

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WELL COMPLETION OR RECOMPLETION REPORT AND LOGFORM APPROVED
OMBNO. 1004-0137
Expires: March 31, 2007

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other		5. Lease Serial No. NMNM31636
b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____		6. If Indian, Allottee or Tribe Name
2. Name of Operator Marbob Energy Corporation		7. Unit or CA Agreement Name and No. NMNM117963
3. Address PO Box 227 Artesia, NM 88211-0227		8. Lease Name and Well No. Mule 24 Federal Com #2
3a. Phone No. (include area code) 505-748-3303		9. AFI Well No. 30-015-21203 00C1
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface 1980 FNL 1656 FEL, Unit G At top prod. interval reported below At total depth 1923 FNL 669 FEL, Unit H		10. Field and Pool, or Exploratory Atoka
14. Date Spudded 11/02/2006		11. Sec., T., R., M., on Block and Survey or Area Sec. 24-T24S-R25E
15. Date T.D. Reached 12/03/2006		12. County or Parish Eddy
16. Date Completed 03/13/2007 ☐ D & A ☒ Ready to Prod.		13. State NM
17. Elevations (DF, RKB, RT, GL)* 3863' GL		
18. Total Depth: MD 12700' TVD 12598'		19. Plug Back T.D.: MD 11665' TVD 11582'
20. Depth Bridge Plug Set: MD 11700' TVD 11616'		
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) DDL, Csg		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
15"	10 3/4"	51#	0	2668'		1900 sx		280'	None
9 1/2"	7"	23#	0	6989'		1400 sx		550'	None
6 1/8"	4 1/2"	11.6#	0	12648'		485 sx		5500'	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 3/8"	10867'							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Atoka	11309'	11458'	11309' - 11458'		17	Open
B)			11732' - 12007'		100	CIBP set @ 11700'
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
11732' - 12007'	Acidz w/ 2000 gal 7 1/2% Morrow acid. Frac w/ 24845 gal fluid & 41168# versaprop.
11309' - 11458'	Acidz w/ 2500 gal NE Fe 15% HCL.

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03/14/2007	03/16/2007	24	→	0	168	0			Flowing
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
8/64"	SI 650		→					Producing	

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	
	SI		→						

*(See instructions and spaces for additional data on page 2)

ACCEPTED FOR RECORD
/S/ DAVID R. GLASS
MAY 22 2007
DAVID R. GLASS
PETROLEUM ENGINEER

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):

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.

31. Formation (Log) Markers

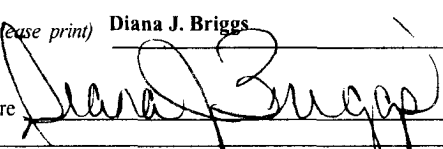
Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				Capitan Delaware Bone Spring Wolfcamp Strawn Atoka Morrow Clastics Lower Morrow Mississippian Limestone	352' 2457' 5550' 8736' 10795' 11181' 11719' 11986' 12560'

32. Additional remarks (include plugging procedure):

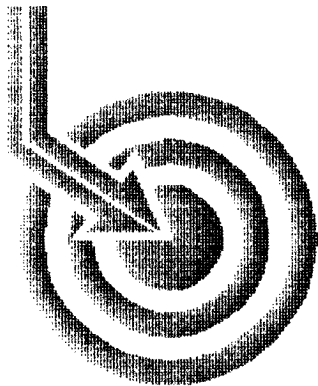
33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☒ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ 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) Diana J. BriggsTitle Production AnalystSignature Date 04/17/2007

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.



Scientific Drilling

MARBOB ENERGY

Field: Carlsbad
Site: Eddy County, NM
Well: Mule 24 Fed #2
Wellpath: VH - Job #32K1106914
Survey: 11/09/06

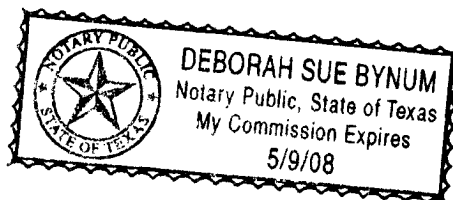
This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*Deborah Sue Bynum*.....Company Representative

Notorized this date 11th of January, 2007.

Deborah Sue Bynum
Notary Signature

County of Midland
State of Texas





Scientific Drilling International

Survey Report

Company: MARBOB ENERGY
Field: Carlsbad
Site: Eddy County, NM
Well: Mule 24 Fed #2
Wellpath: VH - Job #32K1106914

Date: 01/08/2007 Time: 19:45:38 Page: 1
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 11/09/06
KSRG 0'-7021'

