

Richardson Operating Company

Downhole Commingling Application

The WF Federal 25 #2 is a newly drilled Basin Fruitland Coal/Harper Hill Pictured Cliffs well. This well is part of Richardson's development program.

Pursuant to Order R-11363, Richardson Operating company seeks approval to downhole commingle the "Pre-approved pools and areas": Basin-Fruitland Coal (71629) and Harper Hill Pictured Cliffs (78160) in this well.

The Basin-Fruitland Coal is perforated at 1116'-1120', 1100'-1110', 1070'-1072', and 1017'-1024'. The Harper Hill Pictured Cliffs is perforated at 1120'-1130'.

Due to the intermingled nature of the pools and since neither pool has enough data to prepare a reliable production forecast or predict the ultimate reserves, Richardson Operating Company proposes to allocate the production on a 49/51 basis:

Pictured Cliffs Production = $0.49 \times \text{Total Production}$.

Fruitland Coal Production = $0.51 \times \text{Total Production}$.

Please see the attached document for the methodology used to determine allocation.

The downhole commingling will not reduce the value of the total remaining production of this well.

Ownership between the two pools is not identical.

Richardson Operating Company has sent notice to all interest holders in the spacing units by certified mail (return receipt) of their intent to apply for downhole commingling and no objection was received within 20 days of sending the notice.

A copy of this application has been submitted via Sundry Notice Form 3160-5 to the Bureau of Land Management.

Richardson Operating Company

Downhole Commingling Allocation Methodology

This document describes the methodology used in determining the allocation between the proposed pools to be commingled in the WF Federal 25 #2 well. Production data was obtained from the OnGard system when possible. The Ropco 4 #3 data was obtained using current production for Richardson Operating Company files. For consistency the average production from the wells was calculated by using a minimum of 6 months of initial production in the well. This average should represent the initial potential of the well. Data was gathered for the Section 4 T29N, R14W and the eight adjacent sections. Analysis was performed in October, 2002.

The data from four sections did not provide a reliable correlation to determine the allocation: Section 34, T29N R14W, Section 5, Section 8, and Section 9 T29N R14W.

Section 32 T30N R14W:

Fruitland Coal:	Dugan Bi Knobs Com 90	23 Mcf/day
	Dugan Bi Knobs 91	75 Mcf/day
Pictured Cliffs:	Dugan Bi Knobs 1	52 Mcf/day
	Dugan Bi Knobs 2R	104 Mcf/day
	Richardson WF State 32-1	42 Mcf/day

FC avg. = 49

PC avg. = 66

Section 32 allocation = 43% FC, 57% PC

Section 33 T30N R14W:

Fruitland Coal:	Richardson WF Federal 33-1	203 Mcf/day
Pictured Cliffs:	Dugan Cline #1R	75 Mcf/day
	Richardson WF Federal 33 #3	555 Mcf/day

FC avg. = 203

PC avg. = 315

Section 33 allocation = 39% FC, 61% PC

Section 4 T29N R14W:

Commingled FC/PC:	Richardson Ropco 4 #3	425 Mcf/day
Pictured Cliffs:	Richardson Ropco 4 #2	231 Mcf/day
	Richardson Ropco 4 #4	129 Mcf/day

Comm. avg. = 425

PC avg. = 180

Section 4 allocation = 57% FC, 43% PC

Section 3 T29N R14W:

Fruitland Coal:	Dugan Federal 1 #99	187Mcf/day
	Richardson WF Federal 3 #2	160 Mcf/day

Pictured Cliffs:	Dugan Federal 1 #7	266 Mcf/day
	Richardson WF Federal 3 #1	128 Mcf/day

FC avg. = 174

PC avg. = 160

Section 3 allocation = 47% FC, 53% PC

Section 10 T29N R14W:

Fruitland Coal:	Dugan Federal 1 #98	165 Mcf/day
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Pictured Cliffs:	Richardson Ropco 10 #2	115 Mcf/day
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FC avg. = 165

PC avg. = 115

Section 10 allocation = 59% FC, 41% PC

Summary:

Section 32 allocation = 43% FC, 57% PC

Section 33 allocation = 39% FC, 61% PC

Section 4 allocation = 57% FC, 43% PC

Section 3 allocation = 47% FC, 53% PC

Section 10 allocation = 59% FC, 41% PC

AVERAGE = 49% FC, 51% PC

The proposed allocation for the WF Federal 25 #2 will be 49% Fruitland Coal and 51% Pictured Cliffs.

Conditions of Approval:

Notice of Intent: Down hole commingle

Richardson Operating Company
WF Federal 25 # 2
742' FSL & 1306' FEL
Sec 25.,T30N.,R14W.
API # 3004530713

- 1) Due to the Basin Fruitland Coal and Harper Hill Pictured Cliffs intervals being in Close proximity to each other, and lack of reliable production history to make accurate determinations, you will be given authorization to produce the well with your proposed allocation rates until July 1, 2004. At the end of this period, you will Be required to resubmit your allocation rates to the Farmington Field Office, to the Attention of Matt Halbert.