

APPLICATION OF GEORGE L. BUCKLES COMPANY
FOR A WATERFLOOD PROJECT, LEA COUNTY, NEW MEXICO

Case No. 3772

Name of Field and Pay Zone

Langle-Mattix Field. Queen Sand (oil zone).

Location of Leases

All of Section 3 and parts of Section 4, 10, 11, 14, 15, and 22 T25S R37E,
Lea County, New Mexico. See attached plat.

Name and Present Status of the Leases

	<u>Acres</u>	<u>Wells</u>	<u>Average Bbls./Day</u> <u>March, 1968</u>	<u>Accumulated</u> <u>Production to 4-1-68</u>
Fristoe	160	4	16.8	378,956
Humphrey A	280	7	13.9	521,776
Humphrey B	40	1	3.1	31,024
Liberty	160	4	7.3	266,653
Smith	120	3	5.2	276,487
Tract 1	80	3	6.4	215,933
Tract 2	40	1	0.1	175,422
Tract 3	40	1	0.4	110,132
Tract 4	40	1	0.4	108,577
Tract 5	80	2	4.2	235,839
Tract 6	60	1	0	168,280
Tract 7	40	1	0	156,578
Tract 8	40	0	0	52,595
Tract 9	160	4	18.1	461,739
Tract 10	40	1	0	128,036
Stuart Community	40	1	0.3	143,270
F.S.B. Stuart	40	1	6.9	303,037
Totals:	<u>1460</u>	<u>36</u>	<u>83.1</u>	<u>3,734,334</u>

Current production is 2.3 barrels of oil per day per well and 1.5 barrels of water per day per well. The gas volumes are small.

Completion Methods

All wells were completed with casing set in the Queen formation at approximately 3395'. The completion is open hole through the Queen

BEFORE EXAMINER NUTTER

OIL CONSERVATION

Accepted EX-11-1
C 3772

Sand with all old wells shot with nitroglycerine. If conditions are favorable, all new wells will be completed open hole with the casing set near the top of the oil bearing zone. A log showing a typical well completion is attached. Also, a diagrammatic sketch of a typical injection well completion is attached.

Plan of Development and Operation

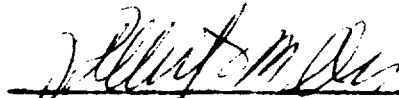
The plan of development is to cooperate with the Amerada Woolworth Unit, the Gulf Stuart Unit, and other offset operators. A cooperative waterflood pattern has been developed and is shown on the enclosed plat.

