STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Siete Oil and Gas Corporation

Address: P.O. Box 2523 Roswell, NM 88202

Contact party: Robert 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 [X] 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.

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
EXHIBIT NO. 4
CASE NO. 9925

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 Lee Title Senior Reservoir Engineer

Signature: Robert Lee Date: October 6, 1989

* 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.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

SIETE OIL & GAS CORPORATION
CURRENT WELLBORE SCHEMATIC

WELL: Geronimo Federal No. 2
FIELD: Shugart-SA-Grayburg
INTERVAL: Grayburg
Comp: 4/16/85
IP: 136 BO, 60 BWPD, 77 MCFGPD
GOR 566-1

LOCATION:
950' FNL & 2310' FEL
Section 24: T18S, R31E
Eddy County, N.M.
API #: 30-015-25244
Spudded 17 1/2" hole on 4/3/85

ELEVATION: 4694' KB
ZERO: 8' AGL

TOPS
1. Queen 3512'
2. Penrose 3759'
3. Grayburg 4072'
4. Grayburg 4264'

EQUIPMENT IN HOLE
1. Jensen 114 Pump
2. 131 jts. tbg.

Seat Nipple @ 4197'

SURFACE CASING ran 10 jts. 13 3/8" 48# J-55 STC @ 345'KB cem w/400 sks. Class "C", 2% CaCl2, circulate

PRESENT COMPLETION INTERVAL
Grayburg Zone

<-Perf 4264' - 4277.5' (10 shots) w/1000 gals. 15% HCL acid, Frac w/20,000 gals. YF3 Crosslink w/47,000# 12/20 sand.

Acidize & Frac existing perfs (4/3/87) w/500 gals. 15% HCL acid.Frac w/27,000 gals. 30# Crosslink w/6,400 100# mesh, 38,000# <-20/40 & 37,000# 12/20 sand

PRODUCTION CASING ran 118 jts. 4 1/2" 10.5# J-55 STC @ 4700' KB, cem w/1730 sks. Lt. Wt. III, tail in w/460 sks. 50/50 POZ Class "C", circulate

TD: 4702'
PBTD: 4691'

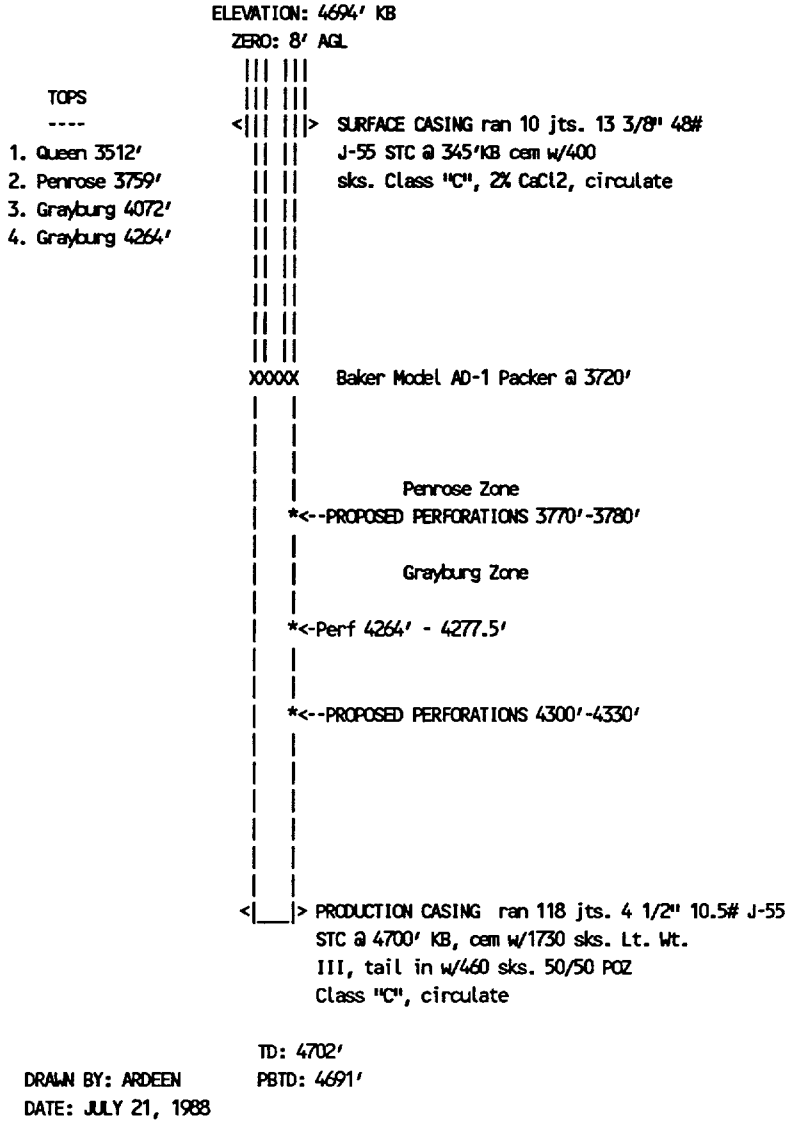
DRAWN BY: ARDEEN
DATE: JULY 21, 1988

Per Trico - Pump History

SIETE OIL & GAS CORPORATION
PROPOSED

WELL: Geronimo Federal No. 2
FIELD: Shugart-SA-Grayburg
INTERVAL: Grayburg
Comp: 4/16/85
IP: 136 BO, 60 BWPD, 77 MCFGPD
GOR 566-1

LOCATION:
950' FNL & 2310' FEL
Section 24: T18S, R31E
Eddy County, N.M.
API #: 30-015-25244
Spudded 17 1/2" hole on 4/3/85



DRAWN BY: ARDEEN
DATE: JULY 21, 1988

SIETE OIL & GAS CORPORATION

Geronimo Federal No. 2 - Convert 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: Geronimo Federal lease

   Well No: 2

   Location: 950' FNL & 2310' FEL
   Section 24, T-18S, R-31E
   Eddy County, NM

2. Casing: 13-3/8" surface @ 345' w/400 sks., circ. to surface
   4 1/2" production @ 4700' w/2190 sks. circ. to surface.

3. Injection tubing: + or - 118 Jts. 2-3/8", 4.7 lb/ft, J-55 internally plastic coated tubing.

4. Packer: Baker Model AD-1 injection packer set @ 3720' feet.

B. Other well information

1. Injection formation: Yates-7 Rivers-Queen-Penrose-Grayburg

   Field: Shugart Yates 7-Rvrs Queen Grayburg

2. Existing cased hole perforated interval from 4264' - 4277.5' and proposed perforations from 3770'- 3780' and 4300' - 4330'.

3. The Geronimo Federal No. 2 well was originally drilled for oil and gas production.

4. There are no other perforated or tested intervals in the Geronimo Federal No. 2 well.

5. Within the area of the Geronimo Federal No. 2, there are no higher productive formations. The Delaware is productive at about 5300'. But this wellbore does not penetrate the Delaware zone.

SIETE OIL & GAS CORPORATION
CURRENT WELLBORE SCHEMATIC

WELL: Geronimo Federal No. 7 LOCATION:
FIELD: Shugart-SA-Grayburg 1750' FNL & 990' FEL
INTERVAL: Grayburg Section 24: T18S, R31E
Comp: 5/4/86 Eddy County, N.M.
IP: 115 BOPD, 113 BWPD, 55 MCFGPD (GOR 478)
API #: 30-015-25598 Spudded 12 1/4" hole on 4/21/86

ELEVATION: 4492' KB
ZERO: 8' AGL

TOPS
1. Yates 2396'
2. Queen 3505'
3. Grayburg 4018'
4. San Andres 4420'

EQUIPMENT IN HOLE
1. American 114 Pump
2. 133 jts. 2 3/8" tbg.
3. RBP @ 4283'
4. 150-3/4" rods
5. 2 -2' rod subs
Seat Nipple @ 4247'

RBP @ 4283'

SURFACE CASING - ran 9 jts. 8 5/8" 24# J-55 @ 362'
cem w/230 sks. Class C w/2% CaCl2 &
1/4# celloflake - circ.

