

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB NO 1004-0137
Expires July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5 LEASE DESIGNATION AND SERIAL NO

NMNM102031

1a Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other		6 INDIAN ALLOTTEE OR TRIBE NAME	
b Type of Completion ☒ New Well ☐ Workover ☐ Deepen ☐ Plug Back ☐ Diff Resvr		7 UNIT AGREEMENT	
Other			
2 Name of Operator Marbob Energy Corporations		8 FARM OR LEASE NAME Shocker 20 Federal #1H	
3 Address P.O. Box 227 Artesia, NM 88211-0227		9 API WELL NO 30-015-36430	
4 Location of Well (Report location clearly and in accordance with Federal requirements)* At surface 1750' FSL & 330' FWL, Unit L (NWSW) At top prod Interval reported below 1730' FSL & 694' FWL, Unit L (NWSW) At total depth 1728' FSL & 2310' FWL, Unit K (NESW)*		10 FIELD NAME Willow Lake; Bone Spring, SE	
14 Date Spudded 9/30/08		11 SEC T, R, M, OR BLOCK AND SURVEY OR AREA 20 T 25S R 29E	
15 Date T D Reached 11/2/08		12 COUNTY OR PARISH Eddy	
16 Date Completed 11/26/08 ☒ D & A ☒ Ready to Prod		13 STATE NM	
17 ELEVATIONS (DF, RKB, RT, GR, etc)*		18 Total Depth MD 10793' TVD 8995'	
19 Plug back T D MD 10726' TVD 8993'		20 Depth Bridge Plug Set MD TVD	
21 Type Electric & other Logs Run (Submit a copy of each) DLL, DSN		22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit report) Directional Survey? ☐ No ☒ Yes (Submit copy)	

23 Casing and Liner Record (Report all strings set in well)									
Hole Size	Size/ Grade	Wt. (#/ft)	Top (MD)	Bottom(MD)	Stage Cementer Depth	No of Sks & Type of Cement	Slurry Vol (Bbl)	Cement Top*	Amount Pulled
26"	13 3/8" H-40	48#	0	607'		590 sx		0	None
12 1/4"	9 5/8" J-55	36#	0	2869'		1300 sx		0	None
7 7/8"	5 1/2" N-80	17#	0	10793'		250 sx		0	None

24 Tubing Record									
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	
2 7/8"	8518'	N/A							

25 Producing Intervals				26 Perforation Record			
Formation	Top	Bottom		Perforated Interval	Size	No of Holes	Perf Status
A) Bone Spring	9175'	10725'		9175-10725'		28	Open
B)							
C)							
D)							

27 Acid, Fracture Treatment, Cement Squeeze, Etc.	
Depth Interval	Amount and Type of Material
9175-10725'	Acidz w/1500 gal 15% NEFE acid; Frac w/157319 gal fluid & 260397# 16/30 Ottawa sand

28 Production- Interval A									
Date First Produced 11/27/08	Test Date 11/28/08	Hours Tested 24	Test Production →	Oil Bbl 147	Gas MCF 0	Water Bbl 308	Oil Gravity Corr API	Gas Gravity	Production Method Pumping
Choke Size N/A	Tbg Press Flwg SI N/A	Csg Press 40#	24 Hr Rate →	Oil Bbl	Gas MCF	Water Bbl	Gas Oil Ratio	Well Status	
28a Production- Interval B									
Date First Produced	Test Date	Hours Tested	Test Production →	Oil Bbl	Gas MCF	Water Bbl	Oil Gravity Corr API	Gas Gravity	Production Method
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate →	Oil Bbl	Gas MCF	Water Bbl	Gas Oil Ratio	Well Status	

ACCEPTED FOR RECORD
Producing
DEC 21 2008
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

28b Production- Interval C									
Date First Produced	Test Date	Hours Tested	Test Production →	Oil Bbl	Gas MCF	Water Bbl	Oil Gravity Corr API	Gas Gravity	Production Method
Choke Size	Tbg. Press Flwg SI	Csg Press	24 Hr. Rate →	Oil Bbl	Gas MCF	Water Bbl	Gas Oil Ratio	Well Status	

28c Production- Interval D									
Date First Produced	Test Date	Hours Tested	Test Production →	Oil Bbl	Gas MCF	Water Bbl	Oil Gravity Corr API	Gas Gravity	Production Method
Choke Size	Tbg. Press Flwg SI	Csg Press	24 Hr. Rate →	Oil Bbl	Gas MCF	Water Bbl	Gas Oil Ratio	Well Status	

29 Disposition of Gas (Sold, used for fuel, vented, etc)

Sold

30 Summary of Porous Zones (include Aquifers)				31 Formation (Log) Markers	
Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries					
Formation	Top	Bottom	Descriptions Contents, Etc	Name	Top Measured Depth
Bell Canyon	2858'	3755'		Rustler	666'
Cherry Canyon	3756'	5551'		Top of Salt	836'
Brushy Canyon	5552'	6631'		Bottom of Salt	2662'
Bone Spring	6632'	10793'		Bell Canyon	2858'
				Cherry Canyon	3756'
				Brushy Canyon	5552'
				Bone Spring	6632'
					TD 10793'

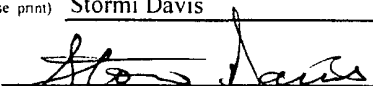
32 Additional remarks (include plugging procedure)

