

30

R-2W

T
26
N

31

Application for Amendment to
Division Order R-7367
JEROME P. MCHUGH - Wright Way #1
Unit C, Sec. 2, T24N, R2W
Rio Arriba County, New Mexico
Case No. 8309, Exhibit B1

6

7

18

MESA GRANDE
#1 WOCT
Brown TD 8317

GAVILAN
MANCOS
Pool
BOUNDARY

19

79 C 592-2 #2
Commingled
J.P. McHugh
JANET

109 C 6634 MANCOS
83 C 14,45B GH-DAK
#1 LOCATION
7800' MANCOS

24
#2N 108 C 605

MESA
GRANDE
GAVILAN-
HOWARD

NWPL
RUCKER
LAKE

30

81 C 1442 J.P. McHugh
#1 FULL SAIL

#1 580 C 420
Commingled
J.P. McHugh
E.T.

LOCATION
8230' DAKOTA → #2
J.P. McHugh
Full Sail

140 C 573-2 #1
Commingled
J.P. McHugh
JANET

5 535 C 816
J.P. McHugh
NATIVE SON

29 C 8519
GHYMAN
#1 EIE DAK SI
NWEX
GAVILAN

94 C 2430 - MANCOS
DAKOTA SI

25
#3 NWPL
Rucker
LAKE

31

LOCATION
8190' DAKOTA → #1
J.P. McHugh
High Adventure

312 C 1603 #1
J.P. McHugh
NATIVE SON

5 196 C 2816
Southland
Royalty
HAWK FED.

25
#4 NWPL
Rucker
LAKE

#3 LOCATION
7950' DAKOTA
HAWK FED.
Southland Royalty

36
LOCATION
7600' MAN
DUGAN PROD.
#1 Lindrith

MAP LEGEND

- - MANCOS COMPLETION
- - GREENHORN COMPLETION
- - DAKOTA COMPLETION

WELL STATUS AS OF 9/1/84
PRODUCTION - BOPD C GOR
during 7/84 if available -
if not, then most current.

GAVILAN Mancos &
BASIN DAKOTA Pools.

Rio Arriba County
New Mexico.

