

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

January 5, 1987



GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Union Texas Petroleum Corporation
P.O. Box 2120
Houston, Texas 77252-2120

Attention: Ralph E. Stanley
Contract Analyst

Re: Administrative Order NFL-151

Dear Mr. Stanley:

Reference is made to your application for an Infill Well Finding and Well-Spacing Waiver made pursuant to Section 271.305(b) of the Federal Energy Regulatory Commission regulations, Natural Gas Policy Act of 1978, and Oil Conservation Division Order No. R-6013 for the following described well:

Langlie Jal Unit Well No. 101 located 2540 feet from the South line and 1250 feet from the West line of Section 32, Township 24 South, Range 37 East, NMPM, Langlie Mattix Pool, Lea County, New Mexico.

THE DIVISION FINDS THAT:

(1) Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling, that the well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit, and must grant a waiver of existing well-spacing requirements.

(2) By Division Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.

until further notice.
October 11, 1984, shall remain in full force and effect
(2) Division Administrative Order No. NFL-98, dated

(1) The applicant is hereby authorized to drill the
Langlie Jai Unit Well No. 101 as described above, as an
infill well on the existing 40-acre oil proration unit com-
prising the NW/4 SW/4 (Unit L) of Section 32, Township 24
South, Range 37 East, NMPM, Langlie Mattix Pool, Lea County,
New Mexico. The authorization for infill drilling granted by
this order is an exception to applicable well spacing re-
quirements and is necessary to permit the drainage of a
portion of the reservoir covered by said proration unit
which cannot be effectively and efficiently drained by any
existing well thereon.

IT IS THEREFORE ORDERED THAT:

(9) In order to permit effective and efficient drainage
of said proration unit, the subject application should be
approved as an exception to the standard well spacing re-
quirements for the pool.

(8) All the requirements of Division Order No. R-6013
have been complied with, and the well for which a finding is
sought is necessary to effectively and efficiently drain a
portion of the reservoir covered by said proration unit
which cannot be so drained by any existing well within the
unit.

(7) The drilling and completion of the well for which a
finding is sought should result in the production of an
additional 59,000 MCF of gas from the proration unit which
would not otherwise be recovered.

(6) Said unit is not being effectively and efficiently
drained by the existing wells on the unit.

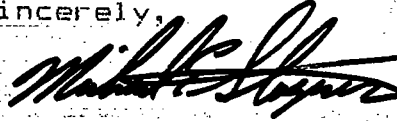
(5) Administrative Order No. NFL-98, dated October 11,
1984, authorized an infill well finding for said Langlie Jai
Unit Well No. 100 on the aforementioned proration unit.
NFL-98 should remain in full force and not be affected by
the entry of this order.

(4) A standard 40-acre oil proration unit comprising
the NW/4 SW/4 (Unit L) of Section 32, Township 24 South,
Range 37 East, is currently dedicated to the Langlie Jai
Unit Wells Nos. 19 and 100 also located in Unit L of said
Section 32.

(3) The well for which a finding is sought is to be
completed in the Langlie Mattix Pool, and the standard spac-
ing unit in said pool is 40 acres.

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

Sincerely,

A handwritten signature in dark ink, appearing to read "Michael E. Stogner", written over a horizontal line.

Michael E. Stogner,
Examiner

xc: N.M.O.C.D. - Hobbs
NFL-98 File

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

January 5, 1987



GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Union Texas Petroleum Corporation
P.O. Box 2120
Houston, Texas 77252-2120

Attention: Ralph E. Stanley
Contract Analyst

Re: Administrative Order NFL-151

Dear Mr. Stanley:

Reference is made to your application for an Infill Well Finding and Well-Spacing Waiver made pursuant to Section 271.305(b) of the Federal Energy Regulatory Commission regulations, Natural Gas Policy Act of 1978, and Oil Conservation Division Order No. R-6013 for the following described well:

Langlie Jal Unit Well No. 101 located 2540 feet from the South line and 1250 feet from the West line of Section 32, Township 24 South, Range 37 East, NMPM, Langlie Mattix Pool, Lea County, New Mexico.

