



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD  
AZTEC, NEW MEXICO 87410  
(505) 334-6178

OIL CONSERVATION DIVISION  
BOX 2088  
SANTA FE, NEW MEXICO 87501

DATE Nov. 19, 1984

RE: Proposed MC \_\_\_\_\_  
Proposed DHC a \_\_\_\_\_  
Proposed NSL \_\_\_\_\_  
Proposed SWD \_\_\_\_\_  
Proposed WFX \_\_\_\_\_  
Proposed PMX \_\_\_\_\_

Gentlemen:

I have examined the application dated 11/5/84  
for the W.B. Minter and Assoc. Martin Whitaker #51 C-5-23a-5w  
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve  
Correct pool names - W.C. Gallups and W.C. Dakota  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours truly,

Sam S. Chung



# W. B. MARTIN & ASSOCIATES, INC.

709 North Butler, Farmington, New Mexico 87401

Phone: (505) 326-4507

Oil Conservation Commission  
State Petroleum Engineer  
Director Oil Conservation Division  
P. O. Box 2088  
Santa Fe, N.M. 87501

ATTN: Richard Staments

Accompanying this note is the required State Oil and Gas Conservation information for Letter of Intent to Comingle Gallup and Dakota formations for Well #57 Martin-Whittaker and ~~#58 Martin-Whittaker~~. The following information is in compliance with Rule 303 Section C-2 page E-3 in Oil and Gas Conservation Division for State of New Mexico.

a.) W.B. Martin & Associates, Inc.  
709 N. Butler  
Farmington, N.M. 87401

b.) #57 Martin-Whittaker  
970' FNL and 1850' FWL  
NW $\frac{1}{4}$  Sec 5 T23N R5W  
Rio Arriba County, N.M.

Gallup-Semilla-Greenhorn-Dakota

c.) See attached Lease-Ownership Plat

d & e.) See attached Completion Report. Reference P. 3 & 4

Dakota C & D 6482-87 6505-10  
BHP=2000 psi  
IPS=12 BOPD and 10-30 MCFD  
Oil gravity=40° API @ 60° F

Dakota "A" 6371-78  
BHP=2000 psi  
IPS=3 BOPD, 9 BOPD, 10 MCFD  
Oil gravity=40° API @ 60° F  
RW=.18--M

Greenhorn-Semilla 5992-98 6001-02 6057-74 6288-6302  
BHP =1105 psi + slow build up but still increasing pressure.  
IPS=7 BOPD: 10 MCFD  
Oil gravity=42° API @ 60° F

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OIL CON. DIV.  
DIST. 3

Gallup 5376-5586  
BHP=1175 psi  
IPS=8 BOPD and 30-50 MCFD  
Oil gravity=42.5 @ 60° F

Upper Gallup 5023-5171  
BHP =1250 psi  
IPS=2 BOPD and 30 MCFD  
Oil gravity=42.5 @ 60° F

Total production from swabbing after acid breakdown approximately  
32 BOPD and 120 MCFD.

IP from C-104 30 EOPD, 250 MCFD and 40 bbl load water/day.  
See attached C-104

- f.) See above section (d & e)
- g.) See above section (d & e) These wells lie within two other known Gallup-Dakota comingled pools South Lindrath Gallup-Dakota to the east and Counselors Gallup-Dakota to the west. All formation fluids are compatible from after swab pre-frac emulsion tests.
- h.) Usually initial potential swabbing is 20% greater with fluids than pumping. See section (d & e)
- i.) Due to the tortuosity (Interconnected permeability) of the Semilla, Greenhorn, and Dakota "A" and its lower porosity the productive life of these two intervals is long term but low volume, volume contribution factor of 10% 3 BOPD and 25 MCFD Total for all three intervals. Gallup interval will contribute 50% of the oil and 40% gas for total 15 BOPD and 100 MCFD gas, Dakota C & D factor of 10-12 BOPD 40% oil and 50% of gas of 125 MCFD.
- j.) Adjacent operators have been notified in writing of the proposed comingling. See attached.

