

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTRECEIVED
OCD ArtesiaFORM APPROVED
OMB NO 1004-0135
Expires July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

DEC - 2 2009

Lease Serial No.
NMNM102031

NMOCD ARTESIA

Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

7 If Unit or CA/Agreement. Name and/or No

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8 Well Name and No.

SHOCKER 20 FEDERAL 1H

2 Name of Operator

Contact: DEBBIE WILBOURN

MARBOB ENERGY CORPORATION E-Mail: geology@marbob.com

9. API Well No

30-015-36430

3a. Address

P O BOX 227
ARTESIA, NM 88211-0227

3b Phone No. (include area code)

Ph: 575-748-3303

10. Field and Pool, or Exploratory

WILLOW LAKE, BONE SPRING

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 20 T25S R29E NWSW 1750FSL 330FWL

11. County or Parish, and State

EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Fracture Treat☐ New Construction☐ Plug and Abandon☒ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☐ Other

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

MARBOB ENERGY CORPORATION PROPOSES TO MI A DRLG RIG W/A 3000# DBL RAM BOP & TST THE BOP TO 3000# W/AN INDEPENDENT TSTR BEFORE COMMENCING OPERATIONS. WE WILL KICK-OFF THE OLD WELLBORE @660' & DRL TO A NEW BHL W/A 7 7/8" BIT USING 9.0 PPG CUT BRINE. AT TD WE WILL RUN 11495' OF NEW 5 1/2" 17# N-80 LTC CSG, CMTG THE 1ST STG W/450 SX ACID SOLUBLE "H", WT 15.0 PPG, YLD 2.6. CMT 2ND STG W/500 SX "H" LIGHT, WT 12.7 PPG, YLD 1.91 & TAIL IN W/100 SX "H", WT 13.0 PPG, YLD 1.64. THE DVT WILL BE @6500' & TOC WILL BE 2600'.

HRZTL DRILLING PLAN ATTACHED.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. Thereby certify that the foregoing is true and correct.

**Electronic Submission #77599 verified by the BLM Well Information System
For MARBOB ENERGY CORPORATION, sent to the Carlsbad**

Name (Printed/Typed) DEBBIE WILBOURN

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 11/17/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

APPROVED

/s/ Roger Hall

NOV 27 2009

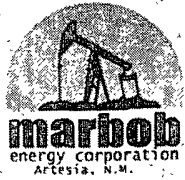
Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Petroleum Engineer
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****



Marbob

Eddy County

Shocker 20 Federal

#1H

OH

Plan: Plan #1

Pathfinder X & Y Planning Report

13 November, 2009

PATHFINDER



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Shocker 20 Federal
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 2995.00ft (22' KB Correction)
MD Reference: WELL @ 2995.00ft (22' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Project: Eddy County

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: Shocker 20 Federal

Site Position:		Northing:	403,669.500 ft	Latitude:	32° 6' 33.841 N
From:	Map	Easting:	598,979.200 ft	Longitude:	104° 0' 49.179 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.17 °

Well:	#1H					
Well Position	+N/-S	0.00 ft	Northing:	403,669.500 ft	Latitude:	32° 6' 33.841 N
	+E/-W	0.00 ft	Easting:	598,979.200 ft	Longitude:	104° 0' 49.179 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	2,973.00 ft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/13/2009	7.96	60.06	48,688

Design: Plan #1

Audit Notes:

Version: **Phase:** PLAN **Tie On Depth:** 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	89.96

Survey Tool Program **Date** 11/13/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	11,495.06	Plan #1 (OH)	MWD	MWD - Standard



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Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	-2,995.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
100.00	0.00	0.00	100.00	-2,895.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
200.00	0.00	0.00	200.00	-2,795.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
300.00	0.00	0.00	300.00	-2,695.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
400.00	0.00	0.00	400.00	-2,595.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
500.00	0.00	0.00	500.00	-2,495.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
600.00	0.00	0.00	600.00	-2,395.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
700.00	0.00	0.00	700.00	-2,295.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
800.00	0.00	0.00	800.00	-2,195.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
900.00	0.00	0.00	900.00	-2,095.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,000.00	0.00	0.00	1,000.00	-1,995.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,100.00	0.00	0.00	1,100.00	-1,895.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,200.00	0.00	0.00	1,200.00	-1,795.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,300.00	0.00	0.00	1,300.00	-1,695.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,400.00	0.00	0.00	1,400.00	-1,595.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,500.00	0.00	0.00	1,500.00	-1,495.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,600.00	0.00	0.00	1,600.00	-1,395.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,700.00	0.00	0.00	1,700.00	-1,295.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,800.00	0.00	0.00	1,800.00	-1,195.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
1,900.00	0.00	0.00	1,900.00	-1,095.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,000.00	0.00	0.00	2,000.00	-995.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,100.00	0.00	0.00	2,100.00	-895.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,200.00	0.00	0.00	2,200.00	-795.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,300.00	0.00	0.00	2,300.00	-695.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,400.00	0.00	0.00	2,400.00	-595.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,500.00	0.00	0.00	2,500.00	-495.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,600.00	0.00	0.00	2,600.00	-395.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20



