

PATRIOT DRILLING, LLC

OPERATOR: Marbob Energy Corp.
WELL/LEASE: Liberator Fed
COUNTY: Eddy Co., New Mexico
Sec 13, T

30 015 37185

**STATE OF NEW MEXICO
DEVIATION REPORT**

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
400	1/4	3,963	1/2
578	1	4,275	1 1/2
765	3/4	4,401	1 1/2
1,261	1	4,540	1 1/4
1,803	1/2	4,790	3/4
2,056	2	5,238	1 3/4
2,180	2 1/4	5,483	2
2,275	2 1/2	5,674	1 3/4
2,374	1 3/4	5,928	1 1/2
2,469	1 3/4	6,182	3/4
2,595	3/4	6,439	1 1/2
2,787	3/4	6,696	1 1/4
3,010	1/2	7,169	3/4
3,134	1/2	7,675	2
3,455	1/2	7,931	4

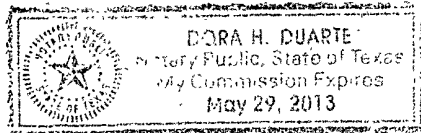
Patriot Drilling, LLC

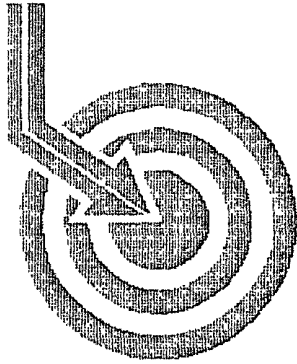
M. Leroy Peterson, Executive Vice-President

The foregoing instrument was acknowledged before me on this 9th day of October, 2009 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 5/29/2013

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





Scientific Drilling

MARBOB ENERGY

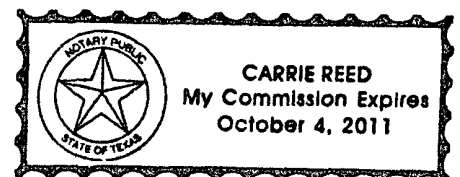
Field: Lusk Bone Springs
Site: Eddy County, NM
Well: Liberator Federal Com #1
Wellpath: VH - Job #32K0909363
Survey: 09/12/09

