

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

May 9, 1994

Sirgo Brothers Energy Corporation

P.O. Box 3531

Midland, TX 79702

Attention: M.A. Sirgo, III

Administrative Order DD-94(NSBHL)

Dear Mr. Sirgo:

Under the provisions of General Rule 111 (c), (d) and (e), and the Special Rules and Regulations for the Cha Cha Gallup Pressure Maintenance Project as promulgated by Division Order No. R-2154, as amended by Division Order No. R-6172, Sirgo Brothers Energy Corporation made application to the New Mexico Oil Conservation Division on April 29, 1994, for authorization to directionally drill its proposed Northwest Cha Cha Unit Well No. 26, San Juan County, New Mexico.

The Division Director Finds That:

- (1) The application has been duly filed under the provisions of Rule 111(d) and (e) of the Division General Rules and Regulations;
- (2) Under the provisions of Division General Rule 104.F(1), the Special Rules and Regulations for the Cha Cha Gallup Oil Pool and Division Memorandum No. 4-86, the applicant has requested that the bottomhole location be unorthodox for the purpose of completing an efficient injection/production pattern within the Cha Cha Gallup Pressure Maintenance Project;
- (3) The dedicated acreage for said well is within the applicant's Northwest Cha Cha Unit Area;
- (4) No notification was required in this instance; and
- (5) The applicant has presented satisfactory evidence that all requirements prescribed in General Rule 111 have either been met or will be met.

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Sirgo Brothers Energy Corporation
P.O. Box 3531
Midland, TX 79702

Attention: M. A. Sirgo, III

DD-94 (NSB/HL)
Administrative Order ~~NSB 2393~~

Dear Mr. Sirgo:

Under the provisions of General Rule 111 (c), (d) and (e), and the Special Rules and Regulations for the Cha Cha Gully Pressure Maintenance Project as promulgated by Division Order No. R-2154, as amended by Order No. R-6172, Sirgo Brothers Energy Corp. made application to the New Mexico Oil Conservation Division on April 29, 1994, for authorization to directionally drill its proposed Northwest Cha Cha Unit Well No. 26, San Juan County, New Mexico.

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(1) The application has been dully filed under the provisions of Rule 111(d) and (e) of the Division General Rules and Regulations;

(2) Under the provisions of Rule Division General Rule 104.F(1), ~~and~~ the Special Rules and Regulation for the Cha Cha Gully Oil Pool, and Division Memorandum No. 4-86, the applicant has requested that the bottomhole location be unorthodox for the purpose of completing an efficient injection/production pattern within the Cha Cha Gully Pressure Maintenance Project;



STATE OF NEW MEXICO
GENERAL SERVICES DEPARTMENT
RISK MANAGEMENT DIVISION
Joseph M. Montoya State Building, Suite
1100 St. Francis Drive
Mailing address: Post Office Drawer 26110
Santa Fe, New Mexico 87502-0110

**Please
distribute**

BRUCE KING
GOVERNOR

Laura E. Threet
SECRETARY

J. David Ortiz
DEPUTY SECRETARY

OFFICE of the SECRETARY
505-827-2000

ADMINISTRATIVE SERVICES DIVISION
505-827-2165

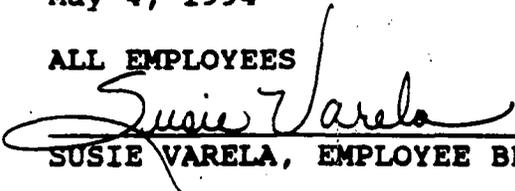
INFORMATION SYSTEMS DIVISION
505-827-2001

BUILDING & PROPERTY SERVICES DIVISION
505-827-2141

PURCHASING DIVISION
505-827-2470

RISK MANAGEMENT DIVISION (RMD)
505-827-2442

M E M O R A N D U M

DATE: May 4, 1994
TO: ALL EMPLOYEES
FROM: 
SUSIE VARELA, EMPLOYEE BENEFITS ADMINISTRATOR
SUBJECT: VERIFICATION OF DEDUCTIONS

CHECK YOUR DEDUCTIONS

Don't jeopardize your insurance coverage.

Please take a moment to verify your insurance deductions. If you think there is a discrepancy between your payroll deduction shown on your check stub and what you enrolled for or if you recently had a family status change, see your group representative. The following are the different carriers with whom you may have coverage.

Blue Cross/Blue Shield
Mutual of Omaha/US Dental
United of Omaha Life Insurance
Supplemental 1, 2 or 3
Midwest Legal

The deadline for reporting any discrepancies is May 27, 1994.

Northwest Cha Cha

- (3) The dedicated acreage for said well is within the applicant's ~~North Hobbs Grayburg-San Andres Unit Area~~;
- (4) No notification was required in this instance; and,
- (5) The applicant has presented satisfactory evidence that all requirements prescribed in General Rule 111 ~~and Special Rule~~ have either been or will be met.

IT IS THEREFORE ORDERED THAT:

(1) *The applicant, Sigo Brothers Energy Corporation, is hereby authorized to directionally drill its Northwest Cha Cha ~~Unit~~ Well No. 26, the surface location of which shall be 2077 feet from the South line and 317 feet from the East line (Unit I) of Section 22, Township 29 North, Range 14 West, N.M.P.M., San Juan County, New Mexico, by ^{kick-off} ~~kick-off~~ from vertical and drilled in such a manner as to bottom in the Cha Cha Galleys Pool within 50 feet of a point 2105 feet from the South line and 851 feet from the East line (Unit I) of said Section 22, being an ~~unworked~~ bottomhole oil well location.*

PROVIDED HOWEVER THAT prior to commencing directional drilling operations into said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

PROVIDED HOWEVER THAT during or upon completion of directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

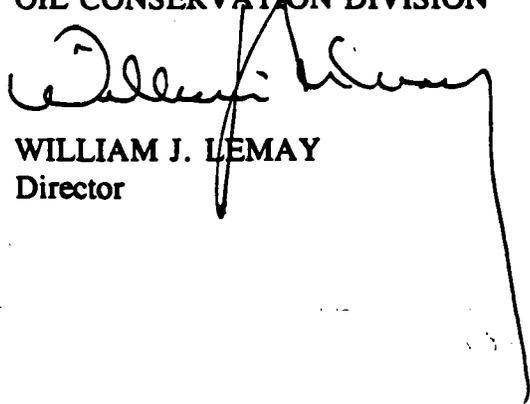
(6) Each 40-acre proration unit within the project area shall maintain its own oil allowable of 365 barrels of oil per day in the Denton-Devonian Pool.

(7) The applicant's request to establish an administrative procedure in order to secure Division approval to horizontally drill additional wells within the project area is hereby denied.

(8) Jurisdiction of this cause is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

S E A L

Atke

(2) The applicant shall notify the supervisor of the ~~Hobbs~~ district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and ~~Hobbs~~ offices of the Division upon completion.

Atke

(3) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

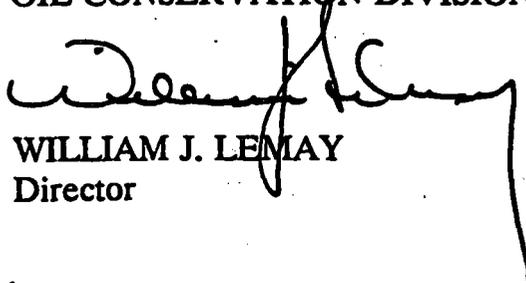
E/2 SE/4 of said Section 22 shall be dedicated to said well to form a

(4) ~~The existing 40-acre oil spacing and proration unit comprising the NW/4 SE/4 of said Section 28 shall be dedicated to this well.~~ *standard 80-acre oil spacing and proration unit for said pool.*

(5) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

SEAL

cc: Oil Conservation Division - ~~Hobbs~~ *Atke*
~~NMSLO - Santa Fe~~
NSBLM - Farmington

(6) Each 40-acre proration unit within the project area shall maintain its own oil allowable of 365 barrels of oil per day in the Denton-Devonian Pool.

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DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

OIL CONSERVATION DIVISION
RECEIVED
SIRGO BROTHERS ENERGY CORP.
P. O. BOX 3531
MIDLAND, TEXAS 79702
915/685-0878
APR 29 AM 8 50

April 27, 1994

NEW MEXICO OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87504

Attention: Mr. Mike Stogner

Re: APD's Filed on Phase I Area
NW Cha Cha Unit
San Juan County, New Mexico

Dear Mr. Stogner:

As per Ernie Bush's request, we are forwarding you this information.

We recently filed ten new well APD's in the NW Cha Cha Unit with the BLM. When we went to stake these wells, Daggett Surveyors could not find any of the old corners that tied to the old survey that the existing wells were surveyed from. Daggett contacted the BLM for assistance and were told that a lot of the old surveys in this township were wrong. (I think they referred to these as the Fischer Surveys).

As a solution to spotting the wells correctly, Daggett told the BLM that we would stake the wells based on spacing from existing wells first, then shoot the section line calls, based on the new corners from that point. Therefore, the section line calls would not appear consistent with existing wells, but the wells would be spaced correctly. The BLM indicated that was the only reasonable alternative.

We first picked the well locations based on proration from the existing wells and geologic consideration based on the old survey. Daggett then shot these locations from the existing wells so as to provide the desired distance and location of the new wells from the existing wells. Daggett, after locating these points, shot the section line calls from the new survey corners. These descriptions are located under Part I of the attached Table II.

New Mexico Oil Conservation Division
April 27, 1994
Page 2

We then inspected the field locations for surface related problems and moved the locations accordingly, with regard for maintaining critical geologic aspects of the redevelopment project. The surface locations on some of the wells were moved for various reasons including surface terrain that did not allow for construction of drilling pads (i.e. cliff face) locations that fell in planted Navajo agricultural areas, and one location that an arc-site was found on. The resulting final locations we submitted with our APD's are shown on Table II Part II.

We then filed the APD's with the section line calls from the new survey, and the BLM indicated we would have to get approval from the OCD for nonstandard locations (see attached correspondence from BLM).

I have prepared for your review the legal locations for the existing wells in the Phase I area from the original survey (Table I).

It is apparent from my discussions with the BLM, it will take the OCD to determine and convey to the BLM that these wells have been staked properly. I would greatly appreciate your assistance in getting this issue cleared up as soon as possible.

I have also enclosed a plat showing the entire NW Cha Cha Unit with the proposed new locations in each phase area. The 10 APD's we have filed are for new Wells No. 49, 32, 25, 48, 37, 26, 47, 27, 60 and 40. These wells are all located in the area designated Phase I on the attached plat.

I have also included a copy of a portion of the APD for each of the wells, as well as the approved 1994 Plan of Development for the unit, and the arc study covering all 10 wells.

If you need me to gather any additional information, please do not hesitate to call.