Pathfinder Energy Services

Pathfinder X & Y Planning Report



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Wellbore: OH
Design: Plan #1

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2,700.00	0.00	0.00	2,700.00	-295.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,800.00	0.00	0.00	2,800.00	-195.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
2,900.00	0.00	0.00	2,900.00	-95.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,000.00	0.00	0.00	3,000.00	5.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,100.00	0.00	0.00	3,100.00	105.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,200.00	0.00	0.00	3,200.00	205.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,300.00	0.00	0.00	3,300.00	305.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,400.00	0.00	0.00	3,400.00	405.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,500.00	0.00	0.00	3,500.00	505.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,600.00	0.00	0.00	3,600.00	605.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,700.00	0.00	0.00	3,700.00	705.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,800.00	0.00	0.00	3,800.00	805.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
3,900.00	0.00	0.00	3,900.00	905.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,000.00	0.00	0.00	4,000.00	1,005.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,100.00	0.00	0.00	4,100.00	1,105.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,200.00	0.00	0.00	4,200.00	1,205.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,300.00	0.00	0.00	4,300.00	1,305.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,400.00	0.00	0.00	4,400.00	1,405.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,500.00	0.00	0.00	4,500.00	1,505.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,600.00	0.00	0.00	4,600.00	1,605.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,700.00	0.00	0.00	4,700.00	1,705.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,800.00	0.00	0.00	4,800.00	1,805.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
4,900.00	0.00	0.00	4,900.00	1,905.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,000.00	0.00	0.00	5,000.00	2,005.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,100.00	0.00	0.00	5,100.00	2,105.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,200.00	0.00	0.00	5,200.00	2,205.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,300.00	0.00	0.00	5,300.00	2,305.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20



Pathfinder Energy Services

Pathfinder X & Y Planning Report



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Site: Shocker 20 Federal
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Wellbore: OH
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5,400.00	0.00	0.00	5,400.00	2,405.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,500.00	0.00	0.00	5,500.00	2,505.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,600.00	0.00	0.00	5,600.00	2,605.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,700.00	0.00	0.00	5,700.00	2,705.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,800.00	0.00	0.00	5,800.00	2,805.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
5,900.00	0.00	0.00	5,900.00	2,905.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
6,000.00	0.00	0.00	6,000.00	3,005.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
6,100.00	0.00	0.00	6,100.00	3,105.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
6,200.00	0.00	0.00	6,200.00	3,205.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
6,300.00	0.00	0.00	6,300.00	3,305.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
6,400.00	0.00	0.00	6,400.00	3,405.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
6,500.00	0.00	0.00	6,500.00	3,505.00	0.00	0.00	0.00	0.00	403,669.50	598,979.20
6,602.50	0.00	0.00	6,602.50	3,607.50	0.00	0.00	0.00	0.00	403,669.50	598,979.20
6,625.00	2.70	89.96	6,624.99	3,629.99	0.00	0.53	0.53	12.00	403,669.50	598,979.73
6,650.00	5.70	89.96	6,649.92	3,654.92	0.00	2.36	2.36	12.00	403,669.50	598,981.56
6,675.00	8.70	89.96	6,674.72	3,679.72	0.00	5.49	5.49	12.00	403,669.50	598,984.69
6,700.00	11.70	89.96	6,699.32	3,704.32	0.01	9.92	9.92	12.00	403,669.51	598,989.12
6,725.00	14.70	89.96	6,723.66	3,728.66	0.01	15.63	15.63	12.00	403,669.51	598,994.83
6,750.00	17.70	89.96	6,747.67	3,752.67	0.02	22.60	22.60	12.00	403,669.52	599,001.80
6,775.00	20.70	89.96	6,771.27	3,776.27	0.02	30.82	30.82	12.00	403,669.52	599,010.02
6,800.00	23.70	89.96	6,794.42	3,799.42	0.03	40.27	40.27	12.00	403,669.53	599,019.47
6,825.00	26.70	89.96	6,817.04	3,822.04	0.04	50.91	50.91	12.00	403,669.54	599,030.11
6,850.00	29.70	89.96	6,839.07	3,844.07	0.04	62.72	62.72	12.00	403,669.54	599,041.92
6,875.00	32.70	89.96	6,860.45	3,865.45	0.05	75.67	75.67	12.00	403,669.55	599,054.87
6,900.00	35.70	89.96	6,881.12	3,886.12	0.06	89.72	89.72	12.00	403,669.56	599,068.92
6,925.00	38.70	89.96	6,901.03	3,906.03	0.07	104.83	104.83	12.00	403,669.57	599,084.03
6,950.00	41.70	89.96	6,920.13	3,925.13	0.08	120.96	120.96	12.00	403,669.58	599,100.16