LOCATION
8100' DAKOTA
#1 AMOCO
050 CANYON FED A

LOCATION
8100' DAKOTA
#1 AMOCO
050 CANYON FED A

470532-2

Dugan
FED 25
TAPARITOS
#2

36

SI-
NWPL → #1
Dugan
Production
Divide

9
C
1

Mallon
Ribeyowids
LOCATION
8100' DAKOTA

12

13

24

#2N 108 C 605

NWPL
Rucker
LAKE

25
#3 NWPL
Rucker
LAKE

25
#4 NWPL
Rucker
LAKE

25
#5 NWPL
Rucker
LAKE

25
#6 NWPL
Rucker
LAKE

25
#7 NWPL
Rucker
LAKE

25
#8 NWPL
Rucker
LAKE

25
#9 NWPL
Rucker
LAKE

25
#10 NWPL
Rucker
LAKE

25
#11 NWPL
Rucker
LAKE

25
#12 NWPL
Rucker
LAKE

25
#13 NWPL
Rucker
LAKE

25
#14 NWPL
Rucker
LAKE

25
#15 NWPL
Rucker
LAKE

25
#16 NWPL
Rucker
LAKE

25
#17 NWPL
Rucker
LAKE

25
#18 NWPL
Rucker
LAKE

25
#19 NWPL
Rucker
LAKE

25
#20 NWPL
Rucker
LAKE

25
#21 NWPL
Rucker
LAKE

25
#22 NWPL
Rucker
LAKE

25
#23 NWPL
Rucker
LAKE

25
#24 NWPL
Rucker
LAKE

25
#25 NWPL
Rucker
LAKE

25
#26 NWPL
Rucker
LAKE

25
#27 NWPL
Rucker
LAKE

25
#28 NWPL
Rucker
LAKE

25
#29 NWPL
Rucker
LAKE

25
#30 NWPL
Rucker
LAKE

25
#31 NWPL
Rucker
LAKE

25
#32 NWPL
Rucker
LAKE

25
#33 NWPL
Rucker
LAKE

25
#34 NWPL
Rucker
LAKE

25
#35 NWPL
Rucker
LAKE

25
#36 NWPL
Rucker
LAKE

25
#37 NWPL
Rucker
LAKE

25
#38 NWPL
Rucker
LAKE

25
#39 NWPL
Rucker
LAKE

25
#40 NWPL
Rucker
LAKE

25
#41 NWPL
Rucker
LAKE

25
#42 NWPL
Rucker
LAKE

25
#43 NWPL
Rucker
LAKE

25
#44 NWPL
Rucker
LAKE

25
#45 NWPL
Rucker
LAKE

25
#46 NWPL
Rucker
LAKE

25
#47 NWPL
Rucker
LAKE

25
#48 NWPL
Rucker
LAKE

25
#49 NWPL
Rucker
LAKE

25
#50 NWPL
Rucker
LAKE

25
#51 NWPL
Rucker
LAKE

25
#52 NWPL
Rucker
LAKE

25
#53 NWPL
Rucker
LAKE

25
#54 NWPL
Rucker
LAKE

25
#55 NWPL
Rucker
LAKE

25
#56 NWPL
Rucker
LAKE

25
#57 NWPL
Rucker
LAKE

25
#58 NWPL
Rucker
LAKE

25
#59 NWPL
Rucker
LAKE

25
#60 NWPL
Rucker
LAKE

25
#61 NWPL
Rucker
LAKE

25
#62 NWPL
Rucker
LAKE

25
#63 NWPL
Rucker
LAKE

25
#64 NWPL
Rucker
LAKE

25
#65 NWPL
Rucker
LAKE

25
#66 NWPL
Rucker
LAKE

25
#67 NWPL
Rucker
LAKE

25
#68 NWPL
Rucker
LAKE

25
#69 NWPL
Rucker
LAKE

25
#70 NWPL
Rucker
LAKE

25
#71 NWPL
Rucker
LAKE

25
#72 NWPL
Rucker
LAKE

25
#73 NWPL
Rucker
LAKE

25
#74 NWPL
Rucker
LAKE

25
#75 NWPL
Rucker
LAKE

25
#76 NWPL
Rucker
LAKE

25
#77 NWPL
Rucker
LAKE

25
#78 NWPL
Rucker
LAKE

25
#79 NWPL
Rucker
LAKE

25
#80 NWPL
Rucker
LAKE

25
#81 NWPL
Rucker
LAKE

25
#82 NWPL
Rucker
LAKE

25
#83 NWPL
Rucker
LAKE

25
#84 NWPL
Rucker
LAKE

25
#85 NWPL
Rucker
LAKE

25
#86 NWPL
Rucker
LAKE

25
#87 NWPL
Rucker
LAKE

25
#88 NWPL
Rucker
LAKE

25
#89 NWPL
Rucker
LAKE

25
#90 NWPL
Rucker
LAKE

25
#91 NWPL
Rucker
LAKE

25
#92 NWPL
Rucker
LAKE

25
#93 NWPL
Rucker
LAKE

25
#94 NWPL
Rucker
LAKE

25
#95 NWPL
Rucker
LAKE

25
#96 NWPL
Rucker
LAKE

25
#97 NWPL
Rucker
LAKE

25
#98 NWPL
Rucker
LAKE

25
#99 NWPL
Rucker
LAKE

25
#100 NWPL
Rucker
LAKE

25
#101 NWPL
Rucker
LAKE

25
#102 NWPL
Rucker
LAKE

25
#103 NWPL
Rucker
LAKE

25
#104 NWPL
Rucker
LAKE

25
#105 NWPL
Rucker
LAKE

25
#106 NWPL
Rucker
LAKE

25
#107 NWPL
Rucker
LAKE

25
#108 NWPL
Rucker
LAKE

25
#109 NWPL
Rucker
LAKE

25
#110 NWPL
Rucker
LAKE

25
#111 NWPL
Rucker
LAKE

25
#112 NWPL
Rucker
LAKE

25
#113 NWPL
Rucker
LAKE

25
#114 NWPL
Rucker
LAKE

25
#115 NWPL
Rucker
LAKE

25
#116 NWPL
Rucker
LAKE

25
#117 NWPL
Rucker
LAKE

25
#118 NWPL
Rucker
LAKE

25
#119 NWPL
Rucker
LAKE

25
#120 NWPL
Rucker
LAKE

25
#121 NWPL
Rucker
LAKE

25
#122 NWPL
Rucker
LAKE

25
#123 NWPL
Rucker
LAKE

25
#124 NWPL
Rucker
LAKE

25
#125 NWPL
Rucker
LAKE

25
#126 NWPL
Rucker
LAKE

25
#127 NWPL
Rucker
LAKE

25
#128 NWPL
Rucker
LAKE

25
#129 NWPL
Rucker
LAKE

25
#130 NWPL
Rucker
LAKE

25
#131 NWPL
Rucker
LAKE

25
#132 NWPL
Rucker
LAKE

25
#133 NWPL
Rucker
LAKE

25
#134 NWPL
Rucker
LAKE

25
#135 NWPL
Rucker
LAKE

25
#136 NWPL
Rucker
LAKE

25
#137 NWPL
Rucker
LAKE

25
#138 NWPL
Rucker
LAKE

25
#139 NWPL
Rucker
LAKE

25
#140 NWPL
Rucker
LAKE

25
#141 NWPL
Rucker
LAKE

25
#142 NWPL
Rucker
LAKE

25
#143 NWPL
Rucker
LAKE

25
#144 NWPL
Rucker
LAKE

25
#145 NWPL
Rucker
LAKE

25
#146 NWPL
Rucker
LAKE

25
#147 NWPL
Rucker
LAKE

dugan production corp.

