

E-06-37

OCD-ARTESIA

Form 3160-3
(April 2004)

RECEIVED

JUN 21 2006

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 20075. Lease Serial No.
LC NM 068712

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No. 35816
BOBCAT FED COM #19. API Well No.
30-015-3499310. Field and Pool, or Exploratory
Empire Morrow, Sour L

11. Sec., T. R. M. or Blk. and Survey or Area

SEC. 11, T17S-R28E

12. County or Parish
EDDY13. State
NM1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone2. Name of Operator
MURCHISON OIL & GAS, INC.3a. Address 1100 MIRA VISTA BLVD.
PLANO, TX. 75093-46983b. Phone No. (include area code)
972-931-0700

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface 107' FSL & 704' FWL

At proposed prod. zone 810' FSL & FWL

SUBJECT TO LIKE WLM
APPROVAL BY STATE14. Distance in miles and direction from nearest town or post office*
15 MILES EAST OF ARTESIA, NM.15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any) 810' BHL16. No. of acres in lease
16017. Spacing Unit dedicated to this well
320 AC.18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. N/A19. Proposed Depth
10500'20. BLM/BIA Bond No. on file
NM 216321. Elevations (Show whether DF, KDB, RT, GL, etc.)
367822. Approximate date work will start*
05/01/200623. Estimated duration
30 DAYS

24. Attachments

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

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

25. Signature: *Michael S. Daugherty*
Title: VICE PRESIDENT OPERATIONSName (Printed/Typed)
MICHAEL S. DAUGHERTYDate
02/14/2006Approved by (Signature) */s/ James Stovall*Name (Printed/Typed) */s/ James Stovall*

Date JUN 16 2006

Title: *James Stovall*
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.

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)

ROSWELL CONTROLLED WATER BASIN

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

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

APPROVAL FOR 1 YEAR

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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised June 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 74400	³ Pool Name Empire, Morrow, South
⁴ Property Code	⁵ Property Name BOBCAT FEDERAL	⁶ Well Number 1
⁷ OGRID No. 015363	⁸ Operator Name MURCHISON OIL & GAS, INC.	⁹ Elevation 3678

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	11	17-S	28-E		107	SOUTH	704	WEST	EDDY

¹¹ 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
M	11	17-S	28-E		810	SOUTH	810	WEST	EDDY

¹² Dedicated Acre 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
-------------------------------------	-------------------------------	----------------------------------	-------------------------

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.

	<p>¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by</p> <p><i>Michael S. Daugherty</i> 3/13/2006 Signature Date</p> <p>MICHAEL S. DAUGHERTY Printed Name</p> <p>¹⁸ 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 supervision, and that the same is true and correct to the best of my belief.</p> <p>DECEMBER 3, 2005</p> <p>Date of Survey</p> <p><i>Dan R. Reddy</i> Signature and Seal of Professional Surveyor</p> <p><i>Dan R. Reddy</i> Professional Engineer 5412</p> <p>DAN R. REDDY NM PE&PS NO. 5412</p>
--	--



VIA FEDERAL EXPRESS

February 14, 2006

United States Department of the Interior
Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220

**Re: Application for Permit to Drill
Murchison Oil & Gas, Inc.
Bobcat Federal Com #1
Eddy County, New Mexico
Lease No. NM-068712**

Gentlemen:

Murchison Oil & Gas, Inc. "MOGI" respectfully requests permission to drill our Bobcat Federal Com #1 located on the surface 107' FSL and 704' FWL and a bottom hole location "BHL" of 810' FSL & FWL of Section 11, T17S, R28E, Eddy County, New Mexico, Federal Lease No. NM-068712. The proposed well will be drilled to a TD of approximately 10500' (TVD). A direction drilling plan has been prepared and is attached. The location and work area have been staked. It is approximately 15 miles East of Artesia, NM.

In accordance with requirements stipulated in Federal Onshore Oil and Gas Order No. 1 under 43 CFR 3162.1, our Application for Permission to Drill and supporting evidence is hereby submitted.

I. Application for Permit to Drill:

1. Form 3160-3, Application for Permit to Drill.
2. Form C-102 Location and Acreage Dedication Plat certified by Dan Reddy Registered Land Surveyor No. 5412 in the State of New Mexico, dated December 3, 2005.
3. The elevation of the unprepared ground is 3678 feet above sea level.
4. The geologic name of the surface formation is Permian Rustler.
5. Rotary drilling equipment will be utilized to drill the well to TD 10500' (TVD), and run casing. This equipment will then be rigged down and the well will be completed with a pulling unit.

6. Proposed total depth is 10500' TVD.
7. Estimated tops of important geologic markers. (KDB EST @ 3695')

Queen	1396' TVD
Grayburg	1650' TVD
San Andres	2191' TVD
Glorieta	3575' TVD
Yeso	3643' TVD
Abo	5543' TVD
Wolfcamp	6709' TVD
Cisco	7919' TVD
Canyon	8544' TVD
Strawn	9135' TVD
Atoka	9605' TVD
Morrow "A"	10091' TVD
Morrow "C"	10161' TVD
Base Penn.	10203' TVD
Total Depth	10500'

8. Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

Primary Objective: Morrow 10091' TVD

Secondary Objectives: Atoka 9605' TVD

9. The proposed casing program is as follows:

Surface: 13-3/8" OD 48# H40 ST&C casing set at 250'

1st Intermediate: 9-5/8" OD 47# N80 ST&C casing from 0 to 2200'

Production Casing: 5-1/2" OD 17# S-95 & L-80 LT&C from surface to 10500'

10. Casing setting depth and cementing program:

- A. 13-3/8" surface casing set at 200', or the top of the Rustler Anhydrite, in 17-1/2" hole. Circulate cement with 225 sxs of Class C cement with additives.