THE DIVISION FINDS THAT:

(1) Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling, that the well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit, and must grant a waiver of existing well-spacing requirements.

(2) By Division Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.

(3) The well for which a finding is sought is to be completed in the Langlie Mattix Pool, and the standard spacing unit in said pool is 40 acres.

(4) A standard 40-acre oil proration unit comprising the NW/4 SW/4 (Unit L) of Section 32, Township 24 South, Range 37 East, is currently dedicated to the Langlie Jai Unit Wells Nos. 19 and 100 also located in Unit L of said Section 32.

(5) Administrative Order No. NFL-98, dated October 11, 1984, authorized an Infill Well Finding for said Langlie Jai Unit Well No. 100 on the aforementioned proration unit. NFL-98 should remain in full force and not be affected by the entry of this order.

(6) Said unit is not being effectively and efficiently drained by the existing wells on the unit.

(7) The drilling and completion of the well for which a finding is sought should result in the production of an additional 59,000 MCF of gas from the proration unit which would not otherwise be recovered.

(8) All the requirements of Division Order No. R-6013 have been complied with, and the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.

(9) In order to permit effective and efficient drainage of said proration unit, the subject application should be approved as an exception to the standard well spacing requirements for the pool.

IT IS THEREFORE ORDERED THAT:

(1) The applicant is hereby authorized to drill the Langlie Jai Unit Well No. 101 as described above, as an infill well on the existing 40-acre oil proration unit comprising the NW/4 SW/4 (Unit L) of Section 32, Township 24 South, Range 37 East, NMPM, Langlie Mattix Pool, Lee County, New Mexico. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

(2) Division Administrative Order No. NFL-98, dated October 11, 1984, shall remain in full force and effect until further notice.

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

Sincerely,



Michael E. Stogner,
Examiner

xc: N.M.O.C.D. - Hobbs
NFL-98 File

Received 6/16/86
Release ASAP

NFL UTX5

Union Texas Petroleum Corporation
P.O. Box 2120
Houston, Texas 77252-2120

Attention: Ralph E. Stanley
Contract Analyst

Re: Administrative Order NFL-151

Dear Mr. Stanley:

Reference is made to your application for an Infill Well Finding and Well-Spacing Waiver made pursuant to Section 271.305(b) of the Federal Energy Regulatory Commission regulations, Natural Gas Policy Act of 1978, and Oil Conservation Division Order No. R-6013 for the following described well:

Langlie Jal Unit Well No. 101 located 2540 feet from the South line and 1250 feet from the West line of Section 32, Township 24 South, Range 37 East, NMPM, Langlie Mattix Pool, Lea County, New Mexico.

THE DIVISION FINDS THAT:

(1) Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling, that the well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit, and must grant a waiver of existing well-spacing requirements.

(2) By Division Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.

(3) The well for which a finding is sought is to be completed in the Langlie Mattix Pool, and the standard spacing unit in said pool is 40 acres.

(4) A standard 40-acre oil proration unit comprising the NW/4 SW/4 (Unit L) of Section 32, Township 24 South, Range 37 East, is currently dedicated to the Langlie Jal Unit Wells Nos. 19 and 100 also located in Unit L of said Section 32.

(5) Administrative Order No. NFL-98, dated October 11, 1984, authorized an Infill Well Finding for said Langlie Jal Unit Well No. 100 on the aforementioned proration unit. NFL-98 should remain in full force and not be effected by the entry of this order.

(6) Said unit is not being effectively and efficiently drained by the existing wells on the unit.

(7) The drilling and completion of the well for which a finding is sought should result in the production of an additional 59,000 MCF of gas from the proration unit which would not otherwise be recovered.

(8) All the requirements of Division Order No. R-6013 have been complied with, and the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.

(9) In order to permit effective and efficient drainage of said proration unit, the subject application should be approved as an exception to the standard well spacing requirements for the pool.