dp

July 12, 1984

Frank Chavez
New Mexico Oil Conservation Division
1000 Rio Brazos Rd.
Aztec, NM 87410

RE: Proposed Revision of Allocation Factors
Jerome P. McHugh's Wright Way #1
Gavilan Mancos-Dakota Fields
Unit C, Sec. 2, T-24N, R-2W, NMPM
Rio Arriba County, New Mexico

Application for Amendment to
Division Order R-7367
JEROME P. MCHUGH - Wright Way #1
Unit C, Sec. 2, T24N, R2W
Rio Arriba County, New Mexico
Case No. 8309, Exhibit B2

Dear Mr. Chavez:

We are writing to request your approval of revised allocation factors to be utilized in splitting production between the Mancos and Dakota formations in the captioned well.

Currently, as provided by Order R-7367, dated October 4, 1983, the Mancos formation receives 67% of the oil and 85% of the gas, while the Dakota formation is allocated 33% of the oil and 15% of the gas. It is proposed that the oil allocation factor be revised to reflect 92% of the commingled stream being allocated to the Mancos and 8% of the commingled oil stream allocated to the Dakota. The gas allocation factors should not be changed.

The proposed revised allocation factors are necessitated by the fact that production has improved since the initial testing, at which time a combined potential of 78 BOPD with an average GOR of 4615 was indicated (51 BOPD with a GOR of 6000 from the Mancos perforations 6760-7072' and 27 BOPD with a GOR of 2000 from Dakota perforations 7865-8141'). The early testing indicated that the well would flow intermittently and appeared to be a mediocre well. Since installing artificial lift equipment in November of 1983, the commingled production has averaged 124 BOPD and has consistently produced at rates exceeding that indicated by the initial potential, which was utilized in determining our original allocation factors. It is our belief that the increase in productivity actually exhibited by the well is the result of natural fractures in the Mancos cleaning up with production. During the drilling of the Mancos, we did encounter lost circulation and it was necessary to include lost circulation material in our mud system in order to maintain circulation. It is believed that this is indicative of natural fracturing within the Mancos. The Dakota interval was drilled with no lost circulation and it is believed that the initial potential is indicative of the productive capacity of the Dakota formation.

With respect to gas production, gas sales were commenced 3-16-84 and since that time the commingled stream GOR has averaged 586 SCF/STB, much less than anticipated from our initial testing. With the revised oil allocations and the reported gas production, the GOR during the past 2 months has averaged 497 SCF/STB from the Mancos and 1290 SCF/STB from the Dakota. These GOR's are in line with the GOR's indicated from testing and/or production in other wells in the field.

I have summarized the production submitted to date for the Wright Way #1 on the attached tabulation and have also indicated the numbers as revised, utilizing the proposed revised allocation factors. It is my belief that it is necessary to make these revisions in order to avoid misrepresenting the true productive capacity of the Dakota in this general area. As can be seen from the tabulation, based upon our current allocations, the Dakota is indicated to have averaged up to 46 BOPD and actually averaged 41 BOPD per producing day during the last 7 months of production on rod pump. These high rates of production from the Dakota are unrealistic, considering the initial testing and the reservoir parameters that are indicated from the open hole logs and sample analysis. As can be seen from the revised production schedule, the actual Dakota production during the last 7 months averaged 10 BOPD with the increase in productivity being from the Mancos interval. It has been our contention ever since the date of first production that the Dakota reservoir in this general area is of secondary interest and that the primary zone of interest is the Mancos and we believe that the revised allocation factors proposed herein more properly reflect this fact than do our original factors based upon an initial potential totaling 78 BOPD.

Should you have questions regarding this matter or need additional information, please feel free to contact me.