Start Date: 11/09/2006

Company: Scientific Drilling Internatio
Tool: Keeper;Keeper Gyro

Engineer: Rehders w/GeoGyro
Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	2.42	234.33	99.97	-1.23	-1.23	-1.72	2.42	2.11	234.33
200.00	2.66	235.96	199.87	-3.76	-3.76	-5.35	0.25	6.54	234.91
300.00	2.44	242.99	299.77	-6.03	-6.03	-9.17	0.38	10.98	236.69
400.00	2.27	246.41	399.69	-7.79	-7.79	-12.88	0.22	15.05	238.85
500.00	2.07	262.65	499.62	-8.81	-8.81	-16.49	0.64	18.70	241.89
600.00	1.68	269.79	599.56	-9.05	-9.05	-19.75	0.45	21.72	245.39
700.00	1.60	275.39	699.52	-8.92	-8.92	-22.60	0.18	24.30	248.46
800.00	1.48	279.83	799.49	-8.57	-8.57	-25.27	0.17	26.68	251.27
900.00	1.39	289.04	899.46	-7.95	-7.95	-27.68	0.25	28.80	253.97
1000.00	1.38	299.88	999.43	-6.96	-6.96	-29.88	0.26	30.67	256.89
1100.00	1.28	299.16	1099.40	-5.81	-5.81	-31.89	0.10	32.42	259.67
1200.00	1.26	304.44	1199.38	-4.65	-4.65	-33.78	0.12	34.09	262.17
1300.00	0.94	308.10	1299.36	-3.52	-3.52	-35.33	0.33	35.50	264.31
1400.00	0.77	316.05	1399.35	-2.53	-2.53	-36.44	0.21	36.53	266.03
1500.00	0.34	311.63	1499.34	-1.85	-1.85	-37.13	0.43	37.17	267.15
1600.00	0.34	314.17	1599.34	-1.44	-1.44	-37.56	0.02	37.59	267.80
1700.00	0.37	265.36	1699.34	-1.26	-1.26	-38.10	0.29	38.12	268.10
1800.00	0.35	220.87	1799.34	-1.52	-1.52	-38.62	0.27	38.65	267.74
1900.00	0.44	199.14	1899.33	-2.11	-2.11	-38.95	0.17	39.00	266.89
2000.00	0.56	195.10	1999.33	-2.95	-2.95	-39.20	0.12	39.31	265.70
2100.00	0.59	180.46	2099.32	-3.94	-3.94	-39.33	0.15	39.53	264.29
2200.00	0.70	171.91	2199.32	-5.06	-5.06	-39.25	0.15	39.57	262.66
2300.00	0.73	161.94	2299.31	-6.27	-6.27	-38.96	0.13	39.47	260.86
2400.00	0.54	152.01	2399.30	-7.29	-7.29	-38.55	0.22	39.23	259.29
2500.00	0.57	159.04	2499.30	-8.17	-8.17	-38.15	0.07	39.01	257.91
2600.00	0.51	151.69	2599.30	-9.02	-9.02	-37.76	0.09	38.82	256.56
2700.00	0.37	145.82	2699.29	-9.68	-9.68	-37.37	0.15	38.60	255.47
2800.00	0.40	133.98	2799.29	-10.19	-10.19	-36.93	0.08	38.31	254.57
2900.00	0.35	140.45	2899.29	-10.67	-10.67	-36.49	0.07	38.02	253.70
3000.00	0.34	130.09	2999.29	-11.10	-11.10	-36.07	0.06	37.73	252.90
3100.00	0.37	148.16	3099.28	-11.56	-11.56	-35.67	0.12	37.50	252.04
3200.00	0.39	149.52	3199.28	-12.13	-12.13	-35.33	0.02	37.35	251.05
3300.00	0.44	126.24	3299.28	-12.65	-12.65	-34.84	0.17	37.07	250.05
3400.00	0.28	132.15	3399.28	-13.04	-13.04	-34.35	0.16	36.74	249.21
3500.00	0.36	129.48	3499.28	-13.41	-13.41	-33.93	0.08	36.48	248.44
3600.00	0.37	131.93	3599.27	-13.82	-13.82	-33.45	0.02	36.19	247.55
3700.00	0.21	191.46	3699.27	-14.22	-14.22	-33.24	0.32	36.15	246.85
3800.00	0.15	133.48	3799.27	-14.49	-14.49	-33.18	0.18	36.21	246.42
3900.00	0.13	190.27	3899.27	-14.69	-14.69	-33.11	0.13	36.22	246.08
4000.00	0.17	149.44	3999.27	-14.93	-14.93	-33.05	0.11	36.27	245.70
4100.00	0.10	261.55	4099.27	-15.07	-15.07	-33.06	0.23	36.34	245.50
4200.00	0.25	208.14	4199.27	-15.27	-15.27	-33.25	0.21	36.59	245.33
4300.00	0.06	232.90	4299.27	-15.50	-15.50	-33.40	0.20	36.82	245.11
4400.00	0.21	184.13	4399.27	-15.71	-15.71	-33.45	0.18	36.96	244.84
4500.00	0.07	193.00	4499.27	-15.95	-15.95	-33.48	0.14	37.09	244.52
4600.00	0.13	145.38	4599.27	-16.11	-16.11	-33.43	0.10	37.11	244.28
4700.00	0.38	180.62	4699.27	-16.53	-16.53	-33.37	0.28	37.24	243.65
4800.00	0.33	196.42	4799.27	-17.14	-17.14	-33.45	0.11	37.59	242.87



