

CMD :  
OG6IWCM

ONGARD  
INQUIRE WELL COMPLETIONS

01/06/04 10:15:53  
OGOMES -TQAC

API Well No : 30 15 32548 Eff Date : 11-05-2003 WC Status : A  
Pool Idn : 81600 NASH DRAW;MORROW (GAS)  
OGRID Idn : 15363 MURCHISON OIL & GAS INC  
Prop Idn : 8131 NASH UNIT

Well No : 053  
GL Elevation: 2986

	U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
	---	---	-----	-----	-----	-----	-----
B.H. Locn : K	12	23S	29E	FTG 1663	F S	FTG 2185	F W P
Lot Identifier:							
Dedicated Acre: 320.00							
Lease Type : F							
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :							

M0025: Enter PF keys to scroll

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07	PF08	PF09	PF10 NEXT-WC	PF11 HISTORY	PF12 NXTREC

CMD : ONGARD 01/06/04 10:16:16  
OG6ACRE C102-DEDICATE ACREAGE OGOMES -TQAC  
Page No : 1

API Well No : 30 15 32548 Eff Date : 11-05-2003  
Pool Idn : 81600 NASH DRAW;MORROW (GAS)  
Prop Idn : 8131 NASH UNIT Well No : 053  
Spacing Unit : 58198 OCD Order : Simultaneous Dedication:  
Sect/Twp/Rng : 12 23S 29E Acreage : 320.00 Revised C102? (Y/N) :  
Dedicated Land:

S	Base	U/L	Sec	Twp	Rng	Acreage	L/W	Ownership	Lot	Idn
	A		12	23S	29E	40.00	N	FD		
	B		12	23S	29E	40.00	N	FD		
	G		12	23S	29E	40.00	N	FD		
	H		12	23S	29E	40.00	N	FD		
	I		12	23S	29E	40.00	N	FD		
	J		12	23S	29E	40.00	N	FD		
	O		12	23S	29E	40.00	N	FD		
	P		12	23S	29E	40.00	N	ST		

E0005: Enter data to modify or PF keys to scroll

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06 CONFIRM
PF07 BKWD	PF08 FWD	PF09	PF10 LAND	PF11 NXTSEC	PF12 RECONF

County Eddy Pool Nash Draw - Morrow Gas

TOWNSHIP 23 South Range 29 East NMFM

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Description: E $\frac{1}{2}$  Sec 13 (R-5095, 10-1-75)

Ext:

COUNTY Eddy POOL Nash Draw - Morrow Gas

TOWNSHIP 23 South RANGE 30 East NMFM

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Ext: N $\frac{1}{2}$  Sec 18 (R-5252, 9-1-76) Ext: S $\frac{1}{2}$  Sec 7 (R-6476, 10-1-80)

## Stogner, Michael

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**From:** Arrant, Bryan  
**Sent:** Tuesday, December 02, 2003 10:09 AM  
**To:** 'mdaugherty@jdmii.com'  
**Cc:** Gum, Tim; Stogner, Michael  
**Subject:** Nash Unit # 53



LETTERHEAD.032.d  
oc



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**  
Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

**December 2, 2003**

**Murchison Oil & Gas, Inc.**  
**1100 Mira Vista Blvd.**  
**Plano, TX 75093-4698**  
**Attn: Mr. Michael S. Daugherty**

**RE: Murchison Oil & Gas, Inc.'s gas well completion of the  
Nash Unit # 53, located in Section 12 of Township 23 South,  
Range 29 East, Eddy County, New Mexico.  
Bottom Hole Location: 2185' FWL & 692' FEL  
API # 30-015-32548**

Dear Mr. Daugherty,

In reference to the above directionally well, the top and bottom producing intervals of the Morrow formation as well as the bottom hole location is non-standard according to New Mexico Oil Conservation Division's Rule 104 for deep gas wells in southeast New Mexico. I cannot find a non-standard location approval for this well allowing for Morrow gas production. Until such an approval is issued, this well will need to be shut-in. Please refer to NMOCD's Rule 104 C. (2) for further clarification or please give me a call to discuss this matter further.

Yours truly,

Bryan G. Arrant  
PES

Cc: Michael Stogner, Chief Hearing Examiner-Santa Fe  
Tim Gum, District Supervisor-Artesia

## **Stogner, Michael**

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**From:** Arrant, Bryan  
**Sent:** Tuesday, December 02, 2003 10:29 AM  
**To:** 'mdaugherty@jdmii.com'  
**Cc:** Gum, Tim; Stogner, Michael  
**Subject:** Nash Unit # 53

This is a revised letter as the previous letter stated an incorrect bottom hole location making it a Very Large hole.



LETTERHEAD.0321.  
doc



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

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**December 2, 2003**

**Murchison Oil & Gas, Inc.**

**1100 Mira Vista Blvd.**

**Plano, TX 75093-4698**

**Attn: Mr. Michael S. Daugherty**

**RE: Murchison Oil & Gas, Inc.'s gas well completion of the  
Nash Unit # 53, located in Section 12 of Township 23 South,  
Range 29 East, Eddy County, New Mexico.  
Bottom Hole Location: 2056' FNL & 692' FEL  
API # 30-015-32548**

Dear Mr. Daugherty,

In reference to the above directionally well, the top and bottom producing intervals of the Morrow formation as well as the bottom hole location is non-standard according to New Mexico Oil Conservation Division's Rule 104 for deep gas wells in southeast New Mexico. I cannot find a non-standard location approval for this well allowing for Morrow gas production. Until such an approval is issued, this well will need to be shut-in. Please refer to NMOCD's Rule 104 C. (2) for further clarification or please give me a call to discuss this matter further.

Yours truly,

Bryan G. Arrant

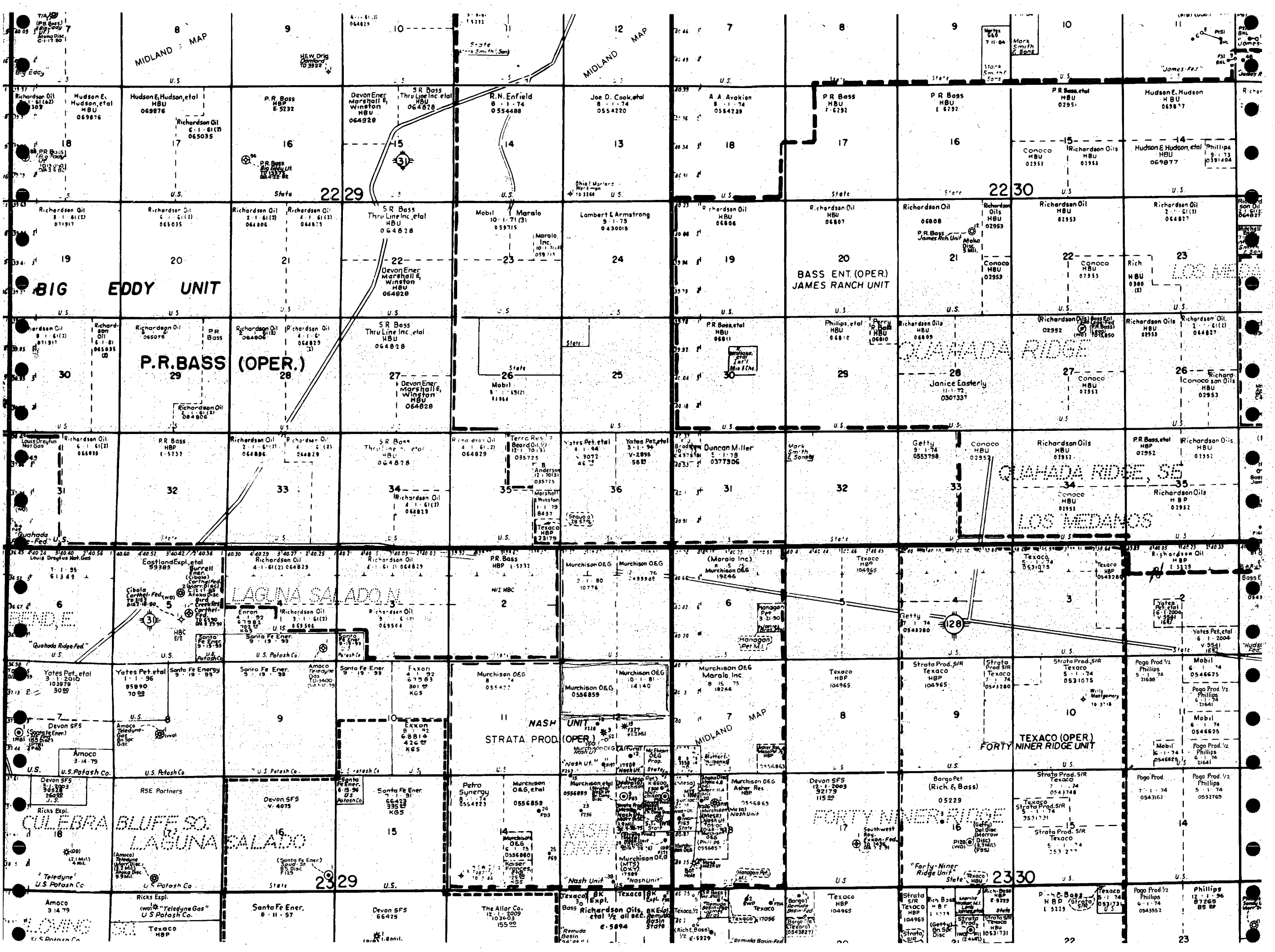
PES

Cc: Michael Stogner, Chief Hearing Examiner-Santa Fe  
Tim Gum, District Supervisor-Artesia

Sec : 12 Twp : 23S Rng : 29E Section Type : NORMAL

<p>D 40.00</p> <p>Federal owned U R</p>	<p>C 40.00</p> <p>Federal owned U R A</p> <p><i>Alaska Commission</i></p>	<p>B 40.00</p> <p>Federal owned U R</p>	<p>A 40.00</p> <p>Federal owned U R</p>
<p>E 40.00</p> <p>Federal owned U R</p>	<p>F 40.00</p> <p>Federal owned U R</p>	<p>G 40.00</p> <p>Federal owned U R</p>	<p>H 40.00</p> <p>Federal owned U R</p>
<p>L 40.00</p> <p>Federal owned U R</p>	<p>K 40.00</p> <p>Federal owned U R A A A A</p>	<p>J 40.00</p> <p>Federal owned U R A</p>	<p>I 40.00</p> <p>Federal owned U R</p>
<p>M 40.00</p> <p>Federal owned U R A</p>	<p>N 40.00</p> <p>Federal owned U R A</p>	<p>O 40.00</p> <p>Federal owned U R A</p>	<p>P 40.00 CS K06600 0001 MCELVAIN OIL &amp; GA U R 12/20/76 A</p>





N.M. Oil Cons. Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 14140 BHL NM 0556859-A SHL	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator MURCHISON OIL & GAS, INC. Las Medanos, Merrew		7. If Unit or CA Agreement, Name and No. NASH UNIT 8/31	
3a. Address 1100 MIRA VISTABLVD., PLANO, TX. 75093-4698		8. Lease Name and Well No. NASH UNIT #53	
3b. Phone No. (include area code) (972) 931-0700		9. API Well No. 30-015-32548	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1663' FSL & 2185' FWL W.K. At proposed prod. zone 1980' FNL & 660' FEL UNIT H R-111-P Potash		10. Field and Pool, or Exploratory NASH DRAW	
14. Distance in miles and direction from nearest town or post office* 17 MILES SOUTHEAST OF CARLSBAD		11. Sec., T., R., M., or Blk. and Survey or Area SEC. 12, T23S, R29E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660' BHL		12. County or Parish EDDY	
16. No. of Acres in lease 320		13. State NM.	
17. Spacing Unit dedicated to this well 320 N/2			
18. Distance from proposed location* to nearest well, drilling, completed, applic. for, on this lease, ft. 2965' BHL		20. BLM/BIA Bond No. on file ROTARY	
19. Proposed Depth 14000 TVD		21. Estimated duration 70 DAYS	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2986' GL		22. Approximate date work will start* 9/1/02	
24. Attachments Carlsbad Controlled Water Basin			

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall 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 shall 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 authorized officer.

25. Signature <i>Michael S. Daugherty</i>	Name (Printed/Typed) MICHAEL S. DAUGHERTY	Date 6/21/02
Title VICE PRESIDENT OPERATIONS		
Approved by (Signature) <i>Richard A. Whitley</i>	Name (Printed/Typed) RICHARD A. WHITLEY	Date NOV 29 2002
Title STATE DIRECTOR		
Office NM STATE 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 1 YEAR

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 reverse)

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name NASH UNIT	Well Number 53
OGRID No. 015363	Operator Name MURCHISON OIL & GAS INC.	Elevation 2986'

#### Surface Location

UL or lot No. K	Section 12	Township 23-S	Range 29-E	Lot Idn	Feet from the 1663'	North/South line SOUTH	Feet from the 2185'	East/West line WEST	County EDDY
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#### Bottom Hole Location If Different From Surface

UL or lot No. H	Section 12	Township 23-S	Range 29-E	Lot Idn	Feet from the 1980'	North/South line NORTH	Feet from the 660'	East/West line EAST	County EDDY
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Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
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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

	<h4>OPERATOR CERTIFICATION</h4> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Michael S Daugherty</i> Signature MICHAEL S. DAUGHERTY Printed Name VICE PRESIDENT OPERATIONS Title 6/21/02 Date</p> <h4>SURVEYOR CERTIFICATION</h4> <p>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>MAY 28, 2002</p> <p>Date Surveyed Signature Professional Surveyor RONALD S. EIDSON NEW MEXICO 5/29/02 02.11.0394 Certificate No. RONALD S. EIDSON 3239 GARY EIDSON 12641</p>
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June 21, 2002

United States Department of the Interior  
Bureau of Land Management  
Roswell District Office  
2909 West Second Street  
Roswell, New Mexico 88201  
Attn: Linda Askawik

**Re: Application for Permit to Drill  
Murchison Oil & Gas, Inc.  
Nash Unit #53  
Eddy County, New Mexico  
Lease No. NM-0556859-A**

Gentlemen:

Murchison Oil & Gas, Inc. "MOGI" respectfully requests permission to drill our Nash Unit #53 with a surface location at 1663' FSL and 2185' FWL, and a bottom hole location at 1980' FNL and 660' FEL of Section 12, T23S, R29E, Eddy County, New Mexico, Federal Lease No. NM-0556859-A. The proposed well will be drilled to a TD of approximately 14,000' (TVD) and 14,600' MD. The location and work area have been staked. It is approximately 17 miles South East of Carlsbad, New Mexico.

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 Gary Eidson Registered Land Surveyor No. 12641 in the State of New Mexico, dated May 28, 2002.
3. The elevation of the unprepared ground is 2986 feet above sea level.
4. The geologic name of the surface formation is Permian.
5. Rotary drilling equipment will be utilized to drill the well to a measured depth of 14,600', 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 14,000' TVD.

7. Estimated tops of important geologic markers.

Lamar	3070' TVD
Delaware	3140' TVD
Cherry Canyon	4170' TVD
Bone Springs	6865' TVD
3 <sup>rd</sup> BS SS	9786' TVD
Wolfcamp	10139' TVD
Strawn	12025' TVD
Atoka	12147' TVD
Morrow	12918' TVD

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

Primary Objective:	Morrow	12918' TVD
Secondary Objectives:	Strawn	12025' TVD
	Atoka	12147' TVD

9. The proposed casing program is as follows:

Surface: 16" OD J-55 BUTT T&C casing set at 400' TVD *6-5 #1*

1<sup>st</sup> Intermediate: 10-3/4" OD BUTT T&C casing set at 3100' TVD *4-5 5 #1*

2<sup>nd</sup> Intermediate: 7-5/8" 33.7 #/FT N-80 and S-95 LT&C casing set  
@ 10330' TVD

Production Liner: 5-1/2" 20#/FT N-80 FL4S Liner set @ 10000-14000'  
TVD

10. Casing setting depth and cementing program:

- A. 16" surface casing set at 400', in a 20" hole. Circulate cement with 550sx Class C 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 cement with additives.