If cement does not circulate, a temperature survey will be run to find the TOC and then finish cementing to surface through 1" using Class C with 2% CaCl₂.

- B. 9-5/8" 1st intermediate casing set at 2200' in 12-1/4" hole. Circulate cement with 800 sxs Class C with additives.

If hole conditions dictate, a DV tool may be run to ensure that the intermediate string is cemented to surface.

If cement does not circulate, a temperature survey will be run to find the TOC and then finish cementing to surface through 1" using Class C with 2% CaCl_2 .

- C. 5-1/2" Production Casing will be set if warranted from surface to TD in a 8-3/4" hole. Cement with 600 sx of Class "H" with additives.

11. Pressure Control Equipment

0' – 250'	None
250' – 2200'	13-3/8" 3000# ram type preventers with one set blind rams and one set pipe rams.
2200' – 10500'	11" 5000# ram type preventers with one set blind rams and one set pipe rams and a 3000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. See attached Sketch of BOP Equipment.

A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

After setting the 9-5/8" casing, the blowout preventers and related control equipment shall be pressure tested to 5000 psi and 3000 psi respectively. Any equipment failing to test satisfactorily shall be repaired or replaced. Results of the BOP test will be recorded in the Driller's Log.

The BOP's will be maintained ready for use until drilling operations are completed.

BOP drills will be conducted as necessary to assure that equipment is operational and each crew is properly trained to carry out emergency duties.

Accumulator shall maintain a pressure capacity reserve at all times to provide for the close-open-close sequence of the blind and pipe rams of the hydraulic preventers.

12. Mud Program:

0 – 250'	Fresh water/native mud. Wt. 8.4 ppg, vis 32-34 sec, Lime for pH control. Paper for seepage. Lost circulation may be encountered.
250' – 2200'	Fresh water 8.4 ppg, vis 28-29 sec. Add 10# brine as make-up to avoid excessive washouts in salt stringers. Caustic for pH control. Paper for seepage. Lost circulation may be encountered.
2200' – 7500'	Fresh water. Wt. 8.4 ppg, vis 28-29 sec, caustic for pH control. Paper for seepage.
7500' – 9600'	Cut brine. Wt. 9.2 – 9.4 ppg, vis 28-29 sec, caustic for pH control.
9600' – 10500'	Mud up with an XCD Polymer mud system with the following characteristics: Wt. 10.0, Vis 32-40 sec, WL 6-8cc.

Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until the production casing is run and cemented. Monitoring equipment shall consist of the following:

- 1) A recording pit level indicator.
- 2) A pit volume totalizer.
- 3) A flowline sensor.


13. Testing, Logging and Coring Program:

- A. Testing program: None.
- B. Mud logging program: Two man unit from 2200' to TD.
- C. Electric logging program: CNL/LDT/CAL/GR, DLL/CAL/GR.
- D. Coring program: Possible sidewall rotary cores.

14. No abnormal temperatures, or H₂S gas are anticipated. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

15. Anticipated starting date is May 1, 2006. It should take approximately 35 days to drill the well and another 10 days to complete.
16. A statement accepting responsibility for operations is attached.
17. The Multi-Point Surface Use & Operation Plan is attached.
18. If the Bureau of Land Management needs additional information to evaluate this application, please advise.

Very truly yours,


Michael S. Daugherty
Vice President, Operations

MSD/cb/BobcatFedCom#1-BLM-APTD

Attachments

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MURCHISON OIL & GAS, INC.
BOBCAT FEDERAL COM #1
EDDY COUNTY, NEW MEXICO
LEASE NO. NM-068712

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to identify the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal may be made of the environmental effects associated with the operation.

The well, and work area have been staked by a registered New Mexico land surveyor. Daniel Boone in Carlsbad, NM has been engaged to make an archaeological reconnaissance of the work area. Their findings concerning cultural resources will be reported to the Bureau of Land Management.

1. Existing Roads

A copy of a Access Road Easement Plat is attached showing the proposed location. The well location is spotted on this map, which also shows the existing road system.

2. Planned Access Road

- A. An existing lease access road will be used to gain access to location. About 475' feet of new lease road will have to be constructed.
- B. Surfacing material: Six inches of caliche and water, compacted and graded.
- C. Maximum Grade: Less than 3%
- D. Turnouts: None needed.
- E. Drainage Design: N/A.
- F. Culverts: None needed.
- G. Cuts and Fills: Leveling the location will require minimal cuts or fills.
- H. Gates or Cattleguards: None required.

3. Existing wells within a one mile radius of the proposed development well are shown on the attached map.
4. Location of Existing and/or Proposed Facilities
 - A. If the well is productive, production facilities will be constructed on the well pad. The facility will consist of a stack pack, one 300 bbl oil tank and one 300 bbl fiberglass water tank. All permanent above ground facilities will be painted in accordance with the BLM's painting guidelines simulating the color of sandstone brown.
 - B. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to and a site security plan will be submitted for the Mustang Fed Com #1 tank battery. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.
5. Location and Type of Water Supply

Fresh water and brine water will be used to drill this well. It will be purchased from a supply near the well's location and transported to the well site.
6. Source of Construction Materials

Caliche for surfacing the well pad will be obtained from a Federal pit located in Eddy County, New Mexico.
7. Method of Handling Waste Disposal
 - A. Drill Cuttings will be disposed of in drilling pits. A NMOCD Form C-144 Pit Permit which has been submitted to the NMOCD for approval is attached further describing reserve pit construction and location of ground water, waterways and water wells.
 - B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
 - C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

- D. Current laws and regulations pertaining to the disposal of human waste will be complied with.
 - E. Trash, waste paper, garbage and junk will be collected in steel trash bins and removed after drilling and completion operations are completed. All waste material will be contained to prevent scattering by the wind.
 - F. All trash and debris will be removed from the wellsite within 30 days after finishing drilling and/or completion operations.
8. Ancillary Facilities
- A. None needed.
9. Wellsite Layout
- A. The location and dimensions of the well pad, mud pits, reserve pit and location of major rig components are shown on the attached well site layout sketch. The V-door will be to the East and the reserve pit located to the North.
 - B. Leveling of the wellsite will be required with minimal cuts or fills anticipated.
 - C. The pad and pit area has been staked and flagged.
10. Plans for Restoration of the Surface
- A. After completion of drilling and/or completion operations, all equipment and other materials not needed for operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing condition as possible.
 - B. Any unguarded pits containing fluids will be fenced until they are filled.
 - C. After abandonment of the well, surface restoration will be in accordance with the land owner. This will be accomplished as expeditiously as possible.

