ATS-07-575

HIGH CAVE/KARST

OCD-ARTESIA

RESUBMITTAL

Form 3160-3
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

C-1138

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. **NM 31636**	
6 If Indian, Allotee or Tribe Name	
1a. Type of work ☑ DRILL ☐ REENTER	7 If Unit or CA Agreement, Name and No
1b. Type of Well ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. **Mule 23 Federal #1**
2 Name of Operator **Marbob Energy Corporation**	9 API Well No. 30-015-35846
3a Address **P.O. Box 227, Artesia, NM 88211-0228** / 3b Phone No. *(include area code)* **505-748-3303**	10 Field and Pool, or Exploratory **Wildcat; Granite**
4. Location of Well *(Report location clearly and in accordance with any State requirements *)* At surface **550' FSL & 2215' FWL** At proposed prod zone **BHL: 660' FSL & 1980' FWL**	11 Sec , T. R M or Blk and Survey or Area **Sec. 23 T24S - R25E**
14 Distance in miles and direction from nearest town or post office* **About 1.5 miles from White City, NM**	12 County or Parish **Eddy County** / 13 State **NM**

OCT 02 2007
OCD-ARTESIA

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) **550'**	16 No of acres in lease **2040**	17 Spacing Unit dedicated to this well **320**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth **12200'**	20 BLM/BIA Bond No on file **NMB000412**
21 Elevations (Show whether DF, KDB, RT, GL, etc) **4042' GL**	22 Approximate date work will start* **08/17/2007**	23 Estimated duration **21 Days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form

1. Well plat certified by a registered surveyor
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM

25 Signature Nancy T. Agnew	Name *(Printed Typed)* **Nancy T. Agnew**	Date **07/17/2007**
Title **Land Department**		
Approved by *(Signature)* **/s/ James Stovall**	Name *(Printed Typed)*	Date SEP 27 2007
Title **FIELD MANAGER**	Office **CARLSBAD FIELD OFFICE**	

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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)

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

Carlsbad Controlled Water Ba:

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

State of New Mexico

Energy, Minerals and Natural Resources Departme

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-1
Revised JUNE 10, 20
Submit to Appropriate District Offi
State Lease - 4 Copi
Fee Lease - 3 Copi

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPOR

API Number	Pool Code	Pool Name*
	96070	Wildcat; Granite

Property Code	Property Name	Well Number
35279	Mule 23 Federal	1

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	4042'

Surface Location

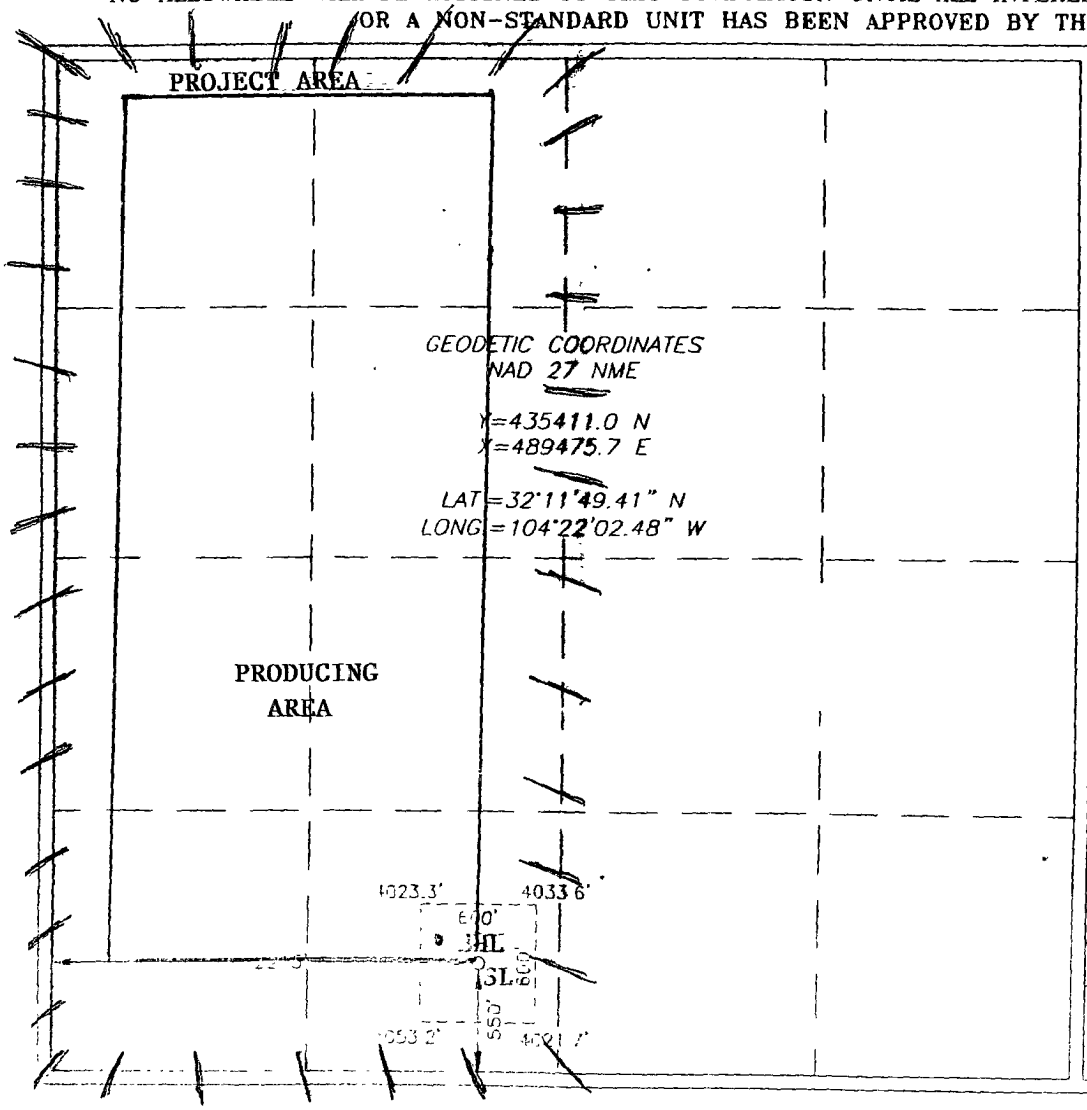
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	23	24-S	25-E		550	SOUTH	2215	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	23	24-S	25-E		660	SOUTH	1980	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Nancy T. Agnew
Signature

Nancy T. Agnew
Printed Name

LAND DEPARTMENT
Title

7/16/07
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison and that the same is true and correct to the best of my belief.