Scientific Drilling International

Survey Report

Company: MARBOB ENERGY
Field: Carlsbad
Site: Eddy County, NM
Well: Mule 24 Fed #2
Wellpath: VH - Job #32K1106914

Date: 01/08/2007 Time: 19:45:38 Page: 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

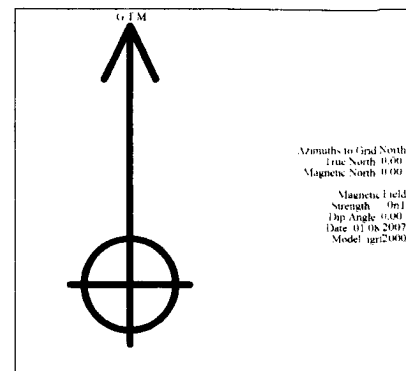
Survey

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	0.39	172.19	4899.27	-17.75	-17.75	-33.49	0.16	37.90	242.07
5000.00	0.44	185.32	4999.26	-18.47	-18.47	-33.48	0.11	38.24	241.11
5100.00	0.47	185.59	5099.26	-19.26	-19.26	-33.55	0.03	38.69	240.14
5200.00	0.66	194.92	5199.25	-20.23	-20.23	-33.74	0.21	39.34	239.06
5300.00	0.51	170.88	5299.25	-21.22	-21.22	-33.82	0.28	39.93	237.89
5400.00	0.57	181.93	5399.24	-22.16	-22.16	-33.77	0.12	40.39	236.72
5500.00	0.67	186.33	5499.24	-23.24	-23.24	-33.85	0.11	41.06	235.53
5600.00	0.58	212.30	5599.23	-24.25	-24.25	-34.18	0.29	41.91	234.65
5700.00	0.75	202.82	5699.23	-25.28	-25.28	-34.71	0.20	42.94	233.93
5800.00	0.76	213.86	5799.22	-26.43	-26.43	-35.33	0.15	44.12	233.20
5900.00	0.44	193.44	5899.21	-27.36	-27.36	-35.79	0.38	45.05	232.61
6000.00	0.27	197.64	5999.21	-27.95	-27.95	-35.95	0.17	45.54	232.13
6100.00	0.42	222.44	6099.21	-28.45	-28.45	-36.27	0.21	46.09	231.89
6200.00	0.46	240.62	6199.21	-28.92	-28.92	-36.87	0.14	46.85	231.89
6300.00	1.12	263.94	6299.20	-29.22	-29.22	-38.19	0.72	48.08	232.58
6400.00	1.48	285.08	6399.17	-28.98	-28.98	-40.41	0.59	49.73	234.35
6500.00	1.42	290.01	6499.14	-28.22	-28.22	-42.82	0.14	51.28	236.61
6600.00	1.29	287.85	6599.11	-27.45	-27.45	-45.05	0.14	52.76	238.64
6700.00	1.26	287.64	6699.09	-26.78	-26.78	-47.17	0.03	54.24	240.42
6800.00	1.40	289.54	6799.06	-26.03	-26.03	-49.37	0.15	55.81	242.20
6900.00	1.24	287.78	6899.03	-25.30	-25.30	-51.55	0.17	57.42	243.86
7000.00	1.68	277.49	6999.00	-24.77	-24.77	-54.04	0.51	59.44	245.37
7021.00	1.78	270.43	7019.99	-24.73	-24.73	-54.67	1.12	60.00	245.66

