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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 **BI**

6

7

18

Mesa Grande
 ① WOOT
 BROWN TO 8317

GAVILAN
MANCOS
Pool
BOUNDARY

19

790592 → E2
Comm ingled
J. p. McHugh
JANET


 #15802420
 Commingled
 J.P. McHUGH
 ET

8101442 J.P. M. H. 91
2-1
F. H. 91

Location
8230' Dakota → #2
IP at High
Full Sail

5
F₂
J. F. McHugh

LOCATION
8190' DAKOTA → 

312 e/603  #1
J.P. McKing
NATURE S

31

1960-1986
#2
Southland
Royalty
HAWK FED.

LOCATED
7950' DA
HAWK FED.
Southland Royalty

36
LOCATION
7600' MAN
Dugout Pond
→ 
LINDR. th

MAP LEGEND

- - MANCUS completion
- - GREENHORN completion
- - DAKOTA completion

well status As of 9/1/84
- Production - BOPD @ GOR
during T/B4 if available -
if not, then most current.

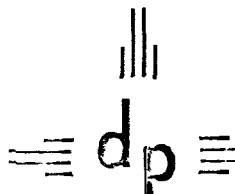
GRAVILAN MANCOS +
BASIN DAKOTA POOLS

Rio Arriba County
New Mexico.

LOCATION
8100' DAKOTA
Amoco
050 Canyon Feb 8

Location
8100' DATE
Amoco
OSO CANYON F.D.A.

13



dugan production corp.

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

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JEROME P. MCHUGH - Wright Way #1
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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.

NMOCD - Wright Way #1
July 12, 1984

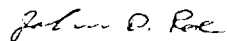
Page 2

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
Petroleum Engineer

fp
cc: Jerome P. McHugh

Attachment

Wright way No. 1

MAN - 51 BOPD 21.4
DAR 27 BOPD 11.3
78 32.7

NC = No Change
9-2-84

C-115 AS Submitted

Revised. C-115 (AS PROPOSED)

month	oil production - bbl			MFG-GAS PRODUCTION			days ON	bbl- oil production			MFG-GAS PRODUCTION		
	DAKOTA	MANCOS	TOTAL	DAKOTA	MANCOS	TOTAL		DAKOTA	MANCOS	TOTAL	DAKOTA	MANCOS	TOTAL
11/83	933	1893	2826	94			30	330	"		2496	83	NC
12/83	1109	2254	3363	108			31	329	10.4		3034	98	"
1/84	1328	2695	4023	130			31	319	10.3		3704	119	"
2/84	1262	2564	3826	132			29	287	9.9		3539	112	"
3/84	1432	2707	4139	140			31-01/10-045	298	9.6		4041	130	"
4/84	1332	2704	4036	135			30	279	9.3		3757	115	"
5/84	1334	2707	4041	130			31	279	9.0		3762	121	"
6 mo. Total	8730	17715	26445	124			213	2121	10		29333	114	"
% of Total	33%	67%						8%			92%		
6/84	1011	2053	3064	102			30	261	8.7		2803	93	NC
7/84	1443	2930	4373	141			31	260	8.4		4113	133	NC
7 mo. Total	11184	22708	33891	124			274	2642	9.6		31249	114	NC
% of Total	33%	67%						8%			92%		
Note:- well plugged on pump 11-2-83 & AS of 11-1-83 only a minor amount of oil snubbed during completion had been produced. GAS WAS 1 st delivered to NWPL ON 3-16-84.													

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11	12	13	14
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Case No. 8309, Exhibit B3

