

RICHARDSON OPERATING COMPANY
Bushman Federal #6-1
Commingling Application

Allocation Formula

The proposed Bushman #1 is a new drill so there is no production data available. There have been five Twin Mounds Fruitland Sand - Pictured Cliffs that have produced in the offsetting sections to the proposed Bushman #6-1. Please refer to Attachment 1 for a summary of the PC offset wells. There have been, however, no Basin Fruitland Coal completion attempts within several miles of the proposed location.

Based on the production from the offsetting Pictured Cliffs wells (Attachment #2) and anticipated drilling and completion costs Attachment #3), the Pictured Cliffs formation appears to only be capable of marginal production (Attachment #4). Since the production characteristics of the Fruitland Coal formation are unknown at this time, Richardson Operating Company, proposes to downhole commingle the production.

Both zones have very similar bottom hole pressures (approximately 200 psig from both Pictured Cliffs and the Fruitland Coal so cross flow will not be a factor. It is anticipated that both zones will produce some water. Neither zone is fluid sensitive and the fluids from the two zones should be compatible.

Since neither zone has enough data to prepare a reliable production forecast, or predict the ultimate reserves, Richardson Operating Company proposes to allocate the production based on a ratio of the well tests.

The Pictured Cliffs and Fruitland Coal will be stimulated in separate fracture treatments. Prior to retrieving the bridge plug between the two zones, a well test will be performed of the Fruitland Coal zone. After the bridge plug is pulled and the Pictured Cliffs zone is cleaned out, both zones will be tested together. The production will be allocated on the following formula:

% Fruitland Coal Production = Fruitland Coal Test/ Total Test

% Pictured Cliffs Production = 1 - % Fruitland Coal Production

BEFORE THE
CIL CONSERVATION DIVISION

Case No. 11772 Exhibit No. 9
Submitted By:
Richardson Operating Company
Hearing Date: May 15, 1997

**RICHARDSON OPERATING
BUSHMAN FEDERAL #6-1****FRUITLAND SAND - PICTURED CLIFFS OFFSET WELLS**

WELL NAME	LOCATION Sec-Twn-Rng	DATE OF 1ST PRODUCTION	CUMMULATIVE PRODUCTION MCF
Bi-Knobs #1	32H 30N 14W	9/87	102,988
State Com #45	32I 30N 14W	1/79	95,047
Mayre #1	31P 30N 14W	5/75	86,990
Sterling #1Y	8H 29N 14W	1/80	38,927
Sterling #2	8J 29N 14W	10/77	114,901

Lease Name	Bushman #1 PC	
Init Rate	55	55 per day
Init Decline	25.00%	25.00%
Time	12	12 months
Ending Rate	0	41 per day
2nd Rate	0	41 per day
2nd Decline	15.00%	15.00%
Time	12	12 months
Ending Rate	0	35 per day
3rd Rate	0	35 per day
3rd Decline	8.00%	8.00%
Time	420	420 months
Ending Rate	0	2 per day
Time in 1st Year	12 months	

Year	Start Mo	Start	End	Reserves	Cummulativ
1	1	55	41	17,445	17,445
2	13	41	35	13,896	31,342
3	25	35	32	12,279	43,621
4	37	32	30	11,296	54,917
5	49	30	27	10,393	65,310
6	61	27	25	9,561	74,871
7	73	25	23	8,796	83,668
8	85	23	21	8,093	91,760
9	97	21	20	7,445	99,206
10	109	20	18	6,850	106,055
11	121	18	17	6,302	112,357
12	133	17	15	5,798	118,155
13	145	15	14	5,334	123,488
14	157	14	13	4,907	128,396
15	169	13	12	4,514	132,910
16	181	12	11	4,153	137,063
17	193	11	10	3,821	140,884
18	205	10	9	3,515	144,400
19	217	9	8	3,234	147,634
20	229	8	8	2,975	150,609
21	241	8	7	2,737	153,347
22	253	7	7	2,518	155,865
23	265	7	6	2,317	158,182
24	277	6	6	2,132	160,314
25	289	6	5	1,961	162,275
26	301	5	5	1,804	164,079
27	313	5	4	1,660	165,739
28	325	4	4	1,527	167,266
29	337	4	4	1,405	168,671
30	349	4	3	1,292	169,963
31	361	3	3	1,189	171,152
32	373	3	3	1,094	172,246
33	385	3	3	1,006	173,253
34	397	3	2	926	174,179
35	409	2	2	852	175,030
36	421	2	2	784	175,814
37	433	2	2	721	176,535
38	445	2	2	663	177,198
39	457	2	2	610	177,809
40	469	2	1	561	178,370
41	481	1	1		