Sincerely,


M. A. Sirgo, III

MAS/pr

TABLE I

NW CHA CHA PHASE I LEGAL LOCATIONS

EXISTING WELL LOCATIONS - PHASE I
(FROM OLD FISCHER SURVEY)

<u>UNIT WELL NO.</u>	<u>LEGAL DESCRIPTION</u>	<u>SECTION</u>
39	890' FNL & 890' FEL	Sec. 27
36	660' FNL & 660' FEL	Sec. 28
50	1980' FSL & 1980' FWL	Sec. 27
30	480' FSL & 1980' FEL	Sec. 22
16	660' FWL & 1830' FNL	Sec. 22
24	1780' FSL & 835' FEL	Sec. 21
35	330' FNL & 2310' FWL	Sec. 28
46	660' FWL & 1980' FNL	Sec. 26

P&A'D WELLS (FROM OLD FISCHER SURVEY)

15	1830' FNL & 1830' FEL	Sec. 22
31	660' FSL & 1980' FWL	Sec. 22
28	510' FSL & 2130' FEL	Sec. 23
51	1930' FSL & 780' FEL	Sec. 27
29	704' FSL & 510' FWL	Sec. 23
38	660' FNL & 1980' FWL	Sec. 27

TABLE II

PHASE I NW CHA CHA UNIT
NEW WELLS

PART I - ORIGINAL WELL LOCATIONS (AS DETERMINED FROM PRORATION AND GEOLOGIC CONSIDERATIONS)
OLD FISCHER SURVEY

<u>WELL NO.</u>	<u>SEC. NO.</u>	<u>DESCRIPTION</u>	<u>COMPARATIVE NEW SURVEY DESCRIPTION</u>
49	28	1830' FNL & 1830' FEL	1761' FNL & 1741' FEL
32	22	660' FSL & 660' FWL	849' FSL & 682' FWL
25	22	2130' FSL & 1980' FWL	2377' FSL & 1998' FWL
48	27	660' FWL & 2130' FNL	1985' FNL & 672' FWL
37	27	1830' FWL & 810' FNL	612' FNL & 1842' FWL
26	22	810' FEL & 1980' FSL	2105' FSL & 851' FEL
47	27	1980' FNL & 1980' FEL	1567' FNL & 1849' FEL
27	23	810' FWL & 1830' FSL	2128' FSL & 730' FWL
60	27	1300' FSL & 1830' FEL	1710' FSL & 1873' FEL
40	26	510' FNL & 1980' FWL	(Sec.23) 3' FSL & 1897' FWL

TABLE II

PHASE I CHA CHA UNIT
NEW WELLS

PART II - FINAL WELL LOCATIONS AFTER MOVING WELLS FOR STATED REASON & ADJUSTED FOR GEOLOGICAL CONSIDERATIONS OLD FISCHER SURVEY

<u>WELL NO.</u>	<u>SEC. NO.</u>	<u>DESCRIPTION</u>	<u>COMPARATIVE NEW SURVEY DESCRIPTION</u>	<u>REASON FOR MOVE</u>
49	28	1830' FNL & 1830' FEL	1761' FNL & 1741' FEL	NOT MOVED
32	22	660' FSL & 1980' FWL	849' FSL & 682' FWL	NOT MOVED
25	22	2184' FSL & 1871' FWL	2431' FSL & 1889' FWL	SURFACE TERRAIN PROBLEM
48	27	BHLOC 660' FWL & 2130' FNL	BH 1985' FNL & 672' FWL	BOTTOM HOLE NOT MOVED SURFACE LOC MOVED OUT OF NAPI PLANTED AREA
37	27	634' FNL & 1880' FWL	436' FNL & 1892' FWL	MOVED OUT OF EXISTING NAPI PLANTED AREA
26	22	BHLOC 810' FEL & 1980' FSL	BH 2105' FSL & 851' FEL	BOTTOM HOLE NOT MOVED SURFACE LOC MOVED OUT OF FOUND ARC STUDY
47	27	1980' FNL & 1980' FEL	1567' FNL & 1849' FEL	NOT MOVED
27	23	1586' FSL & 732' FWL	1884' FSL & 652' FWL	SURFACE TERRAIN PROBLEM
60	27	1520' FSL & 928' FEL	1930' FSL & 971' FEL	MOVED OUT OF NAPI PLANTED AREA
40	26	442' FNL & 2083' FWL(SEC23)	71' FSL & 2000' FWL	SURFACE TERRAIN

Operational

RECEIVED
BLM

94 MAR 31 AM 8:55

070 FARMINGTON, NM

March 28, 1994

United States Department of the Interior
Bureau of Land Management
Farmington Resource Area
1235 LaPlata Highway
Farmington, New Mexico 87401
Attn: Duane W. Spencer

Re: N.W. Cha Cha Unit, San Juan County, NM.

Dear Mr. Spencer:

Following is the review of the 1993 operations and the Plan of Development for 1994 for the above captioned property.

REVIEW OF 1993 OPERATIONS:

(Sirgo Operating, Inc. until 7/1/93, MSPC until 12/31/93)	
Number of Drilling Wells	0
Number of Producing Wells	12
Number of Shut in Wells	4
Number of Injection Wells	10
Oil Production for 1993	15,244 bbls
Gas Production for 1993	TSTM
Water Production for 1993	23,813 bbls
Cumulative Oil Production 12/31/93	5,726,963 bbls
Cumulative Water Production 12/31/93	11,011,045 bbls

PLAN OF DEVELOPMENT FOR 1994:

Sirgo Brothers Energy Corp. plans to spend approximately \$3.0 million in capital expenditures to infield drill and reestablish a waterflood program in the Unit. Currently plans are to implement a line drive flood taking advantage of the directional permeability of the Gallup formation.

Sirgo plans to drill 10 new wells in the unit, located in the Phase I area as shown on the attached plat. The new wells #32, 47, 49, 25, and 27 will be drilled and completed as producers. Well #32 will be conventionally cored throughout the Gallup interval to assist in a more definite reservoir description for stimulation design, and further study fracture orientation in the field. The new wells #26, 48, 37, 40, and 60 will be drilled and completed as producers and will be converted to injection wells by Sirgo in the future depending on results. All of the new wells will circulate cement to surface on the production casing.

In addition to the new wells being drilled, Sirgo will workover the following current producing wells #39, 36, and 50. These workover wells will be restimulated using larger stimulation programs and the wells will remain as producers.

Page 2. Plan of Development Letter for 1994; MSPC to Navajo Nation dated March 24, 1994, N.W. Cha Cha Unit.

The # 30 current producer will be converted to an injection well.

The #16, 24, 35, and 48 wells will be worked over and restimulated for use as injection wells.

In addition to the well work described above, Sirgo plans to upgrade the water injection plant and the production facilities to handle the expected results from this capital outlay.

Sirgo has begun upgrading and repairing the existing water source wells and testing these wells for use as injection make up water sources.

The work described above will commence upon Sirgo's receiving requisite approval for all permitted work by the proper regulatory agencies.

We respectfully submit this Plan of Development for your review. If you have any questions or comments please contact myself or Manny Sirgo at (915) 685-0878.

Very truly yours,

Brian M. Sirgo
Brian M. Sirgo
Landman

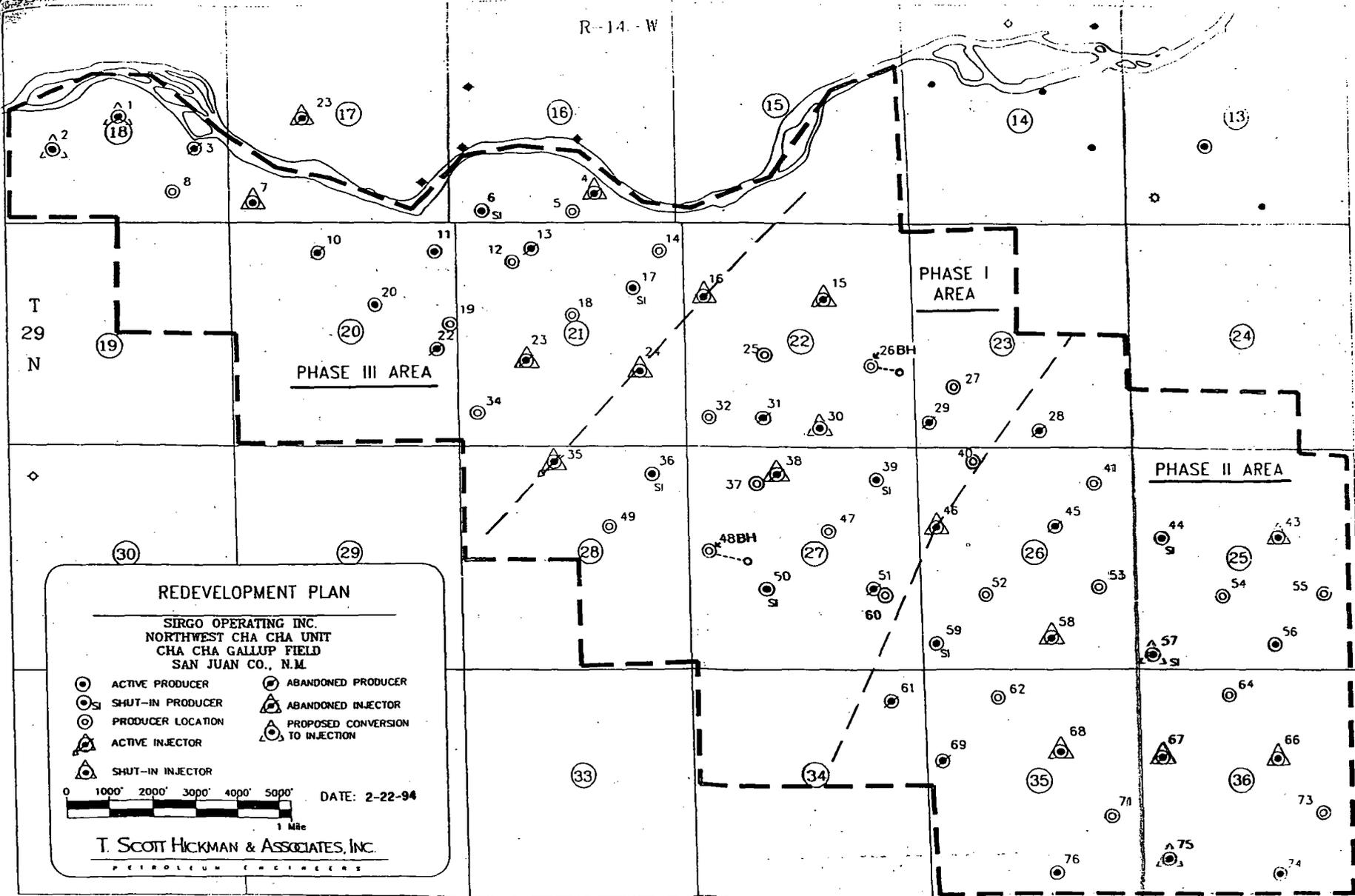
PO Box 3531
Midland 79702

APPROVED

4/1/94
DATE

Francis J. Spence
CHIEF, BRANCH OF RESERVOIR
MANAGEMENT

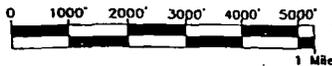
R-14.-W



REDEVELOPMENT PLAN

SIRGO OPERATING INC.
NORTHWEST CHA CHA UNIT
CHA CHA GALLUP FIELD
SAN JUAN CO., N.M.

- ACTIVE PRODUCER
- SI SHUT-IN PRODUCER
- PRODUCER LOCATION
- ▲ ACTIVE INJECTOR
- ▲ SHUT-IN INJECTOR
- S ABANDONED PRODUCER
- ▲ S ABANDONED INJECTOR
- ▲ S PROPOSED CONVERSION TO INJECTION



DATE: 2-22-94

T. SCOTT HICKMAN & ASSOCIATES, INC.
PETROLEUM ENGINEERS



United States Department of the Interior

TAKE
PRIDE IN
AMERICA

BUREAU OF LAND MANAGEMENT

Farmington District Office
1235 La Plata Highway
Farmington, New Mexico 87401

14-20-603-2168A et al. (WC)
3162.3-1 (07337)

IN REPLY REFER TO:

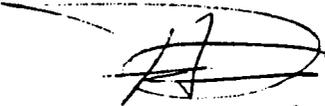
March 17, 1994

Mr. M. A. Sirgo, III
Mountain States Petroleum Corporation
c/o Sirgo Brothers Energy Corporation
P. O. Box 3531
Midland, Texas 79702

Dear Mr. Sirgo:

References are made to your Applications for Permits to Drill (APD's) the wells listed on the enclosure. Your APD's are being processed; final action pending receipt of further information as noted. If you have any questions, please contact Mr. Errol Becher of this office at (505) 599-6358.

Sincerely,


Ken Townsend
Chief, Branch of Drilling
and Production

Note: Retained, but incomplete APD's must be brought to an acceptable level of completion within 45 days of the date of this notice or they will be returned unapproved.

Enclosure



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

Farmington District Office
1235 La Plata Highway
Farmington, New Mexico 87401

IN REPLY REFER TO:

14-20-603-2199 (WC)
3162.3-1 (07337)

March 24, 1994

Mr. M. A. Sirgo, III
Mountain States Petroleum Corporation
c/o Sirgo Brothers Energy Corporation
P. O. Box 3531
Midland, Texas 79702

Dear Mr. Sirgo:

Reference is made to your Application for Permit to Drill (APD) for Well No. 26 NW Cha Cha Unit, 2077' FSL & 317' FEL (NE $\frac{1}{4}$ SE $\frac{1}{4}$), Sec. 22, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2199. The APD was received on March 21, 1994. The following information is required in order to comply with BLM engineering specifications:

- ✓ The Plan of Development for NW Cha Cha Unit.
- ✓ Need to show both the surface location and the location at the bottom of the producing interval on the Acreage Dedication Plat.

NMOCD approval of the unorthodox location.

The posting date for the start of the 30-day waiting period is November 5, 1993. Your APD is being processed; final action pending receipt of further information as noted above. If you have any questions, please contact Mr. Errol Becher of this office at (505) 599-6358.