33 Indicate which items have been attached by placing a check in the appropriate boxes

☒ Electrical/ Mechanical Logs (1 full set required)	☐ Geologic Report	☐ DST Report	☒ Directional Survey
☐ Sundry Notice for plugging and cement verification	☐ Core Analysis	☒ Other	

34 I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Stormi Davis Title Production Assistant

Signature  Date 12/9/08

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

OPERATOR: Marbob Energy Corporation
WELL/LEASE: Shocker 20 Federal # 1
COUNTY: Eddy Co., New Mexico
Sec. 20, T25S, R29E

STATE OF NEW MEXICO
DEVIATION REPORT

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
297	1	4,533	1/2
559	1	5,010	3/4
804	1 3/4	5,485	1 1/2
1,055	0	5,710	1/2
1,084	1 3/4	5,962	1
1,341	1/2	6,313	1/2
1,592	1 1/2	6,821	2
1,847	1	7,071	2
2,102	1 1/4	7,297	1 3/4
2,327	1 1/4	7,518	1
2,581	0	8,028	0
2,823	1 3/4	8,537	2
3,035	2	8,790	1 1/2
3,548	1 3/4	9,012	2
4,025	3/4		

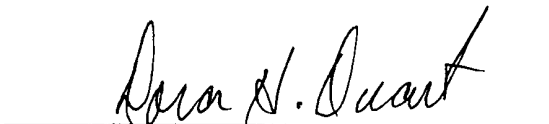
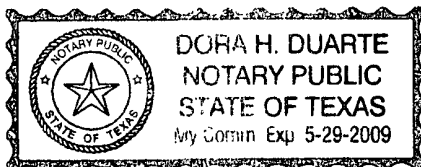
Patriot Drilling, LLC



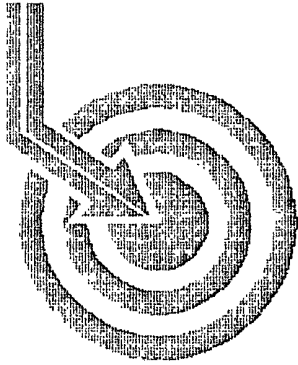
M. Leroy Peterson, Executive Vice-
President

The foregoing instrument was acknowledged before me on this 25th day of November, 2008 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 5/29/2009



Dora H. Duarte
Notary Public for Midland Co., Texas



Scientific Drilling

MARBOB ENERGY

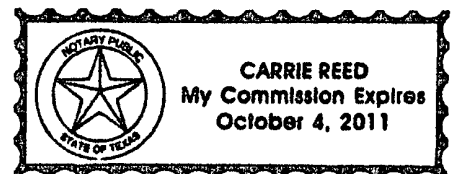
Field: Willow Lake
Site: Eddy County, NM
Well: Shocker 20 Federal #1H
Wellpath: VH - Job #32K1008831
Survey: 10/22/08

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

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

Notorized this date 20th of November, 2008.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: MARBOB ENERGY	Date: 11/15/2008	Time: 17:26:48	Page: 1
Field: Willow Lake	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Shocker 20 Federal #1H	Section (VS) Reference:	Well (0.00N,0.00E,90.68Azi)	
Wellpath: VH - Job #32K1008831	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 10/22/08	Start Date: 10/22/2008
KSRG 0'-8195'	
Company: Scientific Drilling Internatio	Engineer: Garza w/GeoGyro
Tool: Keeper;Keeper Gyro	Tied-to: From Surface

