

Scientific Drilling

RECEIVED

JAN 25 2011

HOBBS, NM

MARBOB ENERGY

Field: Lusk Bone Springs
Site: Lea County, NM
Well: King Air Federal #2H
Wellpath: VH - Job #32K1109472
Survey: 11/06/09

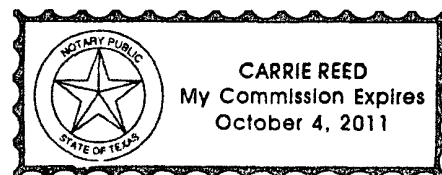
SUR: B-8-19s-32e, 430/N & 2310/E
BHL: A-8-19s-32e, 420/N & 360/E
API # 30-025-38905

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

[Signature] Company Representative

Notorized this date 3rd of December, 2009.

[Signature]
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: MARBOB ENERGY	Date: 11/09/2009	Time: 11:08:20	Page: 1
Field: Lusk Bone Springs	Co-ordinate(NE) Reference:	Site: Lea County, NM, Grid North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: King Air Federal #2H	Section (VS) Reference:	Well (0.00N,0.00E,89.93Azi)	
Wellpath: VH: Job #32K1109472	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 11/06/09	Start Date: 11/06/2009
KSRG 0'-8728'	
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	359.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.16	284.92	100.00	-0.13	0.04	-0.13	0.16	0.14	284.92
200.00	0.31	289.59	200.00	-0.52	0.16	-0.52	0.15	0.55	287.22
300.00	0.27	240.99	300.00	-0.99	0.14	-0.99	0.24	1.00	278.03
400.00	0.46	240.45	400.00	-1.54	-0.17	-1.54	0.19	1.55	263.59
500.00	0.48	228.71	499.99	-2.21	-0.65	-2.20	0.10	2.30	253.63
600.00	0.44	247.59	599.99	-2.88	-1.07	-2.87	0.16	3.07	249.58
700.00	0.60	232.82	699.99	-3.65	-1.53	-3.65	0.21	3.96	247.20
800.00	0.47	220.35	799.98	-4.33	-2.16	-4.33	0.17	4.84	243.46
900.00	0.47	220.98	899.98	-4.87	-2.78	-4.86	0.01	5.60	240.21
1000.00	0.44	214.70	999.97	-5.36	-3.41	-5.35	0.06	6.35	237.50
1100.00	0.31	216.59	1099.97	-5.74	-3.94	-5.73	0.13	6.96	235.48
1200.00	0.41	201.56	1199.97	-6.03	-4.49	-6.02	0.14	7.51	233.29
1300.00	0.31	193.17	1299.97	-6.22	-5.09	-6.22	0.11	8.03	230.70
1400.00	0.15	200.30	1399.97	-6.33	-5.47	-6.32	0.16	8.36	229.12
1500.00	0.21	219.14	1499.97	-6.49	-5.74	-6.49	0.08	8.66	228.49
1600.00	0.09	214.16	1599.97	-6.65	-5.95	-6.65	0.12	8.92	228.17