11. Other Information

- A. Topography: The location is rolling hills. Ground Level elevation is 3678 feet.
- B. Soil: Sandy clay loams.
- C. Flora and Fauna: The vegetative cover is generally sparse consisting of mesquite, yucca, shinnery oak, sandsage and perennial native range grasses. Wildlife in the area is also sparse consisting of coyotes, rabbits, rodents, reptiles, dove and quail.
- D. Ponds and Streams: None.
- E. Residences and Other Structures: There are no occupied dwellings within a 1 mile radius of the location.
- F. Archaeological, Historical and Cultural Sites: An Archaeological Consultant who is acceptable to the BLM will be engaged to make an archaeological reconnaissance of the work area.
- G. Land Use: Cattle ranching.
- H. Surface Ownership: The surface is public land leased by Bogle, Ltd., P.O. Box 460, Dexter, NM. 88230. They will be notified of our intention to drill prior to any activity.

Upon completion of the well, the reserve pit and burn pit will be closed in accordance with the New Mexico Oil Conservation Division Guidelines.

All garbage and debris left on site will be removed within 30 days of the final completion. The well site, if a producer, will be maintained and kept clean of all trash and litter which detracts from the surrounding environment. Equipment will be maintained in accordance with good operating practice.

After the wellsite is cleaned and pits and sumps closed, any obstruction to the natural drainage will be corrected by ditching or terracing. All disturbed areas, including any access road no longer needed, will be ripped. Those areas will be reseeded with grass if, in the opinion of the land owner, it is required.

12. Operator's Representatives


The Field representatives responsible for assuring compliance with the approved surface use and operations plan are as follows:

Michael S. Daugherty
1100 Mira Vista Blvd.
Plano, TX. 75093-4698
Office Phone: (972) 931-0700
Home Phone: (972) 618-0792

Randy Ford
415 W. Wall St., Ste. 1700
Midland, TX. 79701
Office Phone: (432) 682-0440
Cell Phone: (432) 559-2222

13. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site 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 MOGI and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.


Michael S. Daugherty

Vice President, Operations
Murchison Oil & Gas, Inc.

2/14/2006

Date

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220

Statement Accepting Responsibility for Operations

Operator Name: MURCHISON OIL & GAS, INC.
Street or Box: 1100 MIRA VISTA BLVD.
City, State: PLANO, TX.
Zip Code: 75093-4698

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

Lease No.: NM-068712


Legal Description of Land: SW/4
SECTION 11, T17S, R28E

Formation (s) (if applicable): FROM THE SURFACE DOWN TO 10500'

Bond Coverage (State if individually bonded or another's bond):
PERSONAL STATEWIDE BOND

