

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
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.

5. Lease Serial No
Surf & BHL: NMNM118720
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Marbob Energy Corporation

3a. Address

P O Box 227, Artesia, NM 88211-0227

3b. Phone No. (include area code)

575-748-3303

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Surf 2310' FSL & 1500' FEL, BHL 330' FSL & 1680' FEL
Section 5, T19S-R32E

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

8. Well Name and No
Patterson B-52 Federal #3

9. API Well No
30-025-39638

10. Field and Pool or Exploratory Area
Lusk; Bone Spring

11. Country or Parish, State
Lea County, New Mexico

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

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

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 recomple 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 must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must 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 respectfully requests approval for the following change in bottom hole location:

From: 2310' FSL & 1500' FEL
To: 330' FSL & 1680' FEL

Please see new C-102 and well plan attached.

RECEIVED
JAN 19 2010
HOBBSOCD

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Nancy T. Agnew

Title Land Department

Signature

Nancy T. Agnew

Date 12/23/2009

APPROVED

JAN 10 2010

/s/ Chris Walls

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

RECEIVED

Title

Date

JAN 21 2010

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.

(Instructions on page 2)

Amended



Marbob

B-52 Federal #3

B-52 Federal #3

B-52 Federal #3

Original Hole

RECEIVED

JAN 19 2010

HOBBSOCD

Plan: Plan #2

Pathfinder X & Y Planning Report

15 December, 2009

RECEIVED

DEC 23 PM 2:52

BUREAU OF LAND MGMT
CARLSBAD DISTRICT OFFICE

PATHFINDER



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob
 Project: B-52 Federal #3
 Site: B-52 Federal #3
 Well: B-52 Federal #3
 Wellbore: Original Hole
 Design: Plan #2

Local Co-ordinate Reference: Well B-52 Federal #3
 TVD Reference: EST RKB @ 3662.00ft
 MD Reference: EST RKB @ 3662.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Midland Database

Project: B-52 Federal #3

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: B-52 Federal #3

Site Position:	From:	Map	Position Uncertainty:	0 00 ft	Northing:	614,605.870 ft	Easting:	668,931.100 ft	Slot Radius:	"	Latitude:	32° 41' 18.415 N	Longitude:	103° 47' 3.287 W	Grid Convergence:	0.30 °
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Well: B-52 Federal #3

Well Position	+N/-S	0.00 ft	Northing:	614,605.700 ft	Latitude:	32° 41' 18.414 N
	+E/-W	0.00 ft	Easting:	668,931.100 ft	Longitude:	103° 47' 3.287 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,662 00 ft

Wellbore: Original Hole

Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	04/16/2008	8.09	60.67	49,239

Design: Plan #2

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.00

Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	185 19

Survey Tool Program Date 12/15/2009

From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
0.00	11,118.23	Plan #2 (Original Hole)	MWD	MWD - Standard



Pathfinder Energy Services

Pathfinder X & Y Planning Report



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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)
0.00	0.00	0.00	0.00	-3,662.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
100.00	0.00	0.00	100.00	-3,562.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
200.00	0.00	0.00	200.00	-3,462.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
300.00	0.00	0.00	300.00	-3,362.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
400.00	0.00	0.00	400.00	-3,262.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
500.00	0.00	0.00	500.00	-3,162.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
600.00	0.00	0.00	600.00	-3,062.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
700.00	0.00	0.00	700.00	-2,962.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
800.00	0.00	0.00	800.00	-2,862.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
900.00	0.00	0.00	900.00	-2,762.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,000.00	0.00	0.00	1,000.00	-2,662.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,100.00	0.00	0.00	1,100.00	-2,562.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,200.00	0.00	0.00	1,200.00	-2,462.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,300.00	0.00	0.00	1,300.00	-2,362.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,400.00	0.00	0.00	1,400.00	-2,262.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,500.00	0.00	0.00	1,500.00	-2,162.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,600.00	0.00	0.00	1,600.00	-2,062.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,700.00	0.00	0.00	1,700.00	-1,962.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,800.00	0.00	0.00	1,800.00	-1,862.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
1,900.00	0.00	0.00	1,900.00	-1,762.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,000.00	0.00	0.00	2,000.00	-1,662.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,100.00	0.00	0.00	2,100.00	-1,562.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,200.00	0.00	0.00	2,200.00	-1,462.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,300.00	0.00	0.00	2,300.00	-1,362.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,400.00	0.00	0.00	2,400.00	-1,262.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,500.00	0.00	0.00	2,500.00	-1,162.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,600.00	0.00	0.00	2,600.00	-1,062.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob
Project: B-52 Federal #3
Site: B-52 Federal #3
Well: B-52 Federal #3
Wellbore: Original Hole
Design: Plan #2