1 2 3 4 5 6 7 8 9 10 11 12 13 14

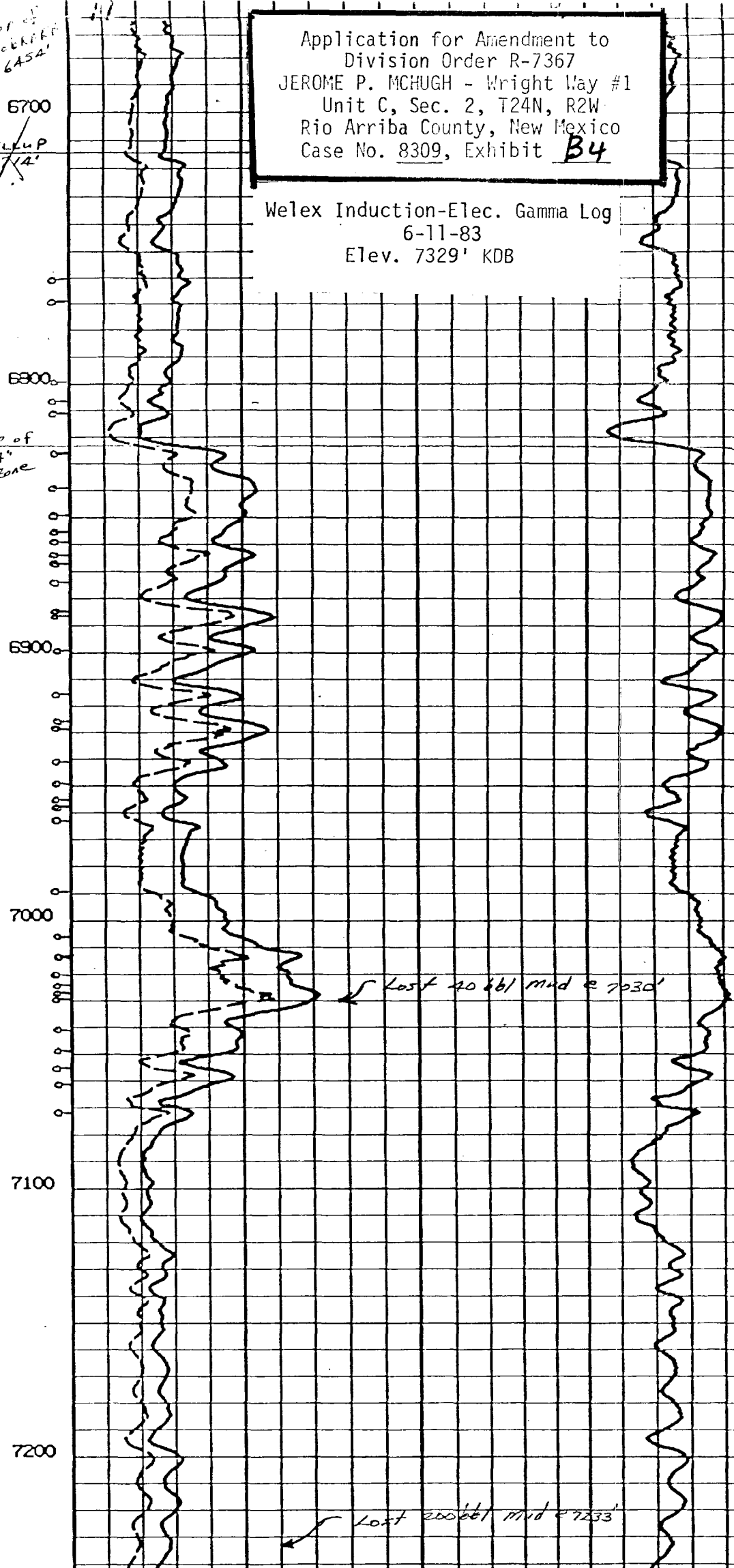
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 Case No. 8309, Exhibit **B4**

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

Handwritten notes on the left margin:
 Top of Neckline 66454'
 GALUP 27/14'
 [Illegible handwritten notes]

Top of Neckline 66454'
 GALUP 27/14'

