

30-015-36220

Marbob

Shocker 32 State #3H

S32 T25S R29E

Shocker 32 State #3H

Original Hole

Plan: Plan #1

Pathfinder Survey Report

18 March, 2008



Azimuths to Grid North
 True North: -0.18°
 Magnetic North: 7.97°
 Magnetic Field
 Strength: 48838.3snT
 Dip Angle: 60.08°
 Date: 3/17/2008
 Model: IGRF200510

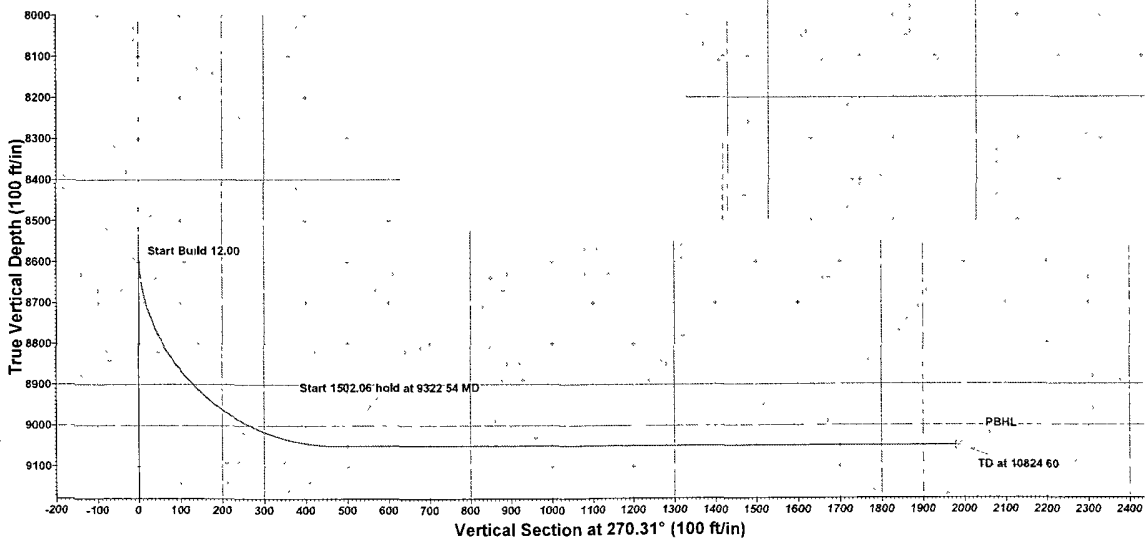
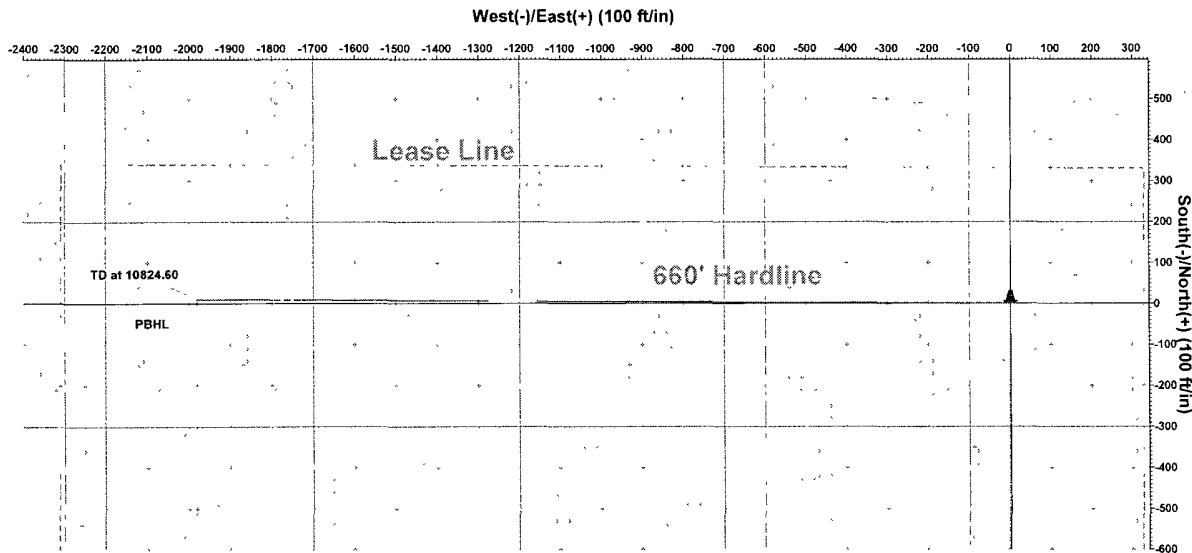
Project: Shocker 32 State #3H
 Site: S32 T25S R29E
 Well: Shocker 32 State #3H
 Wellbore: Original Hole
 Plan: Plan #1 (Shocker 32 State #3H/Original Hole)



