

10/13/06 DATE IN	SUSPENSE	JONES ENGINEER	10/13/06 LOGGED IN	DHC TYPE	PDLC0628951001 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☐ Offset Operators, Leaseholders or Surface Owner
 [C] ☐ Application is One Which Requires Published Legal Notice
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name

Signature

Title

Date

e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240

District II
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District III
1000 Rio Brazos Road, Aztec, NM 87410

District IV
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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A
Revised June 10, 2003

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

APPLICATION TYPE

☒ Single Well

☐ Establish Pre-Approved Pools

EXISTING WELLBORE

☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

BLACK HILLS GAS RESOURCES, INC. c/o Mike Pippin LLC (agent), 3104 N. Sullivan, Farmington, NM 87401

Operator

2006 OCT 13 PM 2:19

DHC-3815

JICARILLA 29-02-21 #31

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. 013925 Property Code 32537 API No. 30-039-29523 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE <i>UNDES</i>	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	La Jara Canyon Tertiary	Basin Fruitland Coal	East Blanco Pictured Cliffs
Pool Code	97036	71629	72400
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	1156'-92'	3424'-36'	3460'-97'
Method of Production (Flowing or Artificial Lift)	Now Flowing Plan to Pump	Now Flowing Plan to Pump	Now Flowing Plan to Pump
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	258	1130	1150
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1052	1125	1185
Producing, Shut-In or New Zone	Producing Above PKR	Producing Below PKR DHC-3726	Producing Below PKR DHC-3726
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: 10/9/06 Rates: 56 MCF/D & 0 BWPD	Date: 2/21/06 Rates: 11 MCF/D	Date: 2/15/06 Rates: 407 MCF/D
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas 0% 12%	Oil Gas 0% 2%	Oil Gas 100% 86%

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones?

Yes ☒ No ☐

If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?

Yes ☐ No ☐

Are all produced fluids from all commingled zones compatible with each other?

Yes ☒ No ☐

Will commingling decrease the value of production?

Yes ☐ No ☒

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application?

Yes ☒ No ☐

NMOCD Reference Case No. applicable to this well: _____

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, royalty and overriding royalty interests for uncommon interest cases.
- Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools

List of all operators within the proposed Pre-Approved Pools

Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.

Bottomhole pressure data.

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

SIGNATURE Mike Pippin TITLE Petroleum Engineer - Agent DATE October 10, 2006

TYPE OR PRINT NAME Mike Pippin TELEPHONE NO. (505) 327-4573

E-MAIL ADDRESS mike@pippinllc.com

BLACK HILLS GAS RESOURCES, INC.
JICARILLA 29-02-21 #31 PC/FRTC/TERTIARY
L Section 21 T29N R02W
10/10/2006

Commingled Allocation Calculations

OIL

The Basin Fruitland Coal and Tertiary gas pools do not make oil in this portion of San Juan Basin. Therefore, any and all oil will be assigned to the Pictured Cliffs.

GAS

During completion operations, stabilized choke tests were individually taken for the Pictured Cliffs, the Fruitland Coal, and the Tertiary gas pools.

The Pictured Cliffs (only) choke test stabilized at 50 psi on a ½" choke for a 12 hour period on 2/15/06.

$$Q = .0555 * C * P \quad C = \text{coefficient for } \frac{1}{2}'' \text{ choke} = 112.72$$
$$P = \text{gauge pressure} + 15 \text{ psi} = 65 \text{ psi.}$$
$$Q = .0555 * 112.72 * 65 = \mathbf{407 \text{ MCF/D.}}$$

The Fruitland Coal (only) choke test stabilized at 17.7 psi on a 1/8" choke for a 17 hour period on 2/21/06.

$$Q = .0555 * C * P \quad C = \text{coefficient for } \frac{1}{8}'' \text{ choke} = 6.25$$
$$P = \text{gauge pressure} + 15 \text{ psi} = 32.7 \text{ psi.}$$
$$Q = .0555 * 6.25 * 32.7 = \mathbf{11 \text{ MCF/D.}}$$

The Tertiary (only) metered gas on 10/9/06 was **56 MCF/D** and 0 BWPD.
This well is producing above a pkr up the tbg annulus to a separate meter.

$$\text{Total gas} = 407 + 11 + 56 = 474 \text{ MCF/D.}$$

$$\% \text{ Pictured Cliffs} = \frac{407}{474} = \mathbf{86\%}$$

$$\% \text{ Fruitland Coal} = \frac{11}{474} = \mathbf{2\%}$$

$$\% \text{ Tertiary} = \frac{56}{474} = \mathbf{12\%}$$

ADDITIONAL EXPLANATION

This well is currently producing up the tubing from commingled FRTC/PC intervals below a packer at 2881' with DHC-3726. The Tertiary produces from the annulus through the casing valve to a separate meter. See the attached wellbore diagram. Since both sides are having problems producing, Black Hills Gas Resources would like to trimingle and pump the well. Both sides were recently 1st delivered on 7/20/06.

