

CARLILE, GREENHORN, GRANEROS AND DAKOTA TEST DATA
Gavilan Area
Rio Arriba County, New Mexico

Operator & Well	DAKOTA & GRANEROS				GREENHORN & CARLILE			
	Initial Potential		Avg. Prod. 1st Mo.	9 Mo. Avg. Prod. 11/83-7/84	Initial Potential		Avg. Prod. 1st Mo.	9 Mo. Avg. Prod. 11/83-7/84
	BOPD	GOR	BOPD	GOR	BOPD	GOR	BOPD	GOR
Jerome P. McHugh								
Janet #1	43	1047	18	15.7	1150	NC	NC	--
Janet #2	36	1111	15	21	242	NC	NC	--
E.T. #1	18	1833	8	17	164	NC	NC	--
Wright Way #1	27	2000	11	9.6	1639	NC	NC	--
Mother Lode #1	15	2200	6	5.6	2454	NC	NC	--
Native Son #2	58	3824	24	10.8	2049	NC	NC	--
Northwest Exploration								
Gavilan #1	(A) 10.2	(A) 3400	13 (A) 4	6	14667	NC	NC	4 (B) 0
Gavilan #1E				0	0	9.8	2510	0
Mesa Grande Resources								
Gavilan Howard #1	83 (C)	29699	35	0	0	NR	NR	0
Gavilan #2	NR	NR	NR	0	0	NR	NR	0
Southland Royalty								
Hawk Federal #1	0	0	0	0	0	NC	NC	0
11 Well Total	290		134	85.7				
11 Well Average (D)	36	5639	15	12.2	3195			
9 Well Total	197		95	58.7				
9 Well Average (E)	33	2394	14	11.8	1507			
A - IP not reported - was tested with Mancos. Dakota was production tested for 50 days - avg. 1st 20 days = 13 BOPD + 131 MCFD and avg. last 30 days = 6 BOPD + 88 MCFD. NWPL utilized a rate of 5.9 BOPD w/ GOR of 14983 for Downhole Commingling Application (Case #8042).								
B - Estimated rate based upon area evaluation. NWPL utilized 3.4 BOPD w/ GOR of 4706 on Application for Downhole Commingling (Case #8042 de novo).								
C - Commingled Carlile, Greenhorn, Graneros & Dakota perfs. Individual zones not reported separately. During completion, individual zones tested as follows: Graneros & Dakota - 20 to 30 BOPD @ GOR = 37,280; Carlile & Greenhorn - 102.5 BOPD @ GOR = 22,829								
D - Average of all wells with actual test. Wells not reported or testing zero are not included.								
E - Average excluding high and low tests - considering only wells with actual tests.								
Wells not reported or testing zero are not included.								
NC = Not completed NR = Not reported separately								

DRILLING AND COMPLETION EXPENDITURES
Wells with McHugh/Dugan Working Interest
Gavilan Mancos Field Area
Rio Arriba County, New Mexico

<u>Operator & Well</u>	<u>Type of Compl.</u>	<u>Expenditures Invoiced As of 9-12-84</u>	<u>Estimated Monies to be Spent</u>	<u>Total Well Cost</u>
<u>Jerome P. McHugh</u>				
Janet #1	A	\$ 460,165	\$ -0-	\$ 460,165
Janet #2	A	456,097	-0-	456,097
E.T. #1	A	517,676	-0-	517,676
Wright Way #1	A	661,256	-0-	661,256
Mother Lode #1	A	445,222	-0-	445,222
Native Son #2	A	522,587	40,813	563,400
Full Sail #1	C	516,279	-0-	516,279
Native Son #1	C	299,092	188,808	487,900
High Adventure #1	C	-0-	487,900 (F)	487,900
Full Sail #2	C	-0-	487,900 (F)	487,900
Subtotal		\$3,878,374	\$1,205,421	\$5,083,795
10 Well Average				\$ 508,380
<u>Dugan Production Corp.</u>				
Lindrieth #1	D	-0-	499,123 (F)	499,123
Tapacitos #3	D	-0-	499,123 (F)	499,123
<u>Southland Royalty</u>				
Hawk Fed. #3	E	262,517	352,483	615,000
<u>Northwest Exploration</u>				
Gavilan #1	A	1,140,284	60,000	1,200,284
Gavilan #1E	A	906,423	60,000	966,423
<u>Northwest Pipeline Corp.</u>				
Rucker Lake #3	D	574,605	-0-	574,605
Rucker Lake #4	D	-0-	513,170 (F)	513,170
<u>Mesa Grande Resources/E. Alex*Phillips</u>				
Gavilan Howard #1	B	716,003	121,997	838,000
Gavilan Howard #2	B	585,744	176,431	762,175
19 Well Total		\$8,063,950		\$11,551,698
19 Well Average				\$ 607,984