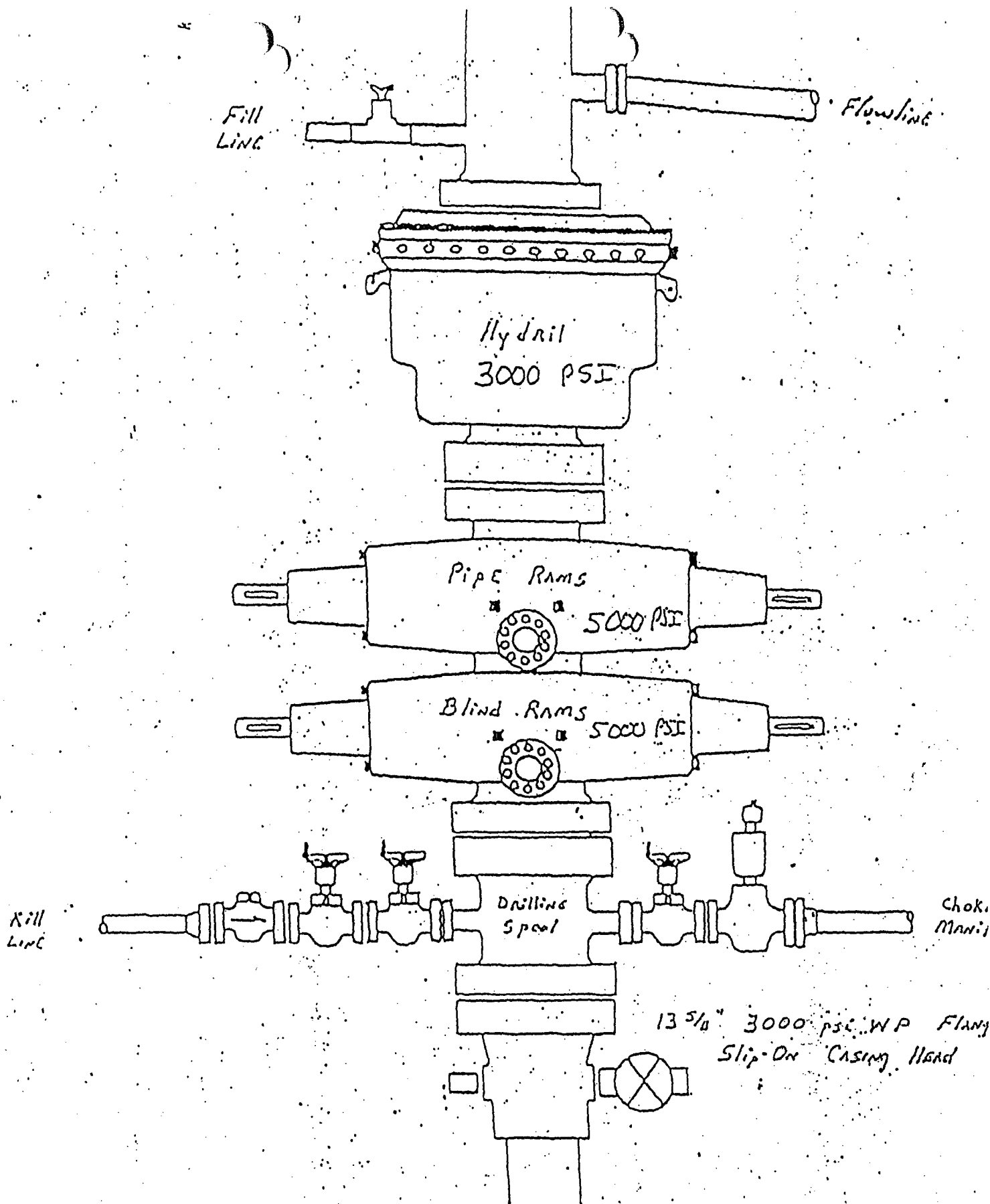
BLM Bond File No.: NM2163

Authorized Signature: _____

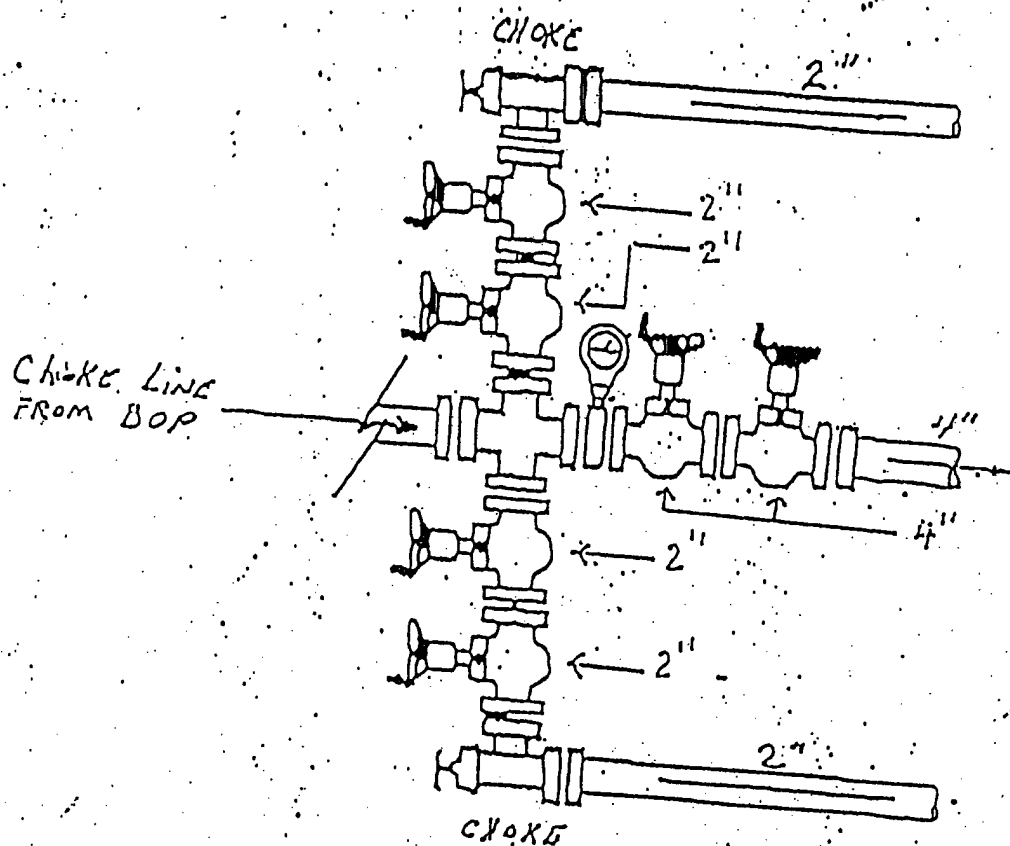

MURCHISON OIL & GAS, INC.

Title: MICHAEL S. DAUGHERTY
VICE PRESIDENT OPERATIONS

Date: 2/14/2006



MURCHISON OIL & GAS, INC.
BOBCAT FEDERAL COM #1
107' FSL & 704' FWL
EDDY CO., NM.



MURCHISON OIL & GAS, INC.
 BOBCAT FEDERAL COM #1
 107' FSL & 704' FWL
 EDDY CO., NM.

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220

Statement Accepting Responsibility for Operations

Operator Name: MURCHISON OIL & GAS, INC.
Street or Box: 1100 MIRA VISTA BLVD.
City, State: PLANO, TX.
Zip Code: 75093-4698

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

Lease No.: NM LC-068712
Legal Description of Land: SW/4
SECTION 11, T17S, R28E

Lease No.: NM-012898
Legal Description of Land: NW/4
SECTION 11, T17S, R28E

Formation (s) (if applicable): Yeso, Wolfcamp, Strawn, Atoka & Morrow

Bond Coverage (State if individually bonded or another's bond):
PERSONAL STATEWIDE BOND

BLM Bond File No.: NM2163

Authorized Signature: _____


MURCHISON OIL & GAS, INC.