- B. 10-3/4" 1<sup>st</sup> intermediate casing set at 3100' in a 14-3/4" hole. Circulate cement with 1800sx 35:65 POZ/Class C and 200sx Class C cement with additives.

- C. 7-5/8" 2<sup>nd</sup> intermediate casing set at 10330' TVD in 8-3/4" hole. Cement with 1500sx Class C cement with additives.
- D. 5-1/2" production liner set from 10,000' to 14,000' TVD. Cement with 340sx Class C cement with additives.

Note: Cement volumes may need to be adjusted to hole caliper.

11. Pressure Control Equipment

0' – 400'	None
400' – 3100'	20" Hydril and Divertor System.
3100' – 14000' TVD	13-3/8" 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 10330' TVD. 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 7-5/8" 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 – 350' Spud with fresh water gel flocculated with lime and pretreated with 6-8 lbs/bbl cottonseed hulls, 2-4 lbs/bbl fiber, and 2 lbs/bbl paper for possible severe loss circulation zone 100-200'. If necessary drill without returns, or if full returns cannot be established at casing point mix 150 bbls viscous mud treated with LCM as above and spot on bottom before coming out of the hole to run casing.

350' – 3100' Drill out with brine water through a controlled section of the reserve pit. Add paper for seepage control or to sweep hole, as needed. At casing point, sweep hole with 150± bbls viscous mud with 6-8 lbs/bbl LCM before coming out of the hole to run casing.

3100' – 10330' TVD Drill out with fresh water through a controlled section of the reserve pit. Use paper, sea mud, and salt water gel slugs to sweep the hole and control seepage, as necessary. To control corrosion maintain ph 8.5 to 9.5 with caustic soda and use corrosion chemicals from 3100' to total depth.

10330' – 14000' TVD Circulate steel pits and mud up to 36-40 sec/qt viscosity, 6 to 8cc API filtrate, and 3.0+% KCL.

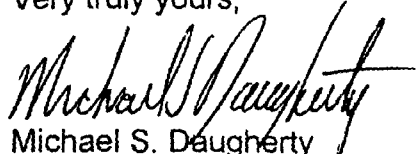
13. A direction well plan prepared by Directional Drilling Contractors LLC is attached which represents the proposed well plan.

14. Testing, Logging and Coring Program:

- A. Testing program: None anticipated.
- B. Mud logging program: Two man unit from 8000' to TD.
- C. Electric logging program: CNL/LDT/CAL/GR, DLL/CAL/GR.
- D. Coring program: Possible sidewall rotary cores.

15. 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.
16. Anticipated starting date is September 1, 2002 subject to rig availability. It should take approximately 60 days to drill the well and another 10 days to complete.
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/NashUnit#53-BLM-APTD

Attachments



## MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MURCHISON OIL & GAS, INC.  
NASH UNIT #53  
EDDY COUNTY, NEW MEXICO  
LEASE NO. NM-0556859-A

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. Mesa Field Services Archaeological Service 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 USGS "Remuda Basin, New Mexico" Topographic map is attached showing the proposed location. The well location is spotted on this map, which also shows the existing road system.

Directions to location: Travel East from Loving, NM on State Highway 31 and turn southeast on State Highway 128 and go 4 miles, then east 1 mile on lease road then north 2/10 mile to the location.

### 2. Planned Access Road

- A. An existing lease access road will be used to gain access.
- 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 Nash Unit #53 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 in Carlsbad, NM vicinity 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. A closed loop mud system will be utilized for drilling operations and water for drilling will be stored in steel tanks.
  - B. Drill cuttings will be collected in steel bins and transported to a lined pit to be located approximately 685' from the north line and 1295' from the west line of Section 18, T23S, R30E. This is the location and drilling pad for the Nash Unit #7 which has been P&A'd and is approximately 1 mile from the rig. A sketch of the proposed land farm pit is attached.
  - C. Water produced during tests will be stored in test tanks and transported to authorized disposal facility. 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, steel mud pits and location of major rig components are shown on the attached well site layout sketch. If Patterson Drilling Company Rig #18 is not utilized a comparable rig will be substituted. The V-door will be to the North.
  - B. Leveling of the wellsite will be minimal since this is an existing wellsite.
  - C. A closed loop mud system will be utilized for drilling operations and water for drilling will be stored in steel tanks.
  - D. Drill cuttings will be collected in steel bins and transported to a lined pit to be located approximately 685' from the north line and 1295' from the west line of Section 18, T23S, R30E. This is the location and drilling pad for the Nash Unit #7 which has been P&A'd and is approximately 1 mile from the rig. A sketch of the proposed land farm pit is attached.
  - E. The pad 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 land farm pit will be filled. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing condition as possible.

- B. After abandonment of the well, surface restoration will be in accordance with the land owner. This will be accomplished as expeditiously as possible. Barring unforeseen problems, all pits will be filled and leveled within 90 days after abandonment.

11. Other Information

- A. Topography: The location is a flat plain. GL elevation is 2986'.
- 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: A Playa Lake is located within .2 miles to the north and west. See attached topographic map.
- E. Residences and Other Structures: There are no occupied dwellings within a 1 mile radius of the location.
- F. Archaeological, Historical and Cultural Sites: Cultural resources have been recorded in the area. Mesa Field Services Archaeological Service has been 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 the BLM to Hart M. Greenwood, Jr., P.O. Box 104, Carlsbad, NM. 88221. They will be notified of our intention to drill prior to any activity.

Upon completion of the well, any plastic material used to line the pits or sumps will be cut off below ground level as far as possible and disposed of before the pits are covered. All unattended pits containing liquid will be fenced and the liquid portion allowed to evaporate before the pits are broken and backfilled.

All waste associated with the drilling operation will be contained in steel bins and removed. 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 backfilled, 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

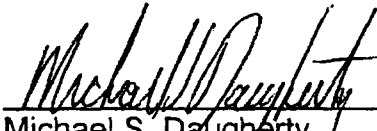
The Field representatives responsible for assuring compliance with the approved surface use and operations plan are as follows:

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

Randy Ford  
210 W. Wall St., Suite 600  
Midland, TX. 79701  
Office Phone: (915) 682-0440

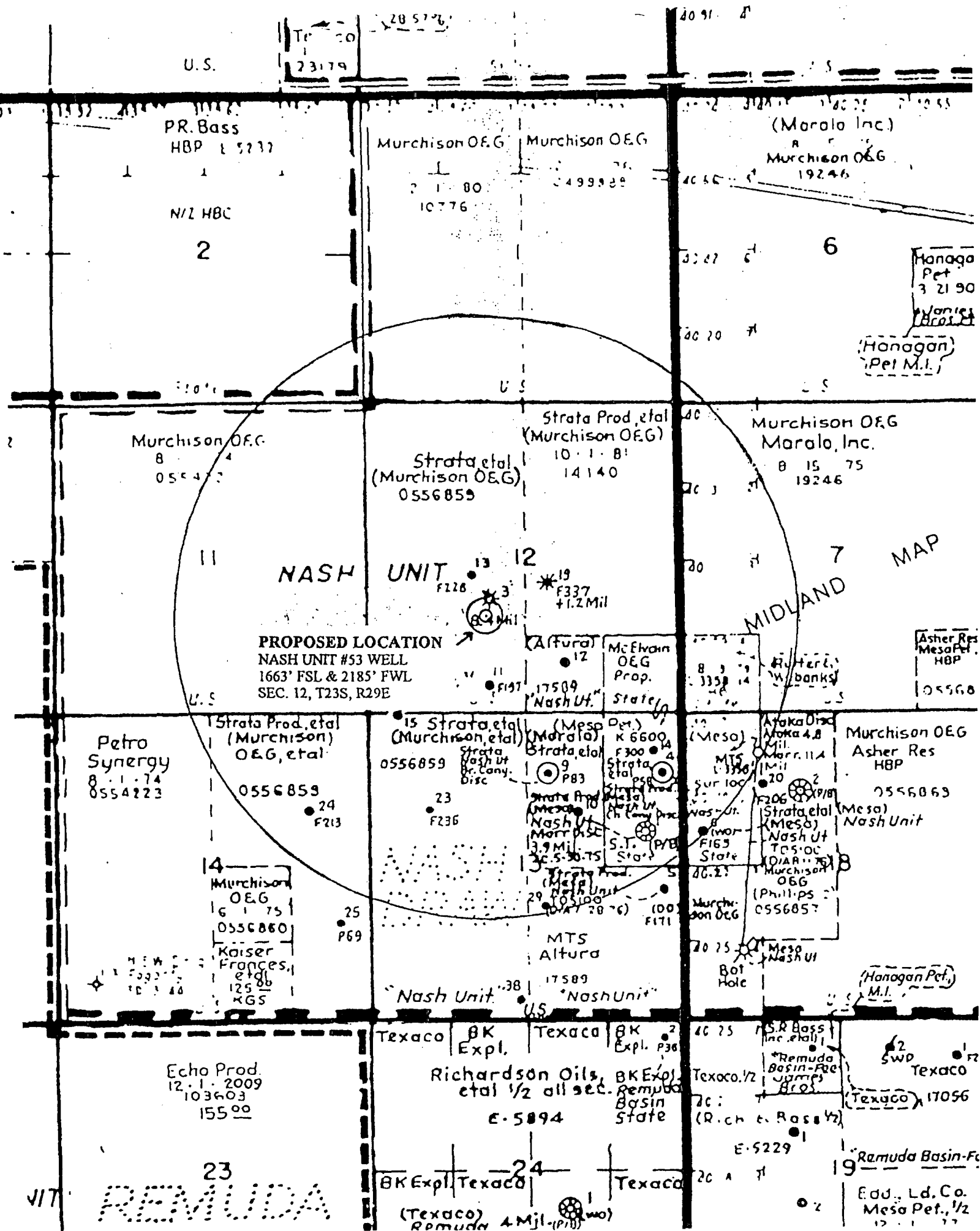
13. Certification

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.

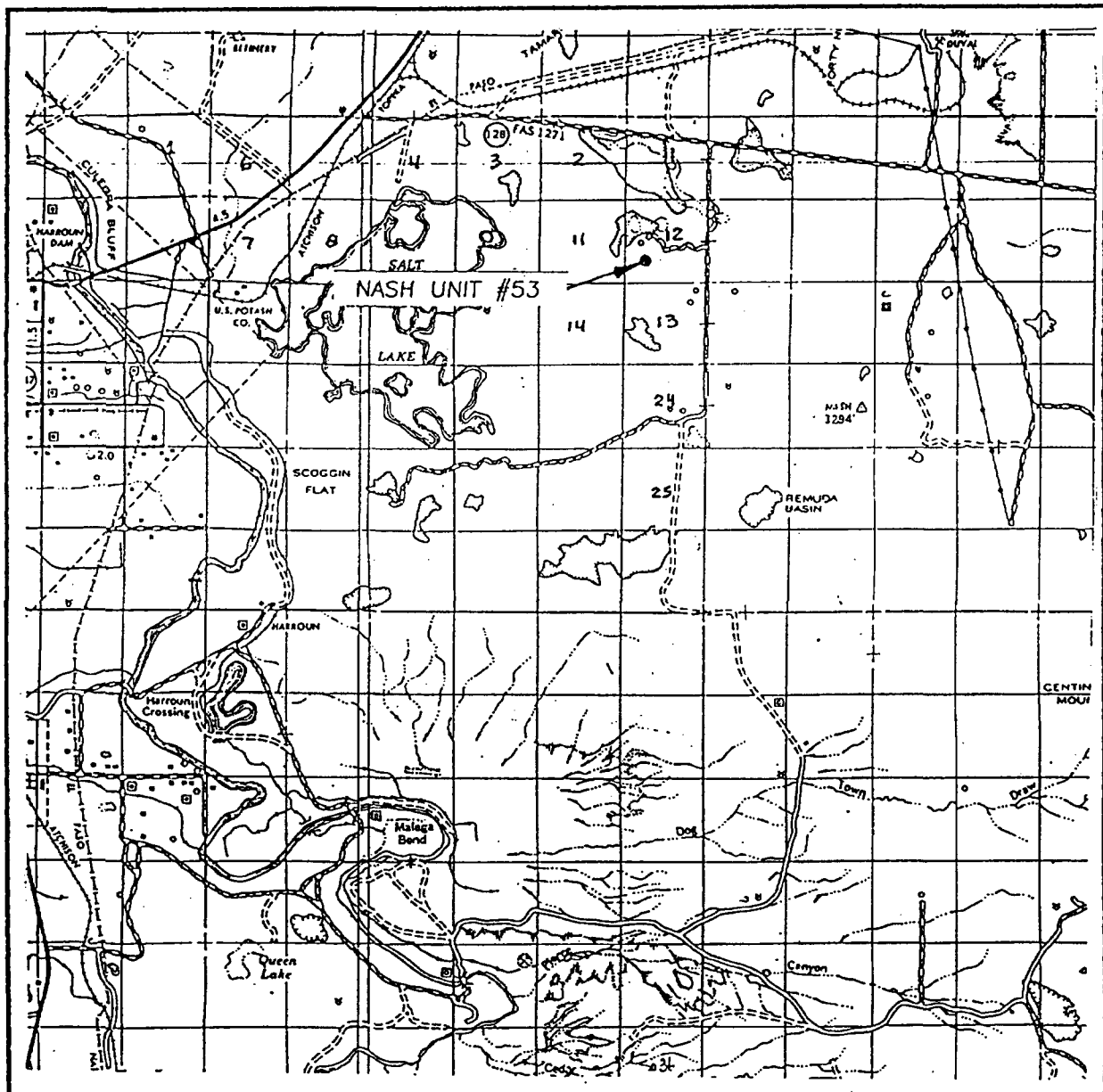
  
Michael S. Daugherty

6/21/02  
Date

Vice President, Operations  
Murchison Oil & Gas, Inc.



# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 12 TWP. 23-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1663' FSL & 2185' FWL

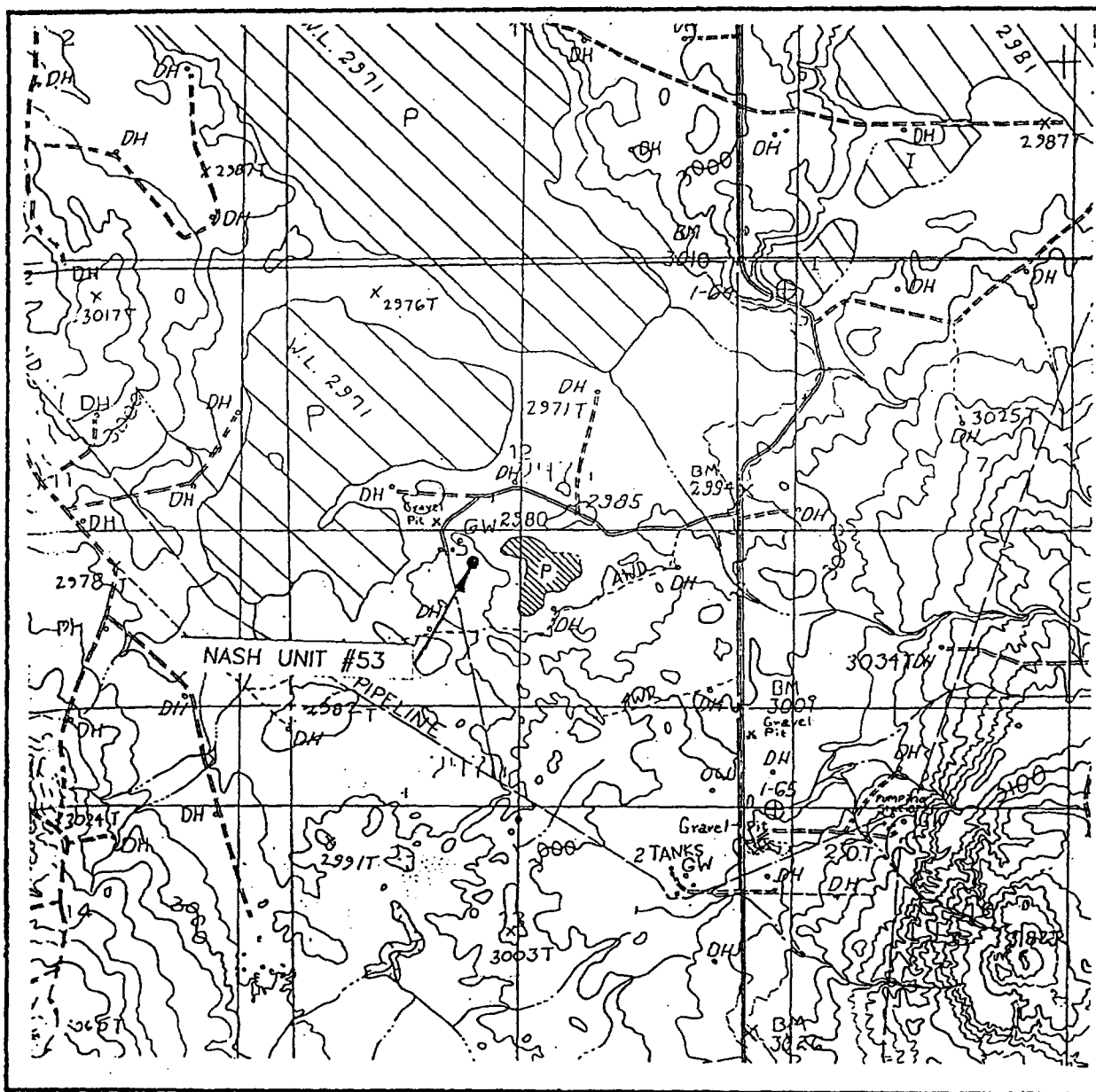
ELEVATION 2986'

OPERATOR MURCHISON OIL & GAS INC.

LEASE NASH UNIT

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 20'  
REMADA BASIN, N.M.

SEC. 12 TWP. 23-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1663' FSL & 2185' FWL

ELEVATION 2986'

OPERATOR MURCHISON OIL & GAS INC.

LEASE NASH UNIT

U.S.G.S. TOPOGRAPHIC MAP  
REMADA BASIN, N.M.

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117



MIDLAND, TX (915) 684-7446  
OKLAHOMA CITY, OK (405) 810-0021  
CORPUS CHRISTI, TX (361) 851-2473

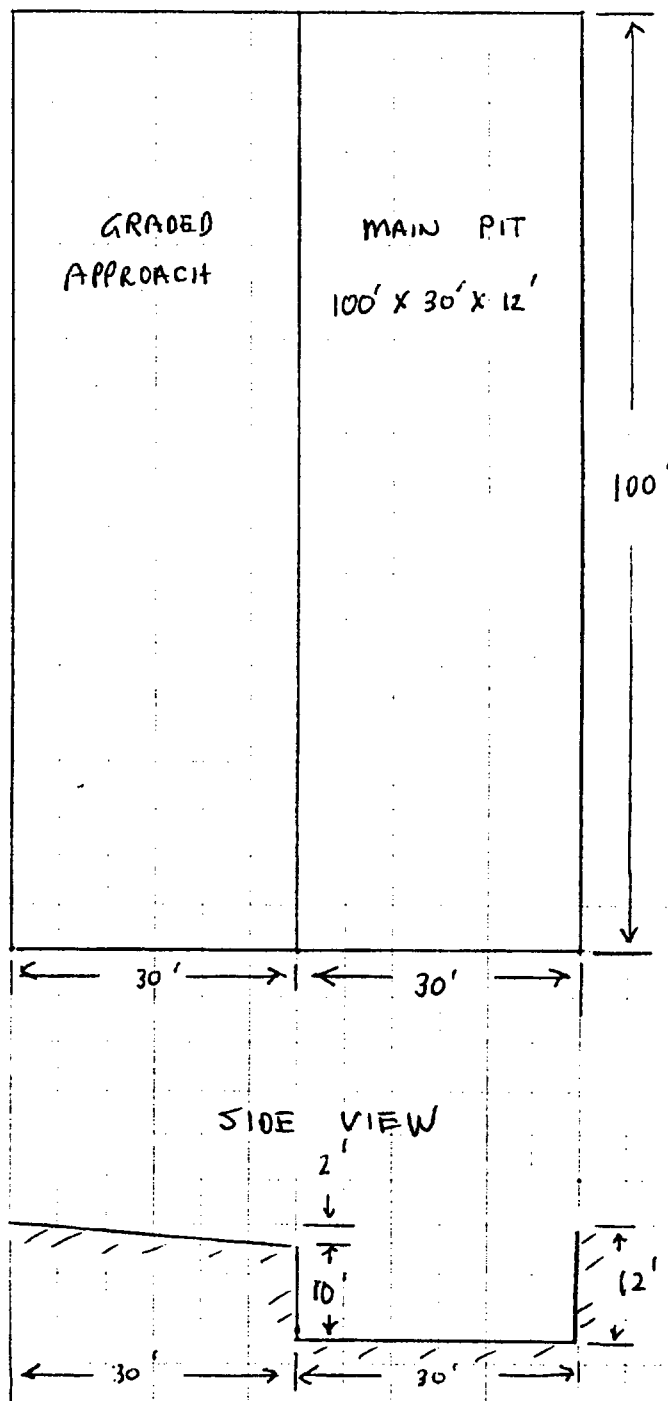


HOUSTON, TX (281) 877-1200  
LAFAYETTE, LA (337) 237-5300  
NEW ORLEANS, LA (504) 566-0410

Subject	Page No.	of
File	By	Date

### PLAN VIEW

MURCHISON OIL & GAS INC  
PROPOSED LAND FARM PIT  
NASH UNIT # 53  
SEC 12 T23S R29E  
(WELL LOCATION)





Directional Drilling Contractors, LLC.

Job Number: Proposal

Company: MURCHISON OIL & GAS, INC.

Lease/Well: Nash #53

Location: Eddy County

Rig Name: N/A

RKB: Ground Level

G.L. or M.S.L.: 2987'

State/Country: New Mexico

Declination: 9.0

Grid: 1.8

File name: C:\WINSERVE\MURNA53.SVY

Date/Time: 04-Jun-02 / 11:13

Curve Name: Nash # 53 (ST @ 3200')

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane 56.09  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	CLOSURE Distance FT	Direction Deg
<b>10-3/4" Csg Pt.</b>									
3100.00	.00	.00	3100.00	.00	.00	.00	.00	.00	.00
<b>ST Point w/Gradual Nudge to 400' V.S.</b>									
3200.00	.00	8.57	3200.00	.00	.00	.00	.00	.00	.00
3300.00	.35	56.09	3300.00	.17	.25	.30	.35	.30	56.08
3400.00	.70	56.09	3400.00	.68	1.01	1.22	.35	1.22	56.08
3500.00	1.05	56.09	3499.98	1.53	2.28	2.74	.35	2.74	56.09
3600.00	1.40	56.09	3599.96	2.72	4.05	4.88	.35	4.88	56.09
3700.00	1.75	56.09	3699.92	4.25	6.33	7.62	.35	7.62	56.09
3800.00	2.10	56.09	3799.87	6.12	9.11	10.97	.35	10.97	56.09
3900.00	2.45	56.09	3899.79	8.33	12.40	14.94	.35	14.94	56.09
4000.00	2.79	56.09	3999.68	10.88	16.19	19.51	.35	19.51	56.09
4100.00	3.14	56.09	4099.55	13.77	20.49	24.69	.35	24.69	56.09
4200.00	3.49	56.09	4199.38	17.00	25.29	30.48	.35	30.48	56.09
4300.00	3.84	56.09	4299.18	20.57	30.60	36.88	.35	36.88	56.09
4400.00	4.19	56.09	4398.93	24.48	36.42	43.88	.35	43.88	56.09
4500.00	4.54	56.09	4498.64	28.73	42.74	51.50	.35	51.50	56.09
4600.00	4.89	56.09	4598.30	33.32	49.56	59.72	.35	59.72	56.09
4700.00	5.24	56.09	4697.91	38.24	56.89	68.55	.35	68.55	56.09
4800.00	5.59	56.09	4797.46	43.51	64.72	77.99	.35	77.99	56.09
4900.00	5.94	56.09	4896.96	49.11	73.06	88.03	.35	88.03	56.09
5000.00	6.29	56.09	4996.39	55.05	81.90	98.68	.35	98.68	56.09

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	CLOSURE Distance FT	Direction Deg
5100.00	6.64	56.09	5095.75	61.33	91.24	109.94	.35	109.94	56.09
5200.00	6.99	56.09	5195.05	67.95	101.08	121.80	.35	121.80	56.09
5300.00	7.34	56.09	5294.27	74.91	111.43	134.27	.35	134.27	56.09
5400.00	7.69	56.09	5393.41	82.20	122.28	147.34	.35	147.34	56.09
5500.00	8.04	56.09	5492.47	89.83	133.63	161.02	.35	161.02	56.09
5600.00	8.38	56.09	5591.44	97.80	145.48	175.30	.35	175.30	56.09
5700.00	8.73	56.09	5690.33	106.10	157.83	190.18	.35	190.18	56.09
5800.00	9.08	56.09	5789.12	114.74	170.68	205.67	.35	205.67	56.09
5900.00	9.43	56.09	5887.82	123.72	184.03	221.75	.35	221.75	56.09
6000.00	9.78	56.09	5986.42	133.03	197.89	238.44	.35	238.44	56.09
6100.00	10.13	56.09	6084.91	142.68	212.23	255.73	.35	255.73	56.09
6200.00	10.48	56.09	6183.30	152.66	227.08	273.62	.35	273.62	56.09
6300.00	10.83	56.09	6281.57	162.97	242.43	292.11	.35	292.11	56.09
6400.00	11.18	56.09	6379.73	173.62	258.27	311.20	.35	311.20	56.09
6500.00	11.53	56.09	6477.78	184.61	274.61	330.89	.35	330.89	56.09
6600.00	11.88	56.09	6575.70	195.92	291.44	351.18	.35	351.18	56.09
6700.00	12.23	56.09	6673.49	207.57	308.77	372.06	.35	372.06	56.09
6800.00	12.58	56.09	6771.16	219.56	326.60	393.54	.35	393.54	56.09
<b>Target @ 6800' TVD w/400' V.S.</b>									
6829.56	12.68	56.09	6800.00	223.16	331.96	400.00	.35	400.00	56.09
6859.56	13.58	56.09	6829.22	226.96	337.62	406.81	3.00	406.81	56.09
6889.56	14.48	56.09	6858.32	231.02	343.65	414.09	3.00	414.09	56.09
6919.56	15.38	56.09	6887.31	235.33	350.07	421.81	3.00	421.81	56.09
6949.56	16.28	56.09	6916.17	239.90	356.86	430.00	3.00	430.00	56.09
6979.56	17.18	56.09	6944.90	244.72	364.02	438.63	3.00	438.63	56.09
7009.56	18.08	56.09	6973.49	249.79	371.57	447.72	3.00	447.72	56.09
7039.56	18.98	56.09	7001.93	255.10	379.48	457.25	3.00	457.25	56.09
7069.56	19.88	56.09	7030.22	260.67	387.76	467.23	3.00	467.23	56.09
<b>EOB w/20.2° Inc. @ 7079' MD/7039' TVD</b>									
7078.84	20.16	56.09	7038.94	262.45	390.40	470.41	3.00	470.41	56.09
7178.84	20.16	56.09	7132.82	281.67	419.00	504.87	.00	504.87	56.09
7278.84	20.16	56.09	7226.69	300.90	447.60	539.34	.00	539.34	56.09
7378.84	20.16	56.09	7320.57	320.13	476.20	573.80	.00	573.80	56.09
7478.84	20.16	56.09	7414.44	339.35	504.80	608.26	.00	608.26	56.09
7578.84	20.16	56.09	7508.32	358.58	533.40	642.72	.00	642.72	56.09
7678.84	20.16	56.09	7602.19	377.81	562.00	677.18	.00	677.18	56.09
7778.84	20.16	56.09	7696.06	397.04	590.60	711.65	.00	711.65	56.09
7878.84	20.16	56.09	7789.94	416.26	619.20	746.11	.00	746.11	56.09
7978.84	20.16	56.09	7883.81	435.49	647.80	780.57	.00	780.57	56.09
8078.84	20.16	56.09	7977.69	454.72	676.40	815.03	.00	815.03	56.09
8178.84	20.16	56.09	8071.56	473.94	705.00	849.50	.00	849.50	56.09
8278.84	20.16	56.09	8165.43	493.17	733.60	883.96	.00	883.96	56.09