- A - Mancos & Dakota completion - commingled
 B - Mancos & Dakota completion - dualled
 C - Dakota penetrated - only Mancos completed
 D - Dakota not penetrated - only Mancos completed
 E - Mancos only - Dakota TA after compl. attempt
 F - Location - Dollar values = AFE estimates.

APPLICATION for Jerome P. McHugh
 NEW POOL CREATION
 Gavilan Greenhorn-Graneros-Dakota Oil Pool
 Rio Arriba County, New Mexico
 Case No. 8350, Exhibit 7

9/84

JDR

DUGAN PRODUCTION CORP.

P.O. Box 208, Farmington, NM 87401 Ph. (505) 325-1821

AUTHORIZATION FOR EXPENDITURE

WELL NAME AND NO. Single Dakota Completion

LOCATION Gavilan Area - Rio Arriba County, New Mexico

298 - TANGIBLES

Code			
01	Surface Casing -	300 ft. of 9-5/8" @ \$15.50/ft.	4,650
02	Prod. Casing -	8100 ft. of 5-1/2" @ 6.00/ft.	48,600
	Casing -	ft. of	
04	Tubing -	8000 ft. of 2-3/8" @ 2.50/ft.	20,000
	Tubing -	ft. of	
06	Packer and Tubing Equipment		1,000
07	Wellhead Equipment		13,500
08	Valves & Fittings		500
09	Production Unit & Treaters		10,500
10	Tank Battery		10,000
11	Pumping Unit & Prime Mover		40,000
12	Rods, Bottom-hole Pump, Aux Equip.		12,500
13	Misc. Tangible Equipment		500
14	Well Hookup		4,500
15	Gas Lines and Installation		
16	Pipeline Installation		
	TOTAL TANGIBLES		\$166,250

299 - INTANGIBLES

Code		
30	Survey Archeologist	750
31	Location Damages	2,500
32	Road & Location Construction	7,500
33	Water & Gas Lines	
40	Contract Drilling 8100 ft. @ \$12.00/ft.	97,200
41	Daywork 48 hrs. @ \$ 200 /hr.	9,600
43	Drill Stem Test & Cores	
44	Mud Logging	5,500
45	Open Hole Logging	11,000
46	Rental Tools	
47	Casing Float Equip. & Centralizer	4,000
48	Trucking	1,500
49	Mud	47,500
50	Water - Drilling Oper.	11,500
51	Casing Crew & Power Tongs	2,000
52	Miscellaneous	
53	Testing Tubular Goods	
54	Tool & Equip. Repair	
55	Company & Contract Labor, Roustabouts	1,000
56	Supplies	500
60	Cementing Surface Casing	3,000
61	Cementing Prod. Casing	20,700
70	Completion Rig 8 days unit + 7 days swab	19,000
71	Perf. & Cased Hole Logging	7,500
72	Acidizing	1,500
73	Fracturing	35,000
74	Tank Rental	1,500
75	Trucking - Completion	1,500
76	Water - Completion	4,000
77	Rental Tools - Completion	1,500
78	Clean-up Location	1,500
79	Power Swivel, Pump & Pit Rental	2,000
80	Contract Serv. & Labor - Completion	
90	Supervision - Administrative	1,500
91	Supervision - Legal	1,000
92	Supervision - Field	8,000