#57 Martin-Whittaker  
Completion Report

Dakota C & D

- 1.) Spot 250 gallons of 10% Acetic w/10% Methanol and Surfactant and Inhibitor.
- 2.) Perforate Dakota C & D zone @ 6482-87 & 6505-10 total 48 .375 Dia Holes.
- 3.) Pakr @ 6207 breakdown zones w/850 gal 10% Acetic Acid w/10% Methanol Surfactant and Inhibitor. ISIP-1400 psi Frac Gradient = .65 psi/ft.
- 4.) After recovering Acid Water SIW for 2 hours 200 psi.
- 5.) Build then after 24 hours SITP-500 psi. Initial fluid level 800' Swabbed 16 gas cut bbls oil 40° API from Dakota with 500 psi on TBG and 100% oil in TBG gave a BHP approx. 2000 psi. After initial swab test fluid entry was 2 bbl/4 hour=12 BOPD and 10-30 MCFD
- 6.) Frac'd Dakota C & D with 63,000 gal of 25#/1000 Gel 2% KCL water with Surfactant and corrosion and Scale Inhibitor with 66,000# 20/40 sand. Avg injection rate 26 BPM and 2900 psi Avg. ISIP-2750 psi 15 min-2360 psi

Dakota "A"

- 1.) Set R.B.P. above Dakota C & D P.T. to 3000 psi. Held.
- 2.) Perforated Dakota A from 6371-78 total 24 .375 Dia Holes.
- 3.) Pakr @ 6304' KB breakdown Dakota A with 500 gallons 10% Acetic Acid with 10% Methanol. ISIP-2400 psi 15 min-2400 psi Very tight zone.
- 4.) After recovering Acetic Water load SIW for 2 hours 70 psi SIW for 12 hours 575 psi SIW for 24 hours 700 psi. Blew down TBG in 2 min initial fluid level 3000' KB Pulled 12 bbls w/25% oil cut. Total oil swabbed 3 BOPD and 9 bbls formation water RW= .18 μm. BHP=2000 psi
- 5.) SIW for 4 hour 1 bbl fluid entry and 80 psi on TBG 25% oil cut. Gas would burn not economic to frac would maintain a hydrostatic head on zone.

Semilla-Greenhorn

- 1.) Set R.B.P above Dakota A.P.T to 3000 psi. Held
- 2.) Perforate Semilla-Greenhorn interval from 5992-98, 6001-6002, 6057-74, 6288-6302 total 87 .41 Hole.
- 3.) Pakr @ 5950' KB breakdown interval with 1550 gallon 10% Acetic Acid w/10% Methanol and Surfactant and Inhibitor dropping 74 ball sealer for diversion. Rate during job 2 BPM at 3600 psi Very tight. ISIP-2650 psi 15 min-2375 psi
- 4.) After recovering Acid Water SIW for 1 hour SITP-50 psi and fluid level @ 5600' KB. ½ bbl w/15% oil cut. SIW for 2 hours SITP-80 psi and ½ bbl w/15% oil cut. SIW for 24 hours SITP= 475 psi Fluid level @ 4100' KB 100% oil. Bled down TBG gas would flare oil gravity 42° API BHP-1105 psi SIW for 12 hours SITP-150 psi and fluid level @ 4500' KB zone not economic to frac too low porosity and permeability zone will sustain a column of 2% KCL with no fluid entry.

#57 Martin-Whittaker  
Completion Report (continued)

Gallup-Was to be treated due to Semilla-Dakota zones uneconomic together.

- 1.) Set R.B.P. above Semilla-Greenhor P.T. to 3000 psi. Held.
- 2.) Perforate Gallup 5376-5586 total 40 .375 Dia Holes.
- 3.) Pakr @ 5267' KB breakdown Gallup with 1500 gallons 10% Acetic Acid with 10% Methanol and Surfactant and Inhibitor.
- 4.) After recovery of Acid Water SIW for 1 hour SITP-100 psi. Bled down Natural Gas and pull 1 bbl 15% oil. SIW 1 hour SITP-150 psi and pulled  $1\frac{1}{2}$  bbls. 40% oil and Acid Water. SIW for 3 hours SITP-250 psi and 2 bbls 90% oil and Acid Water. SIW for 24 hrs SITP-450 psi and IFL @ 3000'. Bled down gas in 1 hour through  $\frac{1}{4}$ " choke still casing/10 psi flowing pressure approximately 30-50 MCFD and pulled 7 bbls oil. BHP=1175 psi API-42.5°
- 5.) Frac Gallup due to experience with Gallup.  
Pump 80,000 gallons of 2% slickwater with Surfactant and Scale and Corrosion Inhibitor and 100,000# 20/40 sand. Avg injection pressure 1500 psi @ 60 BPM