AUGUST 12, 2005
Date Surveyed

Signature & Seal of Professional Surveyor

05.11.1184
Certificate No. GARY EIDSON 12641

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Date: July 17, 2007

Lease #: NM-31636
Mule 23 Federal #1

Legal Description: Section 23, T24S, R25E
Eddy County, New Mexico

Formation(s): Permian

Bond Coverage: Statewide

BLM Bond File #: NMB000412

Marbob Energy Corporation

Nancy T. Agnew

Nancy T. Agnew
Land Department

PATHFINDER ENERGY SERVICES

PathFinder
Planning Report

Company:	Marbob Energy	**Date:** 9/7/2005 **Time:** 09:00:26 **Page:**	1
Field:	Mule	**Co-ordinate(NE) Reference:**	Site: Mule 23 Federal #1, True North
Site:	Mule 23 Federal #1	**Vertical (TVD) Reference:**	SITE 0.0
Well:	Mule 23 Federal #1	**Section (VS) Reference:**	Well (0.00N,0.00E,299.05Azi)
Wellpath:	Orginal Hole	**Plan:**	Plan #1 090705

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 23 Federal #1
Eddy County, New Mexico
Section 23, T25-S, R25-E

Site Position:		**Northing:**	ft	**Latitude:**	
From:	Lease Line	**Easting:**	ft	**Longitude:**	
Position Uncertainty:	0.00 ft			**North Reference:**	True
Ground Level:	0.00 ft			**Grid Convergence:**	0.00 deg

Well: Mule 23 Federal #1 **Slot Name:**

Well Position:	+N/-S	0.00 ft	**Northing:**	0.00 ft	**Latitude:**	30	59	24.512 N
	+E/-W	0.00 ft	**Easting :**	0.00 ft	**Longitude:**	105	55	44 137 W
Position Uncertainty:		0 00 ft						

Wellpath:	Orginal Hole			**Drilled From:**	Surface
				Tie-on Depth:	0.00 ft
Current Datum:	SITE	**Height**	0.00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	9/7/2005			**Declination:**	0.00 deg
Field Strength:	0 nT			**Mag Dip Angle:**	0.00 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	8620.00	0 00	0 00	299.05

Plan:	Plan #1 090705	**Date Composed:**	9/7/2005
		Version:	1
Principal:	No	**Tied-to:**	From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	299.05	0.00	0.00	0.00	0 00	0 00	0.00	0.00	
6623.60	0.00	299.05	6623.60	0.00	0.00	0.00	0.00	0 00	0.00	
7223.60	12.00	299.05	7219.22	30.40	-54.72	2.00	2.00	0 00	299 05	
8655.67	12 00	299.05	8620.00	175.00	-315 00	0.00	0.00	0.00	0 00	Target @ 8620' TVD
12161.24	0.00	299.05	12100.00	352.63	-634.74	0.34	-0.34	0.00	-180.00	Mule 23 Federal #1 PBHL

Survey

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
0.00	0 00	299.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	299.05	100 00	0.00	0.00	0 00	0.00	0 00	0.00	
200 00	0 00	299.05	200.00	0.00	0.00	0.00	0.00	0 00	0 00	
300.00	0.00	299.05	300.00	0 00	0 00	0.00	0.00	0 00	0.00	
400.00	0.00	299.05	400.00	0.00	0 00	0 00	0 00	0.00	0.00	
500.00	0.00	299.05	500 00	0 00	0 00	0.00	0.00	0 00	0.00	
600.00	0.00	299 05	600.00	0.00	0.00	0.00	0.00	0 00	0.00	
700.00	0.00	299.05	700.00	0.00	0 00	0.00	0 00	0.00	0.00	
800.00	0 00	299 05	800.00	0.00	0 00	0.00	0 00	0.00	0 00	
900.00	0.00	299 05	900.00	0 00	0.00	0 00	0 00	0.00	0.00	
1000.00	0 00	299.05	1000.00	0 00	0.00	0 00	0.00	0 00	0.00	
1100.00	0 00	299 05	1100.00	0 00	0 00	0.00	0.00	0.00	0.00	
1200.00	0.00	299 05	1200 00	0.00	0.00	0.00	0 00	0.00	0 00	
1300.00	0.00	299.05	1300.00	0.00	0 00	0 00	0.00	0.00	0.00	
1400.00	0.00	299 05	1400.00	0.00	0 00	0 00	0 00	0 00	0 00	
1500.00	0.00	299.05	1500.00	0 00	0.00	0 00	0.00	0.00	0.00	

PATHFINDER ENERGY SERVICES

PathFinder
Planning Report

Company:	Marbob Energy	**Date:** 9/7/2005 **Time:** 09:00:26 **Page:** 2	
Field:	Mule	**Co-ordinate(NE) Reference:**	Site: Mule 23 Federal #1, True North
Site:	Mule 23 Federal #1	**Vertical (TVD) Reference:**	SITE 0 0
Well:	Mule 23 Federal #1	**Section (VS) Reference:**	Well (0.00N,0.00E,299.05Azi)
Wellpath:	Orginal Hole	**Plan:**	Plan #1 090705

Survey

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
1600.00	0.00	299 05	1600.00	0 00	0.00	0.00	0.00	0.00	0.00	
1700.00	0.00	299.05	1700.00	0 00	0.00	0.00	0.00	0.00	0.00	
1800 00	0.00	299.05	1800.00	0 00	0.00	0 00	0.00	0.00	0 00	
1900.00	0.00	299.05	1900.00	0 00	0 00	0.00	0.00	0.00	0 00	
2000.00	0 00	299.05	2000.00	0.00	0 00	0.00	0.00	0.00	0 00	
2100.00	0 00	299.05	2100.00	0 00	0 00	0 00	0.00	0.00	0.00	
2200.00	0 00	299 05	2200.00	0 00	0.00	0.00	0.00	0.00	0 00	
2300.00	0.00	299.05	2300.00	0.00	0 00	0 00	0.00	0.00	0.00	
2400.00	0 00	299 05	2400.00	0 00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	299.05	2500.00	0.00	0 00	0 00	0.00	0.00	0.00	
2600.00	0.00	299 05	2600.00	0.00	0.00	0.00	0 00	0.00	0.00	
2700.00	0.00	299 05	2700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2800.00	0 00	299.05	2800.00	0 00	0.00	0 00	0.00	0 00	0.00	
2900.00	0 00	299.05	2900.00	0.00	0.00	0.00	0 00	0.00	0.00	
3000.00	0 00	299.05	3000 00	0.00	0 00	0 00	0.00	0.00	0.00	
3100.00	0.00	299 05	3100.00	0 00	0.00	0 00	0.00	0.00	0.00	
3200 00	0.00	299.05	3200 00	0.00	0 00	0 00	0.00	0.00	0.00	
3300.00	0.00	299 05	3300.00	0.00	0 00	0 00	0.00	0.00	0.00	
3400 00	0.00	299.05	3400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3500.00	0.00	299 05	3500 00	0.00	0.00	0 00	0.00	0.00	0.00	
3600.00	0 00	299.05	3600.00	0 00	0.00	0.00	0.00	0.00	0.00	
3700.00	0.00	299.05	3700.00	0 00	0.00	0.00	0.00	0.00	0.00	
3800.00	0 00	299 05	3800.00	0.00	0.00	0 00	0.00	0.00	0.00	
3900.00	0.00	299.05	3900.00	0.00	0.00	0.00	0.00	0.00	0 00	
4000 00	0.00	299.05	4000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4100.00	0.00	299 05	4100.00	0.00	0.00	0.00	0 00	0.00	0.00	
4200.00	0.00	299 05	4200.00	0.00	0 00	0.00	0.00	0.00	0 00	
4300 00	0.00	299.05	4300.00	0.00	0.00	0.00	0.00	0 00	0.00	
4400 00	0.00	299 05	4400.00	0.00	0 00	0.00	0.00	0.00	0.00	
4500.00	0.00	299.05	4500.00	0.00	0.00	0.00	0 00	0.00	0 00	
4600.00	0.00	299 05	4600.00	0.00	0.00	0 00	0.00	0 00	0.00	
4700.00	0.00	299.05	4700.00	0.00	0.00	0.00	0.00	0.00	0.00	
4800.00	0 00	299.05	4800.00	0.00	0.00	0.00	0.00	0.00	0.00	
4900.00	0.00	299.05	4900.00	0.00	0.00	0.00	0.00	0.00	0.00	
5000.00	0.00	299.05	5000.00	0.00	0.00	0.00	0.00	0 00	0.00	
5100.00	0 00	299.05	5100.00	0.00	0 00	0.00	0.00	0.00	0 00	
5200.00	0 00	299 05	5200.00	0.00	0 00	0.00	0 00	0.00	0.00	
5300.00	0 00	299 05	5300 00	0.00	0.00	0 00	0.00	0.00	0.00	
5400.00	0 00	299 05	5400.00	0.00	0 00	0.00	0 00	0.00	0.00	
5500.00	0.00	299 05	5500 00	0 00	0 00	0 00	0.00	0.00	0.00	
5600.00	0.00	299 05	5600.00	0.00	0.00	0.00	0.00	0 00	0.00	
5700.00	0.00	299 05	5700.00	0 00	0.00	0.00	0.00	0.00	0.00	
5800.00	0.00	299 05	5800 00	0 00	0.00	0.00	0.00	0 00	0.00	
5900.00	0 00	299 05	5900.00	0 00	0.00	0 00	0.00	0 00	0.00	
6000.00	0.00	299 05	6000 00	0.00	0.00	0.00	0.00	0 00	0.00	
6100.00	0.00	299.05	6100 00	0 00	0.00	0.00	0.00	0 00	0.00	
6200.00	0.00	299 05	6200.00	0.00	0.00	0 00	0.00	0.00	0.00	
6300 00	0.00	299.05	6300.00	0 00	0 00	0.00	0.00	0 00	0.00	
6400.00	0.00	299 05	6400.00	0 00	0.00	0.00	0.00	0.00	0.00	
6500 00	0 00	299 05	6500 00	0 00	0.00	0 00	0 00	0.00	0.00	
6600 00	0.00	299 05	6600.00	0 00	0 00	0 00	0 00	0 00	0.00	
6623 60	0.00	299.05	6623.60	0 00	0.00	0 00	0 00	0.00	0.00	KOP @ 6624' w/ 2° Doglegs
6700.00	1 53	299 05	6699 99	0 49	-0 89	1 02	2.00	2.00	0.00	
6800.00	3 53	299 05	6799 89	2 64	-4 75	5 43	2.00	2.00	0.00	

