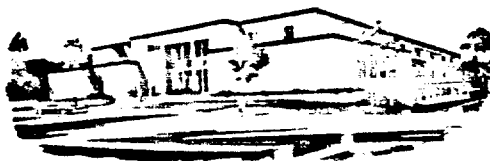


State of New Mexico



ALEX J. ARMIJO
COMMISSIONER



Commissioner of Public Lands

January 8, 1982

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Blackwood & Nichols Co. Ltd.
2013 First National Center West
Oklahoma City, Oklahoma 73102

Re: Northeast Blanco Unit
1982 Plan of Development
San Juan and Rio Arriba
Counties, New Mexico

318

ATTENTION: Mr. Charles F. Blackwood

Gentlemen:

The Commissioner of Public Lands has this date approved your 1982 Plan of Development for the Northeast Blanco Unit, San Juan and Rio Arriba Counties, New Mexico. Such plan proposes the drilling of the Well Nos. 55-A, 70-A, 72-A, 73, 74, 75, 76, 77, 78, and 79 which will test the Mesaverde formation. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files. The Four Dollar (\$4.00) Dollar filing fee has been received.

Please be advised that in the future the following information will be required by this office on all future plans of development involving State Lands.

1. An up to date map showing all well numbers locations and current well status.
2. A complete production history by month for the years beginning with 1980.

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division
AC 505/827-2748

AJA/RDG/pm
encls.

cc: OCD-Santa Fe, New Mexico
 USGS-Albuquerque, New Mexico

ECONOMIC EVALUATION OF THE
NORTHEAST BLANCO UNIT FRUITLAND-PICTURED CLIFFS WELLS

Northeast Blanco Unit
Well No. 208
SW/4 Sec. 12 T31N R7W
San Juan Co., New Mexico

Completed June 5, 1981
Initial Potential 3425 Mcfpd.

1981 Production
October 14,002
November 8,522
December 7,192

Cumulative production through January 1, 1982 - 29,716

The actual cost of this well was \$248,695. \$190,924 of that amount was intangible expense and \$57,770 was equipment.

The average gas price received to date is approximately \$3.37 per Mcf. The Fruitland-Pictured Cliffs reservoirs are now designated as "tight reservoirs" and this well is eligible to receive twice the category 103 price retroactively. This means that the average final price will be \$6.74 per Mcf. for gas produced prior to 1982.

Economics to date:

Well cost	\$248,695
Operating cost	850
Total cost	<u>249,695</u>

Income @ \$6.74 x 29,716 Mcf.	\$200,285
less Royalty plus O. R. R. .164209	(32,888)
less Taxes @ 9%	<u>(18,026)</u>
Net Income	\$149,371
Less Costs	(249,454)
Remaining to be paid out	(100,174)

ESTIMATED FUTURE PRODUCTION

Year	Mcf.	Price	Gross Income	Net Income .745791	Disc. Factor @ 15%	Net Income Discounted
1982	60,000	7.08	424,800	316,812	.87	\$ 275,626
1983	54,000	7.79	420,660	313,724	.76	238,430
1984	48,600	8.57	416,502	310,623	.66	205,011
1985	43,740	9.42	412,030	307,288	.57	175,154
1986	39,366	10.37	408,225	304,450	.50	152,225
						<u>\$1,046,446</u>
						(100,174)
						\$ 946,272

Remaining to be paid out as of 1/1/82
Profit above 15% rate of return

This well is estimated to pay out in 1982 and earn a substantial profit thereafter.

Yours very truly,

Charles F. Blackwood

Charles F. Blackwood

ECONONOMIC EVALUATION OF THE
NORTHEAST BLANCO UNIT FRUITLAND PICTURED CLIFFS WELLS

Northeast Blanco Unit
Well No. 206
790 FSL, 1190 FWL
Sec. 10, T31N, R7W
San Juan Co., New Mexico

Completed June 8, 1981
Initial Potential 890 Mcfpd.
Initial SIP 1340 psig
Perforations 3518-3549

The actual cost of this well was \$185,925 intangible expense and \$51,577 equipment for a total of \$237,502.

This well now qualifies for category 107 "tight reservoir" pricing under the provision of the N. G. P. A.

The open hole logs used to evaluate the NEBU #206 well are those of the adjacent NEBU #64. The Pictured Cliffs zone which is now perforated contains approximately 70 feet gas bearing sandstone from 3,507 to 3,585. The average porosity is estimated to be 10% and the average water saturation 50% throughout this interval.

An additional gas bearing sandstone in the Fruitland Formation from 3406 to 3453 shows an average porosity of 12% and a water saturation of 50%. This interval has not yet been perforated but is expected to produce commercial quantities of gas when this zone is completed.