PRESENT COMPLETION INTERVAL

Grayburg
*<--Perf 4250' - 4262' (9 shots) w/1000 gal. 15% acid
* frac w/33,000 gals. 30# Crosslink, w/4000#
*<--100 mesh, 36,000# 20/40 & 35,000# 12/20 (2 stages)

*<--Perf 4299' 4309.5' (8 shots) w/500 gal.
* 15% acid, 20,000 gal. crosslink
* 2,000# 100 mesh, 20,000#
*<--20/40, 20,000# 12/20.

PRODUCTION CASING - ran 113 jts. 5 1/2" J-55 @ 4499'
cem w/500 sks. HEII, 10# salt, tail in w/
200 sks. 50/50 POZ, 6# salt - circ.

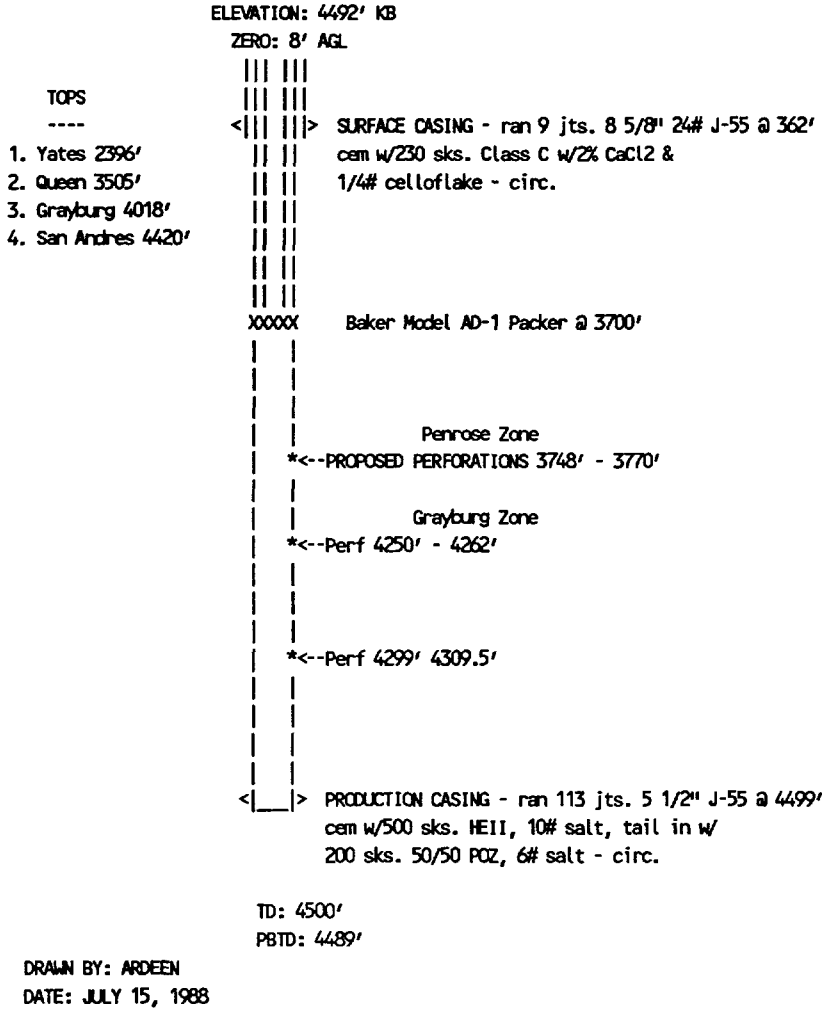
TD: 4500'
PBTD: 4489'

DRAWN BY: ARDEEN
DATE: JULY 15, 1988

SIETE OIL & GAS CORPORATION
PROPOSED

WELL: Geronimo Federal No. 7
FIELD: Shugart-SA-Grayburg
INTERVAL: Grayburg
Comp: 5/4/86
IP: 115 BOPD, 113 BWPD, 55 MCFGPD (GOR 478)
API #: 30-015-25598

LOCATION:
1750' FNL & 990' FEL
Section 24: T18S, R31E
Eddy County, N.M.
Spudded 12 1/4" hole on 4/21/86



DRAWN BY: ARDEEN
DATE: JULY 15, 1988

SIETE OIL & GAS CORPORATION

Geronimo Federal No. 7 - Convert 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: Geronimo Federal lease

   Well No: 7

   Location: 1750' FNL & 990' FEL
   Section 24, T-18S, R-31E
   Eddy County, NM

2. Casing: 8-5/8" surface @ 362' w/230 sks., circ. to surface
   5-1/2" production @ 4499' w/700 sks. circ. to surface.

3. Injection tubing: + or - 118 Jts. 2-3/8", 4.7 lb/ft, J-55 internally plastic coated tubing.

4. Packer: Baker Model AD-1 injection packer set @ 3700' feet.

B. Other well information

1. Injection formation: Yates-7 Rivers-Queen-Penrose-Grayburg

   Field: Shugart Yates 7-Rvrs Queen Grayburg

2. Existing cased hole perforated interval from 4250' - 4262', 4299' - 4309.5' and proposed perforatins at 3748' - 3770'.

3. The Geronimo Federal No. 7 well was originally drilled for oil and gas production.

4. There are other perforated intervals in the Geronimo Federal No. 7 well. These are at 4299'- 4309.5'. There is a RBP @ 4283', which will be pulled. The lower zone will then be fraced and used for injection.

5. Within the area of the Geronimo Federal No. 7, the Delaware is productive at about 5300'. But this wellbore does not penetrate the Delaware zone. There are no higher productive intervals.

SIETE OIL & GAS CORPORATION
CURRENT WELLBORE SCHEMATIC

WELL: Inca Federal No. 4 — LOCATION:
FIELD: Y-SR-Q-GB-SA — 760' FNL & 420' FWL
INTERVAL: Penrose — Section 19: T18S, R32E
Comp: 2/4/88 — Lea County, N. M.
IP: 82 BOPD, 39 BWPD, 28 MCFGPD, (GOR 339)
Spudded 12 1/4" hole on 1/7/88 — API #: 30-025-30039

ELEVATION: 3719' KB
ZERO: 8' AGL

TOPS
1. B/Salt 2200'
2. T/Queen 3520'
3. T/Grayburg 3942'

EQUIPMENT IN HOLE
1. Trico P.J.
2. 110 jts. 2 3/8" tbg

Seat Nipple @ 3728'

SURFACE CASING - ran 8 jts. 8 5/8" 24# J-55 @ 358'
cem w/230 sks. HEII, w/2% CaCl2 & 1/4#
celloflake - circ.