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

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

Notorized this date 22nd of September, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: MARBOB ENERGY	Date: 09/18/2009	Time: 11:57:56	Page: 1
Field: Lusk Bone Springs	Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North		
Site: Eddy County, NM	Vertical (TVD) Reference: SITE 0.0		
Well: Liberator Federal Com #1	Section (VS) Reference: Well (0.00N,0.00E,179.60Azi)		
Wellpath: VH - Job #32K0909363	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 09/12/09	Start Date: 09/12/2009
Company: Scientific Drilling Internatio	Engineer: Madrid w/Gray
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	359.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.19	172.28	100.00	0.16	-0.16	0.02	0.19	0.17	172.28
200.00	0.20	189.49	200.00	0.50	-0.50	0.02	0.06	0.50	178.20
300.00	0.33	210.40	300.00	0.92	-0.92	-0.16	0.16	0.93	189.78
400.00	0.49	211.84	400.00	1.53	-1.53	-0.53	0.16	1.62	199.07
500.00	0.75	212.58	499.99	2.44	-2.45	-1.11	0.26	2.69	204.36
600.00	0.89	212.37	599.98	3.64	-3.66	-1.88	0.14	4.11	207.17
700.00	0.76	209.04	699.97	4.87	-4.89	-2.61	0.14	5.55	208.12
800.00	0.83	211.03	799.96	6.07	-6.09	-3.31	0.08	6.93	208.51
900.00	0.69	182.84	899.95	7.29	-7.31	-3.71	0.39	8.20	206.91
1000.00	0.64	168.83	999.94	8.44	-8.46	-3.63	0.17	9.21	203.24
1100.00	0.58	162.69	1099.94	9.47	-9.49	-3.38	0.09	10.08	199.57
1200.00	0.56	156.39	1199.93	10.40	-10.42	-3.03	0.07	10.86	196.20
1300.00	0.62	154.63	1299.93	11.34	-11.36	-2.60	0.06	11.66	192.90
1400.00	0.53	125.72	1399.92	12.11	-12.12	-1.99	0.30	12.28	189.34
1500.00	0.44	123.15	1499.92	12.59	-12.60	-1.30	0.09	12.67	185.88
1600.00	0.52	98.39	1599.92	12.87	-12.88	-0.53	0.22	12.89	182.34
1700.00	0.62	85.76	1699.91	12.91	-12.90	0.46	0.16	12.91	177.95
1800.00	1.03	70.45	1799.90	12.57	-12.56	1.85	0.46	12.70	171.63
1900.00	1.61	71.61	1899.87	11.85	-11.82	4.03	0.58	12.49	161.18
2000.00	2.03	65.71	1999.82	10.69	-10.65	6.98	0.46	12.73	146.77
2100.00	2.08	64.32	2099.76	9.20	-9.13	10.23	0.07	13.71	131.76
2200.00	2.15	65.65	2199.69	7.67	-7.57	13.57	0.09	15.54	119.16
2300.00	2.10	66.16	2299.62	6.18	-6.06	16.95	0.05	18.00	109.66
2400.00	2.17	63.09	2399.55	4.60	-4.46	20.32	0.13	20.80	102.38
2500.00	1.40	79.60	2499.50	3.54	-3.38	23.21	0.92	23.45	98.29
2600.00	0.94	110.10	2599.48	3.62	-3.44	25.18	0.76	25.42	97.79
2700.00	0.80	138.24	2699.47	4.43	-4.25	26.42	0.44	26.76	99.13
2800.00	0.82	136.69	2799.46	5.48	-5.29	27.37	0.03	27.88	100.93
2900.00	0.79	150.94	2899.45	6.61	-6.41	28.20	0.20	28.92	102.81
3000.00	0.70	161.31	2999.44	7.79	-7.59	28.73	0.16	29.71	104.80
3100.00	0.63	187.05	3099.44	8.92	-8.72	28.86	0.30	30.14	106.81
3200.00	0.54	201.54	3199.43	9.90	-9.70	28.62	0.17	30.22	108.73
3300.00	0.54	196.82	3299.43	10.79	-10.59	28.31	0.04	30.22	110.51
3400.00	0.55	204.22	3399.42	11.67	-11.48	27.97	0.07	30.24	112.31
3500.00	0.57	204.28	3499.42	12.56	-12.37	27.57	0.02	30.22	114.16
3600.00	0.42	203.56	3599.42	13.35	-13.16	27.22	0.15	30.23	115.80
3700.00	0.34	188.73	3699.41	13.98	-13.79	27.03	0.13	30.34	117.03
3800.00	0.31	176.15	3799.41	14.54	-14.35	27.00	0.08	30.58	117.99
3900.00	0.29	185.66	3899.41	15.06	-14.87	27.00	0.05	30.82	118.85
4000.00	0.69	190.47	3999.41	15.90	-15.72	26.86	0.40	31.12	120.33
4100.00	0.89	196.34	4099.40	17.24	-17.05	26.53	0.22	31.54	122.73
4200.00	1.23	192.41	4199.38	19.03	-18.85	26.08	0.35	32.18	125.85
4300.00	1.38	192.11	4299.35	21.25	-21.07	25.60	0.15	33.16	129.46
4400.00	1.42	194.00	4399.32	23.63	-23.45	25.05	0.06	34.31	133.12
4500.00	1.32	196.93	4499.30	25.93	-25.76	24.41	0.12	35.49	136.54
4600.00	1.16	205.51	4599.27	27.94	-27.77	23.64	0.24	36.47	139.59
4700.00	1.05	212.44	4699.25	29.62	-29.46	22.71	0.17	37.20	142.37
4800.00	0.99	233.97	4799.24	30.89	-30.74	21.52	0.39	37.53	145.00



Scientific
Drilling

Scientific Drilling International Survey Report

Company: MARBOB ENERGY
Field: Lusk Bone Springs
Site: Eddy County, NM
Well: Liberator Federal Com #1
Wellpath: VH - Job #32K0909363

Date: 09/18/2009 Time: 11:57:56 Page: 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,179.60Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

