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FEB 27 1990

OIL CONSERVATION DIV.
SANTA FE

BEFORE THE OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF
SIETE OIL & GAS CORPORATION FOR
WATERFLOOD PROJECT, EDDY COUNTY,
NEW MEXICO

CASE NO.

9896

APPLICATION FOR WATERFLOOD PROJECT

Applicant states:

1. That Applicant seeks authority to institute a waterflood project within the Shugart, Yates, 7-Rivers, Queen, Penrose, Grayburg, San Andres pool by the injection of water through the Scottsdale Federal Well No. 2, located 330' FNL, 990' FEL, of Section 27, Township 18 South, Range 31 East, Eddy County, New Mexico.

2. That the horizontal limits of the waterflood project shall include the following described lands in Eddy County, New Mexico:

Township 18 South, Range 31 East,
Section 27: NE/4

3. The producing formations in the proposed project area are in an advanced stage of depletion and the area is suitable for waterflooding.

4. That attached hereto and made a part of this application is a Form C-108, together with its information requirement.

5. The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste and should otherwise protect correlative rights.

WHEREFORE, Applicant requests that the application be granted in its entirety, and for such other and proper relief as the Division deems proper and appropriate.

Respectfully submitted,

PADILLA & SNYDER

By: 

Ernest L. Padilla

P. O. Box 2523

Santa Fe, New Mexico 87504-2523

(505) 988-7577

ATTORNEYS FOR APPLICANT

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no

II. Operator: Siete Oil and Gas Corporation

Address: P. O. Box 2523 Roswell, New Mexico 88202-2523

Contact party: Robert S. Lee Phone: 505-622-2202

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Robert S. Lee Title Senior Reservoir Engineer

Signature: *Robert S. Lee* Date: February 5, 1990

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

SIETE OIL & GAS CORPORATION
CURRENT

WELL: Scottsdale Federal #2	LOCATION:
FIELD: Shugart	330' FNL & 990' FEL
INTERVAL:	Section 27: T18S, R31E
Comp: 3/12/85	Eddy County, N.M.
API #: 30-015-25170	IP: 40 BOPD, 12.5 MCFGPD, 10 BWPD (GOR 313)
Spudded 14 3/4" hole on 1/29/85	SHUT IN 5/16/86

TEMPORARILY ABANDONED
ELEVATION:

ZERO: 8' AGL

TOPS		
----	< >	SURFACE CASING-ran 9 jts. 10 3/4" 40.5# K-55
1. Yates 2477'		STC @ 378'. Cem w/300 sks. Class "C"
2. Queen 3366'		2% CaCl2 - circulate.
3. Penrose 3630'		
4. Grayburg 4162'		
EQUIPMENT IN HOLE		

