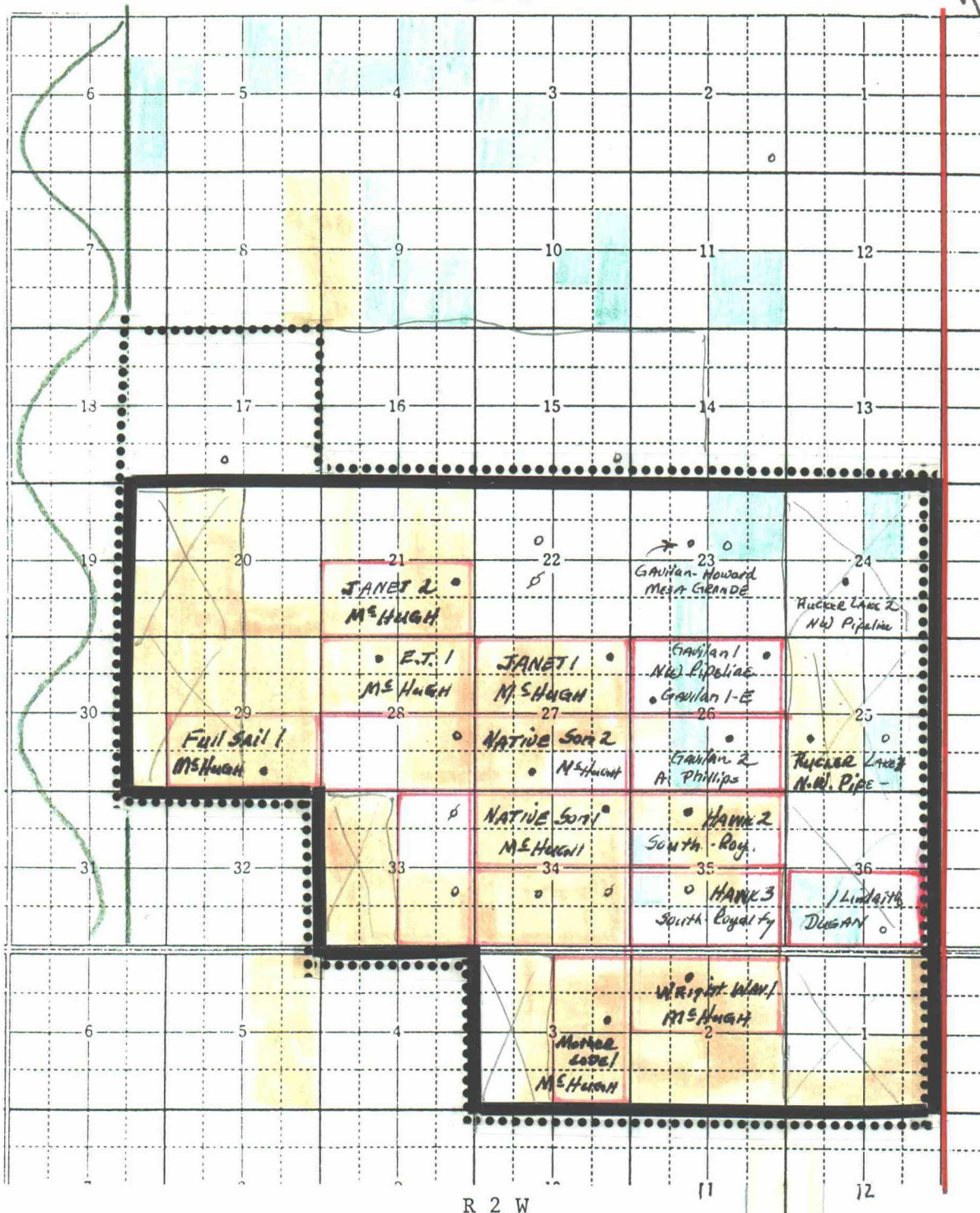


EAST & WEST
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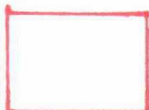
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McHUGH ACREAGE