RICHARDSON OPERATING COMPANY AUTHORITY FOR EXPENDITURE							
Well Name: Bushman #6-1			Date: May 5, 1997				
Location: SE Section 6, T29N, R14W, San Juan County, NM			Objective: Commingled Pictured Cliffs and Fruitland Well				
Proposed Depth: 800'							
			Tangible	Intangible	Total	Fruitland	Pictured Cliffs
I. Drilling Costs (Include Running Casing)							
Survey and Permits				2,850	2,850	1,425	1,425
Title Opinion and Land Costs				17,500	17,500	8,750	8,750
Damages				3,000	3,000	1,500	1,500
Drilling (incl. mud, wtr. and move) 800' @ 11.00/ft.				8,800	8,800	4,400	4,400
Rig Rentals (BOP, Adapter flange, ect.)				500	500	250	250
Dirt Work				1,000	1,000	500	500
Pit Liner				200	200	100	100
Surface Casing (120' @ 6.25/ft.)			750		750	375	375
Casing Head			600		600	300	300
Cement Surface				950	950	475	475
Casing Crew				800	800	400	400
Production Casing (800' @ 3.75/ft.)			3,000		3,000	1,500	1,500
Trucking				1,500	1,500	750	750
Logs				3,100	3,100	1,550	1,550
Engineering				1,200	1,200	600	600
Cement Longstring				2,250	2,250	1,125	1,125
Total Cost to Run Casing			4,350	43,650	48,000	24,000	24,000
5.625% SJ County Tax			240	2,460	2,700	1,350	1,350
10% Contingency			440	4,370	4,810	2,405	2,405
Grand Total to Run Casing			5,030	50,480	55,510	27,755	27,755
II. Completion Costs							
Anchors, and Misc.				2,000	2,000	1,000	1,000
Perf				2,650	2,650	1,325	1,325
Tubing Head and Well Connection Fittings			3,180		3,180	1,590	1,590
Tubing (750' @ 2.25/ft.)			1,690		1,690	845	845
Stimulation				30,000	30,000	15,000	15,000
Tool Rental (RBP and Frac Valve)				1,750	1,750	875	875
Trucking				500	500	250	250
Surface Facility Installation				2,000	2,000	1,000	1,000
Restore Location				500	500	250	250
Engineering				1,200	1,200	600	600
Separator			1,650		1,650	825	825
Pipelines and Install (2100' @ 6.00/ft.)			6,300	6,300	12,600	6,300	6,300
Tank and Fittings			1,200		1,200	600	600
Completion Rig				6,400	6,400	3,200	3,200
Completion Fluids				600	600	300	300
Meter			2,500		2,500	1,250	1,250
Frac Tank Rental				400	400	200	200
Pump, Rods, Wellhead Equip. & Pump Jack			9,500		9,500	4,750	4,750
Completion Costs			26,020	54,300	80,320	40,160	40,160
5.625% SJ County Tax			1,460	3,050	4,510	2,260	2,260
10% Contingency			2,600	5,430	8,030	4,020	4,020
Total Completion Costs			30,080	62,780	92,860	46,440	46,440
Grand Total Well Costs			35,110	113,260	148,370	74,195	74,195
Prepared By: Paul C. Thompson, P.E. <i>PT</i>							
Date: May 5, 1997							
Working Interest Owners			ESTIMATED COSTS ONLY—Each participating				
Richardson Operating			Owner to pay Proportionate Share of Actual				
Others			Well Costs Subject to Operating Agreement				

ATTACHMENT #4

-- RESERVE & ECONOMIC REPORT --

PREPARED BY ----- Paul Thompson, PE	COMB NAME comb1	CATEGORY - PDP
INTEREST OWNER ----- Richardson Operating	FILE NAME c1bushmn	COUNTY --- San Juan
WELL &/OR LEASE ----- Bushman Federal #6-1	EVAL. DATE 13-May-97	STATE ---- NM
FIELD OR RESERVOIR - PC Only	EFFECTIVE DATE JAN-98	OPERATOR - Richardson Operating