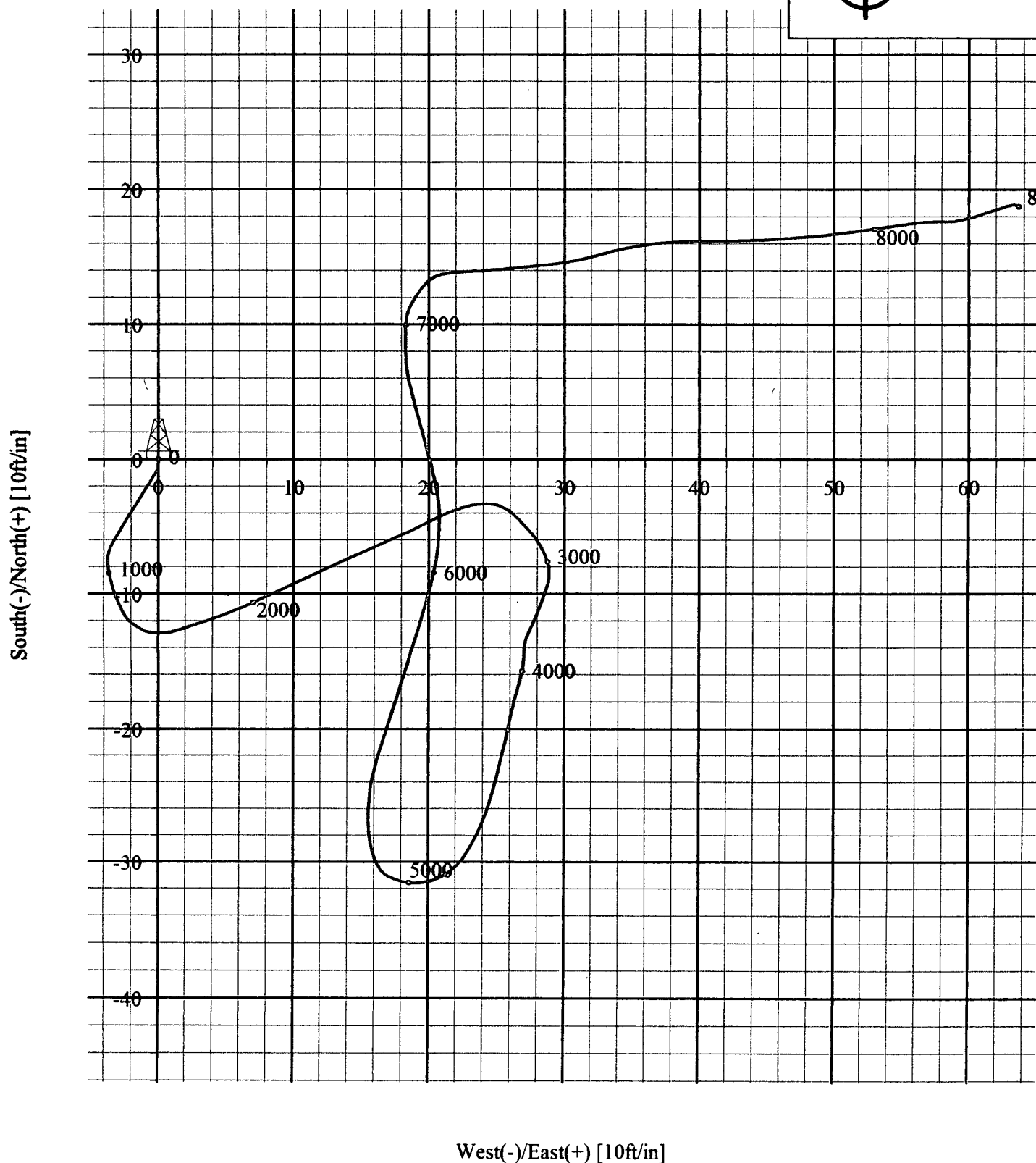
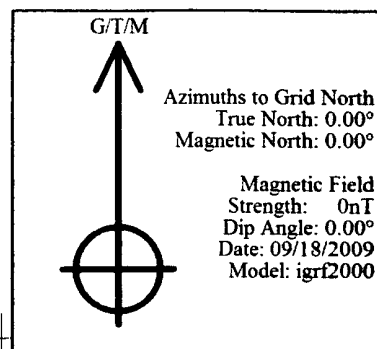
Survey