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6,975.00	44.70	89.96	6,938.35	3,943.35	0.10	138.07	138.07	12.00	403,669.60	599,117.27
7,000.00	47.70	89.96	6,955.65	3,960.65	0.11	156.11	156.11	12.00	403,669.61	599,135.31
7,025.00	50.70	89.96	6,971.99	3,976.99	0.12	175.04	175.04	12.00	403,669.62	599,154.24
7,050.00	53.70	89.96	6,987.31	3,992.31	0.14	194.79	194.79	12.00	403,669.64	599,173.99
7,075.00	56.70	89.96	7,001.58	4,006.58	0.15	215.31	215.31	12.00	403,669.65	599,194.51
7,100.00	59.70	89.96	7,014.75	4,019.75	0.17	236.56	236.56	12.00	403,669.67	599,215.76
7,125.00	62.70	89.96	7,026.80	4,031.80	0.18	258.46	258.46	12.00	403,669.68	599,237.66
7,150.00	65.70	89.96	7,037.68	4,042.68	0.20	280.97	280.97	12.00	403,669.70	599,260.17
7,175.00	68.69	89.96	7,047.37	4,052.37	0.21	304.01	304.01	12.00	403,669.71	599,283.21
7,200.00	71.69	89.96	7,055.84	4,060.84	0.23	327.53	327.53	12.00	403,669.73	599,306.73
7,225.00	74.69	89.96	7,063.06	4,068.06	0.25	351.46	351.46	12.00	403,669.75	599,330.66
7,250.00	77.69	89.96	7,069.03	4,074.03	0.26	375.73	375.73	12.00	403,669.76	599,354.93
7,275.00	80.69	89.96	7,073.72	4,078.72	0.28	400.29	400.29	12.00	403,669.78	599,379.49
7,300.00	83.69	89.96	7,077.11	4,082.11	0.30	425.05	425.05	12.00	403,669.80	599,404.25
7,325.00	86.69	89.96	7,079.21	4,084.21	0.31	449.96	449.96	12.00	403,669.81	599,429.16
7,350.00	89.69	89.96	7,079.99	4,084.99	0.33	474.94	474.94	12.00	403,669.83	599,454.14
7,352.56	90.00	89.96	7,080.00	4,085.00	0.33	477.50	477.50	12.00	403,669.83	599,456.70
7,352.71	90.00	89.96	7,080.00	4,085.00	0.33	477.66	477.66	0.00	403,669.83	599,456.86
7,400.00	90.00	89.96	7,080.00	4,085.00	0.37	524.94	524.94	0.00	403,669.87	599,504.14
7,500.00	90.00	89.96	7,080.00	4,085.00	0.44	624.94	624.94	0.00	403,669.94	599,604.14
7,600.00	90.00	89.96	7,080.00	4,085.00	0.51	724.94	724.94	0.00	403,670.01	599,704.14
7,700.00	90.00	89.96	7,080.00	4,085.00	0.58	824.94	824.94	0.00	403,670.08	599,804.14
7,800.00	90.00	89.96	7,080.00	4,085.00	0.65	924.94	924.94	0.00	403,670.15	599,904.14
7,900.00	90.00	89.96	7,080.00	4,085.00	0.72	1,024.94	1,024.94	0.00	403,670.22	600,004.14
8,000.00	90.00	89.96	7,080.00	4,085.00	0.79	1,124.94	1,124.94	0.00	403,670.29	600,104.14
8,100.00	90.00	89.96	7,080.00	4,085.00	0.86	1,224.94	1,224.94	0.00	403,670.36	600,204.14
8,200.00	90.00	89.96	7,080.00	4,085.00	0.92	1,324.94	1,324.94	0.00	403,670.42	600,304.14