Top of "A" Zone



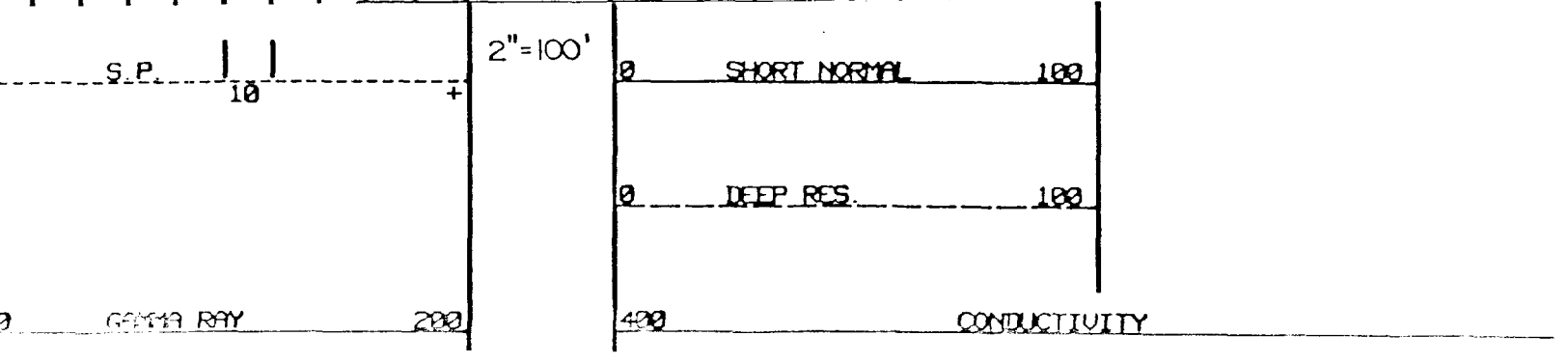
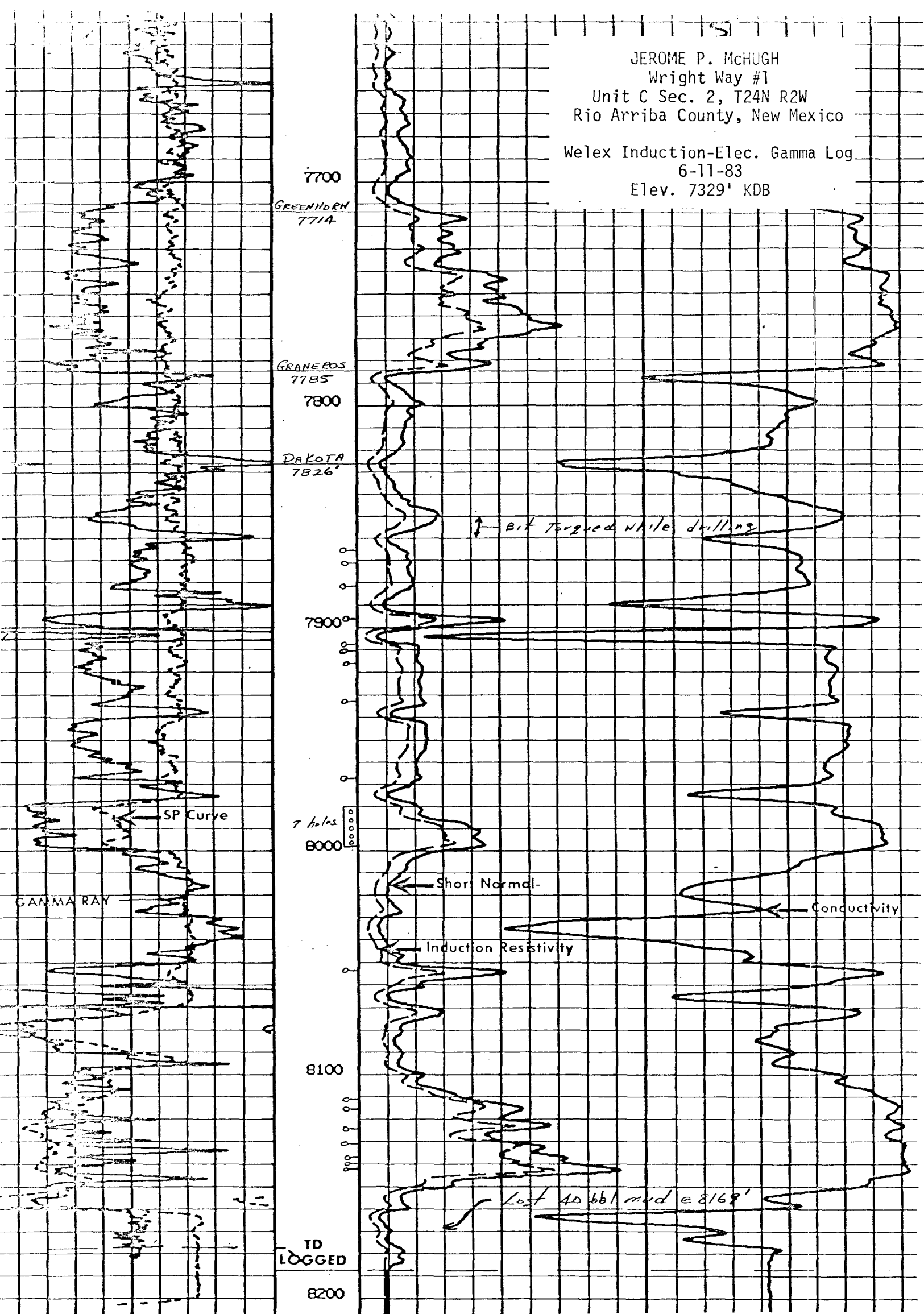
S.P. 10 +