DUGAN ACREAGE



PRORATION UNIT/WELL



GAVILAN-MANCOS POOL



GAVILAN, GREENHORN, GRANEROS,
DAKOTA PROPOSED POOL

12,000 Gross Acres in
Proposed Pool

APPLICATION OF JEROME P. McHUGH

NEW POOL CREATION

Gavilan, Greenhorn, Graneros,
Dakota Oil Pool
Rio Arriba County, New Mexico

Case #8350 - Exhibit 1

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R-2W

31

APPLICATION for Jerome P. McHugh
NEW POOL CREATION
Gavilan Greenhorn-Graneros-Dakota Oil Pool
Rio Arriba County, New Mexico
Case No. 8350, Exhibit 2

6

7

PROPOSED
GAVILAN - GREENHORN,
GRANEROS, DAKOTA
POOL

18

Mesa Grande
#1 WOCT
BROWN TO 8317

GAVILAN
MANCOS
POOL
BOUNDARY

19

79°59'22" #2
Commingle
J.P. McHugh
JANET

MESA
GRANDE
GAVILAN-
HOWARD

24

#25 148°60'S
NWPL
RUCKER LAKE

30

81°14'42" J.P. McHugh
Full Sail

#1 580°42'0
Commingle
J.P. McHugh
E.T.

LOCATION #2
8230' DAKOTA
Full Sail

140°57'32" #1
Commingle
J.P. McHugh
JANET

535°8'16" #2
J.P. McHugh
NATIVE SON

29°8'51" #1
GAVILAN
#1E DAKOTA
NWEX
GAVILAN

COMPLETING #2
TO 8200' EA. Phillips
GAVILAN

94°2'43" - MANCOS
DAKOTA SI

112°12'45" #3
NWPL
RUCKER LAKE
LOCATION
7800' DAKOTA

31

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

312°16'03" #1
J.P. McHugh
NATIVE SON

196°28'16" #2
Southland
Royalty
HAWK FED.

LOCATION #3
7950' DAKOTA
HAWK FED.
Southland Royalty

36

Drilling
Dugan Prod.
#1
Lindell

MAP LEGEND

- - MANCOS Completion
- - GREENHORN Completion
- - DAKOTA Completion

Well Status AS of 9/1/84
- PRODUCTION - BOPD @ GOR
during 7/84 if AVAILABLE -
if Not, then most current.

GAVILAN MANCOS +
BASIN DAKOTA POOLS.

Rio Arriba County

New Mexico

294°59'12" #1
Commingle
J.P. McHugh
Mother Lode

127°7'52" #1
Commingle
J.P. McHugh
WRIGHT WAY

1

Amoco
050 CANYON
GAS COM. D-1
7765' DAKOTA

Amoco
050 CANYON
GAS COM. D-1
7765' DAKOTA

12

#1
Amoco
050 CANYON Fd B
8100' DAKOTA

Amoco
050 CANYON
GAS COM. D-1
7765' DAKOTA

LOCATION #1
8100' DAKOTA
#1
Amoco
050 CANYON Fd. A

1

PROD
050 CANYON
GAS C
8100'

47°53'22"

SI-
WOPL
Dugan
Production
Divide

LOCATION
7800' MANCOS
TAPACITOS
DUGAN PROD.

36

Mallon
Ribeyowids

LOCATION
8100' DAKOTA

12

13

109°26'34" MANCOS
83°19'45" SH-DAK

#1

24

#25 148°60'S
NWPL
RUCKER LAKE

79°59'22" #2
Commingle
J.P. McHugh
JANET

MESA
GRANDE
GAVILAN-
HOWARD

24

#25 148°60'S
NWPL
RUCKER LAKE

30

81°14'42" J.P. McHugh
Full Sail

#1 580°42'0
Commingle
J.P. McHugh
E.T.