IT IS THEREFORE ORDERED THAT:

(1) The applicant is hereby authorized to drill the Langlie Jal Unit Well No. 101 as described above, as an infill well on the existing 40-acre oil proration unit comprising the NW/4 SW/4 (Unit L) of Section 32, Township 24 South, Range 37 East, NMPM, Langlie Mattix Pool, Lea County, New Mexico. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

(2) Division Administrative Order No. NFL-98, dated October 11, 1984, shall remain in full force and effect until further notice.

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

Sincerely,

Michael E. Stogner
Examiner

N.M.O.C.D. - Hobbs
NFL-98 File

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. Box 2088
SANTA FE, NEW MEXICO
87501

Amended
ADMINISTRATIVE ORDER

NFL NFL-98A

INFILL DRILLING FINDINGS AND WELL-SPACING WAIVER
MADE PURSUANT TO SECTION 271.305(b) OF THE
FEDERAL ENERGY REGULATORY COMMISSION REGULATIONS,
NATURAL GAS POLICY ACT OF 1978 AND OIL CONSERVATION DIVISION
ORDER NO. R-6013

I.

Operator Union Texas Petroleum Corp. Well Name and No. Langlie Jol Unit Well No. 101
Location: Unit L Sec. 32 Twp. 24 S Rng. 37 E Cty. Lea

II.

THE DIVISION FINDS:

- (1) That Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling, that the well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit, and must grant a waiver of existing well-spacing requirements.
- (2) That by Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.
- (3) That the well for which a finding is sought is to be completed in the Langlie North Pool, and the standard spacing unit in said pool is 40 acres.
- (4) That a Stand. 40 -acre proration unit comprising the NW 1/4 SW 1/4 (Unit L) of Sec. 32, Twp. 24 S, Rng. 37 E, is currently dedicated to the Langlie Jol Unit Wells Nos. 19 and 100 located in Unit L of said section.
- (5) That this proration unit is (☒ standard () nonstandard; if nonstandard, said unit was previously approved by Order No. NP).
- (6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.
- (7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 59,000 MCF of gas from the proration unit which would not otherwise be recovered.
- (8) That all the requirements of Order No. R-6013 have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.
- (9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved as an exception to the standard well spacing requirements for the pool.

IT IS THEREFORE ORDERED:

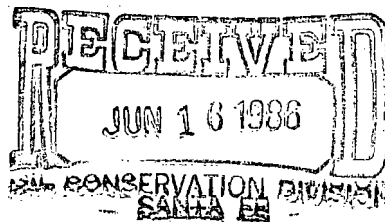
- (1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.
- (2) 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 this _____ day of _____, 19____.

DIVISION DIRECTOR _____ EXAMINER _____



Union Texas Petroleum



1330 Post Oak Blvd.
P.O. Box 2120
Houston, Texas 77252-2120
(713) 623-6544

June 11, 1986

New Mexico Dept. of Energy & Minerals
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Mike Stogner

RE: Langlie Jal Unit 32-245-37E #101-L

Dear Mike:

In order to respond to your request for an infill well finding, I have used the format that is prescribed by the Texas Railroad Commission. Since this format is simpler to understand and provides the same type of information that every jurisdictional agency requires, I have found it to be accepted by everyone.

I trust this will enable you to complete the filing process; however, if additional information is needed, please call me at (713) 968-3677.

Yours truly,

Ralph E. Stanley
Contract Analyst

RES/jv

MISC/13

IN ORDER TO FULFILL THE REQUIREMENTS FOR AN INFILL WELL FILING, PLEASE ANSWER THE FOLLOWING:

