

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

Well Name and Num: SL Deep Federal #4
Location: Sec 30, T19S, R32E
Operator: Marbob Energy Corp.
Drilling Contractor: McVay Drilling Company

SUR: E-30-19s-32e, 2310/N & 660/W
BHL: D-30-19s-32e, 338/N & 929/W
API # 30-025-39538

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

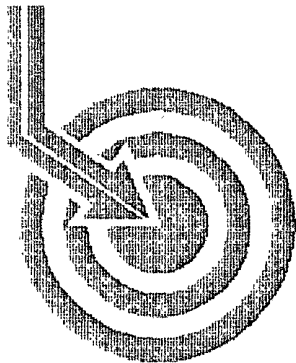
<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
0.25	286	1.35	5528	1.93	8830
0.50	547	2.59	6028	0.84	8955
0.75	803	2.48	6339	0.75	9051
1.20	1113	2.05	6555	1.25	9305
0.20	1517	1.96	6866	0.71	9527
0.06	1826	2.44	7179	1.65	10033
2.50	2110	2.10	7553	1.20	10439
1.60	2327	2.53	7801	1.85	8659
0.90	2608	2.00	7895	1.93	8691
1.10	2858	2.41	7958	1.49	8722
1.10	3045	2.33	8051	18.91	8850
1.87	3419	2.60	8175	48.28	9104
1.58	3757	2.32	82668	60.76	9229
2.14	4069	2.56	8383	72.63	9323
0.75	4391	1.91	8487	91.01	9828
0.44	4624	2.48	8612	90.57	10296
0.81	5030	2.18	8706	89.96	10755
				89.87	10808

By: H.H. Cramel Jr.

Subscribed and sworn to before me this 18th day of January, 2010

Tina Flemens
Notary Public, Lea County, New Mexico





Scientific Drilling

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FEB 03 2010

MARBOB ENERGY

Field: Lusk Bone Springs
Site: Eddy County, NM
Well: SL Deep Federal #4H
Wellpath: VH - Job #32K1001008
Survey: 01/05/10

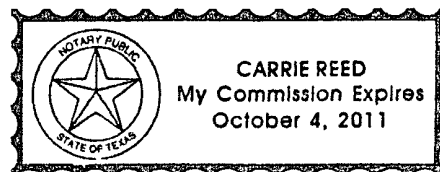
SUR: E-30-19s-32e, 2310/N & 660/W
BHL: D-30-19s-32e, 338/N & 929/W
API # 30-025-39538

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

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

Notorized this date 28th of January, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: MARBOB ENERGY
Field: Lusk Bone Springs
Site: Eddy County, NM
Well: SL Deep Federal #4H
Wellpath: VH - Job #32K1001008

Date: 01/12/2010 Time: 12:47:59 Page: 1
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,61.32Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 01/05/10
KSRG 0'-10439'