Title: MICHAEL S. DAUGHERTY
VICE PRESIDENT OPERATIONS

Date: 3/13/2006

Murchison Oil & Gas

Bobcat Federal #1
Sec.11, T17S, R28E
Eddy Co. NM
Plan 1_02-02-2006

PATHFINDER ENERGY SERVICES

COMPANY DETAILS
Murchison Oil & Gas

Calculation Method: Minimum Curvature
Error System: Systematic Ellipsoid
Scan Method: Closest Approach 3D
Error Series: Ellipsoid Conic
Warning Method: Error Ratio

WELL DETAILS

Name	-N/S	-E/W	Northing	Easting	Latitude	Longitude	Slor
Bobcat Federal #1	0.00	0.00	364158.69	487247.47	32°00'04.000"N	104°28'15.534"W	N/A

SECTION DETAILS

Sec	MD	Inc	Adj	TVD	-N/S	-E/W	DLg	TFac	V.Soc	Target
1	0.00	0.00	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2400.00	0.00	8.57	2400.00	0.00	0.00	0.00	8.57	0.00	0.00
3	2733.33	10.00	8.57	2733.33	28.69	4.32	3.00	8.57	29.02	29.02
4	6493.30	10.00	8.57	6493.30	674.51	101.82	0.00	180.00	710.34	710.34
5	6828.64	0.00	0.00	6828.64	703.00	106.00	0.00	93.84	710.35	710.35
6	10160.50	0.00	93.84	10160.50	703.00	106.00	0.00	93.84	710.35	710.35

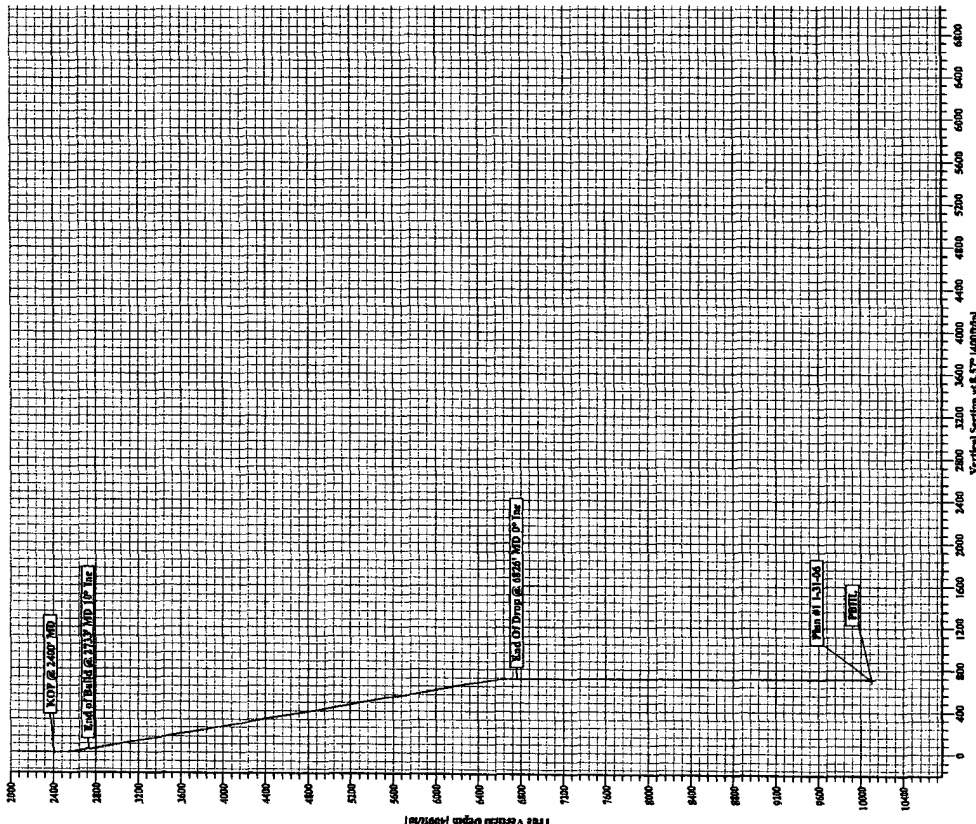
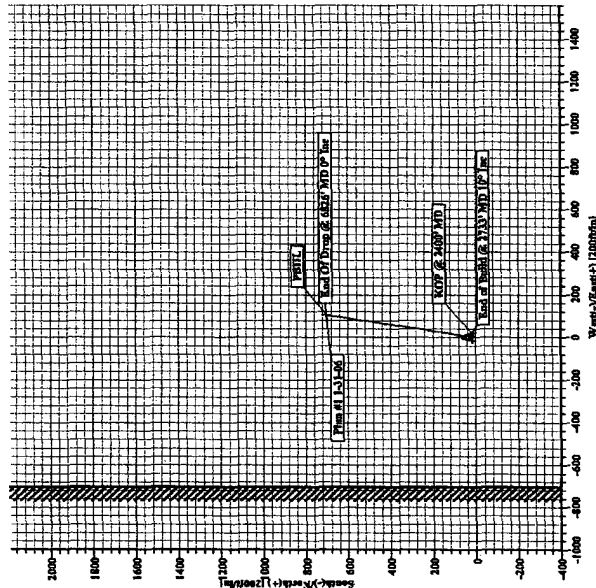
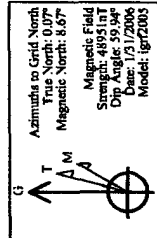
WELL PATH DETAILS

Bobcat Federal #1
Rig: Mean Sea Level 0.00ft
Ref Datum: Origin
V.Section -N/S
Angle -E/W
8.57°

ANNOTATIONS

No.	TVD	MD	Annotation
1	2400.00	2400.00	KOP @ 2400' MD
2	2733.33	2733.33	End of Curve @ 2733' MD 10° Inc
3	6762.50	6828.64	End of Drop @ 6762' MD 0° Inc

SITE DETAILS
Bobcat Federal #1
S11; T17S; R28E
Ground Level: 3678.00
Positional Uncertainty: 0.00
Convergence: -0.07