PATHFINDER
ENERGY SERVICES

PathFinder
Planning Report

Company:	Marbob Energy	**Date:** 9/7/2005 **Time:** 09:00:26 **Page:** 3	
Field:	Mule	**Co-ordinate(NE) Reference:**	Site: Mule 23 Federal #1, True North
Site:	Mule 23 Federal #1	**Vertical (TVD) Reference:**	SITE 0.0
Well:	Mule 23 Federal #1	**Section (VS) Reference:**	Well (0.00N,0.00E,299.05Azi)
Wellpath:	Orginal Hole	**Plan:**	Plan #1 090705

Survey

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
6900 00	5.53	299 05	6899.57	6.47	-11 65	13.32	2 00	2.00	0 00	
7000.00	7.53	299 05	6998 92	11.99	-21 58	24 69	2.00	2.00	0 00	
7100.00	9.53	299 05	7097.81	19.19	-34 55	39.52	2.00	2.00	0 00	
7200.00	11.53	299 05	7196.12	28 07	-50 52	57.79	2.00	2 00	0.00	
7223 60	12 00	299 05	7219 22	30 40	-54.72	62.60	2 00	2 00	0 00	End of Build @ 12° Inclin
7300.00	12 00	299.05	7293.95	38.12	-68 61	78.49	0.00	0 00	0.00	
7400.00	12.00	299.05	7391.77	48.21	-86 78	99 28	0.00	0.00	0.00	
7500.00	12.00	299 05	7489 58	58.31	-104.96	120 07	0 00	0 00	0 00	
7600.00	12.00	299 05	7587.40	68.41	-123.13	140.86	0 00	0 00	0.00	
7700.00	12.00	299.05	7685.21	78 51	-141.31	161.65	0.00	0.00	0.00	
7800.00	12.00	299.05	7783 03	88.60	-159 48	182 44	0.00	0 00	0.00	
7900.00	12.00	299 05	7880 84	98.70	-177.66	203.23	0.00	0.00	0.00	
8000 00	12.00	299.05	7978 66	108.80	-195.83	224 03	0.00	0.00	0.00	
8100.00	12.00	299 05	8076.47	118.89	-214.01	244.82	0 00	0.00	0.00	
8200 00	12.00	299.05	8174 29	128 99	-232.18	265.61	0 00	0 00	0.00	
8300.00	12 00	299.05	8272 10	139.09	-250 36	286 40	0.00	0.00	0.00	
8400.00	12 00	299.05	8369.92	149.18	-268.53	307 19	0.00	0.00	0.00	
8500.00	12.00	299.05	8467 73	159.28	-286 71	327 98	0 00	0 00	0 00	
8600.00	12 00	299 05	8565.55	169.38	-304 88	348 77	0.00	0.00	0.00	
8655.67	12 00	299.05	8620 00	175 00	-315 00	360 35	0.00	0 00	0 00	Target @ 8620' TVD
8700.00	11 85	299 05	8663.37	179.45	-323 01	369.51	0.34	-0 34	0 00	
8800.00	11.51	299.05	8761 30	189.28	-340.70	389.75	0 34	-0 34	0.00	
8900.00	11.16	299.05	8859.35	198 82	-357.88	409.40	0.34	-0.34	0.00	
9000.00	10.82	299.05	8957.52	208 08	-374.55	428.47	0.34	-0.34	0.00	
9100.00	10.48	299 05	9055 79	217.06	-390 70	446.95	0 34	-0 34	0.00	
9200.00	10 14	299 05	9154.18	225 75	-406.35	464 84	0.34	-0 34	0.00	
9300.00	9 79	299 05	9252 67	234.15	-421.47	482.15	0 34	-0.34	0.00	
9400.00	9 45	299 05	9351.26	242 27	-436.09	498 87	0.34	-0 34	0.00	
9500.00	9.11	299.05	9449.95	250.10	-450.18	514.99	0.34	-0.34	0.00	
9600.00	8.77	299.05	9548.74	257.65	-463.77	530.53	0 34	-0.34	0.00	
9700 00	8.43	299 05	9647.62	264 91	-476.83	545 48	0.34	-0 34	0.00	
9800 00	8.08	299.05	9746.58	271.88	-489.38	559.83	0 34	-0.34	0.00	
9900.00	7.74	299.05	9845.63	278.56	-501 42	573 60	0.34	-0 34	0.00	
10000.00	7 40	299 05	9944.76	284.96	-512.93	586 77	0 34	-0.34	0 00	
10100.00	7 06	299 05	10043.96	291.07	-523 93	599.35	0 34	-0 34	0 00	
10200.00	6.71	299.05	10143 24	296 89	-534.41	611 34	0 34	-0.34	0.00	
10300.00	6.37	299 05	10242.59	302 43	-544 37	622.73	0 34	-0 34	0.00	
10400 00	6 03	299.05	10342 00	307.67	-553.81	633 53	0.34	-0.34	0 00	
10500.00	5.69	299 05	10441 48	312 63	-562.73	643.74	0.34	-0 34	0.00	
10600 00	5.34	299.05	10541 02	317.29	-571 13	653.35	0.34	-0.34	0.00	
10700 00	5.00	299 05	10640.61	321.67	-579.01	662 37	0.34	-0.34	0.00	
10800.00	4.66	299.05	10740 26	325 76	-586.38	670.79	0.34	-0 34	0.00	
10900.00	4.32	299.05	10839 95	329 56	-593 22	678.62	0.34	-0 34	0.00	
11000.00	3.98	299.05	10939.69	333.07	-599.54	685 85	0.34	-0 34	0.00	
11100.00	3.63	299.05	11039 47	336 30	-605 34	692 48	0.34	-0.34	0.00	
11200 00	3.29	299.05	11139 28	339.23	-610.62	698 52	0.34	-0 34	0 00	
11300 00	2.95	299.05	11239.14	341.87	-615.37	703 96	0.34	-0.34	0.00	
11400.00	2 61	299.05	11339.02	344.22	-619.61	708 81	0.34	-0.34	0.00	
11500.00	2.26	299.05	11438.93	346.29	-623.32	713.05	0.34	-0.34	0.00	
11600.00	1.92	299.05	11538 86	348 06	-626 51	716 70	0.34	-0 34	0.00	
11700.00	1 58	299.05	11638 81	349 54	-629 18	719.76	0.34	-0 34	0.00	
11800 00	1 24	299.05	11738.78	350.74	-631.33	722 22	0.34	-0 34	0 00	
11900 00	0 89	299 05	11838.77	351 64	-632.96	724 08	0.34	-0.34	0 00	