EFFECTIVE AND EFFICIENT DRAINAGE FINDING

1. SUBMIT A DETAILED DESCRIPTION OF THE CIRCUMSTANCES NECESSITATING DRILLING OF ADDITIONAL WELL(S) ON THE PRORATION UNIT FOR EACH WELL. (I.E., MECHANICAL DIFFICULTY, RESERVOIR CHARACTERISTICS).
2. PROVE THE PRORATION UNIT TO BE REASONABLY PRODUCTIVE (I.E., STRUCTURE MAP ILLUSTRATING GAS-WATER CONTACTS AND RESERVOIR LIMITS OR OFFSET PRODUCTION IN THE SAME RESERVOIR).
3. CALCULATE THE ORIGINAL RECOVERABLE GAS IN PLACE OF PRORATION UNIT (I.E., VOLUMETRIC CALCUTATION USING RECOVERY FACTOR OR OTHER ACCEPTED ENGINEERING CALCULATIONS SUCH AS P/Z PLOT VS. CUMULATIVE PRODUCTION OF PRORATION UNIT). SHOW WORK.
4. PROVIDE CUMULATIVE PRODUCTION TO DATE OR ORIGINAL WELL ON PRORATION UNIT.
5. SUBMIT AN ESTIMATION OF FUTURE RECOVERY FROM ORIGINAL WELL IF THE ORIGINAL WELL IS STILL PRODUCTIVE. SHOW WORK.
6. ESTIMATE THE REMAINING RECOVERABLE RESERVES THAT THE ORIGINAL WELL ON THE PRORATION UNIT IS NOT CAPABLE OF RECOVERING. SHOW WORK.
7. ESTIMATE THE RECOVERY OF EACH ADDITIONAL WELL.

LANGLIE JAL UNIT NO. 101

1. A recent reservoir study indicated that porosity stringers in the Seven Rivers-Queen formations (the unitized interval) of the Langlie Jal Unit varied in quantity and quality from well to well. In order to decrease the discontinuity it was proposed that an infill well pilot project be undertaken. Infill drilling to decrease discontinuity thereby increasing flood efficiency was proven to be succesful in the Langlie Jal Unit. Wells numbered 95 through 100, drilled in 1982, added 134,700 barrels of oil and 200 MMSCFG to existing reserves.
2. The infill drilling of Langlie Jal Unit Well No. 101 is a part of a project to increase well density from 40 acres per well and 80 acre 5-spot patterns to 20 acres per well and 40 acre 5-spot patterns.
3. Based on an initial production of 38 BOPD, a GOR of 1000 and a unit production decline of 20%, reserves for this well are estimated at 59,000 BO and 59 MMCF gas.
4. The cumulative production from the Langlie Jal Unit Well No. 19, which is within the 40 acre proration unit, is 73 MBO (gas production not available).
5. There is no future production from Langlie Jal Unit Well No. 19. This well was converted to injection service on 5/24/72 to complete the 80 acre 5-spot patterns following unitization.
6. The estimate of remaining recoverable reserves that the original well could not recover is 59,000 STBO and 59 MMCF gas.
7. The estimated recovery of the Langlie Jal Unit No. 101 is 59,000 STBO and 59 MMCF gas.

LANGLIE JAL UNIT NO. 101

1. A recent reservoir study indicated that porosity stringers in the Seven Rivers-Queen formations (the unitized interval) of the Langlie Jal Unit varied in quantity and quality from well to well. In order to decrease the discontinuity it was proposed that an infill well pilot project be undertaken. Infill drilling to decrease discontinuity thereby increasing flood efficiency was proven to be succesful in the Langlie Jal Unit. Wells numbered 95 through 100, drilled in 1982, added 134,700 barrels of oil and 200 MMSCFG to existing reserves.
2. The infill drilling of Langlie Jal Unit Well No. 101 is a part of a project to increase well density from 40 acres per well and 80 acre 5-spot patterns to 20 acres per well and 40 acre 5-spot patterns.
3. Based on an initial production of 38 BOPD, a GOR of 1000 and a unit production decline of 20%, reserves for this well are estimated at 59,000 BO and 59 MMCF gas.
4. The cumulative production from the Langlie Jal Unit Well No. 19, which is within the 40 acre proration unit, is 73 MBO (gas production not available).
5. There is no future production from Langlie Jal Unit Well No. 19. This well was converted to injection service on 5/24/72 to complete the 80 acre 5-spot patterns following unitization.
6. The estimate of remaining recoverable reserves that the original well could not recover is 59,000 STBO and 59 MMCF gas.
7. The estimated recovery of the Langlie Jal Unit No. 101 is 59,000 STBO and 59 MMCF gas.