TOTAL INTANGIBLES	\$311,250
≈ 5 % Contingency	23,900

TOTAL WELL COST	\$501,400
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APPLICATION for Jerome P. McHugh
 NEW POOL CREATION
 Gavilan Greenhorn-Graneros-Dakota Oil Pool
 Rio Arriba County, New Mexico
 Case No. 8350, Exhibit 8

9/84
JAX

DUGAN PRODUCTION CORP.
P.O. Box 208, Farmington, NM 87401 Ph. (505) 325-1821

AUTHORIZATION FOR EXPENDITURE

WELL NAME AND NO.		Typical Mancos Completion		
LOCATION		Gavilan Area - Rio Arriba County, New Mexico		
<u>298 - TANGIBLES</u>				
Code				
01	Surface Casing -	300 ft. of	9-5/8" @ \$15.50/ft.	4,650
02	Prod. Casing -	7600 ft. of	5-1/2" @ 6.00/ft.	45,600
	Casing -	ft. of		
04	Tubing -	7500 ft. of	2-7/8" @ 3.50/ft.	26,250
	Tubing -	ft. of		
06	Packer and Tubing Equipment			1,000
07	Wellhead Equipment			13,500
08	Valves & Fittings			500
09	Production Unit & Treaters			10,500
10	Tank Battery			10,000
11	Pumping Unit & Prime Mover			40,000
12	Rods, Bottom-hole Pump, Aux Equip.			12,500
13	Misc. Tangible Equipment			500
14	Well Hookup			4,500
15	Gas Lines and Installation			
16	Pipeline Installation			
TOTAL TANGIBLES				\$169,500

299 - INTANGIBLES

Code		
30	Survey Archeologist	750
31	Location Damages	2,500
32	Road & Location Construction	7,500
33	Water & Gas Lines	
40	Contract Drilling 7600 ft. @ \$12.00/ft.	91,200
41	Daywork 48hrs. @ \$200 /hr.	9,600
43	Drill Stem Test & Cores	
44	Mud Logging	5,500
45	Open Hole Logging	9,500
46	Rental Tools	
47	Casing Float Equip. & Centralizer	4,000
48	Trucking	1,500
49	Mud	47,500
50	Water - Drilling Oper.	11,500
51	Casing Crew & Power Tongs	2,000
52	Miscellaneous	
53	Testing Tubular Goods	
54	Tool & Equip. Repair	
55	Company & Contract Labor, Roustabouts	1,000
56	Supplies	500
60	Cementing Surface Casing	3,000
61	Cementing Prod. Casing	20,000
70	Completion Rig 8 days unit + 7 days swab	19,000
71	Perf. & Cased Hole Logging	7,000
72	Acidizing	
73	Fracturing	40,000
74	Tank Rental	1,500
75	Trucking - Completion	1,500
76	Water - Completion	4,000
77	Rental Tools - Completion	1,500
78	Clean-up Location	1,500
79	Power Swivel, Pump & Pit Rental	2,000
80	Contract Serv. & Labor - Completion	
90	Supervision - Administrative	1,500
91	Supervision - Legal	1,000
92	Supervision - Field	8,000

TOTAL INTANGIBLES	\$306,050
± 5 % Contingency	23,550

TOTAL WELL COST	\$499,100
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9/84
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DUGAN PRODUCTION CORP.
P.O. Box 208, Farmington, NM 87401 Ph. (505) 325-1821

AUTHORIZATION FOR EXPENDITURE

WELL NAME AND NO. Typical Mancos-Dakota Commingled Comp.