Local Co-ordinate Reference: Well B-52 Federal #3
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Database: Midland Database

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2,700.00	0.00	0.00	2,700.00	-962.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,800.00	0.00	0.00	2,800.00	-862.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
2,900.00	0.00	0.00	2,900.00	-762.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,000.00	0.00	0.00	3,000.00	-662.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,100.00	0.00	0.00	3,100.00	-562.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,200.00	0.00	0.00	3,200.00	-462.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,300.00	0.00	0.00	3,300.00	-362.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,400.00	0.00	0.00	3,400.00	-262.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,500.00	0.00	0.00	3,500.00	-162.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,600.00	0.00	0.00	3,600.00	-62.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,700.00	0.00	0.00	3,700.00	38.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,800.00	0.00	0.00	3,800.00	138.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
3,900.00	0.00	0.00	3,900.00	238.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,000.00	0.00	0.00	4,000.00	338.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,100.00	0.00	0.00	4,100.00	438.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,200.00	0.00	0.00	4,200.00	538.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,300.00	0.00	0.00	4,300.00	638.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,400.00	0.00	0.00	4,400.00	738.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,500.00	0.00	0.00	4,500.00	838.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,600.00	0.00	0.00	4,600.00	938.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,700.00	0.00	0.00	4,700.00	1,038.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,800.00	0.00	0.00	4,800.00	1,138.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
4,900.00	0.00	0.00	4,900.00	1,238.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,000.00	0.00	0.00	5,000.00	1,338.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,100.00	0.00	0.00	5,100.00	1,438.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,200.00	0.00	0.00	5,200.00	1,538.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,300.00	0.00	0.00	5,300.00	1,638.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: B-52 Federal #3
Site: B-52 Federal #3
Well: B-52 Federal #3
Wellbore: Original Hole
Design: Plan #2

Local Co-ordinate Reference: Well B-52 Federal #3
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Survey Calculation Method: Minimum Curvature
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Planned Survey

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5,400.00	0.00	0.00	5,400.00	1,738.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,500.00	0.00	0.00	5,500.00	1,838.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,600.00	0.00	0.00	5,600.00	1,938.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,700.00	0.00	0.00	5,700.00	2,038.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,800.00	0.00	0.00	5,800.00	2,138.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
5,900.00	0.00	0.00	5,900.00	2,238.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,000.00	0.00	0.00	6,000.00	2,338.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,100.00	0.00	0.00	6,100.00	2,438.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,200.00	0.00	0.00	6,200.00	2,538.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,300.00	0.00	0.00	6,300.00	2,638.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,400.00	0.00	0.00	6,400.00	2,738.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,500.00	0.00	0.00	6,500.00	2,838.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,600.00	0.00	0.00	6,600.00	2,938.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,700.00	0.00	0.00	6,700.00	3,038.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,800.00	0.00	0.00	6,800.00	3,138.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
6,900.00	0.00	0.00	6,900.00	3,238.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
7,000.00	0.00	0.00	7,000.00	3,338.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
7,100.00	0.00	0.00	7,100.00	3,438.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
7,200.00	0.00	0.00	7,200.00	3,538.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
7,300.00	0.00	0.00	7,300.00	3,638.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
7,400.00	0.00	0.00	7,400.00	3,738.00	0.00	0.00	0.00	0.00	614,605.70	668,931.10
7,500.00	2.50	263.66	7,499.97	3,837.97	-0.24	-2.17	0.44	2.50	614,605.46	668,928.93
7,600.00	5.00	263.66	7,599.75	3,937.75	-0.96	-8.67	1.74	2.50	614,604.74	668,922.43
7,700.00	7.50	263.66	7,699.14	4,037.14	-2.17	-19.49	3.92	2.50	614,603.53	668,911.61
7,775.15	9.38	263.66	7,773.48	4,111.48	-3.38	-30.45	6.13	2.50	614,602.32	668,900.65
7,800.00	9.38	263.66	7,797.99	4,135.99	-3.83	-34.47	6.94	0.00	614,601.87	668,896.63
7,900.00	9.38	263.66	7,896.66	4,234.66	-5.63	-50.67	10.19	0.00	614,600.07	668,880.43