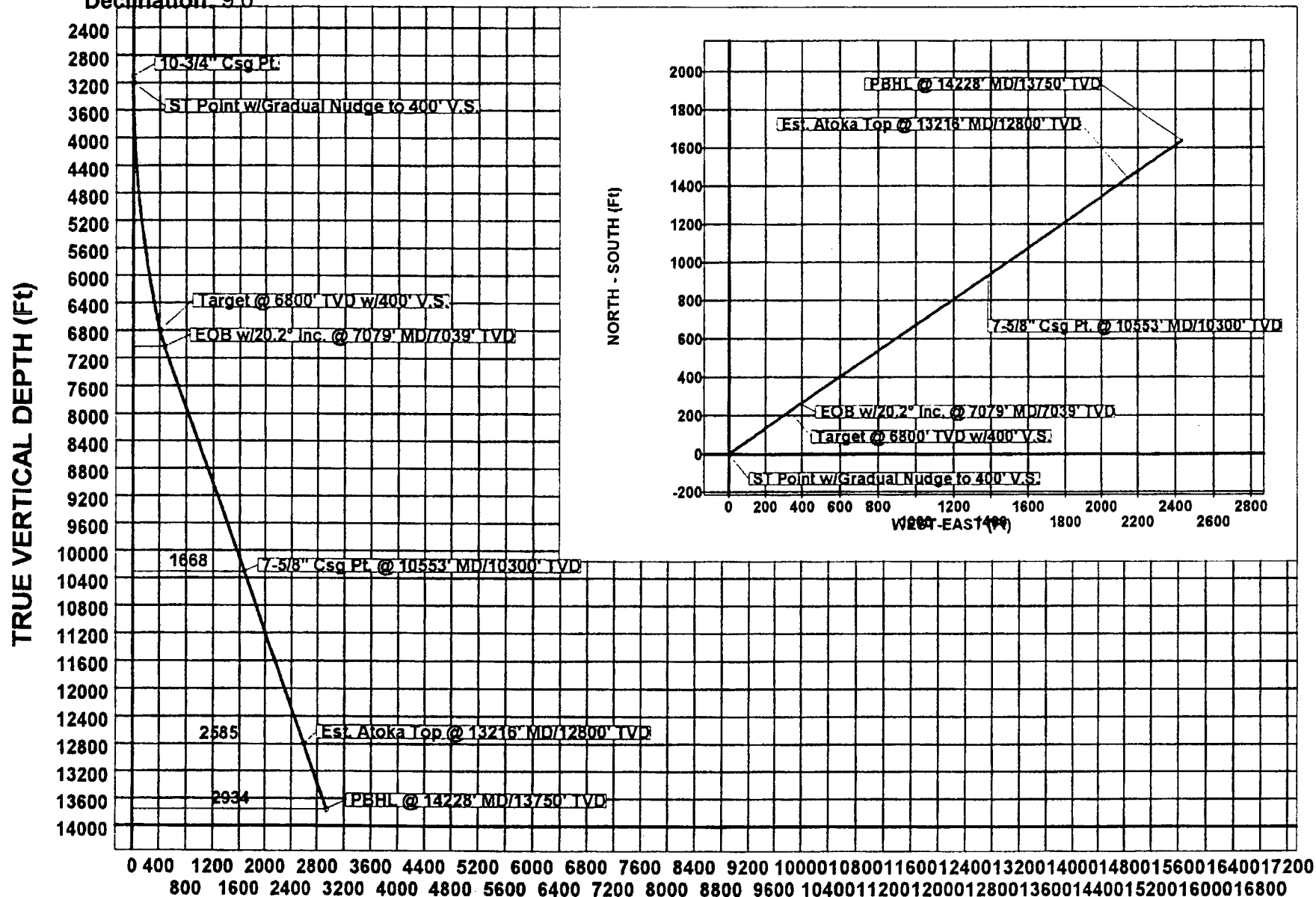
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	CLOSURE Distance FT	Direction Deg
8378.84	20.16	56.09	8259.31	512.40	762.19	918.42	.00	918.42	56.09
8478.84	20.16	56.09	8353.18	531.63	790.79	952.88	.00	952.88	56.09
8578.84	20.16	56.09	8447.06	550.85	819.39	987.34	.00	987.34	56.09
8678.84	20.16	56.09	8540.93	570.08	847.99	1021.81	.00	1021.81	56.09
8778.84	20.16	56.09	8634.81	589.31	876.59	1056.27	.00	1056.27	56.09
8878.84	20.16	56.09	8728.68	608.54	905.19	1090.73	.00	1090.73	56.09
8978.84	20.16	56.09	8822.55	627.76	933.79	1125.19	.00	1125.19	56.09
9078.84	20.16	56.09	8916.43	646.99	962.39	1159.65	.00	1159.65	56.09
9178.84	20.16	56.09	9010.30	666.22	990.99	1194.12	.00	1194.12	56.09
9278.84	20.16	56.09	9104.18	685.44	1019.59	1228.58	.00	1228.58	56.09
9378.84	20.16	56.09	9198.05	704.67	1048.19	1263.04	.00	1263.04	56.09
9478.84	20.16	56.09	9291.92	723.90	1076.79	1297.50	.00	1297.50	56.09
9578.84	20.16	56.09	9385.80	743.13	1105.39	1331.97	.00	1331.97	56.09
9678.84	20.16	56.09	9479.67	762.35	1133.99	1366.43	.00	1366.43	56.09
9778.84	20.16	56.09	9573.55	781.58	1162.59	1400.89	.00	1400.89	56.09
9878.84	20.16	56.09	9667.42	800.81	1191.19	1435.35	.00	1435.35	56.09
9978.84	20.16	56.09	9761.30	820.04	1219.79	1469.81	.00	1469.81	56.09
10078.84	20.16	56.09	9855.17	839.26	1248.39	1504.28	.00	1504.28	56.09
10178.84	20.16	56.09	9949.04	858.49	1276.99	1538.74	.00	1538.74	56.09
10278.84	20.16	56.09	10042.92	877.72	1305.59	1573.20	.00	1573.20	56.09
10378.84	20.16	56.09	10136.79	896.94	1334.19	1607.66	.00	1607.66	56.09
10478.84	20.16	56.09	10230.67	916.17	1362.79	1642.13	.00	1642.13	56.09
<b>7-5/8" Csg Pt. @ 10553' MD/10300' TVD</b>									
10552.70	20.16	56.09	10300.00	930.37	1383.92	1667.58	.00	1667.58	56.09
10578.84	20.16	56.09	10324.54	935.40	1391.39	1676.59	.00	1676.59	56.09
10678.84	20.16	56.09	10418.41	954.63	1419.99	1711.05	.00	1711.05	56.09
10778.84	20.16	56.09	10512.29	973.85	1448.59	1745.51	.00	1745.51	56.09
10878.84	20.16	56.09	10606.16	993.08	1477.19	1779.97	.00	1779.97	56.09
10978.84	20.16	56.09	10700.04	1012.31	1505.79	1814.44	.00	1814.44	56.09
11078.84	20.16	56.09	10793.91	1031.54	1534.39	1848.90	.00	1848.90	56.09
11178.84	20.16	56.09	10887.79	1050.76	1562.99	1883.36	.00	1883.36	56.09
11278.84	20.16	56.09	10981.66	1069.99	1591.59	1917.82	.00	1917.82	56.09
11378.84	20.16	56.09	11075.53	1089.22	1620.19	1952.28	.00	1952.28	56.09
11478.84	20.16	56.09	11169.41	1108.44	1648.79	1986.75	.00	1986.75	56.09
11578.84	20.16	56.09	11263.28	1127.67	1677.39	2021.21	.00	2021.21	56.09
11678.84	20.16	56.09	11357.16	1146.90	1705.99	2055.67	.00	2055.67	56.09
11778.84	20.16	56.09	11451.03	1166.13	1734.59	2090.13	.00	2090.13	56.09
11878.84	20.16	56.09	11544.90	1185.35	1763.19	2124.60	.00	2124.60	56.09
11978.84	20.16	56.09	11638.78	1204.58	1791.79	2159.06	.00	2159.06	56.09
12078.84	20.16	56.09	11732.65	1223.81	1820.39	2193.52	.00	2193.52	56.09
12178.84	20.16	56.09	11826.53	1243.04	1848.99	2227.98	.00	2227.98	56.09
12278.84	20.16	56.09	11920.40	1262.26	1877.59	2262.44	.00	2262.44	56.09

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	CLOSURE Distance FT	Direction Deg
12378.84	20.16	56.09	12014.28	1281.49	1906.19	2296.91	.00	2296.91	56.09
12478.84	20.16	56.09	12108.15	1300.72	1934.79	2331.37	.00	2331.37	56.09
12578.84	20.16	56.09	12202.02	1319.94	1963.39	2365.83	.00	2365.83	56.09
12678.84	20.16	56.09	12295.90	1339.17	1991.99	2400.29	.00	2400.29	56.09
12778.84	20.16	56.09	12389.77	1358.40	2020.59	2434.76	.00	2434.76	56.09
12878.84	20.16	56.09	12483.65	1377.63	2049.19	2469.22	.00	2469.22	56.09
12978.84	20.16	56.09	12577.52	1396.85	2077.79	2503.68	.00	2503.68	56.09
13078.84	20.16	56.09	12671.39	1416.08	2106.39	2538.14	.00	2538.14	56.09
13178.84	20.16	56.09	12765.27	1435.31	2134.99	2572.60	.00	2572.60	56.09
<b>Est. Atoka Top @ 13216' MD/12800' TVD</b>									
13215.83	20.16	56.09	12800.00	1442.42	2145.57	2585.35	.00	2585.35	56.09
13278.84	20.16	56.09	12859.14	1454.54	2163.59	2607.07	.00	2607.07	56.09
13378.84	20.16	56.09	12953.02	1473.76	2192.19	2641.53	.00	2641.53	56.09
13478.84	20.16	56.09	13046.89	1492.99	2220.79	2675.99	.00	2675.99	56.09
13578.84	20.16	56.09	13140.77	1512.22	2249.39	2710.45	.00	2710.45	56.09
13678.84	20.16	56.09	13234.64	1531.44	2277.99	2744.91	.00	2744.91	56.09
13778.84	20.16	56.09	13328.51	1550.67	2306.59	2779.38	.00	2779.38	56.09
13878.84	20.16	56.09	13422.39	1569.90	2335.19	2813.84	.00	2813.84	56.09
13978.84	20.16	56.09	13516.26	1589.13	2363.79	2848.30	.00	2848.30	56.09
14078.84	20.16	56.09	13610.14	1608.35	2392.39	2882.76	.00	2882.76	56.09
14178.84	20.16	56.09	13704.01	1627.58	2420.99	2917.23	.00	2917.23	56.09
<b>PBHL @ 14228' MD/13750' TVD</b>									
14227.83	20.16	56.09	13750.00	1637.00	2435.00	2934.11	.00	2934.11	56.09

Company: MURCHISON OIL & GAS, INC.  
 Lease/Well: Nash #53  
 Location: Eddy County  
 Rig Name: N/A  
 State/Country: New Mexico  
 Declination: 9.0

Grid: 1.8

**DDC**  
 Directional Drilling Contractors, LLC.



○ - Nash # 53 (ST @ 3200')

**VERTICAL SECTION (Ft) @ 56.09°**

11/0/93

# Patterson Drilling Company

Rig #18

14,500'

## DRAWWORKS

Drowslor N-46  
Drake: V80 Double Parmac  
Twin Disc Torque Converter

## ENGINES

Two Caterpillar 3406 Diesels, 475 HP ea

## DERRICK

Pyramid 130', 000,000// Rated Capacity

## SUBSTRUCTURE

Pyramid 10', 000,000// Setback Capacity  
KD - 19', Rotary Clearance - 15'

## MUD PUMPS

Pump #1: Idaco 700 w/Cat 379  
Pump #2: Drowslor D-750 w/Cat 379

## DRILL STRING

4-1/2" Grade E. Now, 20// Drill Pipe  
6-1/2" Now Drill Collars  
Other sizes of drill pipe and drill collars are available

## BLOWOUT PREVENTERS\*

13 5/8" 5,000// Ram/Ram/Annular Shaffer SL

## MUD SYSTEM

Shale pit, 500 bbls, suction pit, 500 bbls, 3 sub pumps, 2 electric mud stirrers, 2 mud mixing pumps (6x8 centrifugal), two 70 HP electric motors, double screen high-speed vibrating shale shaker

## MUD HOUSE

None

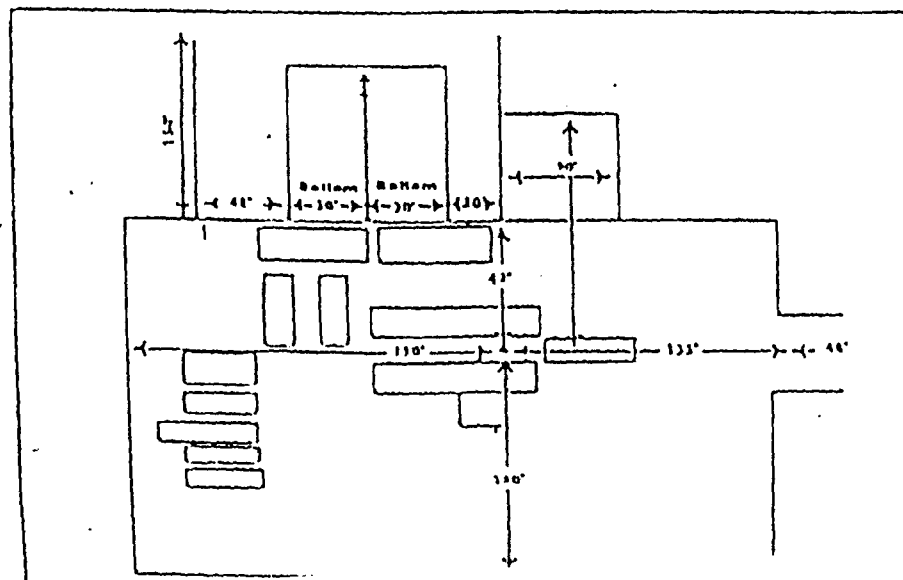
## COMMUNICATIONS

24 hour direct cellular telephone

## OTHER EQUIPMENT

Blocks. Gardner Denver 300 Ton  
Hook. Gardner Denver 300 Ton  
Swivel. 7 SX Drowslor 300 Ton  
Rotary Table. Gardner Denver 27 1/2"  
Electrical Power. Two 275 kW Generators w/3400 Cal  
Fresh Water Storage. 1000 bbls  
Housing.

\*Hole Requirements will dictate actual Reserve Pit size (TOOLPUSHER SHOULD BE CONSULTED)



Fill  
Line

Flowline

Hydril  
3000 PSI

Pipe Rams

5000 PSI

Blind Rams

5000 PSI

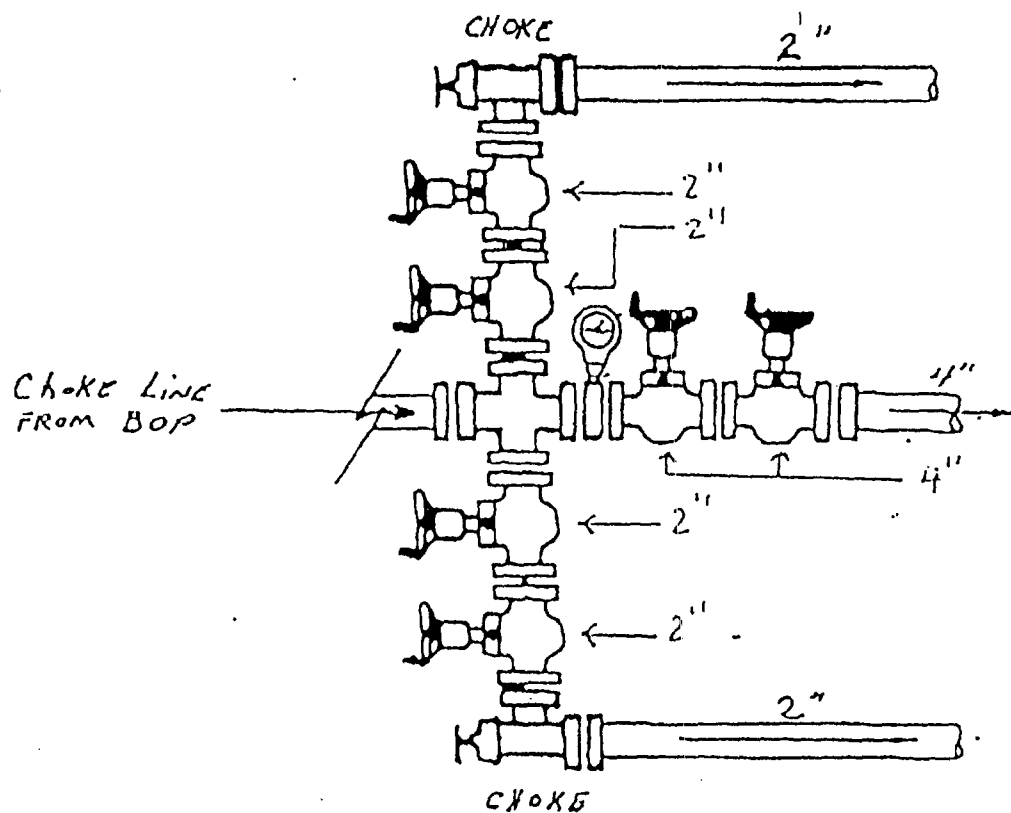
Kill  
Line

Drilling  
Spool

Choke  
Manifo

13 5/8" 3000 psi WP FLANGE  
Slip-On CASING HEAD





Form 3160-3  
(September 2001)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004SUNDRY NOTICES AND REPORTS ON WELLS  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

JUN 2003

RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on reverse side

## 1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

## 2. Name of Operator

MURCHISON OIL &amp; GAS, INC.