LOCATION Gavilan Area - Rio Arriba County, New Mexico

298 - TANGIBLES

Code			
01	Surface Casing -	300 ft. of 9-5/8" @ \$15.50/ft.	4,650
02	Prod. Casing -	8100 ft. of 5-1/2" @ 6.00/ft.	48,600
	Casing -	ft. of	
04	Tubing -	8000 ft. of 2-7/8" @ 3.50/ft.	28,000
	Tubing -	ft. of	
06	Packer and Tubing Equipment		1,000
07	Wellhead Equipment		13,500
08	Valves & Fittings		500
09	Production Unit & Treaters		10,500
10	Tank Battery		10,000
11	Pumping Unit & Prime Mover		40,000
12	Rods, Bottom-hole Pump, Aux Equip.		12,500
13	Misc. Tangible Equipment		500
14	Well Hookup		4,500
15	Gas Lines and Installation		
16	Pipeline Installation		
	TOTAL TANGIBLES		\$174,250

299 - INTANGIBLES

Code		
30	Survey Archeologist	750
31	Location Damages	2,500
32	Road & Location Construction	7,500
33	Water & Gas Lines	
40	Contract Drilling 8100 ft. @ \$12.00/ft.	97,200
41	Daywork 48 hrs. @ \$ 200 /hr.	9,600
43	Drill Stem Test & Cores	
44	Mud Logging	5,500
45	Open Hole Logging	11,000
46	Rental Tools	
47	Casing Float Equip. & Centralizer	4,000
48	Trucking	1,500
49	Mud	47,500
50	Water - Drilling Oper.	11,500
51	Casing Crew & Power Tongs	2,000
52	Miscellaneous	
53	Testing Tubular Goods	
54	Tool & Equip. Repair	
55	Company & Contract Labor, Roustabouts	1,000
56	Supplies	500
60	Cementing Surface Casing	3,000
61	Cementing Prod. Casing	20,700
70	Completion Rig 10 days unit + 7 days swab	22,000
71	Perf. & Cased Hole Logging	7,500
72	Acidizing	1,500
73	Fracturing	75,000
74	Tank Rental	1,500
75	Trucking - Completion	1,500
76	Water - Completion	4,000
77	Rental Tools - Completion	1,500
78	Clean-up Location	1,500
79	Power Swivel, Pump & Pit Rental	2,000
80	Contract Serv. & Labor - Completion	
90	Supervision - Administrative	1,500
91	Supervision - Legal	1,000
92	Supervision - Field	8,800

TOTAL INTANGIBLES \$355,050
≈ 5 % Contingency 26,500

TOTAL WELL COST

\$555,800

9/84
for

DUGAN PRODUCTION CORP.
P.O. Box 208, Farmington, NM 87401 Ph. (505) 325-1821

AUTHORIZATION FOR EXPENDITURE

WELL NAME AND NO. Dual Mancos - Dakota Well

LOCATION Gavilan Area - Rio Arriba County, New Mexico

298 - TANGIBLES

Code	10-3/4" 40.5#	
01 Surface Casing -	300 ft. of @ \$20.00/ft.	6,000
02 Prod. Casing -	8100 ft. of 7"23&26# @ \$12.50/ft.	101,250
Casing -	ft. of	
04 Tubing -	8000 ft. of 2-3/8" @ \$2.50/ft.	20,000
Tubing -	7600 ft. of 2-3/8" @ \$2.50/ft.	19,000
06 Packer and Tubing Equipment		24,250
07 Wellhead Equipment		20,000
08 Valves & Fittings		1,000
09 Production Unit & Treaters		21,000
10 Tank Battery		20,000
11 Pumping Unit & Prime Mover		80,000
12 Rods, Bottom-hole Pump, Aux Equip.		25,000
13 Misc. Tangible Equipment		1,000
14 Well Hookup		9,000
15 Gas Lines and Installation		
16 Pipeline Installation		
TOTAL TANGIBLES		\$347,500