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Shocker 20 Federal
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 2995.00ft (22' KB Correction)
MD Reference: WELL @ 2995.00ft (22' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,300.00	90.00	89.96	7,080.00	4,085.00	0.99	1,424.94	1,424.94	0.00	403,670.49	600,404.14
8,400.00	90.00	89.96	7,080.00	4,085.00	1.06	1,524.94	1,524.94	0.00	403,670.56	600,504.14
8,500.00	90.00	89.96	7,080.00	4,085.00	1.13	1,624.94	1,624.94	0.00	403,670.63	600,604.14
8,600.00	90.00	89.96	7,080.00	4,085.00	1.20	1,724.94	1,724.94	0.00	403,670.70	600,704.14
8,700.00	90.00	89.96	7,080.00	4,085.00	1.27	1,824.94	1,824.94	0.00	403,670.77	600,804.14
8,800.00	90.00	89.96	7,080.00	4,085.00	1.34	1,924.94	1,924.94	0.00	403,670.84	600,904.14
8,900.00	90.00	89.96	7,080.00	4,085.00	1.41	2,024.94	2,024.94	0.00	403,670.91	601,004.14
9,000.00	90.00	89.96	7,080.00	4,085.00	1.48	2,124.94	2,124.94	0.00	403,670.98	601,104.14
9,100.00	90.00	89.96	7,080.00	4,085.00	1.55	2,224.94	2,224.94	0.00	403,671.05	601,204.14
9,200.00	90.00	89.96	7,080.00	4,085.00	1.62	2,324.94	2,324.94	0.00	403,671.12	601,304.14
9,300.00	90.00	89.96	7,080.00	4,085.00	1.69	2,424.94	2,424.94	0.00	403,671.19	601,404.14
9,400.00	90.00	89.96	7,080.00	4,085.00	1.76	2,524.94	2,524.94	0.00	403,671.26	601,504.14
9,500.00	90.00	89.96	7,080.00	4,085.00	1.83	2,624.94	2,624.94	0.00	403,671.33	601,604.14
9,600.00	90.00	89.96	7,080.00	4,085.00	1.90	2,724.94	2,724.94	0.00	403,671.40	601,704.14
9,700.00	90.00	89.96	7,080.00	4,085.00	1.97	2,824.94	2,824.94	0.00	403,671.47	601,804.14
9,800.00	90.00	89.96	7,080.00	4,085.00	2.04	2,924.94	2,924.94	0.00	403,671.54	601,904.14
9,900.00	90.00	89.96	7,080.00	4,085.00	2.11	3,024.94	3,024.94	0.00	403,671.61	602,004.14
10,000.00	90.00	89.96	7,080.00	4,085.00	2.18	3,124.94	3,124.94	0.00	403,671.68	602,104.14
10,100.00	90.00	89.96	7,080.00	4,085.00	2.25	3,224.94	3,224.94	0.00	403,671.75	602,204.14
10,200.00	90.00	89.96	7,080.00	4,085.00	2.32	3,324.94	3,324.94	0.00	403,671.82	602,304.14
10,300.00	90.00	89.96	7,080.00	4,085.00	2.39	3,424.94	3,424.94	0.00	403,671.89	602,404.14
10,400.00	90.00	89.96	7,080.00	4,085.00	2.46	3,524.94	3,524.94	0.00	403,671.96	602,504.14
10,500.00	90.00	89.96	7,080.00	4,085.00	2.53	3,624.94	3,624.94	0.00	403,672.03	602,604.14
10,600.00	90.00	89.96	7,080.00	4,085.00	2.60	3,724.94	3,724.94	0.00	403,672.10	602,704.14
10,700.00	90.00	89.96	7,080.00	4,085.00	2.67	3,824.94	3,824.94	0.00	403,672.17	602,804.14
10,800.00	90.00	89.96	7,080.00	4,085.00	2.74	3,924.94	3,924.94	0.00	403,672.24	602,904.14
10,900.00	90.00	89.96	7,080.00	4,085.00	2.81	4,024.94	4,024.94	0.00	403,672.31	603,004.14



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Shocker 20 Federal
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 2995.00ft (22' KB Correction)
MD Reference: WELL @ 2995.00ft (22' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