Start Date: 01/05/2010

Company: Scientific Drilling Internatio
Tool: Keeper;Keeper Gyro

Engineer: Madrid w/Gray
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	0.26	335.57	100.00	0.02	0.21	-0.09	0.26	0.23	335.57
200.00	0.26	323.57	200.00	0.00	0.60	-0.32	0.05	0.68	331.58
300.00	0.32	331.25	300.00	-0.03	1.02	-0.59	0.07	1.18	329.97
400.00	0.33	321.26	400.00	-0.08	1.49	-0.91	0.06	1.75	328.74
500.00	0.41	331.61	499.99	-0.13	2.03	-1.26	0.10	2.39	328.27
600.00	0.60	321.33	599.99	-0.22	2.76	-1.75	0.21	3.27	327.53
700.00	0.68	310.38	699.98	-0.52	3.55	-2.53	0.15	4.36	324.48
800.00	0.77	305.59	799.98	-1.02	4.32	-3.53	0.11	5.58	320.76
900.00	0.80	308.24	899.97	-1.59	5.15	-4.63	0.05	6.92	318.05
1000.00	1.36	298.17	999.95	-2.51	6.14	-6.22	0.59	8.74	314.63
1100.00	0.81	313.36	1099.93	-3.38	7.19	-7.78	0.62	10.59	312.72
1200.00	0.76	306.98	1199.92	-3.87	8.07	-8.82	0.10	11.96	312.44
1300.00	0.91	308.43	1299.91	-4.45	8.96	-9.98	0.15	13.41	311.93
1400.00	0.67	313.84	1399.90	-4.93	9.86	-11.02	0.25	14.79	311.82
1500.00	0.64	324.23	1499.89	-5.18	10.72	-11.77	0.12	15.92	312.33
1600.00	0.63	322.55	1599.89	-5.33	11.61	-12.43	0.02	17.01	313.04
1700.00	0.70	340.81	1699.88	-5.32	12.62	-12.96	0.22	18.09	314.23
1800.00	0.88	3.27	1799.87	-4.81	13.97	-13.12	0.35	19.16	316.79
1900.00	1.58	27.48	1899.85	-3.26	15.95	-12.44	0.86	20.23	322.05
2000.00	2.08	39.93	1999.80	-0.42	18.57	-10.64	0.64	21.40	330.19
2100.00	2.28	40.23	2099.73	3.12	21.48	-8.19	0.20	22.99	339.13
2200.00	2.37	44.39	2199.64	6.96	24.48	-5.46	0.19	25.08	347.43
2300.00	2.13	45.05	2299.57	10.72	27.27	-2.70	0.24	27.40	354.35
2400.00	1.95	46.32	2399.50	14.15	29.75	-0.15	0.19	29.75	359.71
2500.00	1.56	40.52	2499.46	17.06	31.96	1.96	0.43	32.02	3.51
2600.00	1.44	29.97	2599.42	19.41	34.09	3.47	0.30	34.26	5.82
2700.00	1.59	16.77	2699.39	21.47	36.50	4.50	0.38	36.78	7.03
2800.00	1.60	20.59	2799.35	23.52	39.14	5.39	0.11	39.51	7.85
2900.00	0.95	354.53	2899.32	24.90	41.27	5.81	0.86	41.68	8.01
3000.00	0.87	348.55	2999.31	25.45	42.84	5.58	0.12	43.20	7.42
3100.00	0.75	324.42	3099.30	25.60	44.12	5.04	0.36	44.40	6.52
3200.00	0.88	324.76	3199.29	25.43	45.28	4.22	0.13	45.47	5.33
3300.00	2.11	7.96	3299.28	26.45	47.73	4.03	1.59	47.90	4.83
3400.00	1.92	14.16	3399.20	28.68	51.17	4.70	0.29	51.39	5.24
3500.00	1.22	25.27	3499.16	30.68	53.76	5.56	0.76	54.05	5.91
3600.00	1.25	26.89	3599.13	32.44	55.70	6.51	0.05	56.08	6.67
3700.00	1.45	89.48	3699.11	34.46	56.68	8.27	1.41	57.28	8.30
3800.00	1.61	92.52	3799.08	36.78	56.63	10.94	0.18	57.68	10.93
3900.00	1.56	83.97	3899.04	39.23	56.71	13.69	0.24	58.34	13.57
4000.00	1.66	69.64	3999.00	41.92	57.36	16.41	0.41	59.66	15.96
4100.00	2.00	62.46	4098.95	45.10	58.67	19.31	0.41	61.77	18.22
4200.00	1.89	59.52	4198.89	48.49	60.31	22.28	0.15	64.30	20.27
4300.00	1.33	53.87	4298.85	51.29	61.83	24.64	0.58	66.56	21.72
4400.00	1.19	54.56	4398.83	53.47	63.12	26.42	0.14	68.43	22.71
4500.00	0.95	46.65	4498.81	55.31	64.29	27.87	0.28	70.07	23.44
4600.00	0.75	41.79	4598.80	56.73	65.35	28.91	0.21	71.46	23.86
4700.00	0.67	41.62	4698.79	57.89	66.27	29.73	0.08	72.64	24.16
4800.00	0.62	25.77	4798.78	58.88	67.20	30.36	0.18	73.74	24.31