PRESENT COMPLETION INTERVAL

Penrose
*<--Perf 3768'-3792' (17 shots) w/ 1,000 gal.
* 15%, Frac w/17,000 gals. 30# Crosslink
*<--w/2000# 100 mesh, 27,000# 20/40 sand & 12,000# 12/20

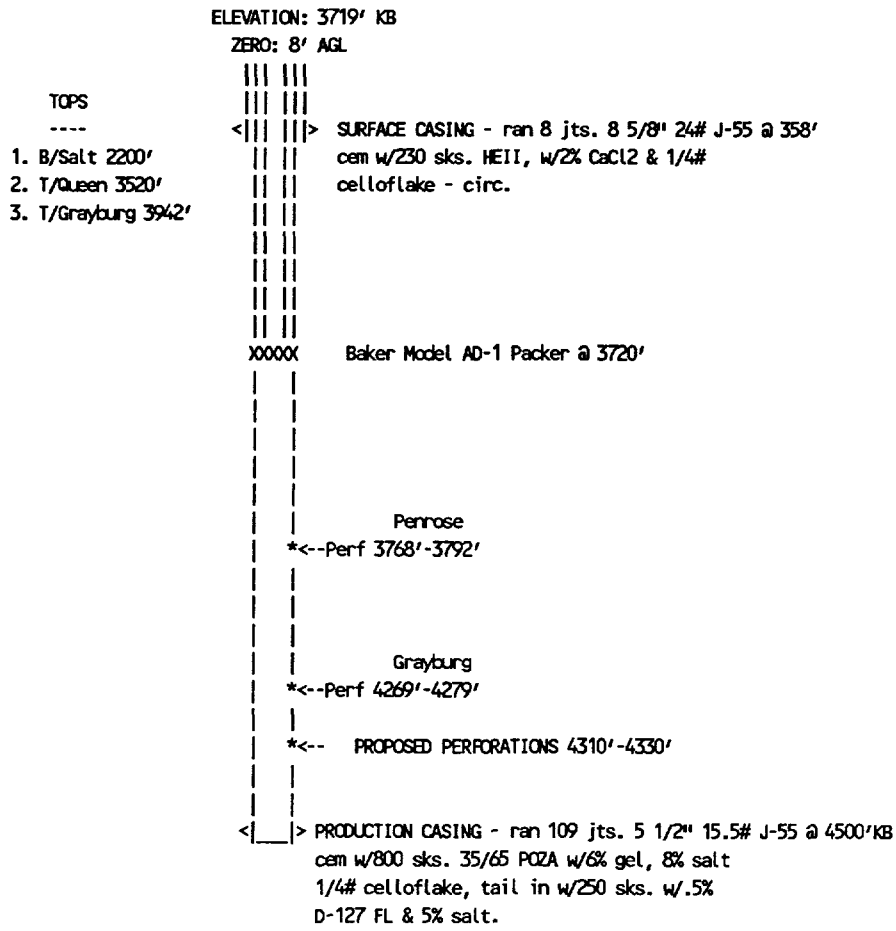
Grayburg
*<--Perf 4269'-4279' (11 shots) w/500 gal. .15%,
* 15,000 gal. 2000# 100 mesh
*<--25,000# 20/40, 12,000 12/20.

PRODUCTION CASING - ran 109 jts. 5 1/2" 15.5# J-55 @ 4500'KB
cem w/800 sks. 35/65 POZA w/6% gel, 8% salt
1/4# celloflake, tail in w/250 sks. w/.5%
D-127 FL & 5% salt.

DRAWN BY: ARDEEN — TD: 4500'
DATE: JULY 12, 1988 — PBTD: 4244'

SIETE OIL & GAS CORPORATION
PROPOSED

WELL: Inca Federal No. 4 — LOCATION:
FIELD: Y-SR-Q-GB-SA — 760' FNL & 420' FWL
INTERVAL: Penrose — Section 19: T18S, R32E
Comp: 2/4/88 — Lea County, N. M.
IP: 82 BOPD, 39 BWPD, 28 MCFGPD, (GOR 339)
Spudded 12 1/4" hole on 1/7/88 — API #: 30-025-30039



DRAWN BY: ARDEEN — TD: 4500'
DATE: JULY 12, 1988 — PBTD: 4244'

SIETE OIL & GAS CORPORATION

Inca Federal No. 4 - Convert 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: Inca Federal lease

   Well No: 4

   Location: 760' FNL & 420' FWL
   Section 19, T-18S, R-32E
   Lea County, NM

2. Casing: 8-5/8" surface @ 358' w/230 sks., circ. to surface
   5-1/2" production @ 4500' w/1050 sks. circ. to surface.

3. Injection tubing: + or - 118 Jts. 2-3/8", 4.7 lb/ft, J-55 internally plastic coated tubing.

4. Packer: Baker Model AD-1 injection packer set @ 3720' feet.

B. Other well information

1. Injection formation: Yates-7 Rivers-Queen-Penrose-Grayburg

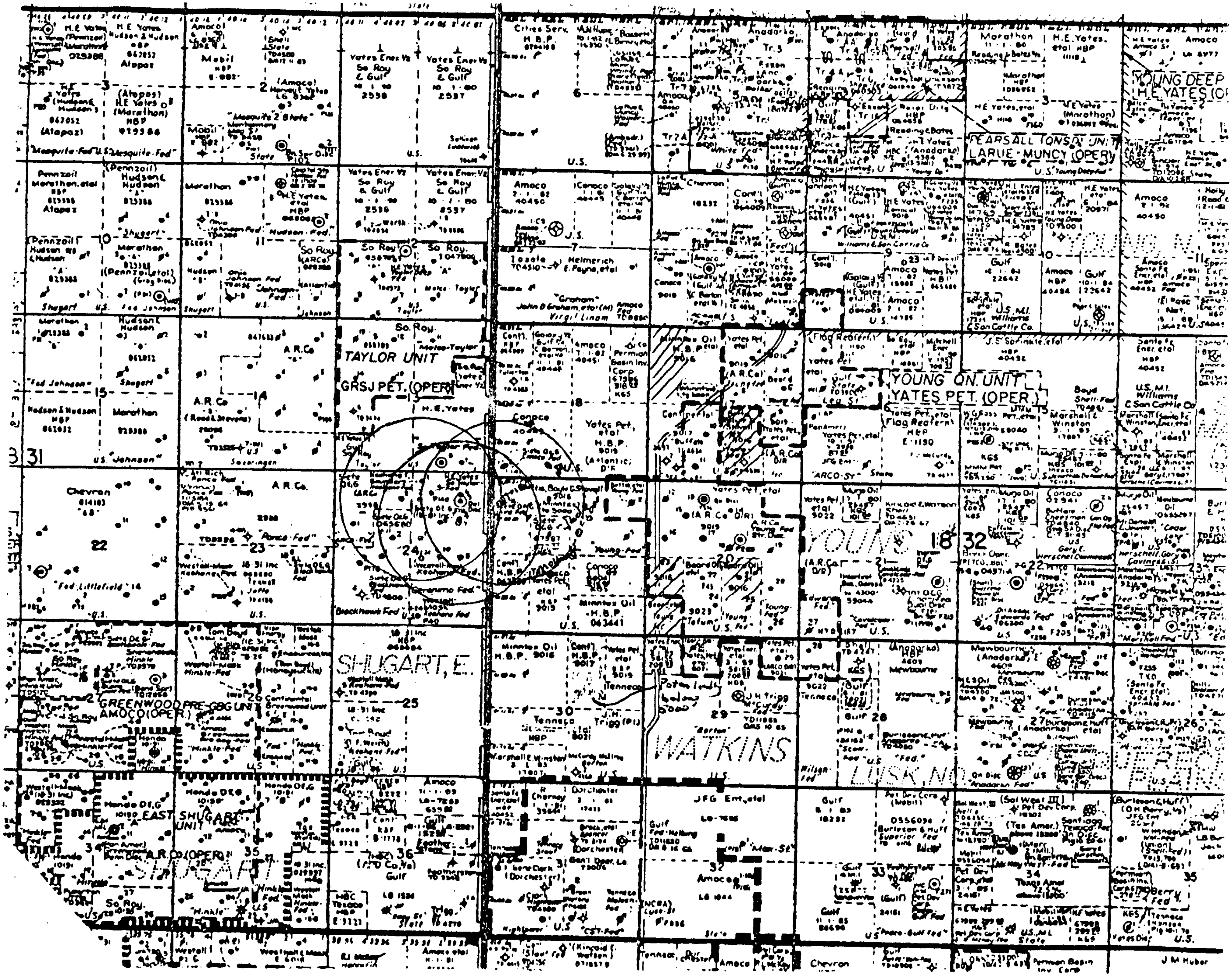
   Field: Shugart Yates 7-Rvrs Queen Grayburg

2. Existing cased hole perforated interval from 3768' - 3792', 4269' - 4279' and proposed perforations at 4310' - 4330'.

3. The Inca Federal No. 4 well was originally drilled for oil and gas production.

4. There are no other perforated or tested intervals in the Inca Federal No. 4 well.

5. Within the area of the Inca Federal No. 4, there are no other higher productive formations. The Delaware is productive at a depth of 5300'. But this well does not penetrate the Delaware.