Sincerely,

John D. Roe

John D. Roe
Petroleum Engineer

fp
cc: Jerome P. McHugh

Attachment

To some P. another off
arrived last evening No. 1

TP 424
51.0000 21.4
27 Baro 11.3

No change

Month	Oil Production - bbl			MFR - GPM Production			Days on
	Dakota	Mancos	Total	Dakota	Mancos	Total	
11/83	933	51	1883	2824			30
12/83	1029	11	2254	3363			31
1/84	1328	43	2625	4023			31
2/84	1262	44	2564	3826			29
3/84	1432	41	2903	4339			103/01 303
4/84	1232	44	2704	4036	324	176	30
5/84	1334	13	2707	4091	396	2238	2100 80
7 mo. Total	8730	41	12725	26454			31
% of Total	33%		62%				2/3

Production		M.F.-GAS Production			
Date	Meters	Total	Date	Meters	Total
11-10-6	330	2476	NC		
10-10	329	3034	"		
10-3	319	3704	"		
10-9	287	3532	"		
10-16	298	4041	"		
10-23	279	3757	"		
10-30	279	3742	"		
11-10	2121	29333	"		
11-17	222				

卷之三

C-115 A5 Standard

Month		Production		Met - 6755 production	
		Dakota	Mansas	Total	Total
11/83	933	31	1,893	63	2,826
12/83	1109	36	2,254	13	3,363
1/84	1328	43	2,695	97	4,023
2/84	1262	44	2,524	88	3,824
3/84	1432	46	2,707	94	4,337
4/84	1332	44	2,704	90	4,036
5/84	1334	43	2,707	87	4,041
MO. Total	8730	41	12,725	63	26,454
% of Total	33%		67%		15%
					2,634
					85%

Note: - well fired on pump 11-2-83 & as of 11-1-83 only 8 min. amount of oil at surface during combustion had been produced. Gas was 1st delivered to N.W.C. on 3-16-84.

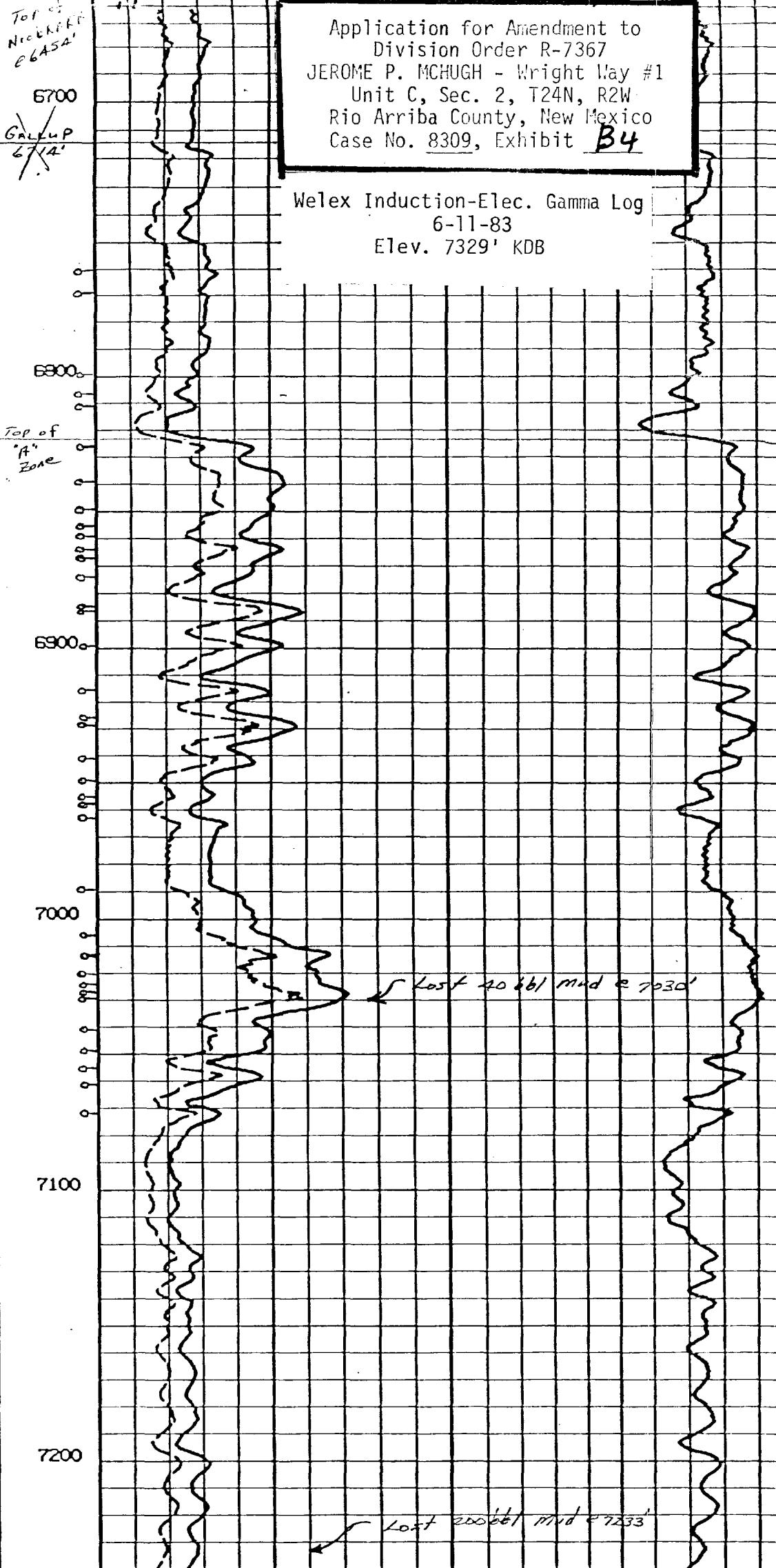
Application for Amendment to
Division Order R-7367
EROME P. KICUGH - Wright Way #1
Unit C, Sec. 2, T24N, R2W
Rio Arriba County, New Mexico
Case No. 8309, Exhibit B3

