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RECEIVED DHC NA

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
811 South First St., Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410
DISTRICT IV
2040 S. Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

APPLICATION FOR DOWNHOLE COMMINGLING

Form C-107-A
Revised August 1999

NOV 12 2002

APPROVAL PROCESS:

OIL CONSERVATION Administrative
DIVISION Hearing

EXISTING WELLBORE

☒ YES ☐ NO

Murchison Oil & Gas, Inc. 1100 Mira Vista Blvd., Plano, Texas 75093

Operator

Address

Big Cat State Com #1 G Sec. 11, T-17S, R-28E Eddy County

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 016363

Property Code 29051

API NO. 30-015-32091

Federal ☐ State ☒ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	UNDES - North Empire - ABO	North Anderson (W)	
2. Top and Bottom of Pay Section (Perforations)	ABO 6772-6805 9635	Wolfcamp 7528-7540 9718	
3. Type of production (Oil or Gas)	Oil	Oil	
4. Method of Production (Flowing or Artificial Lift)	Pumping	Pumping	
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) b. (Original)	a. 150 b. 10 BOPD 10 MCFD	a. b.
6. Oil Gravity (EAPI) or Gas BTU Content	42	42	
7. Producing or Shut-In?	Shut-in	Producing	
Production Marginal? (yes or no)	Yes	Yes	
* If Shut-In, give date and oil/gas/ water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/ water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: % Gas: %	Oil: % Gas: %	Oil: % Gas: %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☐ No

11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)

12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No

13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)

14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☐ Yes ☒ No

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S) _____

16. ATTACHMENTS:

- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- * Production curve for each zone for at least one year. (If not available, attach explanation.)
- * For zones with no production history, estimated production rates and supporting data.
- * Data to support allocation method or formula.
- * Notification list of working, overriding, and royalty interests for uncommon interest cases.
- * Any additional statements, data, or documents required to support commingling.

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

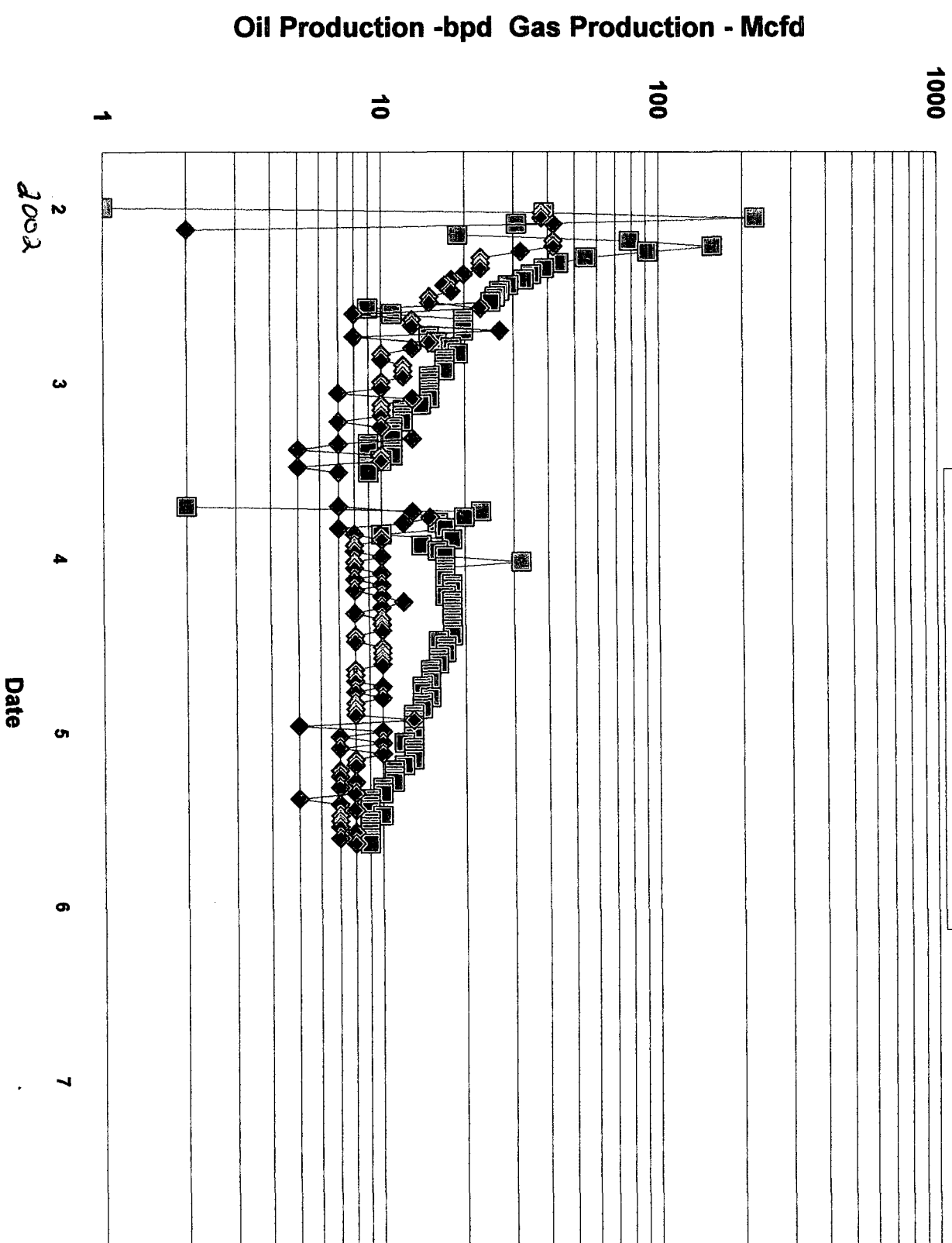
SIGNATURE Tommy W. Folsom TITLE Production Manager DATE 10/25/02