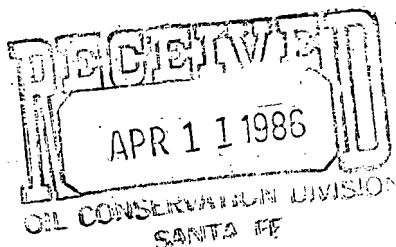
LANGLIE JAL UNIT NO. 101

1. A recent reservoir study indicated that porosity stringers in the Seven Rivers-Queen formations (the unitized interval) of the Langlie Jal Unit varied in quantity and quality from well to well. In order to decrease the discontinuity it was proposed that an infill well pilot project be undertaken. Infill drilling to decrease discontinuity thereby increasing flood efficiency was proven to be successful in the Langlie Jal Unit. Wells numbered 95 through 100, drilled in 1982, added 134,700 barrels of oil and 200 MMSCFG to existing reserves.
2. The infill drilling of Langlie Jal Unit Well No. 101 is a part of a project to increase well density from 40 acres per well and 80 acre 5-spot patterns to 20 acres per well and 40 acre 5-spot patterns.
3. Based on an initial production of 38 BOPD, a GOR of 1000 and a unit production decline of 20%, reserves for this well are estimated at 59,000 BO and 59 MMCF gas.
4. The cumulative production from the Langlie Jal Unit Well No. 19, which is within the 40 acre proration unit, is 73 MBO (gas production not available).
5. There is no future production from Langlie Jal Unit Well No. 19. This well was converted to injection service on 5/24/72 to complete the 80 acre 5-spot patterns following unitization.
6. The estimate of remaining recoverable reserves that the original well could not recover is 59,000 STBO and 59 MMCF gas.
7. The estimated recovery of the Langlie Jal Unit No. 101 is 59,000 STBO and 59 MMCF gas.



Union Texas Petroleum

April 7, 1986



1330 Post Oak Blvd.
P.O. Box 2120
Houston, Texas 77252-2120
(713) 623-6544

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Attention: Mr. Michael E. Stogner

Re: Langlie Jal Unit 32-24S-37E #101-L
Langlie Jal Unit 32-24S-37E #102-K
Langlie Jal Unit 32-24S-37E #103-P
Langlie Jal Unit 32-24S-37E #104-M
Langlie Jal Unit 32-24S-37E #106-A

Dear Mr. Stogner:

Enclosed please find the information requested for the above referenced wells. If there is any other necessary information, please let me know.

Sincerely,

Kathleen Mathis

Kathleen Mathis
Natural Gas Marketing

KM/jc
Enclosure

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Union Texas Petroleum Corp.		Lease Langlie-Jal		Well No. 101
Section 32	Township 24-S	Range 37-E	County Lea	
Well Footage Location of Well:				
2540 feet from the South line and		1250 feet from the West line		
Ground Level Elev. 3234'	Producing Formation Seven Rivers-Queen	Pool Langlie Mattix (Queen)	Dedicated Acreage: 20 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks 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 interests 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 interests, has been approved by the Commission.

CERTIFICATION

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

Name

W. A. Higgins

Position

Production Services Supr.

Company

Union Texas Petroleum Corp.

Date

September 19, 1983

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

Sept. 15, 1983

Registered Professional Engineer and/or Land Surveyor

Maule E. Moore

Certificate No.

2189

Union Texas Petroleum Corporation
Langlie-Jal Unit Well No. 19
1980' FSL - 660' FWL
Spd: 6/25/39
Langlie-Mattix Completion
Cumulative Production
Gas - 630937 MCF
O/I - 72562 B.O.
Converted to W.I.W. Sept. 1976

1250' 101
Texaco Producing Inc.
Skelly M State Well No. 4
1150' FSL - 660' FWL
Jalmar Yates completion
Spd: 6/29/78

Union Texas Petroleum Corporation
Langlie-Jal Unit Well No. 100
1426' FSL - 1300' FWL (NFL-99)
Spd: 7/4/82
Langlie-Mattix Completion
Cumulative as of 12/31/84
Gas - 41489 MCF
O/I - 27576 B.O.

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0