PATHFINDER ENERGY SERVICES

PathFinder
Planning Report

Company:	Marbob Energy	**Date:** 9/7/2005 **Time:** 09:00:26 **Page:** 4	
Field:	Mule	**Co-ordinate(NE) Reference:**	Site: Mule 23 Federal #1, True North
Site:	Mule 23 Federal #1	**Vertical (TVD) Reference:**	SITE 0.0
Well:	Mule 23 Federal #1	**Section (VS) Reference:**	Well (0.00N,0.00E,299.05Azi)
Wellpath:	Orginal Hole	**Plan:**	Plan #1 090705

Survey

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
12000 00	0.55	299 05	11938.76	352.25	-634.06	725.34	0 34	-0 34	0.00	
12100 00	0.21	299.05	12038.76	352.58	-634 64	726.00	0 34	-0 34	0.00	
12161.24	0 00	299.05	12100.00	352.63	-634.74	726.11	0.34	-0.34	0.00	Mule 23 Federal #1 PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg Min Sec	<---- Longitude ----> Deg Min Sec
Target @ 8620' TVD -Plan hit target			8620 00	175.00	-315 00	179.50	-312.46	30 59 26.243 N	105 55 47.755 W
Mule 23 Federal #1 PBHL -Plan hit target			12100 00	352 63	-634.74	361.70	-629 62	30 59 28.001 N	105 55 51.428 W

Annotation

MD ft	TVD ft	
6623.60	6623.60	KOP @ 6624' w/ 2° Doglegs
7223 60	7219.22	End of Build @ 12° Inclination

Marbob Energy Corporation

Mule 23 Federal #1

Section 23, T25S & R25E
Eddy County, New Mexico
Plan #1 090705

PATHFINDER ENERGY SERVICES

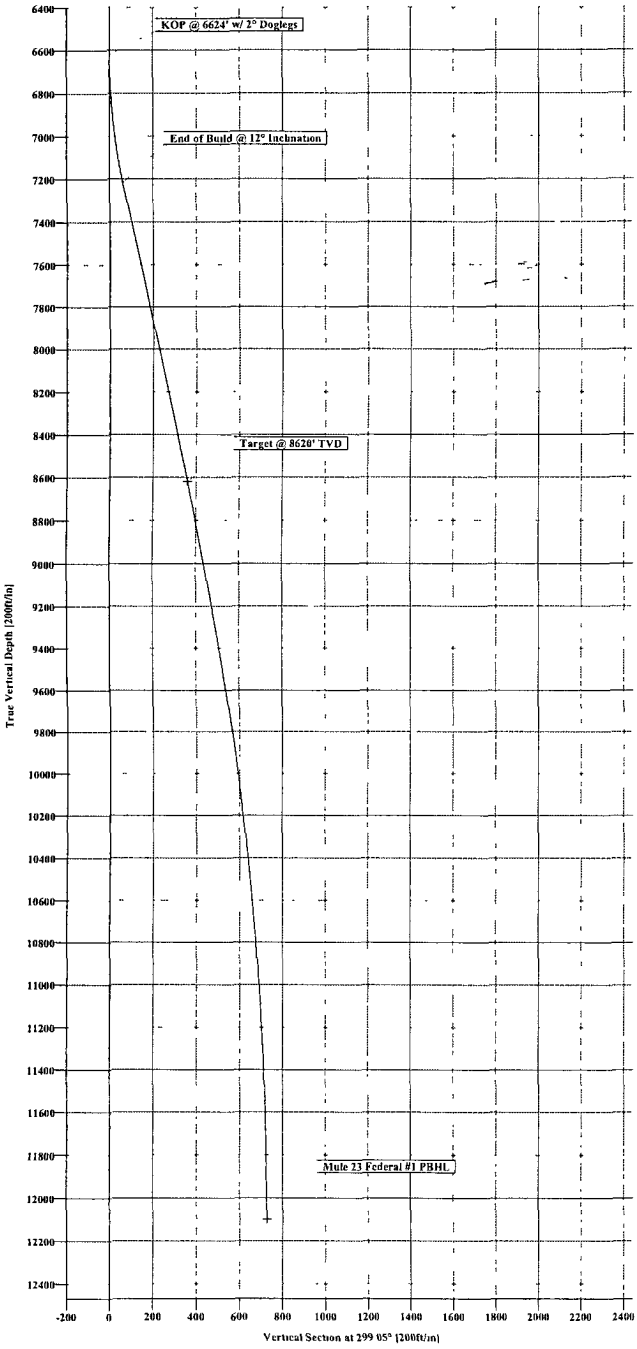
COMPANY DETAILS

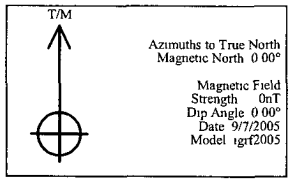
Marbob Energy
2208 W Main St
Artesia, New Mexico

Calculation Method	Minimum Curvature
Error System	Systematic Ellipse
Scan Method	Closest Approach 3D
Error Surface	Elliptical Conic
Warning Method	Error Ratio

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0 00	299 05	0.00	0 00	0 00	0 00	0 00	0 00	
2	6623 60	0 00	299 05	6623 60	0 00	0 00	0 00	0 00	0.00	
3	7223 60	12 00	299 05	7219 22	30 40	-54 72	2 00	299 05	62 60	
4	8655 67	12 00	299 05	8620.00	175 00	-315.00	0 00	0 00	360 35	Target @ 8620' TVD
5	12161 24	0 00	299 05	12100 00	352 63	-634 74	0 34	-180 00	726 11	Mule 23 Federal #1 PBHL