Scientific
Drilling

Scientific Drilling International Survey Report

Company: MARBOB ENERGY
Field: Lusk Bone Springs
Site: Eddy County, NM
Well: SL Deep Federal #4H
Wellpath: VH - Job #32K1001008

Date: 01/12/2010 Time: 12:47:59 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,61.32Azi)
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	0.64	28.63	4898.78	59.79	68.18	30.86	0.04	74.83	24.35
5000.00	0.66	24.98	4998.77	60.73	69.19	31.37	0.05	75.97	24.39
5100.00	0.70	29.63	5098.76	61.71	70.24	31.92	0.07	77.15	24.44
5200.00	1.00	45.81	5198.75	63.07	71.38	32.84	0.38	78.57	24.71
5300.00	1.10	40.74	5298.74	64.81	72.72	34.10	0.14	80.31	25.12
5400.00	1.23	41.90	5398.72	66.72	74.24	35.44	0.13	82.27	25.52
5500.00	1.26	47.35	5498.69	68.80	75.79	36.96	0.12	84.32	26.00
5600.00	1.60	57.47	5598.66	71.26	77.28	38.95	0.42	86.54	26.75
5700.00	2.24	63.08	5698.60	74.61	78.92	41.87	0.67	89.34	27.95
5800.00	2.90	67.94	5798.50	79.07	80.75	45.96	0.69	92.91	29.64
5900.00	2.27	59.93	5898.40	83.57	82.69	50.01	0.72	96.64	31.17
6000.00	2.36	61.32	5998.32	87.61	84.67	53.54	0.11	100.18	32.30
6100.00	2.33	60.78	6098.24	91.70	86.66	57.12	0.04	103.78	33.39
6200.00	2.23	60.61	6198.16	95.68	88.60	60.58	0.10	107.34	34.36
6300.00	2.10	61.86	6298.09	99.45	90.42	63.90	0.14	110.72	35.25
6400.00	1.90	62.92	6398.02	102.94	92.04	66.99	0.20	113.84	36.05
6500.00	1.77	62.65	6497.97	106.14	93.50	69.83	0.13	116.70	36.75
6600.00	1.74	62.72	6597.93	109.21	94.91	72.56	0.03	119.47	37.40
6700.00	1.62	62.22	6697.88	112.14	96.26	75.16	0.12	122.13	37.98
6800.00	1.64	60.96	6797.84	114.98	97.62	77.68	0.04	124.74	38.50
6900.00	1.73	62.83	6897.80	117.92	99.00	80.25	0.11	127.44	39.03
7000.00	1.70	60.50	6997.76	120.91	100.42	82.89	0.08	130.21	39.54
7100.00	1.77	62.99	7097.71	123.94	101.85	85.55	0.10	133.02	40.03
7200.00	2.05	75.92	7197.65	127.21	102.99	88.66	0.51	135.90	40.73
7300.00	2.10	76.02	7297.59	130.72	103.87	92.18	0.05	138.87	41.59
7400.00	1.92	83.85	7397.53	134.04	104.49	95.62	0.33	141.64	42.46
7500.00	1.82	95.82	7497.47	136.89	104.51	98.86	0.40	143.86	43.41
7600.00	2.37	100.23	7597.41	139.81	103.98	102.48	0.57	145.99	44.58
7700.00	2.49	100.92	7697.32	143.09	103.20	106.65	0.12	148.40	45.94
7800.00	2.47	100.69	7797.22	146.43	102.39	110.90	0.02	150.94	47.28
7900.00	2.33	99.64	7897.14	149.69	101.65	115.02	0.15	153.50	48.53
8000.00	2.24	102.11	7997.06	152.77	100.90	118.93	0.13	155.97	49.69
8100.00	2.14	101.93	8096.98	155.66	100.10	122.67	0.10	158.33	50.78
8200.00	2.36	100.38	8196.91	158.68	99.35	126.52	0.23	160.87	51.86
8300.00	2.35	99.59	8296.82	161.89	98.63	130.57	0.03	163.64	52.93
8400.00	2.35	98.66	8396.74	165.13	97.98	134.62	0.04	166.50	53.95
8500.00	2.16	101.14	8496.66	168.20	97.31	138.49	0.21	169.26	54.91
8600.00	2.09	105.48	8596.59	170.96	96.46	142.10	0.18	171.75	55.83
8700.00	1.97	108.12	8696.53	173.44	95.44	145.49	0.15	174.00	56.74
8800.00	1.54	116.35	8796.48	175.39	94.31	148.33	0.50	175.77	57.55
8900.00	1.29	129.02	8896.45	176.59	93.00	150.41	0.40	176.84	58.27
9000.00	1.20	138.07	8996.43	177.26	91.51	151.98	0.22	177.41	58.95
9100.00	1.26	138.29	9096.40	177.74	89.91	153.41	0.06	177.82	59.63
9200.00	1.26	139.09	9196.38	178.22	88.26	154.86	0.02	178.25	60.32
9300.00	1.15	129.29	9296.36	178.83	86.80	156.36	0.23	178.84	60.97
9400.00	1.15	128.89	9396.34	179.59	85.53	157.92	0.01	179.59	61.56
9500.00	0.56	99.09	9496.33	180.36	84.82	159.18	0.72	180.37	61.95
9600.00	0.60	345.12	9596.32	180.87	85.25	159.53	0.97	180.88	61.88
9700.00	0.97	250.45	9696.32	180.16	85.48	158.60	1.18	180.17	61.68
9800.00	1.24	256.20	9796.30	178.28	84.93	156.75	0.29	178.28	61.55
9900.00	1.46	254.05	9896.27	175.99	84.33	154.47	0.23	175.99	61.37
10000.00	1.61	256.25	9996.24	173.39	83.64	151.89	0.16	173.39	61.16