LEGEND

Plan #1 1-31-06

PathFinder

Planning Report - Geographic

Company: Murchison Oil & Gas	Date: 2/3/2006	Time: 08:38:39	Page: 1
Field: Bobcat	Co-ordinate(NE) Reference: Site: Bobcat Federal #11, Grid North		
Site: Bobcat Federal #11	Vertical (TVD) Reference: System: Mean Sea Level		
Well: Bobcat Federal #1	Section (VS) Reference: Well (0.00N,0.00E,8.57Azi)		
Wellpath: Bobcat Federal #1	Plan:	Plan #1 1-31-06	

Field: Bobcat S,11; T17S; R28E Eddy County NM USA	Map Zone: New Mexico, Eastern Zone
Map System: US State Plane Coordinate System 1927	Coordinate System: Site Centre
Geo Datum: NAD27 (Clarke 1866)	Geomagnetic Model: igrf2005
Sys Datum: Mean Sea Level	

Site: Bobcat Federal #11

S11; T17S; R28E

Site Position:	Northing:	ft	Latitude:
From: Lease Line	Easting:	ft	Longitude:
Position Uncertainty: 0.00 ft			North Reference: Grid
Ground Level: 3678.00 ft			Grid Convergence: -0.07 deg

Well: Bobcat Federal #1

Slot Name:

Well Position:	+N/-S	0.00 ft	Northing:	364158.69 ft	Latitude:	32 0 4.000 N
	+E/-W	0.00 ft	Easting :	457347.47 ft	Longitude:	104 28 15.334 W
Position Uncertainty:		0.00 ft				

Wellpath: Bobcat Federal #1

Current Datum: Mean Sea Level	Height	0.00 ft	Drilled From: Surface
Magnetic Data: 1/31/2006			Tie-on Depth: 0.00 ft
Field Strength: 48951 nT			Above System Datum: Mean Sea Level
Vertical Section: Depth From (TVD)	+N/-S		Declination: 8.59 deg
	ft		Mag Dip Angle: 59.94 deg
			+E/-W
			ft
			Direction
			deg
0.00	0.00	0.00	8.57

Plan: Plan #1 1-31-06

Date Composed: 1/31/2006

Principal: Yes

Version:

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	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2400.00	0.00	8.57	2400.00	0.00	0.00	0.00	0.00	0.00	8.57	
2733.33	10.00	8.57	2731.64	28.69	4.32	3.00	3.00	0.00	8.57	
6493.30	10.00	8.57	6434.49	674.31	101.62	0.00	0.00	0.00	0.00	
6826.64	0.00	0.00	6766.13	703.00	105.94	3.00	-3.00	-2.57	180.00	
10160.50	0.00	93.84	10100.00	703.00	106.00	0.00	0.00	2.81	93.84	PBHL

Section 1 : Start Hold

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	TFO deg
0.00	0.00	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2400.00	0.00	8.57	2400.00	0.00	0.00	0.00	0.00	0.00	0.00	8.57

Section 2 : Start Build 3.00

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	TFO deg
2600.00	6.00	8.57	2599.63	10.35	1.56	10.46	3.00	3.00	0.00	0.00
2733.00	9.99	8.57	2731.32	28.63	4.32	28.96	3.00	3.00	0.00	0.00
2733.33	10.00	8.57	2731.64	28.69	4.32	29.02	3.00	3.00	0.00	0.00

Section 3 : Start Hold

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	TFO deg
2800.00	10.00	8.57	2797.30	40.14	6.05	40.59	0.00	0.00	0.00	0.00
3000.00	10.00	8.57	2994.26	74.48	11.22	75.32	0.00	0.00	0.00	0.00
3200.00	10.00	8.57	3191.22	108.82	16.40	110.05	0.00	0.00	0.00	0.00

PathFinder

Planning Report - Geographic

Company: Murchison Oil & Gas
 Field: Bobcat
 Site: Bobcat Federal #11
 Well: Bobcat Federal #1
 Wellpath: Bobcat Federal #1

Date: 2/3/2006 Time: 08:38:39 Page: 2
 Co-ordinate(NE) Reference: Site: Bobcat Federal #11, Grid North
 Vertical (TVD) Reference: System: Mean Sea Level
 Section (VS) Reference: Well (0.00N,0.00E,8.57Azi)
 Plan: Plan #1 1-31-06

Section 3 : Start Hold

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	TFO deg
3400.00	10.00	8.57	3388.18	143.16	21.57	144.78	0.00	0.00	0.00	0.00
3600.00	10.00	8.57	3585.14	177.51	26.75	179.51	0.00	0.00	0.00	0.00
3800.00	10.00	8.57	3782.11	211.85	31.93	214.24	0.00	0.00	0.00	0.00
4000.00	10.00	8.57	3979.07	246.19	37.10	248.97	0.00	0.00	0.00	0.00
4200.00	10.00	8.57	4176.03	280.53	42.28	283.70	0.00	0.00	0.00	0.00
4400.00	10.00	8.57	4372.99	314.87	47.45	318.43	0.00	0.00	0.00	0.00
4600.00	10.00	8.57	4569.95	349.22	52.63	353.16	0.00	0.00	0.00	0.00
4800.00	10.00	8.57	4766.91	383.56	57.80	387.89	0.00	0.00	0.00	0.00
5000.00	10.00	8.57	4963.87	417.90	62.98	422.62	0.00	0.00	0.00	0.00
5200.00	10.00	8.57	5160.84	452.24	68.15	457.35	0.00	0.00	0.00	0.00
5400.00	10.00	8.57	5357.80	486.58	73.33	492.08	0.00	0.00	0.00	0.00
5600.00	10.00	8.57	5554.76	520.92	78.50	526.81	0.00	0.00	0.00	0.00
5800.00	10.00	8.57	5751.72	555.27	83.68	561.54	0.00	0.00	0.00	0.00
6000.00	10.00	8.57	5948.68	589.61	88.85	596.27	0.00	0.00	0.00	0.00
6200.00	10.00	8.57	6145.64	623.95	94.03	631.00	0.00	0.00	0.00	0.00
6400.00	10.00	8.57	6342.61	658.29	99.20	665.73	0.00	0.00	0.00	0.00
6493.30	10.00	8.57	6434.49	674.31	101.62	681.93	0.00	0.00	0.00	0.00