1700.00	0.26	132.78	1699.97	-6.53	-6.17	-6.52	0.26	8.98	226.61
1800.00	0.24	88.02	1799.97	-6.15	-6.31	-6.15	0.19	8.81	224.24
1900.00	0.54	47.78	1899.96	-5.60	-5.99	-5.59	0.39	8.19	223.02
2000.00	0.76	17.89	1999.96	-5.04	-5.04	-5.04	0.40	7.13	224.97
2100.00	0.59	29.56	2099.95	-4.58	-3.96	-4.58	0.22	6.05	229.12
2200.00	0.62	26.33	2199.94	-4.09	-3.03	-4.08	0.05	5.08	233.43
2300.00	0.81	29.45	2299.94	-3.50	-1.93	-3.50	0.19	3.99	241.12
2400.00	1.06	32.73	2399.92	-2.65	-0.54	-2.65	0.26	2.70	258.57
2500.00	1.07	38.12	2499.91	-1.57	0.98	-1.57	0.10	1.85	301.86
2600.00	1.24	46.90	2599.89	-0.20	2.45	-0.21	0.24	2.46	355.20
2700.00	1.25	39.14	2699.86	1.28	4.04	1.27	0.17	4.23	17.50
2800.00	0.82	33.32	2799.85	2.36	5.48	2.35	0.44	5.96	23.25
2900.00	0.60	18.61	2899.84	2.92	6.57	2.91	0.28	7.19	23.91
3000.00	0.51	7.19	2999.83	3.15	7.51	3.14	0.14	8.14	22.66
3100.00	0.47	2.24	3099.83	3.22	8.36	3.21	0.06	8.96	20.99
3200.00	0.46	359.25	3199.83	3.23	9.17	3.22	0.03	9.72	19.34
3300.00	0.22	43.64	3299.82	3.36	9.72	3.35	0.34	10.28	19.01
3400.00	0.15	28.57	3399.82	3.55	9.97	3.54	0.08	10.58	19.56
3500.00	0.16	25.65	3499.82	3.68	10.21	3.66	0.01	10.85	19.75
3600.00	0.24	355.82	3599.82	3.72	10.54	3.71	0.13	11.18	19.38
3700.00	0.26	7.03	3699.82	3.74	10.98	3.72	0.05	11.59	18.73
3800.00	0.50	333.52	3799.82	3.57	11.59	3.56	0.32	12.13	17.05
3900.00	0.52	331.54	3899.82	3.16	12.38	3.15	0.03	12.78	14.25
4000.00	0.84	326.17	3999.81	2.54	13.39	2.52	0.33	13.63	10.66
4100.00	0.78	328.74	4099.80	1.78	14.58	1.76	0.07	14.69	6.88
4200.00	0.98	315.82	4199.79	0.83	15.78	0.81	0.28	15.80	2.94
4300.00	1.13	320.22	4299.77	-0.40	17.15	-0.42	0.17	17.15	358.61
4400.00	1.11	312.24	4399.75	-1.74	18.56	-1.76	0.16	18.64	354.57
4500.00	0.99	307.26	4499.73	-3.15	19.73	-3.17	0.15	19.98	350.88
4600.00	1.13	306.75	4599.72	-4.62	20.84	-4.65	0.14	21.36	347.43
4700.00	1.15	309.01	4699.70	-6.19	22.07	-6.22	0.05	22.93	344.27
4800.00	1.44	316.43	4799.67	-7.83	23.61	-7.86	0.33	24.88	341.58