Upper Gallup

- 1.) Set R.B.P. above Gallup P.T. to 2000 psi. Held.
- 2.) Perforate Upper Gallup @ 5023-5171 with 40 .375 Dia Holes.
- 3.) Pakr @ 4908' KB acidize Upper Gallup with 850 gallon 10% Acetic Acid with 10% Methanol and Surfactant and Inhibitor. ISIP-1400 psi 15 min-1400 psi Low permeability and low porosity due to no decline in pressures.
- 4.) Slow Acid Water recovery SIW for 1 hour 250 psi and  $\frac{1}{2}$  bbl w/trace oil and Acid Water. SIW for 1 hour SITP-100 psi gas and  $\frac{1}{2}$  bbl w/trace oil. SIW for 24 hour SITP -800 psi IFL @ 3800'KB Pulled 4 bbls 20%-40% oil and Acid Water. BHP 1250 psi. Zone not economic to frac low permeability and porosity.

REQUEST FOR ALLOWABLE  
AND  
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

DISTRIBUTION		
DATE		
TO		
FROM		
AND OFFICE		
TRANSPORTER	OIL	
	GAS	
PERATOR		
FORMATION OFFICE		
Operator		

W. B. Martin & Associates

Address

709 N. Butler, Farmington, NM 87401

Reason(s) for filing (Check proper box)

Oil Well ☐  
Recompletion ☐  
Change in Ownership ☐

Change in Transporter of:

Oil ☒ Dry Gas ☐  
Casinghead Gas ☐ Condensate ☐

Other (Please explain)

Change of ownership give name  
Address of previous owner

DESCRIPTION OF WELL AND LEASE

Well Name	Well No.	Pool Name, including Formation	Kind of Lease	Lease No.
Martin-Whittaker	57	S. Lindrieth-Gallup-Dakota Extension	State, Federal, or Free Federal	38

Unit Letter C : 970 Feet From The North Line and 1850 Feet From The West

Line of Section 5 Township 23N Range R4W NMPM Rio Arriba County

SIGNATURE OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil or Condensate	Address (Give address to which approved copy of this form is to be sent)
Giant Refining Co	P. O. Box 256, Farmington, NM 87499

Name of Authorized Transporter of Casinghead Gas or Dry Gas	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Co	P. O. Box 1492, El Paso, Texas 79978

Well produces oil or liquids, or location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
	C	5	23N	4W	no	

Is production commingled with that from any other lease or pool, give commingling order number

COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Reservoir	Other
	X		X					
Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.					
9/3/84	10/18/84	6573	6570					
Location (D.F., R.K.B., RT., GR., etc.)	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth					
6587'	Gallup-Dakota	5023 Gallup	5300' R.B.					
Locations			Depth Casing Shoe					
5023-6510			6570					

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
12 1/2	9 5/8" 32#/ft	285	206.50 ft <sup>3</sup>
8 3/4	7" 32#/ft	4419	529.5 ft <sup>3</sup>
6 1/2	4 1/2" 11.6#/ft	6570'	283 ft <sup>3</sup>
	2 3/8" 4.7#/ft	5300'	

TEST DATA AND REQUEST FOR ALLOWABLE WELL

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
10/18/84	10/19/84	Flowing	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
24 hrs	30#	600#	2"
Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas - MCF
70	30	40	250

WELL

Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MCF	Gravity of Condensate
Test Method (pilot, back pr.)	Tubing Pressure (Start-End)	Casing Pressure (Start-End)	Choke Size

CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

W.B. Martin & Associates  
(Signature)

Operator

(Title)

10/23/84

(Date)

OIL CONSERVATION DIVISION

APPROVED

19

BY

TITLE

This form is to be filed in compliance with RULE 1104.