WELL DETAILS Shocker 32 State #3H						
		Ground Elevation		EST RKB @ 2983.00ft		
		RKB Elevation		Rig Name		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	397541.400	603709.900	32° 5' 33.052 N	103° 59' 54.397 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	8572.54	0.00	0.00	8572.54	0.00	0.00	0.00	0.00	0.00	
3	9322.54	90.00	270.31	9050.00	2.58	-477.46	12.00	270.31	477.46	
4	10824.60	90.00	270.31	9050.00	10.71	-1979.50	0.00	0.00	1979.53	PBHL

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
PBHL	9050.00	10.70	-1979.50	397552.100	601730.400	



PROJECT DETAILS Shocker 32 State #3H
 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

Plan Plan #1 (Shocker 32 State #3H/Original Hole)	
Created By: Mark Freeman	Date: 14 42, March 18 2008
Checked: _____	Date: _____

WHS
Pathfinder Survey Report

Company: Marbob	Local Co-ordinate Reference: Well Shocker 32 State #3H
Project: Shocker 32 State #3H	TVD Reference: EST RKB @ 2983.00ft
Site: S32 T25S R29E	MD Reference: EST RKB @ 2983 00ft
Well: Shocker 32 State #3H	North Reference: Grid
Wellbore: Original Hole	Survey Calculation Method: Minimum Curvature
Design: Plan #1	Database: EDM 2003 16 Single User Db

Project Shocker 32 State #3H	
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 S32 T25S R29E		
Site Position:	Northing: 397,541 400 ft	Latitude: 32° 5' 33.052 N
From: Map	Easting: 603,709 900 ft	Longitude: 103° 59' 54.397 W
Position Uncertainty: 0 00 ft	Slot Radius: "	Grid Convergence: 0 18 °

Well: Shocker 32 State #3H			
Well Position	+N/-S 0 00 ft	Northing: 397,541.400 ft	Latitude: 32° 5' 33 052 N
	+E/-W 0 00 ft	Easting: 603,709 900 ft	Longitude: 103° 59' 54.397 W
Position Uncertainty	0.00 ft	Wellhead Elevation: ft	Ground Level: 2,983 00ft

Wellbore Original Hole					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	3/17/2008	(°) 8 14	(°) 60.08	(nT) 48,838

Design Plan #1					
Audit Notes:					
Version:	Phase: PLAN	Tie On Depth:	0.00		
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0 00	0 00	0.00	270.31	

Survey Tool Program		Date: 3/17/2008		
From	To	Survey (Wellbore)	Tool Name	Description
(ft) 0 00	(ft) 10,824 60	Plan #1 (Original Hole)	MWD	MWD - Standard

Planned Survey								
MD	Inc	Azi	TVD	N/S	E/W	V. Sec	DLeg	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
0 00	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	0 00
200.00	0 00	0.00	200 00	0.00	0.00	0 00	0 00	0 00
300.00	0 00	0.00	300 00	0 00	0 00	0 00	0 00	0 00
400 00	0.00	0 00	400.00	0.00	0 00	0 00	0 00	0 00
500 00	0 00	0 00	500.00	0.00	0 00	0 00	0 00	0 00
600 00	0 00	0 00	600.00	0.00	0 00	0 00	0 00	0 00
700 00	0.00	0 00	700.00	0.00	0.00	0 00	0 00	0 00
800 00	0.00	0 00	800.00	0.00	0.00	0 00	0 00	0 00
900 00	0 00	0.00	900 00	0 00	0.00	0 00	0 00	0 00
1,000 00	0 00	0.00	1,000 00	0.00	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	0 00

WHS

Pathfinder Survey Report

Company: Marbob
Project: Shocker 32 State #3H
Site: S32 T25S R29E
Well: Shocker 32 State #3H
Wellbore: Original Hole
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Shocker 32 State #3H
 EST RKB @ 2983.00ft
 EST RKB @ 2983.00ft
 Grid
 Minimum Curvature
 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
Pathfinder Survey Report

Company: Marbob
Project: Shocker 32 State #3H
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Well: Shocker 32 State #3H
Wellbore: Original Hole
Design: Plan #1