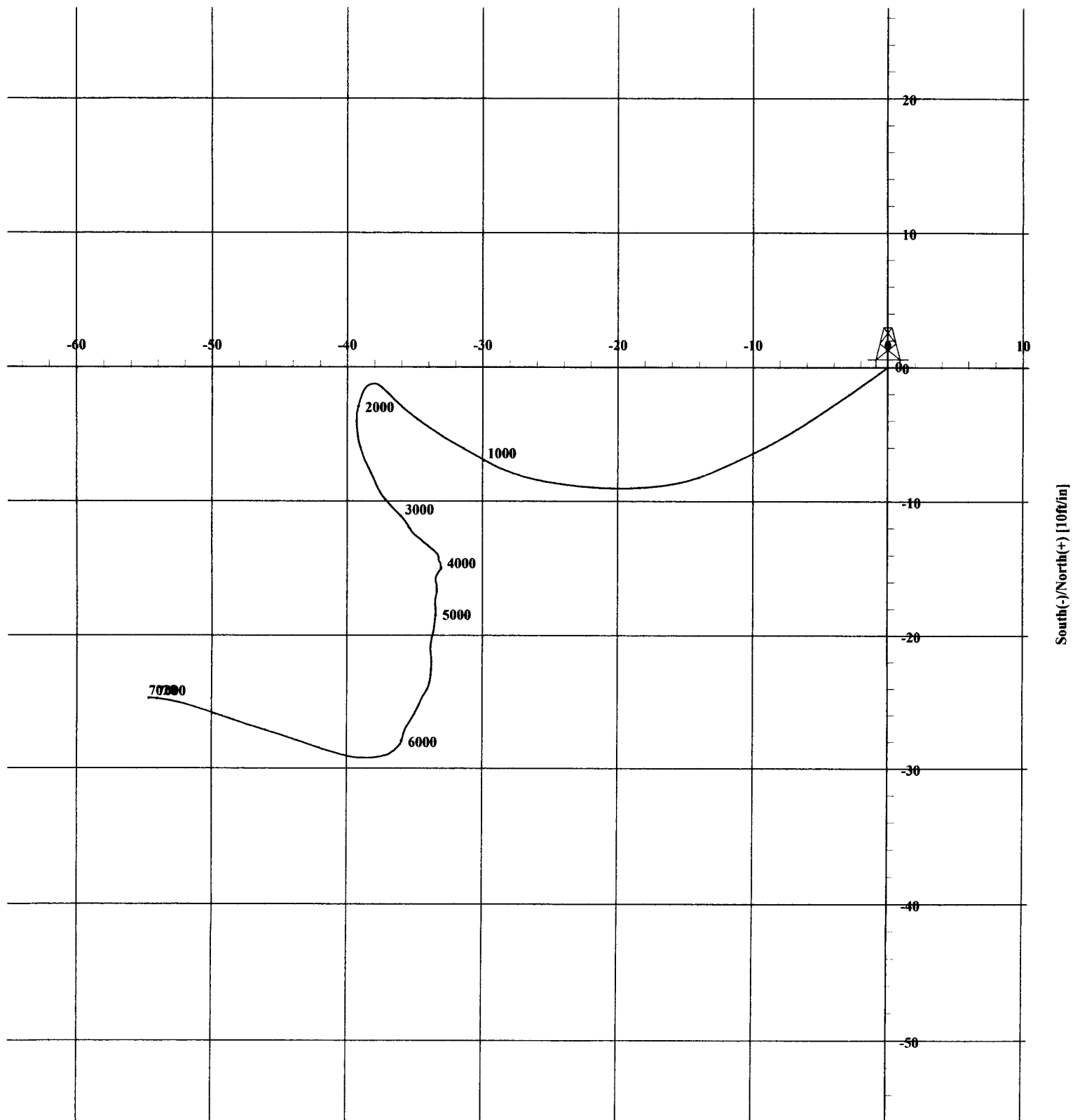


Scientific
Drilling

Field: Carlsbad
Site: Eddy County, NM
Well: Mule 24 Fed #2
Wellpath: VH - Job #32K1106914
Survey: 11/09/06



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



Pathfinder Energy

Survey Report

Company: Marbob Energy			Date: 12/7/2006			Time: 10:12:54			Page: 1		
Field: Mule			Co-ordinate(NE) Reference: Site: Mule 24 #2, True North								
Site: Mule 24 #2			Vertical (TVD) Reference: System: Mean Sea Level								
Well: Mule 24 #2			Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)								
Wellpath: Original Hole			Survey Calculation Method: Minimum Curvature						Db: Sybase		
Field: Mule Eddy County, New Mexico											
Map System: US State Plane Coordinate System 1927						Map Zone: New Mexico, Eastern Zone					
Geo Datum: NAD27 (Clarke 1866)						Coordinate System: Site Centre					
Sys Datum: Mean Sea Level						Geomagnetic Model: igrf2005					
Site: Mule 24 #2 Eddy County, New Mexico Section 24; T24S; R25E											
Site Position:			Northing: 438068.45 ft		Latitude: 32 12 15.720 N						
From: Geographic			Easting: 496169.77 ft		Longitude: 104 20 44.580 W						
Position Uncertainty: 0.00 ft					North Reference: True						
Ground Level: 0.00 ft					Grid Convergence: -0.01 deg						
Well: Mule 24 #2 Slant Well											
Slot Name:											
Well Position: +N/-S 0.00 ft			Northing: 438068.45 ft		Latitude: 32 12 15.720 N						
+E/-W 0.00 ft			Easting: 496169.77 ft		Longitude: 104 20 44.580 W						
Position Uncertainty: 0.00 ft											
Wellpath: Original Hole Slant well											
Current Datum: Mean Sea Level			Height 0.00 ft		Drilled From: Surface						