YOUNG DEEP
H.E. YATES (OPER)
PEARSALL TONSIL UNIT
LARUE - MUNCY (OPER)
TAYLOR UNIT
GRSJ PET. (OPER)
YOUNG QN. UNIT
YATES PET. (OPER.)
SHUGART, E.
GREENWOOD PRE-GBG UNIT
AMOCO (OPER.)
EAST SHUGART UNIT
A.R.Co (OPER)
WATKINS
YOUNG
J M Huber

WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD PBTD	COMPLETION INTERVAL	FORMATION	CASING PROGRAM
ARCO NO. 1	SIETE	1830 FNL 660 FWL SEC. 24 T18S R31E	OIL	3-12-85	4-01-85	5256' 5235'	3740-4316'	QPG	13 3/8" srf. csg.@ 350 cem. w/370 sks. 4 1/2" Prod. csg. @ 5255' cem. w/2300 sks.
ARCO NO. 2	SIETE	950 FNL 2310 FWL SEC. 24 T18S R31E	OIL	6-02-86	6-21-86	4500' 4487'	4264-4272'	QPG	8 5/8" srf. csg. @ 357' cem. w/250 sks. 5 1/2" prod. csg. @ 4497' cem. w/750 sks.
BLACKHAWK NO. 1	SIETE	2310 FSL 1650 FWL SEC. 24 T18S R31E	OIL	3-24-85	4-18-85	4527' 4485'	3761-3814	QPG	13 3/8" srf. csg. @ 374' cem w/400 sks. 4 1/2" prod. csg. 4525' cem. w/1985 sks.
BLACKHAWK NO. 2	SIETE	2310 FNL 1980 FWL SEC. 24 T18S R31E	OIL	4-08-85	9-05-85	4500' 4204'	3750-3791	QPG	8 5/8" srf. csg. @ 350' cem. w/400 sks. 5 1/2" prod. csg. @ 4600' cem. w/2050 sks.
BLACKHAWK NO. 3	SIETE	2040 FSL 920 FWL SEC. 24 T18S R31E	OIL	1-12-86	2-05-86	4500' 4463'	3722-3747	QPG	8 5/8" srf. csg. @ 351' cem. w/500 sks. 5 1/2" prod. csg. @ 4498' cem. w/2415 sks.
BLACKHAWK NO. 4	SIETE	990 FSL 990 FWL SEC. 24 T18S R31E	D/A	6-11-86	6-20-86	4500'	P & A		8 5/8" srf. csg.@ 366' cem. w/250 sks. No production casing in hole.
BLACKHAWK NO. 5	SIETE	2310 FSL 330 FEL SEC. 23 T18S R31E	OIL	11-14-86	12-04-86	4500' 4462'	4234-4264'	QPG	8 5/8" srf. csg. @ 351' cem. w/225 sks. 5 1/2" prod. csg. @ 4500' cem. w/990 sks.
BLACKHAWK NO. 6	SIETE	2310 FSL 1650 FEL SEC. 23 T18S R31E	D/A	3-15-87	11-24-87	4500'	TESTED 4214-4229'	QPG	8 5/8" srf. csg. @ 350' cem. w/225 sks. 5 1/2" prod. csg. @ 4500' cem. w/799 sks.

WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD PBTD	COMPLETION INTERVAL	FORMATION	CASING PROGRAM
CONOCO NO. 1	SIETE	330 FSL 330 FWL SEC 18 T18S R32E	OIL	6-21-86	7-15-86	5500' 5457'	5190-5221'	DEL	8 5/8" srf. csg. @ 362' cem. w/250 sks. circ.5 1/2" prod. csg. @ 5457' cem. w/ 1100 sks.
CONOCO NO. 2	SIETE	400 FSL 400 FWL SEC. 18 T18S R32E	OIL	12-13-86	1-13-87	4500' 4487'	4420-4425'	QPG	8 5/8" srf. csg. @ 350' cem. w/200 sks. circ. 5 1/2" prod. csg. @ 4500" cem. w/1100 sks.
CONOCO NO. 3	SIETE	2310 FSL 660 FWL SEC. 19 T18S R32E	OIL	12-27-87	2-12-88	5650' 5596'	5054-5215'	DEL	8 5/8" srf. csg. @ 374' cem. w/230 sks. circ. 5 1/2" prod. csg. @ 5636' cem. w/1425 sks.
GERONIMO NO. 1	SIETE	2310 FNL 2310 FEL SEC. 24 T18S R31E	OIL	11-07-84	2-17-85	6417' 4748'	4268-4284'	QPG	8 5/8" srf. csg. @ 846' cem. w/415 sks. circ. 5 1/2" prod. csg. @ 5367' cem. w/900 sks.
GERONIMO NO. 2	SIETE	950 FNL 2310 FEL SEC. 24 T18S R31E	OIL	4-03-85	4-26-85	4702' 4691'	4264-4277'	QPG	13 3/8" srf. csg. @ 345' cem. w/400 sks. circ. 4 1/2 prod. csg. @ 4700 cem. w/1730 sks.
GERONIMO NO. 3	SIETE	890 FNL 990 FEL SEC. 24 T18S R31E	OIL	9-01-85	10-05-85	6470' 6459'	5012-5069'	DEL	8 5/8" srf. csg. @ 311' cem. w/400 sks. circ. 5 1/2" prod. csg. @ 6489' cem. w/2830 sks.
GERONIMO NO. 4	SIETE	1650 FNL 990 FEL SEC. 24 T18S R31E	OIL	11-30-85	12-20-85	6550' 5321'	5016-5074'	DEL	13 3/8" srf. csg. @ 357', cem w/400 sks., circ. 5 1/2" prod. csg. @ 5365', cem. w/840 sks.

WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD PBTD	COMPLETION INTERVAL	FORMATION	CASING PROGRAM
GERONIMO NO. 5	SIETE	765 FNL 1980 FEL SEC. 24 T18S R31E	OIL	2-16-86	3-18-86	10200' 5250'	5013-5088'	DEL	13 3/8" srf. csg. @ 372', cem. w/385 sks. circ. 8 5/8" prod. csg. @ 5350' cem. w/2050 sks.
GERONIMO NO. 6	SIETE	790 FNL 940 Fel SEC 24 T18S R31E	OIL	4-10-86	4-26-86	4450' 4407'	4301-4306'	QPG	8 5/8" srf. csg. @ 357'. cem. w/230 sks., circ. 5 1/2" prod. csg. @ 4449', cem. w/900 sks.
GERONIMO NO. 7	SIETE	1750 FNL 990 FEL SEC. 24 T18S R31E	OIL	4-21-86	5-06-86	4500' 4489'	4299-4309'	QPG	8 5/8" srf. csg. @ 362', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 4499', cem. w/700 sks.
GERONIMO NO. 8	SIETE	2310 FSL 990 FEL SEC. 24 T18S R31E	OIL	9-08-86	10-02-86	5500' 5441'	5042-5094'	DEL	8 5/8" srf. csg. @ 337', cem. w/250 sks., circ. 5 1/2" prod. csg. @ 5497', cem. w/910 sks.
GERONIMO NO. 9	SIETE	1730 FNL 1650 FEL SEC. 24 T18S R31E	OIL	12-01-86	2-02-87	5400' 5360'	5022-5273'	DEL	8 5/8" srf. csg. @ 345', cem. w/200 sks., circ. 5 1/2" prod. csg. @ 5400', cem. w/935 sks.
GERONIMO NO. 10	SIETE	2310 FSL 1650 FEL SEC. 24 T18S R31E	OIL	3-02-87	3-23-87	5500' 5471'	5041-5079'	DEL	8 5/8" srf. csg. @ 350', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 5496' cem. w/1300 sks
GERONIMO NO. 11	SIETE	990 FSL 330 FEL SEC 24 T18S R31E	OIL	9-03-87	9-30-87	5500' 5489'	4636-4651'	QPG	8 5/8" srf. csg. @ 364', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 5489', cem. w/1330 sks

WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD PBTD	COMPLETION INTERVAL	FORMATION	CASING PROGRAM
GERONIMO NO. 12	SIETE	990 FNL 1650 FEL SEC. 24 T18S R31E	OIL	12-21-88	2-03-89	5600' 5400'	5255-5270' 5135-5156'	DEL	8 5/8" srf. csg. @ 372', cem. w/240 sks., circ. 5 1/2" prod. csg. @ 5622', cem. w/1170 sks.
INCA NO. 1	SIETE	760 FNL 440 FWL SEC. 19 T18S R32E	OIL	4-10-87	5-04-87	5500' 5450'	5292-5307'	DEL	8 5/8" srf. csg. @ 350', cem. w/200 sks., circ. 5 1/2" prod. csg. @ 5500', cem. w/1250 sks.
INCA NO. 2	SIETE	1700 FNL 330 FWL SEC. 19 T18S R32E	OIL	6-08-87	6-28-87	5500' 5460'	5259-5274'	DEL	8 5/8" srf. csg. @ 372', cem. w/200 sks., circ. 5 1/2" prod. csg. @ 5460', cem. w/1170 sks.
INCA NO. 3	SIETE	660 FNL 1650 FWL Sec 19 T18S R32E	OIL	7-12-87	8-06-87	5500' 5255'	5188-5200'	DEL	8 5/8" srf. csg. @ 374', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 5500', cem. w/1360 sks.
INCA NO. 4	SIETE	760 FNL 430 FWL SEC. 19 T18S R32E	OIL	1-07-88	2-04-88	4500' 4244'	3768-3792'	QPG	8 5/8" srf. csg. @ 358', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 4500', cem. w/1050 sks.
JADE NO. 1	SIETE	1650 FNL 1650 FWL SEC. 19 T18S R32E	OIL	6-20-87	7-13-87	5500' 5488'	5274-5289'	DEL	8 5/8" srf. csg. @ 372', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 5500', cem. w/1160 sks.
JADE NO. 2	SIETE	1650 FNL 1750 FWL Sec. 19 T18S R32E	OIL	12-15-87	1-27-88	4525' 4230'	3806-3875'	QPG	8 5/8" srf. csg. @ 350', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 4526', cem. w/1205 sks.
MOHAWK NO. 1	SIETE	2310 FSL 1650 FWL SEC. 19 T18S R32E	OIL	10-24-87	11-28-87	6550' 6510'	5048-5072'	DEL	8 5/8" srf. csg. @ 351', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 6550',cem. w/1635 sks.

WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD PBTD	COMPLETION INTERVAL	FORMATION	CASING PROGRAM
PANCO FEDERAL WI-4	ARCO	2310 FWL 2310 FWL Sec 23 T 18S R31E SE /4 NW/4 SEC. 23	INJ.	11-07-69	11-19-69	3535	3439-59	QN	8 5/8" srf. csg. @ 814', cem. w/400 sks. 5 1/2" prod. csg @ 3529', cem. w/300 sks.
BUFFALO NO. 1	CONOCO	1650 FSL 330 FWL SEC. 18 T18S R32E	OIL	9-09-87	11-24-87	6519' 6469'	4795-4820' 6279-6329'	QPG DEL	8 5/8" srf. csg. @ 950', cem. w/570 sks. 5 1/2" prod. csg. @ 6519', cem. w/2775 sks.
BUFFALO NO. 2	CONOCO	330 FSL 1650 FWL SEC. 18 T18S R32E	OIL	10-02-87	12-09-87	6500' 5064'	4826-4958'	QPG	8 5/8" srf. csg. @ 900', cem. w/570 sks. 5 1/2" prod. csg. @ 5110', cem. w/2025 sks.
YOUNG FED. NO. 5	CONOCO	1650 FNL 330 FEL SEC. 19 T18S R32E SE/4NW/4 SEC. 19	ABND. LOC.	1-30-57	5-22-57	4050'	TESTED 3700-3726'	QPG	8 5/8" srf. csg. @ 837', cem. w/450 sks. 5 1/2" prod csg. @ 4050', cem. w/500 sks.
S. TAYLOR "13" FED. 1	HEYCO	330 FSL 990 FEL SEC. 13 T18S R31E	OIL	7-24-86	9-25-86	5410' 5083'	5063-5063' (JET PERF)	DEL	8 5/8" srf. csg. @ 352', cem. w/250 sks., circ. 5 1/2" prod. csg. @ 5410', cem. w/2325 sks.
S. TAYLOR "13" FED. 2	HEYCO	330 FSL 330 FEL SEC. 13 T18S R31E	OIL	12-30-87	3-09-88	5448' 5410'	5310-5390'	DEL	8 5/8" srf. csg. @ 350', cem. w/230 sks., circ. 5 1/2" prod. csg. @ 5448', cem. w/1350 sks.
S. TAYLOR "13" FED. 3	HEYCO	430 FSL 1650 FEL SEC. 13 T18S R31E	OIL	7-22-88	8-01-88	5450' 4781'	4330-4428' 4848-4870'	QPG	8 5/8" srf. csg. @ 366', cem. w/230 sks., circ. 5 1/2' prod. csg. @ 5450', cem. w/1950 sks.

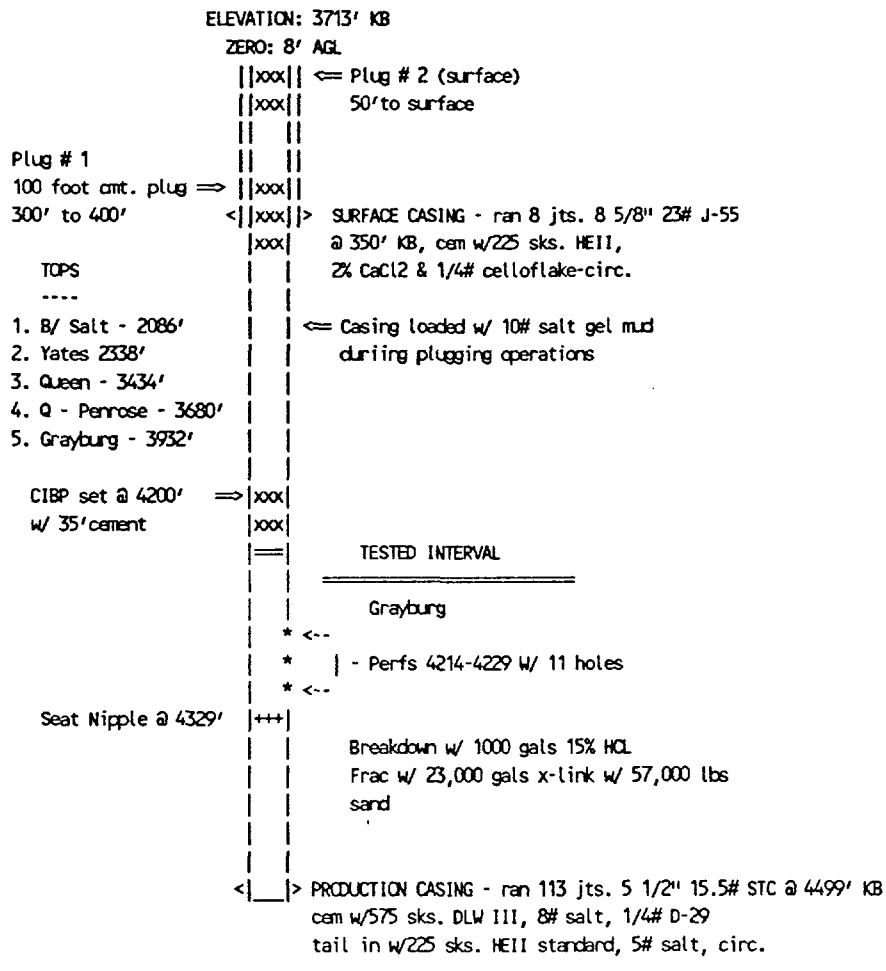
WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD PBTD	COMPLETION INTERVAL	FORMATION	CASING PROGRAM
KEOHANE 24-1	WESTALL	330 FSL 2310 FEL SEC. 24 T18S R31E	OIL	11-30-78	12-27-78	4200'	3785-4135'	QPG	8 5/8" srf. csg. @ 685' cem. w/300 sks. 4 1/2" prod. csg. @ 4200', cem. w/365 sks.
KEOHANE 24-2	WESTALL	2310 FSL 2200 FEL SEC. 24 T18S R31E	OIL	10-18-85	12-11-85	4500' 4496'	4266-4338'	QPG	8 5/8" srf. csg. @ 687', cem. w/410 sks. 4 1/2" prod. csg. @ 4496', cem. w/870 sks.
KEOHANE 24-3	WESTALL	2200 FSL 990 FEL SEC. 24 T18S R31E	OIL	10-09-87	11-25-87	4500'	4252-4292' 4300-4328'	QPG	8 5/8" srf. csg. @ 749', cem. w/400 sks. 4 1/2" prod. csg. @ 4500', cem. w/ 750 sks.
KEOHANE SAUNDERS	WESTALL	330 FNL 2260 FEL SEC. 24 T18S R32E	OIL	3-12-61	5-03-61	4232'	P & A	QPG	8 5/8" srf. csg. @ 897', cem. w/50 sks. 7" prod. csg. @ 4232' cem. w/100 sks. Well is currently P & A'd
KEOHANE FEDERAL #3	WESTFALL MASK	990 FSL 1750 FWL SEC. 23 T 185 R31E SE/4 SW/4 SEC. 23	OIL	8-22-75	9-03-75	3692'	3392-3682'	QPG	8 5/8" srf. csg. @ 650', cem. w/250 sks. 4 1/2' prod. csg @ 3692', cem. w/400 sks.