2"=100'
 BASE OF
 Niobrara
 @ 7494'

0	SHORT NORMAL	100
0	DEEP RES.	100

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



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

Well Name	Location ^(D) U-S-T-R	Order Drld.	KB Elev.	Completion Date	Mancos Zone ^(A)		Dakota Zone		Cumm. to 8-1-84		Current Prod.	
					Perts	BOPD @ GOR	Perts	BOPD @ GOR	BO	MCF	BOPD @	GOR
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	140 @	573
Janet #2	I 21-25N-2W	3	7197	9-1-83	6657-7055	60 @ 3000	7841-7994	36 @ 1111	20,328	12,244	79 @	592
E.T. #1	C 28-25N-2W	4	7170	9-19-83	6643-7025	96 @ 5219	7747-8033	18 @ 1833	19,864	8,052	80 @	420
Wright Way #1	C 2-24N-2W	6	7329	9-29-83	6760-7072	51 @ 6000	7865-8141	27 @ 2000	33,891	21,227	127 @	752
Mother Lode #1	H 3-24N-2W	7	7333	9-2-83	6765-7070	63 @ 5190	7861-8108	15 @ 2200	52,569	28,185	294 @	591
Native Son #2	N 27-25N-2W	10	7329	11-18-83	6802-7485	233 @ 1882	7886-7977	58 @ 3824 ^(E)	30,540	19,587	535 @	816
Full Sail #1	O 29-25N-2W	13	7119	6-15-84	6745-7409	216 @ 1444	^(E)		-0-	-0-	81 @	1442
Native Son #1	A 34-25N-2W	14	7320	6-7-84	6765-7443	198 @ 1636	^(E)		5,927	4,830	312 @	1603
High Adventure #1	A 33-25N-2W	--	7214	Location								
Full Sail #2	I 28-25N-2W	--	7263	Location								
Northwest Exploration												
Gavilan #1	A 26-25N-2W	1	7467	3-21-82	6821-7562	62 @ 8790 ^(B)	7879-8026	^(B)	41,084 ⁽¹⁾	234,498 ⁽¹⁾	94 @	2430
Gavilan #1 ^(C)	E 26-25N-2W	5	7319	7-23-83	6804-7366	32 @ 11700	7822-7918	10.2@3400	11,811 ⁽¹⁾	47,656 ⁽¹⁾	29 @	8519
Northwest Pipeline												
Rucker Lake #1	G 23-25N-2W	--	7309	Location								
Rucker Lake #2	K 24-25N-2W	9	7396	8-26-83	6825-7484	193 @ 1200	--	--	37,051 ⁽¹⁾	23,386	148 @	605
Rucker Lake #3	L 25-25N-2W	8	7408	8-10-83	6808-7538	145 @ 2089	--	--	30,171 ⁽¹⁾	34,899	112 @	1245
Rucker Lake #4	J 25-25N-2W	--	7448	Location								
Mesa Grande Resources												
Gavilan-Howard #1 ^(G)	F 23-25N-2W	11	7294	4-23-84	6659-7370	75 @ 36160	7665-7849	83 @ 29699 ^(G)	2,308	16,190 ^(K)	192 @	10,016 ^(K)
Brown #1	N 17-25N-2W	17	7196	Waiting on Completion	- 7" casing @ 8300'							
Mallon Oil												
Ribeyowids Fed #1	P 2-25N-2W	--		Location								
Southland Royalty												
Hawk Federal #2	C 35-25N-2W	12	7331	3-25-84	6766-7448	215 @ 2447	7832-7914	Tst water	1,806	1,472	196 @	2816 ^(J)
Hawk Federal #3	K 35-25N-2W	--		Location								
E. Alex Phillips (also known as Mesa Grande)												
Gavilan #2	J 26-25N-2W	15	7416	Completing	6872-7127	Testing	7902-7998	Testing ^(H)				
Dugan Production Corp.												
Lindrieth #1	O 36-25N-2W	--	7432	Location								
Tapacitos #3	D 36-26N-2W	--	7818	Location								
Amoco Production Co.												
AmocoFed-Oso Cny#1	E 24-24N-2W	16	7457	Completing								
Oso Canyon Fed.B-1	F 11-24N-2W	--		Location								
Oso Canyon Fed.A-1	F 14-24N-2W	--		Location								