Revised. C-115 (As proposed)

Application for Amendment to
Division Order R-7367
JEROME P. RICHUGH - Wright Way #1
Unit C, Sec. 2, T24N, R2W
Rio Arriba County, New Mexico
Case No. 8309, Exhibit B3

Application for Amendment to
Division Order R-7367
JEROME P. MCHUGH - Wright Way #1
Unit C, Sec. 2, T24N, R2W
Rio Arriba County, New Mexico
Case No. 8309, Exhibit B4

Welex Induction-Elec. Gamma Log
6-11-83
Elev. 7329' KDB



S.P. | |
10 +

2"=100'
0 SHORT NORMAL 100
0 DEEP RES. 100
BASE OF
NIOBRA
C
1994

JEROME P. McHUGH

Wright Way #1

Unit C Sec. 2, T24N R2W

Rio Arriba County, New Mexico

Welex Induction-Elec. Gamma Log

6-11-83

Elev. 7329' KDB

GREENHORN
7714'

GRANERO
7785'

DAKOTA
7826'

Bit forged while drilling

7 holes
8000'

Short Normal-

Induction Resistivity

Conductivity

Lost 40 bbl mud e 8168'

TD
LOGGED
8200'

S.P. 10 +

2"=100'

SHORT NORMAL

100

DEEP RES.

100

CONDUCTIVITY

GAMMA RAY

200

400

MANCOS DAKOTA WELL DATA - Gavilan Area - Rio Arriba County, New Mexico

Well Name	Location① U-S-T-R	Order Drld.	KB Elev.	Completion Date	Mancos Zone①	Perfs	Dakota Zone	BOPD @ GOR	Cumm. to 8-1-84 BO	Current Prod. BOPD @ GOR
					BOPD @ GOR		BOPD @ GOR		MCF	
Jerome P. McHugh										
Janet #1	A-27-25N-2W	2	7253	2-17-83	6689-7000	73 @ 2753	7740-7869	43 @ 1047	44,265	35,616
Janet #2	I 21-25N-2W	3	7197	9-1-83	6657-7055	60 @ 3000	7841-7994	36 @ 1111	20,328	12,244
E.T. #1	C 28-25N-2W	4	7170	9-19-83	6643-7025	96 @ 5219	7747-8033	18 @ 1833	19,864	8,052
Wright Way #1	C 2-24N-2W	6	7329	9-29-83	6760-7072	51 @ 6000	7865-8141	27 @ 2000	33,891	21,227
Nother Lode #1	H 3-24N-2W	7	7333	9-2-83	6765-7070	63 @ 5190	7861-8108	15 @ 2200	52,569	28,185
Native Son #2	N 27-25N-2W	10	7329	11-18-83	6802-7485	233 @ 1882	7886-7977	58 @ 3824②	30,540	19,587
Full Sail #1	O 29-25N-2W	13	7119	6-15-84	6745-7409	216 @ 1444	(E)	-0-	81	81
Native Son #1	A 34-25N-2W	14	7320	6-7-84	6765-7443	198 @ 1636	(E)	5,927	4,830	312
High Adventure #1	A 33-25N-2W	--	7214	Location						
Full Sail #2	I 28-25N-2W	--	7263	Location						
<u>Northwest Exploration</u>										
Gavilan #1	A 26-25N-2W	1	7467	3-21-82	6821-7562	62 @ 8790③	7879-8026	③	41,084①	234,498①
Gavilan #1EC	E 26-25N-2W	5	7319	7-23-83	6804-7366	32 @ 11700	7822-7918	10,203400	11,811①	47,656①