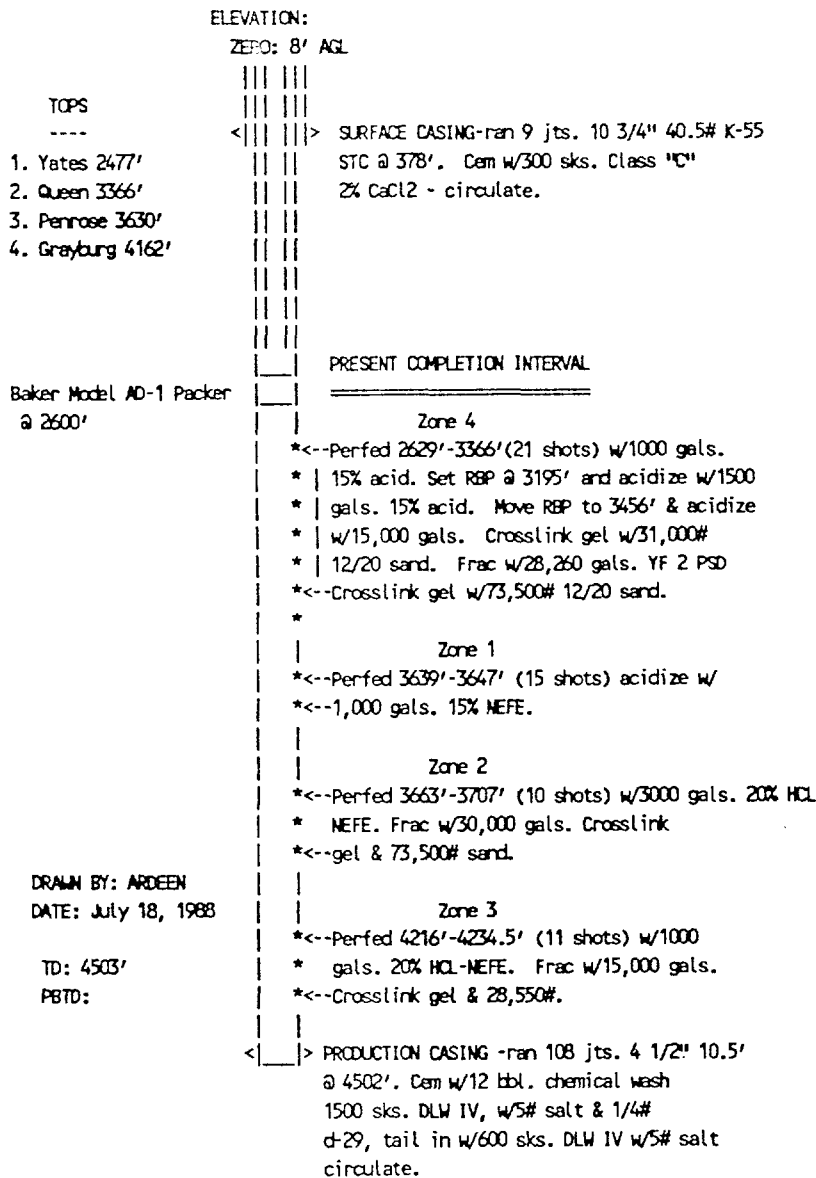
1. RBP @ 3456'		PRESENT COMPLETION INTERVAL
2. Jensen 114 PJ		-----
3. 113 jts. 2 3/8" tbg.		Zone 4
		*-<-Perfed 2629'-3366' (21 shots) w/1000 gals.
		* 15% acid. Set RBP @ 3195' and acidize w/1500
		* gals. 15% acid. Move RBP to 3456' & acidize
		* w/15,000 gals. Crosslink gel w/31,000#
		* 12/20 sand. Frac w/28,260 gals. YF 2 PSD
		*-<-Crosslink gel w/73,500# 12/20 sand.
		*
		Zone 1
		*-<-Perfed 3639'-3647' (15 shots) acidize w/
		*-<-1,000 gals. 15% NEFE.
		Zone 2
		*-<-Perfed 3663'-3707' (10 shots) w/3000 gals. 20% HCL
		* NEFE. Frac w/30,000 gals. Crosslink
		*-<-gel & 73,500# sand.
		Zone 3
		*-<-Perfed 4216'-4234.5' (11 shots) w/1000
		* gals. 20% HCL-NEFE. Frac w/15,000 gals.
		*-<-Crosslink gel & 28,550#.
	<	PRODUCTION CASING -ran 108 jts. 4 1/2" 10.5'
		@ 4502'. Cem w/12 bbl. chemical wash
		1500 sks. DLW IV, w/5# salt & 1/4#
		d-29, tail in w/600 sks. DLW IV w/5# salt
		circulate.

DRAWN BY: ARDEEN
DATE: July 18, 1988

TD: 4503'
PBTD:

SIETE OIL & GAS CORPORATION
PROPOSED

WELL: Scottsdale Federal #2	LOCATION:
FIELD: Shugart	330' FML & 990' FEL
INTERVAL:	Section 27: T18S, R31E
Comp: 3/12/85	Eddy County, N.M.
API #: 30-015-25170	IP: 40 BOPD, 12.5 MCFOPD, 10 BWPD (GCR 313)
Spudded 14 3/4" hole on 1/29/85	SHUT IN 5/16/86



SIETE OIL & GAS CORPORATION

Scottsdale Federal No. 2 - Conversion to Injection

NMOCD Form C-108 Section III

III. Data on injection well (s)

A. Injection well information (see attached schematic)

Tabular Data

1. Lease: Scottsdale Federal
Well No.: 2
Location: 330' FNL & 990' FEL
Section 27: T-18-S, R-31-E
Eddy County, New Mexico
2. Proposed Casing: 10 3/4" surface @ 378' w/300 sks.,
circ. to surface
4 1/2" production @ 4502' w/600
sks. circ. to surface.
3. Injection tubing: + or - 84 jts. 2 3/8", 4.7
lb/ft., J-55 internally plastic
coated tubing.
4. Packer: Baker Model AD-1 injection packer set @
2600 feet.