## 3a. Address 1100 MIRA VISTA BLVD.

PLANO, TX. 75093-4698

## 3b. Phone No. (include area code)

(972) 931-0700

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SEC. 12, T23S, R29E

At surface 1663' FSL &amp; 2185' FWL

At proposed prod. zone 1980' FNL &amp; 660' FEL UNIT H

## 5. Lease Serial No. NM 14140 BHL

NM 0556859-A SHL

If Indian, Allottee or Tribe Name

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

NASH UNIT

## 8. Well Name and No.

NASH UNIT #53

## 9. API Well No.

30-015-32548

## 10. Field and Pool, or Exploratory Area

NASH DRAW

## 11. County or Parish, State

EDDY CO., NM.

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other CONSTRUCT A
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	DISPOSAL PIT FOR
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	DRILL CUTTINGS

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Pursuant to the Approved drilling plan dated 11/29/02, Murchison Oil & Gas, Inc. intends to construct a disposal pit for wellbore cuttings as stipulated on the old drilling pad for the Nash Unit #7 located 685' FNL & 1295' FWL, Sec. 18, T23S, R30E, the old pad is partially on BLM land and State land. The disposal pit will be constructed entirely on BLM land and within the boundaries of the old drilling pad. Please refer to the attached diagram. The size of the disposal pit will not be as large as the area shown but will be located within the area designated. The disposal pit will be lined and reclaimed as stipulated. Verbal approval has been granted by Berry Hunt. Construction will begin on 6/19/03.

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

MICHAEL S. DAUGHERTY

Title

VICE PRESIDENT OPERATIONS

Signature

*Michael S. Daugherty*

Date

6/18/03

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

## Approved by

*John A. Tighe*

FIELD MANAGER

Date

19 JUN 2003

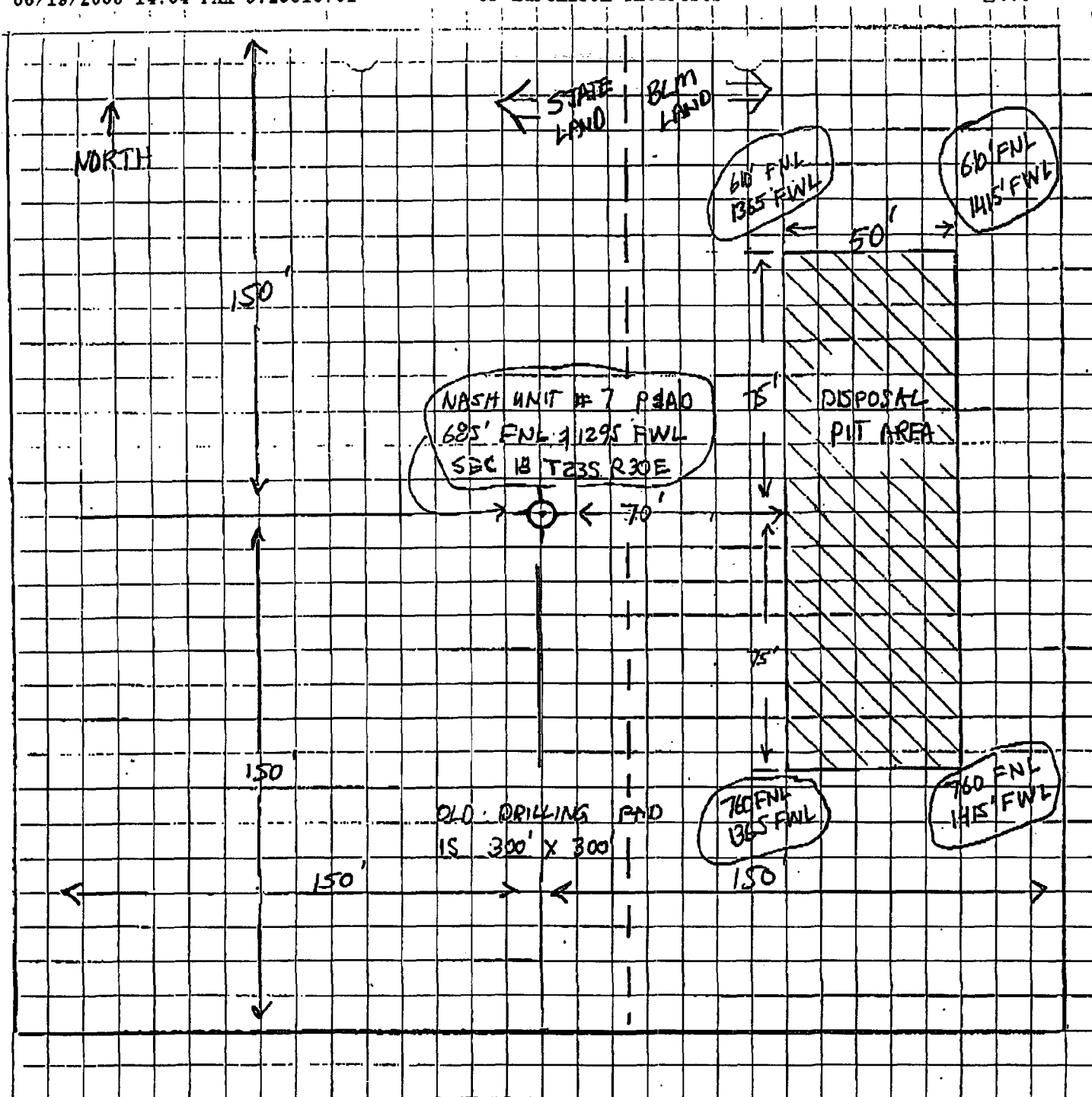
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)



Murchison Oil & Gas, Inc.  
Attachment to Form 3160-5 dated 6/18/03  
Nash Unit #53  
Eddy Co., NM.

JUN 2003

RECEIVED  
OCD ARTESIAUNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTOil Cons.  
N.M. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004SUNDRY NOTICES AND REPORTS ON WELLS  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

## 1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

## 2. Name of Operator

MURCHISON OIL &amp; GAS, INC.

## 3a. Address 1100 MIRA VISTA BLVD.

PLANO, TX. 75093-4698

## 3b. Phone No. (include area code)

(972) 931-0700

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SEC. 12, T23S, R29E

At surface 1663' FSL &amp; 2185' FWL

At proposed prod. zone 1980' FNL &amp; 660' FEL UNIT H

5. Lease Serial No. NM 14140 BHL  
NM 0556859-A SHL

6. If Indian, Allottee or Tribe Name

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

NASH UNIT

8. Well Name and No.

NASH UNIT #53

9. API Well No.

30-015-32548

10. Field and Pool, or Exploratory Area

NASH DRAW

11. County or Parish, State

EDDY CO., NM.

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other SPUD WELL
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	RUN SURFACE CASING
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	& CEMENT

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Spud well @ 19:00 HRS 6/13/03 and drill 20" hole to 420'. Ran 10 jts. of 16" 75#/FT J-55 BUTT casing to a depth of 420. Cemented w/ 520 SX Class "C" + 2% CaCl + 1/4 #/SX Celloflakes. Circulate 100 SXS to pit. Cement job witnessed by Paul w/ BLM Carlsbad Office. Plug down at 19:00 HR. 6/14/03. WOC and cut off conductor and casing and weld on flange. Nipple up 21-1/4" Hydrill. Run in hole with BHA. WOC total of 18 HRS. Drill out cement. Test casing and hydrill to 1000 PSI. Resume drilling 14-3/4" open hole.

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

MICHAEL S. DAUGHERTY

Title VICE PRESIDENT OPERATIONS

Signature

Date

6/18/03

ACCEPTED FOR RECORD

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

JUN 23 2003

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

ALEXIS C. SWOBODA  
PETROLEUM ENGINEER

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 reverse)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTOil Cons.  
N.M. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004RECEIVED  
JUL 2003  
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well  
☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator  
MURCHISON OIL & GAS, INC.3a. Address 1100 MIRA VISTA BLVD.  
PLANO, TX. 75093-46983b. Phone No. (include area code)  
(972) 931-07004. Location of Well (Footage, Sec., T., R., M., or Survey Description) SEC. 12, T23S, R29E  
At surface 1663' FSL & 2185' FWL  
At proposed prod. zone 1980' FNL & 660' FEL UNIT H5. Lease Serial No. NM 14140 BHL  
NM 0556859-A SHL

6. If Indian, Allottee or Tribe Name

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

NASH UNIT

8. Well Name and No.  
NASH UNIT #539. API Well No.  
30-015-3254810. Field and Pool, or Exploratory Area  
NASH DRAW11. County or Parish, State  
EDDY CO., NM.

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>RUN CASING</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<u>&amp; CEMENT</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/DIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Drill a 14-3/4" hole from 420' to a depth of 3120'. Ran 74 jts of 10-3/4" casing as follows:

	Guide Shoe				1'
1 Jt	10-3/4"	45.5 #/FT	P-110	Butt	43'
1	Float Collar				1'
4 Jts	10-3/4"	45.5 #/FT	P-110	Butt	165'
11 Jts	10-3/4"	45.5 #/FT	N-80	Butt	465'
58 Jts	10-3/4"	45.5 #/FT	J-55	Butt	2465'
					3140'

Set casing @ 3120'. Cemented w/ 1825 SX 35:65 + 2% CaCL<sub>2</sub> + 1/4 #/SX Celloflake followed w/ 200 SX Class "C" + 2% CaCL<sub>2</sub>. Circulated 450 SX to surface. Bumped plug and floats held. WOC and nipple down Hydrill. Weld on casing head. Nipple up 10,000 BOP and 5000 PSI Hydrill and manifold. Rig up top drive and drill out cement. WOC total of 48 Hrs. Test casing to 1000 PSI. Resume drilling 9-7/8" hole.

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

MICHAEL S. DAUGHERTY

Title VICE PRESIDENT OPERATIONS

Signature

Date

6/30/03

ACCEPTED FOR RECORD

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

JUL 2 2003

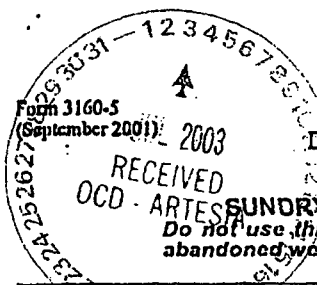
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Office

ALEXIS C. SWOBODA  
PETROLEUM ENGINEER

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(Instructions on reverse)



Oil Cons.  
N.M. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

5

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

RECEIVED  
OGD - ARTESIA

SUNDRY NOTICES AND REPORTS ON WELLS  
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

MURCHISON OIL & GAS, INC.

3a. Address

1100 MIRA VISTA BLVD.  
PLANO, TX. 75093-4698

3b. Phone No. (include area code)

(972) 931-0700

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SEC. 12, T23S, R29E  
At surface 1663' FSL & 2185' FWL

At proposed prod. zone 1980' FNL & 660' FEL UNIT H

5. Lease Serial No.

NM 14140 BHL  
NM 0556859-A SHL

6. If Indian, Allottee or Tribe Name

7. If Unit or C/A Agreement, Name and/or No.

NASH UNIT

8. Well Name and No.

NASH UNIT #53

9. API Well No.

30-015-32548

10. Field and Pool, or Exploratory Area

NASH DRAW

11. County or Parish, State

EDDY CO., NM.

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat.	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>RUN CASING &amp; CEMENT</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/DIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Drill a 14-3/4" hole from 420' to a depth of 3120'. Ran 74 jts of 10-3/4" casing as follows:

	Guide Shoe				
1 Jt	10-3/4"	45.5 #/FT	P-110	Butt	43'
1	Float Collar				1'
4 Jts	10-3/4"	45.5 #/FT	P-110	Butt	165'
11 Jts	10-3/4"	45.5 #/FT	N-80	Butt	465'
58 Jts	10-3/4"	45.5 #/FT	J-55	Butt	2465'
					3140'

Set casing @ 3120'. Cemented w/ 1825 SX 35:65 + 2% CaCL<sub>2</sub> + 1/4 #/SX Celloflakc followed w/ 200 SX Class "C" + 2% CaCL<sub>2</sub>. Circulated 450 SX to surface. Bumped plug and floats held. WOC and nipple down Hydrill. Weld on casing head. Nipple up 10,000 BOP and 5000 PSI Hydrill and manifold. Rig up top drive and drill out cement. WOC total of 48 Hrs. Test casing to 1000 PSI. Resume drilling 9-7/8" hole.

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

MICHAEL S. DAUGHERTY

Title VICE PRESIDENT OPERATIONS

Signature

Date

6/30/03

ACCEPTED FOR RECORD

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

JUL 2 2003

Office

ALEXIS C. SWOBODA  
PETROLEUM ENGINEER

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(Instructions on reverse)

Oil Cons.  
N.M. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Form 3160-3  
September 2001

AUG 2003

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

RECEIVED  
OCD - ARTESIA

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

MURCHISON OIL & GAS, INC.

3a. Address

1100 MIRA VISTA BLVD.  
PLANO, TX. 75093-4698

3b. Phone No. (include area code)

(972) 931-0700

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SEC. 12, T23S, R29E

At surface 1663' FSL & 2185' FWL

At proposed prod. zone 1980' FNL & 660' FEL UNIT H

5. Lease Serial No. NM 14140 BHL

NM 0556859-A SHL

6. If Indian, Allottee or Tribe Name

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

NASH UNIT

8. Well Name and No.

NASH UNIT #53

9. API Well No.

30-015-32548

10. Field and Pool, or Exploratory Area

NASH DRAW

11. County or Parish, State

EDDY CO., NM.

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>RUN CASING</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<u>&amp; CEMENT</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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Drill a 9-7/8" hole from 3120' to a depth of 10820'. Ran 256 jts of 7-5/8" casing as follows:

	Float Shoe			
1 Jt	7-5/8"	39 #/FTP-110	Butt	42'
1	Float Collar			1'
52 Jts	7-5/8"	39 #/FTP-110	Butt	2263'
83 Jts	7-5/8"	39 #/FTN-80	Butt	3480'
15 Jts	7-5/8"	33.7 #/FT S-95	Butt	558'
1	DV Tool			2'
22 Jts	7-5/8"	33.7 #/FTS-95	Butt	899'
83 Jts	7-5/8"	33.7 #/FTP-110	Butt	3474'
				10820'

ACCEPTED FOR RECORD

AUG - 5 2003

ALEXIS C. SWOBODA  
PETROLEUM ENGINEER

Set casing @ 10820'. Cemented w/ 850 SX 50:50:10 + 3% SMS +.75% R3 followed with 200 SX Class "H" + 5% FL25. Plug down and circulate 164 SX to pit off DV tool. WOC and circulate DV tool. Cement w/ 513 SX 50:50:10 + 5% Salt + 2% SMS followed w/ 100 SX "C" Neat. Circulate 11 SX to pit. Plug down. Nipple down, set slips, cut off 7-5/8" csg. Nipple up tbg. head and test to 5000 PSI. WOC total of 56 Hrs. Test casing to 2500 PSI. Resume drilling 6-1/2" hole.

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

MICHAEL S. DAUGHERTY

Title VICE PRESIDENT OPERATIONS

Signature

*Michael S. Daugherty*

Date

7/29/03

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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(Instructions on reverse)

Oil Cons.  
N.M. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

5. Lease Serial No. NM 14140 BHL

NM 0556859-A SHL

6. If Indian, Allottee or Tribe Name

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

NASH UNIT

8. Well Name and No.

NASH UNIT #53

9. API Well No.

30-015-32548

10. Field and Pool, or Exploratory Area

NASH DRAW

11. County or Parish, State

EDDY CO., NM.