Survey

MD ft	Incl deg	Azlm deg	TVD ft	VS ft	N/S ft	E/V ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	359.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.76	208.51	100.00	-0.31	-0.58	-0.32	0.76	0.66	208.51
200.00	1.34	206.51	199.98	-1.13	-2.21	-1.16	0.58	2.50	207.57
300.00	2.00	192.58	299.94	-2.00	-4.96	-2.06	0.77	5.37	202.52
400.00	2.21	195.22	399.87	-2.84	-8.52	-2.94	0.23	9.02	199.05
500.00	2.04	203.72	499.80	-4.02	-12.01	-4.17	0.36	12.72	199.12
600.00	2.17	216.44	599.73	-5.83	-15.17	-6.01	0.48	16.31	201.60
700.00	1.97	216.25	699.67	-7.93	-18.08	-8.15	0.20	19.83	204.26
800.00	1.64	222.51	799.62	-9.89	-20.52	-10.13	0.38	22.88	206.28
900.00	1.69	238.17	899.58	-12.08	-22.35	-12.35	0.46	25.54	208.92
1000.00	1.62	242.90	999.54	-14.58	-23.77	-14.86	0.15	28.03	212.01
1100.00	1.60	245.72	1099.50	-17.09	-24.99	-17.39	0.08	30.45	214.84
1200.00	0.68	260.15	1199.48	-18.94	-25.67	-19.25	0.96	32.08	216.87
1300.00	0.48	277.68	1299.47	-19.94	-25.71	-20.25	0.27	32.73	218.22
1400.00	0.44	293.64	1399.47	-20.71	-25.50	-21.02	0.13	33.05	219.49
1500.00	0.64	261.08	1499.46	-21.62	-25.43	-21.92	0.36	33.58	220.76
1600.00	0.67	254.30	1599.46	-22.73	-25.68	-23.03	0.08	34.50	221.89
1700.00	0.63	246.62	1699.45	-23.79	-26.05	-24.10	0.10	35.49	222.77
1800.00	0.62	260.41	1799.44	-24.82	-26.36	-25.14	0.15	36.43	223.64
1900.00	0.79	255.69	1899.44	-26.02	-26.62	-26.34	0.18	37.45	224.69
2000.00	0.88	258.19	1999.43	-27.44	-26.95	-27.76	0.10	38.69	225.85
2100.00	0.62	248.31	2099.42	-28.69	-27.31	-29.02	0.29	39.85	226.74
2200.00	0.18	87.77	2199.42	-29.03	-27.50	-29.36	0.79	40.23	226.87
2300.00	0.52	118.94	2299.41	-28.48	-27.72	-28.81	0.38	39.97	226.11
2400.00	1.09	92.61	2399.40	-27.13	-27.98	-27.46	0.67	39.20	224.46
2500.00	1.78	90.88	2499.37	-24.62	-28.05	-24.96	0.69	37.54	221.66
2600.00	2.36	95.09	2599.31	-21.02	-28.25	-21.35	0.60	35.41	217.08
2700.00	2.50	92.60	2699.22	-16.78	-28.53	-17.12	0.18	33.28	210.97
2800.00	2.04	91.62	2799.14	-12.82	-28.68	-13.17	0.46	31.56	204.65
2900.00	1.64	90.07	2899.09	-9.61	-28.74	-9.96	0.40	30.41	199.11
3000.00	1.58	90.24	2999.05	-6.80	-28.74	-7.15	0.06	29.62	193.96
3100.00	1.33	89.83	3099.01	-4.26	-28.75	-4.61	0.25	29.11	189.10
3200.00	1.26	89.05	3198.99	-2.01	-28.72	-2.35	0.07	28.82	184.67
3300.00	1.27	81.90	3298.96	0.19	-28.55	-0.15	0.16	28.55	180.30
3400.00	1.04	79.40	3398.94	2.17	-28.23	1.84	0.24	28.29	176.27
3500.00	0.99	81.24	3498.93	3.92	-27.93	3.58	0.06	28.16	172.69
3600.00	0.69	87.51	3598.92	5.37	-27.77	5.04	0.31	28.22	169.71
3700.00	0.43	87.97	3698.91	6.35	-27.73	6.02	0.26	28.38	167.76
3800.00	0.46	80.68	3798.91	7.12	-27.65	6.79	0.06	28.47	166.21
3900.00	0.43	78.78	3898.91	7.88	-27.51	7.55	0.03	28.53	164.65
4000.00	0.43	88.92	3998.90	8.62	-27.43	8.30	0.08	28.66	163.18
4100.00	0.44	113.26	4098.90	9.35	-27.58	9.02	0.18	29.02	161.88
4200.00	0.45	111.92	4198.90	10.07	-27.88	9.74	0.01	29.53	160.74
4300.00	0.21	149.06	4298.90	10.53	-28.18	10.20	0.31	29.97	160.10
4400.00	0.15	80.77	4398.90	10.76	-28.32	10.42	0.21	30.17	159.79
4500.00	0.37	195.57	4498.90	10.80	-28.61	10.46	0.45	30.46	159.91
4600.00	0.17	253.50	4598.89	10.58	-28.96	10.24	0.31	30.72	160.53
4700.00	0.03	304.65	4698.89	10.42	-28.99	10.07	0.15	30.69	160.84
4800.00	0.10	158.15	4798.89	10.43	-29.05	10.08	0.13	30.75	160.86



Scientific
Drilling

Scientific Drilling International

Survey Report

Company: MARBOB ENERGY	Date: 11/15/2008	Time: 17:26:48	Page: 2
Field: Willow Lake	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Shocker 20 Federal #1H	Section (VS) Reference:	Well (0.00N,0.00E,90.68Azi)	
Wellpath: VH - Job #32K1008831	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