Scientific Drilling International Survey Report

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Site: Lea County, NM
Well: King Air Federal #2H
Wellpath: VH - Job #32K1109472

Date: 11/09/2009 Time: 11:08:20 Page: 2
Co-ordinate(NE) Reference: Site: Lea County, NM; Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,89.93Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

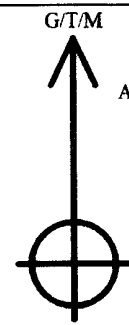
Survey

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	1.63	323.77	4899.64	-9.54	25.67	-9.57	0.27	27.39	339.55
5000.00	1.86	313.84	4999.59	-11.55	27.94	-11.58	0.38	30.24	337.49
5100.00	1.95	307.03	5099.53	-14.07	30.09	-14.11	0.24	33.23	334.88
5200.00	1.86	304.76	5199.48	-16.76	32.04	-16.80	0.12	36.17	332.33
5300.00	2.04	298.88	5299.42	-19.65	33.82	-19.69	0.27	39.14	329.79
5400.00	2.03	294.83	5399.36	-22.82	35.42	-22.86	0.14	42.16	327.17
5500.00	1.90	292.65	5499.30	-25.95	36.81	-26.00	0.15	45.06	324.77
5600.00	1.83	288.12	5599.25	-29.00	37.94	-29.04	0.16	47.78	322.57
5700.00	1.79	283.89	5699.20	-32.03	38.81	-32.08	0.14	50.35	320.43
5800.00	1.97	282.31	5799.14	-35.22	39.55	-35.27	0.19	53.00	318.28
5900.00	2.01	285.92	5899.08	-38.59	40.40	-38.64	0.13	55.90	316.28
6000.00	1.91	284.62	5999.02	-41.89	41.30	-41.94	0.11	58.86	314.56
6100.00	2.00	279.47	6098.97	-45.22	42.01	-45.27	0.20	61.76	312.86
6200.00	1.77	282.42	6198.91	-48.45	42.63	-48.50	0.25	64.57	311.31
6300.00	1.65	277.83	6298.87	-51.38	43.16	-51.43	0.18	67.14	310.00
6400.00	1.61	277.44	6398.83	-54.20	43.54	-54.25	0.04	69.56	308.75
6500.00	1.78	274.66	6498.78	-57.14	43.85	-57.19	0.19	72.07	307.47
6600.00	1.66	279.75	6598.74	-60.12	44.22	-60.17	0.19	74.67	306.31
6700.00	1.49	278.58	6698.70	-62.83	44.66	-62.88	0.17	77.13	305.38
6800.00	1.50	279.57	6798.67	-65.40	45.07	-65.46	0.03	79.47	304.55
6900.00	1.61	282.08	6898.63	-68.07	45.58	-68.12	0.13	81.97	303.78
7000.00	1.54	290.43	6998.59	-70.70	46.34	-70.76	0.24	84.58	303.22
7100.00	1.98	295.53	7098.54	-73.52	47.56	-73.57	0.47	87.61	302.88
7200.00	1.85	295.52	7198.49	-76.53	49.00	-76.59	0.13	90.92	302.61
7300.00	1.69	296.43	7298.44	-79.31	50.35	-79.37	0.16	93.99	302.39
7400.00	1.61	290.46	7398.40	-81.94	51.49	-82.00	0.19	96.83	302.13
7500.00	1.92	286.57	7498.35	-84.86	52.46	-84.93	0.33	99.82	301.71
7600.00	1.71	270.97	7598.30	-87.96	52.97	-88.02	0.53	102.73	301.04
7700.00	1.35	260.02	7698.27	-90.61	52.79	-90.68	0.46	104.92	300.21
7800.00	1.58	266.30	7798.23	-93.15	52.49	-93.21	0.28	106.98	299.39
7900.00	1.90	268.45	7898.19	-96.18	52.36	-96.24	0.33	109.57	298.55
8000.00	2.06	258.49	7998.13	-99.60	51.96	-99.66	0.38	112.39	297.53
8100.00	1.92	258.05	8098.07	-103.00	51.25	-103.06	0.14	115.10	296.44
8200.00	1.90	260.21	8198.01	-106.27	50.62	-106.34	0.07	117.77	295.46
8300.00	1.85	254.92	8297.96	-109.47	49.92	-109.53	0.18	120.37	294.50
8400.00	1.49	244.76	8397.92	-112.20	48.95	-112.26	0.46	122.47	293.56
8500.00	1.48	250.48	8497.88	-114.60	47.96	-114.66	0.15	124.28	292.70
8600.00	1.59	252.17	8597.85	-117.14	47.10	-117.19	0.12	126.31	291.90
8700.00	1.74	235.97	8697.81	-119.72	45.83	-119.77	0.49	128.24	290.94
8728.00	1.71	245.25	8725.79	-120.45	45.42	-120.50	1.00	128.78	290.65