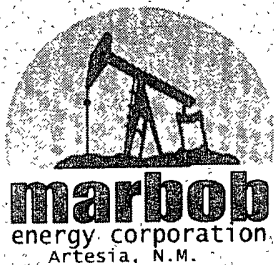
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
11,000.00	90.00	89.96	7,080.00	4,085.00	2.88	4,124.94	4,124.94	0.00	403,672.38	603,104.14
11,100.00	90.00	89.96	7,080.00	4,085.00	2.95	4,224.94	4,224.94	0.00	403,672.45	603,204.14
11,200.00	90.00	89.96	7,080.00	4,085.00	3.02	4,324.94	4,324.94	0.00	403,672.52	603,304.14
11,300.00	90.00	89.96	7,080.00	4,085.00	3.09	4,424.94	4,424.94	0.00	403,672.59	603,404.14
11,400.00	90.00	89.96	7,080.00	4,085.00	3.16	4,524.94	4,524.94	0.00	403,672.66	603,504.14
11,495.06	90.00	89.96	7,080.00	4,085.00	3.00	4,620.00	4,620.00	0.00	403,672.50	603,599.20

PBHL#1H

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#1H - plan hits target - Point	0.00	0.00	7,080.00	3.00	4,620.00	403,672.500	603,599.200	32° 6' 33.732 N	103° 59' 55.463 W

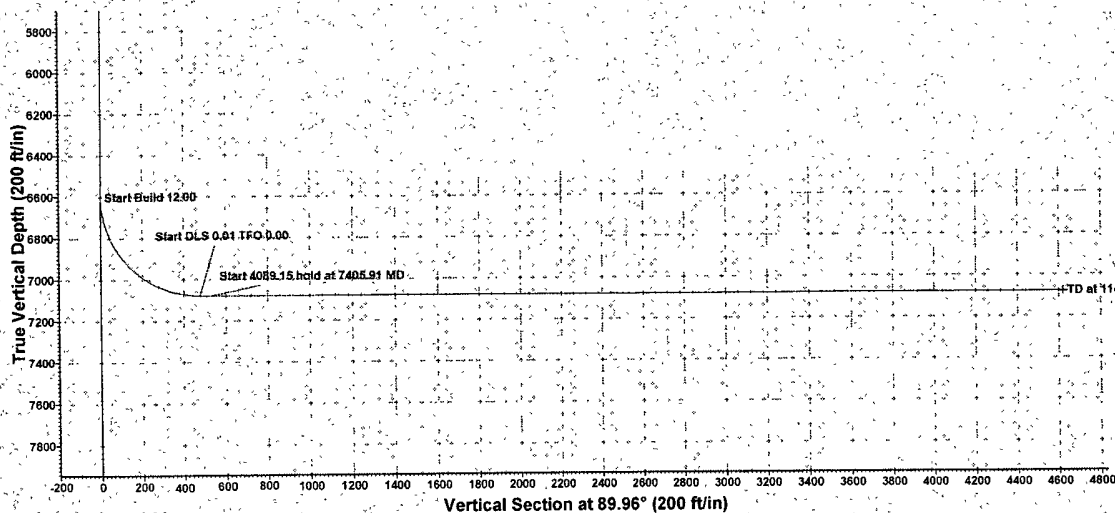
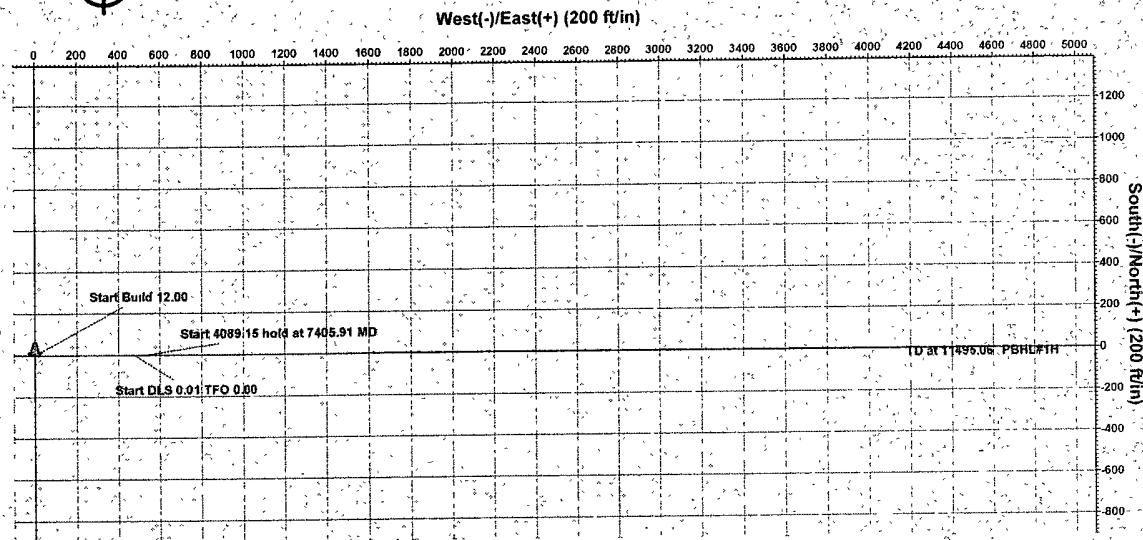
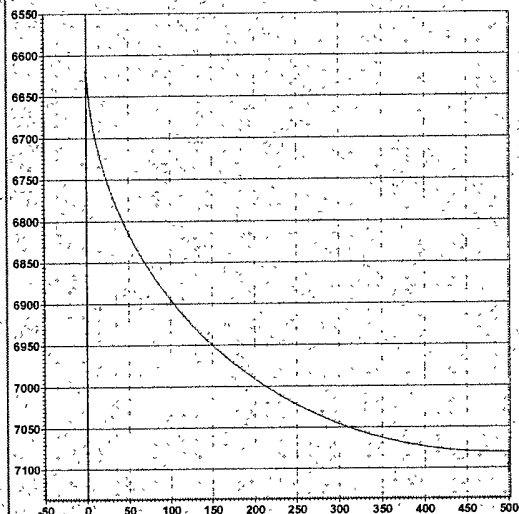
Checked By: _____ Approved By: _____ Date: _____