299 - INTANGIBLES

Code		
30 Survey Archeologist		750
31 Location Damages		2,500
32 Road & Location Construction		7,500
33 Water & Gas Lines		
40 Contract Drilling 8100 ft. @ \$14.00/ft.		113,400
41 Daywork 48 hrs. @ \$200 /hr.		9,600
43 Drill Stem Test & Cores		
44 Mud Logging		5,500
45 Open Hole Logging		11,000
46 Rental Tools		
47 Casing Float Equip. & Centralizer		4,000
48 Trucking		1,500
49 Mud		47,500
50 Water - Drilling Oper.		11,500
51 Casing Crew & Power Tongs		2,000
52 Miscellaneous		
53 Testing Tubular Goods		
54 Tool & Equip. Repair		
55 Company & Contract Labor, Roustabouts		1,000
56 Supplies		500
60 Cementing Surface Casing		2,800
61 Cementing Prod. Casing		19,000
70 Completion Rig 15 days unit & 10 days swab		32,500
71 Perf. & Cased Hole Logging		7,500
72 Acidizing		1,500
73 Fracturing		75,000
74 Tank Rental		1,500
75 Trucking - Completion		1,500
76 Water - Completion		4,000
77 Rental Tools - Completion		1,500
78 Clean-up Location		1,500
79 Power Swivel, Pump & Pit Rental		2,000
80 Contract Serv. & Labor - Completion		
90 Supervision - Administrative		1,500
91 Supervision - Legal		1,000
92 Supervision - Field		12,000

TOTAL INTANGIBLES \$383,050

= 5 % Contingency 36,450

TOTAL WELL COST

\$767,000

3/84
80R.
Hypothetical Single Dakota Completion
Gavilan Acre - Rio Arriba Co, N.M.
8100' TD.

Initial Production 15 BOPD
1.507 M/GAL/D
200.34E-9 9/1000-9
OPERATING EXP. 1500 \$/mo (4.0)

Oil Price 29.00 Tim 3 less 15% Trucking 51
Gas Price 103.694 = 2.92 + 1.125 = 3.535/mcf
Oil Prod. Tax 7.52876
Gas Prod Tax 3.77876 GAC + 12.164/mcf/mcf (4.0)
WPT Tax Rate 84 = 474/80, 8500-350/80 (E)

Years on Prod. comm./100 -	W/NZ 20-3P	Annual m-bbl base/mcf 8P-	Annual gas-mcf base/mcf 9P-	Net Revenue - m\$			Prod. Tax m\$ LS	Winnfall Profits Tax-m\$ 75	Operating Expense m\$ 85	Investment m\$	Interest m\$ 25 12.5%	Annual Cash Flow m\$ 95	Cumulative Revenue m\$
				Oil	Gas	Total							
0				35	45	55	LS	75	85			95	
1	100/825	438/3.8	6.6/5.8	105.4	19.8	125.2	9.4	1.8	18.0	501.4	42.7	-428.1	-428.1
2		263/2.3	4.0/3.5	63.2	11.9	75.1	5.4	0.8	"	0	58.5	-7.8	-475.9
3		158/1.4	2.4/2.1	37.9	7.1	45.1	3.4	0.5	"	0	59.5	-36.3	-512.2
4		1.13/1.0	1.7/1.5	27.2	5.1	32.3	2.9	0.3	"	0	64.0	-52.5	-564.6
5		1.03/0.9	1.6/1.4	24.8	4.7	29.4	2.2	0.3	"	0	70.6	-61.7	-626.3
5 yr Total		10.7/9.4	16.2/14.2	258.5	48.6	307.1	23.0	3.8	90.0	501.4	315.3	-676.3	
6		0.93/0.8	1.4/1.2	22.4	4.2	26.6	2.0	0.3	18.0	0	78.3	-78.0	-498.3
7		0.85/0.7	1.3/1.1	20.4	3.8	24.2	1.8	0.3	"	0	82.3	-83.2	-781.5
8		0.77/0.67	1.2/1.0	18.5	3.5	22.0	1.7	0.2	"	0	92.7	-95.6	-877.0
9		0.70/0.61	1.04/0.9	16.9	3.2	20.0	1.5	0.2	"	0	109.4	-109.8	-986.3
10		0.6/0.6	1.0/0.8	15.3	2.9	18.2	1.4	0.2	"	0	123.3	-124.6	-1110.9
10 yr Total		14.6/12.8	22.0/19.3	352.0	66.2	418.2	31.3	4.9	180.0	501.4	811.5	-1110.9	
11													
12													
13													
14													
15													
15 yr Total													
16													
17													
18													
19													
20													
20 yr Total													
20-00													

