

30-025-38865

Marbob

Lear State #1

Lear State #1

Lear State #1

Original Hole

Plan: Plan #1

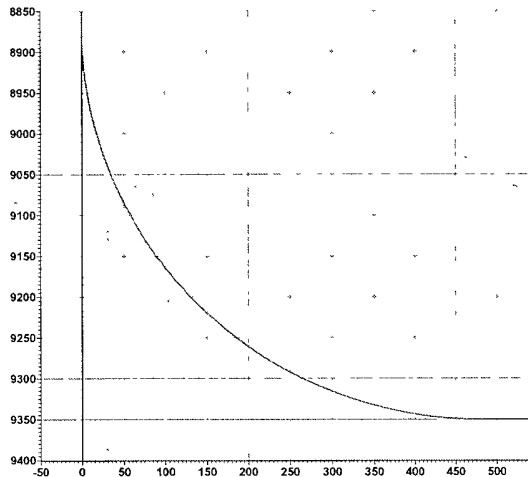
Pathfinder Survey Report

23 April, 2008



Azimuths to Grid North
True North: -0.30°
Magnetic North: 7.78°

Magnetic Field
Strength: 49218.6snT
Dip Angle: 60.68°
Date: 4/23/2008
Model: IGRF200510



WELL DETAILS Lear State #1						
Ground Elevation		3696.00				
RKB Elevation		EST RKB @ 3696.00ft				
Rig Name						
+N/-S	+E/-W	North	Easting	Latitude	Longitude	Slot
0 00	0 00	619895.400	670068.200	32° 42' 10.698 N	103° 46' 49.659 W	

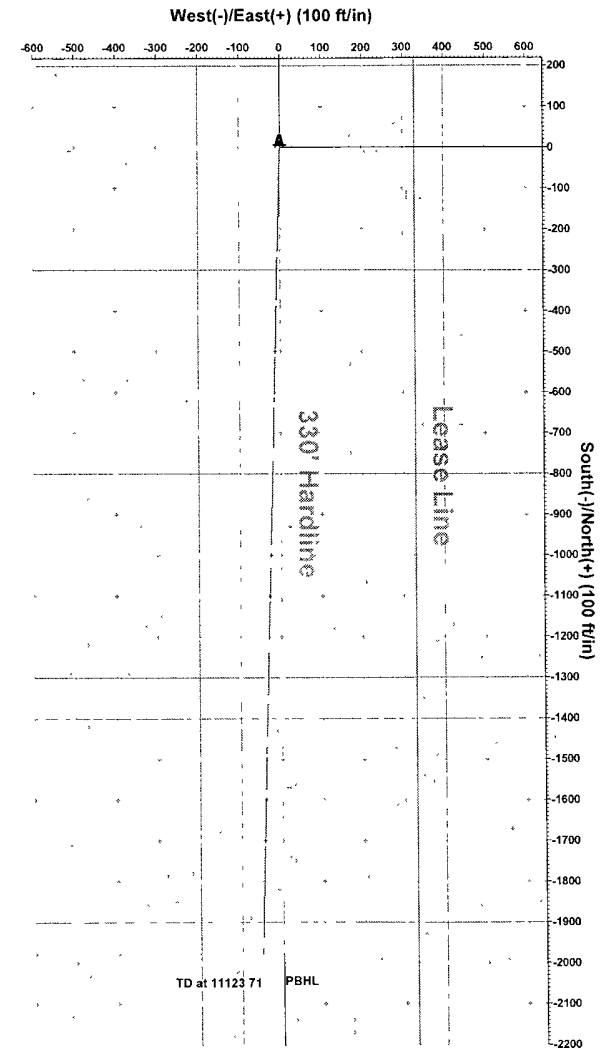
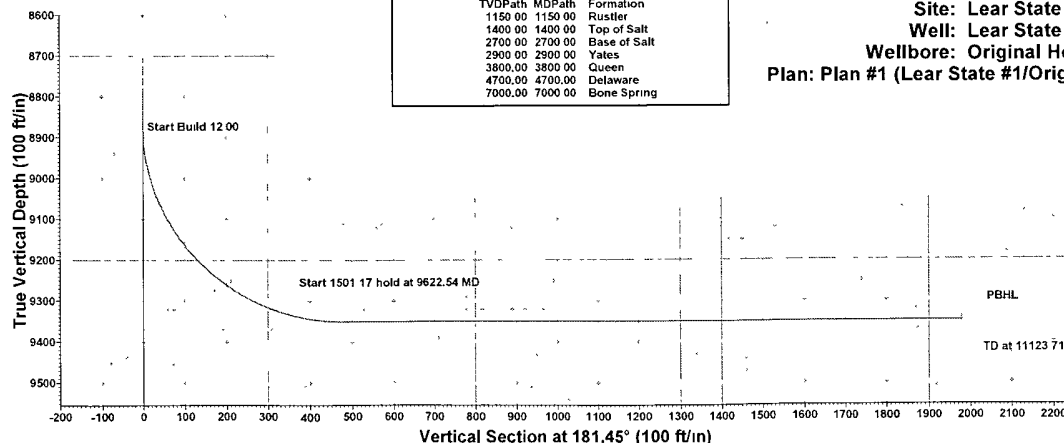
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8872.54	0.00	0.00	8872.54	0.00	0.00	0.00	0.00	0.00	
3	9622.54	90.00	181.45	9350.00	-477.31	-12.08	12.00	181.45	477.46	
4	11123.71	90.00	181.45	9350.00	-1978.00	-50.07	0.00	0.00	1978.63	PBHL