B. Other well information

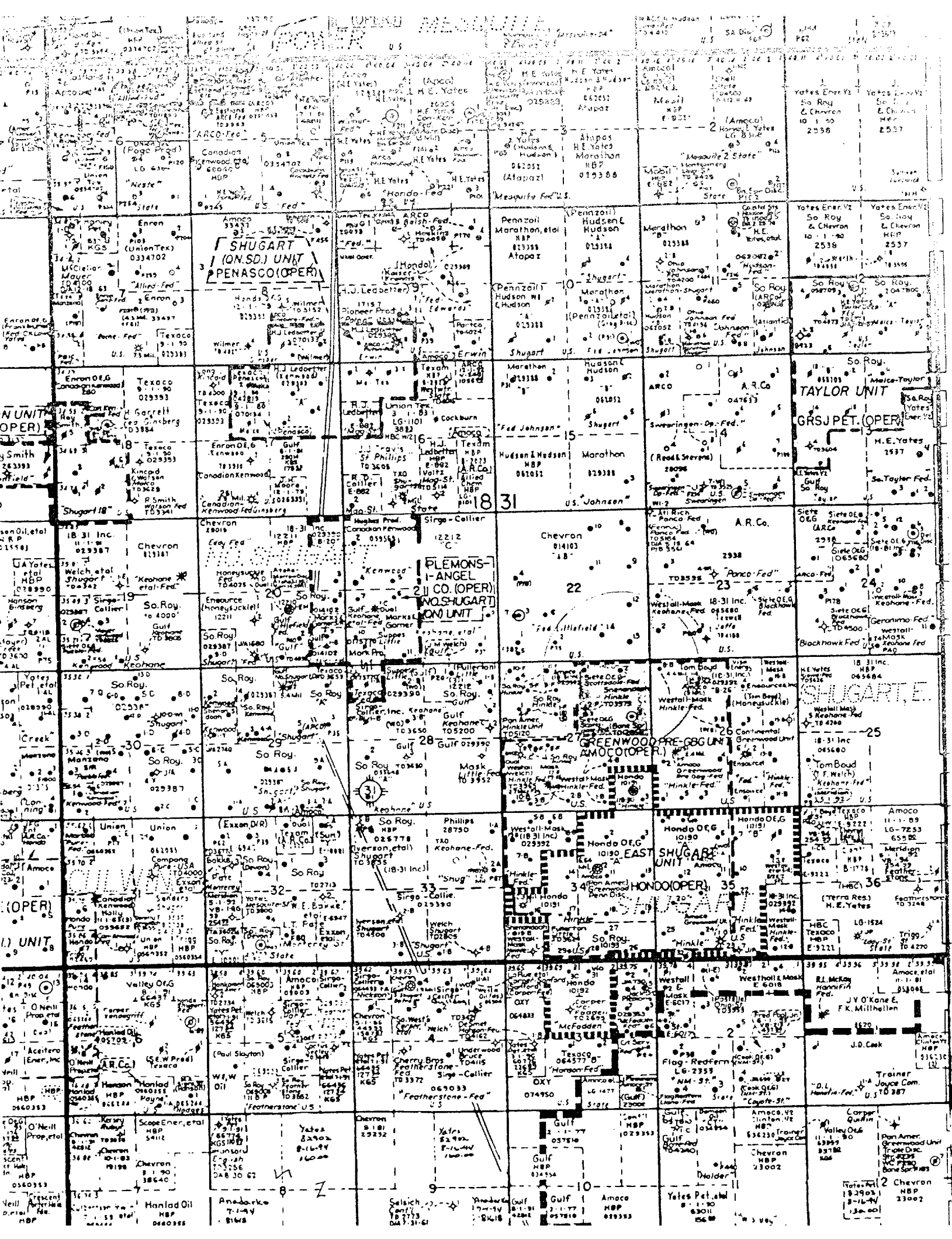
1. Injection formation: Yates-7 Rivers-Queen-Penrose-
Grayburg-San Andres
Field: Shugart-Yates 7 Rvrs Queen Grayburg San Andres
2. Cased hole perforated interval is estimated to be
from 2475' - 2625' (Yates), 3360' - 3398'
(Queen), 3639' - 3707' (Penrose).
3. The Scottsdale Federal No. 2 well was originally
drilled as an oil well.
4. Within the area of the Scottsdale Federal No. 2,
there are no other higher productive formations.