Azimuths to Grid North
True North: -0.17°
Magnetic North: 7.79°

Magnetic Field
Strength: 48688.5nT
Dip Angle: 60.06°
Date: 11/13/2009
Model: IGRF200510

PATHFINDER



WELL DETAILS #1H						
Ground Elevation	2973.00					
RKB Elevation	WELL @ 2995.00ft (22' KB Correction)					
Rig Name	22' KB Correction					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	403659.500	598979.200	32° 6' 33.841 N	104° 0' 49.179 W	

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+W/-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	6602.50	0.00	0.00	6602.50	0.00	0.00	0.00	0.00	0.00
3	7352.56	90.00	89.96	7080.00	0.33	477.50	12.00	89.96	477.50
4	7352.71	90.00	89.96	7080.00	0.33	477.68	0.00	0.00	477.66
5	11495.06	90.00	89.96	7080.00	3.00	4620.00	0.00	0.00	4620.00 PBHL#1H

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/-S	+E/-W	Northing	Easting Shape Point
PBHL#1H7080.00	3.00	4620.00	403672.500	603599.200	

Project: Eddy County
Site: Shocker 20 Federal
Well: #1H
Wellbore: OH
Plan: Plan #1 (#1H/OH)

PROJECT DETAILS: Eddy County
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 #1 (#1H/OH)	
Created By: Nate Bingham	Date: 14.45, November 13 2009
Checked: _____	Date: _____

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marbob Energy Corporation
LEASE NO.:	NMNM102031
WELL NAME & NO.:	Shocker 20 Federal #1H
SURFACE HOLE FOOTAGE:	1750' FSL & 330' FWL
BOTTOM HOLE FOOTAGE	1753' FSL & 330' FEL
LOCATION:	Section 20, T. 25 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING – RE-ENTRY & ADDITION OF HORIZONTAL LEG

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. BOPE test
- b. CIT test

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

B. CASING – Re-entry

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

Possible water flows or lost circulation in the Delaware Mountain Group.

- 1. The 13-3/8 inch surface casing is set at 607 feet with cement circulated to surface.**
- 2. The 9-5/8 inch intermediate casing is set at 2869 feet with cement circulated to surface.**

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:**
 - a. First stage to DV tool, cement shall:**
 - ☒ **Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.**
 - b. Second stage above DV tool, cement shall:**
 - ☒ **Cement should tie-back at least 200 feet into the 9-5/8 inch intermediate casing string. Operator shall provide method of verification. May require additional cement as the excess calculates to less than zero.**

A CIT is to be performed on this casing per Onshore Oil and Gas Order 2.III.B.1.h prior to drilling the shoe plug.

C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.**

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **3,000 (3M)** psi.
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. The tests shall be done by an independent service company.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
 - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

RGH 112509