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8,000.00	9.38	263.66	7,995.32	4,333.32	-7.43	-66.87	13.45	0.00	614,598.27	668,864.23
8,100.00	9.38	263.66	8,093.98	4,431.98	-9.23	-83.06	16.71	0.00	614,596.47	668,848.04
8,200.00	9.38	263.66	8,192.65	4,530.65	-11.03	-99.26	19.97	0.00	614,594.67	668,831.84
8,300.00	9.38	263.66	8,291.31	4,629.31	-12.83	-115.45	23.23	0.00	614,592.87	668,815.65
8,400.00	9.38	263.66	8,389.97	4,727.97	-14.63	-131.65	26.49	0.00	614,591.07	668,799.45
8,500.00	9.38	263.66	8,488.64	4,826.64	-16.43	-147.85	29.75	0.00	614,589.27	668,783.25
8,510.53	9.38	263.66	8,499.02	4,837.02	-16.62	-149.55	30.09	0.00	614,589.08	668,781.55
8,600.00	7.14	263.66	8,587.56	4,925.56	-18.04	-162.33	32.66	2.50	614,587.66	668,768.77
8,700.00	4.64	263.66	8,687.03	5,025.03	-19.17	-172.53	34.71	2.50	614,586.53	668,758.57
8,800.00	2.14	263.66	8,786.84	5,124.84	-19.82	-178.41	35.89	2.50	614,585.88	668,752.69
8,885.68	0.00	0.00	8,872.50	5,210.50	-20.00	-180.00	36.21	2.50	614,585.70	668,751.10
8,900.00	1.72	180.00	8,886.82	5,224.82	-20.21	-180.00	36.43	12.00	614,585.49	668,751.10
8,925.00	4.72	180.00	8,911.78	5,249.78	-21.62	-180.00	37.83	12.00	614,584.08	668,751.10
8,950.00	7.72	180.00	8,936.63	5,274.63	-24.33	-180.00	40.52	12.00	614,581.37	668,751.10
8,975.00	10.72	180.00	8,961.30	5,299.30	-28.33	-180.00	44.51	12.00	614,577.37	668,751.10
9,000.00	13.72	180.00	8,985.73	5,323.73	-33.62	-180.00	49.78	12.00	614,572.08	668,751.10
9,025.00	16.72	180.00	9,009.86	5,347.86	-40.18	-180.00	56.31	12.00	614,565.52	668,751.10
9,050.00	19.72	180.00	9,033.60	5,371.60	-48.00	-180.00	64.10	12.00	614,557.70	668,751.10
9,075.00	22.72	180.00	9,056.90	5,394.90	-57.04	-180.00	73.11	12.00	614,548.66	668,751.10
9,100.00	25.72	180.00	9,079.70	5,417.70	-67.30	-180.00	83.32	12.00	614,538.40	668,751.10
9,125.00	28.72	180.00	9,101.93	5,439.93	-78.73	-180.00	94.70	12.00	614,526.97	668,751.10
9,150.00	31.72	180.00	9,123.53	5,461.53	-91.31	-180.00	107.23	12.00	614,514.39	668,751.10
9,175.00	34.72	180.00	9,144.44	5,482.44	-105.00	-180.00	120.87	12.00	614,500.70	668,751.10
9,200.00	37.72	180.00	9,164.61	5,502.61	-119.77	-180.00	135.58	12.00	614,485.93	668,751.10
9,225.00	40.72	180.00	9,183.98	5,521.98	-135.58	-180.00	151.32	12.00	614,470.12	668,751.10
9,250.00	43.72	180.00	9,202.49	5,540.49	-152.37	-180.00	168.04	12.00	614,453.33	668,751.10
9,275.00	46.72	180.00	9,220.10	5,558.10	-170.12	-180.00	185.71	12.00	614,435.58	668,751.10



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob
 Project: B-52 Federal #3
 Site: B-52 Federal #3
 Well: B-52 Federal #3
 Wellbore: Original Hole
 Design: Plan #2