SCOTTSDALE WATERFLOOD PROJECT

WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD P8TD	COMPLETION INTERVAL	FORMATION	CASING PROGRAM
LITTLEFIELD #12	CHEVRON	1980' FSL 660' FEL SEC. 22 T18S R31E	OIL	5/4/70	5/16/70	3460 3413	3370 TO 3392	QUEEN	8 5/8 TO 715' CMT. W/ 325 SX. 4 1/2 TO 3459' CMT. W/ 325 SX.
LITTLEFIELD #13	CHEVRON	660' FSL 660' FEL SEC. 22 T18S R31E	OIL	12/24/70	1/14/71	3450 3412	3375 TO 3396	QUEEN	8 5/8 TO 715' CMT. W/ 350 SX. 5 1/2 TO 3449' CMT. W/ 450 SX.
LITTLEFIELD #14	CHEVRON	990' FSL 1650' FEL SEC. 22 T18S R31E	OIL	5/9/71	5/20/71	3436 3402	3372 TO 3384	QUEEN	8 5/8 TO 744' CMT. W/ 350 SX. 4 1/2 TO 3435' CMT. W/ 450 SX.
LITTLEFIELD AG-2	GULF	660' FSL 1980' FSL SEC. 22 T18S R31E	OIL	11/27/58	2/25/59	5300 3979	4982 TO 3979	GRAYBURG	8 5/8 TO 989' W/625 SX. 5 1/2 TO 5300' W/2200 SX.
KEOHANE FED.#2	WESTALL-MASK	990' FSL 330' FSL SEC. 23 T18S R31E	OIL	3/10/70	5/15/72	4000 3983	3358 TO 3816	QUEEN	8 5/8 TO 650' CMT. W/ 250 SX. 5 1/2 TO 3983' CMT. W/ 300 SX.
GREENWOOD #D-1	AMOCO	660' FNL 1980' FNL SEC. 26 T18S R31E	GAS	7/15/82	9/14/82	11875 11415	11090 TO 11111	ATOKA	13 3/8 TO 800' CMT. W/ 800 SX. 9 5/8 TO 4900' CMT. W/ 2200 SX 5 1/2 TO 11875' CMT. W/ 2150 S
HINKLE B-8	WESTALL-MASK	330' FNL 330' FNL SEC. 26 T18S R31E	OIL	3/26/76	5/21/76	4035 3700	3280 TO 3652	QUEEN	8 5/8 TO 648' CMT. W/ 300 SX. 4 1/2 TO 4035' CMT. W/ 800 SX.
GREENWOOD #3	AMOCO	1985' FNL 660' FEL SEC. 27 T18S R31E	OIL	1/7/61	2/28/61	12858 12687	9785 TO 9795	WOLF CAMP	16 TO 691' W/1500 SX. 10 TO 6385' W/2111 SX. 7 5/8 TO 12858' W/400 SX.
HINKLE F-11	MERIDIAN	330' FNL 1650' FNL SEC. 27 T18S R31E	OIL	11/15/86	12/15/86	4240 4170	3562 TO 3934	QUEEN	8 5/8 TO 733' CMT. W/ 400 SX. 5 1/2 TO 4240' CMT. W/ 1835 SX
HINKLE B-8	MERIDIAN	1880' FNL 1980' FNL SEC. 27 T18S R31E	OIL	11/6/64	11/11/64	5188 3960	3712 TO 3928	QUEEN	4 1/2 TO 5188' W/170 SX.
HINKLE F-2	WELCH V.S	1650' FNL 2310' FEL SEC. 27 T18S R31E	P&A	5/15/65	7/22/65	3979	P&A		8 5/8 TO 890' CMT. W/ 50 SX.