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N/-S	+E/-W	North	Easting	Shape
PBHL	9350.00	-1978.00	-50.00	617917.400	670018.200	Point

PROJECT DETAILS Lear State #1
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

Project: Lear State #1
Site: Lear State #1
Well: Lear State #1
Wellbore: Original Hole
Plan: Plan #1 (Lear State #1/Original Hole)

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	
1150.00	1150.00	Rustler	
1400.00	1400.00	Top of Salt	
2700.00	2700.00	Base of Salt	
2900.00	2900.00	Yates	
3800.00	3800.00	Queen	
4700.00	4700.00	Delaware	
7000.00	7000.00	Bone Spring	



Plan Plan #1 (Lear State #1/Original Hole)			
Created By	Mark Freeman	Date	13 36, April 23 2008
Checked		Date	

WHS

Pathfinder Survey Report

Company: Marbob
Project: Lear State #1
Site: Lear State #1
Well: Lear State #1
Wellbore: Original Hole
Design: Plan #1

Local Co-ordinate Reference: Well Lear State #1
TVD Reference: EST RKB @ 3696 00ft
MD Reference: EST RKB @ 3696.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Project Lear State #1	
Map System: US State Plane 1927 (Exact solution)	System Datum: Mean Sea Level
Geo Datum: NAD 1927 (NADCON CONUS)	
Map Zone: New Mexico East 3001	

Site Lear State #1

Site Position:	Northing: 619,895.400 ft	Latitude: 32° 42' 10.698 N
From: Map	Easting: 670,068.200 ft	Longitude: 103° 46' 49.659 W
Position Uncertainty: 0 00 ft	Slot Radius: "	Grid Convergence: 0.30 °

Well Lear State #1

Well Position	+N/-S 0.00 ft	Northing: 619,895.400 ft	Latitude: 32° 42' 10.698 N
	+E/-W 0.00 ft	Easting: 670,068.200 ft	Longitude: 103° 46' 49.659 W
Position Uncertainty	0.00 ft	Wellhead Elevation: ft	Ground Level: 3,696.00 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/23/2008	8.08	60.68	49,219

Design Plan #1

Audit Notes:

Version:	Phase: PLAN	Tie On Depth: 0 00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)
	0.00	0.00
		+E/-W (ft)
		0 00
		Direction (°)
		181.45

Survey Tool Program Date 4/23/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0 00	11,123.71	Plan #1 (Original Hole)	MWD	MWD - Standard

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
0.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
100.00	0 00	0 00	100.00	0 00	0 00	0 00	0 00
200.00	0 00	0 00	200.00	0 00	0 00	0 00	0 00
300.00	0 00	0 00	300.00	0 00	0 00	0 00	0 00
400.00	0 00	0 00	400.00	0 00	0 00	0 00	0 00
500.00	0 00	0 00	500.00	0 00	0 00	0 00	0 00
600.00	0 00	0 00	600.00	0 00	0 00	0 00	0 00
700.00	0 00	0 00	700.00	0 00	0 00	0 00	0 00
800.00	0 00	0 00	800.00	0 00	0 00	0 00	0 00
900.00	0 00	0 00	900.00	0 00	0 00	0 00	0 00
1,000.00	0 00	0 00	1,000.00	0 00	0 00	0 00	0 00
1,100.00	0 00	0 00	1,100.00	0 00	0 00	0 00	0 00

WHS

Pathfinder Survey Report

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Site: Lear State #1
Well: Lear State #1
Wellbore: Original Hole
Design: Plan #1

Local Co-ordinate Reference: Well Lear State #1
TVD Reference: EST RKB @ 3696.00ft
MD Reference: EST RKB @ 3696.00ft
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00

WHS

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MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00
8,872.54	0.00	0.00	8,872.54	0.00	0.00	0.00	0.00
8,875.00	0.30	181.45	8,875.00	-0.01	0.00	0.01	12.00
8,900.00	3.30	181.45	8,899.98	-0.79	-0.02	0.79	12.00
8,925.00	6.30	181.45	8,924.89	-2.88	-0.07	2.88	12.00
8,950.00	9.30	181.45	8,949.66	-6.27	-0.16	6.27	12.00
8,975.00	12.30	181.45	8,974.22	-10.95	-0.28	10.95	12.00
9,000.00	15.30	181.45	8,998.49	-16.91	-0.43	16.91	12.00
9,025.00	18.30	181.45	9,022.42	-24.13	-0.61	24.13	12.00
9,050.00	21.30	181.45	9,045.94	-32.59	-0.82	32.60	12.00
9,075.00	24.30	181.45	9,068.99	-42.27	-1.07	42.29	12.00
9,100.00	27.30	181.45	9,091.49	-53.15	-1.35	53.16	12.00