Magnetic Data: 11/9/2006					Tie-on Depth: 0.00 ft						
Field Strength: 49017 nT					Above System Datum: Mean Sea Level						
Vertical Section: Depth From (TVD)			+N/-S		Declination: 8.47 deg						
ft			ft		Mag Dip Angle: 60.15 deg						
					+E/-W		Direction				
					ft		deg				
0.00			0.00		0.00		90.00				
Survey: Pathfinder MWD Surveys											
Start Date: 11/13/2006											
Company: Pathfinder Energy											
Engineer: Midwellplan											
Tool: From: Definitive Path											
Survey: Pathfinder MWD Surveys											
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment	
7000.00	1.68	277.48	6999.00	-24.78	-54.03	-54.03	0.00	0.00	0.00	Tie In to Gyro Begin PathFinder MWD Surveys	
7055.00	0.35	335.87	7053.99	-24.52	-54.90	-54.90	2.77	-2.42	106.16		
7116.00	4.48	83.54	7114.93	-24.08	-52.61	-52.61	7.54	6.77	176.51		
7147.00	4.75	84.33	7145.83	-23.82	-50.13	-50.13	0.89	0.87	2.55		
7178.00	4.57	85.91	7176.73	-23.61	-47.62	-47.62	0.71	-0.58	5.10		
7210.00	4.31	86.18	7208.63	-23.44	-45.15	-45.15	0.82	-0.81	0.84		
7241.00	4.13	84.15	7239.55	-23.24	-42.88	-42.88	0.75	-0.58	-6.55		
7271.00	4.31	87.58	7269.47	-23.09	-40.67	-40.67	1.03	0.60	11.43		
7302.00	4.48	88.72	7300.37	-23.01	-38.30	-38.30	0.62	0.55	3.68		
7333.00	5.36	88.37	7331.26	-22.94	-35.64	-35.64	2.84	2.84	-1.13		
7364.00	5.63	89.34	7362.12	-22.88	-32.67	-32.67	0.92	0.87	3.13		
7394.00	5.28	89.25	7391.98	-22.85	-29.82	-29.82	1.17	-1.17	-0.30		
7426.00	5.19	91.62	7423.85	-22.87	-26.90	-26.90	0.73	-0.28	7.41		
7458.00	6.51	89.34	7455.68	-22.89	-23.64	-23.64	4.19	4.12	-7.12		
7489.00	7.74	87.67	7486.44	-22.78	-19.80	-19.80	4.02	3.97	-5.39		
7520.00	8.79	85.91	7517.12	-22.53	-15.35	-15.35	3.48	3.39			