SCOTTSDALE WATERFLOOD PROJECT

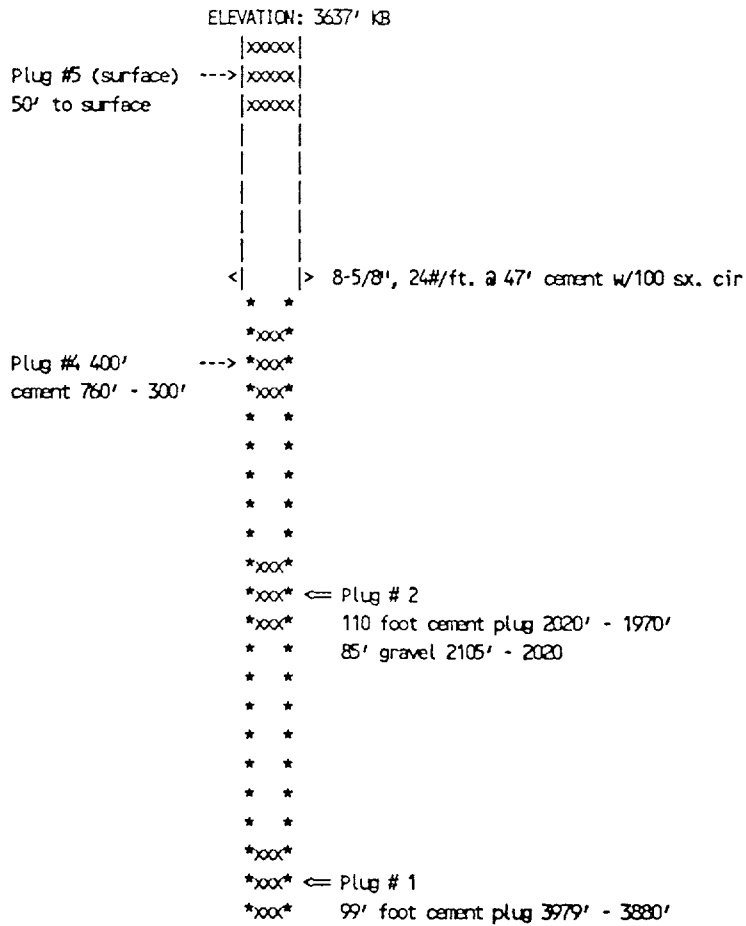
WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD PRD	COMPLETION INTERVAL	FORMATION	CASING PROGRAM
NIRKLE F-3	WELCH V.S.	990' FNL 1980' FNL SEC. 27 T18S R31E	OIL	6/1/65	8/4/65	3976 3960	3908 TO 3926	QUEEN	8 5/8 TO 870' CMT. W/ 50 SX. 5 1/2 TO 3976' CMT. W/ 100 SX.
RINKLE B-20	WESTALL-MASK	2310' FSL 2310' FEL SEC. 27 T18S R31E	OIL	10/18/87	3/31/88	4300 3000	2530 TO 2702	YATES	8 5/8 TO 450' CMT. W/ 400 SX. 4 1/2 TO 4300' CMT. W/ 2000 SX
SCOTTSDALE #1	SIETE	330' FNL 2310' FEL SEC. 27 T18S R31E	OIL	9/25/84	10/18/84	4070 3900	3580 TO 3650	QUEEN	8 5/8 TO 750' W/ 300 SX. CMT. 5 1/2 TO 4070' CMT. W/ 770 SX.
SCOTTSDALE #2	SIETE	330' FNL 990' FEL SEC. 27 T18S R31E	OIL	5/16/86	3/12/85	4503 4525	2629 TO 4234	YATES QUEEN SAN ANDRES	10 3/4 TO 378' CMT. W/ 300 SX. 4 1/2 TO 4502' CMT. W/ 2100 SX
SCOTTSDALE #3	SIETE	1850' FNL 2310' FEL SEC. 27 T18S R31E	OIL	6/19/85	7/3/85	4500 4489	3574 TO 3952	QUEEN	13 3/8 TO 355' CMT. W/ 400 SX. 5 1/2 TO 4499' CMT. W/ 2600 SX



V. S. WELCH

WELL: Hinkle F No. 2
FIELD: Shugart
Spudded 5/15/65
Dry & Abandoned; plugged 7/22/65
1/8/81

LOCATION:
1650' FNL & 2310' FEL
Section 27, T-18S, R31E
Eddy County, N.M.