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DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87506

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29523		*Pool Code 72400	*Pool Name E. Blanco / Pictured Cliffs
*Property Code 24245 32537	*Property Name JICARILLA 29-02-21		*Well Number 31
*OGRD No. 013925	*Operator Name BLACK HILLS GAS RESOURCES		*Elevation 7077'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	21	29-N	2-W		1900	SOUTH	900	WEST	RIO ARRIBA

11 Bottom Hole Location if Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
*Dedicated Acres 160 acres - SW/4					*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

FD MRKD STONE
W/ P+C 8894

N 00-26-21 W
5544.96' (M)

LAT. 36°42'28.0"N (NAD 83)
LONG. 107°03'14.8" W (NAD 83)

FD MRKD STONE
W/ P+C 8894

S 86-04 W
5273.0' (M)

FD MRKD STONE
W/ P+C 8894

17 OPERATOR CERTIFICATION

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

Kathy L. Schneebeck
Signature

Kathy L. Schneebeck
Printed Name

Permit Agent for Black Hills

Title
April 7, 2005
Date

18 SURVEYOR CERTIFICATION

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

APR 10 2005
Date



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OIL CONSERVATION DIVISION
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Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ **AMENDED REPORT**

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-29523	² Pool Code 97036	³ Pool Name La Jara Canyon Tertiary Ext.
⁴ Property Code 32537	⁵ Property Name Jicarilla 29-2-21	⁶ Well Number 31
⁷ OGRID No. 013925	⁸ Operator Name Black Hills Gas Resources, Inc.	⁹ Elevation 7077' GL

¹⁰ Surface Location									
UL or lot no. L	Section 21	Township 29-N	Range 2-W	Lot Idn	Feet from the 1900'	North/South line South	Feet from the 900'	East/West line West	County Rio Arriba

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres 160 - SW/4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

¹⁶ 	¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.</i> Mike Pippin 6-8-06 Signature Date Mike Pippin Printed Name

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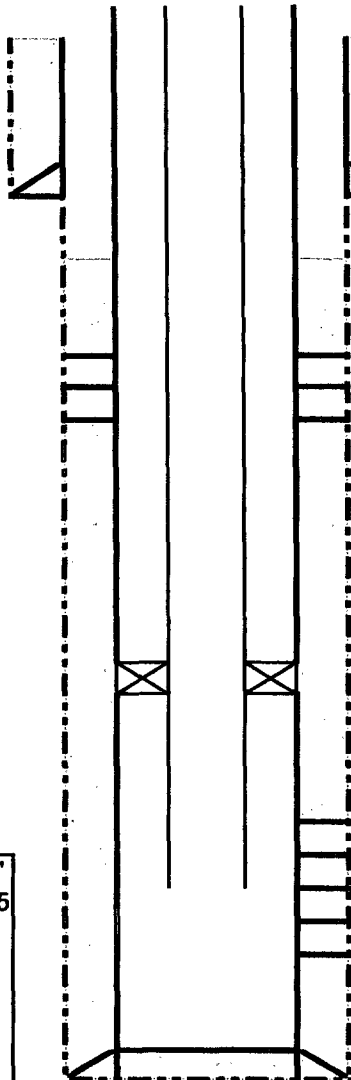
8

JIC 29-02-21 #31
Current Wellbore Diagram
 API # 30-039-29523
UNIT L NW SW, Sec 21, T29N, R02W Rio Arriba, NM
Spud Date 1-4-06

Elev. GL= 7077'
 Elev. KB= 7090'

SURF CSG
 8 5/8" 24# J-55
 @297' KB, TOC surf

PROD CASING
 5 1/2" 15.5# @ 3625'
 KB; cmt; 445 sx 65/35
 Poz lead, + 150 sx
 50/50/3 Poz tail.
 TOC= 930' - CBL



TUBING DETAIL

KB	13
91 JOINTS 2-3/8" TBG	2862.14
MODEL R PKR	6.85
18 JOINTS TBG 2-3/8"	566.63
SN	1.1
MULE SHOE	0.4
EOT	3449.72

SAN JOSE PERFS: 1156'-61', 1171'-82', 1186'-92' 4-0.34"
 SPF PERF IN ACID, BROKE DOWN W/500 GALS 7-1/2%
 HCL

**SQUEEZE HOLES @ 1340' PUMP 70 SXS CEMENT TOP
 OF CEMENT 930'**

FRTC PERFS: 3424'-36' 8 SPF, FRAC WELL W/ 19870# 20-
 40 BRADY XL FOAM SCREENED OFF ON 2# SND

Pictured Cliffs perfs: 3460'-62', 3466'-74', 3485'-87', 3495'-
 97' frac w/ 100720# 20-40 slick water foam

PBTD= 3603'

Prepared: 9-Jun-06