	98.07
7300.00	1.67	149.08	7298.21	91.79	-15.52	90.53	0.46	91.85	99.73
7400.00	1.10	124.06	7398.18	93.67	-17.31	92.07	0.82	93.68	100.65
7500.00	1.10	111.43	7498.16	95.50	-18.20	93.76	0.24	95.51	100.99
7600.00	1.23	124.61	7598.14	97.44	-19.16	95.54	0.30	97.44	101.34
7655.00	1.48	140.63	7653.13	98.53	-20.04	96.47	0.82	98.53	101.74



Scientific
Drilling

Field: Willow Lake
Site: Eddy County, NM
Well: Munnynthabank State #1H
Wellpath: VH - Job #32K12081043
Survey: 12/30/08

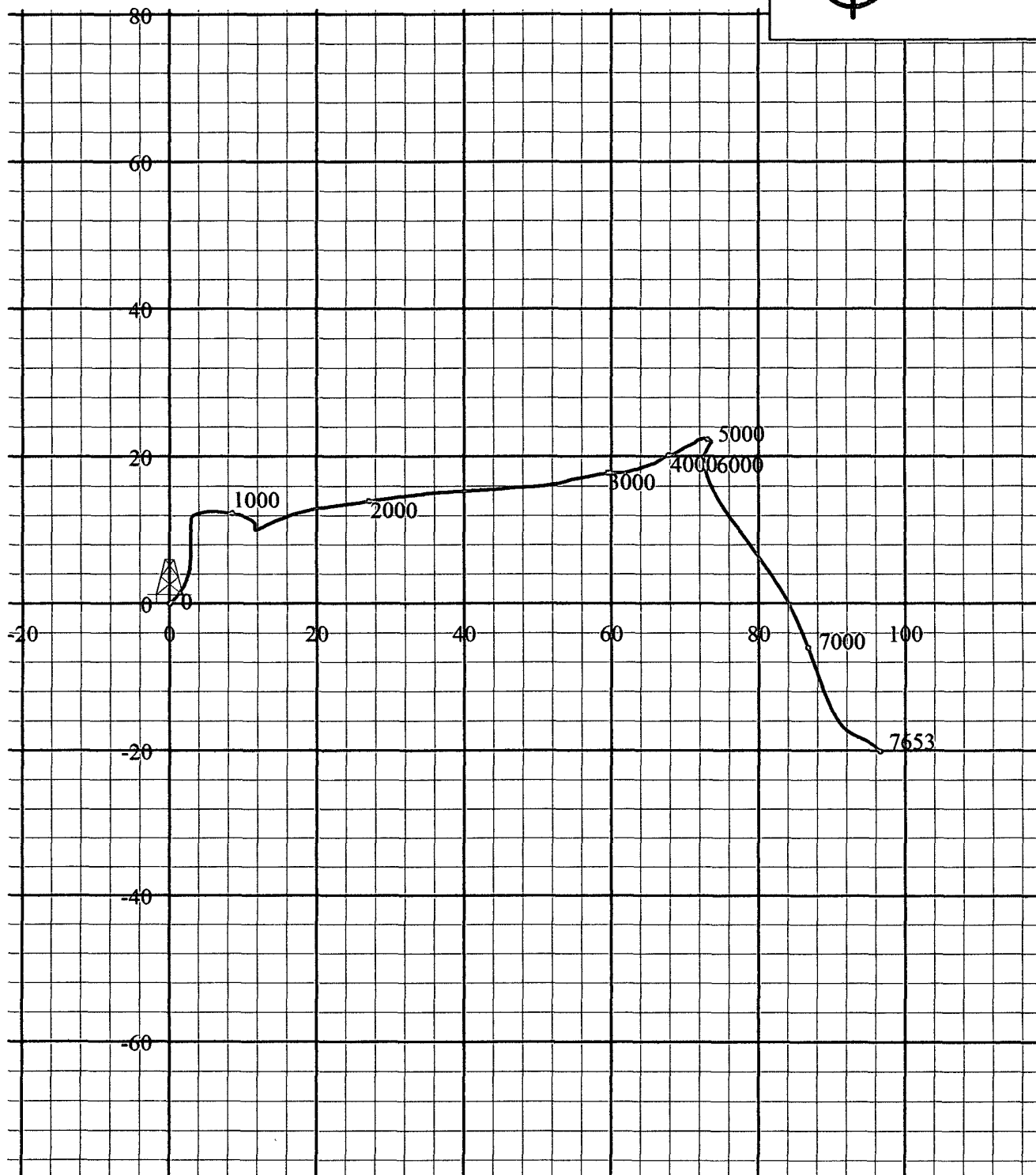
G/T/M



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 01/16/2009
Model: igrf2000

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



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

January 13, 2009

Marbob Energy Corporation
P.O. Box 227
Artesia, NM 88211-0227

RE: Marbob Energy Corporation
MunnyNThaBank State #1H
Eddy County, New Mexico
Rig: Patriot #6
Field: Willow Lake Bone Spring; West
PES File No.: 101008149 WT-WT

To whom it may concern:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA
1 – Original survey report
2 – Survey report copies

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (432) 687-1647

Sincerely,



MIKE EVANS
MWD Engineer
PathFinder Energy Services

ML:sh



DIRECTIONAL SURVEY REPORT

MARBOB ENERGY CORPORATION

MUNNYNTHABANK STATE #1H

EDDY COUNTY, NEW MEXICO

PREPARED BY: MIKE EVANS

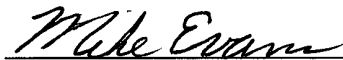
Pathfinder Energy Services, Inc.
6213 W. County Road 112 • Midland, TX • 79706
(432)681-6000

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) MATT SHIPP
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 1/01/09 TO 1/08/09
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