Sincerely,

Ken Townsend
Chief, Branch of Drilling
and Production

Note: A retained, but incomplete APD must be brought to an acceptable level of completion within 45 days of the date of this notice or it will be returned unapproved.

SENDS BLM

37, 48.

Pending APD's

Mountain States Petroleum Corporation

1. Well No. 47 NW Cha Cha Unit, 1567' FNL & 1849' FEL (SW $\frac{1}{4}$ NE $\frac{1}{4}$), Sec. 27, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2168A. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

- ✓ The Plan of Development for NW Cha Cha Unit.
- ✓ Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.
- NMOCD approval of the unorthodox location.

2. Well No. 37 NW Cha Cha Unit, 436' FNL & 1892' FWL (NE $\frac{1}{4}$ NW $\frac{1}{4}$), Sec. 27, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2168A. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

- ✓ The Plan of Development for NW Cha Cha Unit.
- ✓ Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.
- NMOCD approval of the unorthodox location.
- ✓ Need to dedicate an acreage that does not overlap the acreage dedicated to Well No. 48 NW Cha Cha Unit.

3. Well No. 48 NW Cha Cha Unit, 2067' FNL & 1394' FWL (SE $\frac{1}{4}$ NW $\frac{1}{4}$), Sec. 27, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2168A. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

- ✓ The Plan of Development for NW Cha Cha Unit.
- ✓ Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.
- ✓ Need to show both the surface and location at the bottom of the producing interval on the Acreage Dedication Plat.
- ✓ Need to dedicate an acreage that does not overlap the acreage dedicated to Well No. 37 NW Cha Cha Unit.

4. Well No. 60 NW Cha Cha Unit, 1930' FSL & 971' FEL (NE $\frac{1}{4}$ SE $\frac{1}{4}$), Sec. 27, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2168A. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

- ✓ The Plan of Development for NW Cha Cha Unit.
- ✓ Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.

NMOCD approval of the unorthodox location.

5. Well No. 49 NW Cha Cha Unit, 1761' FNL & 1741' FEL (SW $\frac{1}{4}$ NE $\frac{1}{4}$), Sec. 28, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2168A. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

- ✓ The Plan of Development for NW Cha Cha Unit.
- ✓ Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.

NMOCD approval of the unorthodox location.

6. Well No. 27 NW Cha Cha Unit, 1884' FSL & 652' FWL (NW $\frac{1}{4}$ SW $\frac{1}{4}$), Sec. 23, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2168A. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

- ✓ The Plan of Development for NW Cha Cha Unit.
- ✓ Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.

7. Well No. 32 NW Cha Cha Unit, 849' FSL & 682' FWL (SW $\frac{1}{4}$ SW $\frac{1}{4}$), Sec. 22, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2199. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

- ✓ The Plan of Development for NW Cha Cha Unit.
- ✓ Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.

NMOCD approval of the unorthodox location.

8. Well No. 25 NW Cha Cha Unit, 2431' FSL & 1889' FWL (NE $\frac{1}{4}$ SW $\frac{1}{4}$), Sec. 22, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2199. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

✓ The Plan of Development for NW Cha Cha Unit.

Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.

NMOCD approval of the unorthodox location and the non-standard proration unit.

9. Well No. 40 NW Cha Cha Unit, 71' FSL & 2000' FWL (SE $\frac{1}{4}$ SW $\frac{1}{4}$), Sec. 23, T. 29 N., R. 14 W., San Juan County, New Mexico, Navajo Lease No. 14-20-603-2172. The APD was received on March 8, 1994. The following information is required in order to comply with BLM engineering specifications:

The Plan of Development for NW Cha Cha Unit.

✓ Need to fill in the Producing Formation, Pool and Dedicated Acreage on the Acreage Dedication Plat.

NMOCD approval of the unorthodox location.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 2447
Order No. R-2154

APPLICATION OF HUMBLE OIL & REFINING
COMPANY FOR APPROVAL OF THE CHA CHA-
GALLUP PRESSURE MAINTENANCE PROJECT,
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on December 11, 1961, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 3rd day of January, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Humble Oil & Refining Company, proposes to institute a pressure maintenance project in the Cha Cha-Gallup Oil Pool, said project area to comprise Navajo Indian Reservation Lands constituting portions of Sections 15, 16, 17, 18, 19, 23, 24, 28, and 34, and all of Sections 20, 21, 22, 25, 26, 27, 35, and 36, all in Township 29 North, Range 14 West, NMPM, San Juan County, New Mexico. Initial injection into the Gallup formation would be through certain wells located in Sections 21, 26, 27, and 36 of the same Township.

(3) That the applicant proposes that an administrative procedure be established whereby said pressure maintenance project may be expanded for good cause shown, and whereby additional wells in the project area may be converted to water injection.

(4) That Special Rules and Regulations for the operation of the Humble Oil & Refining Company Cha Cha-Gallup Pressure Maintenance Project should be promulgated and, for operational

convenience, such rules should provide certain flexibility in authorizing the production of the project allowable from any well or wells in the project in any proportion, provided that no well in the project area which directly or diagonally offsets a well outside the project area producing from the same common source of supply should be allowed to produce in excess of top unit allowable for the Cha Cha-Gallup Oil Pool until such time as the well has experienced a substantial response from water injection. When such a response has occurred, the well should be permitted to produce up to two times top unit allowable for the Cha Cha-Gallup Oil Pool. Production of such well at a higher rate should be authorized only after notice and hearing.

IT IS THEREFORE ORDERED:

(1) That the applicant is hereby authorized to institute a Pressure Maintenance Project in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, by the injection of water into the Gallup formation through the following-described wells in Township 29 North, Range 14 West:

Pan American-Navajo "E" No. 3, Unit K, Section 21;

Pan American-Navajo "E" No. 2, Unit I, Section 21;

El Paso Natural Gas Products-Ojo Amarillo No. 2,
Unit C, Section 27;

Humble-Navajo "L" No. 1, Unit E, Section 26;

Humble-Navajo "L" No. 4, Unit O, Section 26;

Humble-Navajo "L" No. 5, Unit E, Section 36.

(2) That Special Rules and Regulations governing the operation of The Humble Oil & Refining Company Cha Cha-Gallup Pressure Maintenance Project, San Juan County, New Mexico, are hereby promulgated as follows, effective January 1, 1962:

SPECIAL RULES AND REGULATIONS
FOR THE HUMBLE OIL & REFINING COMPANY
CHA CHA-GALLUP PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of The Humble Oil & Refining Company Cha Cha-Gallup Pressure Maintenance Project, San Juan County, New Mexico, hereinafter referred to as the Project, shall comprise that area described as follows:

TOWNSHIP 29 NORTH, RANGE 14 WEST, NMPM
Section 15: That portion of the S/2
lying South of the mid-
channel of the San Juan
River

Section 16: All that portion lying South of the mid-channel of the San Juan River
Section 17: All that portion lying South of the mid-channel of the San Juan River
Section 18: All that portion lying South of the mid-channel of the San Juan River
Section 19: NE/4
Section 20: All
Section 21: All
Section 22: All
Section 23: S/2 and NW/4
Section 24: SW/4 SE/4 and S/2 SW/4
Section 25: All
Section 26: All
Section 27: All
Section 28: E/2 and NW/4
Section 34: N/2
Section 35: All
Section 36: All

RULE 2. The allowable for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or used as injection wells. Allowables for all wells shall be determined in a manner hereinafter prescribed.

RULE 3. Allowables for injection wells may be transferred to producing wells within the project area, as may the allowables for producing wells which, in the interest of more efficient operation of the Project, are shut-in or curtailed because of high gas-oil ratio or are shut-in for any of the following reasons pressure regulation, control of pattern or sweep efficiencies, or to observe changes in pressures or changes in characteristics of reservoir liquids or progress of sweep.

RULE 4. The allowable assigned to any well which is shut-in or which is curtailed in accordance with the provisions of Rule 3, which allowable is to be transferred to any well or wells in the project area for production, shall in no event be greater than its ability to produce during the test prescribed by Rule 6, below, or greater than the current top unit allowable for the pool during the month of transfer, whichever is less.

RULE 5. The allowable assigned to any injection well on an 80-acre proration unit shall be top unit allowable for the Cha Cha Gallup Oil Pool.

RULE 6. The allowable assigned to any well which is shut-in or curtailed in accordance with Rule 3, shall be determined by a

24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well should be produced in the same manner and at a constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2,000 to 1) for the Cha Cha-Gallup Oil Pool shall be waived during such tests. The project operator shall notify all operators offsetting the well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire.

RULE 7. The allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the Cha Cha-Gallup Oil Pool, whichever is less, provided that any producing well in the project area which directly or diagonally offsets a well outside the project area producing from the same common source of supply shall not produce in excess of top unit allowable for the pool until such time as the well receives a substantial response to water injection. When such a response has occurred, the well shall be permitted to produce up to two times top unit allowable for the pool. Production of such well at a higher rate shall be authorized only after notice and hearing. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the Cha Cha-Gallup Oil Pool, except that any well or wells within the project area producing with a gas-oil ratio in excess of 2,000 cubic feet of gas per barrel of oil may be produced on a "net" gas-oil ratio basis, which net gas-oil ratio shall be determined by applying credit for daily average gas injected, if any, into the Cha Cha-Gallup Oil Pool within the project area to such high gas-oil ratio well. The daily adjusted oil allowable for any well receiving gas injection credit shall be determined in accordance with the following formula:

$$A_{adj} = \frac{TUA \times F_a \times 2,000}{\frac{P_g - I_g}{P_o}}$$

where:

- A_{adj} = the well's daily adjusted allowable
- TUA = top unit allowable for the pool
- F_a = the well's acreage factor
- P_g = average daily volume of gas produced by the well during the preceding month, cubic feet

I_g = the well's allocated share of the daily average gas injected during the preceding month, cubic feet

P_o = average daily volume of oil produced by the well during the preceding month, barrels

In no event shall the amount of injected gas being credited to a well be such as to cause the net gas-oil ratio, $\frac{P_g - I_g}{P_o}$ to be less than 2,000 cubic feet of gas per barrel of oil produced.

RULE 8. Credit for daily average net water injected into the Cha Cha-Gallup Oil Pool through any injection well located within the project area may be converted to its gas equivalent and applied to any well producing with a gas-oil ratio in excess of two thousand cubic feet of gas per barrel of oil. Total credit for net water injected in the project area shall be the gas equivalent volume of the daily average net water injected during a one-month period. The daily average gas equivalent of net water injected shall be computed in accordance with the following formula:

$$E_g = (V_w \text{ inj} - V_w \text{ prod}) \times 5.61 \times \frac{P_a}{15.025} \times \frac{520^\circ}{T_r} \times \frac{1}{Z}$$

where:

- E_g = Average daily gas equivalent of net water injected, cubic feet
- $V_w \text{ inj}$ = Average daily volume of water injected, barrels
- $V_w \text{ prod}$ = Average daily volume of water produced, barrels
- 5.61 = Cubic foot equivalent of one barrel of water
- P_a = Average reservoir pressure at a datum of + 418 feet above sea level, psig + 12.00, as determined from most recent survey
- 15.025 = Pressure base, psi
- 520° = Temperature base of 60°F expressed as absolute temperature
- T_r = Reservoir temperature of 158°F expressed as absolute temperature (618°R)

Z = Compressibility factor from analysis of Cha Cha-Gallup gas at average reservoir pressure, P_a , interpolated from compressibility tabulation below:

<u>Pressure</u> <u>Psig</u>	<u>Z</u>	<u>Pressure</u> <u>Psig</u>	<u>Z</u>	<u>Pressure</u> <u>Psig</u>	<u>Z</u>
0	.986	500	.912	1000	.869
50	.976	550	.906	1050	.865
100	.963	600	.902	1100	.860
150	.952	650	.899	1150	.857
200	.943	700	.895	1200	.853
250	.935	750	.891	1250	.849
300	.930	800	.886	1300	.845
350	.927	850	.882	1350	.842
400	.923	900	.877	1400	.838
450	.918	950	.873		

RULE 9. Each month the project operator shall, within three days after the normal unit allowable for Northwest New Mexico has been established, submit to the Commission a Pressure Maintenance Project Operator's Report, on a form prescribed by the Commission, outlining thereon the data required, and requesting allowables for each of the several wells in the Project as well as the total Project allowable. The aforesaid Pressure Maintenance Project Operator's Report shall be filed in lieu of Form C-120 for the Project.