NET OPERATING REVENUE										NET OPERATING EXPENSES		
--- GROSS PROD. ---		--- NET PROD ---		PRICE	PRICE	OIL	GAS	TOTAL	DIR & INDIR	SEV & ADV	TOTAL	
YEAR	OIL-BBLS	GAS-MCF	OIL-BBLS	GAS-MCF	OIL-\$	GAS-\$	REVENUE-\$	REVENUE-\$	REVENUE-\$	OPR EXP-\$	& TRANSP-	EXPENSES-\$
MANUAL INPUT												
1998	0	17445	0	14392	\$0.00	\$1.75	\$0	\$25,186	\$25,186	\$4,500	\$6,039	\$10,539
1999	0	13896	0	11464	0.00	1.80	0	20,664	20,664	4,500	4,868	9,368
2000	0	12279	0	10130	0.00	1.86	0	18,807	18,807	4,635	4,355	8,990
2001	0	11206	0	9245	0.00	1.91	0	17,679	17,679	4,774	4,024	8,798
2002	0	10310	0	8506	0.00	1.97	0	16,753	16,753	4,917	3,750	8,667
2003	0	9485	0	7825	0.00	2.03	0	15,875	15,875	5,065	3,495	8,559
2004	0	8726	0	7199	0.00	2.09	0	15,043	15,043	5,217	3,257	8,474
2005	0	8028	0	6623	0.00	2.15	0	14,255	14,255	5,373	3,037	8,410
2006	0	7386	0	6093	0.00	2.22	0	13,508	13,508	5,534	2,832	8,367
2007	0	6795	0	5606	0.00	2.28	0	12,800	12,800	5,700	2,647	8,342
2008	0	6251	0	5157	0.00	2.35	0	12,129	12,129	5,871	2,465	8,336
2009	0	5751	0	4745	0.00	2.42	0	11,494	11,494	6,048	2,300	8,348
S-TOT	0	117559	0	96986	WT.	WT.	0	194,195	194,195	62,135	43,064	105,199
REM.	0	14638	0	12076	AVG.	AVG.	0	30,169	30,169	19,253	5,942	25,196
TOTAL	0	132197	0	109062	\$0.00	\$2.06	0	224,364	224,364	81,388	49,006	130,395

YEAR	OPERATING CASH FLOW-\$	CAPITAL INVEST-\$	ANNUAL PRIN.		CASH FLOW BTAX-\$	CUM. CASH FLOW BTAX-\$	OPR CASH FLOW AFTER DEBT REDUCTION	DISC RATE-%	---PRESENT WORTH PROFILE---		
			INT. 1000-\$	PAYMENT 1000-\$					NPV BTAX-\$	DISC RATE-%	NPV BTAX-\$
Based On Mid-Year Discounting											
1998	\$14,648	\$127,970	0.0	0.0	(\$113,322)	(\$113,322)	\$14,648	2	(42,643)	40	(\$96,954)
1999	11,296	0	0.0	0.0	11,296	(102,027)	11,296	5	(53,190)	45	(99,117)
2000	9,817	0	0.0	0.0	9,817	(92,209)	9,817	8	(61,536)	50	(100,943)
2001	8,881	0	0.0	0.0	8,881	(83,328)	8,881	10	(66,165)	55	(102,504)
2002	8,086	0	0.0	0.0	8,086	(75,242)	8,086	12	(70,197)	60	(103,856)
2003	7,316	0	0.0	0.0	7,316	(67,927)	7,316	15	(75,335)	65	(105,038)
2004	6,569	0	0.0	0.0	6,569	(61,358)	6,569	18	(79,606)	70	(106,080)
2005	5,845	0	0.0	0.0	5,845	(55,513)	5,845	20	(82,068)	75	(107,008)
2006	5,141	0	0.0	0.0	5,141	(50,372)	5,141	25	(87,176)	80	(107,838)
2007	4,458	0	0.0	0.0	4,458	(45,914)	4,458	30	(91,163)	85	(108,587)
2008	3,793	0	0.0	0.0	3,793	(42,120)	3,793	35	(94,351)	90	(109,265)
2009	3,146	0	0.0	0.0	3,146	(38,974)	3,146				
S-TOT	88,996	127,970	0.0	0.0	(38,974)	(38,974)	88,996				
REM.	4,973	0	0.0	0.0	4,973	4,973	4,973				
TOTAL	93,969	127,970	0.0	0.0	(34,001)	(34,001)	93,969				