Section 4 : Start DLS 3.00 TFO 180.00

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	TFO deg
6600.00	6.80	8.57	6540.03	689.72	103.94	697.51	3.00	-3.00	0.00	180.00
6800.00	0.80	8.57	6739.50	702.82	105.92	710.76	3.00	-3.00	0.00	180.00
6826.00	0.02	8.57	6765.50	703.00	105.94	710.94	3.00	-3.00	0.00	180.00
6826.64	0.00	0.00	6766.13	703.00	105.94	710.94	3.00	-3.00	0.00	-180.00

Section 5 : Start DLS 0.00 TFO 93.84

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	TFO deg
7000.00	0.00	93.84	6939.50	703.00	105.94	710.94	0.00	0.00	0.00	0.00
7200.00	0.00	93.84	7139.50	703.00	105.94	710.94	0.00	0.00	0.00	0.00
7400.00	0.00	93.84	7339.50	703.00	105.94	710.94	0.00	0.00	0.00	0.00
7600.00	0.00	93.84	7539.50	703.00	105.95	710.94	0.00	0.00	0.00	0.00
7800.00	0.00	93.84	7739.50	703.00	105.95	710.94	0.00	0.00	0.00	0.00
8000.00	0.00	93.84	7939.50	703.00	105.95	710.94	0.00	0.00	0.00	0.00
8200.00	0.00	93.84	8139.50	703.00	105.95	710.94	0.00	0.00	0.00	0.00
8400.00	0.00	93.84	8339.50	703.00	105.96	710.94	0.00	0.00	0.00	0.00
8600.00	0.00	93.84	8539.50	703.00	105.96	710.94	0.00	0.00	0.00	0.00
8800.00	0.00	93.84	8739.50	703.00	105.96	710.94	0.00	0.00	0.00	0.00
9000.00	0.00	93.84	8939.50	703.00	105.97	710.94	0.00	0.00	0.00	0.00
9200.00	0.00	93.84	9139.50	703.00	105.97	710.94	0.00	0.00	0.00	0.00
9400.00	0.00	93.84	9339.50	703.00	105.98	710.94	0.00	0.00	0.00	0.00
9600.00	0.00	93.84	9539.50	703.00	105.98	710.95	0.00	0.00	0.00	0.00
9800.00	0.00	93.84	9739.50	703.00	105.99	710.95	0.00	0.00	0.00	0.00
10000.00	0.00	93.84	9939.50	703.00	105.99	710.95	0.00	0.00	0.00	0.00
10160.50	0.00	93.84	10100.00	703.00	106.00	710.95	0.00	0.00	0.00	0.00

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
2400.00	0.00	8.57	2400.00	0.00	0.00	364158.69	457347.47	32	0	4.000 N	104	28	15.334 W
2600.00	6.00	8.57	2599.63	10.35	1.56	364169.03	457349.03	32	0	4.102 N	104	28	15.316 W
2733.00	9.99	8.57	2731.32	28.63	4.32	364187.32	457351.78	32	0	4.283 N	104	28	15.284 W
2733.33	10.00	8.57	2731.64	28.69	4.32	364187.38	457351.79	32	0	4.284 N	104	28	15.284 W
2800.00	10.00	8.57	2797.30	40.14	6.05	364198.83	457353.52	32	0	4.397 N	104	28	15.264 W
3000.00	10.00	8.57	2994.26	74.48	11.22	364233.17	457358.69	32	0	4.737 N	104	28	15.205 W
3200.00	10.00	8.57	3191.22	108.82	16.40	364267.51	457363.87	32	0	5.077 N	104	28	15.145 W
3400.00	10.00	8.57	3388.18	143.16	21.57	364301.85	457369.04	32	0	5.417 N	104	28	15.086 W
3600.00	10.00	8.57	3585.14	177.51	26.75	364336.19	457374.22	32	0	5.757 N	104	28	15.026 W

PathFinder

Planning Report - Geographic

Company: Murchison Oil & Gas
 Field: Bobcat
 Site: Bobcat Federal #11
 Well: Bobcat Federal #1
 Wellpath: Bobcat Federal #1

Date: 2/3/2006 Time: 08:38:39 Page: 3
 Co-ordinate(NE) Reference: Site: Bobcat Federal #11, Grid North
 Vertical (TVD) Reference: System: Mean Sea Level
 Section (VS) Reference: Well (0.00N,0.00E,8.57Azi)
 Plan: Plan #1 1-31-06