Scientific
Drilling

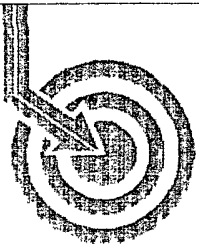
Scientific Drilling International

Survey Report

Company:	MARBOB ENERGY	Date:	01/12/2010	Time:	12:47:59	Page:	3
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:	SL Deep Federal #4H	Section (VS) Reference:	Well	(0.00N,0.00E,61.32Azi)			
Wellpath:	VH - Job #32K1001008	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
10100.00	1.41	249.22	10096.20	170.82	82.87	149.37	0.27	170.82	60.98
10200.00	1.13	243.91	10196.18	168.61	82.00	147.33	0.30	168.62	60.90
10300.00	1.13	230.63	10296.16	166.66	80.94	145.69	0.26	166.66	60.94
10400.00	1.21	215.42	10396.14	164.74	79.46	144.31	0.32	164.74	61.16
10439.00	1.20	201.27	10435.13	164.06	78.74	143.93	0.76	164.06	61.32



Scientific Drilling

Field: Lusk Bone Springs
Site: Eddy County, NM
Well: SL Deep Federal #4H
Wellpath: VH - Job #32K1001008
Survey: 01/05/10



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

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 01/12/2010
Model igrf2000





Marbob

Lea County
S L Deep Federal
#4H
OH

Survey: MWD #1

Pathfinder X & Y Survey Report

12 January, 2010

PATHFINDER

SUR: E-30-19s-32e, 2310/N & 660/W
BHL: D-30-19s-32e, 338/N & 929/W
API # 30-025-39538



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
Project: Lea County
Site: S L Deep Federal
Well: #4H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #4H
TVD Reference: WELL @ 3549.00ft (Patnot #3)
MD Reference: WELL @ 3549.00ft (Patriot #3)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Project: Lea County, New Mexico
Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site: S L Deep Federal