RULE 10. The Commission shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for each well in the Project for the next succeeding month in accordance with these rules. The sum of the allowables so calculated shall be assigned to the Project and may be produced from the wells in the Project in any proportion except that no well in the Project which directly or diagonally offsets a well outside the Project producing from the same common source of supply shall produce in excess of two times top unit allowable for the pool.

RULE 11. The conversion of producing wells to injection, the drilling of additional wells for injection, and expansion of the project area shall be accomplished only after approval of the same by the Secretary-Director of the Commission. To obtain such approval, the Project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional injection wells shall include the following:

(1) A plat showing the location of proposed injection well, all wells within the project area, and offset operators, locating wells which offset the project area.

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(2) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depth showing that the injection of gas or water will be confined to the Gallup formation.

(3) A letter stating that all offset operators to the proposed injection well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection well if, within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Secretary Director of the Commission administratively when good cause is shown therefor.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK
 DRILL DEEPEN

b. TYPE OF WELL
 OIL WELL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 SIRGO BROTHERS ENERGY CORP. AS AGENT
 FOR MOUNTAIN STATES PETROLEUM CORP.

3. ADDRESS AND TELEPHONE NO.
 P. O. BOX 3531, MIDLAND, TX 79702 (915)685-0878

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface 1394' FWL & 2067' FNL Unit F
 Sec. 27, T29N, R14W, NMPM
 At proposed prod. zone
 1985' FNL & 672' FWL Sec. 27, T29N, R14W, NMPM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 5 MILES SOUTHWEST OF FARMINGTON

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any.)
 2586' from unit boundary

16. NO. OF ACRES IN LEASE
 1440

17. NO. OF ACRES ASSIGNED TO THIS WELL
 80

18. DISTANCE FROM PROPOSED* LOCATION TO NEAREST WELL, DRILLING, COMPLETED OR APPLIED FOR, ON THIS LEASE, FT.
 1551' from Well #50

19. PROPOSED DEPTH
 5400'

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 5670' GR

22. APPROX. DATE WORK WILL START*
 March 20, 1994

5. LEASE DESIGNATION AND SERIAL NO.
 14-20-603- 2168A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
 NAVAJO NATION

7. UNIT AGREEMENT NAME
 N.W. CHA CHA UNIT

8. FARM OR LEASE NAME WELL NO.
 N.W. CHA CHA UNIT #48

9. AM WELL NO.

10. FIELD AND POOL, OR WILDCAT
 CHA CHA (GALLUP)

11. SEC, T, R, M, OR BLM. AND SURVEY OR AREA
 Sec. 27, T29N, R14W, NMPM

12. COUNTY OR PARISH
 SAN JUAN

13. STATE
 NM

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	J-55, 8-5/8"	24#	210'	165 sacks
7-7/8"	J-55, 4-1/2"	10.5#	5400'	900 sacks

1. Circulate cement to surface on 8-5/8" surface pipe.
2. Will two stage 4-1/2" casing to circulate cement back to surface pipe.
3. BOP Diagram attached.
4. Deviation Plan attached.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED M. A. Sirgo, III TITLE President DATE Feb. 17, 1994
 (This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
 CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

AMENDED
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88240

DISTRICT II
P.O. Drawer DD, Arterio, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT
All Distances must be from the outer boundaries of the section

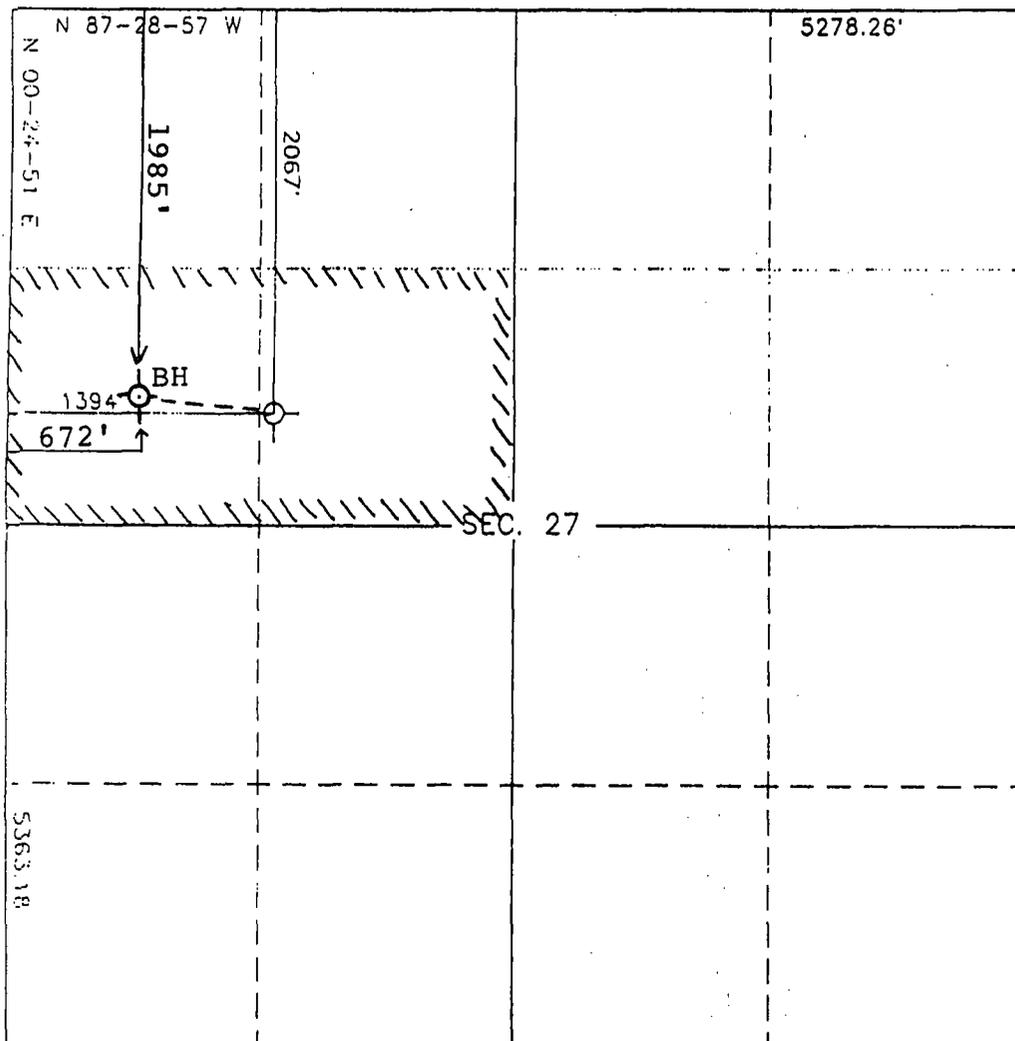
Operator SIRGO OPERATING, INC.		Lease NW CHA CHA		Well No. 48
Unit Letter F	Section 27	Township 29 NORTH	Range 14 WEST	County SAN JUAN
Actual Footage Location of Well:				
1394 feet from the WEST line and		2067 feet from the NORTH line		
Ground level Elev. 5670	Producing Formation Gallup	Pool Cha Cha Gallup	Dedicated Acreage: 80 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure mark on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?

Yes No If answer is "yes" type of consolidation _____

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



SURVEYOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed Name

Position

Company

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

JANUARY 20, 1994

Signature & Seal of Professional Surveyor

ROY A. RUSH
8894
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No.

ARCHAEOLOGICAL INVENTORY REPORT DOCUMENTATION PAGE (HPD JAN/91)

1. HPD REPORT NO.	2. (FOR HPD USE ONLY)	3. <u>Recipients Accession No.</u>
4. TITLE OF REPORT: A Cultural Resources Inventory of Ten Proposed Well Locations and Associated Access Roads as Part of Sirgo Production Inc. Northwest Cha Cha Unit in San Juan County, New Mexico. AUTHOR: David Skoglund		5. <u>Fieldwork Dates:</u> 02/28/94-03/01/94 6. <u>Report Date:</u> 03/9/94
7. CONSULTANT NAME AND ADDRESS: General Charge: Meredith Matthews, Co-Director Org. Name: San Juan College CRMP Org. Address: 4601 College Boulevard Farmington, NM 87402 Phone: (505) 599-0344		8. <u>Permit No.</u> B9401 9. <u>Consultant Report No.</u> 94-SJC-003A
10. SPONSOR NAME AND ADDRESS: Ind. Responsible: Howard Daggett Org. Name: Daggett Inc. Org. Address: 420 W. Elm, Farmington, New Mexico 87402 Phone: (505) 326-1772		11. SPONSOR PROJECT NO. 12. Areas of effect: <u>8.98</u> ac Areas Surveyed: <u>16.27</u> ac (see Attachment 1)
13. LOCATION (See Attachment 2-Figure 1, Vicinity Map) a. Chapter: Upper Fruitland Chapter b. Agency: Northern Navajo Agency c. County: San Juan County d. State: New Mexico e. Land Status: Navajo Nation Tribal Trust	f. UTM: (See Attachment 1) Zone 12 g. Area: T29N, R14W, NMPM h. 7.5' Map Name: Kirtland, NM, 1966 Photorevised 1979	
14. REPORT /X/ OR SUMMARY // OR PRELIMINARY REPORT // a. <u>Description of Undertaking:</u> (see Figure 1) The proposed project consists of construction of 10 gas well locations and four associated access roads. The proposed well locations and access roads are part of Sirgo Operating Inc. oil and gas lease, Northwest Cha Cha Unit. Five of the proposed well locations, NW Cha Cha Units 37, 47, 48, 49, and 60 are within the boundaries of the Navajo Indian Irrigation Project (NIIP) Block II survey. On February 15, 1994 Mr. Bob Crakow of the Bureau of Indian Affairs NIIP administration office was contacted by Dave Skoglund of San Juan College Cultural Resources Management Program (SJC-CRMP) in regards to these five locations. At that time Mr. Crakow informed Mr. Skoglund that because of the previous inventory and mitigation conducted for the Block II project area, these five proposed well locations did not have to be surveyed. The five remaining wells, proposed NW Cha Cha Units 25, 26, 27, 32, and 40 are outside of the previously surveyed Block II project area and thus required a complete inventory of the well locations and associated access roads. b. <u>Existing Data Review:</u> A records search was conducted for this project by Karen Brown of the Navajo Nation Archaeology Department (NNAD) in Window Rock in late January. An additional records search was conducted at the Navajo Nation Archaeology Department in Farmington by SJC-CRMP personnel. Nearby sites were recorded during various phases of the large NIIP Block II survey (Allen et al. 1975; Correll 1976; Hallisy 1977; NNCRMP 1979), and several were excavated (Kirkpatrick 1980). Approximately 12 previously recorded sites have been recorded within a 0.5 kilometer area of the 10 well locations. These sites include Anasazi lithic and ceramic scatters, several historic and recent Navajo sites, and one undated prehistoric campsite. All of the previously recorded sites are 500 ft or more from the proposed well locations. See attached Nearby Sites Documentation (Attachment 3) for further detail.		

c. Area Environmental and Cultural Setting: The proposed well locations and roads are located along the northern end and edge of a mesa top which borders the east side of Ojo Amarillo Canyon and is approximately 4 miles southeast of Kirtland, New Mexico. The San Juan River and Interstate 550 can be seen north of the project area. The mesa top is primarily agricultural land associated with NAPI and the University of New Mexico Experimental Farm. The area north of the mesa drops steeply towards the San Juan River and is bisected by numerous large to small intermittent drainages. Small benches as well as sandstone and limestone outcrops are exposed throughout this area. Vegetation cover is approximately 5 to 10 percent and includes sparse juniper with an understory of sagebrush, Russian thistle, saltbush, Indian ricegrass, composites, mormon tea, narrowleaf yucca and pricklypear. Soils consist of decomposing tan to brown sandstone with areas of dunal sand. Due to the high amount of erosion, the entire area is also covered with lag gravels and various sizes of cobbles. One occupied residence, belonging to Harris Author, is within sight of several of the proposed well locations.

d. Field Methods: The proposed well locations had been marked with painted lath at each corner. The proposed access roads were also marked with painted lath approximately 200 ft. apart. The proposed well locations and access roads were surveyed with contiguous 15 m wide zig-zag transects. A 50 ft cultural buffer zone was surveyed around all sides of the well locations. A 50 ft wide corridor was surveyed along the proposed access roads. In this way a 30 ft wide access road and a 10 ft cultural buffer zone on either side were surveyed.