TD: 3979'

This well was originally plugged by V. S. Welch in 1965.
It was re-plugged by Southland Royalty in January 1981.

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE (Other instructions on reverse side)

Form approved. Budget Bureau No. 42-R1421

5. LEASE DESIGNATION AND SERIAL NO. LC 029392 B

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different location. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [] GAS WELL [X] OTHER P & A Well JAN 14 1981

7. UNIT AGREEMENT NAME

2. NAME OF OPERATOR Southland Royalty Company V.S. Welch O.C.D.

8. FARM OR LEASE NAME V.S. Welch, Hinkle F

3. ADDRESS OF OPERATOR 1100 Wall Towers West Midland, Texas 79701 ARTESIA, OFFICE

9. WELL NO. 237

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1650' FNL & 2310 FEL, Sec. 27, T-18-S, R-31-E

10. FIELD AND POOL, OR WILDCAT Shugart

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 27, T-18-S, R-31-E

14. PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, CR, etc.) 3637 GR

12. COUNTY OR PARISH Eddy 13. STATE New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data. NOTICE OF INTENTION TO: TEST WATER SHUT-OFF, FRACTURE TREAT, SHOOT OR ACIDIZE, REPAIR WELL, (Other), PULL OR ALTER CASING, MULTIPLE COMPLETE, ABANDON*, CHANGE PLANS. SUBSEQUENT REPORT OF: WATER SHUT-OFF, FRACTURE TREATMENT, SHOOTING OR ACIDIZING, (Other) Re-enter & re-plug, REPAIRING WELL, ALTERING CASING, ABANDONMENT* [X]. (NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Re-enter w/11" bit & drl to 60'. Ran 47' 8 5/8" 24# csg & cmt w/100 sxs Cl "C" w/4% CaCl. Cmt circ. GIH w/6 1/4" bit & drl cmt to 123'. Drlg samples indicated new hole deviating from old hole where 8 5/8" csg was pulled and plugged. POH & GIH w/7 7/8" bit to ream out hole and attempt to penetrate plug above 8 5/8". Drl thru 140' cmt @ 501-641' then samples indicated Red Bed & Shale. Continue drlg from 693-760' showing anhydrite. Did not find csg. Spotted cmt plug from TD to 300'. Pulled up & spotted 50' cmt plug from csg shoe to surface.

This procedure was approved by USGS in verbal agreement between USGS office in Artesia and SRC representative, Mr. Don Craig, when it became apparent that the original plans could not be carried out.

RECEIVED

JAN 12 1981

U.S. GEOLOGICAL SURVEY ARTESIA, NEW MEXICO

18. I hereby certify that the foregoing is true and correct. SIGNED [Signature] TITLE District Operations Engineer DATE 1-8-81

(This space for Federal or State office use)

APPROVED BY (Orig. Sgd.) PETER W. CHESTER TITLE ACTING DISTRICT ENGINEER DATE JAN 13 1981

CONDITIONS OF APPROVAL, IF ANY:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE
(Other instructions on reverse side)

Form approved
Budget Bureau No. 42-B1433

5. LEASE DESIGNATION AND SERIAL NO.

10 020002 (6)

6. IF INDIAN, ALLOTTEE OR TRUST LAND

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL GAS WELL OTHER **DRY HOLE**

2. NAME OF OPERATOR **V. S. WELCH**

3. ADDRESS OF OPERATOR **DRAWER W - ARTESIA, NEW MEXICO**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface

**1650' FROM NORTH AND 2510' FROM E. LINE OF
Sec. 27-18S-31E**

14. PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, GR, etc.)
12. COUNTY OR PARISH **RODY** 13. STATE **NEW MEXICO**