Site Position:		Northing:	594,129.900 ft	Latitude:	32° 37' 56.214 N
From:	Map	Easting:	660,635.100 ft	Longitude:	103° 48' 41.535 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.28 °

Well: #4H

Well Position	+N/-S	0.00 ft	Northing:	594,129.900 ft	Latitude:	32° 37' 56.214 N
	+E/-W	0.00 ft	Easting:	660,635.100 ft	Longitude:	103° 48' 41.535 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,527.00 ft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.89	60.58	49,010

Design: OH

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	7.67



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
 Project: Lea County
 Site: S L Deep Federal
 Well: #4H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #4H
 TVD Reference: WELL @ 3549.00ft (Patnot #3)
 MD Reference: WELL @ 3549.00ft (Patriot #3)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Midland Database

Survey Program		Date 01/12/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	8,600.00	GYRO (OH)	CT_GYRO_MS	Continuous Gyro Multishot	
8,659.00	10,858.00	MWD #1 (OH)	MWD	MWD - Standard	

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,600.00	2.09	105.48	8,596.59	5,047.59	96.46	142.10	114.56	0.00	594,226.36	660,777.20
8,659.00	1.85	104.89	8,655.56	5,106.56	95.93	144.06	114.30	0.41	594,225.83	660,779.16
8,691.00	1.93	104.65	8,687.54	5,138.54	95.66	145.08	114.17	0.25	594,225.56	660,780.18
8,722.00	1.49	99.47	8,718.53	5,169.53	95.46	145.98	114.09	1.50	594,225.36	660,781.08
8,755.00	2.55	4.11	8,751.51	5,202.51	96.12	146.46	114.81	9.31	594,226.02	660,781.56
8,786.00	9.06	356.32	8,782.34	5,233.34	99.25	146.35	117.89	21.11	594,229.15	660,781.45
8,818.00	14.42	359.28	8,813.66	5,264.66	105.75	146.14	124.31	16.85	594,235.65	660,781.24
8,850.00	18.91	2.26	8,844.30	5,295.30	114.92	146.29	133.42	14.28	594,244.82	660,781.39
8,882.00	23.39	2.99	8,874.14	5,325.14	126.45	146.83	144.92	14.02	594,256.35	660,781.93
8,913.00	26.91	3.19	8,902.20	5,353.20	139.61	147.54	158.05	11.36	594,269.51	660,782.64
8,945.00	30.42	3.60	8,930.27	5,381.27	154.93	148.45	173.35	10.99	594,284.83	660,783.55
8,977.00	33.50	4.89	8,957.42	5,408.42	171.82	149.71	190.26	9.86	594,301.72	660,784.81
9,008.00	37.28	5.55	8,982.69	5,433.69	189.69	151.35	208.19	12.26	594,319.59	660,786.45
9,040.00	42.12	5.14	9,007.30	5,458.30	210.04	153.25	228.61	15.15	594,339.94	660,788.35
9,072.00	45.37	4.81	9,030.41	5,481.41	232.08	155.17	250.71	10.18	594,361.98	660,790.27
9,104.00	48.28	4.93	9,052.31	5,503.31	255.33	157.15	274.02	9.10	594,385.23	660,792.25
9,136.00	51.09	5.60	9,073.01	5,524.01	279.62	159.39	298.39	8.93	594,409.52	660,794.49
9,167.00	54.17	6.00	9,091.82	5,542.82	304.13	161.88	323.01	9.99	594,434.03	660,796.98
9,198.00	57.24	6.13	9,109.29	5,560.29	329.59	164.59	348.61	9.91	594,459.49	660,799.69
9,229.00	60.76	6.26	9,125.25	5,576.25	356.00	167.46	375.17	11.36	594,485.90	660,802.56
9,259.00	64.81	6.20	9,138.97	5,589.97	382.52	170.35	401.83	13.50	594,512.42	660,805.45