/015

SIETE OIL & GAS CORPORATION

WELL: Blackhawk Federal No. 6 LOCATION:
FIELD: Shugart 2310' FSL & 1650' FEL
INTERVAL: Grayburg Section 23, T-18S, R-31E
Comp: Well tested non-commercial Eddy County, N.M.
IP: 1 BOPD, 60 BWPD, TSTM-MCFGPD (GOR N/A) Spudded 12 1/4" hole on 3/15/87

WELL PLUGGED AND ABANDONED ON 11/24/87



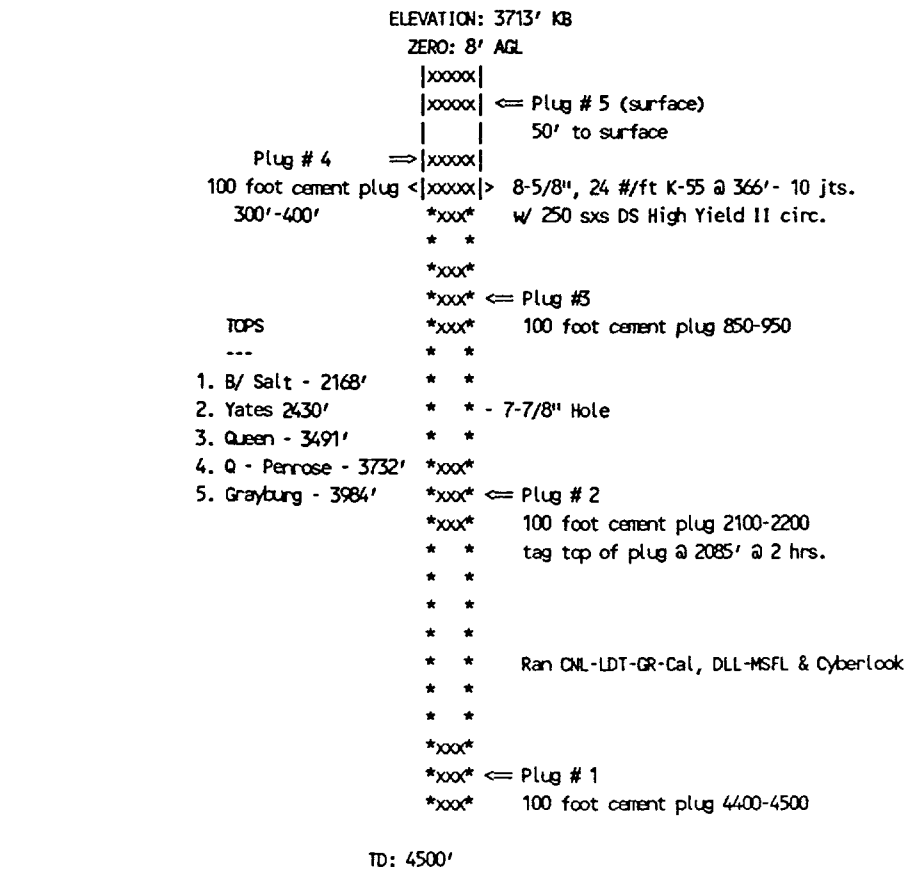
DRAWN BY: ARDEEN TD: 4500'
DATE: JULY 14, 1988 PBTD: 4330'

/015 SIETE OIL & GAS CORPORATION

WELL: Blackhawk Federal No. 6 LOCATION:
FIELD: Shugart 2310' FSL & 1650' FEL
INTERVAL: Grayburg Section 23, T-18S, R-31E
Comp: Well tested non-commercial Eddy County, N.M.
IP: 1 BOPD, 60 BWPD, TSTM-MCFGPD (GOR N/A) Spudded 12 1/4" hole on 3/15/87

SIETE OIL & GAS CORPORATION

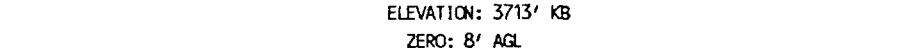
WELL: Blackhawk Federal No. 4 — LOCATION:
FIELD: Shugart — 990' FSL & 990' FWL
INTERVAL: Proposed Queen-Grayburg — Section 24, T-18S, R-31E
Spudded 6/11/86 — Eddy County, N.M.
Dry & Abandoned; plugged 6/20/86 — API #: 30-015-25629



DRAWN BY: JER
DATE: November 7, 1987

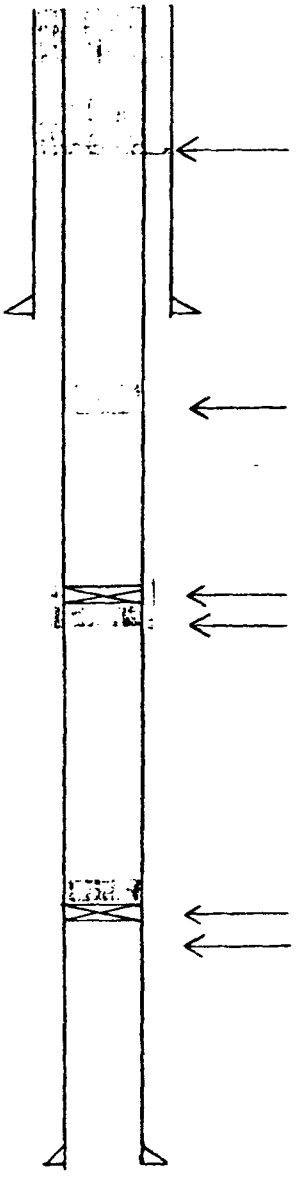
SIETE OIL & GAS CORPORATION

WELL: Blackhawk Federal No. 4 — LOCATION:
FIELD: Shugart — 990' FSL & 990' FWL
INTERVAL: Proposed Queen-Grayburg — Section 24, T-18S, R-31E
Spudded 6/11/86 — Eddy County, N.M.
Dry & Abandoned; plugged 6/20/86 — API #: 30-015-25629



Siete Oil & Gas Corporation
Keohane Federal No. 1
330' FNL & 2260' FEL
Sec. 24 : T18S, R31E
Eddy County, New Mexico

PLUGGING DIAGRAM



Perforations @ 400' w/4 holes per foot in 7" casing circulated cement Between 7" & 8 5/8" casing - Filled inside 7" casing from surface to 400' (142 sks.).