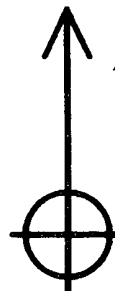
MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	0.09	175.47	4898.89	10.47	-29.21	10.12	0.03	30.92	160.89
5000.00	0.18	187.26	4998.89	10.46	-29.45	10.11	0.09	31.13	161.05
5100.00	0.22	239.86	5098.89	10.27	-29.70	9.92	0.18	31.31	161.53
5200.00	0.24	271.06	5198.89	9.90	-29.79	9.55	0.13	31.28	162.23
5300.00	0.35	250.98	5298.89	9.40	-29.89	9.05	0.15	31.23	163.16
5400.00	0.22	268.04	5398.89	8.92	-29.99	8.57	0.15	31.19	164.06
5500.00	0.21	247.77	5498.89	8.56	-30.07	8.21	0.08	31.17	164.73
5600.00	0.24	223.09	5598.89	8.25	-30.29	7.89	0.10	31.30	165.39
5700.00	0.39	198.89	5698.89	8.01	-30.77	7.64	0.20	31.70	166.05
5800.00	0.49	200.22	5798.88	7.76	-31.49	7.38	0.10	32.34	166.81
5900.00	0.52	214.31	5898.88	7.36	-32.27	6.98	0.13	33.01	167.79
6000.00	0.46	206.75	5998.88	6.93	-33.00	6.54	0.09	33.64	168.79
6100.00	0.49	202.06	6098.87	6.60	-33.75	6.20	0.05	34.32	169.59
6200.00	0.44	176.71	6198.87	6.47	-34.53	6.06	0.21	35.06	170.04
6300.00	0.62	171.58	6298.87	6.58	-35.45	6.16	0.19	35.98	170.14
6400.00	0.37	174.12	6398.86	6.71	-36.31	6.28	0.25	36.85	170.19
6500.00	0.38	233.02	6498.86	6.48	-36.83	6.04	0.37	37.32	170.68
6600.00	0.68	278.04	6598.86	5.63	-36.95	5.19	0.49	37.31	172.00
6700.00	1.91	285.14	6698.83	3.43	-36.43	3.00	1.24	36.55	175.30
6800.00	2.62	289.61	6798.75	-0.35	-35.22	-0.77	0.73	35.23	181.25
6900.00	2.37	290.88	6898.65	-4.45	-33.72	-4.85	0.26	34.07	188.19
7000.00	2.03	289.20	6998.58	-8.07	-32.40	-8.46	0.35	33.49	194.63
7100.00	1.80	285.13	7098.53	-11.27	-31.41	-11.64	0.27	33.50	200.34
7200.00	1.09	274.36	7198.49	-13.74	-30.93	-14.11	0.76	33.99	204.52
7300.00	1.21	284.20	7298.47	-15.72	-30.60	-16.08	0.23	34.56	207.73
7400.00	0.98	289.26	7398.45	-17.55	-30.05	-17.91	0.25	34.99	210.79
7500.00	0.70	261.73	7498.44	-18.97	-29.86	-19.32	0.48	35.57	212.91
7600.00	0.59	244.20	7598.44	-20.03	-30.17	-20.39	0.22	36.42	214.05
7700.00	0.54	255.30	7698.43	-20.95	-30.52	-21.31	0.12	37.22	214.93
7800.00	0.58	269.39	7798.43	-21.91	-30.64	-22.27	0.14	37.88	216.01
7900.00	0.36	250.33	7898.42	-22.71	-30.75	-23.07	0.27	38.45	216.88
8000.00	0.26	273.23	7998.42	-23.23	-30.84	-23.60	0.16	38.84	217.42
8100.00	0.40	257.85	8098.42	-23.80	-30.91	-24.16	0.16	39.23	218.02
8195.00	0.68	247.23	8193.42	-24.64	-31.19	-25.01	0.31	39.98	218.72



Scientific
Drilling

Field: Willow Lake
Site: Eddy County, NM
Well: Shocker 20 Federal #1H
Wellpath: VH - Job #32K1008831
Survey: 10/22/08