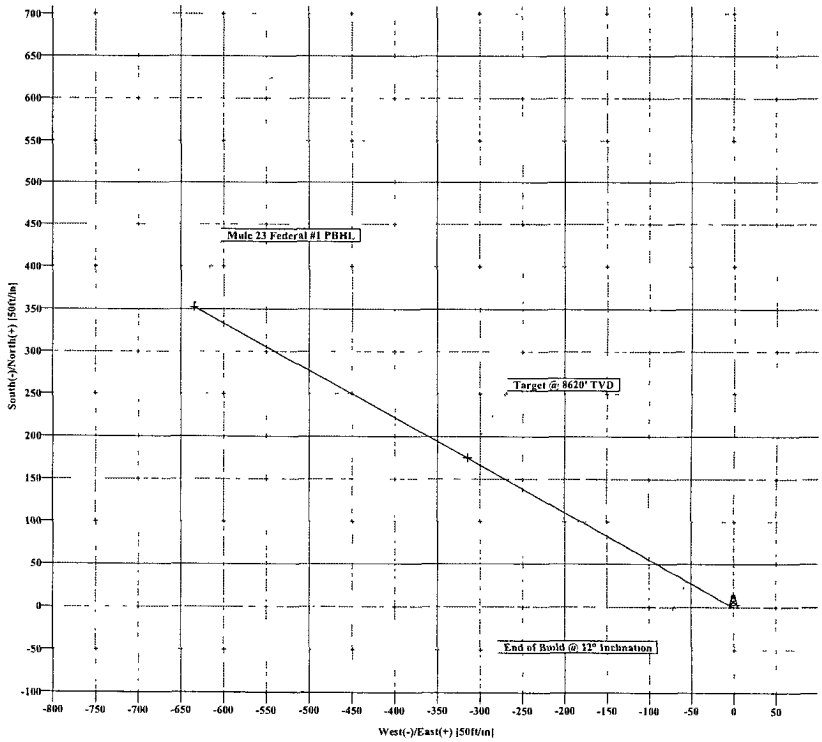




FIELD DETAILS

Mule
Eddy County, New Mexico

Geodetic System	US State Plane Coordinate System 1927
Ellipsoid	NAD27 (Clarke 1866)
Zone	New Mexico, Eastern Zone
Magnetic Model	igrf2005
System Datum	Mean Sea Level
Local North	True North



Plan: Plan #1 090705 (Mule 23 Fed #1) Original Hole
Created By: Ben McIntyre Date: 9/7/2005

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Mule 23 Federal #1
550' FSL & 2215' FWL, Unit N; BHL: 660' FSL & 1980' FWL
Section 23, T24S, R25E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Marbob Energy Corporation submits the following ten items of pertinent information in accordance with BLM requirements.

1. The geological surface formation is Permian.

2. The estimated tops of geologic markers are as follows:

Permian	surface		Atoka	11000
Capitan	424		Morrow	11600
Delaware	2300		TD	12200
Bone Spring	5600			
Wolfcamp	8700			
Strawn	10700			

3. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Capitan	424	Water
Delaware	2300	Oil
Bone Spring	5600	Oil
Wolfcamp	8700	Oil
Strawn	10700	Gas
Atoka	11000	Gas
Morrow	11600	Gas

We propose to drill 26 inch hole to 400 ft with fresh water, run 94 lb H-40 20 inch csg and set at 400 ft with 500 sx cmt, circ to surf; drl 12 1/4 inch hole to 2300 ft with Fresh Water, run 36 lb J-55 9 5/8 inch csg and set at 2300 ft with 450 sx cmt, circ to surface; drl 8 3/4 inch hole to 8770 ft with cut brine water, run 23 lb N80 P110 7 inch csg and set at 8770 ft with 750 sx cmt, TOC 2100'; drl 6 1/8 inch hole to 12200 ft with Brine Water, run 11.6 lb S95-P110 csg and set at 12200 ft with 250 sx cmt, TOC 8500'.

See COA

4. Proposed Casing Program:

Hole Size	Interval	OD Casing	Wt	Grade		New or Used	Collapse	Burst	Tension
26"	400'	20"	94#	H-40	STC	New	1.125	1.125	1.6
12 ¼"	2300'	9 5/8"	36#	J-55	STC	New	1.125	1.125	1.6
8 3/4"	8770'	7"	23#	N-80 P-110	LTC	New	1.125	1.125	1.6
6 1/8"	12200'	4 ½"	11.6#	S-95 P110	LTC	New	1.125	1.125	1.6

for the bottom 1500'

Additional Volume Needed.

Proposed Cement Program:

Casing	Cement		Class	Yield
Surf: 20"	500 SK	Circ. to Surf.	C	1.34
Int. 1: 9 5/8"	450 SK	Circ. To Surf.	C/Light	1.92/1.34
Int. 2: 7"	750 SK	TOC 2100'	C/Light	1.67/1.92
Prod: 4 ½"	250 SK	TOC 8500'	H	1.67

See COA

5. Pressure Control Equipment:

   See Exhibit #1. Marbob Proposes to nipple up on 20" casing with 2M system and test to 1000# with rig pumps, then nipple up on 9 5/8" casing with 5M system and test to 5000# with independent tester before drilling out of casing. Function Test Daily (Pipe Rams) Function Test on Trips (Blind Rams)

   ANTICIPATED BHP: 4800 psi

6. Mud Program: The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0 – 400'	Fresh Water	8.5	28	N.C.
400 – 2300'	Fresh Water	8.5	40-45	N.C.
2300 - 8770'	Cut Brine	8.6-9.4	28-36	N.C.
8770' – 12200'	Brine	10.0	28-36	10 CC

7. Auxiliary Equipment: Kelly Cock; Sub with full opening valve on floor; and drill pipe connections.

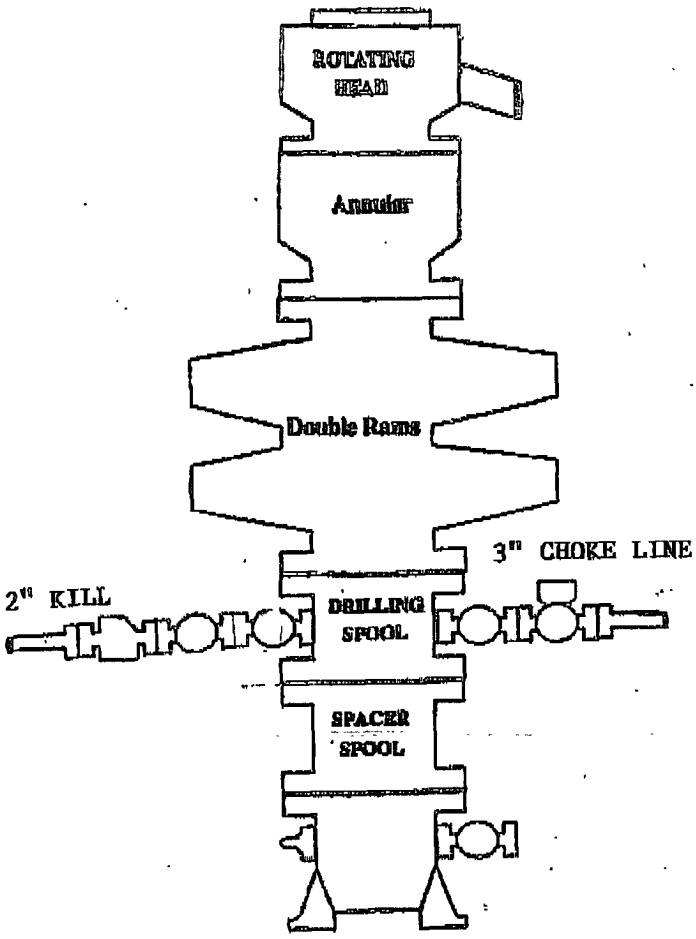
8. Testing, Logging and Coring Program:

   No drillstem tests are anticipated.
   The electric logging program will consist of Dual Laterolog Micro SFL, Spectral Density Dual Spaced Neutron Csng Log, and Depth Control Log.
   No conventional coring is anticipated.