Any artifacts encountered were pinflagged in an effort to determine extent of scatter and the presence of any features. The relationship of the artifacts to the project areas was determined by using a compass and meter tape. The one newly recorded site was documented on a Laboratory of Anthropology Site Record form (Attachment 4). If the artifacts were determined to be Isolated Occurrences (IOs), the IOs were fully documented in the field using the NNHPD IO form as a guide to content (Attachment 5).

15. CULTURAL RESOURCE FINDINGS: One newly recorded site, LA 1030,987/SJC-2289, and two IOs were discovered during the inventory of the proposed project areas. Newly recorded site, LA 103,987, (Attachment 4, Figure 2), was located during field inspection of the originally proposed Unit 26 well location. IO #1 was found during the survey of the Unit 32 well location, and IO #2 was found during the survey of the Unit 26 access road. See Attachment 4, Cultural Resources Documentation, and Attachment 5, Isolated Occurrence Documentation, for further information.

A Traditional Cultural Properties (TCP) inventory was completed. Interviews with nearby residents and chapter officials were conducted. Although one resident, Mr. Harris Arthur, indicated that there were some abandoned hogans which were used for burials near the project area, none were found. Additional information is provided in Attachment 6.

a. Location/Identification of Each Resource: The originally proposed Unit 26 well location was staked across the west half of site LA 103987. The site is an Anasazi PII activity area or seasonal habitation consisting of a possible structure, a charcoal ash stained area, and a dispersed artifact scatter. Due to the discovery of site LA 103,987, the Unit 26 well location was moved approximately 99 m east of the original location. Construction of the relocated Unit 26 well location will have no effect to the site. IO #1 is located within the southeastern cultural buffer zone of the Unit 32 well location. The IO is 3.5 m outside of the staked area and consists of four amethyst glass shards, a rusted frying pan handle, one white crockery rim shard and a button. IO #2 is located along the proposed Unit 26 access road approximately 61 m west of the Unit 27 well location. The IO consists of an alignment of sandstone slabs measuring 7.2 m in length x 50 cm wide x 40 cm high and is oriented at 345 deg. No additional cultural materials and or features were noted near the IO. The IO is most likely historic in age. The proposed access road is staked through the central portion of the feature.

b. Evaluation of Significance of Each Resource (above): Site LA 103987 is considered eligible for nomination to the National Register of Historical Places and is also eligible for protection under ARPA and possibly AIRFA. The IOs, fully documented in the field, are not considered to have significant data potential or integrity and, consequently, are not eligible for nomination to the NRHP, nor are they eligible for protection under ARPA or AIRFA.

16. MANAGEMENT SUMMARY (RECOMMENDATIONS): Archaeological clearance is recommended for the proposed 10 Cha Cha Unit well locations and associated access roads described in this report.

17. CERTIFICATION:

SIGNATURE and DATE: *David Skoglund 3-16-94*
 PRINTED NAME and DATE: David Skoglund, 3/9/94

CHARGE NAME and DATE: *Meredith H. Matthews 9 March 1994*
 PRINTED CHARGE NAME and DATE: Meredith Matthews, Co-Director, 3/9/94

References

- Allan, William C., Alan Osborn, William J. Chasko, and David Stuart
 1975 An Archaeological Survey: Road Construction Rights-of-Way Block II, Navajo Indian Irrigation Project. University of New Mexico Office of Contract Archaeology, Albuquerque, New Mexico.
- Correll, J. Lee
 1976 Archaeological Clearance Survey Report of Twenty-Nine Navajo Sites in Block II, Navajo Indian Irrigation Project Southeast of Fruitland, New Mexico. On file, Navajo Nation Archaeology Department, Window Rock, Arizona.
- Hallisy, Stephen J.
 1977 An Archaeological Survey of Selected Agricultural Field Units and Class 6 Lands, Block II, Navajo Indian Irrigation Project, San Juan County, New Mexico. U.S. Department of the Interior, National Park Service, Southwest Region, Southwest Cultural Resources Center, Santa Fe, New Mexico.
- Kirkpatrick, David (ed.)
 1980 Prehistory and History of the Ojo Amarillo: Archaeological Investigations on Block II, Navajo Indian Irrigation Project, San Juan County, New Mexico. New Mexico State University Cultural Resources Management Division Report 276, Las Cruces, New Mexico.
- Navajo Nation Cultural Resources Management Program
 1979 An Archaeological Survey Report and Mitigation Plan for the Block II Cultural Resources - Navajo Indian Irrigation Project. On file, Navajo Nation Archaeology Department, Window Rock, Arizona.

Attachment 1

Archaeological Inventory Report Documentation Page
San Juan College Report 94-SJC-003A

Item 12, Area of Effect/Area Surveyed, and Item 13f, UTM

NW Cha Cha Unit 25 (NW1/4 NE1/4 SW1/4, Section 22)
2431 ft FSL, 1889 ft FWL UTM: E 741320 N 4066020
Area of Effect: 1.06 acres Area Surveyed: 1.94 acres

Access Road:
UTM: beginning E 741350 N 4066840
 ends E 741320 N 4066020
Area of Effect: 0.42 acres Area Surveyed: 0.70 acres

NW Cha Cha Unit 26, Originally Proposed (NW1/4 NE1/4 SE1/4, Section 22)
2105 ft FSL, 851 feet FEL UTM: E 742040 N 4065900
Area of Effect: 1.06 acres Area Surveyed: 1.89 acres

Access Road:
UTM: beginning E 742480 N 4065810
 ends E 742040 N 4065900
Area of Effect: 0.65 acres Area Surveyed: 1.09 acres

NW Cha Cha Unit 26, Relocated (NE1/4 NE1/4 SE1/4, Section 22)
2077 ft FSL, 317 ft FEL UTM: E 472180 N 4065900
Area of Effect: 1.04 acres Area Surveyed: 2.06 acres

NW Cha Cha Unit 27 (SW1/4 NW1/4 SW1/4, Section 23)
1884 ft FSL, 652 ft FWL UTM: E 742480 N 4065810
Area of Effect: 1.06 acres Area Surveyed: 1.98 acres

Access Road:
UTM: beginning E 742420 N 4065560
 ends E 742480 N 4065810
Area of Effect: 1.23 acres Area Surveyed: 2.06 acres

NW Cha Cha Unit 32 (NW1/4 SW1/4 SW1/4, Section 22)
849 ft FSL, 682 FWL UTM: E 740940 N 4065520
Area of Effect: 1.21 acres Area Surveyed: 2.24 acres

Access Road:
UTM: beginning: E 740940 N 4065510
 ends: E 740940 N 4065520
Area of Effect: 0.07 acres Area Surveyed: 0.13 acres

NW Cha Cha Unit 40 (SW1/4 SE1/4 SW1/4, Section 23)
71 ft FSL, 2000 ft FWL UTM: E 742930 N 4065360
Area of Effect: 1.18 acres Area Surveyed: 2.18 acres

Total Areas for NW Cha Cha Units 25, 26, 27, 32, and 40:

Well Locations: Total Areas of Effect	6.61 acres
Total Areas of Survey	12.29 acres
Access Roads: Total Areas of Effect	2.37 acres
Total Areas of Survey	3.98 acres

NW Cha Cha units within the Navajo Indian Irrigation Project Block II Survey area that were not surveyed.

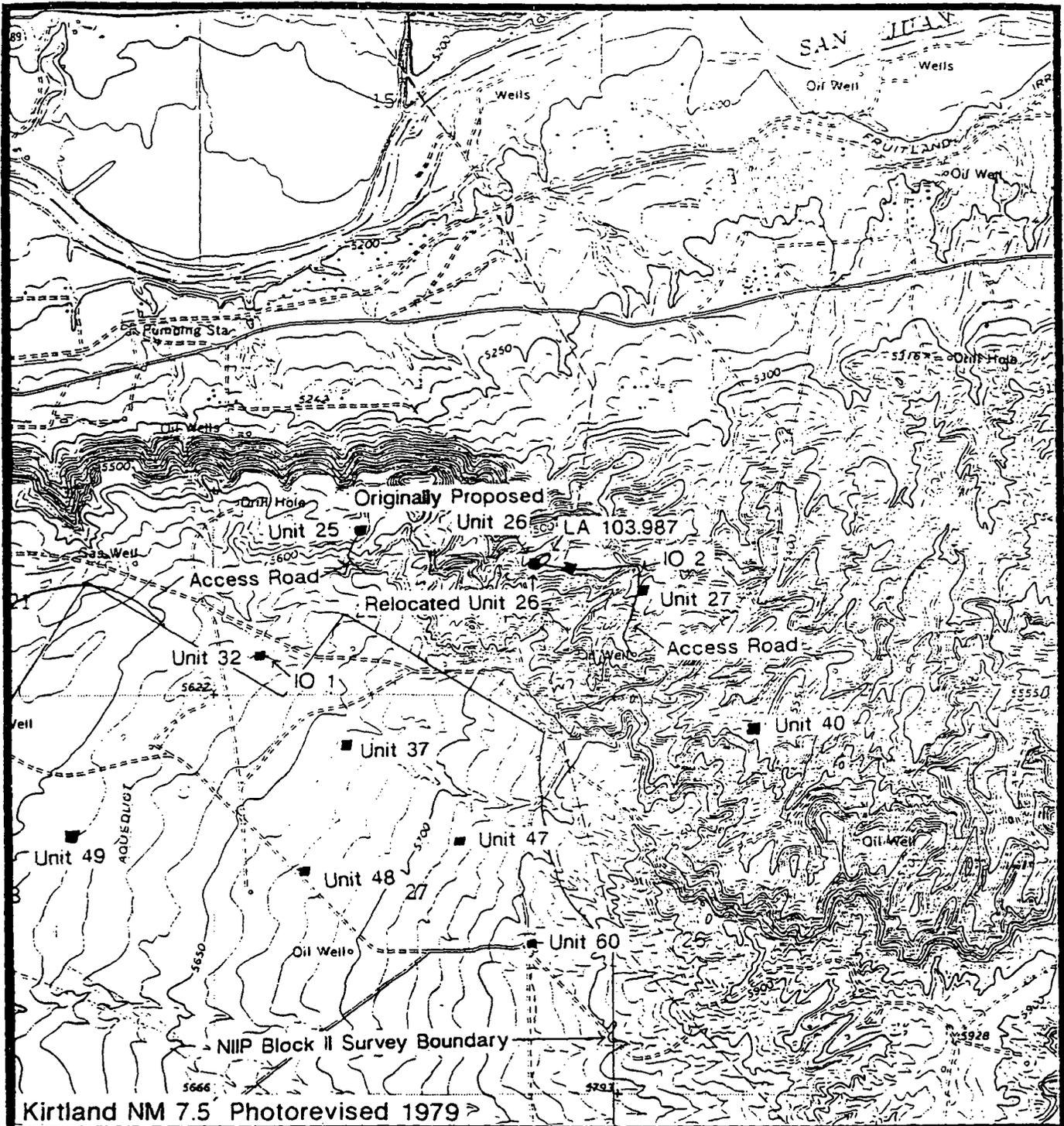
NW Cha Cha Unit 37 (NW1/4 NE1/4 NW1/4, Section 27)
436 ft FNL, 1892 ft FWL UTM: E 741290 N 4065150

NW Cha Cha Unit 47 (NW1/4 SW1/4 NE1/4, Section 27)
1567 ft FNL, 1849 ft FEL UTM: E 741770 N 4064770

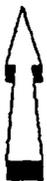
NW Cha Cha Unit 48 (SE1/4 SW1/4 NW1/4, Section 27)
1394 ft FWL, 2067 FNL UTM: E 741140 N 4064630

NW Cha Cha Unit 49 (NE1/4 SW1/4 NE1/4, Section 28)
1761 ft FNL, 1761 ft FEL UTM: E 740220 N 4064750

NW Cha Cha Unit 60 (NW1/4 NE1/4 SE1/4, Section 27)
1930 ft FSL, 971 ft FEL UTM: E 742060 N 4064360