G/T/M

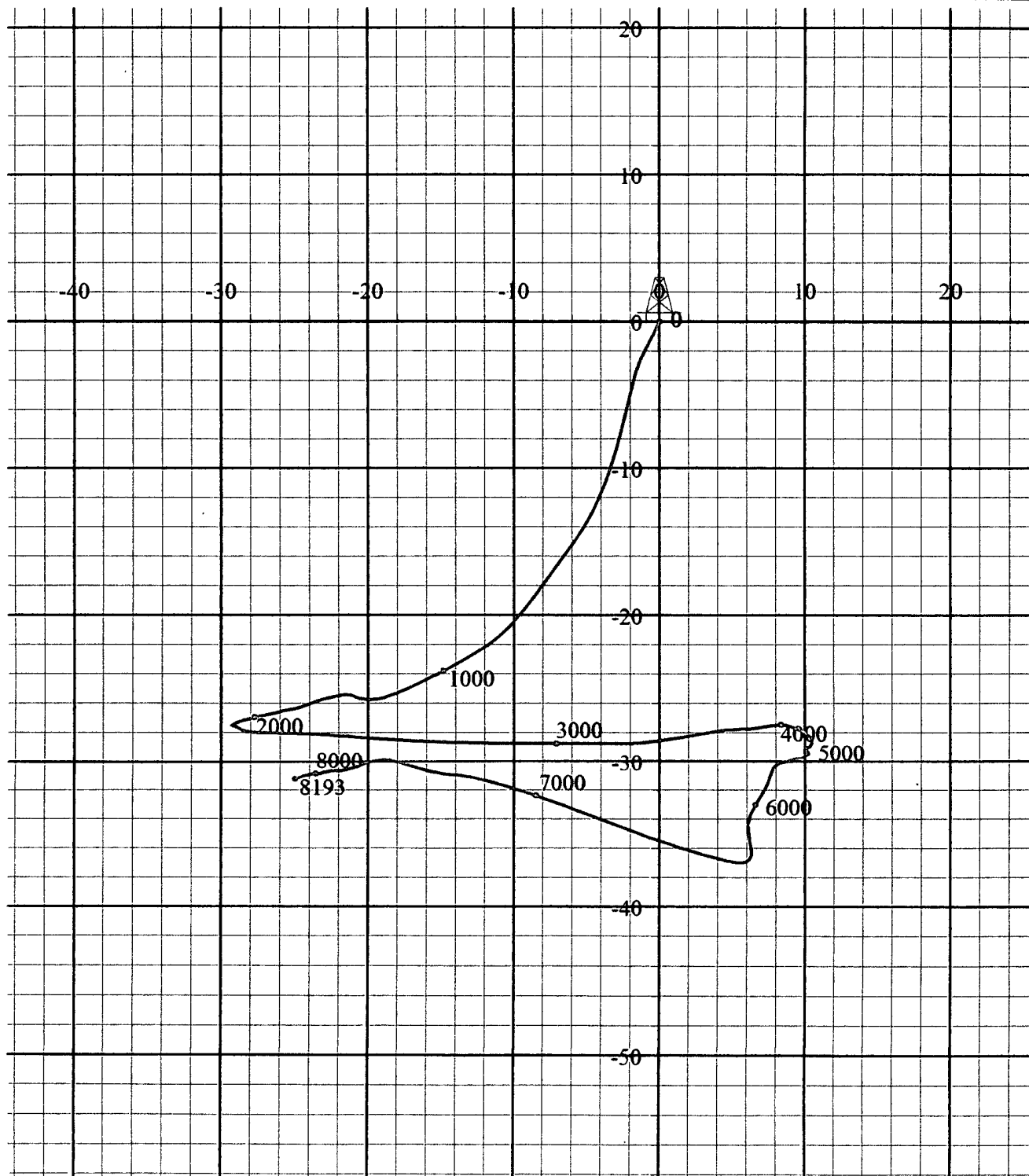


Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 11/15/2008
Model: igrf2000

West(-)/East(+) [10ft/in]

South(-)/North(+) [10ft/in]





Marbob

Shocker 20 Federal #1H

Shocker 20 Federal #1H

Shocker 20 Federal #1H

Original Hole

Survey: MWD #1

Pathfinder X & Y Survey Report

05 November, 2008





Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
Project: Shocker 20 Federal #1H
Site: Shocker 20 Federal #1H
Well: Shocker 20 Federal #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Shocker 20 Federal #1H
TVD Reference: EST RKB @ 2973.00ft
MD Reference: EST RKB @ 2973.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland DB

Project	Shocker 20 Federal #1H		
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	Shocker 20 Federal #1H		
Site Position:		Northing:	404,989.300 ft
From:	Map	Easting:	598,969.300 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	32° 6' 46.902 N
		Longitude:	104° 0' 49.248 W
		Grid Convergence:	0.17 °

Well	Shocker 20 Federal #1H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty		0.00 ft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Original Hole		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	05/13/2008	(°)
			8.13
			Dip Angle
			(°)
			60.09
			Field Strength
			(nT)
			48,834

Design	Original Hole		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			90.68



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
Project: Shocker 20 Federal #1H
Site: Shocker 20 Federal #1H
Well: Shocker 20 Federal #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Shocker 20 Federal #1H
TVD Reference: EST RKB @ 2973.00ft
MD Reference: EST RKB @ 2973.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland DB

Survey Program		Date 11/05/2008			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	8,195.00	Gyro #1 (Original Hole)	CB-GYRO-MS	Camera based gyro multishot	
8,384.00	10,793.00	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)
8,195.00	0.68	247.23	8,193.42	5,220.42	-31.19	-25.01	-24.64	0.00	404,958.11	598,944.29
8,384.00	1.06	176.36	8,382.40	5,409.40	-33.37	-25.93	-25.53	0.56	404,955.93	598,943.37
8,479.00	1.32	178.93	8,477.38	5,504.38	-35.34	-25.86	-25.43	0.28	404,953.96	598,943.44
8,527.00	0.97	161.14	8,525.37	5,552.37	-36.28	-25.71	-25.28	1.03	404,953.02	598,943.59
8,559.00	2.73	111.31	8,557.35	5,584.35	-36.81	-24.92	-24.48	6.97	404,952.49	598,944.38
8,591.00	7.30	91.74	8,589.22	5,616.22	-37.15	-22.17	-21.73	15.05	404,952.15	598,947.13
8,623.00	12.05	94.20	8,620.76	5,647.76	-37.46	-16.81	-16.36	14.90	404,951.84	598,952.49
8,654.00	16.71	93.36	8,650.78	5,677.78	-37.96	-9.13	-8.67	15.05	404,951.34	598,960.17
8,686.00	20.93	92.52	8,681.06	5,708.06	-38.48	1.18	1.64	13.21	404,950.82	598,970.48
8,718.00	24.97	91.18	8,710.52	5,737.52	-38.87	13.65	14.11	12.73	404,950.43	598,982.95
8,750.00	27.08	90.39	8,739.28	5,766.28	-39.06	27.69	28.15	6.68	404,950.24	598,996.99
8,782.00	30.95	88.82	8,767.26	5,794.26	-38.94	43.20	43.66	12.32	404,950.36	599,012.50
8,813.00	34.47	88.09	8,793.34	5,820.34	-38.48	59.95	60.40	11.43	404,950.82	599,029.25
8,845.00	38.08	88.64	8,819.13	5,846.13	-37.95	78.87	79.31	11.33	404,951.35	599,048.17
8,877.00	42.03	89.83	8,843.62	5,870.62	-37.68	99.46	99.90	12.57	404,951.62	599,068.76
8,909.00	47.31	90.81	8,866.37	5,893.37	-37.81	121.94	122.38	16.64	404,951.49	599,091.24
8,941.00	53.02	90.62	8,886.86	5,913.86	-38.12	146.50	146.95	17.85	404,951.18	599,115.80
8,972.00	58.65	89.76	8,904.26	5,931.26	-38.20	172.14	172.58	18.31	404,951.10	599,141.44
9,004.00	62.96	87.15	8,919.87	5,946.87	-37.43	200.06	200.49	15.23	404,951.87	599,169.36
9,036.00	68.15	84.34	8,933.11	5,960.11	-35.26	229.09	229.50	18.08	404,954.04	599,198.39
9,067.00	73.51	83.61	8,943.28	5,970.28	-32.18	258.20	258.57	17.43	404,957.12	599,227.50