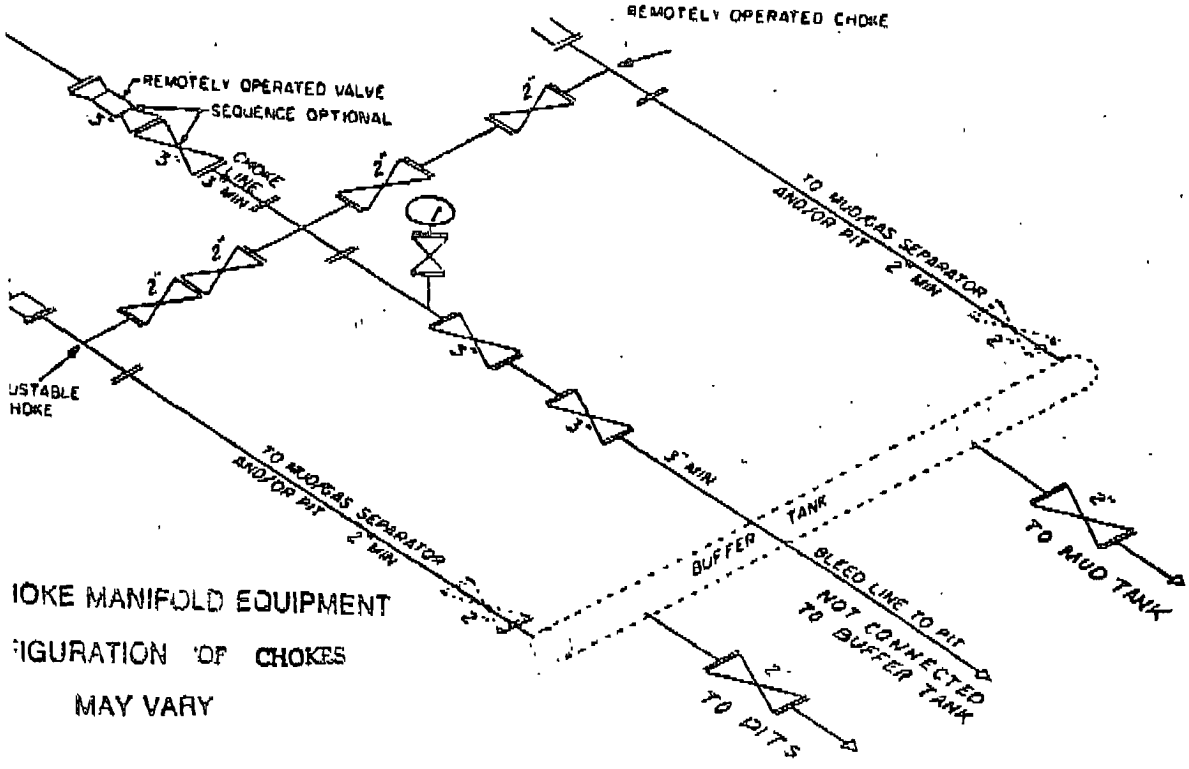
9. No abnormal pressures or temperatures are anticipated.