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec			Longitude Deg Min Sec		
3800.00	10.00	8.57	3782.11	211.85	31.93	364370.53	457379.39	32	0	6.097 N	104	28	14.966 W
4000.00	10.00	8.57	3979.07	246.19	37.10	364404.88	457384.57	32	0	6.437 N	104	28	14.907 W
4200.00	10.00	8.57	4176.03	280.53	42.28	364439.22	457389.74	32	0	6.777 N	104	28	14.847 W
4400.00	10.00	8.57	4372.99	314.87	47.45	364473.56	457394.92	32	0	7.117 N	104	28	14.788 W
4600.00	10.00	8.57	4569.95	349.22	52.63	364507.90	457400.09	32	0	7.457 N	104	28	14.728 W
4800.00	10.00	8.57	4766.91	383.56	57.80	364542.24	457405.27	32	0	7.797 N	104	28	14.668 W
5000.00	10.00	8.57	4963.87	417.90	62.98	364576.59	457410.44	32	0	8.137 N	104	28	14.609 W
5200.00	10.00	8.57	5160.84	452.24	68.15	364610.93	457415.62	32	0	8.477 N	104	28	14.549 W
5400.00	10.00	8.57	5357.80	486.58	73.33	364645.27	457420.80	32	0	8.816 N	104	28	14.490 W
5600.00	10.00	8.57	5554.76	520.92	78.50	364679.61	457425.97	32	0	9.156 N	104	28	14.430 W
5800.00	10.00	8.57	5751.72	555.27	83.68	364713.95	457431.15	32	0	9.496 N	104	28	14.370 W
6000.00	10.00	8.57	5948.68	589.61	88.85	364748.30	457436.32	32	0	9.836 N	104	28	14.311 W
6200.00	10.00	8.57	6145.64	623.95	94.03	364782.64	457441.50	32	0	10.176 N	104	28	14.251 W
6400.00	10.00	8.57	6342.61	658.29	99.20	364816.98	457446.67	32	0	10.516 N	104	28	14.192 W
6493.30	10.00	8.57	6434.49	674.31	101.62	364833.00	457449.09	32	0	10.675 N	104	28	14.164 W
6600.00	6.80	8.57	6540.03	689.72	103.94	364848.41	457451.41	32	0	10.827 N	104	28	14.137 W
6800.00	0.80	8.57	6739.50	702.82	105.92	364861.51	457453.38	32	0	10.957 N	104	28	14.114 W
6826.00	0.02	8.57	6765.50	703.00	105.94	364861.69	457453.41	32	0	10.959 N	104	28	14.114 W
6826.64	0.00	0.00	6766.13	703.00	105.94	364861.69	457453.41	32	0	10.959 N	104	28	14.114 W
7000.00	0.00	93.84	6939.50	703.00	105.94	364861.69	457453.41	32	0	10.959 N	104	28	14.114 W
7200.00	0.00	93.84	7139.50	703.00	105.94	364861.69	457453.41	32	0	10.959 N	104	28	14.114 W
7400.00	0.00	93.84	7339.50	703.00	105.94	364861.69	457453.41	32	0	10.959 N	104	28	14.114 W
7600.00	0.00	93.84	7539.50	703.00	105.95	364861.69	457453.41	32	0	10.959 N	104	28	14.114 W
7800.00	0.00	93.84	7739.50	703.00	105.95	364861.69	457453.42	32	0	10.959 N	104	28	14.114 W
8000.00	0.00	93.84	7939.50	703.00	105.95	364861.69	457453.42	32	0	10.959 N	104	28	14.114 W
8200.00	0.00	93.84	8139.50	703.00	105.95	364861.69	457453.42	32	0	10.959 N	104	28	14.114 W
8400.00	0.00	93.84	8339.50	703.00	105.96	364861.69	457453.42	32	0	10.959 N	104	28	14.114 W
8600.00	0.00	93.84	8539.50	703.00	105.96	364861.69	457453.43	32	0	10.959 N	104	28	14.114 W
8800.00	0.00	93.84	8739.50	703.00	105.96	364861.69	457453.43	32	0	10.959 N	104	28	14.114 W
9000.00	0.00	93.84	8939.50	703.00	105.97	364861.69	457453.43	32	0	10.959 N	104	28	14.114 W
9200.00	0.00	93.84	9139.50	703.00	105.97	364861.69	457453.44	32	0	10.959 N	104	28	14.114 W
9400.00	0.00	93.84	9339.50	703.00	105.98	364861.69	457453.44	32	0	10.959 N	104	28	14.114 W
9600.00	0.00	93.84	9539.50	703.00	105.98	364861.69	457453.45	32	0	10.959 N	104	28	14.114 W
9800.00	0.00	93.84	9739.50	703.00	105.99	364861.69	457453.46	32	0	10.959 N	104	28	14.114 W
10000.00	0.00	93.84	9939.50	703.00	105.99	364861.69	457453.46	32	0	10.959 N	104	28	14.113 W
10160.50	0.00	93.84	10100.00	703.00	106.00	364861.69	457453.47	32	0	10.959 N	104	28	14.113 W

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		
PBHL			10100.00	703.00	106.00	364861.69	457453.47	32	0	10.959 N	104	28	14.113 W
-Plan hit target													

Annotation

MD ft	TVD ft	
2400.00	2400.00	KOP @ 2400' MD
2733.00	2731.32	End of Build @ 2733' MD 10° Inc
6826.00	6765.50	End Of Drop @ 6826' MD 0° Inc

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Murchinson Oil & Gas

Well Name & No: Bobcat Fedral Com No. 01

Location: Surface 107' FSL & 704' FWL, BHL: 810' FSL & 810' FWL,
Sec.11,, T. 17 S., R. 28 E.

Lease: NMLC 068712

Eddy County, New Mexico

.....

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13 3/8 inch; 9 5/8 inch; 5 1/2 inch.

C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan is not required for this well bore.

3. 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.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

6. A Communitization Agreement must be filed and approved by this office prior to any sales from this well.

II. CASING:

1. The 13 3/8 inch shall be set at 250 Feet or a minimum of 10 feet above the Top of the Salt which may be encountered at this depth, with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 9 5/8 inch Intermediate casing is to circulate to surface.

3. The minimum required fill of cement behind the 5 1/2 inch Production casing is to place TOC at least 200 feet above the Top of the Wolfcamp estimated to be at 6700 feet.

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

III Pressure Control (Cont):

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3M psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the test.

- The test shall be done by an independent service company
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.
- Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in safe workman-like manner. Hard line connections shall be required.
- Both low pressure and high pressure testing of BOPE is required.

G. Gourley RFO 03/03/2006