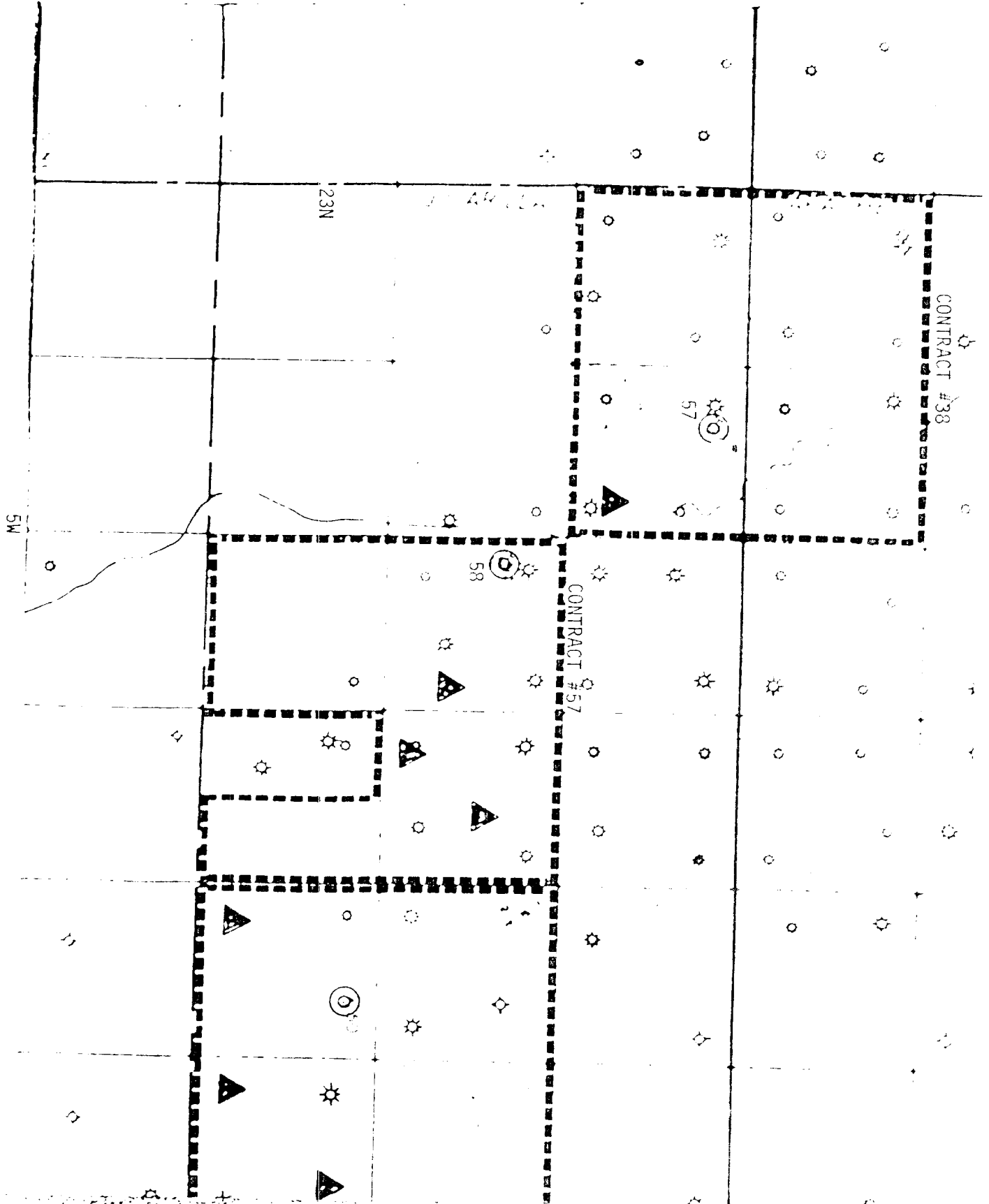
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

PLAT  
DOWN HOLE COMINGLED  
GALLUP and DAKOTA  
#57 & #58 MARTIN-WHITTALER





# W. B. MARTIN & ASSOCIATES, INC.

709 North Butler, Farmington, New Mexico 87401

Phone: (505) 326-4507

October 31, 1984

Amoco Production Co.  
Attention: Tim Clauson  
P. O. Box 800  
Denver, Co. 80201

Re: #57 Martin-Whittaker	and	#58 Martin-Whittaker
970' FNL & 1850' FNL		1830' FNL & 840' FNL
NW $\frac{1}{4}$ Sec 5 T23N R5W		NW $\frac{1}{4}$ Sect 9 T23n R5W
Rio Arriba County, N.M.		Rio Arriba County, NM

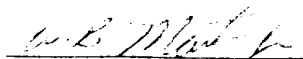
Mr. Clauson,

The New Mexico Oil Commission has deemed the aforementioned wells to be Wildcat Gallup, Wildcat Dakota.

Under Rule 303 Section C-2 Page E-3 of the State Oil and Gas Conservation Commission Rules and Regulations, we are applying for down hole commingling of the Dakota, Greenhorn and Gallup formations.

Pursuant to rule 303 we are informing adjacent operators of our application. If you have any questions or comments please feel free to contact me at any time.

Sincerely,

  
W.B. Martin, Jr.

Enclosures-application