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FOOTNOTES

- A Also referred to as "Gallup"
- B Commingled 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 | 790' FNL - 790' FEL | Gavilan #1 | 930' FNL - 910' FEL |
| Janet #2 | 1850' FSL - 790' FEL | Gavilan #1E | 1850' FNL - 990' FWL |
| E.T. #1 | 1100' FNL - 1600' FWL | | |
| Wright Way #1 | 950' FNL - 1680' FWL | Rucker Lake #1 | 2270' FNL - 2275' FEL |
| Mother Lode #1 | 1730' FNL - 860' FEL | Rucker Lake #2 | 1420' FSL - 1520' FWL |
| Native Son #2 | 1020' FSL - 1670' FWL | Rucker Lake #3 | 1760' FSL - 940' FWL |
| Full Sail #1 | 980' FSL - 1730' FEL | Rucker Lake #4 | 2060' FSL - 1740' FEL |
| Native Son #1 | 790' FNL - 990' FEL | | |
| High Adventure #1 | 790' FNL - 790' FEL | Gavilan-Howard #1 | 1850' FNL - 1651' FWL |
| Full Sail #2 | 1650' FSL - 790' FEL | Brown #1 | 850' FSL - 1850' FWL |
| | | Ribeyowids Fed #1 | 860' FSL - 990' FEL |
| | | Hawk Federal #2 | 910' FNL - 1840' FWL |
| | | Hawk Federal #3 | 1835' FSL - 1690' FWL |
| | | Gavilan #2 | 1828' FSL - 1846' FEL |
| | | Lindrith #1 | 790' FSL - 1650' FEL |
| | | Tapacitos #3 | 990' FNL - 790' FWL |
| | | Amoco Fed-Oso Cny #1 | 990' FWL - 1650' FNL |
| | | Oso Canyon Fed B-1 | 1660' FNL - 1840' FWL |
| | | Oso Canyon Fed A-1 | 1660' FNL - 1790' FWL |
- E Completion postponed. Dakota penetrated and development similar to other completions.
- F Perfs temporarily abandoned with NMOCD not authorizing downhole commingling with Mancos.
- G Commingled 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
- K Total of Mancos, Greenhorn, Carlile & Dakota.

GAS PRODUCTION - 100 mcf/month
OIL PRODUCTION - bbl/month.