Local Co-ordinate Reference: Well Shocker 32 State #3H
TVD Reference: EST RKB @ 2983.00ft
MD Reference: EST RKB @ 2983.00ft
North Reference: Grid
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)
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
8,572.54	0.00	0.00	8,572.54	0.00	0.00	0.00	0.00
8,575.00	0.30	270.31	8,575.00	0.00	-0.01	0.01	12.00
8,600.00	3.30	270.31	8,599.98	0.00	-0.79	0.79	12.00
8,625.00	6.30	270.31	8,624.89	0.02	-2.88	2.88	12.00
8,650.00	9.30	270.31	8,649.66	0.03	-6.27	6.27	12.00
8,675.00	12.30	270.31	8,674.22	0.06	-10.95	10.95	12.00
8,700.00	15.30	270.31	8,698.49	0.09	-16.91	16.91	12.00
8,725.00	18.30	270.31	8,722.42	0.13	-24.13	24.13	12.00
8,750.00	21.30	270.31	8,745.94	0.18	-32.60	32.60	12.00
8,775.00	24.30	270.31	8,768.99	0.23	-42.28	42.29	12.00
8,800.00	27.30	270.31	8,791.49	0.29	-53.16	53.16	12.00
8,825.00	30.30	270.31	8,813.40	0.35	-65.20	65.20	12.00
8,850.00	33.30	270.31	8,834.65	0.42	-78.37	78.37	12.00
8,875.00	36.30	270.31	8,855.17	0.50	-92.64	92.64	12.00

WHS
Pathfinder Survey Report

Company: Marbob
Project: Shocker 32 State #3H
Site: S32 T25S R29E
Well: Shocker 32 State #3H
Wellbore: Original Hole
Design: Plan #1

Local Co-ordinate Reference: Well Shocker 32 State #3H
TVD Reference: EST RKB @ 2983 00ft
MD Reference: EST RKB @ 2983 00ft
North Reference: Grid
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)
8,900.00	39.30	270.31	8,874.93	0.58	-107.96	107.96	12.00
8,925.00	42.30	270.31	8,893.85	0.67	-124.29	124.29	12.00
8,950.00	45.30	270.31	8,911.89	0.77	-141.59	141.59	12.00
8,975.00	48.30	270.31	8,929.01	0.86	-159.81	159.81	12.00
9,000.00	51.30	270.31	8,945.14	0.97	-178.90	178.90	12.00
9,025.00	54.30	270.31	8,960.26	1.08	-198.81	198.81	12.00
9,050.00	57.30	270.31	8,974.31	1.19	-219.48	219.49	12.00
9,075.00	60.30	270.31	8,987.26	1.30	-240.86	240.87	12.00
9,100.00	63.30	270.31	8,999.08	1.42	-262.89	262.90	12.00
9,125.00	66.30	270.31	9,009.72	1.54	-285.51	285.51	12.00
9,150.00	69.30	270.31	9,019.17	1.67	-308.65	308.66	12.00
9,175.00	72.30	270.31	9,027.39	1.80	-332.26	332.26	12.00
9,200.00	75.30	270.31	9,034.37	1.93	-356.26	356.27	12.00
9,225.00	78.30	270.31	9,040.08	2.06	-380.60	380.60	12.00
9,250.00	81.30	270.31	9,044.51	2.19	-405.20	405.20	12.00
9,275.00	84.30	270.31	9,047.64	2.33	-430.00	430.00	12.00
9,300.00	87.30	270.31	9,049.47	2.46	-454.93	454.93	12.00
9,322.54	90.00	270.31	9,050.00	2.58	-477.46	477.46	12.00
9,400.00	90.00	270.31	9,050.00	3.00	-554.92	554.92	0.00
9,500.00	90.00	270.31	9,050.00	3.54	-654.92	654.92	0.00
9,600.00	90.00	270.31	9,050.00	4.08	-754.91	754.92	0.00
9,700.00	90.00	270.31	9,050.00	4.63	-854.91	854.92	0.00
9,800.00	90.00	270.31	9,050.00	5.17	-954.91	954.92	0.00
9,900.00	90.00	270.31	9,050.00	5.71	-1,054.91	1,054.92	0.00
10,000.00	90.00	270.31	9,050.00	6.25	-1,154.91	1,154.92	0.00
10,100.00	90.00	270.31	9,050.00	6.79	-1,254.91	1,254.92	0.00
10,200.00	90.00	270.31	9,050.00	7.33	-1,354.91	1,354.92	0.00
10,300.00	90.00	270.31	9,050.00	7.87	-1,454.90	1,454.92	0.00
10,400.00	90.00	270.31	9,050.00	8.41	-1,554.90	1,554.92	0.00
10,500.00	90.00	270.31	9,050.00	8.95	-1,654.90	1,654.92	0.00
10,600.00	90.00	270.31	9,050.00	9.50	-1,754.90	1,754.92	0.00
10,700.00	90.00	270.31	9,050.00	10.04	-1,854.90	1,854.92	0.00
10,800.00	90.00	270.31	9,050.00	10.58	-1,954.90	1,954.92	0.00
10,824.60	90.00	270.31	9,050.00	10.71	-1,979.50	1,979.53	0.00

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	- plan hits target	- Point	0.00	0.00	9,050.00	10.70	-1,979.50	397,552.100	601,730.400	32° 5' 33.219 N	104° 0' 17.408 W

Checked By: _____ Approved By: _____ Date: _____