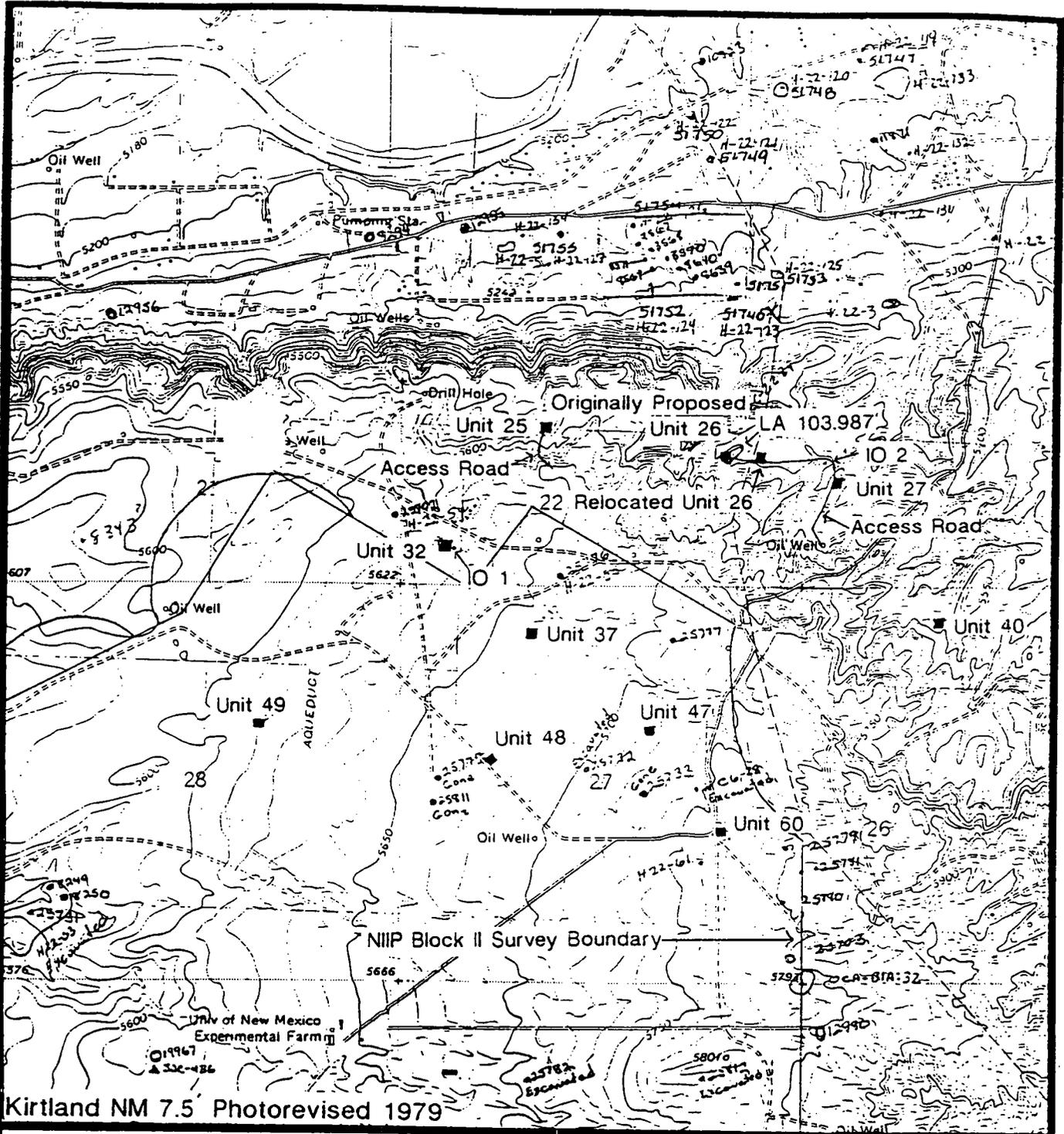
**Sirgo Operating, Inc. Northwest Cha Cha Unit
 Units 25, 26, 27, 32, 37, 40, 47, 48, 49, and 60
 Well Locations and Associated Access Roads**



N

T29N, R14W, Sections 22, 23, 27, and 28
 San Juan County, New Mexico
 Report 94-SJC-003A

Attachment 2
 Figure 1. Vicinity Map



N

**Sirgo Operating, Inc. Northwest Cha Cha Unit
Units 25, 26, 27, 32, 37, 40, 47, 48, 49, and 60
Well Locations and Associated Access Roads**

T29N, R14W, Sections 22, 23, 27, and 28
San Juan County, New Mexico
Report 94-SJC-003 A

Attachment 3
Nearby Sites Map

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

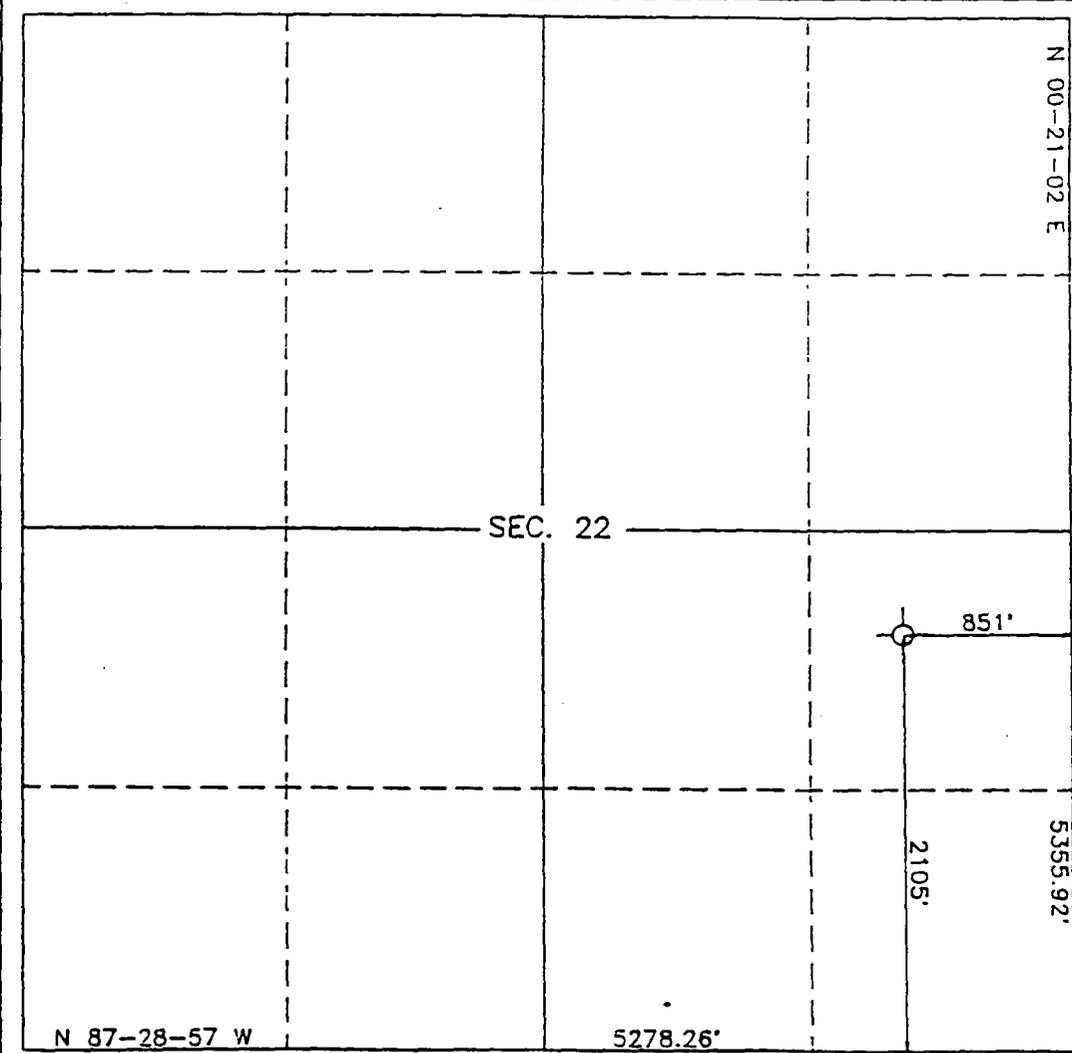
DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88240

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT
All Distances must be from the outer boundaries of the section

Operator SIRGO OPERATING, INC.		Lease NW CHA CHA		Well No. 26
Unit Letter I	Section 22	Township 29 NORTH	Range 14 WEST	County NMPM SAN JUAN
Actual Footage Location of Well:				
2105 feet from the SOUTH line end		851 feet from the EAST line		
Ground level Elev. 5510	Producing Formation Gallup	Pool Cha Cha Gallup	Dedicated Acreage: 80 Acres	
<p>1. Outline the acreage dedicated to the subject well by colored pencil or hatchure mark on the plat below.</p> <p>2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).</p> <p>3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communization, unitization, force-pooling, etc.?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No If answer is "yes" type of consolidation _____</p> <p>If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____</p> <p>No allowable will be assigned to the well until all interests have been consolidated (by communization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.</p>				



SURVEYOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature _____

Printed Name _____

Position _____

Company _____

Date _____

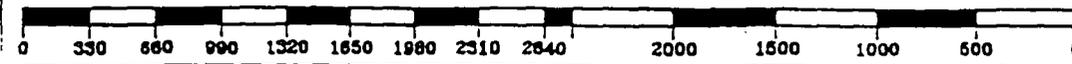
SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
JANUARY 20, 1994

Signature & Seal of Professional Surveyor
ROY A. BRUSH

Certificate No. **8894**



(HORSESHOE-GALLUP (PRESSURE MAINTENANCE PROJECT NO. 4) POOL - Cont'd.)

that the injection well shall be assigned a top unit allowable, that the allowable for the project shall be the sum of the allowables of the producing well and the injection well, that the allowable for the injection well may be transferred to the producing well, and that the allowable for the project shall not exceed two times top unit allowable for the Horseshoe-Gallup Oil Pool.

(6) That the subject application should be approved and that the project should be designated as the Horseshoe-Gallup Pressure Maintenance Project No. 4.

(7) That the project area for said project should be defined as the SW/4 of Section 33, Township 32 North, Range 17 West, NMPM.

IT IS THEREFORE ORDERED:

(1) That the applicant, Skelly Oil Company, is hereby authorized to institute a pressure maintenance project in the Horseshoe-Gallup Oil Pool, to be designated the Horseshoe-Gallup Pressure Maintenance Project No. 4, comprising the SW/4 of Section 33, Township 32 North, Range 17 West, NMPM, San Juan County, New Mexico, by the injection of water into the Gallup formation through the Navajo "M" Well No. 2, located 1980 feet from the South line and 1980 feet from the West line of said Section 33.

(2) That the injection well shall be assigned a top unit allowable; that the allowable for the project shall be the sum of the allowables of the producing well and the injection well; and that the allowables for the injection well may be transferred to the producing well.

PROVIDED HOWEVER, That the allowable for the project shall not exceed two times the top unit allowable for the Horseshoe-Gallup Oil Pool.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**BISTI-LOWER GALLUP POOL
CHA CHA-GALLUP POOL
HORSESHOE-GALLUP POOL
LONE PINE-DAKOTA "D" POOL
MANY ROCKS-GALLUP POOL**
(Certain Pressure Maintenance Projects Reclassified)
San Juan and McKinley Counties, New Mexico

Order No. R-6172, Rescinding Various Orders Authorizing Pressure Maintenance Projects and Reclassifying Certain Pressure Maintenance Projects as Secondary Recovery Projects in the Bisti-Lower Gallup, Cha Cha-Gallup, Horseshoe-Gallup, Lone Pine-Dakota "D", and Many Rocks-Gallup Pools, San Juan and McKinley Counties, New Mexico, November 2, 1979.

In the Matter of the Hearing Called by the Oil Conservation Division on its Own Motion to Consider the Reclassification of Certain Pressure Maintenance Projects in San Juan and McKinley Counties, New Mexico, as Secondary Recovery Projects.

CASE NO. 6093
Order No. R-6172

ORDER OF THE DIVISION

BY THE DIVISION: This cause came on for hearing at 9 a.m. on November 30, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 2nd day of November, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the Oil Conservation Division heretofore authorized the following Northwest New Mexico pressure maintenance projects in the named pools by the designated order:

PROJECT	POOL	ORDER NO.
Atlantic Horseshoe Gallup	Horseshoe-Gallup	R-2210
Dugan Central Cha Cha Unit	Cha Cha-Gallup	R-2305
Energy Reserves Horseshoe Gallup No. 3	Horseshoe-Gallup	R-1876
Energy Reserves NE Hogback	Horseshoe-Gallup	R-2026
Eng. & Prod. Serv. Horseshoe Gallup No. 2	Horseshoe-Gallup	R-1745
Eng. & Prod. Serv. Many Rocks Gallup No. 1	Many Rocks-Gallup	R-2541
Getty Many Rocks Gallup No. 3	Many Rocks-Gallup	R-2664

(BISTI-LOWER GALLUP, CHA CHA-GALLUP, HORSESHOE-GALLUP, LONE PINE-DAKOTA "D" AND MANY ROCKS-GALLUP (CERTAIN PRESSURE MAINTENANCE PROJECTS RECLASSIFIED) POOLS - Cont'd.)