8 5/8" 24# casing set @ 897' cemented w/50 sks.

Perforations @ 1100' w/4 holes per foot - Could not circulate spot 20 sk. plug (100') top of cement @ 1000'.

20 sk. cement plug (100') TOC @ 2194'

Cement retainer @ 2294'.

Perforations @ 2350' w/4 holes per foot
Squeezed perfs w/35 sks cement
Set 100' plug on top of retainer - TOC @ 2196'

CIBP Set @ 3775'
Old perforations 3811' - 17'

7" 20# casing set @ TD 4232' & cemented w/100 sks.

SIETE OIL GAS CORPORATION

Shugart Waterflood Project - Convert to Injection

NMOCD Form C-108 Sections VII - XIII

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. The injection station for the gathering and processing injection water will be a closed system.

3. Injection Pressures
   a. Proposed average daily injection pressure is 600 PSI.
   b. Maximum daily injection pressure is 740 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. Chemical analysis of injection and formation water (see attached Nalco water analysis).
   a. Proposed injection fluid will be produced water from offsetting Siete operated leases which currently produce from both the East Shugart Delaware and Shugart Grayburg formations. These leases are the Geronimo Federal lease (E/2 Sec. 24, T-18S, R31E), Arco Federal Lease (NE/4 NW/4 and SW/4 NW/4 Section 24, T-18S, R-31E), and Blackhawk Federal lease (NE/4 NE/4 Section 23, T-18S, R-31E) in Eddy County, New Mexico, and the Conoco Federal lease (SW/4 SW/4 Section 18, T-18S, R32E), Inca Federal lease (N/2 and SW/4 NW/4 Section 19, T-18S, R32E), Jade Federal lease (SE/4 NW/4 Section 19, T-18S, R32E) and Mohawk Federal lease (NE/4 SW/4 Section 19, T18S, R32E) in Lea County, New Mexico.
   b. A sample of formation water was obtained from a nearby Siete operated Queen-Penrose producing well, the Scottsdale Federal No. 1 in the NW/4 NE/4 Section 27, T18S, R31E in Eddy County, New Mexico. This well is approximately 2 miles west of the proposed unit.

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

VIII. Geologic Data:

The injection interval on the proposed Shugart Waterflood Project is the Penrose and Grayburg Queen formation. The Penrose and Grayburg, a fine to medium grained sandstone of the Guadalupian Series and Permian age. The Penrose interval exists at an average depth of 3723 feet (-16 feet subsea) and has an average gross thickness of approximately 200 feet. The average net pay thickness of the injection interval is approximately 8 feet. The Grayburg interval exists at a depth of around 4250' (-543 feet subsea), and has an average gross thickness of approximately 270 feet. The average pay thickness for this injection interval is approximately 25 feet. There are no sources of drinking water overlying or underlying the proposed injection interval.

IX. Penrose and Grayburg zones to be perforated will also be fracture stimulated similiar to the original completions.

X. Well logs for these wells have been previously submitted. The well tests are as follows:

	BOPD	BWPD	MCFGPD	EST. CUM. PROD. MBO
Geronimo #2	10	12	9	62.5
Geronimo #7	19	8	77	62.6
Inca #4	6	0	19	19.8

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.

XII. Proof of Notice - requirements
1. See attached mailing list and registered mail certificates.

OIL FIELD SERVICES DIVISION
VISCO CHEMICALS

NALCO CHEMICAL COMPANY
6520 CARLSBAD HIGHWAY ☐ HOBBS, NEW MEXICO 88240 ☐ AREA 505-393-0436

January 18, 1988

RECEIVED
JAN 22 1988

Siete Oil & Gas
Roswell, NM

Attention: Eddie Rodriguez

Eddie,

As you requested I have conducted water analyses on produced water from the Geronimo, Arco and Scottsdale leases. In addition, compatibility was determined to ensure that these waters will not cause scaling problems when mixed. The compatability report attached is for a combination of Geronimo/Arco water and Scottsdale water. The water labeled "produced" is the Geronimo/Arco water that you plan to inject and the sample labeled "fresh" is the water that is present in the formation now.

As you can see from the report, the $CaCO_3$ and the $CaSO_4$ indices are positive at some mixture ratios and temperatures. However, the magnitude of the indices is small and indicates only a slight chance of scale precipitation in the formation. If this is determined to be a problem, a concentration of 1-2 ppm of Visco 953 Scale Inhibitor can be added to the waters before injection.

Since the water tanks at the batteries are open to the atmosphere it will be necessary to remove the oxygen from the water before injection. This can be accomplished by adding an oxygen scavenger to the water before it is transferred to the skim tank. When the water station is complete and actual oxygen levels can be determined, the type and amount of oxygen scavenger can be selected.

Eddie, it is my opinion that the Geronimo/Arco water can be used for injection without any adverse results to the formation as long as the oxygen and scale problems are addressed. I look forward to working with you on this project in the near future. If you have any questions, please contact me at 505-393-0436. Thank you.

Respectfully,

David T. Parker
District Salesman

'ISCO Water Compatibility Report

'repared for SIETE OIL & GAS
LOCO HILLS

Parker, David T.
NALCO Chemical Company
21-JAN-88

	PRODUCED WATER	FRESH WATER
ample Date	: 01/08/88	01/08/88
ater Source	: GERONIMO & ARCO	SCOTTSDALE

emperature Degrees F	Water Mixture (Fresh/Produced)	CaCO3 Index Stiff-Davis units	CaSO4 Index Skillman units	Actual CaSO4 Mg/L
60	0 /100	* 0.29	* 11.81	992.
	20 / 80	* 0.35	* 9.40	907.
	40 / 60	* 0.39	* 6.90	822.
	50 / 50	* 0.40	* 5.61	779.
	60 / 40	* 0.40	* 4.28	737.
	80 / 20	* 0.41	* 1.49	652.
	100 / 0	* 0.41	* -1.57	567.
80	0 /100	* 0.52	* 11.84	
	20 / 80	* 0.58	* 9.43	
	40 / 60	* 0.62	* 6.94	
	50 / 50	* 0.62	* 5.65	
	60 / 40	* 0.62	* 4.32	
	80 / 20	* 0.64	* 1.53	
	100 / 0	* 0.63	* -1.52	
100	0 /100	* 0.80	* 11.76	
	20 / 80	* 0.87	* 9.35	
	40 / 60	* 0.90	* 6.85	
	50 / 50	* 0.91	* 5.56	
	60 / 40	* 0.91	* 4.22	
	80 / 20	* 0.92	* 1.42	
	100 / 0	* 0.92	* -1.64	
120	0 /100	* 1.14	* 11.36	
	20 / 80	* 1.20	* 8.92	
	40 / 60	* 1.24	* 6.38	
	50 / 50	* 1.24	* 5.07	
	60 / 40	* 1.24	* 3.71	
	80 / 20	* 1.26	* 0.86	
	100 / 0	* 1.25	* -2.27	

* Note: Nalco refered to the Scottsdales water (Similiar to Blackhawk formation water) as fresh water

CO Water Compatibility Report

pared for SIETE OIL & GAS
LOCO HILLS

Parker, David T.
NALCO Chemical Company
21-JAN-88

	PRODUCED WATER	FRESH WATER
ple Date	: 01/08/88	01/08/88
er Source	: GERONIMO & ARCO	SCOTTSDALE