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	0.90	256.33	4899.22	31.57	-31.44	20.06	0.38	37.29	147.45
5000.00	0.81	276.16	4999.21	31.67	-31.55	18.60	0.31	36.62	149.48
5100.00	0.97	295.29	5099.20	31.23	-31.11	17.13	0.34	35.51	151.16
5200.00	1.51	342.46	5199.18	29.60	-29.49	15.97	1.11	33.53	151.57
5300.00	1.76	359.70	5299.14	26.81	-26.70	15.56	0.55	30.90	149.76
5400.00	1.72	11.52	5399.09	23.80	-23.69	15.85	0.36	28.51	146.21
5500.00	1.76	17.90	5499.05	20.88	-20.76	16.62	0.20	26.60	141.31
5600.00	1.70	18.66	5599.00	18.02	-17.89	17.57	0.06	25.08	135.52
5700.00	1.57	16.16	5698.96	15.30	-15.17	18.43	0.15	23.87	129.47
5800.00	1.34	17.73	5798.93	12.88	-12.74	19.16	0.23	23.01	123.62
5900.00	1.27	14.76	5898.90	10.69	-10.56	19.80	0.10	22.44	118.06
6000.00	1.20	13.44	5998.88	8.61	-8.47	20.33	0.08	22.02	112.61
6100.00	1.10	5.29	6098.86	6.64	-6.49	20.66	0.19	21.66	107.45
6200.00	0.89	2.57	6198.85	4.91	-4.76	20.78	0.22	21.32	102.90
6300.00	0.88	352.49	6298.83	3.37	-3.22	20.72	0.16	20.97	98.84
6400.00	1.01	348.31	6398.82	1.74	-1.60	20.44	0.15	20.50	94.47
6500.00	1.08	344.04	6498.80	-0.03	0.17	20.00	0.10	20.00	89.51
6600.00	1.02	345.72	6598.79	-1.80	1.94	19.52	0.07	19.62	84.33
6700.00	1.13	345.32	6698.77	-3.62	3.75	19.05	0.11	19.42	78.85
6800.00	1.16	346.97	6798.75	-5.56	5.69	18.58	0.04	19.43	72.96
6900.00	1.25	357.24	6898.73	-7.64	7.77	18.29	0.23	19.88	66.99
7000.00	1.20	3.25	6998.70	-9.78	9.91	18.30	0.14	20.81	61.58
7100.00	1.00	29.95	7098.69	-11.58	11.71	18.80	0.54	22.14	58.08
7200.00	1.03	42.17	7198.67	-12.99	13.13	19.84	0.22	23.79	56.50
7300.00	1.71	86.71	7298.64	-13.73	13.88	21.93	1.21	25.95	57.67
7400.00	2.18	85.55	7398.59	-13.94	14.11	25.31	0.47	28.98	60.86
7500.00	2.20	82.79	7498.51	-14.30	14.50	29.11	0.11	32.53	63.52
7600.00	2.01	74.11	7598.45	-14.99	15.22	32.71	0.37	36.07	65.04
7700.00	2.25	82.33	7698.38	-15.71	15.97	36.34	0.39	39.69	66.28
7800.00	3.12	90.43	7798.27	-15.92	16.21	41.00	0.95	44.09	68.43
7900.00	3.55	85.65	7898.10	-16.09	16.42	46.81	0.51	49.61	70.67
8000.00	3.47	81.74	7997.91	-16.72	17.09	52.89	0.25	55.59	72.09
8100.00	0.87	85.82	8097.83	-17.19	17.58	56.65	2.60	59.31	72.76
8200.00	0.74	91.77	8197.82	-17.21	17.62	58.05	0.15	60.66	73.12
8300.00	0.82	77.80	8297.81	-17.33	17.75	59.39	0.21	61.99	73.36
8400.00	1.05	71.22	8397.80	-17.77	18.19	60.96	0.25	63.62	73.38
8500.00	0.94	72.30	8497.78	-18.30	18.74	62.61	0.11	65.35	73.34
8600.00	0.32	139.91	8597.78	-18.33	18.77	63.57	0.87	66.29	73.55
8605.00	0.31	135.57	8602.78	-18.31	18.75	63.59	0.52	66.30	73.57



Scientific
Drilling

Field: Lusk Bone Springs
Site: Eddy County, NM
Well: Liberator Federal Com #1
Wellpath: VH - Job #32K0909363
Survey: 09/12/09



PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION

LIBERATOR FED COM #1H

Eddy COUNTY, NM

Rig: Patriot #6

PathFinder Office Supervisor: Francisco Sinisterra

PathFinder Field Engineers: David Baker

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 32.40.0.3064 N LON: 103.48.53.9899 W

Reference: NAD27 new mexico east Transverse Mercator

Ref GRID Coord: X: 659508.7789 Y: 606664.8806

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.65° EAST TO GRID

Vertical Section Plane: 179.60

Survey Vert. Reference: 14.00' Kelly Bushing To Ground

Altitude: 3600.00' Ground To MSL

Survey Calculations by RX5 V5.11i 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 Dir (ft) (deg)		DLS (dg/100ft)
TIE INTO SCIENTIFIC DRILLING GYRO SURVEY @ 8605'MD										
8605.00	0.31	135.57	8602.78	0.00	-18.37	18.81 N	63.64 E	66.36@	73.53	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
8654.00	0.18	89.50	8651.78	49.00	-18.27	18.72 N	63.81 E	66.50@	73.65	0.46
8687.00	0.44	109.75	8684.78	33.00	-18.23	18.67 N	63.98 E	66.65@	73.73	0.84
8719.00	1.06	169.79	8716.78	32.00	-17.89	18.34 N	64.15 E	66.72@	74.04	2.88
8751.00	2.73	165.04	8748.76	32.00	-16.86	17.31 N	64.40 E	66.68@	74.95	5.24
8783.00	6.33	170.96	8780.65	32.00	-14.38	14.83 N	64.87 E	66.55@	77.12	11.33
8814.00	10.29	173.67	8811.32	31.00	-9.94	10.39 N	65.45 E	66.27@	80.98	12.83
8846.00	14.60	173.27	8842.56	32.00	-3.08	3.54 N	66.23 E	66.33@	86.94	13.47
8878.00	19.52	171.68	8873.15	32.00	6.23	5.76 S	67.48 E	67.73@	94.88	15.44
8910.00	23.39	171.73	8902.92	32.00	17.82	17.34 S	69.17 E	71.31@	104.07	12.09
8942.00	26.20	171.97	8931.97	32.00	31.12	30.62 S	71.07 E	77.39@	113.31	8.79
8973.00	28.40	174.01	8959.52	31.00	45.24	44.73 S	72.80 E	85.44@	121.57	7.71
9005.00	30.86	175.04	8987.33	32.00	61.00	60.48 S	74.30 E	95.80@	129.14	7.85
9037.00	33.68	176.55	9014.38	32.00	78.04	77.52 S	75.54 E	108.24@	135.74	9.16
9069.00	36.49	176.36	9040.57	32.00	96.40	95.87 S	76.68 E	122.77@	141.35	8.79
9101.00	39.57	175.21	9065.77	32.00	116.07	115.53 S	78.14 E	139.47@	145.93	9.88
9133.00	42.56	174.41	9089.89	32.00	137.02	136.46 S	80.04 E	158.20@	149.61	9.49
9164.00	45.81	174.55	9112.12	31.00	158.53	157.96 S	82.12 E	178.04@	152.53	10.49
9204.00	47.40	182.43	9139.62	40.00	187.55	186.97 S	82.86 E	204.51@	156.10	14.85
9236.00	51.35	185.32	9160.46	32.00	211.76	211.20 S	81.20 E	226.27@	158.97	14.12
9268.00	55.75	187.41	9179.47	32.00	237.31	236.77 S	78.33 E	249.39@	161.69	14.72
9300.00	60.76	188.90	9196.30	32.00	264.21	263.69 S	74.47 E	274.01@	164.23	16.15
9332.00	66.48	189.46	9210.51	32.00	292.46	291.98 S	69.89 E	300.23@	166.54	17.94
9363.00	71.23	190.78	9221.69	31.00	320.88	320.43 S	64.81 E	326.92@	168.57	15.83
9395.00	74.66	191.25	9231.07	32.00	350.86	350.46 S	58.96 E	355.38@	170.45	10.81

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
LIBERATOR FED COM #1H
Eddy COUNTY, NM
RIG:Patriot #6