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Marbob
Project: Shocker 20 Federal #1H
Site: Shocker 20 Federal #1H
Well: Shocker 20 Federal #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Shocker 20 Federal #1H
TVD Reference: EST RKB @ 2973.00ft
MD Reference: EST RKB @ 2973.00ft
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: Midland DB

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,099.00	78.52	83.52	8,951.02	5,978.02	-28.70	289.05	289.37	15.66	404,960.60	599,258.35
9,131.00	83.89	83.22	8,955.91	5,982.91	-25.05	320.45	320.72	16.81	404,964.25	599,289.75
9,163.00	86.79	83.08	8,958.51	5,985.51	-21.25	352.11	352.34	9.07	404,968.05	599,321.41
9,195.00	87.23	83.40	8,960.18	5,987.18	-17.49	383.85	384.03	1.70	404,971.81	599,353.15
9,226.00	87.23	84.82	8,961.67	5,988.67	-14.31	414.65	414.79	4.58	404,974.99	599,383.95
9,258.00	86.79	86.40	8,963.34	5,990.34	-11.86	446.51	446.62	5.12	404,977.44	599,415.81
9,290.00	85.74	87.18	8,965.43	5,992.43	-10.07	478.39	478.47	4.08	404,979.23	599,447.69
9,321.00	85.21	86.43	8,967.87	5,994.87	-8.35	509.24	509.31	2.96	404,980.95	599,478.54
9,353.00	86.88	87.00	8,970.08	5,997.08	-6.52	541.11	541.15	5.51	404,982.78	599,510.41
9,385.00	91.63	88.46	8,970.50	5,997.50	-5.26	573.08	573.10	15.53	404,984.04	599,542.38
9,417.00	94.26	88.56	8,968.85	5,995.85	-4.42	605.02	605.03	8.22	404,984.88	599,574.32
9,449.00	94.97	88.25	8,966.28	5,993.28	-3.54	636.90	636.90	2.42	404,985.76	599,606.20
9,480.00	93.30	89.42	8,964.04	5,991.04	-2.91	667.81	667.80	6.57	404,986.39	599,637.11
9,512.00	92.07	91.22	8,962.54	5,989.54	-3.09	699.78	699.76	6.81	404,986.21	599,669.08
9,544.00	91.10	90.80	8,961.66	5,988.66	-3.65	731.76	731.75	3.30	404,985.65	599,701.06
9,576.00	90.13	90.27	8,961.31	5,988.31	-3.95	763.76	763.75	3.45	404,985.35	599,733.06
9,607.00	90.31	90.08	8,961.20	5,988.20	-4.04	794.76	794.75	0.84	404,985.26	599,764.06
9,639.00	89.60	89.86	8,961.22	5,988.22	-4.03	826.75	826.74	2.32	404,985.27	599,796.05
9,671.00	87.58	90.17	8,962.01	5,989.01	-4.04	858.74	858.73	6.39	404,985.26	599,828.04
9,702.00	86.61	90.22	8,963.58	5,990.58	-4.14	889.70	889.69	3.13	404,985.16	599,859.00
9,734.00	86.61	89.82	8,965.47	5,992.47	-4.15	921.65	921.63	1.25	404,985.15	599,890.95
9,766.00	86.17	89.36	8,967.49	5,994.49	-3.92	953.58	953.56	1.99	404,985.38	599,922.88
9,798.00	85.91	88.69	8,969.70	5,996.70	-3.38	985.50	985.47	2.24	404,985.92	599,954.80
9,830.00	87.14	89.32	8,971.64	5,998.64	-2.83	1,017.44	1,017.40	4.32	404,986.47	599,986.74
9,861.00	87.49	90.74	8,973.09	6,000.09	-2.84	1,048.40	1,048.36	4.71	404,986.46	600,017.70
9,894.00	87.32	90.68	8,974.58	6,001.58	-3.25	1,081.37	1,081.33	0.55	404,986.05	600,050.67
9,925.00	87.05	91.03	8,976.10	6,003.10	-3.71	1,112.32	1,112.29	1.42	404,985.59	600,081.62



Pathfinder Energy Services
Pathfinder X & Y Survey Report



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Site: Shocker 20 Federal #1H
Well: Shocker 20 Federal #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Shocker 20 Federal #1H
TVD Reference: EST RKB @ 2973.00ft
MD Reference: EST RKB @ 2973.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland DB