Local Co-ordinate Reference: Well B-52 Federal #3
 TVD Reference: EST RKB @ 3662.00ft
 MD Reference: EST RKB @ 3662.00ft
 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)
9,300.00	49.72	180.00	9,236.76	5,574.76	-188.75	-180.00	204.28	12.00	614,416.95	668,751.10
9,325.00	52.71	180.00	9,252.41	5,590.41	-208.24	-180.00	223.68	12.00	614,397.46	668,751.10
9,350.00	55.71	180.00	9,267.03	5,605.03	-228.52	-180.00	243.88	12.00	614,377.18	668,751.10
9,375.00	58.71	180.00	9,280.57	5,618.57	-249.53	-180.00	264.80	12.00	614,356.17	668,751.10
9,400.00	61.71	180.00	9,292.98	5,630.98	-271.23	-180.00	286.41	12.00	614,334.47	668,751.10
9,425.00	64.71	180.00	9,304.25	5,642.25	-293.54	-180.00	308.63	12.00	614,312.16	668,751.10
9,450.00	67.71	180.00	9,314.33	5,652.33	-316.42	-180.00	331.41	12.00	614,289.28	668,751.10
9,475.00	70.71	180.00	9,323.20	5,661.20	-339.79	-180.00	354.69	12.00	614,265.91	668,751.10
9,500.00	73.71	180.00	9,330.84	5,668.84	-363.59	-180.00	378.39	12.00	614,242.11	668,751.10
9,525.00	76.71	180.00	9,337.22	5,675.22	-387.76	-180.00	402.46	12.00	614,217.94	668,751.10
9,550.00	79.71	180.00	9,342.32	5,680.32	-412.23	-180.00	426.83	12.00	614,193.47	668,751.10
9,575.00	82.71	180.00	9,346.14	5,684.14	-436.93	-180.00	451.43	12.00	614,168.77	668,751.10
9,600.00	85.71	180.00	9,348.66	5,686.66	-461.80	-180.00	476.20	12.00	614,143.90	668,751.10
9,625.00	88.71	180.00	9,349.88	5,687.88	-486.77	-180.00	501.07	12.00	614,118.93	668,751.10
9,635.73	90.00	180.00	9,350.00	5,688.00	-497.50	-180.00	511.75	12.00	614,108.20	668,751.10
EOC-9622.53°MD,90.00°INC,210.00°AZI,9350.00°TVD,12.00°DLS, 444.59°VS, -413.49°N, -238.73°E										
9,700.00	90.00	180.00	9,350.00	5,688.00	-561.77	-180.00	575.76	0.00	614,043.93	668,751.10
9,800.00	90.00	180.00	9,350.00	5,688.00	-661.77	-180.00	675.35	0.00	613,943.93	668,751.10
9,900.00	90.00	180.00	9,350.00	5,688.00	-761.77	-180.00	774.94	0.00	613,843.93	668,751.10
10,000.00	90.00	180.00	9,350.00	5,688.00	-861.77	-180.00	874.53	0.00	613,743.93	668,751.10
10,100.00	90.00	180.00	9,350.00	5,688.00	-961.77	-180.00	974.12	0.00	613,643.93	668,751.10
10,200.00	90.00	180.00	9,350.00	5,688.00	-1,061.77	-180.00	1,073.70	0.00	613,543.93	668,751.10
10,300.00	90.00	180.00	9,350.00	5,688.00	-1,161.77	-180.00	1,173.29	0.00	613,443.93	668,751.10
10,400.00	90.00	180.00	9,350.00	5,688.00	-1,261.77	-180.00	1,272.88	0.00	613,343.93	668,751.10
10,500.00	90.00	180.00	9,350.00	5,688.00	-1,361.77	-180.00	1,372.47	0.00	613,243.93	668,751.10
10,600.00	90.00	180.00	9,350.00	5,688.00	-1,461.77	-180.00	1,472.06	0.00	613,143.93	668,751.10
10,700.00	90.00	180.00	9,350.00	5,688.00	-1,561.77	-180.00	1,571.65	0.00	613,043.93	668,751.10



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob
 Project: B-52 Federal #3
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 Wellbore: Original Hole
 Design: Plan #2

Local Co-ordinate Reference: Well B-52 Federal #3
 TVD Reference: EST RKB @ 3662.00ft
 MD Reference: EST RKB @ 3662.00ft
 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)
10,800.00	90.00	180.00	9,350.00	5,688.00	-1,661.77	-180.00	1,671.24	0.00	612,943.93	668,751.10
10,900.00	90.00	180.00	9,350.00	5,688.00	-1,761.77	-180.00	1,770.83	0.00	612,843.93	668,751.10
11,000.00	90.00	180.00	9,350.00	5,688.00	-1,861.77	-180.00	1,870.42	0.00	612,743.93	668,751.10
11,100.00	90.00	180.00	9,350.00	5,688.00	-1,961.77	-180.00	1,970.01	0.00	612,643.93	668,751.10
11,118.23	90.00	180.00	9,350.00	5,688.00	-1,980.00	-180.00	1,988.16	0.00	612,625.70	668,751.10