10. Anticipated starting date: As soon as possible after approval.

5M



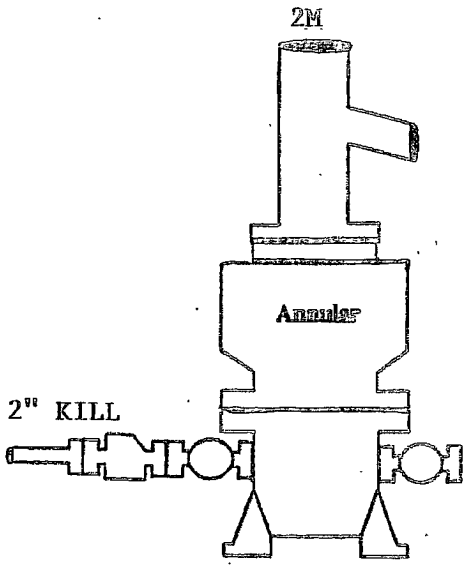
5 M
Choke Manifold

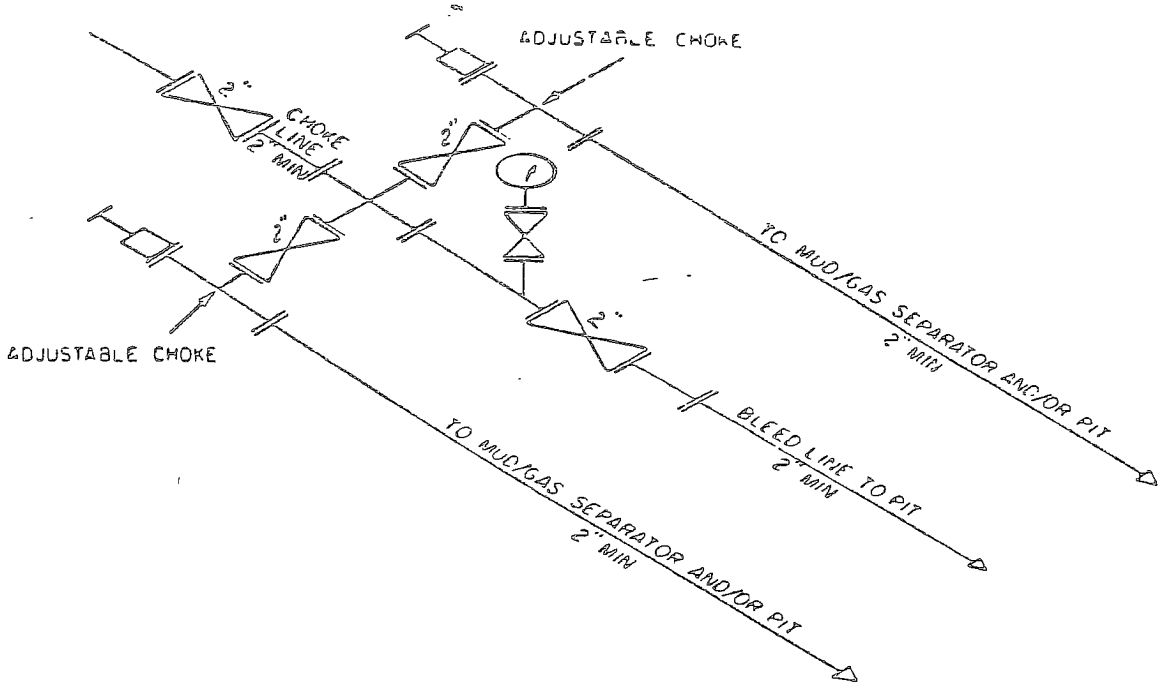


IOKE MANIFOLD EQUIPMENT
'IGURATION 'OF CHOKES
MAY VARY

Exhibit One

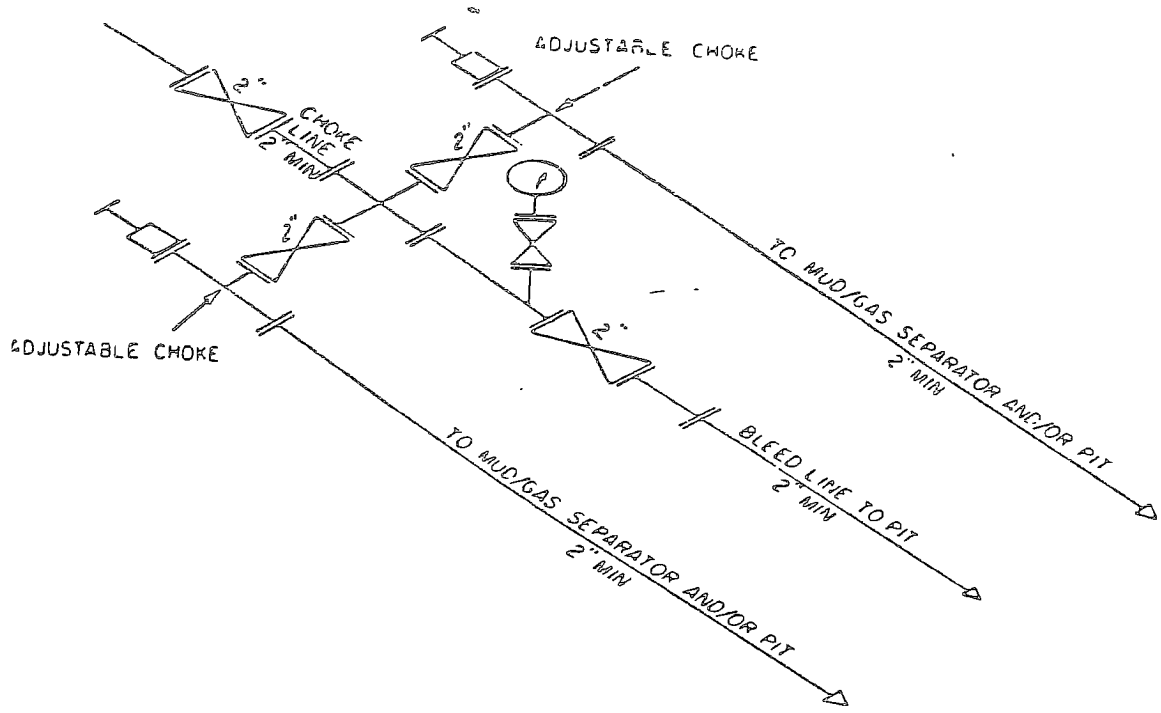
BOPE SCHEMATIC



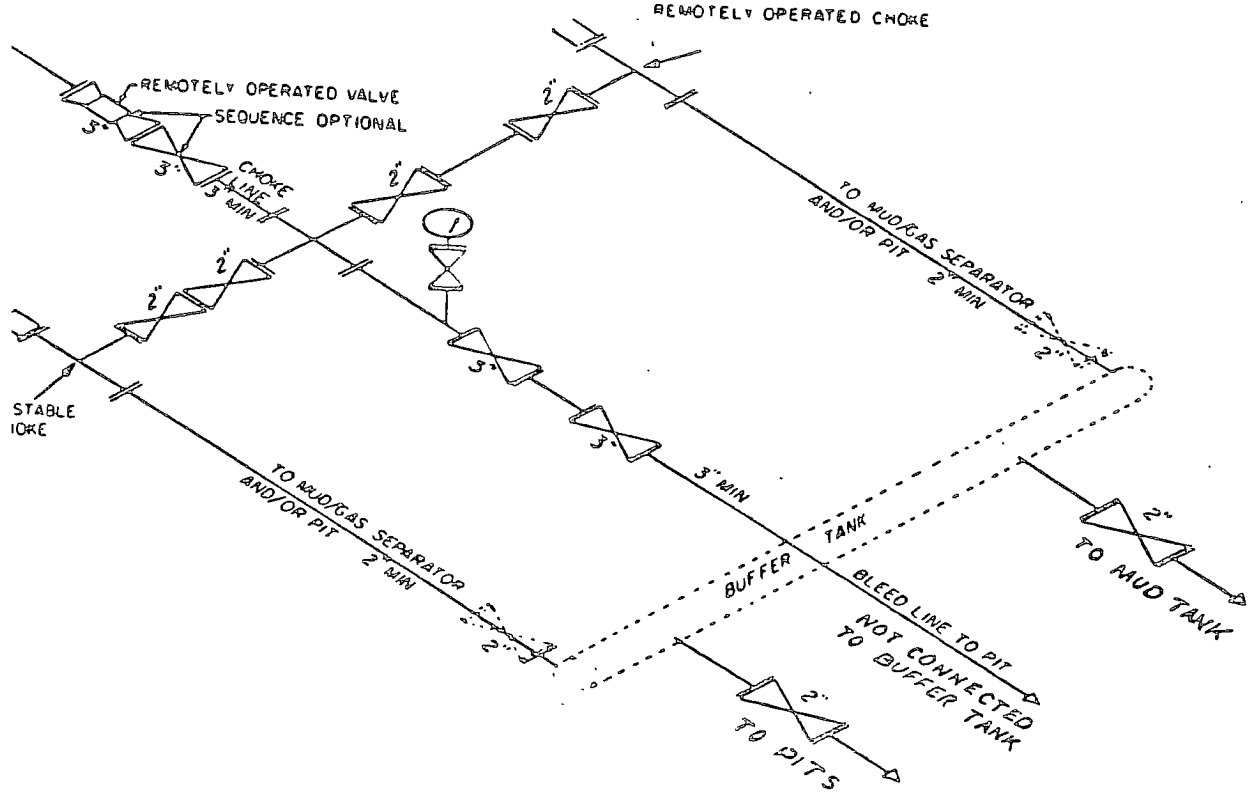


2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

Exhibit One



2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY



5M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES

Exhibit One

MARBOB ENERGY CORPORATION

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

A. The hazards and characteristics of hydrogen sulfide (H_2S).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

D. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

A. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

C. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

A. Well Control Equipment:

Flare line.

Choke manifold.

Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

B. Protective equipment for essential personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

C. H_2S detection and monitoring equipment:

2 - portable H_2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.

D. Visual warning systems:

Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

E. Mud Program:

The mud program has been designed to minimize the volume of H_2S circulated to the surface.

F. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

G. Communication:

Company vehicles equipped with cellular telephone and 2-way radio.