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,957.00	87.49	90.24	8,977.63	6,004.63	-4.07	1,144.29	1,144.25	2.82	404,985.23	600,113.59
9,989.00	87.41	90.68	8,979.05	6,006.05	-4.32	1,176.25	1,176.22	1.40	404,984.98	600,145.55
10,021.00	87.32	90.91	8,980.52	6,007.52	-4.77	1,208.22	1,208.19	0.77	404,984.53	600,177.52
10,052.00	88.37	90.80	8,981.69	6,008.69	-5.23	1,239.19	1,239.17	3.41	404,984.07	600,208.49
10,084.00	89.78	91.58	8,982.21	6,009.21	-5.89	1,271.18	1,271.16	5.04	404,983.41	600,240.48
10,116.00	90.13	91.42	8,982.23	6,009.23	-6.73	1,303.17	1,303.16	1.20	404,982.57	600,272.47
10,148.00	89.60	91.38	8,982.31	6,009.31	-7.51	1,335.16	1,335.15	1.66	404,981.79	600,304.46
10,180.00	89.16	91.24	8,982.65	6,009.65	-8.25	1,367.15	1,367.15	1.44	404,981.05	600,336.45
10,211.00	88.55	90.87	8,983.27	6,010.27	-8.82	1,398.14	1,398.14	2.30	404,980.48	600,367.44
10,243.00	88.64	90.68	8,984.06	6,011.06	-9.25	1,430.12	1,430.13	0.66	404,980.05	600,399.42
10,275.00	88.02	91.07	8,984.99	6,011.99	-9.74	1,462.11	1,462.12	2.29	404,979.56	600,431.41
10,307.00	87.85	91.09	8,986.14	6,013.14	-10.34	1,494.08	1,494.10	0.53	404,978.96	600,463.38
10,339.00	88.11	91.70	8,987.27	6,014.27	-11.12	1,526.05	1,526.07	2.07	404,978.18	600,495.35
10,370.00	88.02	91.72	8,988.32	6,015.32	-12.04	1,557.02	1,557.05	0.30	404,977.26	600,526.32
10,402.00	87.85	91.94	8,989.47	6,016.47	-13.06	1,588.98	1,589.02	0.87	404,976.24	600,558.28
10,434.00	89.16	92.11	8,990.31	6,017.31	-14.19	1,620.95	1,621.00	4.13	404,975.11	600,590.25
10,466.00	90.57	91.86	8,990.38	6,017.38	-15.30	1,652.93	1,652.99	4.47	404,974.00	600,622.23
10,498.00	91.28	92.25	8,989.86	6,016.86	-16.45	1,684.90	1,684.98	2.53	404,972.85	600,654.20
10,529.00	90.92	92.13	8,989.27	6,016.27	-17.63	1,715.88	1,715.96	1.22	404,971.67	600,685.18
10,561.00	89.96	91.53	8,989.02	6,016.02	-18.66	1,747.86	1,747.96	3.54	404,970.64	600,717.16
10,593.00	88.90	90.83	8,989.34	6,016.34	-19.32	1,779.85	1,779.95	3.97	404,969.98	600,749.15
10,625.00	89.16	90.77	8,989.88	6,016.88	-19.76	1,811.84	1,811.95	0.83	404,969.54	600,781.14
10,657.00	88.72	90.89	8,990.48	6,017.48	-20.23	1,843.83	1,843.94	1.43	404,969.07	600,813.13
10,688.00	87.05	90.34	8,991.62	6,018.62	-20.56	1,874.81	1,874.92	5.67	404,968.74	600,844.11
10,720.00	87.76	90.22	8,993.07	6,020.07	-20.71	1,906.77	1,906.89	2.25	404,968.59	600,876.07
10,730.00	88.37	90.98	8,993.41	6,020.41	-20.82	1,916.77	1,916.88	9.74	404,968.48	600,886.07



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Marbob
Project: Shocker 20 Federal #1H
Site: Shocker 20 Federal #1H
Well: Shocker 20 Federal #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Shocker 20 Federal #1H
TVD Reference: EST RKB @ 2973.00ft
MD Reference: EST RKB @ 2973.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland DB

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
10,793.00	88.37	90.98	8,995.20	6,022.20	-21.90	1,979.73	1,979.85	0.00	404,967.40	600,949.03

PTB @ 10793'MD

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 0.00 0.00 8,968.00 -23.40 1,979.80 404,965.900 600,949.100 32° 6' 46.612 N 104° 0' 26.229 W
- survey misses by 27.23ft at 10792.32ft MD (8995.18 TVD, -21.88 N, 1979.05 E)
- Point

Survey Annotations

Measured
Depth
(ft)

Vertical
Depth
(ft)

Local Coordinates

+N-S
(ft)

+E-W
(ft)

Comment

10,793.00 8,995.20 -21.90 1,979.73 PTB @ 10793'MD

Checked By: _____

Approved By: _____

Date: _____

Surface : 1750' FSL, 330' FWL
EOL : 1728' FSL, 2310' FWL



Azimuths to Grid North
True North: -0.17°
Magnetic North: 7.96°

Magnetic Field
Strength: 48834.2snT
Dip Angle: 60.09°
Date: 05/13/2008
Model: IGRF200510