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
B-52(Orthodox Pt) - plan hits target - Point	0.00	0.00	8,872.50	-20.00	-180.00	614,585.700	668,751.100	32° 41' 18.225 N	103° 47' 5.394 W

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
	9,350.00			EOC-9622.53°MD,90.00°INC,210.00°AZI,9350.00°TVD,12.00°DLS, 444

Checked By: _____ Approved By: _____ Date: _____



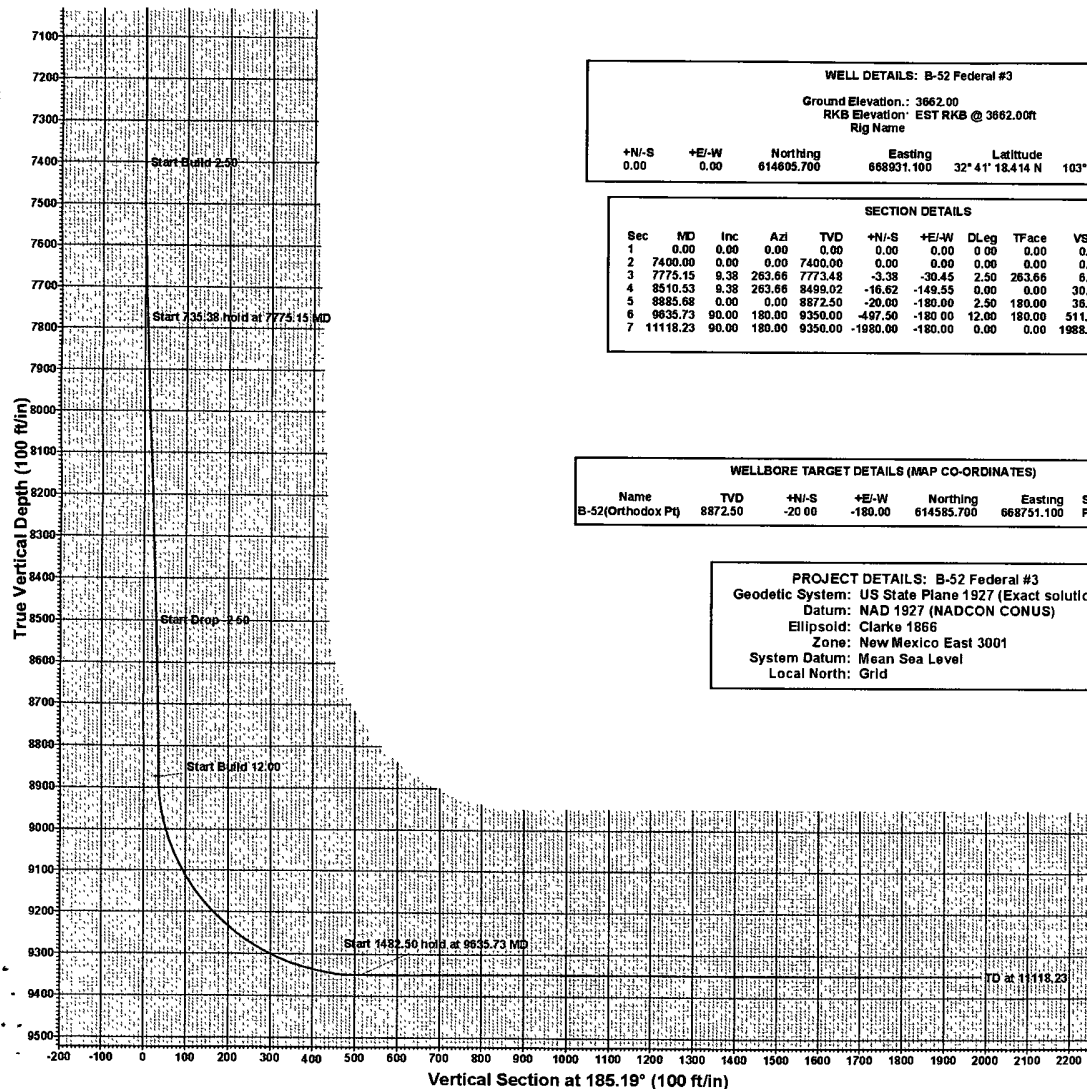
Project: B-52 Federal #3
 Site: B-52 Federal #3
 Well: B-52 Federal #3
 Wellbore: Original Hole
 Plan: Plan #2 (B-52 Federal #3/Original Hole)