LOCATION #2
8230' DAKOTA
Full Sail

140°57'32" #1
Commingle
J.P. McHugh
JANET

535°8'16" #2
J.P. McHugh
NATIVE SON

29°8'51" #1
GAVILAN
#1E DAKOTA
NWEX
GAVILAN

COMPLETING #2
TO 8200' EA. Phillips
GAVILAN

94°2'43" - MANCOS
DAKOTA SI

112°12'45" #3
NWPL
RUCKER LAKE
LOCATION
7800' DAKOTA

31

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

312°16'03" #1
J.P. McHugh
NATIVE SON

196°28'16" #2
Southland
Royalty
HAWK FED.

LOCATION #3
7950' DAKOTA
HAWK FED.
Southland Royalty

36

Drilling
Dugan Prod.
#1
Lindell

MAP LEGEND

- - MANCOS Completion
- - GREENHORN Completion
- - DAKOTA Completion

Well Status AS of 9/1/84
- PRODUCTION - BOPD @ GOR
during 7/84 if AVAILABLE -
if Not, then most current.

GAVILAN MANCOS +
BASIN DAKOTA POOLS.

Rio Arriba County

New Mexico

294°59'12" #1
Commingle
J.P. McHugh
Mother Lode

127°7'52" #1
Commingle
J.P. McHugh
WRIGHT WAY

1

Amoco
050 CANYON
GAS COM. D-1
7765' DAKOTA

Amoco
050 CANYON
GAS COM. D-1
7765' DAKOTA

12

#1
Amoco
050 CANYON Fd B
8100' DAKOTA

Amoco
050 CANYON
GAS COM. D-1
7765' DAKOTA

LOCATION #1
8100' DAKOTA
#1
Amoco
050 CANYON Fd. A

1

PROD
050 CANYON
GAS C
8100'

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

Well Name	Location ^① U-S-T-R	Order Drld.	KB Elev.	Completion Date	Mancos Zone ^① Perfs BOPD @ GOR	Dakota Zone Perfs BOPD @ GOR	Cumm. to 8/1/84 BO MCF	Current Prod. 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 ^⑤	30,540 19,587	535 @ 816
Full1 Sail #1	O 29-25N-2W	13	7119	6-15-84	6745-7409 216 @ 1444	^⑤	-0- -0-	81 @ 1442
Native Son #1	A 34-25N-2W	14	7320	6-7-84	6765-7443 198 @ 1636	^⑤	5,927 4,830	312 @ 1603
High Adventure #1	A 33-25N-2W	--	7214	Location	(8190' Dakota)			
Full1 Sail #2	I 28-25N-2W	--	7263	Location	(8230' Dakota)			
Northwest Exploration								
Gavilan #1	A 26-25N-2W	1	7467	3-21-82	6821-7562 62 @ 8790 ^⑥	7879-8026 10.2 @ 3400 ^⑥	41,084 ^① 234,498 ^①	94 @ 2430
Gavilan #1-E ^③	E 26-25N-2W	5	7319	7-23-83	6804-7366 32 @ 11700	7822-7918	11,811 ^① 47,656 ^①	29 @ 8519
Northwest Pipeline								
Rucker Lake #2	K 24-25N-2W	9	7396	8-26-83	6825-7484 193 @ 1200	^⑤	41,827 23,386	148 @ 605
Rucker Lake #3	L 25-25N-2W	8	7408	8-10-83	6808-7538 145 @ 2089	--	33,342 34,899	112 @ 1245
Rucker Lake #4	J 25-25N-2W	--	7448	Location	(7800' Dakota)			
Mesa Grande Resources								
Gavilan-Howard #1 ^⑤	F 23-25N-2W	11	7294	4-23-84	6659-7370 75 @ 36160	7665-7849 83 @ 29,699 ^⑥	2,308 16,190	192@10,016
Brown #1	N 17-25N-2W	17	7196	Waiting on Completion	- 7" Casing @ 8300'			
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 ^①
Hawk Federal #3	K 35-25N-2W	--		Location	(7950' Dakota)			
E. Alex Phillips (also known as Mesa Grande)								
Gavilan #2 ^①	J 26-25N-2W	15	7416	Completing	6872-7127 Testing	7902-7998 Testing	-0- -0-	---
Dugan Production Corp.								
Lindrith #1	O 36-25N-2W	18	7432	Drilling	(7600' Mancos)			
Tapacitos #3	D 36-26N-2W	--	7818	Location	(7800' Mancos)			
Mallon Oil								
Ribeyowids Fed #1	P 2-25N-2W	--		Location	(8100' Dakota)			