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
 Project: Lea County
 Site: S L Deep Federal
 Well: #4H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #4H
 TVD Reference: WELL @ 3549.00ft (Patriot #3)
 MD Reference: WELL @ 3549.00ft (Patriot #3)
 North Reference: Gnd
 Survey Calculation Method: Minimum Curvature
 Database: Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,291.00	68.59	6.35	9,151.62	5,602.62	411.73	173.56	431.21	11.82	594,541.63	660,808.66
9,323.00	72.63	6.38	9,162.24	5,613.24	441.72	176.91	461.38	12.63	594,571.62	660,812.01
9,356.00	77.91	5.76	9,170.63	5,621.63	473.45	180.28	493.27	16.10	594,603.35	660,815.38
9,388.00	82.31	4.76	9,176.13	5,627.13	504.83	183.17	524.76	14.09	594,634.73	660,818.27
9,451.00	88.20	3.49	9,181.34	5,632.34	567.42	187.68	587.40	9.56	594,697.32	660,822.78
9,483.00	88.11	3.24	9,182.37	5,633.37	599.35	189.56	619.29	0.83	594,729.25	660,824.66
9,577.00	87.76	3.10	9,185.75	5,636.75	693.15	194.75	712.94	0.40	594,823.05	660,829.85
9,640.00	87.67	2.82	9,188.27	5,639.27	756.01	198.00	775.68	0.47	594,885.91	660,833.10
9,734.00	91.01	4.17	9,189.35	5,640.35	849.82	203.73	869.40	3.83	594,979.72	660,838.83
9,828.00	91.10	4.41	9,187.62	5,638.62	943.54	210.76	963.23	0.27	595,073.44	660,845.86
9,922.00	91.19	3.35	9,185.74	5,636.74	1,037.30	217.12	1,057.00	1.13	595,167.20	660,852.22
10,016.00	91.28	2.93	9,183.71	5,634.71	1,131.14	222.27	1,150.68	0.46	595,261.04	660,857.37
10,109.00	89.78	2.71	9,182.85	5,633.85	1,224.02	226.84	1,243.34	1.63	595,353.92	660,861.94
10,202.00	89.69	3.11	9,183.28	5,634.28	1,316.90	231.56	1,336.02	0.44	595,446.80	660,866.66
10,296.00	90.57	2.87	9,183.07	5,634.07	1,410.77	236.47	1,429.71	0.97	595,540.67	660,871.57
10,391.00	90.84	3.15	9,181.90	5,632.90	1,505.63	241.46	1,524.39	0.41	595,635.53	660,876.56
10,484.00	91.36	3.18	9,180.12	5,631.12	1,598.47	246.59	1,617.08	0.56	595,728.37	660,881.69
10,577.00	90.57	3.62	9,178.55	5,629.55	1,691.29	252.10	1,709.81	0.97	595,821.19	660,887.20
10,671.00	89.60	3.56	9,178.41	5,629.41	1,785.11	257.99	1,803.57	1.03	595,915.01	660,893.09
10,765.00	89.96	3.42	9,178.77	5,629.77	1,878.93	263.71	1,897.32	0.41	596,008.83	660,898.81
10,808.00	89.87	3.26	9,178.83	5,629.83	1,921.86	266.22	1,940.20	0.43	596,051.76	660,901.32
10,858.00	89.87	3.26	9,178.95	5,629.95	1,971.78	269.06	1,990.05	0.00	596,101.68	660,904.16

PBHL(SL#4H)

Surf: 2310' FNL, 660' FWL
 EOL: 338' FNL, 929' FWL



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Marbob
Project: Lea County
Site: S L Deep Federal
Well: #4H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #4H
TVD Reference: WELL @ 3549.00ft (Patnot #3)
MD Reference: WELL @ 3549.00ft (Patnot #3)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

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(SL#4H)	0.00	0.00	9,190.00	1,980.00	266.80	596,109.900	660,901.900	32° 38' 15.794 N	103° 48' 38.301 W
- survey misses target center by 13.96ft at 10858.00ft MD (9178.95 TVD, 1971.78 N, 269.06 E)									
- Point									

Checked By: _____ Approved By: _____ Date: _____