Pathfinder Energy

Survey Report

Company: Marbob Energy
Field: Mule
Site: Mule 24 #2
Well: Mule 24 #2
Wellpath: Original Hole

Date: 12/7/2006 **Time:** 10:12:54 **Page:** 2
Co-ordinate(NE) Reference: Site: Mule 24 #2, True North
Vertical (TVD) Reference: System: Mean Sea Level
Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey: Pathfinder MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
7799.00	11.61	79.67	7790.56	-16.27	39.51	39.51	1.15	-1.13	-1.13	
7832.00	11.52	80.55	7822.89	-15.14	46.03	46.03	0.60	-0.27	2.67	
7863.00	11.34	79.76	7853.28	-14.09	52.08	52.08	0.77	-0.58	-2.55	
7894.00	10.99	80.73	7883.69	-13.07	58.00	58.00	1.28	-1.13	3.13	
7925.00	10.64	81.43	7914.14	-12.17	63.75	63.75	1.21	-1.13	2.26	
7955.00	11.08	82.22	7943.60	-11.37	69.34	69.34	1.55	1.47	2.63	
7987.00	11.78	83.63	7974.97	-10.59	75.63	75.63	2.36	2.19	4.41	
8017.00	11.78	83.10	8004.33	-9.88	81.72	81.72	0.36	0.00	-1.77	
8049.00	12.22	84.86	8035.64	-9.18	88.33	88.33	1.79	1.37	5.50	
8080.00	11.87	85.91	8065.95	-8.66	94.78	94.78	1.33	-1.13	3.39	
8111.00	11.78	85.91	8096.29	-8.21	101.12	101.12	0.29	-0.29	0.00	
8142.00	12.22	86.26	8126.62	-7.77	107.55	107.55	1.44	1.42	1.13	
8173.00	11.87	85.47	8156.93	-7.30	114.00	114.00	1.25	-1.13	-2.55	
8204.00	11.43	86.53	8187.30	-6.87	120.24	120.24	1.58	-1.42	3.42	
8235.00	10.90	85.91	8217.71	-6.47	126.23	126.23	1.75	-1.71	-2.00	
8266.00	11.43	85.65	8248.12	-6.03	132.22	132.22	1.72	1.71	-0.84	
8298.00	11.17	84.94	8279.50	-5.51	138.47	138.47	0.92	-0.81	-2.22	
8329.00	11.70	85.03	8309.89	-4.98	144.59	144.59	1.71	1.71	0.29	
8360.00	11.70	85.38	8340.24	-4.45	150.86	150.86	0.23	0.00	1.13	
8391.00	11.52	85.74	8370.61	-3.97	157.08	157.08	0.63	-0.58	1.16	
8422.00	11.17	84.68	8401.00	-3.46	163.15	163.15	1.31	-1.13	-3.42	
8453.00	11.17	85.21	8431.42	-2.93	169.13	169.13	0.33	0.00	1.71	
8484.00	11.08	84.15	8461.83	-2.38	175.09	175.09	0.72	-0.29	-3.42	
8515.00	10.82	84.59	8492.27	-1.80	180.95	180.95	0.88	-0.84	1.42	
8546.00	10.55	85.12	8522.73	-1.28	186.67	186.67	0.93	-0.87	1.71	
8577.00	11.34	83.98	8553.17	-0.72	192.53	192.53	2.64	2.55	-3.68	
8607.00	11.61	84.59	8582.57	-0.13	198.47	198.47	0.99	0.90	2.03	
8638.00	11.52	85.56	8612.94	0.41	204.66	204.66	0.69	-0.29	3.13	
8670.00	11.17	85.38	8644.31	0.90	210.94	210.94	1.10	-1.09	-0.56	
8701.00	10.82	86.09	8674.74	1.34	216.83	216.83	1.21	-1.13	2.29	
8732.00	11.26	85.38	8705.17	1.78	222.75	222.75	1.49	1.42	-2.29	
8762.00	10.99	85.47	8734.61	2.25	228.52	228.52	0.90	-0.90	0.30	
8793.00	10.90	84.86	8765.04	2.74	234.39	234.39	0.47	-0.29	-1.97	
8824.00	11.43	84.15	8795.46	3.32	240.36	240.36	1.77	1.71	-2.29	
8856.00	11.43	83.54	8826.82	4.00	246.67	246.67	0.38	0.00	-1.91	
8887.00	11.08	84.07	8857.22	4.65	252.68	252.68	1.18	-1.13	1.71	
8917.00	10.64	83.36	8886.69	5.27	258.30	258.30	1.53	-1.47	-2.37	
8980.00	10.90	85.12	8948.58	6.45	270.01	270.01	0.67	0.41	2.79	
9041.00	11.87	84.07	9008.38	7.59	282.00	282.00	1.63	1.59	-1.72	
9105.00	9.85	86.00	9071.23	8.65	294.01	294.01	3.21	-3.16	3.02	
9167.00	9.15	85.91	9132.38	9.37	304.22	304.22	1.13	-1.13	-0.15	
9230.00	12.22	75.89	9194.28	11.35	315.68	315.68	5.68	4.87	-15.90	
9294.00	11.70	72.20	9256.89	14.99	328.43	328.43	1.44	-0.81	-5.77	
9357.00	10.29	74.13	9318.74	18.48	339.93	339.93	2.31	-2.24	3.06	
9420.00	10.11	87.58	9380.75	20.25	350.87	350.87	3.78	-0.29	21.35	
9483.00	13.28	87.76	9442.43	20.77	363.62	363.62	5.03	5.03	0.29	
9547.00	11.26	88.55	9504.97	21.22	377.22	377.22	3.17	-3.16	1.23	
9610.00	11.26	99.18	9566.76	20.39	389.44	389.44	3.29	0.00	16.87	
9673.00	11.78	98.83	9628.49	18.42	401.86	401.86	0.83	0.83	-0.56	
9736.00	11.52	92.89	9690.20	17.12	414.50	414.50	1.95	-0.41	-9.43	
9799.00	10.38	95.40	9752.05	16.27	426.44	426.44	1.96	-1.81	3.98	
9863.00	11.61	93.65	9814.87	15.31	438.60	438.60	1.99	1.92	-2.73	
9926.00	12.31	93.56	9876.51	14.49	451.63	451.63	1.11	1.11	-0.14	