Location	Order Drld.	KB Elev.	Completion Date	Mancos Zone①	Perfs	Dakota Zone	BOPD @ GOR	Cumm. to 8-1-84 BO	Current Prod. BOPD @ GOR	
				BOPD @ GOR		BOPD @ GOR		MCF		
<u>Rucker Lake Pipeline</u>										
Rucker Lake #1	6 23-25N-2W	--	7309	Location						
Rucker Lake #2	K 24-25N-2W	9	7396	8-26-83	6825-7484	193 @ 1200	--	--		
Rucker Lake #3	L 25-25N-2W	8	7408	8-10-83	6808-7538	145 @ 2089	--	--		
Rucker Lake #4	J 25-25N-2W	--	7448	Location						
<u>Mesa Grande Resources</u>										
Gavilan-Howard #1GF	23-25N-2W	11	7294	4-23-84	6659-7370	75 @ 36160	7665-7849	83 @ 29699⑥	2,308	16,190⑥
Brown #1	N 17-25N-2W	17	7196	Waiting on Completion	- 7"	casing @ 8300'			37,051①	23,386
<u>Mailton Oil</u>									30,171①	34,899
<u>Ribeyowids</u>	Fed #1	P 2-25N-2W	--	Location					112 @ 1245	112 @ 1245
<u>Gavilan #2</u>	J 26-25N-2W	15	7416	Completing	6872-7127	Testing	7902-7998	Testing④	1,806	1,472

Dugan Production Corp.									
Lindrith #1	0 36-25N-2W	--	7432	Location					
Tapacitos #3	D 36-26N-2W	--	7818	Location					
Amoco Production Co.									
Oso Canyon Fed. B-1	E 24-24N-2W	16	7457	Completing					
Oso Canyon Fed. A-1	F 11-24N-2W	--		Location					

Application for Amendment to
Division Order R-7367
JEROME P. MCHUGH - Wright Way #1
Unit C, Sec. 2, T24N, R2W
Rio Arriba County, New Mexico
Case No. 8309, Exhibit B5

FOOTNOTES

A Also referred to as "Gallup"

B Cmingled with Dakota

C Cemented 7" casing @ 6070' & also completed Greenhorn 7653-7708' with IP of 9.8 BOPD with GOR = 2510

D Surveyed Locations: Janet #1

Janet #2

E.T. #1

Wright Way #1

Mother Lode #1

Native Son #2

Full Sail #1

Native Son #1

High Adventure #1

Full Sail #2

790' FNL - 790' FEL
1850' FSL - 790' FEL
1100' FNL - 1600' FWL
950' FNL - 1680' FWL
1730' FNL - 860' FEL
1020' FSL - 1670' FWL
980' FSL - 1730' FEL
790' FNL - 990' FEL
1650' FSL - 790' FEL

Gavilan #1

Gavilan #1E

Rucker Lake #1

Rucker Lake #2

Rucker Lake #3

Rucker Lake #4

Gavilan-Howard #1

Brown #1

Ribeyowids Fed #1

Hawk Federal #2

Hawk Federal #3

Gavilan #2

1828' FSL - 1846' FEL

Lindrith #1

Tapacitos #3

910' FNL - 1840' FWL

1835' FSL - 1690' FWL

Amoco Fed-Oso Cny #1

Oso Canyon Fed B-1

Oso Canyon Fed A-1

990' FWL - 1650' FNL

1660' FNL - 1840' FWL

1660' FNL - 1790' FWL

E Completion postponed. Dakota penetrated and development similar to other completions.

F Perfs temporarily abandoned with NMOCD not autorizing downhole commingling with Mancos.

G Cmingled Carlile/Greenhorn and Dakota. Greenhorn and Carlile completed 7531-7647 and tested 102.5 BOPD with GOR of 22,829 while Dakota tested 20-30 BOPD with GOR of Approx. 37,280 during completion.

H Also completed Greenhorn 7740 - 7805' - no tests reported.

