

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

Case No. 3772

**Name of Field and Pay Zone**

**Langille-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**

	Acres	Wells	Average Bbls./Day	Accumulated
			March, 1968	Production to 4-1-68
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
<b>Totals:</b>	<b>1460</b>	<b>36</b>	<b>83.1</b>	<b>3,734,334</b>

**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 NUTTFER**

OIL CONSERVATION

*Accepted for filing*  
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.

  
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Robert M. Orr, P.E.  
Vice President



*Will drill  
Producing  
well on this  
tract. Will  
probably  
require another  
direction well  
in SW 1/4 of 40*

- PRODUCTION WELL
- PROPOSED PRODUCTION WELL
- ⊙ INJECTION WELL
- ⊙ PROPOSED INJECTION WELL
- ★ GAS WELL
- ABANDONED WELL
- DRY HOLE



SCALE: 2" = 1 Mile

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

*EX 2  
CA 3772*

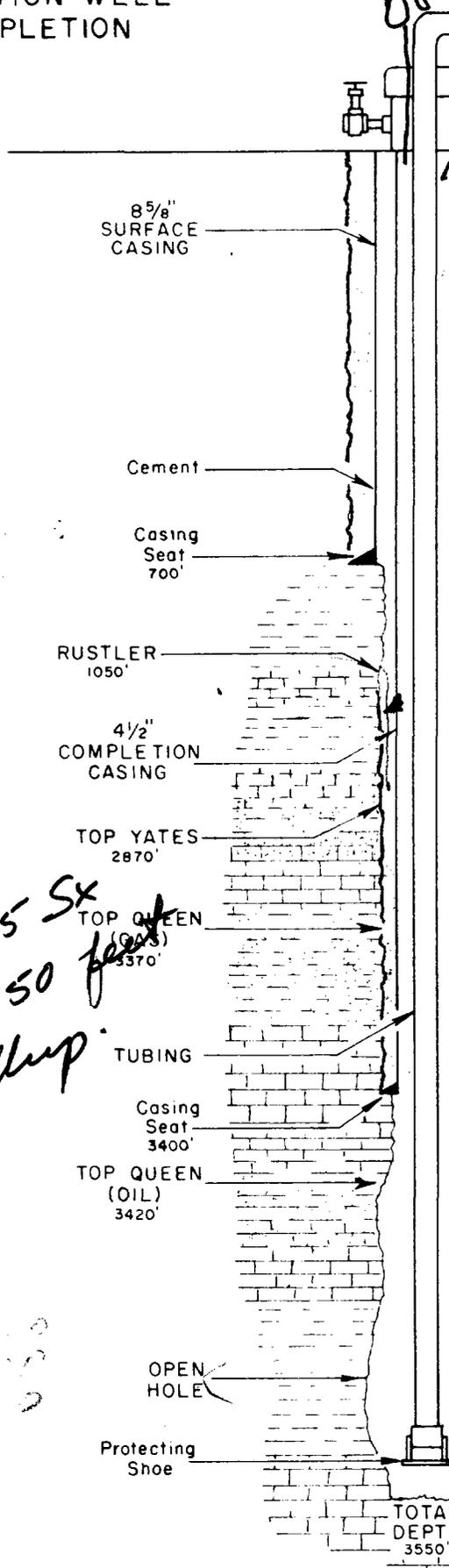
Prepared By:  
GEORGE L. BUCKLES CO.

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

BEFORE EXAMINER NUMBER  
OIL CONSERVATION FORM  
NO. \_\_\_\_\_

BEFORE EXAMINER MUTTER  
OIL CONSERVATION  
*3772* *2*

TYPICAL  
INJECTION WELL  
COMPLETION



BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 5  
CASE NO. 3772

NOTE: All depths approximated and subject to change

*annulus by top  
statically balanced  
w/ inert water.  
app w/ gage*

*200' surface  
string protects  
all fresh  
wtr zones*

*will inj 300 B/D  
per well initially*

*inj pressures  
thereafter lic  
rate rates of  
inj.*

*will re-inject  
produced wtr  
from beginning*

*Have app for wtr rights  
pending w/ DST Eng.  
Other sources: Con'l  
wtr Co or SL wtr at  
about 5000'*

*100-125 Sx  
500-750 feet  
of fillup.*

*2000  
2500  
3000*

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.

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 3772  
CASE NO. 3772

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'~~<sup>1315'</sup> 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: ~~1320'~~<sup>1325'</sup> from North Line & ~~1020'~~<sup>1325'</sup> 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.