Pathfinder Energy

Survey Report

Company: Marbob Energy	Date: 12/7/2006	Time: 10:12:54	Page: 3
Field: Mule	Co-ordinate(NE) Reference: Site: Mule 24 #2, True North		
Site: Mule 24 #2	Vertical (TVD) Reference: System: Mean Sea Level		
Well: Mule 24 #2	Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)		
Wellpath: Original Hole	Survey Calculation Method: Minimum Curvature		
		Db: Sybase	

Survey: Pathfinder MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
9990.00	12.57	90.22	9939.00	14.04	465.41	465.41	1.20	0.41	-5.22	
10053.00	11.70	91.89	10000.60	13.81	478.65	478.65	1.49	-1.38	2.65	
10117.00	13.19	85.74	10063.09	14.13	492.42	492.42	3.11	2.33	-9.61	
10180.00	13.01	83.98	10124.45	15.41	506.64	506.64	0.69	-0.29	-2.79	
10244.00	11.34	85.12	10187.01	16.70	520.07	520.07	2.64	-2.61	1.78	
10307.00	10.90	87.14	10248.83	17.53	532.19	532.19	0.93	-0.70	3.21	
10370.00	11.26	88.37	10310.65	18.00	544.29	544.29	0.68	0.57	1.95	
10408.00	11.17	89.34	10347.93	18.15	551.68	551.68	0.55	-0.24	2.55	
10471.00	12.84	85.65	10409.55	18.75	564.76	564.76	2.92	2.65	-5.86	
10535.00	12.57	84.24	10471.98	19.99	578.78	578.78	0.64	-0.42	-2.20	
10598.00	11.52	81.69	10533.60	21.58	591.83	591.83	1.87	-1.67	-4.05	
10661.00	10.20	80.89	10595.47	23.38	603.56	603.56	2.11	-2.10	-1.27	
10725.00	10.64	82.22	10658.41	25.07	615.01	615.01	0.78	0.69	2.08	
10788.00	9.23	89.85	10720.47	25.87	625.83	625.82	3.06	-2.24	12.11	
10852.00	11.26	82.22	10783.45	26.73	637.15	637.15	3.81	3.17	-11.92	
10915.00	11.08	81.87	10845.25	28.42	649.24	649.24	0.31	-0.29	-0.56	
10979.00	11.52	80.99	10908.01	30.29	661.64	661.64	0.74	0.69	-1.37	
11042.00	10.90	83.54	10969.81	31.95	673.77	673.77	1.26	-0.98	4.05	
11105.00	10.20	86.18	11031.75	32.99	685.25	685.25	1.35	-1.11	4.19	
11168.00	10.99	77.03	11093.68	34.71	696.67	696.67	2.95	1.25	-14.52	
11232.00	10.38	75.45	11156.57	37.53	708.20	708.20	1.06	-0.95	-2.47	
11295.00	9.94	77.30	11218.58	40.15	719.00	719.00	0.87	-0.70	2.94	
11357.00	10.55	78.70	11279.59	42.44	729.78	729.78	1.06	0.98	2.26	
11420.00	10.73	83.98	11341.51	44.18	741.27	741.27	1.57	0.29	8.38	
11483.00	11.52	86.18	11403.32	45.22	753.38	753.38	1.42	1.25	3.49	
11547.00	11.70	85.65	11466.01	46.13	766.23	766.23	0.33	0.28	-0.83	
11610.00	10.82	85.12	11527.80	47.12	778.49	778.49	1.41	-1.40	-0.84	
11674.00	10.38	83.19	11590.71	48.32	790.20	790.20	0.88	-0.69	-3.02	
11737.00	10.90	83.01	11652.62	49.71	801.75	801.75	0.83	0.83	-0.29	
11800.00	10.46	86.44	11714.53	50.79	813.37	813.37	1.23	-0.70	5.44	
11864.00	11.34	80.11	11777.38	52.24	825.36	825.36	2.32	1.37	-9.89	
11927.00	10.46	83.63	11839.24	53.93	837.15	837.15	1.75	-1.40	5.59	
11990.00	11.34	88.64	11901.11	54.72	849.03	849.03	2.05	1.40	7.95	
12054.00	9.67	90.13	11964.03	54.85	860.69	860.69	2.64	-2.61	2.33	
12117.00	11.17	82.48	12026.00	55.64	872.04	872.03	3.23	2.38	-12.14	
12180.00	11.61	83.80	12087.76	57.12	884.39	884.39	0.81	0.70	2.10	
12244.00	11.34	90.13	12150.48	57.80	897.08	897.08	2.01	-0.42	9.89	
12307.00	11.96	90.22	12212.18	57.76	909.80	909.80	0.98	0.98	0.14	
12371.00	9.85	89.16	12275.02	57.82	921.91	921.91	3.31	-3.30	-1.66	
12434.00	11.43	86.70	12336.94	58.26	933.53	933.53	2.61	2.51	-3.90	
12497.00	11.87	92.15	12398.64	58.37	946.24	946.24	1.88	0.70	8.65	
12561.00	11.78	91.27	12461.28	57.98	959.35	959.35	0.31	-0.14	-1.37	
12624.00	11.26	92.50	12523.01	57.57	971.92	971.92	0.91	-0.83	1.95	
12648.00	11.17	94.61	12546.55	57.28	976.58	976.58	1.75	-0.37	8.79	Last PathFinder MWD Survey
12700.00	11.17	94.61	12597.57	56.47	986.62	986.62	0.00	0.00	0.00	Projection to Bit

Annotation

MD ft	TVD ft	
7000.00	6999.00	Tie In to Gyro
7055.00	7053.99	Begin PathFinder MWD Surveys
12648.00	12546.55	Last PathFinder MWD Survey
12700.00	12597.57	Projection to Bit

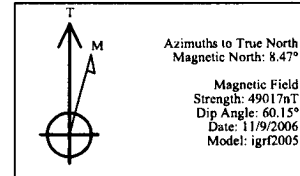
MARBOB ENERGY



Field: Mule
Site: Mule 24 #2
Well: Mule 24 #2
Wellpath: Original Hole
Survey: Pathfinder MWD Surveys

COMPANY DETAILS

Marbob Energy
 2208 W. Main St.
 Artesia, New Mexico
 Calculation Method: Minimum Curvature
 Error System: Systematic Ellipse
 Scan Method: Closest Approach 3D
 Error Surface: Elliptical Cone
 Warning Method: Error Ratio