Azimuths to Grid North
 True North: -0.30°
 Magnetic North: 7.79°

Magnetic Field
 Strength: 49239.2snT
 Dip Angle: 60.67°
 Date: 04/16/2008
 Model: IGRF200510

PATHFINDER

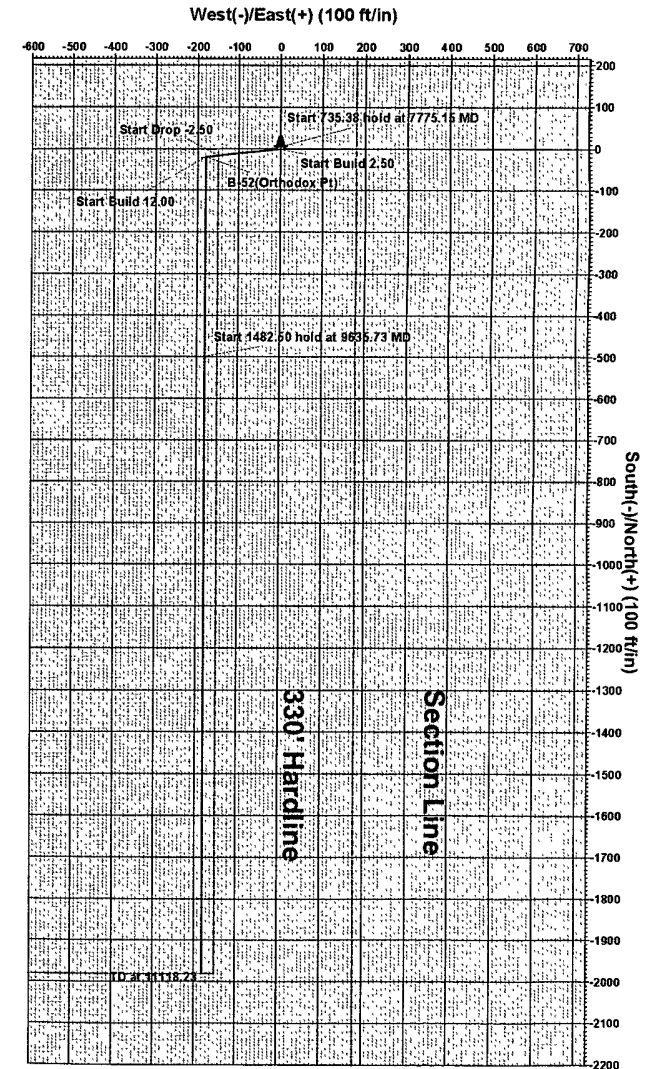


WELL DETAILS: B-52 Federal #3						
Ground Elevation.: 3662.00						
RKB Elevation: EST RKB @ 3662.00ft						
Rig Name						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
0.00	0.00	614605.700	668931.100	32° 41' 18.414 N	103° 47' 3.287 W	

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	7400.00	0.00	0.00	7400.00	0.00	0.00	0.00	0.00	0.00	
3	7775.15	0.38	263.66	7773.48	-3.38	-30.45	2.50	263.66	6.13	
4	8510.53	0.38	263.66	8499.02	-16.82	-149.55	0.00	0.00	30.09	
5	8885.68	0.00	0.00	8872.50	-20.00	-180.00	2.50	180.00	39.21	B-52(Orthodox Pt)
6	9635.73	90.00	180.00	9350.00	-497.50	-180.00	12.00	180.00	511.75	
7	11118.23	90.00	180.00	9350.00	-1980.00	-180.00	0.00	0.00	1988.16	PBHL 3

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/-S	+E/-W	Northing	Easting
B-52(Orthodox Pt)	8872.50	-20.00	-180.00	614585.700	668751.100

PROJECT DETAILS: B-52 Federal #3
 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 #2 (B-52 Federal #3/Original Hole)
 Created By: Aaron Pullin Date: 16 47, December 15 2009
 Checked: _____ Date: _____