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other RUN
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	CASING & CEMENT
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/DIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Drill 6-1/2" hole to a measured depth of 14,367 (TVD of 13,903). Bottom hole location is 2048' FNL and 672' FEL, Sec. 12, T23S, R29E. POH with drill string and run 5-1/2" liner as follows:

		Length
BOTTOM:	Guide Shoe	2'
	23 #/FTP-110 FL4S	35'
	Float Collar	1'
	93 JTS 23 #/FTP-110 FL4S	3790'
TOP:	Liner Hanger & Packer	27'

Cement with 345 SX of Class "H" + 1% BA-56 + 8/10% FL-25 + 3% Salt. Displaced with mud. Liner hanger and packer set had full returns during cementing. Bumped plug, float held. Pull 10 stands and circulate hole. POH w/ liner tool. TIH to liner top. Did not find cement @ liner top. Circulate hole w/ fresh water. POH laying down DP. Rig down and release rig @ 6:00 AM 8/13/03.

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

MICHAEL S. DAUGHERTY

Title VICE PRESIDENT OPERATIONS

Signature

*Michael S. Daugherty*

Date

8/25/03

ACCEPTED FOR RECORD

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

SEP - 4 2003

Office

ALEXIS C. SWOBODA  
PETROLEUM ENGINEER

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 reverse)



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTOil Cons.  
N.M. DIV-Dist. 2  
1801 W. Grand Avenue  
Artesia, NM 88210FORM APPROVED  
OMB NO. 1004-0137  
Expires: November 30, 2000

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry Other  
b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.,  
Other \_\_\_\_\_

2. Name of Operator  
MURCHISON OIL & GAS, INC. OGRID #015363

3. Address 1100 MIRA VISTA BLVD.  
PLANO, TX. 75093-4698 3a. Phone No. (include area code)  
(972) 931-0700

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

At surface 1663' FSL & 2185' FWL

At top prod. interval reported below

At total depth 2056' FNL & 692' FEL UNIT H

RECEIVED

NOV 26 2003

OCD-ARTESIA

14. Date Spudded 6/13/03 15. Date T.D. Reached 8/13/03 16. Date Completed  
☐ D & A ☒ Ready to Prod.

18. Total Depth: MD 14368 TVD 13904 19. Plug Back T.D.: MD 14015 TVD 13560 20. Depth Bridge Plug Set: MD 14030 TVD 14575

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

MSFL

COMPENSATED NEUTRON/DENSITY GR DUAL LATERLOG

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	WL (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20	16"J-55	75	SURFACE	420		520 "C"	79	SURFACE	
14-3/4	10-3/4J-55	45.5	SURFACE	3120		2025 35:65	700	SURFACE	
9-7/8	7-5/8N-8039&33	7	SURFACE	10820	4472	1663 50:50	636	SURFACE	
6-1/2	5-1/2P110	23	10512	14367		345 H	74	TOL	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2-7/8	13580	13580						

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MORROW	13690	13977	13690-977	3/8"	248	OPEN
B)						
C)						
D)						

26. Perforation Record

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

Depth Interval	Amount and Type of Material
13690-13977	FRAC w/ 62 K 20-40 INTERPROP & 26K GAL FOAM III TON CO2 798 MCF N2

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
11/05	11/05	24	→	0	579	56	N/A	.62	FLOWING
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
3/4"	40	0	→	0	579	56	N/A	WAITING ON PIPELINE	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
			→						

ACCEPTED FOR RECORD

NOV 25 2003

ALEXIS C. SWOBODA  
PETROLEUM ENGINEER

(See instructions and spaces for additional data on reverse side)

## 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.)

## 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
STRAWN	12458	12471	SAND	LAMAR	3140
ATOKA BANK	12830	12861	LIME	DELAWARE BELL C.	3170
ATOKA SAND	13046	13065	SAND	DELAWARE CHERRY C.	4231
	13067	13072	SAND	DELAWARE BRUSHY C.	5231
U. MORROW SAND	13529	13548	SAND	BONE SPRING	5246
				3rd BONE SPRING	6940
				WOLFCAMP	10474
M. MORROW SAND	13690	13977	SAND	STRAWN	12453
				ATOKA	12568
				ATOKA BANK	12829
L. MORROW SAND	14045	14191	SAND	MORROW	13419

32. Additional remarks (include plugging procedure):

## 33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)    2. Geologic Report    3. DST Report    4. Directional Survey  
5. Sundry Notice for plugging and cement verification    6. Core Analysis    7. 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) MICHAEL S. DAUGHERTYTitle VICE PRESIDENT OPERATIONSSignature Michael S. DaughertyDate 11/20/03

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.

Submit in duplicate to  
appropriate district office.  
See Rule 401 & Rule 1122

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, NM 87505

RECEIVED Form C-122  
Revised October, 1999  
DEC - 2 7003

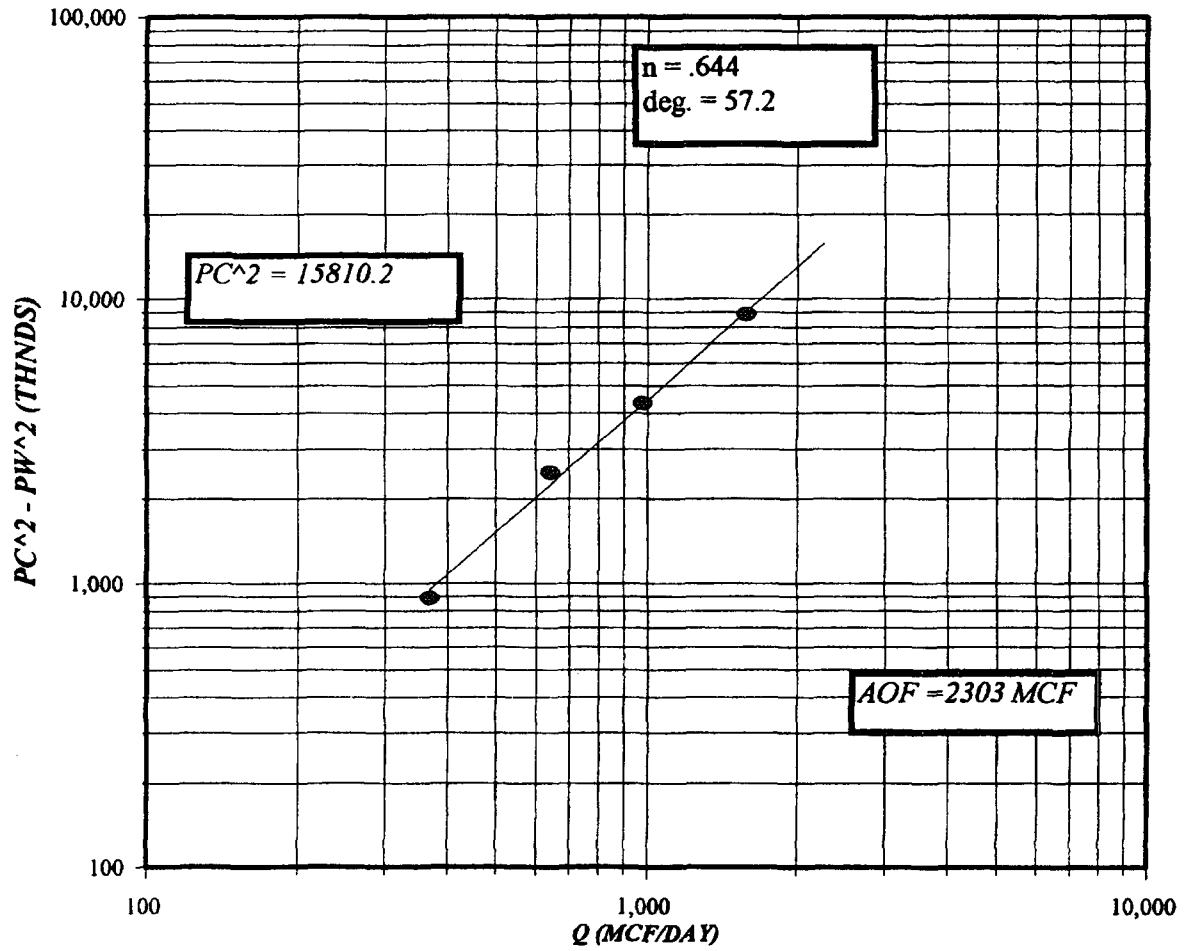
30-015-22548

OCD-ARTESIA

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MURCHISON OIL & GAS, INC.				Lease or Unit Name NASH UNIT			
Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special						Test Date 11-21-03	Well No. 53
Completion Date 11-05-03		Total Depth 14367		Plug Back TD 14015		Elevation 2986 GL	Unit Ltr - Sec - TWP - Rge K 12 23 29
Csg. Size 5 1/2	Wt. 23	d 4.67	Set At 14367	Perforations: From: 13690 To: 13997		County EDDY	
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 13582	Perforations: From: OPEN To: ENDED		Pool NASH DRAW MORROW	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 13582		Formation MORROW	
Producing Thru TBG		Reservoir Temp. °F 188.8 @ 13582	Mean Annual Temp. °F 60	Baro. Press. - P <sub>a</sub> 13.2		Connection DUKE ENERGY	
L 13582	H 13582	Gg 0.688	%CO <sub>2</sub>	%N <sub>2</sub>	%H <sub>2</sub> S N/A	Prover N/A	Meter Run 3.068
Taps FLG							
FLOW DATA				TUBING DATA		CASING DATA	
No.	Prover Line Size	Orifice x Size	Press p.s.i.g.	Diff. h <sub>w</sub>	Temp. °F	Press p.s.i.g.	Temp. °F
SI						3963	PKR
1	3 X	1.625	50	7.3	87	3850	"
2	3 X	1.625	50	21.7	73	3639	"
3	3 X	1.625	53	45.8	65	3372	"
4	3 X	1.625	63	110.5	63	2625	"
5							
RATE OF FLOW CALCULATIONS							
No.	COEFFICIENT (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor Ft.	Gravity Factor F <sub>g</sub>	Super Compress Factor F <sub>pv</sub>	Rate of Flow Q. Mcfd
1							369
2							643
3	METERED	BY		TOTAL	FLOW	METER	977
4							1,581
5							
No.	P <sub>r</sub>	Temp. °R	T <sub>r</sub>	Z	Gas Liquid Hydrocarbon Ratio		
1					A.P. I. Gravity of Liquid Hydrocarbons		
2					Specific Gravity Separator Gas		
3		N/A			Specific Gravity Flowing Fluid		
4					Critical Pressure		
5					Critical Temperature		
P <sub>c</sub> 3976.2 P <sub>c2</sub> 15810.2				DRY GAS Mcf bbl.			
				A.P. I. Gravity of Liquid Hydrocarbons DRY Deg.			
				Specific Gravity Separator Gas 0.688 XXXXXXXX			
				Specific Gravity Flowing Fluid XXXXXX			
				Critical Pressure 669 P.S.I.A. 669 P.S.I.A.			
				Critical Temperature 385 R. 385 R.			
No.	P <sub>t</sub> <sup>2</sup>	P <sub>w</sub>	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	(1) $P_c^2 = \frac{1.793}{P_c^2 - P_w^2}$ (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.457$		
1		3863.5	14926.5	883.7			
2		3653.1	13345	2465.3			
3		3387.3	11473.9	4336.3			
4		2644.6	6994.1	8816.1			
5							
Absolute Open Flow 2,303 Mcfd @ 15.025				Angle of Slope (°): 57.2 Slope n: 0.644			
Remarks: WELL PRODUCED NO FLUID DURING TEST							
Approved By Division:		Conducted By: JARREL SERVICES, INC.		Calculated By: BM		Checked By: BM	

MURCHISON OIL & GAS  
NASH UNIT # 53



\*COMPANY :MURCHISON O & G, INC LEASE : NASH UNIT WELL NO. : 53  
UNIT : K SECTION : 12 TOWNSHIP : 23  
L : 13582 H : 13582 L/H : 1 G/GNIX : 0.688  
%CO2 : %N2 : H2S : DATE :11-21-03  
d : 2.441 Pr :0.010763 GH : 9344.4 RANGE : 29

Pc = 3976.2 Pc2 = 15810.2 \*  
Pt2 = \*\*\*\*\* Pw = 3863.5 \*  
\*\*\*\*\* 3653.1 \*  
\*\*\*\*\* 3387.3 \*  
\*\*\*\*\* 2844.6 \*

VOL 1 : 369 PSIA 1 : 3863.2  
VOL 2 : 643 PSIA 2 : 3652.2  
VOL 3 : 977 PSIA 3 : 3385.2  
VOL 4 : 1581 PSIA 4 : 2638.2

RESV.TEMP 188.8

SHUT-IN PR= 3976.2

Pc2-Pw2= 883.7 Pw2 = 14926.5 \*  
2465.2 13345.0 \*  
4336.3 11473.9 \*  
8816.1 6994.1 \*

PCR : 669

TCR : 385

n = 0.644

Pc2/(Pc2-Pw2) = 17.891

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 QM	0.369	0.369	0.643	0.643	0.977	0.977	1.581	1.581
2 TW	534	534	534	534	534	534	534	534
3 Ts	648.8	648.8	648.8	648.8	648.8	648.8	648.8	648.8
4 T	591.4	591.4	591.4	591.4	591.4	591.4	591.4	591.4
PR (est)	5.77		5.46		5.06		3.94	
5 Z(est)	0.841	0.908	0.826	0.887	0.808	0.862	0.776	0.801
6 TZ	497.2	536.7	488.2	524.5	478.1	509.6	459.0	473.7
7 GH/TZ	18.796	17.409	19.139	17.815	19.546	18.337	20.360	19.728
8 eS	2.024	1.921	2.050	1.950	2.081	1.989	2.146	2.096
9 l-e-S	0.506	0.479	0.512	0.487	0.520	0.497	0.534	0.523
10 Pt	3863.2	3863.2	3652.2	3652.2	3385.2	3385.2	2638.2	2638.2
11 Pt2 /1000	14924.3	14924.3	13338.6	13338.6	11459.6	11459.6	6960.1	6960.1
12 Pr	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763
13 Pc=PrTZ	5.351	5.777	5.255	5.645	5.145	5.485	4.940	5.098
14 PcQm	1.97	2.13	3.38	3.63	5.03	5.36	7.81	8.06
15 L/H(PcQm)	3.9	4.5	11.4	13.2	25.3	28.7	61.0	65.0
16 Pw	1.971981	2.178710	5.847196	6.421174	13.12945	14.27844	32.56989	33.962781
17 Pw2	14926.3	14926.5	13344.4	13345.0	11472.7	11473.9	6992.7	6994.1
18 Ps2	30203.7	28674.0	27352.5	26029.2	23878.1	22821.5	15004.4	14656.2
19 Ps	5495.8	5354.8	5230.0	5101.9	4886.5	4777.2	3873.6	3828.3
20 P	4679.5	4609.0	4441.1	4377.0	4135.9	4081.2	3255.9	3233.3
21 Pr	6.99	6.89	6.64	6.54	6.18	6.10	4.87	4.83
22 Tr	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
23 Z	0.908	0.901	0.887	0.881	0.862	0.857	0.801	0.800

6.413  
3.646  
1.793

[Pc2/Pc2-Pw2]n = 6.408

AOF= Q

2.364  
2.128  
2.248  
2.303

FORM C122-D



**DIRECTIONAL DRILLING CONTRACTORS, LLC.**

Job Number: MDR-3116

Company: MURCHISON OIL & GAS, INC.