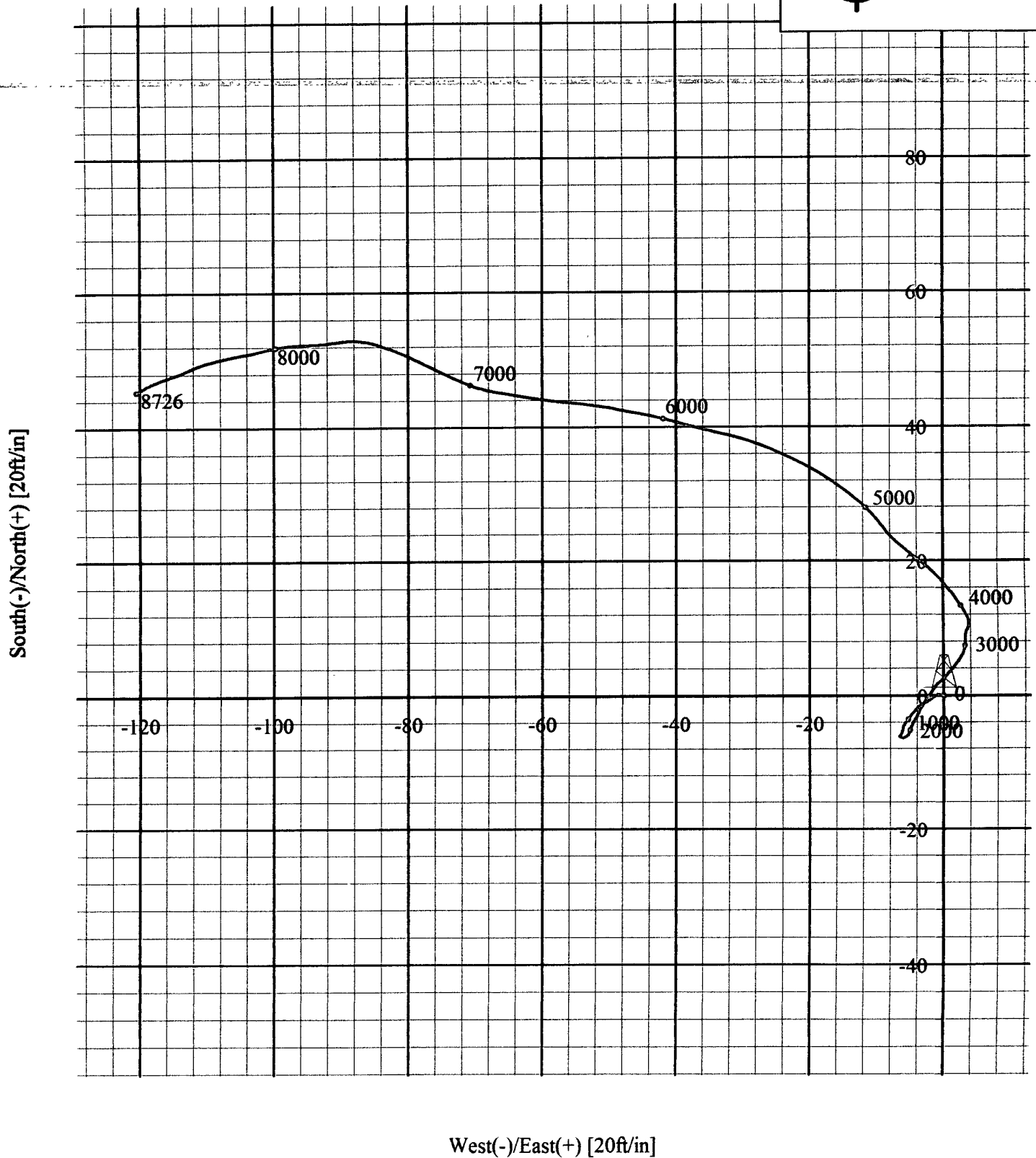
**Scientific
Drilling**

Field: Lusk Bone Springs
Site: Lea County, NM
Well: King Air Federal #2H
Wellpath: VH - Job #32K1109472
Survey: 11/06/09