BEFORE TAX SUMMARY

MONTHS IN 1st YEAR	12
ECO LIFE	15.00
NPV @ SELECT RATE- 12.0%	(\$70,197)
NET INCOME/INVEST	0.73
INT RATE RETURN - Mid-Yr	-5.5%
PAYOUT	NO PAYOUT
\$ PER NET INIT PROD RATE	\$4,847
8/8 OIL RES	0
8/8 GAS RES	132,197
NET OIL RES	0
NET GAS RES	109,062
ULT OIL RECOV	0
ULT GAS RECOV	132,197

NET COST/BOE	\$/BOE	\$17.60	ULT OIL RECOV/ACRE	BBL	0
NET RETURN/BOE	\$/BOE	(\$4.68)	ULT GAS RECOV/ACRE	MCF	826
NET INCOME/BOE	\$/BOE	\$12.92	ULT OIL RECOV/ACRE-FT--	BBL	0
OIL ECO RATE	BBL/DAY	0.0	ULT GAS RECOV/ACRE-FT--	MCF	83
GAS ECO RATE	MCF/DAY	12.3	INITIAL W.I.	%	100.00000
INIT PROD RAT--	MCF/DAY	32	FINAL W.I.	%	100.00000
DECLINE RATE	%	8.0	INITIAL REVENUE INT.	%	82.50000
EXPONENT - N		0.0	FINAL REVENUE INT.	%	82.50000
PROD. RISK FACTOR	%	100.00	TANG & EQUIP RISK FACTOR-	%	100.00
LSEHOLD RISK FACTOR	%	100.00	IDC RISK FACTOR	%	100.00

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 11772

APPLICATION OF RICHARDSON
OPERATING COMPANY FOR
DOWNHOLE COMMINGLING
AND AN UNORTHODOX COAL
GAS WELL LOCATION,
SAN JUAN COUNTY, NEW MEXICO.

PRE-HEARING STATEMENT

This prehearing statement is submitted by William F. Carr, as required by the Oil Conservation Division.

APPEARANCES OF PARTIES

APPLICANT

Richardson Operating Company
1700 Lincoln St., Suite 1700
Denver, CO 80203
Attn: Cathy Colby
(303) 830-8000

name, address, phone and
contact person

ATTORNEY

William F. Carr, Esq.
Campbell, Carr, Berge & Sheridan, P.A.
Post Office Box 2208
Santa Fe, New Mexico 87504
(505) 988-4421

OPPOSITION OR OTHER PARTY

name, address, phone and
contact person

ATTORNEY

STATEMENT OF CASE

APPLICANT

Richardson Operating Company, applicant in the above-styled cause, seeks approval to downhole commingle conventional Pictured Cliffs/Fruitland Sand formations gas production (Twin Mounds Fruitland Sand-Pictured Cliffs Pool) to be dedicated to a standard 160-acre spacing unit comprising the SE/4 with coal gas production from the Basin-Fruitland Coal Gas Pool to be dedicated to a standard 320-acre gas spacing unit comprising the E/2 of Section 6, Township 29 North, Range 14 West, within the wellbore of its proposed Bushman "6" Federal Well No. 1 to be located 1041 feet from the South line and 1136 feet from the East line (Unit P) of said Section 6. Said well is considered to be located at an unorthodox "off-pattern" coal-gas well location.

OPPOSITION OR OTHER PARTY

(Please make a concise statement of the basis for opposing this application or otherwise state the position of the party filing this statement.)

PROPOSED EVIDENCE

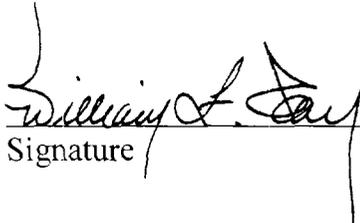
APPLICANT

WITNESSES (Name and expertise)	EST. TIME	EXHIBITS
Paul Thompson, Engineer	20 Min.	Approximately 5

OPPOSITION

WITNESSES (Name and expertise)	EST. TIME	EXHIBITS
-----------------------------------	-----------	----------

PROCEDURAL MATTERS


Signature