TYPE OR PRINT NAME Tommy W. Folsom TELEPHONE NO. (505) 628-3932

MURCHISON OIL AND GAS, INC.
BIG CAT STATE COM. #1
NMOCD ATTACHMENT TO FORM C-107-A

1. A C-102 is attached, it is understood that the spacing unit for each formation is 40 acres.
2. The current producing formation is from the Wolfcamp formation 7,528' to 7,540' production was started on 01/14/02, and has not been on production for a year. The current production is 10 BOPD, 10 MCFD and 30 BWPD. A production curve is attached.
3. We have not completed the ABO formation at this time. We would like to complete it and commingle it with the Wolfcamp. We will conduct a production test of the ABO during the workover by swab test. We would like to then commingle the two formations during the same workover to reduce the cost of working on the well two separate times.
4. There is no offset production from the ABO to this well. However there is ABO production that is near to this area and looks similar in log character. It is felt that the ABO in this well will start production at 30 to 40 BOPD, 40 to 50 MCFPD, and 1 to 2 BWPD on pump.

BIG CAT No. 1



Gas
Production
Oil
Production

Cum Gas Production - 2 MMcf
Cum Oil Production - 1 MBbl

MURCHISON OIL AND GAS, INC.

Big Cat State Com #1
Section 11, T-17S, R-28E
1500' FNL and 1980' FEL
Eddy County, New Mexico

ABO COMPLETION PROCEDURE

OCTOBER 22,2002

CASING:

Surface	13 3/8" - 61# J-55	@ 205'	Cmt Cir.
Intermediate	9 5/8" - 47# N-80	@ 2,200'	Cmt Cir.
Production Csg Cir.	5 1/2" - 17# N-80	@ 10,446'	Cmt

TUBING DETAIL:

2 7/8" N-80 IN WELL 7,549'

REFERENCE LOGS:

CNLDGR & ALL, Micro-CFLGR dated 12/26/01

PERFORATIONS:

WOLFCAMP 7,528' TO 7,540'

ELEVATION:

K. B. 3628' G.L. 3,612' KB Correction - 16'

EQUIPMENT:

There is 7,549' of 2 7/8" tbg in the hole along with a tbg anchor, rods and a pump. The production facilities are in place to include two 300 Bbl steel oil tanks, one 500 Bbl fiberglass water tank, and a 4 x 20 three phase treater.

DISCUSSION:

The well is currently producing around 10 BOPD, 10 MCFD, and 30 BWPD in a pumping operation. It is felt that the ABO 6772' to 6805' should be completed and commingled with the current Wolfcamp production. The oil gravity should be comparable and water from either zone should not have any adverse conditions to the other zone. The Wolfcamp is a Lime Stone and the Abo is Dolomite. It is expected tha the Abo could start production at 30 to 40 BOPD, 40 to 50 MCFD with water production. This commingled with the current production would help make this well more economical.

PROCEDURE:

1. RUPU, matting boards and PU. POOH w/ rods and pump, NUBOP and POOH w/ tbg.
2. TIH w/ RBP and set at 7000' \pm . Test RBP and csg to 2000 psi, POOH w/ tbg and pour 3 sacks sand on RBP.
3. RU wireline company and perforate ABO 6,772' to 6,805' w/ 4" csg gun 90 degree phasing at 4 JSPF. Total 33' - 132 holes.
4. TIH w/ 2 jts tail pipe, packer and tbg, spot 200 gals 15% HCL NEFE across perforations. Pull up hole and clear acid from behind packer, set packer and break down formation.
5. Open by pass on packer and spot acid down tbg, acid treat w/ 3500 gals 15% HCL NEFE dropping 150 - 1.3 RCN ball sealers evenly spaced in treatment.
6. RU swab and swab test well.
7. If required frac treat w/ 35K 20/40 Ottawa sand in crosslink delayed Viking system.
8. Swab for clean up and production test.
9. File pressure and production data with NMOCD. Clean off top of RBP and pull same for commingled production.
10. Release packer and POOH w/ tbg and packer. TIH w/ RBP fishing tool, circulate ball sealers and sand off RBP. Latch on to RBP release and POOH w/ same.