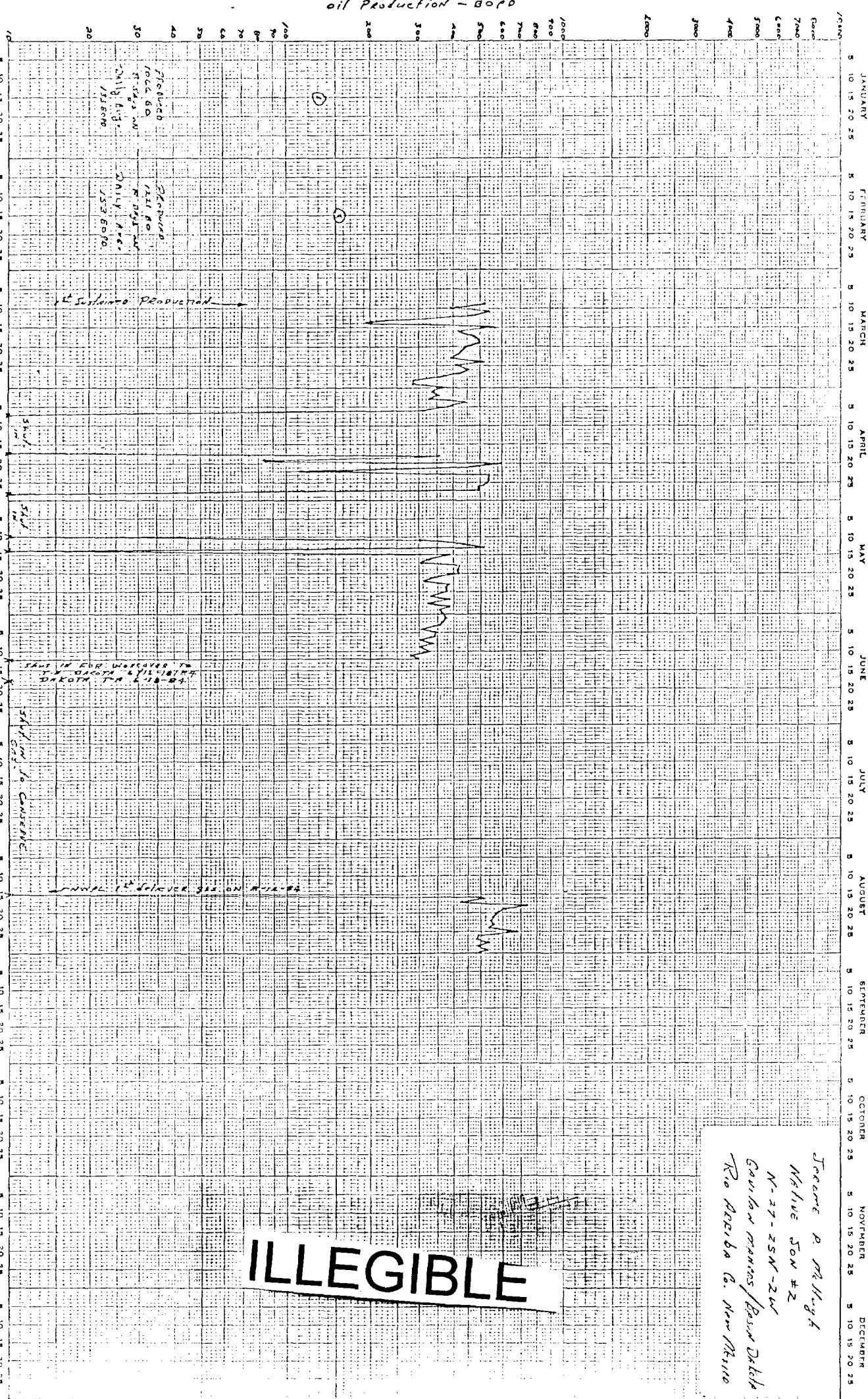
I To 7-1-84 - 7/84 data not on file with NMOCD as of 9/1/84.

J C-116 test Total of Mancos, Greenhorn, Carlile & Dakota.

NO. 4118. ONE YEAR BY DAYS X 3-INCH CYCLES RATIO RULING.

CODEX BOOK COMPANY, INC., NORWOOD, MASSACHUSETTS

1984



Total well system plotted

Northwest Cr. Production
Gulf of Mexico
Gulf of Mexico
P-26 - 25W - 2N

19,000

8

7

6

5

4

3

2

1

0

47 6840

GAS production - 100 mcf/month
oil production - bbl/month.

K-E 20 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSEN CO. NEW YORK

JULY 1940
Cumulative

0.1, 141

1942 1943 1944 1945 1946

1947

1948

1949

1950

1951

1952

1953

1954

1955

1956

1957

1958

1959

1960

1961

1962

1963

1964

1965

1966

1967

1968

1969

1970

1971

1972

1973

1974

1975

1976

1977

1978

1979

1980

1981

1982

1983

1984

1985

1986

1987

1988

1989

1990

1991

1992

1993

1994

1995

1996

1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

2027

2028

2029

2030

2031

2032

2033

2034

2035

2036

2037

2038

2039

2040

2041

2042

2043

2044

2045

2046

2047

2048

2049

2050

2051

2052

2053

2054

2055

2056

2057

2058

2059

2060

2061

2062

2063

2064

2065

2066

2067

2068

2069

2070

2071

2072

2073

2074

2075

2076

2077

2078

2079

2080

2081

2082

2083

2084

2085

2086

2087

2088

2089

2090

2091

2092

2093

2094

2095

2096

2097

2098

2099

20100

ILLEGIBLE

Northwest Exploration - Gavilan No. 1

A-26-25N-2W

(DATA 7/1/83 thru 11/83 from NMEDO CASE #8042 File - Exhibit #6.)