Temperature Degrees F	Water Mixture (Fresh/Produced)	CaCO3 Index Stiff-Davis units		CaSO4 Index Skillman units	
140	0 /100	*	1.53	*	11.39
	20 / 80	*	1.59	*	8.95
	40 / 60	*	1.63	*	6.42
	50 / 50	*	1.64	*	5.10
	60 / 40	*	1.64	*	3.75
	80 / 20	*	1.65	*	0.90
	100 / 0	*	1.65	*	-2.23
160	0 /100	*	1.98	*	11.46
	20 / 80	*	2.04	*	9.03
	40 / 60	*	2.08	*	6.51
	50 / 50	*	2.08	*	5.20
	60 / 40	*	2.08	*	3.85
	80 / 20	*	2.09	*	1.01
	100 / 0	*	2.09	*	-2.10
180	0 /100	*	2.48	*	11.54
	20 / 80	*	2.54	*	9.12
	40 / 60	*	2.58	*	6.60
	50 / 50	*	2.58	*	5.29
	60 / 40	*	2.58	*	3.95
	80 / 20	*	2.59	*	1.12
	100 / 0	*	2.59	*	-1.98

* At this temperature and total ionic strength, the value of "K" exceeds reported values. The index number given is estimated and if positive, scaling is expected.

SIETE OIL & GAS
LOCO HILLS

7-DEC-87

SCOTTSDALE FEDERAL
WELLHEAD

>>> Oil Field Water Analysis <<<

DISSOLVED SOLIDS

Cations		mg/l	meq/l		mg/l
Sodium	Na+	75,877.6	3,299.0	as NaCl	
Calcium	Ca++	7,600.0	380.0	as CaCO3	19,000.0
Magnesium	Mg++	5,346.0	440.0	as CaCO3	22,000.0
Barium	Ba++			as CaCO3	
Strontium	Sr++			as CaCO3	
Total Cations		88,823.6	4,119.0		

Anions		mg/l	meq/l		mg/l
Chloride	Cl-	145,680.0	4,108.2	as NaCl	240,000.0
Sulfate	SO4=	270.4	5.6	as Na2SO4	400.0
Carbonate	CO3=			as CaCO3	
Bicarb.	HCO3-	317.2	5.2	as CaCO3	260.0
Total Anions		146,267.6	4,119.0		

Total Solids 235,091.2

METALS

Total Iron,Fe	0.9	as Fe	0.9
Acid to Phen,CO2		as CaCO3	

OTHER PROPERTIES

pH	6.1
Specific Gravity	1.2
Turbidity	
Oxygen, as O2 ppm	
Sulfide as H2Sppm	
Temperature F	70.0

SIETE OIL & GAS
LOCO HILLS

7-DEC-87

SCOTTSDALE FEDERAL
WELLHEAD

>>> Scaling Indices <<<

Positive values indicate scaling tendencies

Temperature (Deg. F)	Calcium Carbonate	Calcium Sulfate	Barium Sulfate	Strontium Sulfate
60	-0.12	-28.74	NA	NA
80	+0.08	-28.80	NA	NA
100	+0.32	-28.72	NA	NA
120	+0.61	-28.24	NA	NA
140	+0.95	-28.22	NA	NA
160	+1.32	-23.03	NA	NA
180	+1.74	-28.27	NA	NA
200	+2.20	NA	NA	NA
220	NA	NA	NA	NA
240	NA	NA	NA	NA
260	NA	NA	NA	NA
280	NA	NA	NA	NA
300	NA	NA	NA	NA
320	NA	NA	NA	NA

SIETE OIL & GAS
LOCO HILLS

7-DEC-87

ARCO FEDERAL
WELLHEAD

>>> Oil Field Water Analysis <<<

DISSOLVED SOLIDS

Cations		mg/l	meq/l		mg/l
Sodium	Na+	70,047.0	3,045.5	as NaCl	
Calcium	Ca++	8,000.0	400.0	as CaCO3	20,000.0
Magnesium	Mg++	4,131.0	340.0	as CaCO3	17,000.0
Barium	Ba++			as CaCO3	
Strontium	Sr++			as CaCO3	
Total Cations		82,178.0	3,785.5		

Anions		mg/l	meq/l		mg/l
Chloride	Cl-	133,540.0	3,765.8	as NaCl	220,000.0
Sulfate	SO4=	811.2	16.9	as Na2SO4	1,200.0
Carbonate	CO3=			as CaCO3	
Bicarb.	HCO3-	170.8	2.8	as CaCO3	140.0
Total Anions		134,522.0	3,785.5		
Total Solids		216,700.0			

METALS

Total Iron,Fe	0.7	as Fe	0.7
Acid to Phen,CO2		as CaCO3	

OTHER PROPERTIES

pH	6.1
Specific Gravity	1.2
Turbidity	
Oxygen, as O2 ppm	
Sulfide as H2Sppm	
Temperature F	70.0

>>> Scaling Indices <<<

Positive values indicate scaling tendencies

Temperature (Deg. F)	Calcium Carbonate	Calcium Sulfate	Barium Sulfate	Strontium Sulfate
60	-0.44	-13.48	NA	NA
80	-0.25	-13.59	NA	NA
100	-0.01	-13.53	NA	NA
120	+0.27	-12.98	NA	NA
140	+0.60	-12.85	NA	NA
160	+0.97	-12.76	NA	NA
180	+1.39	-12.68	NA	NA
200	+1.86	NA	NA	NA
220	NA	NA	NA	NA
240	NA	NA	NA	NA
260	NA	NA	NA	NA
280	NA	NA	NA	NA
300	NA	NA	NA	NA
320	NA	NA	NA	NA

SIETE OIL & GAS
LOCO HILLS

7-DEC-87

GERONIMO BATTERY
WATER TANK

>>> Scaling Indices <<<

Positive values indicate scaling tendencies

Temperature (Deg. F)	* Calcium Carbonate	Calcium Sulfate	Barium Sulfate	Strontium Sulfate
60	-0.10	-7.92	NA	NA
80	+0.11	-7.86	NA	NA
100	+0.40	-7.88	NA	NA
120	+0.73	-8.15	NA	NA
140	+1.12	-8.36	NA	NA
160	+1.57	-8.56	NA	NA
180	+2.07	-8.77	NA	NA
200	+2.63	NA	NA	NA
220	NA	NA	NA	NA
240	NA	NA	NA	NA
260	NA	NA	NA	NA
280	NA	NA	NA	NA
300	NA	NA	NA	NA
320	NA	NA	NA	NA

* At this temperature and total ionic strength, the value of "K" exceeds reported values. The index number given is estimated and if positive, scaling is expected.

SIETE OIL & GAS
LOCO HILLS

7-DEC-87

GERONIMO BATTERY
WATER TANK

>>> Oil Field Water Analysis <<<

DISSOLVED SOLIDS

Cations		mg/l	meq/l		mg/l
Sodium	Na+	114,115.5	4,961.5	as NaCl	
Calcium	Ca++	15,200.0	760.0	as CaCO3	38,000.0
Magnesium	Mg++	3,402.0	280.0	as CaCO3	14,000.0
Barium	Ba++			as CaCO3	
Strontium	Sr++			as CaCO3	
Total Cations		132,717.5	6,001.5		

Anions		mg/l	meq/l		mg/l
Chloride	Cl-	212,450.0	5,991.1	as NaCl	350,000.0
Sulfate	SO4=	405.6	8.4	as Na2SO4	600.0
Carbonate	CO3=			as CaCO3	
Bicarb.	HCO3-	122.0	2.0	as CaCO3	100.0
Total Anions		212,977.6	6,001.5		

Total Solids 345,695.1

METALS

Total Iron,Fe	12.0	as Fe	12.0
Acid to Phen,CO2		as CaCO3	

OTHER PROPERTIES

pH	6.0
Specific Gravity	1.3
Turbidity	
Oxygen, as O2 ppm	
Sulfide as H2Sppm	
Temperature F	70.0