The volumetric estimate of the reserves for the Pictured Cliffs Formation of the NEBU #206 well follows:

Net feet of Pay	70 ft.
Average Porosity	10%
Average Water Saturation	50%
Estimated Recovery Factor	50%
Estimated BHP	1450 psig
Measured SIP	1340
Estimated Z =	.8

Gas Calculations

$$43,560 \times .10 \times (1-.5) = 2,178 \text{ cuft./oc.ft.}$$

$$Bg = \frac{35.35 \times 1450}{.8 \times 600} = \frac{51257}{480} = 106.7 \text{ scuft/cuft.}$$

$$\begin{aligned} \text{Gas in Place} &= 2178 \times 106.7 \times 70 \times 160 = 2,602,797 \text{ Mcf.} \\ \text{Recoverable Reserve } 50\% &\times 2,602,797 = 1,300,000 \text{ Mcf.} \end{aligned}$$

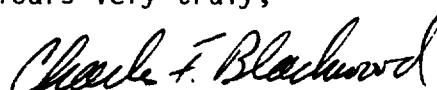
Estimated Production

<u>Year</u>	<u>Mcf.</u>	<u>Price</u>	<u>Gross Income</u>	<u>Net Income</u> <u>(.731582)</u>	<u>Disc. Factor</u> <u>@ 15%</u>	<u>Net Income</u> <u>Discounted</u>
1982	60,000	7.08	428,800	313,702	.87	272,920
1983	57,000	7.79	444,030	324,844	.76	246,881
1984	54,150	8.57	464,065	339,502	.66	224,071
1985	51,442	9.42	484,583	354,512	.57	202,072
1986	48,870	10.37	506,782	370,753	.50	185,376
1987	46,427	11.40	529,268	738,203	.43	166,497
1988	44,105	12.54	553,077	404,621	.38	153,756
1989	41,900	13.80	578,220	423,015	.33	139,595
1990	39,805	15.18	604,240	442,051	.28	123,774

A comparison of estimated future net income with the remaining costs to be paid out shows that payout will occur in one year.

The considerable remaining recoverable reserves make this a much better than commercial undertaking.

Yours very truly,



Charles F. Blackwood

CFB:jw

ECONOMIC EVALUATION OF THE
NORTHEAST BLANCO UNIT FRUITLAND-PICTURED CLIFFS WELLS

Northeast Blanco Unit
Well No. 205
SE/4 Sec. 10 T31N R7W
San Juan Co., New Mexico

Completed August 7, 1979
Reworked and recompleted July 7, 1980
Perforations now open 3350-62
Deliverability Test after rework 55Mcfpd.

1981 Production

January	1003	July	190
February	550	August	653
March	836	September	shut in
April	715	October	670
May	321	November	709
June	shut in	December	713

Cumulative production through December 31, 1981 15,632 Mcf.

The actual cost of this well including the rework was \$190,544, of that \$150,660 was intangible expense and \$39,884 was equipment.

The average gas price received to date has been approximately \$3.00 per Mcf. The Fruitland and Pictured Cliffs reservoirs are now designated "tight reservoirs" and this well is now eligible to receive twice the category 103 price retroactively. This means that the average final price will become approximately \$6.00 per Mcf. for production prior to 1982.

Economics to date:

Well cost	\$190,544
Operating costs	<u>6,721</u>
Total costs	\$197,365

Income @ \$6.00/Mcf. x 15,632 Mcf.	\$ 93,792
less Royalty @ .178418	(16,734)
less Taxes @ 9%	(8,441)
Net Income	68,617
Less costs	(197,365)
remaining to be paid out	(128,749)

This well is currently producing approximately 700 Mcf. per month and is showing almost no decline.

ESTIMATED FUTURE PRODUCTS

<u>Year</u>	<u>Mcf.</u>	<u>Price</u>	<u>Gross-Income</u>	<u>Net Income</u> (.731582)	<u>Disc. Factor</u> @ 15%	<u>Net Income</u> <u>Discounted</u>
1982	8,000	6.60	52,800	38,627	.87	\$ 33,605
1983	8,000	7.26	58,080	42,490	.76	33,292
1984	8,000	7.99	63,920	46,763	.66	30,863
1985	8,000	8.78	70,240	51,386	.57	29,290
1986	8,000	9.66	77,280	56,537	.50	29,268
1987	7,600	10.63	80,788	59,103	.43	25,414
1988	7,220	11.69	84,402	61,747	.38	23,463
1989	6,859	12.86	88,206	64,530	.33	21,295
1990	6,516	14.14	92,136	67,405	.28	18,873
1991	6,190	15.56	96,316	70,463	.25	17,615
1992	5,880	17.12	100,666	73,645	.21	15,465
1993	5,587	18.88	105,482	77,168	.19	14,662
1994	5,307	20.70	109,855	80,367	.16	12,859
1995	5,042	22.78	114,857	84,027	.14	11,764
1996	4,790	25.06	120,037	87,817	.12	10,538
						\$ 328,266
Unrecovered costs to January 1, 1982						(128,748)
Profit over 15% rate of return						\$ 199,518

The estimated future net income discounted calculated to show a 15% rate of return exceeds the amount required by almost \$200,000. The N. E. B. U. #205 Well is estimated to greatly exceed a 15% rate of return and therefore be a commercial well.

Yours very truly,

Charles F. Blackwood

Charles F. Blackwood

CFB:jw

2000 NORTHWEST PIPELINE # 6-17 SAN JUAN UNIT 32-7

PRESSURE VS CUMULATIVE

NE 17-75IN-R74

WH PRESSURE PSI

1800
1600
1400
1200
1000
800
600
400
200

100,000

200,000

300,000

400,000

500,000

600,000

LAST 3 POINTS PROJECT TO APPROX
4 BCE ULTIMATE RECOVERY

CUMULATIVE 9-13-73
684,485 MCF

CUMULATIVE 7-31-75
821,027 MCF

Annual Prod
1,000's of Mcf per yr.

ANNUAL PRODUCTION, CUMULATIVE V TIME

Northwest Pipeline Co

~~ET PASO NATURAL GAS~~

#6-17 San Juan Unit 32-7

Sec. 17-31N-7W