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

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 11/09/2009
Model: igrf2000





Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
Project: Lea County
Site: King Air Federal #2H
Well: King Air Federal #2H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well King Air Federal #2H
TVD Reference: EST RKB @ 3643.00ft
MD Reference: EST RKB @ 3643.00ft
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey Program Date 11/13/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100 00	8,728 00	Survey #1 Gyro (Original Hole)	CB-GYRO-MS	Camera based gyro multishot
8 756 00	11,220 00	MWD #1 (Original Hole)	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)
8 728 00	1 71	245 25	8,725.79	5,082.79	45 42	-120 50	-120 37	0.00	611,911 22	668 010 70
8 756 00	2 02	246 18	8,753.78	5,110 78	45 04	-121 33	-121 20	1.11	611,910 84	668 009 87
8 787 00	1 23	236.88	8,784.77	5,141 77	44 64	-122 11	-121 96	2.66	611 910 44	668,009 09
8 819 00	1.49	95 00	8,816.76	5,173.76	44 42	-121.99	-121.85	8 04	611,910 22	668,009 21
8 850 00	3 61	83 02	8,847 73	5,204 73	44 50	-120 62	-120.48	7 01	611,910 30	668 010 58
8 881 00	5.89	76 94	8,878 62	5,235.62	44 98	-118 10	-117 96	7 52	611,910 78	668,013 10
8 913 00	8 62	73 54	8,910.36	5,267.36	46 03	-114.20	-114 06	8.63	611,911 83	668 017 00
8 944 00	12 40	74 14	8,940.84	5,297.84	47 60	-108 77	-108 62	12.20	611,913 40	668 022.43
8 975 00	16 53	74 77	8,970.85	5,327.85	49 67	-101.31	-101 16	13.33	611,915 47	668,029.89
9,007 00	20 22	72.78	9,001.21	5,358.21	52 50	-91 63	-91.47	11.70	611,918 30	668 039 57
9,039 00	22 60	69 88	9,031.00	5,388.00	56 25	-80 57	-80.40	8.14	611 922 05	668 050 63
9,070 00	25 06	71 34	9,059.36	5,416.36	60 40	-68 75	-68 58	8 16	611,926 20	668,062 45
9 103 00	27 26	76 24	9,088.98	5,445.98	64.44	-54.79	-54.60	9.34	611,930 24	668 076 41
9,133 00	29 02	73 01	9,115.43	5,472.43	68 20	-41 16	-40 95	7.76	611 934 00	668 090 04
9,165 00	32 18	72 23	9,142.97	5,499 97	73 07	-25 61	-25 40	9 95	611,938 87	668 105 59
9,197 00	35 61	73 04	9,169 53	5,526.53	78 39	-8 58	-8 35	10 81	611,944 19	668 122 62
9 228 00	37 99	81 00	9,194.37	5,551 37	82 52	9.49	9.73	17.18	611 948 32	668 140 69
9 260 00	41.42	88 37	9,219 00	5,576 00	84 36	29 81	30 06	18 19	611,950 16	668 161 01
9,292 00	45 46	93 66	9,242.23	5,599.23	83 93	51 79	52 04	17 01	611 949 73	668,182 99
9 323 00	51 27	95 31	9,262 82	5,619 82	82 10	74 88	75.12	19 15	611 947 90	668 206 08
9,355 00	57 16	97.65	9,281 53	5,638 53	79 15	100 65	100.89	19.34	611,944 95	668 231 85



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
 Project: Lea County
 Site: King Air Federal #2H
 Well: King Air Federal #2H
 Wellbore: Original Hole
 Design: Original Hole