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data:

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANS

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

REPAIRING WELL

FRACURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other)

PLUG

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

**PLUGGED THE ABOVE WELL AS FOLLOWS:
CEMENT FROM 3979 TO 3880
MUD FROM 3880 TO 21-5
GRAVEL FROM 2105 TO 2020
CEMENT FROM 2020 TO 1910
MUD FROM 1910 TO 995
GRAVEL FROM 995 TO 940
CEMENT FROM 940 TO 837**

**KNOCKED OFF AND PULLED 8-5/8" CASING @ 724 FT. FILLED WITH
MUD TO 100 FT. FILLED WITH GRAVEL TO 15 FT. RAN 20 BAGS
CEMENT PLUG AND REGULATION MARKER.**

(TWO COPIES OF ELECTRIC LOG ATTACHED)

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

AGENT

DATE

8/2/65

(This space for Federal or State office use)

TITLE

DATE

APPROVED
OCT 15 1965
R. C. BELMONT
ACTING DISTRICT ENGINEER

*See Instructions on Reverse Side

ILLEGIBLE

RECEIVED
AUG 2 1965
S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

RECEIVED
OCT 18 1965
D. C. C.
ARTESIA OFFICE

SIETE OIL GAS CORPORATION

Scottsdale Waterflood Project

NMOCD Form C-108 Section VII

VII. Injection Data

1. Injection Rates

- a. Proposed average daily water injection is 300 BWPD/Well.
- b. Maximum rate of daily water injection is 500 BWPD/Well.

2. We will utilize Meridian's injection station.

3. Injection Pressures

- a. Proposed average daily injection pressure is 500 PSI.
- b. Maximum daily injection pressure is 520 PSI*.

* Note: Maximum injection pressure abides by .2 PSI/Ft maximum injection pressure imposed by the NMOCD. Future necessary increases in surface pressure will be obtained administratively from the NMOCD using field obtained "Step Rate Test" data.

4. Injection water will come from Meridian's waterflood facility on the Hinkle Lease. The water will be produced water from the Penrose-Queen-Grayburg formation. This is the same formation we are injecting into, therefore, the waters will be compatible.

5. Water injection will be into a zone currently productive of oil and gas.

VIII. Geologic Data:

The injection interval for the Scottsdale #2 will be the Yates-Seven Rivers-Queen-Grayburg formations. These horizons produce from fine to medium grained sandstones of the Guadalupian Series and Permian age. The Yates top is at a depth of 2474' (+1198' subsea). The Yates has a gross thickness of 190'. The net pay zone to be injected into is about 35' thick. The Seven Rivers top is at a depth of 2662' (+1010' subsea) and has a gross thickness of 700'. The net pay zone to be injected into is about 20' thick. The Queen top is at a depth of 3362' (+310 subsea). The Queen has a gross thickness of 470'. The net pay zone to be injected into is about 75' thick. The Grayburg top is at a depth of 3832' (-160' subsea) and has a gross thickness of 420'. The net pay zone to be injected into is about 40' thick.

VIII. (con't)

There are no sources of drinking water underlying the zones to be injected into. A thorough search of the State Water Board records show there is a fresh water well located in the center of the NW NE portion of Section 27. It is owned by Southland Royalty. The depth of the well can not be found in any of the State Water Board records. Some other fresh water wells, located over 1 1/2 miles from our injection well are 300' to 400' deep.

IX. No additional stimulation is planned.

X. Well logs have been submitted. The Scottsdale #2 is currently shut-in.

XI. The fresh water well in Section 27 T18S R31E was sampled on 1/26/87. It had chlorides of 38,830 ppm and specific conductance of 92,693. This well is owned by Southland Royalty and appears to be a source well for drilling water, because it is too salty for potable water.

XII. I, Robert Lee, a Production/Reservoir Engineer for Siete Oil and Gas Corporation and in behalf of, have compiled and examined all available geologic and engineering data and have not found any evidence of hydrologic connections between the proposed Shugart Penrose-Grayburg Waterflood Project injection zone and any sources of underground drinking water.

XIII. Proof of Notice - requirements

1. See attached mailing list and registered mail certificates.