APPLICATION for Jerome P. McHugh
NEW POOL CREATION
Gavilan Greenhorn-Graneros-Dakota Oil Pool
Rio Arriba County, New Mexico
Case No. 8350, Exhibit 9

Present worth of
 Dakota commuted
 annuities -

midyear factors
 SPWF = $\frac{1}{1+i}$

years on prod.	Present worth @ 5%				Present worth @ 12 1/2%				Present worth @ 25%				Present worth @ 50%				years on prod.
	SPWF				SPWF				SPWF				SPWF				
0	1.00				1.0				1.0				1.0				0
1	0.97570				0.94251	38.8		38.8	0.89443				0.81650				1
2	0.92943				0.83085	59.0		58.9	0.71554				0.54433				2
3	0.88517				0.74494	24.0		112.9	0.52743				0.36289				3
4	0.84301				0.66216	13.6		126.9	0.45795				0.24192				4
5	0.80288				0.58859	10.5		137.0	0.34636				0.16128				5
6	0.76464				0.52319	8.0		144.98	0.29309				0.10752				6
7	0.72823				0.46566	6.8		151.1	0.23447				0.07168				7
8	0.69355				0.41339	4.6		155.7	0.18757				0.04779				8
9	0.66053				0.36745	3.4		159.1	0.15006				0.03186				9
10	0.62907				0.32663	2.5		161.6	0.12005				0.02124				10
11	0.59912				0.29033	1.8		163.9	0.09604				0.01416				11
12	0.57059				0.25808	1.2		164.6	0.07683				0.00944				12
13	0.54342				0.22940	0.8		165.5	0.06146				0.00629				13
14	0.51754				0.20391	0.5		165.9	0.04917				0.00420				14
15	0.49290				0.18125	0.3		166.2	0.03939				0.00280				15
16	0.46942				0.16111				0.03147				0.00186				16
17	0.44707				0.14321				0.02518				0.00124				17
18	0.42578				0.12730				0.02014				0.00083				18
19	0.40551				0.11516				0.01611				0.00055				19
20	0.38620				0.10058				0.01289				0.00037				20

9/54
802

802

Initial Production

15 Bard

oil price Tier 3 - 29.00 less 1.50/bbl. Taux. (2)

Dakota completion - GAILAN AREA
Rio Arriba County New Mexico

Rio Arriba County New Mexico

Assuming Dakota is Dually completed w
manres & condoning only costs incremental
to single manres OPERATING EXP.

planes & considering only costs incremental to the original machine. Opening a new

1.507 M15/81-P
40%-34% → 9 %/yr. (D-P)

AD%-34E → 9 %/yr. (D-P)

2. 500 g/mo (4.0)

QMS Price $\text{Sect } 103(9/84) = 2.92 + 1.175 = 3.43 \text{ m/f } (2)$
Q1/ PPO. TAX 7.52872 (5)

GAS PRO TAX 377876 GNE + 12.12 d / w/ MAF (C +)

WPT TAX RATE 84 = 47¢/BO 85 on - 35¢/BO (E)

WPT TAX RATE 84 = 47¢/BO 85 on - 35¢/BO (E)

[illegible]