MARBOB ENERGY CORPORATION
MUNNYNTHABANK STATE #1H
EDDY COUNTY, NM
RIG: PATRIOT #6
9. SURVEY CERTIFIED FROM: 7,673 TO 9,986 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 1,943.19 FEET ON A BEARING OF 357.99 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 10,055 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



MIKE EVANS
MWD ENGINEER

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 12/30/2008
Date Completed: 01/08/2009

MARBOB ENERGY CORPORATION
MUNNYNTHABANK STATE #1H
EDDY COUNTY, NEW MEXICO
Rig: PATRIOT #6
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: MATT SHIPP
NATE TVRDY

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.10.27.8873 N LON: 104.10.13.3592 W
GRID Reference: NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 550419.6000 Y: 427210.3000
North Aligned To: GRID NORTH
Total Magnetic Correction: 8.05° EAST TO GRID
Vertical Section Plane: 358.76
Survey Vert. Reference: 17.00' Kelly Bushing To Ground
Altitude: 3184.00' Ground To MSL

Measured Depth	10055.00	(feet)
Inclination	90.22	(deg)
Azimuth	1.77	(deg)
True Vertical Depth	8208.91	(feet)
Vertical Section	1943.02	(feet)
Survey X cord	550351.49	(feet)
Survey Y cord	429152.29	(feet)
Survey Lat	32.17975195	N (deg)
Survey Lon	104.17058819	W (deg)
Rectangular Corr. N/S	1942.00	N (feet)
Rectangular Corr. E/W	68.09	W (feet)
Closure Distance	1943.19	(feet)
Direction of Closure	357.99	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION

MUNNYNTHABANK STATE #1H

EDDY COUNTY, NEW MEXICO

Rig: PATRIOT #6

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: MATT SHIPP

NATE TVRDY

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 32.10.27.8873 N LON: 104.10.13.3592 W