WHS

Pathfinder Survey Report

Company: Marbob
Project: Lear State #1
Site: Lear State #1
Well: Lear State #1
Wellbore: Original Hole
Design: Plan #1

Local Co-ordinate Reference: Well Lear State #1
TVD Reference: EST RKB @ 3696.00ft
MD Reference: EST RKB @ 3696.00ft
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
9,125.00	30.30	181.45	9,113.40	-65.18	-1.65	65.20	12.00
9,150.00	33.30	181.45	9,134.65	-78.35	-1.98	78.37	12.00
9,175.00	36.30	181.45	9,155.17	-92.61	-2.34	92.64	12.00
9,200.00	39.30	181.45	9,174.93	-107.92	-2.73	107.96	12.00
9,225.00	42.30	181.45	9,193.85	-124.25	-3.15	124.29	12.00
9,250.00	45.30	181.45	9,211.89	-141.54	-3.58	141.59	12.00
9,275.00	48.30	181.45	9,229.01	-159.76	-4.04	159.81	12.00
9,300.00	51.30	181.45	9,245.14	-178.84	-4.53	178.90	12.00
9,325.00	54.30	181.45	9,260.26	-198.75	-5.03	198.81	12.00
9,350.00	57.30	181.45	9,274.31	-219.42	-5.55	219.49	12.00
9,375.00	60.30	181.45	9,287.26	-240.79	-6.10	240.87	12.00
9,400.00	63.30	181.45	9,299.08	-262.81	-6.65	262.90	12.00
9,425.00	66.30	181.45	9,309.72	-285.42	-7.22	285.51	12.00
9,450.00	69.30	181.45	9,319.17	-308.56	-7.81	308.66	12.00
9,475.00	72.30	181.45	9,327.39	-332.16	-8.41	332.26	12.00
9,500.00	75.30	181.45	9,334.37	-356.15	-9.02	356.27	12.00
9,525.00	78.30	181.45	9,340.08	-380.48	-9.63	380.60	12.00
9,550.00	81.30	181.45	9,344.51	-405.07	-10.25	405.20	12.00
9,575.00	84.30	181.45	9,347.64	-429.87	-10.88	430.00	12.00
9,600.00	87.30	181.45	9,349.47	-454.79	-11.51	454.93	12.00
9,622.54	90.00	181.45	9,350.00	-477.31	-12.08	477.46	12.00
9,700.00	90.00	181.45	9,350.00	-554.75	-14.04	554.92	0.00
9,800.00	90.00	181.45	9,350.00	-654.72	-16.57	654.92	0.00
9,900.00	90.00	181.45	9,350.00	-754.68	-19.10	754.92	0.00
10,000.00	90.00	181.45	9,350.00	-854.65	-21.63	854.92	0.00
10,100.00	90.00	181.45	9,350.00	-954.62	-24.16	954.92	0.00
10,200.00	90.00	181.45	9,350.00	-1,054.59	-26.69	1,054.92	0.00
10,300.00	90.00	181.45	9,350.00	-1,154.56	-29.22	1,154.92	0.00
10,400.00	90.00	181.45	9,350.00	-1,254.52	-31.76	1,254.92	0.00
10,500.00	90.00	181.45	9,350.00	-1,354.49	-34.29	1,354.92	0.00
10,600.00	90.00	181.45	9,350.00	-1,454.46	-36.82	1,454.92	0.00
10,700.00	90.00	181.45	9,350.00	-1,554.43	-39.35	1,554.92	0.00
10,800.00	90.00	181.45	9,350.00	-1,654.39	-41.88	1,654.92	0.00
10,900.00	90.00	181.45	9,350.00	-1,754.36	-44.41	1,754.92	0.00
11,000.00	90.00	181.45	9,350.00	-1,854.33	-46.94	1,854.92	0.00
11,100.00	90.00	181.45	9,350.00	-1,954.30	-49.47	1,954.92	0.00
11,123.71	90.00	181.45	9,350.00	-1,978.00	-50.07	1,978.63	0.00

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Site: Lear State #1
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Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
PBHL	0 00	0 00	9,350.00	-1,978 00	-50 00	617,917 400	670,018 200	32° 41' 51.128 N	103° 46' 50 365 W
- plan hits target									
- Point									

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
2,900.00	2,900 00	Yates		0 00	
2,700 00	2,700 00	Base of Salt		0.00	
4,700 00	4,700 00	Delaware		0 00	
3,800.00	3,800 00	Queen		0 00	
1,150.00	1,150 00	Rustler		0.00	
1,400 00	1,400.00	Top of Salt		0 00	
7,000.00	7,000 00	Bone Spring		0 00	

Checked By: _____ Approved By: _____ Date: _____