STANDARD
CONVERSION

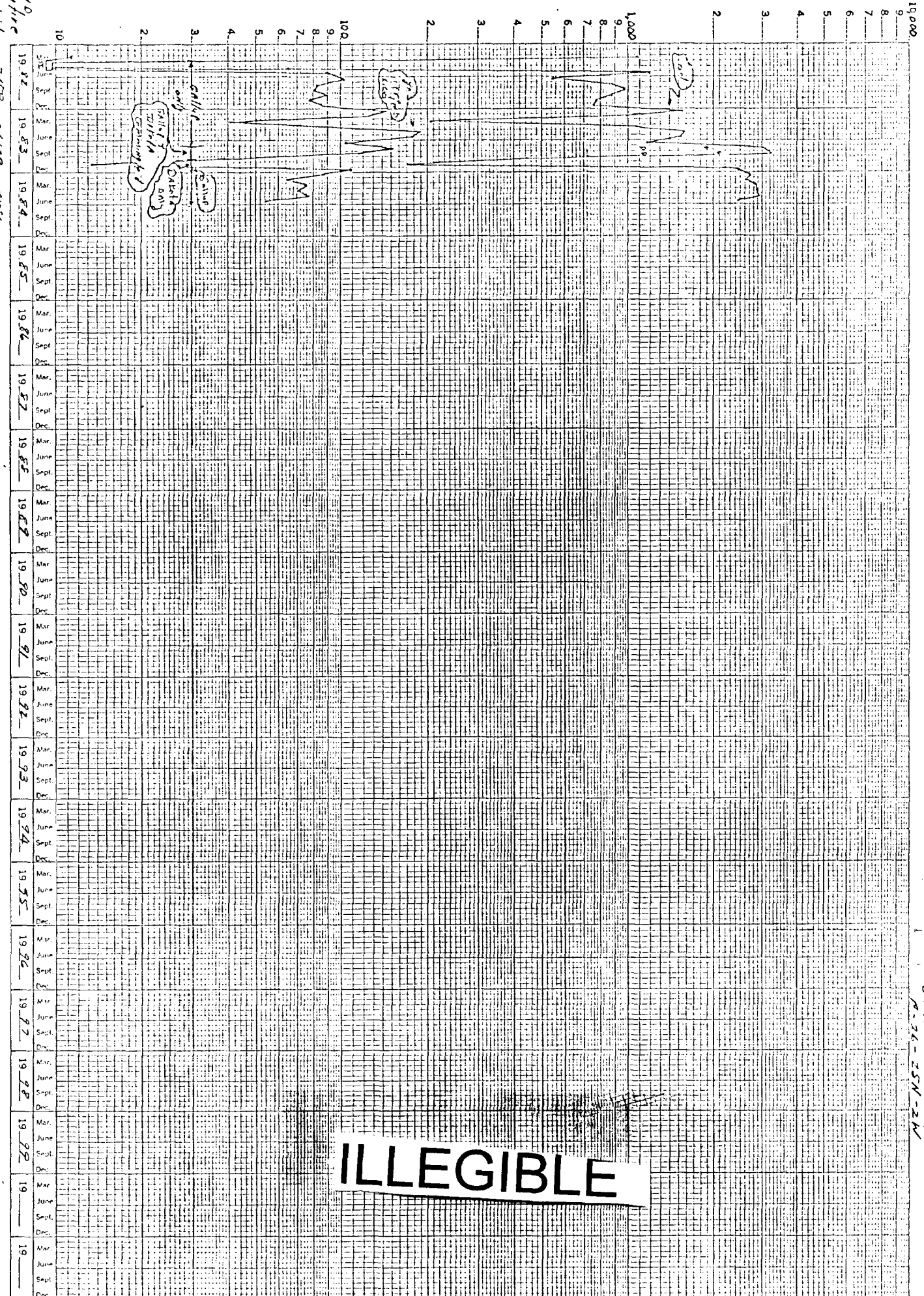
Oil, bbl

7/53

24/59

19/54

12



ILLEGIBLE

Trail well stream plhd

Northwest Exploration
Gulfian Mines / Basin Dakota
P-34-25N-2W

Northwest Exploration - GAVILAN No.1

A-26-25N-2W

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

	7/83	8/83	9/83	10/83	11/83	12/83	1/84	2/84
1	60-584	108-229	102-0	shut in	8-97	5-366	5E	
2	63-586	98-0	?-?	shut in	5-97	87-204	5Z	
3	49-559	68-0	111-0	100-224	5-97	88-501	5E	
4	50-533	83-226	95-0	125-0	7-96	78-501	5E	
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	109-229	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		95-227	110-0	③ 12-0	6-90	69-413	128-376	
13		99-227	102-0	③ 11-170	7-90	83-459	105-376	
14		77-0	82-0	③ 13-0	6-82	83-482	112-376	
15		83-0	98-0	③ 10-0	4-82	77-471	25-157	
16		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	115-354	
18		108-228	110-0	5-0	8-85	68-439	107-354	
19		105-0	172-0	10-0	5-86	100-424	122-315	
20		98-0	96-230	8-0	8-88	84-424	82-514	
21		100-227	94-228	5-0	4-86	5E	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	123-242	
25	83-602	105-0	105-0	12-0	7-90	113-394	118-260	
26	68-609	109-0	108-234	5-0	5-97	70-390		
27		100-0	103-0	NR	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	98-376		
31	98-0	87-229		NR		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=71BOPD+563MCFD(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