	7/1/83	8/1/83	9/1/83	10/1/83	11/1/83	12/1/83	1/1/84	2/1/84
1	60-584	108-229	102-0	Shut in	8-97	5-366	51	
2	63-582	98-0	?-?	Shut in	5-97	87-294	52	
3	49-559	68-0	111-0	100-220	5-97	88-501	51	
4	50-533	83-226	95-0	125-0	7-82	78-501	51	
5	47-546	101-0	132-261	Shut in	5-97	102-482	113-199	
6	47-520	107-226	118-231	108-225	9-85	68-366	118-204	
7	43-616	86-0	81-0	-Shut in	4-88	82-472	103-385	
8	40-565	97-0	115-0	MANCOS prod	7-88	77-449	110-385	
9	28-0	48-0	107-229	DAKOTA	5-88	73-502	111-390	
10	.	107-227	118-241	(3) 19-0	8-83	63-502	101-372	
11	.	92-0	105-217	(3) 11-0	3-97	82-477	83-303	
12	71	95-227	110-0	(3) 12-0	6-90	69-413	128-376	
13	71	99-227	102-0	(3) 11-170	7-90	83-459	105-370	
14	71	77-0	82-0	(3) 13-0	6-82	83-482	112-372	
15	71	83-0	98-0	(3) 10-0	4-82	77-471	25-157	
16	71	13-226	126-229	5-0	4-88	83-475	120-363	
17	123-768	127-0	105-227	5-0	5-84	77-371	115-352	
18	108-228	110-0	MANCOS	5-0	8-85	68-539	107-354	
19	105-0	122-0	MANCOS	10-0	5-86	100-424	122-315	
20	98-0	96-230	8-0	8-0	8-88	84-424	82-512	
21	100-227	94-228	5-0	4-86	SE-	139-295		
22	174-666	97-0	97-0	5-0	4-97	67-450	100-303	
23	104-690	113-0	122-0	8-0	7-87	68-502	103-303	
24	82-602	54-461	119-237	5-0	5-86	95-427	123-742	
25	83-602	105-0	105-0	12-0	7-90	113-394	118-260	
26	68-609	109-0	108-236	5-0	5-97	70-370		
27	*	100-0	103-0	MR	5-97	88-401		
28	89-703	100-230	126-228	5-0	7-94	120-372		
29	112-232	91-0	103-0	8-0	7-88	95-385		
30	95-0	107-0	128-0	7-0	9-81	98-370		
31	98-0	87-229		MR	98-332			
32								

MANCOS ONLY -(1st production in 3/82 thru 7/27/83)

1982- 161 day Avg=44 BOPD+ 382 MCFD (GOR=8677)	4/83- 28 day Avg=67 BOPD+534 MCFD (GOR=7970)
1/83- 27 day Avg=63 BOPD+ 576 MCFD (GOR=9143)	5/83- 31 day Avg=51 BOPD+605 MCFD (GOR=11863)
2/83- 22 day Avg=49 BOPD+ 630 MCFD (GOR=12857)	6/83- 30 day Avg=51 BOPD+597 MCFD (GOR=11706)
3/83- 31 day Avg=41 BOPD+ 812 MCFD (GOR=19805)	7/1-27/83 15day Avg=71 BOPD+563 MCFD (GOR=7930)

MANCOS & DAKOTA COMMINGLED (7/28 thru 10/9/83)

7/28 thru 8/31/83 - 35 day Avg= 98 BOPD + 488 MCFD (GOR=4980) (gas volumes from C-115)
9/83 - 29 day Avg= 108 BOPD + 385 MCFD (GOR=3565) (gas volumes from C-115)
10/1 thru 9/83 - 3 day Avg = 111 BOPD + 225 MCFD (GOR=2027)

DAKOTA ONLY 10/10 thru 11/30/83

10/10 thru 31/83 - 20 day Avg = 13 BOPD + 131 MCFD (GOR=10,077) (gas volumes from C-115)
11/83 - 30 day Avg = 6 BOPD + 88 MCFD (GOR=14,728) (C-115 gas volumes=44 MCFD, GOR from C-115 = 7772)

MANCOS ONLY 12/1/83 thru current

12/83- 30 day Avg= 80 BOPD+366 MCFD (GOR=4429)	4/84- 28 day Avg=103 BOPD+250 MCFD (GOR=2428)
1/84- 27 day Avg=100 BOPD+320 MCFD (GOR=3192)	5/84- 31 day Avg= 97 BOPD+246 MCFD (GOR=2552)
2/84- 22 day Avg=119 BOPD+293 MCFD (GOR=2469)	6/84- 30 day Avg= 82 BOPD+182 MCFD (GOR=2223)
3/84- 31 day Avg= 92 BOPD+243 MCFD (GOR=2642)	

K+E 20 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

47 6840

GAS PRODUCTION - cu ft/month $\times 10^{-3}$
OIL PRODUCTION - bbl/month