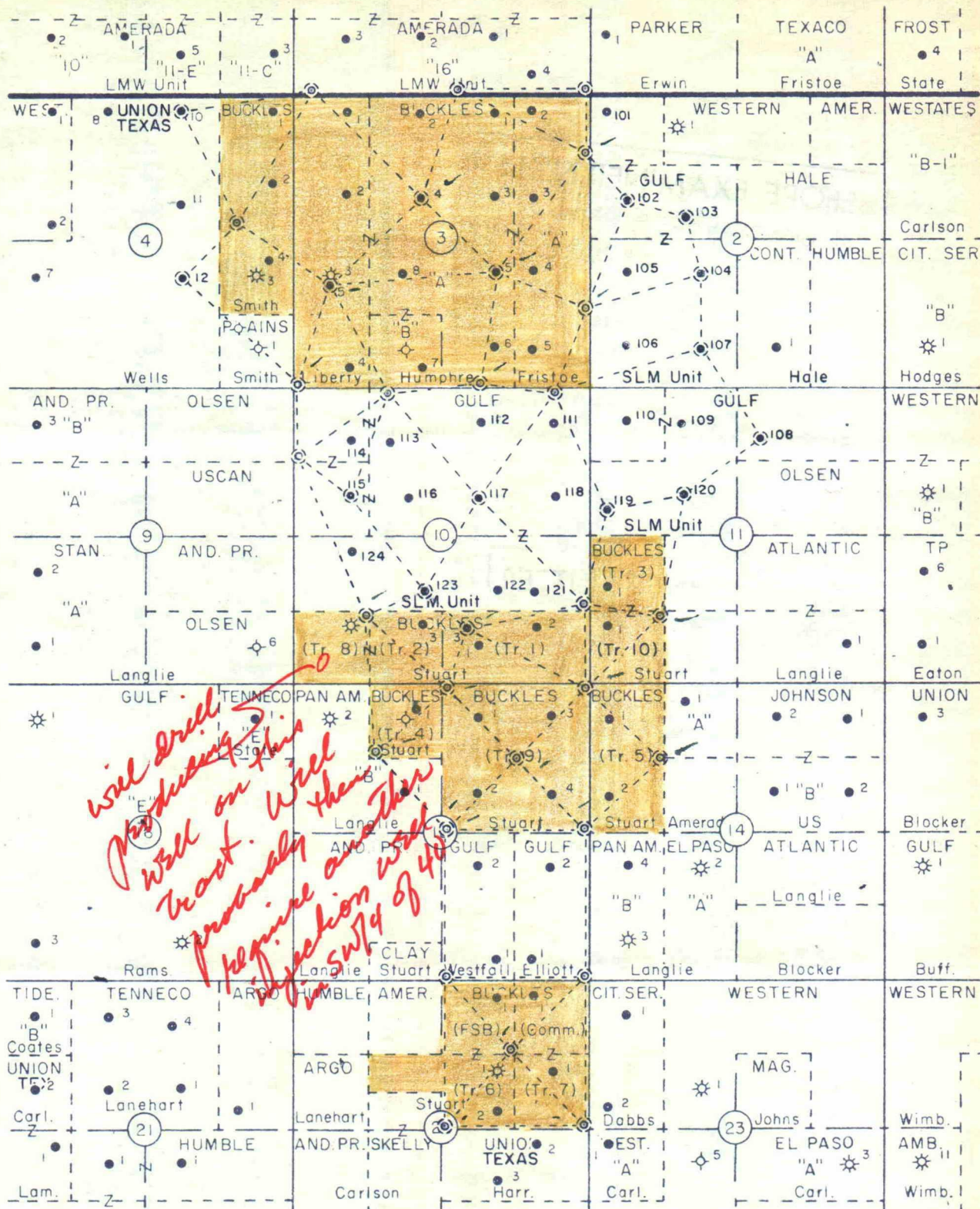
Plans are to build injection facilities capable of furnishing water to all of the injection wells. Initial injection rates are expected to be 300 barrels per well per day. Later, rates will be dictated by performance. Water rights for these leases are pending before the State Engineer.

Conclusions

It is estimated that secondary recovery will exceed primary production. Our Knight project and Amerada's Langlie-Mattix Woolworth Unit have responded to water injection and it is our opinion that this project will respond in a similar manner.

We feel that secondary recovery is the essence of conservation and the prevention of waste, and request that this application be approved.


Robert M. Orr, P.E.
Vice President



GEORGE L. BUCKLES COMPANY LEASES
1420 ACRES MORE OR LESS
LANGLIE-MATTIX FIELD

Prepared By:
GEORGE L. BUCKLES CO.

TWP. 25 SOUTH,
RANGE 37 EAST,
LEA COUNTY, NEW MEX.

EX 2
CA 3772

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXAM NO. 2

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXAM NO. 2
3772

Orange

TYPICAL
COMPLETION WELL
COMPLETION

8 5/8" SURFACE CASING

Cement

Casing Seat 700'

RUSTLER 1050'

4 1/2" COMPLETION CASING

TOP YATES 2870'

5 Sx 50 feet
chup.

TOP QUEEN (OIL) 3370'

TUBING

Casing Seat 3400'

TOP QUEEN (OIL) 3420'

OPEN HOLE

Protecting Shoe

TOTAL DEPTH 3550'

WATER
INJECTION

annulus by up
statically balanced
w/ column of
inert water.
appd w/ gas.

EXHIBIT NO. 5
CASE NO. 3772

NOTE: All depths approximate
and subject to change

2-700' surface
string protects
all fresh
wtr zones

Auth: 26501
Z 100

100B/1

100-125 SX
500-750 feet
of fillup.

200
200
200

will inj 300 B/
 per well Initial
 Inj pressures
 Thereafter lic-
 tate rates of
 inj.
 will re-inject
 produced with
 from beginning
 have app for with right
 pending w/ Ist Eng.
 other sources. Com'l
 Co or S. E. nit at
 about 5000'.
 Prepared By

Prepared By
GEORGE L. BUCKLES CO.