Local Co-ordinate Reference: Well King Air Federal #2H
 TVD Reference: EST RKB @ 3643.00ft
 MD Reference: EST RKB @ 3643.00ft
 North Reference: Grid
 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)
9.386 00	63 14	99 01	9,296 95	5,653.95	75.25	127.24	127.46	19.66	611,941 05	668,258 44
9.418 00	69 73	97 98	9,309 74	5,666 74	70.93	156.24	156 44	20.80	611,936 73	668,287 44
9.449 00	74.74	97 15	9,319.19	5,676.19	67 04	185.49	185.69	16 36	611,932 84	668,316 69
9.481 00	77 03	96.72	9,326 99	5,683.99	63.30	216.30	216.48	7.27	611,929 10	668,347 50
9.513 00	78 00	96.98	9,333 91	5,690 91	59.57	247.32	247.49	3 13	611,925 37	668,378 52
9.545 00	79 14	96 65	9,340.25	5,697.25	55.85	278 46	278 62	3 70	611,921.65	668,409 66
9.576 00	82 04	96 75	9,345.32	5,702.32	52.28	308.83	308.98	9 36	611,918.08	668,440 03
9.608.00	85 30	96 81	9,348 85	5,705 85	48 53	340.41	340.55	10 19	611,914 33	668,471 61
9.640 00	88 72	94 78	9,350 52	5,707 52	45 30	372.19	372.33	12 42	611,911.10	668,503 39
9.671 00	89 25	97 16	9,351.07	5,708.07	42 08	403.02	403.14	7 86	611,907 88	668,534 22
9.766.00	90 04	96 12	9,351.66	5,708.66	31 09	497.38	497 47	1 37	611,896.89	668,626 56
9.861 00	89 25	93 68	9,352.25	5,709.25	22.98	592.02	592.09	2 70	611,888 78	668,723 22
9.955 00	90.31	93 16	9,352 61	5,709.61	17 37	685.85	685.90	1 26	611,883 17	668,817 05
10.049 00	90 48	93 04	9,351.96	5,708 96	12.29	779.71	779 74	0.22	611,878.09	668,910.91
10.144 00	91 10	91 53	9,350 65	5,707 65	8 50	874.62	874.65	1 72	611,874 30	669,005 82
10.240 00	90.22	91 12	9,349 54	5,706.54	6 28	970.59	970.60	1 01	611,872 08	669,101 79
10.334 00	90 13	90.43	9,349 26	5,706.26	5 01	1,064.58	1,064.59	0 74	611,870.81	669,195 78
10.429 00	89 96	90 07	9,349.18	5,706.18	4.60	1,159.56	1,159.59	0 42	611,870 40	669,290 78
10.524 00	90.57	89 87	9,348.74	5,705 74	4 65	1,254.58	1,254.59	0 68	611,870 45	669,385 78
10.619 00	90 84	89.80	9,347.57	5,704 57	4 92	1,349.57	1,349 58	0 29	611,870 72	669,480 77
10.714 00	90 92	89 91	9,346 11	5,703.11	5 16	1,444.56	1,444.57	0.14	611,870.96	669,575 76
10.810 00	89 69	89.46	9,345.60	5,702 60	5 69	1,540.55	1,540.56	1 36	611,871 49	669,671 75
10.905 00	88 46	89 31	9,347 14	5,704 14	6 71	1,635.53	1,635 55	1 30	611,872 51	669,766 73
11.001 00	88 81	89 42	9,349.42	5,706.42	7 77	1,731 50	1,731.52	0.38	611,873.57	669,862 70
11.096 00	89 52	89 45	9,350 81	5,707 81	8 71	1,826.49	1,826.50	0 75	611,874 51	669,957 69
11.143 00	89 78	89 25	9,351 09	5,708 09	9 24	1,873 48	1,873 50	0 70	611,875 04	670,004 68



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
Project: Lea County
Site: King Air Federal #2H
Well: King Air Federal #2H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well King Air Federal #2H
TVD Reference: EST RKB @ 3643.00ft
MD Reference: EST RKB @ 3643.00ft
North Reference: Grid
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)
11 220.00	89.78	89.25	9 351.39	5,708.39	10.25	1,950.47	1,950.50	0.00	611,876.05	670,081.67
PBHL2										

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
0.00	0.00	9,350.00	2.30	1,979.70	611,868.100	670 110 900	32° 40' 51.264 N	103° 46' 49.649 W
PBHL2 - survey misses by 30.32ft at 11220.00ft MD (9351.39 TVD 10.25 N 1950.47 E) - Point								

Checked By _____	Approved By _____	Date _____
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Wellhead 430' FNL 2310' FEL
Bottom 420' FNL 360' FEL