W A R N I N G

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

1. ***BEARDS OR CONTACT LENSES NOT ALLOWED***
2. ***HARD HATS REQUIRED***
3. ***SMOKING IN DESIGNATED AREAS ONLY***
4. ***BE WIND CONSCIOUS AT ALL TIMES***
5. ***CK WITH MARBOB FOREMAN AT MAIN OFFICE***

MARBOB ENERGY CORPORATION

1-505-748-3303

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Mule 23 Federal #1
550' FSL & 2215' FWL, Unit N; BHL: 660' FSL & 1980' FWL
Section 23, T24S, R25E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

Exhibit 2 is a portion of a topo map showing the well and roads in the vicinity of the proposed location. The proposed wellsite and the access route to the location are indicated in red on Exhibit 2.

DIRECTIONS:

From the intersection of U.S. Highway #62-180 & Means Road (Co Rd #772). Go west on Means Road approx. 2.4 miles. This location is approx. 50' south of the road.

2. PLANNED ACCESS ROAD:

No new road will be necessary.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. Marbob Energy Corporation proposes a collection facility, if well is productive, to be located on Mule 23 Federal #1 well pad.

4. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings will be disposed of in the lined pit.

B. Drilling fluids will be allowed to evaporate in the lined pit until the pit is dry.

C. Water produced during completion may be disposed into the lined reserve pit.

D. All trash and debris will be removed from the wellsite within 30 days after finishing drilling and/or completion operations. All waste material will be contained to prevent scattering by the wind.

5. WELLSITE LAYOUT:

A. Exhibit 3 shows the relative location and dimensions of the well pad, the pit.

B. The reserve pit will be lined with high quality plastic sheeting.

6. PLANS FOR RESTORATION:

A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing a condition as possible.

B. Reserve pit will be fenced until they have dried and been leveled.

C. All rehabitation and/or vegetation requirements of the BLM will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level within 90 days after abandonment.

7. SURFACE OWNERSHIP:

The well site and lease are located on Federal surface

A. The area around the well site is grassland and the top soil is sandy. The vegetation is native scrub grasses with abundant oakbrush, sagebrush, yucca, and prickly pear.

B. A Cultural Resources Examination has been requested and will be forwarded to your office in the near future.

8. OTHER INFORMATION:

A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

9. OPERATOR'S REPRESENTATIVE:

A. Through A.P.D. Approval:

Ross Duncan, Landman
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505)513-2544

B. Through Drilling Operations

Sheryl Baker, Drilling Supervisor
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505)748-5489

10. CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Marbob Energy Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Marbob Energy Corporation

7/17/07
Date

Ross Duncan
Land Department

Conditions of Approval
Cave and Karst

Mule 23 Federal No.1
BLM Office Lease No. NM-31636
Marbob Energy Corporation (RESUBMITTAL)

Cave/Karst Surface Mitigation
The following stipulations will be applied to minimize impacts during construction, drilling and production.

Berming:
Any tank batteries will be constructed and bermed large enough to contain any spills that may occur.

Bermed areas will be lined with rip-stop padding to prevent tears or punctures in liners and lined with a permanent 20 mil plastic liner.

Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.

Cave/Karst Subsurface Mitigation
The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Rotary drilling techniques in cave or karst areas will include the use of fresh water as a circulating medium in zones where caves or karst features are expected. Use depth to the deepest expected fresh water as listed in the geologist report.

Fluorescent Dyes:
Nontoxic Fluorescent dyes will be added when the hole is spudded and be circulated to the bottom of the karst layers. These dyes will track the fluids if lost circulation occurs. Arrangements need to be made to have BLM witness the two dyes being injected prior to spudding the hole.

Fluorescein Dye (Acid Yellow 73):
Yellow Green (Acid Yellow 73) Fluorescein dye (32 ounces) will be in added to the drilling fluid and preflush during the drilling of the first 2500 feet of the well (to the base of the Capitan Massif).

Fluorescent Dye Orange (Eosin Y):

Orange (Eosin Y) Fluorescent dye (32 ounces) will be in added to the drilling fluid and preflush during the drilling of the first 2500 feet of the well (to the base of the Capitan Massif).

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone as identified in the geologic report.

Casing:
All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run to American Petroleum Institute and BLM standards.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported.

Regardless of the type of drilling machinery used, if a void (bit drops) of four feet or more and circulation losses greater then 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the BLM will be notified by the operator. The BLM will assess the consequences of the situation and work with operator on corrective actions to resolve the problem.

Delayed Blasting:
Any blasting will be a phased and time delayed.

Abandonment Cementing:
Upon well abandonment the well bore will be cemented completely from 100 feet below the bottom of the cave bearing zone to the surface.

Pressure Tests:
Annual pressure tests will be performed by the Operator on all casing annuli. If the test results indicated a casing failure, remedial actions approved by the BLM will be undertaken to correct the problem.

Differential Shut-off Systems:
A leak detection system and differential shut off systems will be installed for pipelines and tanks used in production or drilling.

Record Keeping:
The Operator will track customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence of absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:	**Marbob Energy Corp.**
Well Name & No.	**Mule 23 Federal # 1**
Location:	**550'FSL, 2215'FWL, SEC23, T24S, R25E, Eddy County, NM**
BHL:	**660'FSL, 1980'FWL, SEC23, T24S, R25E, Eddy County, NM**
Lease:	**NM-31636**

I. DRILLING OPERATIONS REQUIREMENTS:

A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:

1. Spudding well
2. Setting and/or Cementing of all casing strings
3. BOPE tests

- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822

B. A Hydrogen Sulfide (H2S) Drilling Plan is N/A.

C. 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.

D. If floor controls are required, (3M or Greater) 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 are located, this does not include the dog house or stairway area.

II. CASING:

A. The **20** inch surface casing shall be set at **400 feet** and cemented to the surface.

1. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
2. Wait on cement (WOC) time for a primary cement job will be a minimum of 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
4. If cement falls back, remedial action will be done prior to drilling out that string.

B. The minimum required fill of cement behind the **9.625** inch intermediate casing is circulating cement to the surface. If cement does not circulate see A.1 thru 4. This casing will be set approximately 50 feet above the Delaware sand @ approximately 2300'.

C. The minimum required fill of cement behind the 7 inch intermediate casing is circulating cement to 200 feet above the shoe of the 9.625 inch casing, unless circulation is lost while drilling the well bore.for the 9.625 inch casing, in which case cement will be circulated to 200 feet above the most shallow lost circulation zone. If cement does not circulate see A.1 thru 4

C. The minimum required fill of cement behind the **4.5** inch production casing is circulating cement to 270 feet above the shoe of the _7 inch_ intermediate casing.

D. If hardband drill pipe is rotated inside casing; returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool I joints of the drill pipe will be installed prior to continuing drilling operations.

III. PRESSURE CONTROL:

A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2.

B. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

1. The tests shall be done by an independent service company.
2. The results of the test shall be reported to the appropriate BLM office.
3. 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.
4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53, section 17. 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.
5. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **800** psi with the rig pumps is approved.
6. The formation below the shoe of the 7 inch casing will be tested as per Onshore Order # 2.III.B.1.i.

IV. Hazards:

1. Our geologist has indicated that there is high potential for Cave / Karst features.
2. Our geologist has indicated that there is potential for lost circulation in the Delaware, bone Spring and Capitan Reef.
3. Our geologist has indicated that there is potential for abnormal pressure in the Wolfcamp formation and the Pennsylvanian system.

Engineering can be reached at 505-706-2779 for variances.

FWright 8/13/07