GEORGE L. BUCKLES COMPANY
LANGLIE-MATTIX FIELD
LEA COUNTY, NEW MEXICO

LEASE DESCRIPTIONS
AND
PROPOSED INJECTION WELL LOCATIONS

Community Stuart Lease:

NE/4 NE/4, Section 20, T25S, R37E.

Fristoe Lease:

E/2 NE/4 & E/2 SE/4, Section 3, T25S, R37E.

Proposed Injection Well: 990' from North Line & 100' from East Line ✓
of Section 3.

Proposed Injection Well: 1320' from South Line & 100' from East Line ✓
of Section 3.

F.S.B. Stuart Lease:

NW/4 NE/4, Section 22, T25S, R37E.

Proposed Injection Well: 1315' from North Line & 1325' from East ✓
Line of Section 22.

Humphrey "A" Lease:

W/2 NE/4 & E/2 NW/4 & W/2 SE/4 & NE/4 SW/4, Section 3, T25S, R37E.

Well No. 4: 1750' from North Line & 2970' from East ✓
Line of Section 3.

Well No. 5: 2970' from North Line & 1650' from East Line ✓
of Section 3.

Proposed Injection Well: 100' from South Line & 1980' from East ✓
Line of Section 3.

Humphrey "B" Lease:

SE/4 SW/4, Section 3, T25S, R37E.

Liberty Lease:

W/2 NW/4 & W/2 SW/4, Section 3, T25S, R37E.

Well No. 5: 1830' from South Line & 660' from West ✓
Line of Section 3.

Proposed Injection Well: 100' from South Line & 5' from West Line ✓
of Section 3.

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OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
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Smith Lease:

E/2 NE/4 & NE/4 SE/4, Section 4, T25S, R37E.

Proposed Injection Well: 2310' from North Line & 990' from East ✓
Line of Section 4.

Stuart Tract No. 1 Lease:

S/2 SE/4, Section 10, T25S, R37E.

Well No. 3: 4290' from North Line & 2145' from East ✓
Line of Section 10.

Stuart Tract No. 2 Lease:

SE/4 SW/4, Section 10, T25S, R37E.

Stuart Tract No. 3 Lease:

NW/4 SW/4, Section 11, T25S, R37E.

Stuart Tract No. 4 Lease:

NE/4 NW/4, Section 15, T25S, R37E.

Proposed Injection Well: 1315' from North Line & 1325' from West ✓
Line of Section 15.

Stuart Tract No. 5 Lease:

W/2 NW/4, Section 14, T25S, R37E.

Proposed Injection Well: ~~1320'~~^{1315'} from North Line & 1315' from West ✓
Line of Section 14.

Stuart Tract No. 6 Lease:

SW/4 NE/4 & N/2 SE/4 NW/4, Section 22, T25S, R37E.

Proposed Injection Well: 2635' from North Line & 2635' from East ✓
Line of Section 22.

Stuart Tract No. 7 Lease:

SE/4 NE/4, Section 22, T25S, R37E.

Proposed Injection Well: 2635' from North Line & 80' from East ✓
Line of Section 22.

Stuart Tract No. 8 Lease:

SW/4 SW/4, Section 10, T25S, R37E.

Proposed Injection Well: 1220' from South Line & 1315' from West ✓
Line of Section 10.

Stuart Tract No. 9 Lease:

NE/4, Section 15, T25S, R37E.

Proposed Injection Well: 5' from North Line & 80' from East Line ✓
Section 15.

Proposed Injection Well: 5' from North Line & 2635' from East ✓
Line of Section 15.

Proposed Injection Well: ~~1220'~~^{1325'} from North Line & ~~1020'~~^{1325'} from East ✓
Line of Section 15.

Proposed Injection Well: 2540' from North Line & 100' from East ✓
Line of Section 15.

Proposed Injection Well: 2540' from North Line & 2635' from East ✓
Line of Section 15.

Stuart Tract No. 10 Lease:

SW/4 SW/4, Section 11, T25S, R37E.

Proposed Injection Well: 1315' from South Line & 1315' from West ✓
Line of Section 11.