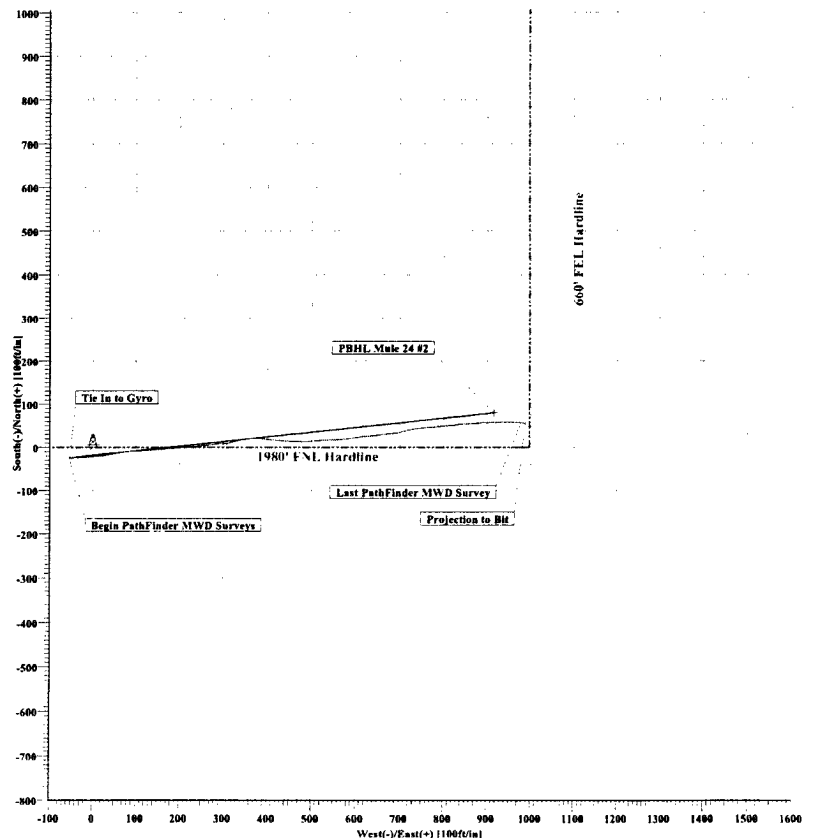
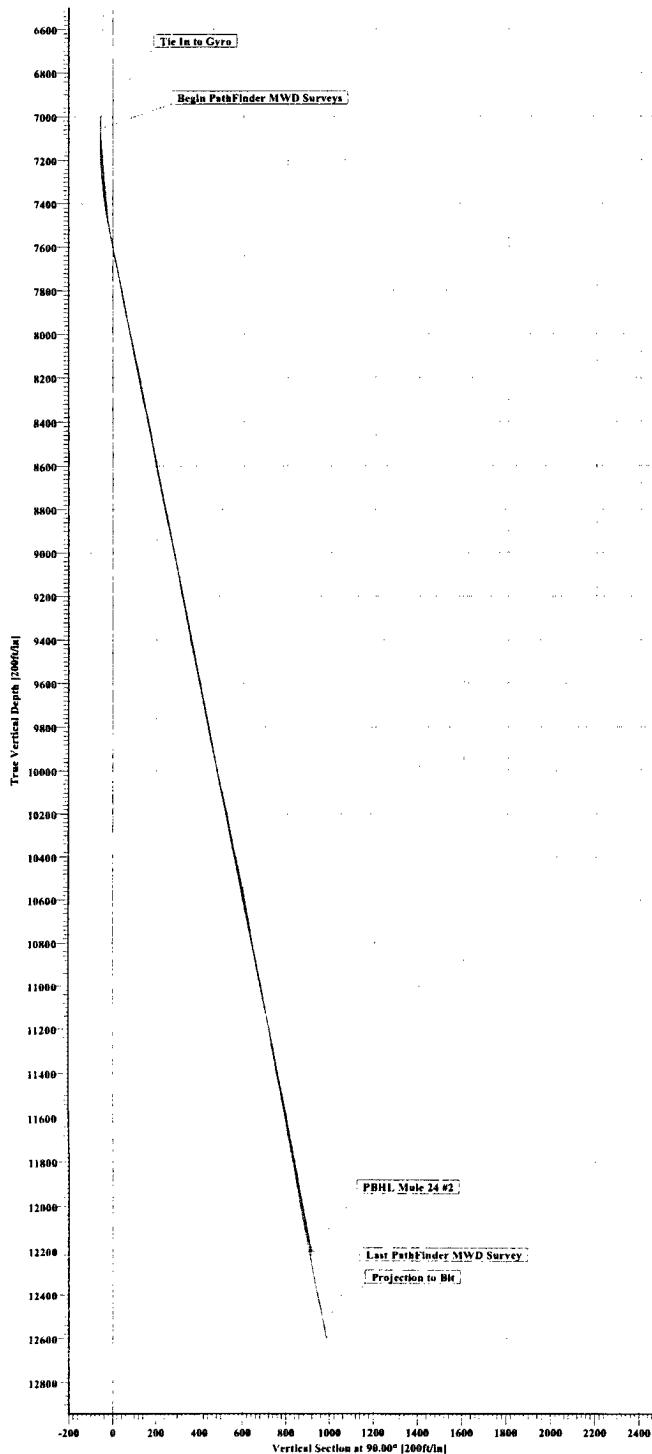


FIELD DETAILS

Mule
 Eddy County, New Mexico
 Geodetic System: US State Plane Coordinate System 1927
 Ellipsoid: NAD27 (Clarke 1866)
 Zone: New Mexico, Eastern Zone
 Magnetic Model: igr2005
 System Datum: Mean Sea Level
 Local North: True North

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Mule 24 #2	0.00	0.00	438068.45	496169.77	32°12'15.720N	104°20'44.580W	N/A



LEGEND

— Mule 24 #2, Original Hole, Plan #1 3-21-06
 — Original Hole
 — Pathfinder MWD Surveys