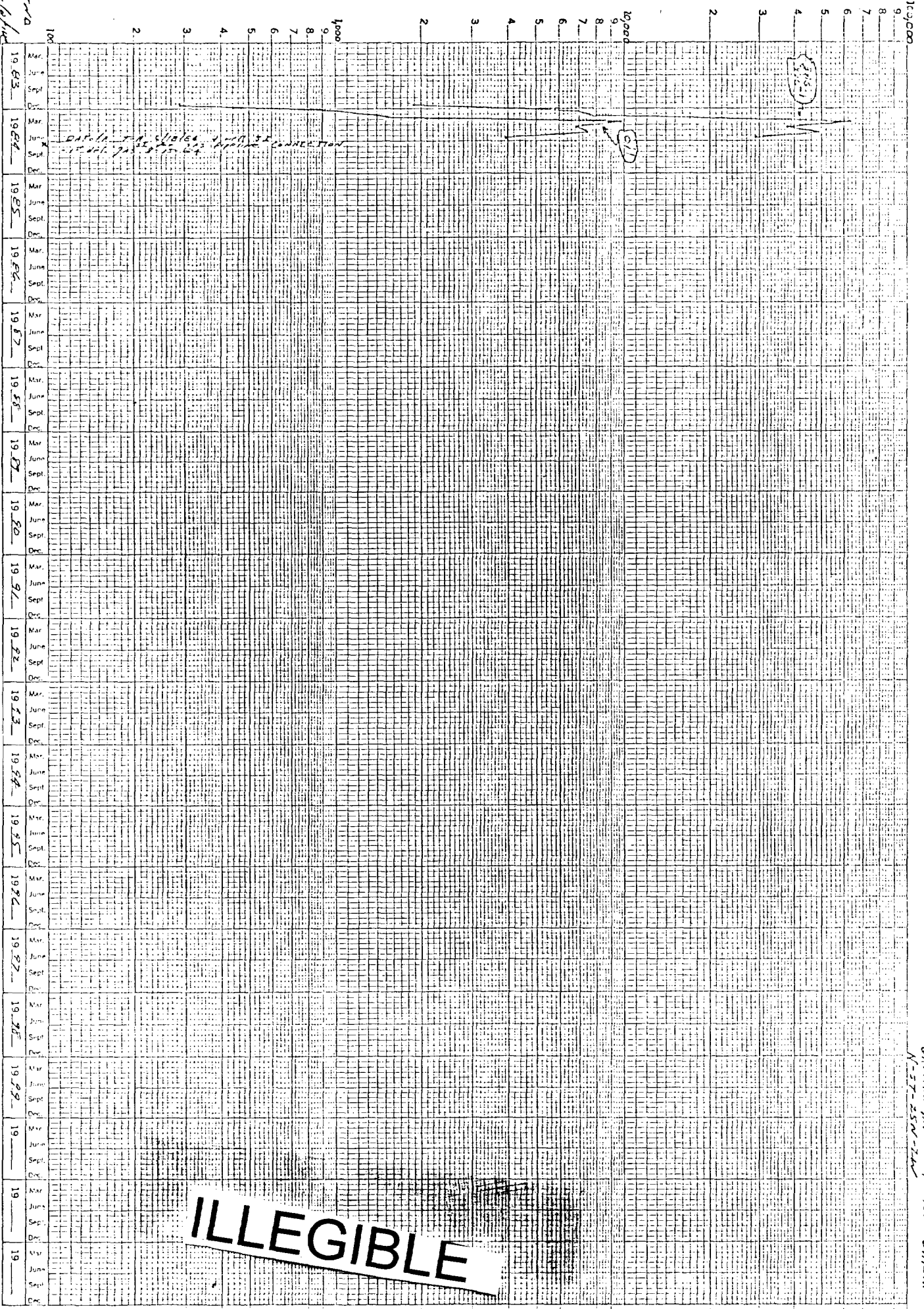
10/10 thru 31/83 - 20 day Avg = 13 BOPD + 131 MCFD (GOR=10,077) (gas volumes from C-115)
11/83 - 30 day Avg = 6 BOPD + 88 MCFD (GOR=14,728) (C-115 gas volumes=44 MCFD, GOR from C-115 = 7772)

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)	

GAS PRODUCTION - MCF/month x 10³
OIL PRODUCTION - BBL/month

Wells
Cumulative
Oil
1961



James P. Millough
NGLS Section
NGLS Division
NGLS Section
NGLS Division