PROJECT	POOL	ORDER NO.
Shell Carson Bisti	Bisti-Gallup	R-2085
Suburban NW Cha Cha	Cha Cha-Gallup	R-2154
Tenneco Lone Pine DK "D"	Lone Pine-Dakota "D"	R-4263
Woolesley Many Rocks Gallup No. 4	Many Rocks-Gallup	R-2700

(3) That each of the above-named pressure maintenance projects has declined to the point where it can no longer be correctly classified as a "pressure maintenance" project but can be correctly classified as a "secondary recovery" project.

(4) That due to certain recent changes in the rules governing reports, the reporting of injection and production is less complicated and time-consuming to operators of secondary recovery projects than is the similar reporting for pressure maintenance projects.

(5) That the processing of data relating to secondary recovery projects by the Oil Conservation Division of the New Mexico Energy and Minerals Department for the purpose of maintaining production records is less time-consuming than is the processing of similar data for pressure maintenance projects.

(6) That the reclassification of the pressure maintenance projects named in Finding No. (2) above as secondary recovery projects will result in a saving of time and effort by both the operators of the projects and by the Division in reporting and processing data relating to the projects, thereby preventing waste, and that said reclassification will not impair correlative rights.

(7) That even though some of the subject projects may not at this time be active projects, or even though some of the originally authorized injection wells may no longer be on active injection, the reclassification of said projects can most easily be carried out by rescinding the orders authorizing said projects as pressure maintenance projects and reauthorizing said projects as secondary recovery projects, subject to any particular rules previously promulgated for said projects which would still be applicable.

(8) That portions of Order No. R-2210, as amended by R-2210-A and R-2719, which authorized the Atlantic Refining Company Horseshoe Gallup Unit Pressure Maintenance Project should be rescinded and approval given for the Atlantic Horseshoe Gallup Waterflood Project.

(9) That Order No. R-2305 which authorized the Dugan Central Cha Cha Unit Pressure Maintenance Project should be rescinded and approval given for the Dugan Central Cha Cha Unit Waterflood Project.

(10) That Order No. R-1876 which authorized the Energy Reserves Group Horseshoe Gallup Pressure Maintenance Project No. 3 should be rescinded and approval given to the Energy Reserves Group Horseshoe Gallup Waterflood Project No. 3.

(11) That Order No. R-2026 which authorized the Energy Reserves Group Northeast Hogback Pressure Maintenance Project should be rescinded and approval given to the Energy Reserves Group Northeast Hogback Waterflood Project.

(12) That Order No. R-1745 which authorized the Engineering and Production Service Horseshoe Gallup Pressure Maintenance Project No. 2 should be rescinded and approval given to the Engineering and Production Service Horseshoe Gallup Waterflood Project No. 2.

(13) That Order No. R-2541 which authorized the Engineering and Production Service Many Rocks Gallup Pressure Maintenance Project No. 1 should be rescinded and approval given for the Engineering and Production Service Many Rocks Gallup Waterflood Project No. 1.

(14) That Order No. R-2664 which authorized the Getty Many Rocks Gallup Pressure Maintenance Project No. 3 should be rescinded and approval given to the Getty Many Rocks Gallup Waterflood Project No. 3.

(15) That Order No. R-2065 which authorized the Shell Carson Bisti Lower Gallup Pressure Maintenance Project should be rescinded and approval given to the Shell Carson Bisti Lower Gallup Waterflood Project.

(16) That Order No. R-2154 which authorized the Suburban Propane Northwest Cha Cha Pressure Maintenance Project should be rescinded and approval given to the Suburban Propane Northwest Cha Cha Waterflood Project.

(17) That Order No. R-4263 which authorized the Tenneco Lone Pine Dakota "D" Pressure Maintenance Project should be rescinded and approval given to the Tenneco Lone Pine Dakota "D" Waterflood Project.

(18) That Order No. R-2700 which authorized the James P. Woolesley Many Rocks Gallup Pressure Maintenance Project No. 4 should be rescinded and approval given to the Woolesley Many Rocks Gallup Waterflood Project No. 4.

IT IS THEREFORE ORDERED:

(1) That Order No. (8) of Division Order No. R-2210 and Order No. (2) of Division Order No. R-2210-A, and Division Orders Nos. R-2719, R-2305, R-1876, R-2026, R-1745, R-2541, R-2664, R-2065, R-2154, R-4263, and R-2700 are hereby rescinded.

(2) That the Atlantic Refining Company is hereby authorized to operate the Atlantic Horseshoe Gallup Waterflood Project, Horseshoe-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. The Division Director is authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of the Horseshoe-Gallup Unit Area as may be necessary to complete an efficient production and injection pattern, provided said wells are drilled no closer than 330 feet to the outer boundary of said unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary. To obtain such approval, the project operator shall file proper application with the Division, which application, if it seeks authorization to convert additional wells to injection or to drill additional production or injection wells shall include the following:

(1) A plat showing the location of proposed well, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed well which fully describes the casing, tubing, perforated interval, and depth.

(3) A letter stating that all offset operators to the proposed well have been furnished a complete copy of the application and the date of notification.

(BISTI-LOWER GALLUP, CHA CHA-GALLUP, HORSESHOE-GALLUP, LONE PINE-DAKOTA "D", AND MANY ROCKS-GALLUP (CERTAIN PRESSURE MAINTENANCE PROJECTS RECLASSIFIED) POOLS - Cont'd.)

The Division Director may approve the proposed project and promulgate special rules therefor if, within 20 days after receiving the application, no objection to the proposal is received. The Division Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Division Director administratively when good cause is shown therefor.

(3) That Dugan Production Company is hereby authorized to operate the Dugan Central Cha Cha Unit Waterflood Project, Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection in the Central Cha Cha Unit Project shall be through the following described wells in Section 31, Township 29 North, Range 13 West, NMPM:

Callow "B" Well No. 1, Unit K
Callow "B" Well No. 2, Unit I

(4) That Energy Reserves Group is hereby authorized to operate the Energy Reserves Group Horseshoe Gallup Waterflood Project No. 3, Horseshoe-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection in the Horseshoe Gallup Waterflood Project No. 3 shall be through the following described well in Section 5, Township 31 North, Range 17 West, NMPM:

Navajo Well No. 4-5, Unit M

(5) That Energy Reserves Group is hereby authorized to operate the Energy Reserves Group Northeast Hogback Waterflood Project, Horseshoe-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection into the Northeast Hogback Waterflood Project shall be through the following described wells in Township 30 North, Range 16 West, NMPM:

Northeast Hogback Unit Well No. 4, Unit J, Section 14
Northeast Hogback Unit Well No. 6, Unit B, Section 15
Northeast Hogback Unit Well No. 10, Unit E, Section 14
Northeast Hogback Unit Well No. 11, Unit F, Section 14
Northeast Hogback Unit Well No. 13, Unit E, Section 13
Northeast Hogback Unit Well No. 14, Unit I, Section 14
Northeast Hogback Unit Well No. 16, Unit K, Section 13
Northeast Hogback Unit Well No. 17, Unit M, Section 13
Northeast Hogback Unit Well No. 20, Unit B, Section 24
Northeast Hogback Unit Well No. 21, Unit D, Section 15
Northeast Hogback Unit Well No. 22, Unit G, Section 15
Northeast Hogback Unit Well No. 23, Unit B, Section 10
Northeast Hogback Unit Well No. 25, Unit D, Section 11
Northeast Hogback Unit Well No. 29, Unit F, Section 10
Northeast Hogback Unit Well 30, Unit L, Section 10
Northeast Hogback Unit Well No. 32, Unit L, Section 11
Northeast Hogback Unit Well No. 37, Unit P, Section 10
Williams Well No. 2, Unit P, Section 11
Williams Well No. 3, Unit J, Section 11
Federal Well No. 3, Unit B, Section 14

(6) Engineering and Production Service, Inc., is hereby authorized to operate the Engineering and Production Service Horseshoe-Gallup Waterflood Project No. 2, Horseshoe-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection into the Engineering and Production Service Horseshoe Gallup Waterflood Project No. 2 shall be through the following described wells in Township 31 North, Range 17 West, NMPM:

Navajo "F" Well No. 1, Unit D, Section 4
Navajo "F" Well No. 3, Unit L, Section 4
Navajo "F" Well No. 8, Unit E, Section 10
Navajo "F" Well No. 9, Unit K, Section 10
Navajo "F" Well No. 11, Unit I, Section 10
Navajo "F" Well No. 14, Unit M, Section 10
Navajo "F" Well No. 15, Unit J, Section 9
Navajo "F" Well No. 17, Unit G, Section 10
Navajo "F" Well No. 18, Unit C, Section 10
Navajo "F" Well No. 21, Unit D, Section 10
Navajo "F" Well No. 22, Unit H, Section 9
Navajo "F" Well No. 23, Unit B, Section 9
Navajo "F" Well No. 24, Unit P, Section 4
Navajo "F" Well No. 25, Unit N, Section 4
Navajo "F" Well No. 27, Unit J, Section 4
Navajo "F" Well No. 28, Unit F, Section 4
Navajo "F" Well No. 31, Unit N, Section 3
Navajo "F" Well No. 32, Unit L, Section 3
Navajo "F" Well No. 33, Unit D, Section 9
Navajo "F" Well No. 34, Unit F, Section 9
Navajo "F" Well No. 36, Unit A, Section 10
Navajo "F" Well No. 38, Unit H, Section 4
Navajo "F" Well No. 40, Unit P, Section 9
Navajo "F" Well No. 43, Unit O, Section 3
Navajo "F" Well No. 44, Unit O, Section 10
Navajo "G" Well No. 3, Unit K, Section 11
Navajo "G" Well No. 4, Unit M, Section 11
Navajo "G" Well No. 5, Unit O, Section 11
Navajo "G" Well No. 6, Unit E, Section 11

(7) That Engineering and Production Services, Inc., is hereby authorized to operate the Engineering and Production Service Many Rocks Gallup Waterflood Project No. 1, Many Rocks-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection into the Engineering and Production Service Many Rocks Gallup Waterflood Project shall be through the following described wells in Township 31 North, Range 17 West, NMPM:

Injection Well, Unit F, Section 1
Injection Well, Unit J, Section 1
Injection Well, Unit L, Section 1
Injection Well, Unit N, Section 1
Injection Well, Unit H, Section 2
Injection Well, Unit B, Section 12

(8) That Getty Oil Company is hereby authorized to operate the Getty Many Rocks Gallup Waterflood Project No. 3, Many Rocks-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection into the Getty Many Rocks Gallup Waterflood Project No. 3 shall be through the following described well in Section 35, Township 32 North, Range 17 West, NMPM:

Navajo "P" Well No. 6, Unit P

(BISTI-LOWER GALLUP, CHA CHA-GALLUP, HORSESHOE-GALLUP, LONE PINE-DAKOTA "D", AND MANY ROCKS-GALLUP (CERTAIN PRESSURE MAINTENANCE PROJECTS RECLASSIFIED) POOLS - Cont'd.)

(9) That Shell Oil Company is hereby authorized to operate the Shell Carson Bisti Lower Gallup Waterflood Project, Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection into the Shell Carson Bisti Lower Gallup Waterflood Project shall be through the following described wells:

TOWNSHIP 25 NORTH, RANGE 11 WEST, NMPM

Section 7: No. 24-7;
 Section 17: Nos. 1, 23-17, 24-17, 31-17, 43-17;
 Section 18: Nos. 21-18, 22-18, 23-18, 24-18;
 Section 19: Nos. 21-19, 22-19;
 Section 20: Nos. 11-20, 23-20, 32-20, 41-20;
 Section 30: No. 11-30;

TOWNSHIP 25 NORTH, RANGE 12 WEST, NMPM

Section 10: No. 31-10;
 Section 11: Nos. 22-11, 23-11, 24-11;
 Section 12: No. 13-12;
 Section 13: Nos. 21-13, 22-13, 23-13, 24-13;
 Section 14: Nos. 21-14, 22-14, 23-14, 24-14;
 Section 15: No. 14-15;
 Section 23: No. 21-23;
 Section 24: Nos. 21-24, 23-24, 32-24;

In addition, Mudge 6 Lease Wells No. 12-16A and 14-16A, located in the SW/4 NW/4 and SW/4 SW/4 respectively, of Section 16, Township 25 North, Range 11 West, NMPM, are hereby approved for conversion to water injection, to form a water barrier between the Carson Unit Area and the acreage to the east thereof.