Page 02/04

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)
9427.00	78.08	192.01	9238.61	32.00	381.27	380.91 S	52.69 E	384.54@	172.12	10.93
9459.00	80.37	192.03	9244.60	32.00	411.97	411.66 S	46.15 E	414.24@	173.60	7.16
9491.00	81.69	192.85	9249.59	32.00	442.79	442.52 S	39.34 E	444.27@	174.92	4.84
9523.00	82.39	192.50	9254.02	32.00	473.66	473.44 S	32.38 E	474.55@	176.09	2.44
9555.00	84.06	193.19	9257.79	32.00	504.59	504.42 S	25.32 E	505.06@	177.13	5.64
9586.00	87.49	195.01	9260.08	31.00	534.51	534.40 S	17.79 E	534.70@	178.09	12.52
9618.00	89.66	196.06	9260.87	32.00	565.27	565.22 S	9.22 E	565.30@	179.07	7.53
9649.00	90.06	196.04	9260.95	31.00	595.00	595.01 S	0.65 E	595.01@	179.94	1.29
9681.00	90.75	196.26	9260.72	32.00	625.68	625.75 S	8.25 W	625.80@	180.76	2.26
9713.00	91.19	196.11	9260.18	32.00	656.34	656.48 S	17.17 W	656.70@	181.50	1.45
9745.00	91.19	194.42	9259.52	32.00	687.14	687.34 S	25.59 W	687.82@	182.13	5.28
9777.00	90.31	193.04	9259.10	32.00	718.17	718.42 S	33.19 W	719.19@	182.64	5.12
9808.00	90.13	192.47	9258.98	31.00	748.36	748.66 S	40.03 W	749.72@	183.06	1.93
9840.00	90.04	191.36	9258.93	32.00	779.62	779.97 S	46.64 W	781.36@	183.42	3.48
9872.00	90.22	190.76	9258.86	32.00	810.98	811.37 S	52.78 W	813.09@	183.72	1.96
9904.00	90.84	190.43	9258.56	32.00	842.39	842.82 S	58.66 W	844.86@	183.98	2.20
9936.00	90.22	188.87	9258.27	32.00	873.90	874.37 S	64.02 W	876.71@	184.19	5.25
9968.00	90.22	188.88	9258.14	32.00	905.48	905.99 S	68.96 W	908.61@	184.35	0.03
10000.00	89.87	187.52	9258.12	32.00	937.12	937.66 S	73.52 W	940.54@	184.48	4.39
10031.00	88.72	185.58	9258.50	31.00	967.89	968.45 S	77.06 W	971.51@	184.55	7.28
10095.00	87.67	184.70	9260.51	64.00	1031.56	1032.16 S	82.79 W	1035.48@	184.59	2.14
10158.00	88.55	183.35	9262.59	63.00	1094.33	1094.97 S	87.21 W	1098.44@	184.55	2.56
10222.00	89.52	181.92	9263.67	64.00	1158.23	1158.89 S	90.15 W	1162.39@	184.45	2.70
10286.00	89.69	179.66	9264.11	64.00	1222.21	1222.88 S	91.03 W	1226.26@	184.26	3.54
10349.00	90.13	178.86	9264.21	63.00	1285.21	1285.87 S	90.22 W	1289.03@	184.01	1.45
10413.00	90.48	176.85	9263.87	64.00	1349.18	1349.82 S	87.83 W	1352.68@	183.72	3.19
10508.00	91.36	175.99	9262.34	95.00	1444.02	1444.62 S	81.89 W	1446.94@	183.24	1.30
10604.00	90.31	174.82	9260.95	96.00	1539.75	1540.30 S	74.20 W	1542.09@	182.76	1.64
10699.00	89.78	176.42	9260.87	95.00	1634.51	1635.02 S	66.95 W	1636.39@	182.34	1.77

PathFinder Energy Services, Inc.