Lease/Well: Nash #53

Location: Eddy County

Rig Name: Big Dog #11

RKB: 3013'

G.L. or M.S.L.: 2986'

State/Country: New Mexico

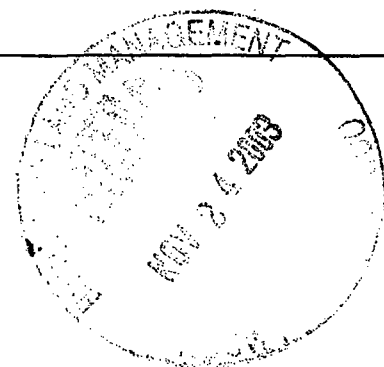
Declination: 8.81935

Grid: -0.2100

File name: C:\PROPOS-1\2003\03090'S\03-090\03-090R1.SVY

Date/Time: 17-Sep-03 / 10:09

Curve Name: DDC As-Drilled Nash #53



**WINSERVE SURVEY CALCULATIONS**  
*Minimum Curvature Method*  
*Vertical Section Plane 56.09*  
*Vertical Section Referenced to Wellhead*  
*Rectangular Coordinates Referenced to Wellhead*

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	CLOSURE	
								Distance FT	Direction Deg
<b>Tie-In to Gyrodata Surveys</b>									
3100.00	.93	140.28	3099.27	20.15	.00	-21.12	38.48	43.89	118.76
3232.00	1.00	147.90	3231.25	20.22	.11	-22.92	39.78	45.91	119.95
3327.00	.80	112.20	3326.24	20.57	.61	-23.87	40.83	47.30	120.31
3423.00	1.30	82.30	3422.22	21.92	.76	-23.98	42.53	48.83	119.42
3518.00	1.40	83.70	3517.20	23.91	.11	-23.71	44.75	50.64	117.91
3613.00	1.80	79.90	3612.16	26.31	.44	-23.32	47.37	52.80	116.21
3709.00	1.80	79.00	3708.11	29.08	.03	-22.77	50.34	55.25	114.34
3805.00	2.30	74.30	3804.05	32.29	.55	-21.96	53.67	57.99	112.25
3901.00	2.20	75.80	3899.98	35.86	.12	-20.98	57.31	61.04	110.11
3997.00	2.60	75.80	3995.89	39.64	.42	-20.00	61.21	64.40	108.09
4093.00	3.00	66.40	4091.78	44.16	.63	-18.46	65.62	68.17	105.71
4189.00	3.50	63.90	4187.62	49.54	.54	-16.16	70.56	72.39	102.90
4283.00	3.90	62.30	4281.43	55.56	.44	-13.42	75.97	77.14	100.02
4378.00	3.90	57.50	4376.21	62.00	.34	-10.18	81.55	82.18	97.11
4474.00	4.60	55.90	4471.94	69.12	.74	-6.27	87.49	87.72	94.10
4569.00	4.80	54.40	4566.62	76.90	.25	-1.82	93.88	93.90	91.11
4664.00	4.60	54.30	4661.31	84.68	.21	2.72	100.20	100.24	88.44
4760.00	5.10	53.30	4756.96	92.79	.53	7.52	106.75	107.02	85.97
4855.00	5.90	55.70	4851.52	101.89	.88	12.79	114.17	114.88	83.61
4951.00	5.80	53.70	4947.02	111.67	.24	18.44	122.16	123.54	81.41

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	CLOSURE	
								Distance FT	Direction Deg
5047.00	6.60	55.10	5042.46	122.03	.85	24.47	130.59	132.86	79.39
5141.00	6.40	54.00	5135.86	132.67	.25	30.64	139.26	142.59	77.59
5235.00	6.70	53.70	5229.24	143.38	.32	36.97	147.92	152.47	75.97
5330.00	7.20	55.50	5323.54	154.87	.57	43.62	157.29	163.23	74.50
5426.00	7.50	57.40	5418.76	167.15	.40	50.40	167.53	174.94	73.25
5521.00	7.90	58.20	5512.90	179.87	.44	57.19	178.30	187.24	72.22
5616.00	8.30	57.10	5606.95	193.25	.45	64.35	189.60	200.23	71.25
5712.00	8.20	57.40	5701.96	207.03	.11	71.80	201.19	213.62	70.36
5807.00	8.80	57.40	5795.91	221.07	.63	79.37	213.02	227.32	69.57
5902.00	9.60	57.90	5889.69	236.25	.85	87.49	225.85	242.21	68.82
5997.00	10.10	57.00	5983.29	252.49	.55	96.24	239.55	258.16	68.11
6092.00	10.60	56.20	6076.74	269.56	.55	105.64	253.79	274.90	67.40
6188.00	11.10	54.80	6171.03	287.63	.59	115.88	268.68	292.60	66.67
6283.00	11.90	54.00	6264.12	306.56	.86	126.90	284.08	311.14	65.93
6378.00	12.40	53.30	6356.99	326.54	.55	138.76	300.18	330.70	65.19
6474.00	13.20	52.70	6450.61	347.77	.84	151.56	317.17	351.52	64.46
6567.00	13.90	52.00	6541.02	369.52	.77	164.87	334.41	372.85	63.76
6662.00	14.20	52.40	6633.17	392.53	.33	179.01	352.64	395.47	63.09
6757.00	14.50	53.70	6725.21	416.04	.46	193.16	371.46	418.67	62.53
6852.00	14.60	53.30	6817.16	439.88	.15	207.35	390.64	442.26	62.04
6947.00	15.10	54.00	6908.99	464.20	.56	221.78	410.25	466.36	61.60
7043.00	17.10	56.50	7001.22	490.82	2.20	236.92	432.14	492.83	61.27
7138.00	18.90	57.70	7091.57	520.16	1.93	252.85	456.79	522.11	61.03
7233.00	20.00	57.30	7181.15	551.79	1.17	269.85	483.47	553.68	60.83
7328.00	21.10	56.30	7270.10	585.13	1.22	288.12	511.37	586.95	60.60
7423.00	21.60	54.60	7358.58	619.71	.84	307.74	539.85	621.40	60.32
7519.00	21.10	53.30	7447.99	654.64	.72	328.30	568.11	656.14	59.98
7614.00	21.70	54.60	7536.44	689.27	.81	348.69	596.13	690.62	59.68
7709.00	20.30	54.00	7625.13	723.30	1.49	368.55	623.78	724.53	59.42
7804.00	21.00	53.10	7714.03	756.77	.81	388.46	650.73	757.86	59.16
7899.00	20.80	51.90	7802.78	790.59	.50	409.09	677.62	791.53	58.88
7995.00	21.50	52.40	7892.31	825.15	.75	430.34	704.97	825.94	58.60
8088.00	22.30	54.60	7978.60	859.79	1.23	450.96	732.85	860.49	58.39
8184.00	22.30	54.00	8067.42	896.20	.24	472.22	762.44	896.83	58.23
8277.00	21.50	53.60	8153.71	930.86	.88	492.70	790.43	931.41	58.06
8373.00	20.90	54.50	8243.21	965.55	.71	513.09	818.53	966.05	57.92
8468.00	18.40	54.60	8332.67	997.49	2.63	531.61	844.55	997.94	57.81
8563.00	20.00	54.90	8422.38	1028.72	1.69	549.64	870.06	1029.13	57.72
8657.00	21.20	55.60	8510.37	1061.79	1.30	568.49	897.24	1062.18	57.64
8752.00	21.70	55.60	8598.79	1096.53	.53	588.12	925.91	1096.90	57.58
8847.00	22.20	56.20	8686.91	1132.04	.58	608.02	955.31	1132.39	57.52

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	C L O S U R E	
								Distance FT	Direction Deg
8942.00	21.70	56.80	8775.02	1167.55	.58	627.62	984.92	1167.90	57.49
9038.00	23.10	55.60	8863.77	1204.13	1.53	647.98	1015.31	1204.47	57.45
9133.00	22.60	56.10	8951.32	1241.02	.56	668.69	1045.84	1241.34	57.41
9228.00	22.50	55.60	9039.06	1277.45	.23	689.14	1075.99	1277.76	57.36
9323.00	22.10	56.00	9126.95	1313.49	.45	709.41	1105.80	1313.80	57.32
9419.00	22.70	54.50	9215.71	1350.07	.86	730.26	1135.86	1350.35	57.26
9514.00	21.40	56.50	9303.76	1385.73	1.58	750.47	1165.23	1385.99	57.22
9609.00	21.60	55.80	9392.15	1420.54	.34	769.87	1194.15	1420.81	57.19
9704.00	22.60	57.00	9480.17	1456.28	1.15	789.64	1223.92	1456.54	57.17
9799.00	22.50	57.90	9567.90	1492.70	.38	809.24	1254.63	1492.97	57.18
9894.00	22.20	57.50	9655.77	1528.81	.35	828.54	1285.16	1529.09	57.19
9989.00	22.90	56.80	9743.50	1565.24	.79	848.31	1315.77	1565.53	57.19
10085.00	22.80	56.30	9831.97	1602.51	.23	868.86	1346.87	1602.80	57.17
10180.00	22.60	56.40	9919.61	1639.18	.21	889.17	1377.39	1639.46	57.16
10274.00	22.20	56.40	10006.52	1675.00	.43	908.99	1407.23	1675.28	57.14
10369.00	22.90	54.50	10094.26	1711.42	1.06	929.66	1437.22	1711.69	57.10
10465.00	23.00	53.90	10182.66	1748.83	.27	951.56	1467.58	1749.07	57.04
10560.00	22.20	53.80	10270.36	1785.31	.84	973.09	1497.06	1785.53	56.98
10655.00	23.30	53.70	10357.97	1822.02	1.16	994.81	1526.69	1822.21	56.91
10775.00	23.00	54.30	10468.31	1869.16	.32	1022.55	1564.85	1869.32	56.84

Casing Point									
10820.00	22.36	56.59	10509.83	1886.51	2.42	1032.39	1579.14	1886.66	56.82
10854.00	21.90	58.40	10541.32	1899.31	2.42	1039.27	1589.94	1899.47	56.83
10917.00	22.50	57.80	10599.65	1923.10	1.02	1051.85	1610.15	1923.27	56.84
11010.00	24.90	56.20	10684.80	1960.47	2.67	1072.23	1641.48	1960.64	56.85
11104.00	23.00	54.80	10770.71	1998.62	2.11	1093.83	1672.93	1998.79	56.82
11198.00	23.00	53.90	10857.24	2035.34	.37	1115.23	1702.78	2035.48	56.78
11290.00	21.90	54.30	10942.26	2070.45	1.21	1135.84	1731.23	2070.58	56.73
11383.00	23.80	53.20	11027.96	2106.53	2.09	1157.20	1760.35	2106.64	56.68
11476.00	22.40	53.40	11113.50	2142.97	1.51	1179.01	1789.60	2143.06	56.62
11569.00	21.10	55.50	11199.88	2177.41	1.63	1199.05	1817.62	2177.49	56.59
11663.00	20.60	57.20	11287.72	2210.86	.83	1217.59	1845.47	2210.95	56.58
11755.00	20.00	58.20	11374.01	2242.77	.75	1234.65	1872.44	2242.86	56.60
11847.00	19.20	58.00	11460.68	2273.61	.87	1250.96	1898.64	2273.71	56.62
11940.00	16.90	57.10	11549.10	2302.41	2.49	1266.41	1922.96	2302.52	56.63
12035.00	15.30	55.90	11640.37	2328.76	1.72	1280.94	1944.94	2328.86	56.63
12128.00	16.70	59.70	11729.77	2354.36	1.88	1294.56	1966.64	2354.47	56.64
12221.00	15.40	65.10	11819.14	2379.90	2.13	1306.50	1989.38	2380.03	56.71
12314.00	13.80	58.70	11909.14	2403.18	2.44	1317.46	2010.06	2403.34	56.76
12408.00	15.60	53.20	12000.07	2427.00	2.42	1330.86	2029.76	2427.16	56.75
12501.00	15.00	50.90	12089.77	2451.48	.92	1345.94	2049.11	2451.62	56.70



Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	C L O S U R E	
								Distance FT	Direction Deg
12595.00	14.50	48.30	12180.67	2475.25	.88	1361.44	2067.34	2475.36	56.63
12688.00	15.60	45.50	12270.48	2499.08	1.42	1377.95	2084.95	2499.16	56.54
12781.00	14.40	45.30	12360.31	2522.73	1.29	1394.85	2102.09	2522.78	56.43
12875.00	15.00	42.60	12451.24	2546.04	.97	1412.03	2118.63	2546.06	56.32
12969.00	14.60	43.80	12542.12	2569.45	.54	1429.53	2135.07	2569.45	56.20
13062.00	12.40	52.60	12632.55	2590.87	3.23	1444.06	2151.12	2590.87	56.13
13155.00	13.80	58.60	12723.14	2611.92	2.10	1455.91	2168.52	2611.92	56.12
13249.00	14.60	61.30	12814.26	2634.92	1.10	1467.44	2188.48	2634.92	56.16
13342.00	11.70	64.90	12904.82	2655.92	3.24	1477.07	2207.31	2655.92	56.21
13435.00	11.80	71.00	12995.87	2674.43	1.34	1484.16	2224.84	2674.44	56.29
13529.00	13.00	57.10	13087.70	2694.29	3.41	1493.04	2242.81	2694.32	56.35
13623.00	13.00	58.30	13179.29	2715.43	.29	1504.34	2260.68	2715.46	56.36
13717.00	13.60	63.90	13270.77	2736.94	1.51	1514.76	2279.60	2736.98	56.40
13809.00	14.60	66.90	13360.00	2759.05	1.35	1524.06	2299.98	2759.11	56.47
13903.00	13.90	71.40	13451.11	2781.57	1.39	1532.31	2321.58	2781.67	56.57
13996.00	13.20	75.60	13541.52	2802.36	1.30	1538.52	2342.45	2802.52	56.70
14090.00	13.20	68.90	13633.04	2822.94	1.63	1545.05	2362.86	2823.17	56.82
14183.00	14.10	66.30	13723.42	2844.44	1.17	1553.43	2383.14	2844.73	56.90
14277.00	12.00	74.20	13814.99	2865.00	2.93	1560.69	2403.03	2865.36	57.00
<b>Projection to Bit</b>									
14368.00	12.00	74.20	13904.00	2882.99	.00	1565.84	2421.24	2883.44	57.11

2051' KWL

674' F EV

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

Form C-104  
Revised June 10, 2003

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit to Appropriate District Office  
5 Copies

☐ AMENDED REPORT

**I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT**

<sup>1</sup> Operator name and Address MURCHISON OIL & GAS, INC. 1100 MIRA VISTA BLVD. PLANO, TX. 75093-4698		<sup>2</sup> OGRID Number 015363
		<sup>3</sup> Reason for Filing Code/ Effective Date NW
<sup>4</sup> API Number 30 - 015-32548	<sup>5</sup> Pool Name NASH DRAW (MORROW)	<sup>6</sup> Pool Code 81600
<sup>7</sup> Property Code	<sup>8</sup> Property Name NASH UNIT	<sup>9</sup> Well Number 53

**II. <sup>10</sup> Surface Location**

UL or lot no. H	Section 12	Township 23S	Range 29E	Lot.Idn	Feet from the 1663	North/SouthLine SOUTH	Feet from the 2185	East/West line WEST	County EDDY
--------------------	---------------	-----------------	--------------	---------	-----------------------	--------------------------	-----------------------	------------------------	----------------

**<sup>11</sup> Bottom Hole Location**

UL or lot no. H	Section 12	Township 23S	Range 29E	Lot Idn	Feet from the 2056	North/South line NORTH	Feet from the 692	East/West line EAST	County EDDY
--------------------	---------------	-----------------	--------------	---------	-----------------------	---------------------------	----------------------	------------------------	----------------