NOTE: (If the well will not circulate Bull Dog Bailor can be used to clean off RBP)
11. TIH w/ tbg, anchor and bottom hole assembly, set anchor w/ 12 points tension, set SN below bottom set of perforations, and anchor above top set of perforations.
12. ND BOP and NU well head. TIH w/ rods and pump, place well on production

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 30-015-32091	Pool Code	Pool Name
Property Code 29051	Property Name BIG CAT STATE	Well Number 1
OGRID No. 016343	Operator Name MURCHISON OIL & GAS, INC.	Elevation 3612

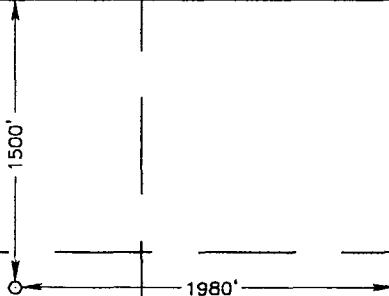

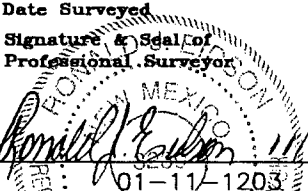
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	11	17 S	28 E		1500	NORTH	1980	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Signature Tommy W. Folsom Printed Name Production Manager Title 10/25/02 Date
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. NOVEMBER 6, 2001 Date Surveyed LMP Signature & Seal of Professional Surveyor  RONALD J. EIDSEN Certificate No. RONALD J. EIDSEN 3239 GARY EIDSON 12641
GEODETIC COORDINATES NAD 27 NMEZ Y=674067.8 X=558022.8 LAT = 32°51'10.63" N LONG = 104°08'39.81" W	

District I
PO Box 1960, Hobbs, NM 88241-1960
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brava Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-104
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
5 Copies

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

Operator name and Address MURCHISON OIL & GAS, INC. 1100 MIRA VISTA BLVD. PLANO, TX. 75093-4698		OCRID Number 015363
		Reason for Filing Code NW
API Number 30 - 015-32091	Pool Name Anderson; Wolfcamp North	Pool Code 97183
Property Code 99051	Property Name BIG CAT STATE COM	Well Number 1

II. Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
G	11	17S	28E		1500	NORTH	1980	EAST	EDDY

" Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
Loc Code	Producing Method Code	Gas Capabilities Date	C-129 Permit Number	C-129 Effective Date	C-129 Expiration Date				
S	F	WOPL							

III. Oil and Gas Transporters

Transporter OCRID	Transporter Name and Address	POD	O/G	POD ULSTR Location and Description
139633	DUKE ENERGY	2881453	G	G SEC 11 -T17S - R28E
15694	NAVAJO CRUDE OIL PRODUCING P.O. DRAWER 159 ARTESIA, NM. 88240	2881451	D	G SEC 11 -T17S - R28E

IV. Produced Water

POD	POD ULSTR Location and Description
2881453	G SEC 11 T17S R28E

V. Well Completion Data

" Spud Date	" Ready Date	" TD	" PBTD	" Perforations
11/21/01	1/14/02	10446'	10350'	7528-7540
" Hole Size	" Casing & Tubing Size	" Depth Set	" Sacks Cement	
17-1/2"	13-3/8"	205'	235 SXS	
12-1/4"	9-5/8"	2200'	1100 SXS	
8-1/2"	5-1/2"	10446'	3530 SXS	

VI. Well Test Data

Date New Oil	Gas Delivery Date	Test Date	Test Length	Tbg. Pressure	Cag. Pressure
1/14/02	WOPL	1/14/02	8 HR	0 PSI	0 PSI
Choke Size	Oil	Water	Gas	ADP	Test Method
OPEN	16	63	16	N/A	S

" 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:

Printed name:

MICHAEL S. DAUGHERTY

Title:

VICE PRESIDENT OPERATIONS

Date:

1/15/02

Phone: (972) 931-0700

Approved by:

**OIL CONSERVATION DIVISION
ORIGINAL SIGNED BY TIM W. GUN
DISTRICT II SUPERVISOR**

Title:

Approval Date:

FEB 12 2002

" If this is a change of operator fill in the OCRID number and name of the previous operator

Previous Operator Signature

Printed Name

Title

Date