Reference: NAD27 new mexico east Transverse Mercator

Ref GRID Coord: X: 550419.6000 Y: 427210.3000

North Aligned To: GRID NORTH

Total Magnetic Correction: 8.05° EAST TO GRID

Vertical Section Plane: 358.76

Survey Vert. Reference: 17.00' Kelly Bushing To Ground

Altitude: 3184.00' Ground To MSL

Survey Calculations by RX4 using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist (ft)	Dir (deg)	DLS (dg/100ft)
TIE-INTO SCIENTIFIC SURVEY @7655'MD.										
7655.00	1.48	140.63	7653.13	0.00	-22.12	20.04 S	96.47 E	98.53@	101.74	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
7673.00	1.06	131.43	7671.13	18.00	-22.42	20.33 S	96.74 E	98.86@	101.87	2.59
7705.00	0.26	190.70	7703.12	32.00	-22.69	20.60 S	96.95 E	99.11@	101.99	2.98
7737.00	1.76	297.03	7735.12	32.00	-22.53	20.45 S	96.50 E	98.64@	101.96	5.78
7769.00	5.28	309.16	7767.05	32.00	-21.34	19.29 S	94.92 E	96.86@	101.49	11.18
7800.00	8.79	307.50	7797.82	31.00	-18.93	16.95 S	91.93 E	93.48@	100.45	11.34
7832.00	13.54	302.91	7829.20	32.00	-15.30	13.42 S	86.85 E	87.88@	98.79	15.09
7864.00	17.32	304.50	7860.04	32.00	-10.41	8.69 S	79.77 E	80.24@	96.22	11.89
7896.00	20.66	309.70	7890.30	32.00	-3.93	2.38 S	71.50 E	71.54@	91.91	11.69
7927.00	24.01	314.16	7918.97	31.00	4.15	5.51 N	62.77 E	63.01@	84.98	12.10
7959.00	26.64	315.48	7947.89	32.00	14.01	15.16 N	53.06 E	55.19@	74.05	8.41
7991.00	29.46	316.31	7976.13	32.00	25.04	25.97 N	42.60 E	49.89@	58.63	8.90
8018.00	32.10	316.97	7999.33	27.00	35.29	36.02 N	33.11 E	48.92@	42.59	9.86
8049.00	33.24	317.66	8025.42	31.00	47.83	48.32 N	21.77 E	52.99@	24.25	3.87
8081.00	35.61	320.39	8051.82	32.00	61.75	61.98 N	9.92 E	62.77@	9.09	8.84
8113.00	39.92	320.97	8077.11	32.00	77.18	77.14 N	2.49 W	77.18@	358.15	13.52
8145.00	44.85	321.98	8100.74	32.00	94.34	94.02 N	15.92 W	95.35@	350.39	15.55
8176.00	49.95	323.85	8121.72	31.00	112.84	112.22 N	29.66 W	116.07@	345.20	17.04
8208.00	55.31	326.23	8141.13	32.00	133.99	133.06 N	44.21 W	140.22@	341.62	17.76
8240.00	60.59	329.60	8158.11	32.00	157.27	156.04 N	58.59 W	166.68@	339.42	18.76
8272.00	65.60	333.24	8172.59	32.00	182.62	181.10 N	72.21 W	194.97@	338.26	18.65
8303.00	71.05	336.16	8184.04	31.00	208.92	207.14 N	84.51 W	223.71@	337.81	19.64