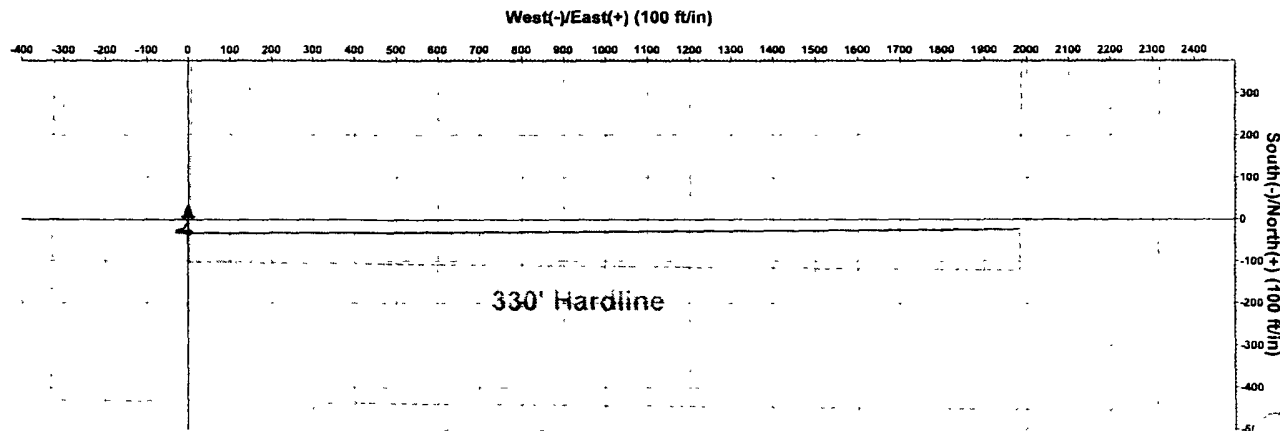
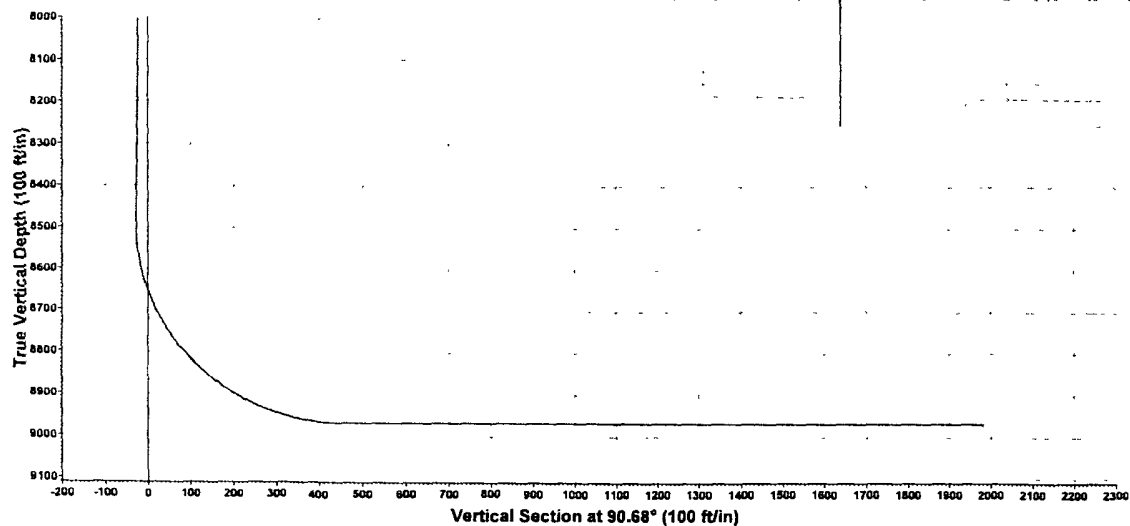
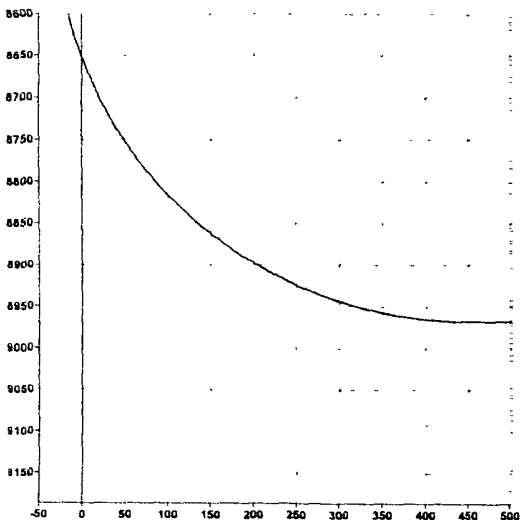


Project: Shocker 20 Federal #1H
Site: Shocker 20 Federal #1H
Well: Shocker 20 Federal #1H
Wellbore: Original Hole
Plan: Plan #1 (Shocker 20 Federal #1H/Original Hole)

WELL DETAILS Shocker 20 Federal #1H						
Ground Elevation: 2973.00						
RKB Elevation: EST RKB @ 2973.00ft						
Rig Name:						
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	404989.300	598969.300	32° 6' 46.902 N	104° 0' 48.248 W	

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec Target
1	8195.00	0.88	247.23	8193.42	-31.19	-25.91	0.00	0.00	-24.54
2	8486.80	0.88	247.23	8485.20	-32.53	-28.20	0.00	0.00	-27.82
3	9242.20	90.00	89.58	8968.00	-32.05	449.34	12.00	-167.55	449.58
4	9307.70	90.00	89.58	8968.00	-31.69	514.84	0.01	0.00	515.18
5	10772.68	90.00	89.58	8968.00	-31.60	1979.80	0.00	0.00	1979.84 PBHL

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N-S	+E-W	Northing	Easting
PBHL	8968.00	-23.40	1979.80	404989.300	600948.100
					Shape Point



PROJECT DETAILS: Shocker 20 Federal #1H
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 20 Federal #1H/Original Hole)
Created By: Nate Bingham Date: 11:30, November 05 2008
Checked: _____ Date: _____