(10) That Suburban Propane Gas Company is hereby authorized to operate the Suburban Propane Northwest Cha Cha Waterflood Project, Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection into the Suburban Propane Northwest Cha Cha Gallup Waterflood Project shall be through the following described wells in Township 29 North, Range 14 West, NMPM:

Navajo "B" Well No. 3, Unit K, Section 21
 Navajo "E" Well No. 2, Unit I, Section 21
 Ojo Amarillo Well No. 2, Unit C, Section 27
 Navajo L Well No. 1, Unit E, Section 26
 Navajo L Well No. 4, Unit O, Section 26
 Navajo L Well No. 5, Unit E, Section 36

(11) That Tenneco Oil Company is hereby authorized to operate the Tenneco Lone Pine Dakota "D" Waterflood Project, Lone Pine-Dakota "D" Oil Pool, McKinley County, New Mexico, in accordance with the following:

A. Injection into the Tenneco Lone Pine Dakota "D" Waterflood Project shall be through the following described wells:

Well	Unit	Section	Township	Range
SFPRR No. 12	I	7	17N	8W
Lone Pine No. 1	D	19	17N	8W
Hospah No. 44	P	12	17N	9W
SFPRR No. 6	H	13	17N	9W
SFPRR No. 10	B	13	17N	9W

(12) That James P. Woosley is hereby authorized to operator the Woosley Many Rocks Gallup Waterflood Project No. 4, Many Rocks-Gallup Oil Pool, San Juan County, New Mexico, in accordance with the following:

A. Injection into the Woosley Many Rocks Gallup Waterflood Project No. 4 shall be through the following described wells in Township 32 North, Range 17 West, NMPM:

Injection Well, Unit D, Section 27
 Injection Well, Unit O, Section 27
 Injection Well, Unit I, Section 28

(13) That each of the above-described waterflood projects shall be operated in accordance with Rules 701, 702, and 703 of the Division Rules and Regulations.

(14) That monthly reports concerning said waterflood projects shall be filed in accordance with Rule 1115 of the Division Rules and Regulations.

(15) That the injection wells herein authorized for each of the subject projects as well as such additional wells which have been previously authorized for pressure maintenance injection are hereby approved for injection purposes until further order of the Division.

(16) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

CHA CHA-GALLUP OIL POOL
San Juan County, New Mexico

Order No. R-1800, Adopting Temporary Operating Rules for the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, November 1, 1960

Order No. R-1800-A, October 23, 1961, makes permanent the temporary rules adopted in Order No. R-1800, and set out below.

Application of Benson-Montin-Greer Drilling Corporation for the creation of a new Gallup Oil Pool in San Juan County, New Mexico, and for the promulgation of temporary special rules and regulations in connection therewith.

CASE NO. 2069
Order No. R-1800

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on September 14, 1960, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 3rd day of October, 1960, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Benson-Montin-Greer Drilling Corporation, seeks an order creating a new oil pool for Gallup production consisting of Section 17, Township 28 North, Range 13 West, NMPM, San Juan County, New Mexico.

(3) That the applicant further proposes that temporary special rules and regulations be promulgated governing said pool, including a provision for 80-acre oil proration units and including a provision for transfer of allowables.

(4) That the evidence available at this time indicates that the Gallup reservoir underlying said Section 17 may be efficiently and economically drained and developed on 80-acre proration units and that it may be uneconomical to drill wells in said pool on 40-acre proration units.

(5) That during the one-year period in which this order will be in effect, the applicant should gather all available information relative to drainage and recoverable reserves in the subject pool, and thus the request for transfer of allowables should be approved.

(6) That this case should be heard again by the Commission at the regular monthly hearing in October, 1961, at which time the applicant should be prepared to prove by a preponderance of the evidence why the subject pool should not be developed on 40-acre proration units.

IT IS THEREFORE ORDERED:

(1) That a new pool in San Juan County, New Mexico,

classified as an oil pool for Gallup production, be and the same is hereby created and designated as the Cha Cha-Gallup Oil Pool, with the vertical limits being the Gallup formation and the horizontal limits being Section 17, Township 28 North Range 13 West, NMPM, San Juan County, New Mexico.

(2) That temporary special rules and regulations for the said Cha Cha-Gallup Oil Pool be and the same are hereby promulgated as follows, effective November 1, 1960.

**SPECIAL RULES AND REGULATIONS
FOR THE CHA CHA-GALLUP OIL POOL**

RULE 1. Each well completed or recompleted in the Cha Cha-Gallup Oil Pool or in the Gallup formation within one mile of the Cha Cha-Gallup Oil Pool, and not nearer to nor within the limits of another designated Gallup oil pool, shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the Cha Cha-Gallup Oil Pool shall be located on a unit containing approximately 80 acres, which consists of any two contiguous quarter-quarter sections of a single governmental quarter section. For purposes of these Rules, a unit consisting of between 79 and 81 surface contiguous acres shall be considered a standard unit.

RULE 3. Each well projected to or completed in the Cha Cha-Gallup Oil Pool shall be located within 150 feet of the center of either quarter-quarter section in the 80-acre unit; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the 80-acre unit.

RULE 4. For good cause shown, the Secretary-Director may grant an exception to Rule 2 without notice and hearing where an application has been filed in due form, and where the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Lands Survey, or where the following facts exist and the following provisions are complied with:

(1) The non-standard unit is to consist of a single quarter-quarter section or lot.

(2) The non-standard unit consists of not more than 81 acres.

(3) The entire non-standard unit may reasonably be presumed to be productive of oil from said pool.

(4) The applicant presents written consent in the form of waivers from all offset operators.

(5) In lieu of Paragraph 4 of this Rule, the applicant may furnish proof of the fact that all of the offset operators were notified of his intent to form such non-standard unit. The Secretary-Director may approve the application if, after a period of 30 days, no such operator has entered an objection to the formation of the non-standard unit.

(CHA CHA-GALLUP OIL POOL—Cont'd.)

RULE 5. The District Supervisor shall have authority to approve non-standard oil proration units without notice and hearing and without administrative approval by the Secretary-Director if such unit consists of two lots or tracts comprising less than 79 surface contiguous acres and the non-standard unit is necessitated by a variation in the United States Public Lands Survey.

RULE 6. The allowable assigned to any non-standard proration unit shall bear the same ratio to a standard allowable in the Cha Cha-Gallup Oil Pool as the acreage in the non-standard unit bears to 80 acres.

RULE 7. An 80-acre proration unit (79 through 81 acres) in the Cha Cha-Gallup Oil Pool shall be assigned an 80-acre proportional factor of 2.33 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from said wells in any proportion.

IT IS FURTHER ORDERED:

That operators who propose to dedicate 80 acres to a well in the Cha Cha-Gallup Oil Pool must file an amended Commission Form C-128 with the Aztec District Office of the Commission by October 15, 1960, in order that the well may be assigned an 80-acre allowable on the November proration schedule.

IT IS FURTHER ORDERED:

That the applicant be and the same is hereby permitted to shut-in one of the wells presently completed in said pool and to transfer its allowable to any presently completed well or wells on the same basic lease which are producing from said pool. Provided, however, that such allowable transfer shall be limited to a period not to exceed one year.

IT IS FURTHER ORDERED:

That this case be reopened at the regular monthly hearing of the Commission in October, 1961, at which time the applicant shall appear and show cause why the Cha Cha-Gallup Oil Pool should not be developed on 40-acre proration units.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**ANGELS PEAK-GALLUP OIL POOL
(FIELD RECLASSIFIED)**

San Juan County, New Mexico

Order No. R-1357, Reclassifying from Gas to Oil the Angels Peak-Gallup Pool, San Juan County, New Mexico, April 1, 1959.

Application of the Oil Conservation Commission on its own motion to consider the Reclassification of the Angels Peak-Gallup Pool in San Juan County, New Mexico, from a Gas Pool to an Oil Pool.

CASE NO. 1616
Order No. R-1357

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on March 18, 1959, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 20th day of March, 1959, the Commission, a quorum being present, having considered the application and the evidence adduced and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the evidence presented indicates there is more likelihood that the Angels Peak-Gallup Pool in San Juan County, New Mexico, is an oil pool rather than a gas pool.

(3) That unrestricted gas production from said Angels Peak-Gallup Pool will result in waste.

(4) That the Angels Peak-Gallup Pool should be reclassified as an oil pool and produced accordingly with a depth factor for proration purposes of 1.77.

(5) That non-standard oil well locations should be approved for all wells heretofore drilled in said Angels Peak-Gallup Pool on unorthodox oil-well locations.

(6) That the effective date of this order should be April 1, 1959.

IT IS THEREFORE ORDERED:

(1) That the Angels Peak-Gallup Pool in San Juan County, New Mexico, be and the same is hereby reclassified as an oil pool effective April 1, 1959, with a depth factor for proration purposes of 1.77.

(2) That non-standard oil well locations be and the same are hereby approved for all such wells in said pool as were drilled or were drilling on unorthodox oil-well locations prior to March 18, 1959.

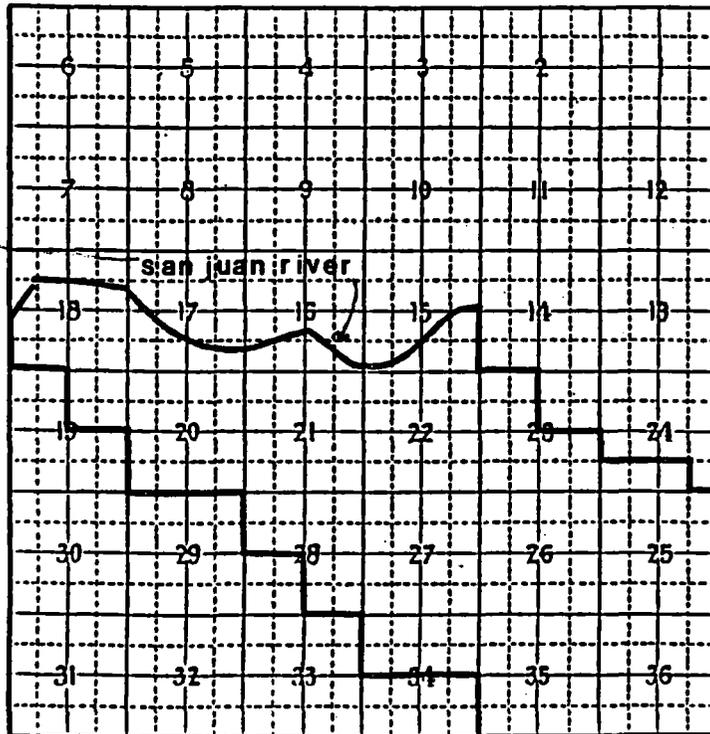
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

NORTHWEST CHA-CHA

SAN JUAN COUNTY
NEW MEXICO

EFFECTIVE 4-1-64

ANIMAS RIVER



29 N

14 W



gulram, inc.

petroleum engineering and government regulation consultants



gulram, inc.

petroleum engineering and government regulation consultants

UNIT NAME: NORTHWEST CHA-CHA UNIT AREA
CONTRACT NUMBER: ? (SW-I-4191)
APPROVAL DATE: 3-3-64
EFFECTIVE DATE: 4-1-64
ACREAGE TOTAL: 7626.80 (7626.80 INDIAN)
TYPE: WATERFLOOD
UNITIZED FORMATION: GALLUP
AUTOMATIC ELIMINATION DATE: NONE
OPERATOR: SLAYTON OIL CORPORATION

PARTICIPATING AREAS

Name: INITIAL (ALL UNIT)

Effective Date: 4-1-64

Legal Description: T.29N.,R.14W.:
Lots 4,5,9,10,SE/4SE/4 sec. 15; Lots 4-
6 sec. 16; Lots 3-5,9-11,SW/4SW/4 sec.
17; Lots 6-11,E/2SW/4,SE/4 sec. 18; NE/4
sec. 19; ALL sec. 20; ALL sec. 21; ALL
sec. 22; W/2,SE/4 sec. 23; S/2SW/4,
SW/4SE/4 sec. 24; ALL sec. 25; ALL sec.
26; ALL sec. 27; E/2,NW/4 sec. 28; N/2
sec. 34; ALL sec. 35; ALL sec. 36.