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
MUNNYNTHABANK STATE #1H
EDDY COUNTY, NEW MEXICO
RIG:PATRIOT #6

Page 02/03

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist (ft)	Dir (deg)	DLS (dg/100ft)
8335.00	75.62	338.46	8193.21	32.00	237.44	235.41 N	96.32 W	254.36@	337.75	15.85
8366.00	78.52	340.26	8200.15	31.00	265.94	263.68 N	106.97 W	284.55@	337.92	10.93
8398.00	79.23	343.23	8206.33	32.00	295.96	293.50 N	116.80 W	315.89@	338.30	9.37
8430.00	81.60	345.86	8211.65	32.00	326.54	323.91 N	125.20 W	347.26@	338.87	10.98
8462.00	84.33	347.36	8215.57	32.00	357.58	354.80 N	132.56 W	378.75@	339.51	9.72
8493.00	86.53	350.30	8218.04	31.00	388.02	385.11 N	138.54 W	409.27@	340.21	11.82
8525.00	87.85	353.73	8219.61	32.00	419.75	416.76 N	142.98 W	440.60@	341.06	11.47
8557.00	89.16	357.36	8220.45	32.00	451.69	448.64 N	145.46 W	471.64@	342.04	12.06
8589.00	89.60	1.31	8220.79	32.00	483.68	480.63 N	145.83 W	502.27@	343.12	12.42
8620.00	90.40	6.17	8220.79	31.00	514.55	511.56 N	143.81 W	531.39@	344.30	15.89
8652.00	92.24	7.53	8220.06	32.00	546.22	543.32 N	140.00 W	561.06@	345.55	7.15
8684.00	93.21	7.82	8218.54	32.00	577.80	574.99 N	135.73 W	590.80@	346.72	3.16
8716.00	93.30	7.91	8216.72	32.00	609.34	606.64 N	131.36 W	620.70@	347.78	0.40
8747.00	93.30	7.74	8214.93	31.00	639.91	637.30 N	127.14 W	649.86@	348.72	0.55
8779.00	93.30	7.50	8213.09	32.00	671.47	668.97 N	122.91 W	680.16@	349.59	0.75
8811.00	91.54	7.55	8211.74	32.00	703.07	700.66 N	118.72 W	710.65@	350.38	5.50
8843.00	89.52	7.69	8211.45	32.00	734.68	732.38 N	114.48 W	741.27@	351.12	6.33
8874.00	88.90	7.64	8211.87	31.00	765.31	763.10 N	110.34 W	771.03@	351.77	2.01
8906.00	88.64	7.60	8212.56	32.00	796.92	794.81 N	106.10 W	801.86@	352.40	0.82
8938.00	89.96	7.06	8212.95	32.00	828.56	826.54 N	102.02 W	832.81@	352.96	4.46
8969.00	90.48	6.87	8212.83	31.00	859.24	857.31 N	98.26 W	862.93@	353.46	1.79
9001.00	90.75	6.60	8212.49	32.00	890.93	889.09 N	94.51 W	894.10@	353.93	1.19
9033.00	90.48	6.44	8212.14	32.00	922.63	920.88 N	90.87 W	925.35@	354.36	0.98
9065.00	91.45	5.06	8211.61	32.00	954.39	952.71 N	87.67 W	956.74@	354.74	5.27
9096.00	91.80	4.56	8210.73	31.00	985.20	983.59 N	85.07 W	987.26@	355.06	1.97
9128.00	92.07	3.09	8209.65	32.00	1017.06	1015.50 N	82.94 W	1018.88@	355.33	4.67
9160.00	92.51	2.46	8208.37	32.00	1048.96	1047.44 N	81.39 W	1050.60@	355.56	2.40

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
MUNNINTHABANK STATE #1H
EDDY COUNTY, NEW MEXICO
RIG:PATRIOT #6

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
9192.00	92.59	2.08	8206.94	32.00	1080.86	1079.38 N	80.12 W	1082.35@	355.75	1.21
9223.00	91.89	1.63	8205.73	31.00	1111.79	1110.34 N	79.12 W	1113.16@	355.92	2.68
9255.00	89.78	1.06	8205.27	32.00	1143.76	1142.33 N	78.37 W	1145.01@	356.08	6.83
9287.00	88.90	1.04	8205.63	32.00	1175.73	1174.32 N	77.78 W	1176.89@	356.21	2.75
9319.00	89.16	0.45	8206.18	32.00	1207.70	1206.31 N	77.37 W	1208.79@	356.33	2.02
9350.00	89.52	0.49	8206.53	31.00	1238.69	1237.31 N	77.11 W	1239.71@	356.43	1.17
9382.00	89.87	0.17	8206.70	32.00	1270.68	1269.31 N	76.93 W	1271.64@	356.53	1.48
9414.00	90.22	0.19	8206.68	32.00	1302.67	1301.31 N	76.83 W	1303.57@	356.62	1.09
9445.00	90.31	359.64	8206.54	31.00	1333.66	1332.31 N	76.87 W	1334.52@	356.70	1.80
9477.00	90.75	359.29	8206.24	32.00	1365.66	1364.31 N	77.17 W	1366.49@	356.76	1.76
9509.00	89.52	359.25	8206.16	32.00	1397.65	1396.30 N	77.58 W	1398.46@	356.82	3.85
9541.00	88.99	359.53	8206.58	32.00	1429.65	1428.30 N	77.92 W	1430.42@	356.88	1.87
9573.00	87.93	0.70	8207.44	32.00	1461.63	1460.28 N	77.86 W	1462.36@	356.95	4.93
9604.00	87.76	0.46	8208.61	31.00	1492.59	1491.26 N	77.54 W	1493.28@	357.02	0.95
9636.00	87.32	0.68	8209.98	32.00	1524.54	1523.23 N	77.22 W	1525.19@	357.10	1.54
9668.00	87.14	0.39	8211.53	32.00	1556.49	1555.19 N	76.93 W	1557.09@	357.17	1.07
9700.00	88.02	1.02	8212.88	32.00	1588.44	1587.16 N	76.53 W	1589.00@	357.24	3.38
9732.00	90.04	1.75	8213.42	32.00	1620.40	1619.14 N	75.76 W	1620.91@	357.32	6.71
9763.00	90.92	1.41	8213.16	31.00	1651.37	1650.13 N	74.90 W	1651.83@	357.40	3.04
9795.00	91.36	0.74	8212.52	32.00	1683.33	1682.12 N	74.30 W	1683.76@	357.47	2.50
9827.00	91.71	0.90	8211.67	32.00	1715.30	1714.10 N	73.85 W	1715.69@	357.53	1.20
9859.00	91.10	0.77	8210.88	32.00	1747.27	1746.09 N	73.38 W	1747.63@	357.59	1.95
9891.00	91.10	0.74	8210.27	32.00	1779.24	1778.08 N	72.96 W	1779.58@	357.65	0.09
9922.00	90.57	1.59	8209.81	31.00	1810.21	1809.07 N	72.33 W	1810.52@	357.71	3.23
9954.00	90.75	2.09	8209.45	32.00	1842.16	1841.05 N	71.30 W	1842.43@	357.78	1.66
9986.00	90.22	1.77	8209.17	32.00	1874.11	1873.03 N	70.22 W	1874.35@	357.85	1.93
STRAIGHT-LINE PROJECTION TO BIT @ 10055' MD.										
10055.00	90.22	1.77	8208.91	69.00	1943.02	1942.00 N	68.09 W	1943.19@	357.99	0.00



TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	Marbob Energy Corporation		
LEASE / WELL No.:	MunnyNThaBank State	#1H	
WELL LOCATION:	Willow Lake Bone Spring, West		
COUNTY / STATE / COUNTRY:	Eddy	New Mexico	USA
RIG:	Patriot #6		
API WELL No:	30-015-36130		
JOB No:	101008149-WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	Pathfinder Energy Services		

WELL SITE INFORMATION

MAGNETIC DECLINATION:			
On Wall Plat:	8.05	LWD Calculated:	8.05209
		Agreed Upon:	8.05
X =	550419.600000	Feet	Y = 427210.300000
			Feet
SITE LATITUDE:	32.174413N	SITE LONGITUDE:	104.170378W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	
PROPOSED DRIFT DIRECTION:	358.76		
KELLY BUSHING ELEVATION:	17		
ALTITUDE:	3184	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	7655		
DRIFT ANGLE:	1.48		
DRIFT DIRECTION:	140.63		
TRUE VERTICAL DEPTH:	7653.13		
VERTICAL SECTION:	-22.12		
RECTANGULAR COORDINATE (N / S) :	-20.04		
RECTANGULAR COORDINATE (E / W) :	96.47		
CLOSURE DISTANCE / DIRECTION:	98.53	101.74	
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:	7700	TOTAL DEPTH:	10045
KICKOFF ANGLE:	1.23	MAX ANGLE:	90

PES Engineers:

**Signature of both field engineers required if applicable

Directional Driller:

DATE:

12/31/08

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

MARBOB ENERGY
MunnyNthabank State #1H
EDDY COUNTY, NEW MEXICO
Rig: PATRIOT 6

Wed Dec 17 11:12:52 2008

Coordinates

Latitude: 32.174413 N (32 deg. 10 min. 27.8873 sec.)
Longitude: 104.170378 W (-104 deg. 10 min. 13.3592 sec.)
Elevation: 3184.00 feet.
Calculation Date: Dec/17/2008

Magnetic Calculations

Model: IGRF2005
Dip Angle: 60.1090 degrees
Total Magnetic Field: 0.48796 gauss
Magnetic Declination: 8.138864 degrees
Horizontal Intensity: 0.243174 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 8.138864 Degr.

Transverse Mercator Grid Calculations NAD27

Grid System: Transverse Mercator: new mexico east
Ellipsoid: Clarke 1866
X: 550419.6000 feet
Y: 427210.3000 feet
True to Grid: (convergence) -0.086774 degrees
Magnetic to Grid: 8.052090 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 8.052090 Degr.