APPLICATION for Jerome P. M

MANCOS-DAKOTA WELL DATA - Gavilan Area - Rio Arriba County, New Mexico (Cont'd)

<u>Well Name</u>	<u>Location</u> ① <u>U-S-T-R</u>	<u>Order</u> <u>Drld.</u>	<u>KB</u> <u>Elev.</u>	<u>Completion</u> <u>Date</u>	<u>Mancos Zone</u> ② <u>Perfs</u> <u>BOPD @ GOR</u>	<u>Dakota Zone</u> <u>Perfs</u> <u>BOPD @ GOR</u>	<u>Cumm. t</u> <u>BO</u>
<u>Amoco Production Co.</u>							
<u>Amoco Fed-Oso Cny.#1</u>	E 24-24N-2W	16	7457	Completing 6838-7016	Testing	7926-8030	Squeezed -0-
Oso Canyon Fed. B-1	F 11-24N-2W	--		Location (8100' Dakota)			
Oso Canyon Fed. A-1	F 14-24N-2W	--		Location (8100' Dakota)			
Oso Cny Gas Com. D-1	P 11-24N-2W	--		Location (7965' Dakota)			
Oso Cny Gas Com. B-1	P 10-24N-2W	--		Location (7965' Dakota)			
Oso Cny Gas Com. C-1	F 13-24N-2W	--		Location (8040' Dakota)			
Oso Cny Gas Com. A-1	D 23-24N-2W	--		Location (7965' Dakota)			

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 | Ribeyowids Fed #1 | 860' FSL - 990' FEL |
| Janet #2 | 1850' FSL - 790' FEL | Hawk Federal #2 | 910' FNL - 1840' FWL |
| E.T. #1 | 1100' FNL - 1600' FWL | Hawk Federal #3 | 1835' FSL - 1690' FWL |
| Wright Way #1 | 950' FNL - 1680' FWL | Gavilan #2 | 1828' FSL - 1846' FEL |
| Mother Lode #1 | 1730' FNL - 860' FEL | Lindriith #1 | 790' FSL - 1650' FEL |
| Native Son #2 | 1020' FSL - 1670' FWL | Tapacitos #3 | 990' FNL - 790' FWL |
| Full Sail #1 | 980' FSL - 1730' FEL | Amoco Fed-Oso Cny #1 | 990' FWL - 1650' FNL |
| Native Son #1 | 790' FNL - 990' FEL | Oso Canyon Fed. B-1 | 1660' FNL - 1840' FWL |
| High Adventure #1 | 790' FNL - 790' FEL | Oso Canyon Fed. A-1 | 1660' FNL - 1790' FWL |
| Full Sail #2 | 1650' FSL - 790' FEL | Oso Cny Gas Com. D-1 | Not Published |
| Gavilan #1 | 930' FNL - 910' FEL | Oso Cny Gas Com. B-1 | Not Published |
| Gavilan #1E | 1850' FNL - 990' FWL | Oso Cny Gas Com. C-1 | Not Published |
| Rucker Lake #2 | 1420' FSL - 1520' FWL | Oso Cny Gas Com. A-1 | Not Published |
| Rucker Lake #3 | 1760' FSL - 940' FWL | | |
| Rucker Lake #4 | 2060' FSL - 1740' FEL | | |
| Gavilan-Howard #1 | 1850' FNL - 1651' FWL | | |
| Brown #1 | 850' FSL - 1850' FWL | | |
- E Completion postponed. Dakota penetrated and development similar to other completions.
- F Perfs temporarily abandoned with NMOC 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 whil
- H Dakota tested 20-30 BOPD with GOR of Approx. 37,280 during completion.
- I Also completed Greenhorn 7740-7805' - no tests reported.
- J To 7-1-84 - 7/84 data not on file with NMOC as of 9/1/84.
- K C-116 test