Survey Report

MARBOB ENERGY CORPORATION
LIBERATOR FED COM #1H
Eddy COUNTY, NM
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)
10794.00	90.40	175.96	9260.72	95.00	1729.34	1729.81 S	60.64 W	1730.87@	182.01	0.81
10890.00	89.87	176.69	9260.50	96.00	1825.19	1825.61 S	54.48 W	1826.42@	181.71	0.94
10985.00	89.34	176.91	9261.15	95.00	1920.07	1920.46 S	49.18 W	1921.09@	181.47	0.60
11079.00	89.43	177.63	9262.16	94.00	2013.99	2014.35 S	44.70 W	2014.84@	181.27	0.77
11175.00	89.69	178.43	9262.90	96.00	2109.95	2110.29 S	41.40 W	2110.69@	181.12	0.88
11270.00	90.75	179.03	9262.53	95.00	2204.93	2205.26 S	39.30 W	2205.61@	181.02	1.28
11365.00	90.84	179.59	9261.21	95.00	2299.92	2300.25 S	38.15 W	2300.56@	180.95	0.60
11461.00	91.54	178.88	9259.22	96.00	2395.90	2396.21 S	36.87 W	2396.50@	180.88	1.04
11556.00	90.57	178.81	9257.47	95.00	2490.87	2491.18 S	34.96 W	2491.42@	180.80	1.02
11651.00	91.01	178.45	9256.16	95.00	2585.85	2586.14 S	32.69 W	2586.35@	180.72	0.60
11747.00	89.08	178.36	9256.09	96.00	2681.82	2682.10 S	30.02 W	2682.27@	180.64	2.01
11842.00	89.69	177.45	9257.11	95.00	2776.78	2777.03 S	26.54 W	2777.16@	180.55	1.15
11937.00	89.69	177.98	9257.62	95.00	2871.72	2871.95 S	22.76 W	2872.04@	180.45	0.56
12032.00	90.22	178.23	9257.69	95.00	2966.69	2966.90 S	19.61 W	2966.96@	180.38	0.62
12128.00	90.40	179.08	9257.17	96.00	3062.67	3062.87 S	17.36 W	3062.92@	180.32	0.90
12223.00	90.13	180.20	9256.74	95.00	3157.67	3157.87 S	16.76 W	3157.91@	180.30	1.21
12318.00	90.48	179.08	9256.23	95.00	3252.67	3252.86 S	16.17 W	3252.90@	180.28	1.23
12413.00	89.52	178.37	9256.23	95.00	3347.66	3347.84 S	14.05 W	3347.87@	180.24	1.26
12508.00	89.52	177.60	9257.03	95.00	3442.62	3442.77 S	10.71 W	3442.79@	180.18	0.81
12603.00	89.34	176.21	9257.97	95.00	3537.50	3537.63 S	5.58 W	3537.63@	180.09	1.48
12699.00	89.60	177.21	9258.86	96.00	3633.38	3633.46 S	0.08 W	3633.46@	180.00	1.08
12794.00	90.04	178.20	9259.16	95.00	3728.32	3728.39 S	3.73 E	3728.39@	179.94	1.14
12888.00	90.75	176.90	9258.51	94.00	3822.26	3822.30 S	7.75 E	3822.30@	179.88	1.58
12985.00	90.57	178.36	9257.39	97.00	3919.19	3919.20 S	11.76 E	3919.22@	179.83	1.52
13080.00	90.04	178.92	9256.89	95.00	4014.17	4014.17 S	14.01 E	4014.20@	179.80	0.81
13175.00	90.57	178.54	9256.38	95.00	4109.16	4109.15 S	16.12 E	4109.18@	179.78	0.69
13271.00	90.22	179.51	9255.72	96.00	4205.15	4205.13 S	17.75 E	4205.17@	179.76	1.07
13366.00	90.13	180.14	9255.43	95.00	4300.15	4300.13 S	18.04 E	4300.17@	179.76	0.67
13461.00	90.92	179.82	9254.56	95.00	4395.14	4395.12 S	18.07 E	4395.16@	179.76	0.90

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
13556.00	91.89	179.63	9252.23	95.00	4490.11	4490.09 S 18.53 E	4490.13@ 179.76	1.04
13633.00	92.51	179.52	9249.27	77.00	4567.06	4567.04 S 19.10 E	4567.08@ 179.76	0.82
STRAIGHT-LINE PROJECTION TO BIT @ 13680'MD.								
13680.00	92.51	179.52	9247.21	47.00	4614.01	4613.99 S 19.49 E	4614.03@ 179.76	0.00

Wellhead

330 FNL 380 FEL

Bottom hole

4944 FNL 360.5 FEL