<sup>12</sup> Lse Code	<sup>13</sup> Producing Method Code	<sup>14</sup> Gas Connection Date	<sup>15</sup> C-129 Permit Number	<sup>16</sup> C-129 Effective Date	<sup>17</sup> C-129 Expiration Date
------------------------	-------------------------------------	-----------------------------------	-----------------------------------	------------------------------------	-------------------------------------

**III. Oil and Gas Transporters**

<sup>18</sup> Transporter OGRID	<sup>19</sup> Transporter Name and Address	<sup>20</sup> POD	<sup>21</sup> O/G	<sup>22</sup> POD ULSTR Location and Description
036785	DUKE ENERGY SERVICES 370 17 <sup>th</sup> STREET, STE. 900 DENVER, CO. 80202		G	H SEC. 12, T23S, R26E
15694	NAVAJO CRUDE OIL P.O. DRAWER 159 ARTESIA, NM. 88240		O	H SEC. 12, T23S, R26E
				RECEIVED
				NOV 24 2003
				OCD-ARTESIA

**IV. Produced Water**

<sup>23</sup> POD	<sup>24</sup> POD ULSTR Location and Description H SEC. 12, T23S, R26E
-------------------	---

**V. Well Completion Data**

<sup>25</sup> Spud Date 6/13/03	<sup>26</sup> Ready Date 11/5/03	<sup>27</sup> TD 14,368	<sup>28</sup> PBDT 14,015	<sup>29</sup> Perforations 13690-13977	<sup>30</sup> DHC, MC SINGLE COMPLETION
<sup>1</sup> Hole Size	<sup>32</sup> Casing & Tubing Size	<sup>33</sup> Depth Set	<sup>34</sup> Sacks Cement		
20"	16"	420	520 SX		
14-3/4"	10-3/4"	3120	2025 SX		
9-7/8"	7-5/8"	10820	1663 SX		
6-1/2"	5-1/2"	10512-14367	345 SX		

**VI. Well Test Data**

<sup>35</sup> Date New Oil	<sup>36</sup> Gas Delivery Date 11/21/03	<sup>37</sup> Test Date 11/5/03	<sup>38</sup> Test Length 24 HR.	<sup>39</sup> Tbg. Pressure 40 PSIG	<sup>40</sup> Csg. Pressure 0
<sup>41</sup> Choke Size 3/4"	<sup>42</sup> Oil 0	<sup>43</sup> Water 56	<sup>44</sup> Gas 579	<sup>45</sup> AOF	<sup>46</sup> Test Method

<sup>47</sup> I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Michael S. Daugherty*

Printed name: MICHAEL S. DAUGHERTY

Title: VICE PRESIDENT OPERATIONS

E-mail Address: mdaugherty@jdmii.com

Date: 11/20/03 Phone: (972) 931-0700

OIL CONSERVATION DIVISION

Approved by: *Jim W. Burns*

Title: *District Supervisor*

Approval Date: DEC 04 2003



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

Joanna Prukop

Cabinet Secretary

**Lori Wrotenbery**

Director

Oil Conservation Division

**Murchison Oil & Gas, Inc.**

**Nash Unit # 53**

**Section 12, T-23-S R-29E**

**Unit K, 1663' FSL & 2185' FWL (Surface Hole Location)**

**Unit H, 20456' FNL & 692' FEL (Bottom Hole Location)**

**G.L. 2986' K.B. 3013'**

**Eddy County, N.M.**

**API # 30-015-32548**

**Geological Tops/per Bryan G. Arrant-OCD  
(Measured Depths)**

<b>Salado</b>	<b>650'</b>
<b>Base of Salt</b>	<b>2914'</b>
<b>Lamar</b>	<b>3140'</b>
<b>Delaware Sands</b>	<b>3180'</b>
<b>Bone Spring</b>	<b>6940'</b>
<b>3<sup>rd</sup> Bone Spring Sand</b>	<b>9950'</b>
<b>Wolfcamp</b>	<b>10473'</b>
<b>Strawn</b>	<b>12230'</b>
<b>Atoka(NC)</b>	<b>12453'</b>
<b>Morrow Limestone</b>	<b>13433'</b>

VIA FAX – 505-476-3462

MURCHISON OIL & GAS, INC.  
MURCHISON PROPERTIES, INC.

December 4, 2003

Mr. Michael Stogner  
Chief Hearing Examiner  
State of New Mexico  
Oil Conservation Division  
1220 S. Saint Francis  
Santa Fe, NM. 87505

**RECEIVED**

DEC 10 2003

**OCD-ARTESIA**

30-015-32548

**RE: REQUEST FOR ADMINISTRATIVE APPROVAL OF A NON-STANDARD LOCATION**

Dear Mr. Stogner:

The Nash Unit #53 is located in the Nash Unit which is a Federal and State approved unit consisting of 8 sections. A map of the unit is attached. The Nash Unit #53 was drilled directionally from a drilling pad to avoid active potash mines, playa lakes, and archeological sites. The down hole location was proposed to be 1980' FNL & 660' FEL of Sec. 12 (Form C-102 is attached). The actual bottom hole location of the well based on directional surveys is 2056' FNL & 692' FEL. The well is perforated from 13,690' to 13,977' (measured depth). The bottom hole location of the top perforation is 2100' FNL & 812' FEL and the bottom perforation is 2073' FNL & 736' FEL.

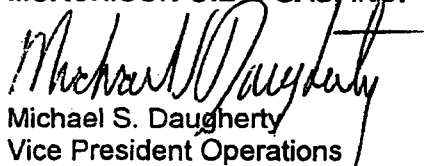
The well missed the proposed bottom hole location by approximately 82' and it is not within the spacing requirement of NMOCD Rule 104. The well is producing 600 MCFD and 34 BBL of water per day. It appears that the water production is declining, but slowly and we are concerned that shutting-in the well may cause irreparable damage. We are seeking administrative approval of a non-standard location for this well.

We believe the following circumstances offer support for our request. The bottom hole location of the well and perforations are over a mile from the nearest unit boundary. The bottom hole location of this well is within the tolerance of a bottom hole location of a straight hole drilled at a surface location of 1980' FNL & 660' FEL under normal operations.

This well required a complicated drilling procedure and the deviation in bottom hole and perforation location was unintentional on our part. If you need more data or wish to meet with me to discuss any technical issues, please let us know as soon as possible.

Very truly yours,

**MURCHISON OIL & GAS, INC.**

  
Michael S. Daugherty  
Vice President Operations

MSD/ct/NashUnit#53-Non-StndLoc

Encl.

cc: Mr. Bryan Arrant – Artesia  
Mr. Tim Gum - Artesia



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

**December 2, 2003**

**RECEIVED**

**DEC 10 2003**

**OCD-ARTESIA**

**Murchison Oil & Gas, Inc.  
1100 Mira Vista Blvd.  
Plano, TX 75093-4698  
Attn: Mr. Michael S. Daugherty**

**RE: Murchison Oil & Gas, Inc.'s gas well completion of the  
Nash Unit # 53, located in Section 12 of Township 23 South,  
Range 29 East, Eddy County, New Mexico.  
Bottom Hole Location: 2056' FNL & 692' FEL  
API # 30-015-32548**

Dear Mr. Daugherty,

In reference to the above directionally well, the top and bottom producing intervals of the Morrow formation as well as the bottom hole location is non-standard according to New Mexico Oil Conservation Division's Rule 104 for deep gas wells in southeast New Mexico. I cannot find a non-standard location approval for this well allowing for Morrow gas production. Until such an approval is issued, this well will need to be shut-in. Please refer to NMOCD's Rule 104 C. (2) for further clarification or please give me a call to discuss this matter further.

Yours truly,

**Bryan G. Arrant**

**PES**

**Cc: Michael Stogner, Chief Hearing Examiner-Santa Fe  
Tim Gum, District Supervisor-Artesia**

# OPERATOR'S COPY

Form 3160-3  
(September 2001)

## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

RECEIVED

DEC 10 2003

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

### APPLICATION FOR PERMIT TO DRILL OR REENTER COO-ARTESIA

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <i>NM 14140 BHL</i> NM 0556859-A <i>SHL</i>	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator MURCHISON OIL & GAS, INC..		7. If Unit or CA Agreement, Name and No. NASH UNIT	
3a. Address 1100 MIRA VISTA BLVD., PLANO, TX. 75093-4698		8. Lease Name and Well No. NASH UNIT #53	
3b. Phone No. (include area code) (972) 931-0700		9. API Well No.	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1663' FSL & 2185' FWL At proposed prod. zone 1980' FNL & 660' FEL UNIT H <b>R-111-P Potash</b>		10. Field and Pool, or Exploratory NASH DRAW	
14. Distance in miles and direction from nearest town or post office* 17 MILES SOUTHEAST OF CARLSBAD		11. Sec., T., R., M., or Blk. and Survey or Area SEC. 12, T23S, R29E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660' BHL	16. No. of Acres in lease 320	17. Spacing Unit dedicated to this well 320 N/2	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2965' BHL	19. Proposed Depth 14000 TVD	20. BLM/DIA Bond No. on file ROTARY	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2986' GL	22. Approximate date work will start* 9/1/02	23. Estimated duration 70 DAYS	
24. Attachments <b>Carlsbad Controlled Water Basin</b>			

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

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

25. Signature <i>Michael S. Daugherty</i>	Name (Printed/Typed) MICHAEL S. DAUGHERTY	Date 6/21/02
Title VICE PRESIDENT OPERATIONS		
Approved by (Signature) <i>Richard A. Whiteley</i>	Name (Printed/Typed) Richard A. Whiteley	Date 7/29/02
Title	Office NM STATE 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 1 YEAR

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 reverse)

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

1988, Hobbs, NM 88241-1080

**DISTRICT II**

P.O. Drawer DD, Artesia, NM 88211-0719

**DISTRICT III**

1000 Rio Brakes Rd., Aztec, NM 87410

**DISTRICT IV**

P.O. BOX 2088, SANTA FE, N.M. 87504-2088

**State of New Mexico**

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

**OIL CONSERVATION DIVISION**

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

**RECEIVED**

DEC 10 2002

**OCD-ARTESIA** ☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>NASH UNIT</b>	Well Number <b>53</b>
OGRID No. <b>015363</b>	Operator Name <b>MURCHISON OIL &amp; GAS INC.</b>	Elevation <b>2986'</b>

**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>K</b>	<b>12</b>	<b>23-S</b>	<b>29-E</b>		<b>1663'</b>	<b>SOUTH</b>	<b>2185'</b>	<b>WEST</b>	<b>EDDY</b>

**Bottom Hole Location If Different From Surface**

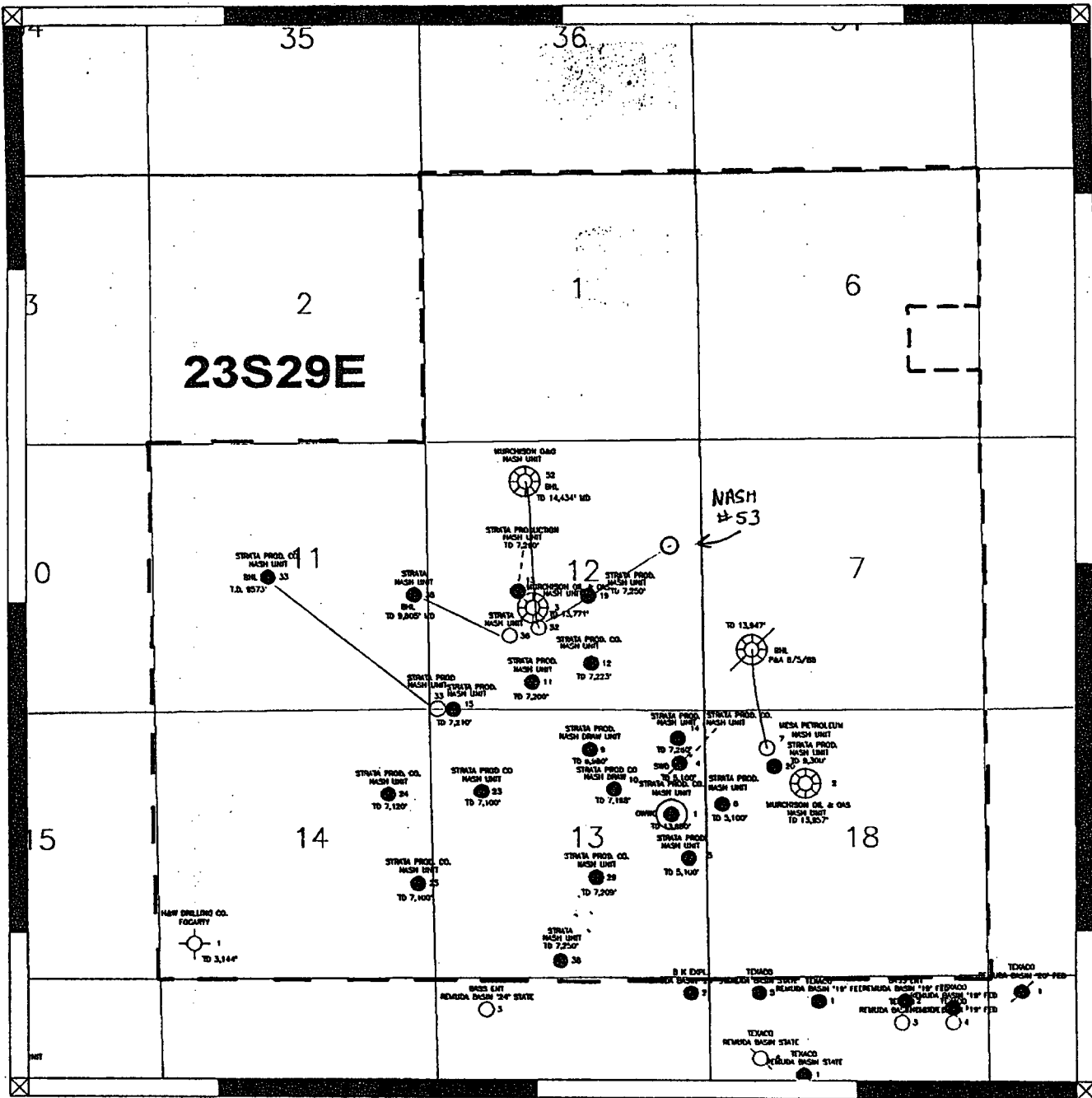
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>H</b>	<b>12</b>	<b>23-S</b>	<b>29-E</b>		<b>1980'</b>	<b>NORTH</b>	<b>660'</b>	<b>EAST</b>	<b>EDDY</b>

Dedicated Acres <b>320</b>	Joint or Infill	Consolidation Code	Order No.
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**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><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Michael S. Daugherty</i> Signature</p> <p><b>MICHAEL S. DAUGHERTY</b> Printed Name</p> <p><b>VICE PRESIDENT OPERATIONS</b> Title</p> <p><b>6/21/02</b> Date</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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><b>MAY 28, 2002</b> Date Surveyed</p> <p><i>Ronald E. Edson</i> Signature</p> <p><b>RONALD E. EDSON</b> Printed Name</p> <p><b>02.11.0394</b> Professional Surveyor No.</p> <p><b>3230</b> Certificate No.</p> <p><b>12841</b> GARY EDSON</p>
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600000.



32.30

NASH UNIT OUTLINE

PARTICIPATING AREA

Scale 1:36000.

1000. 0. 1000. 2000. 3000. 4000. 5000. feet

0.1 0. 0.1 0.2 0.3 0.4 0.5 miles

MURCHISON OIL & GAS, INC.

NASH UNIT  
EDDY CO., NM  
UNIT OUTLINE

EDDY COUNTY

3/10/2003

Scale 1:36000