

DRILLING PROGNOSIS

I. Well Identification:

Lease Name: Odessa Langlie Federal

Well No.: 1

Location: 1650 FSL and 660 FEL Section 8 14
T-25-S, R-37-E

County: Lea

State: New Mexico

Elevations: 3098.5 G.L. (3108.5 RKB)

II. Drilling Objective:

Zone: Queen-Penrose

Total Depth: 3700

Pool Name: Langlie Mattix

Productive Interval: 3040-3250

III. Formation Tops:

Zone	Tops		Gross Interval Drilled	Probable Fluid Production
	Drilling Depth	Subsea Depth		
Rustler Anhydrite	870	+2238	105	
Salado Salt	975	+2133	1265	
Tansil	2240	+ 868	150	
Yates	2390	+ 718	250	
Seven Rivers	2640	+ 468	430	
Queen	3070	+ 38	100	Gas
Penrose	3170	- 62	190	Gas
Grayburg	3360	- 252	340	
TOTAL DEPTH	3700	- 592	3700	

IV. Hole Size:

<u>Hole</u>	<u>Bit Size</u>	<u>T.D.</u>	<u>Gross Interval</u>
Conductor	<u>15</u>	<u>40</u>	<u>40</u>
Surface	<u>12 1/4</u>	<u>800</u>	<u>760</u>
Production	<u>7 7/8</u>	<u>3700</u>	<u>2900</u>

V. Casing Program:

A. Casing Design

<u>String</u>	<u>Casing Size</u>			<u>Threads</u>	<u>Amount</u>	<u>Cond.</u>
	<u>O.D.</u>	<u>Wt.</u>	<u>Grade</u>			
Conductor	13 3/8	33	B	8 Rd	30	New
Surface	8 5/8	28	B	8 Rd	800	Used
Production	5 1/2	17.0	J-55	8 Rd	3700	New

B. Float Equipment:

Surface Casing: 8 5/8-inch guide-shoe and 8 5/8-inch insert float.

Production Casing: 5 1/2-inch guide-shoe and 5 1/2-inch float collar
with automatic fill.

C. Centralizers:

Surface Casing: One centralizer at the float collar and one centralizer
two joints above float collar.

Production Casing: run a total of 8 centralizers. Place one centralizer
at the guide shoe and one centralizer at the float collar with the
remaining being placed 80 to 90 feet apart or every other joint.

D. Wellhead Equipment:

Larkin 8 5/8 x 5 1/2 Fig 92 Casinghead. Larkin 5 1/2 x 2 3/8

Type TH tubinghead complete with slips and bell nipple.

VI. Mud Program

A. Surface Hole:

Drill surface hole with a fresh water gel (approximately 8.5 lb/gal)
while maintaining a high enough viscosity to adequately clean
hole. Add paper as needed to control excess seepage.

Before drilling below surface pipe, jet cuttings out of working pit
into reserve pit and then switch from circulating through working
pit to circulating through reserve pit.

B. Production Hole:

Before entering salt section, switch mud system to a saturated salt
system (10.1 lb/gal). At 2925, switch back out of reserve pit and
back into working pit. Also at this point, start adding starch and
brine gel to lower water loss and raise viscosity. The mud shall have
a water loss of 10 cc/30 min and a viscosity of 34 to 36 sec. before

reaching 3040 (top of Queen pay).

In order to protect the drill string, sufficient lime shall be added to the mud to maintain a safe PH level.

VII. Cementing Program

A. Surface Pipe:

Cement surface pipe with approximately 500 sacks (or as required) of API Class-C cement containing 2% Calcium Chloride. Before resuming drilling operations, allow cement to set for a sufficient time to gain a 500-psi compressive strength (18 hours). Also before drilling plug, the pipe shall be tested to 700 psi for 30 minutes.

B. Production String:

Cement long string with approximately 350 sacks API Class-C cement containing 3% Halliburton Econolite mixed to a slurry weight of 11.3 lb/gal followed by 250 sacks of a 50-50 blend of Pozmix "A" and API Class-C cement containing 18% salt and 2% gel and having a slurry weight of 14.1 lb/gal. Pump 30 barrels of water ahead of the cement to help remove the mud filter cake.

Once top plug is bumped, pressure test casing to 1500 psi.

The total specified cement volume of 600 sacks provides for an

excess that should be sufficient to bring the cement top back to the surface. Before the cement job is actually performed, the required cement volume will be checked against the open hole caliper log to determine the actual amount of cement necessary to bring the cement back to the surface.

VIII. Formation Evaluation:

A. Drilling Rate:

1. The drilling rate shall be monitored with a geolograph from the surface to total depth.
2. As part of their farmout agreement, El Paso Natural Gas Company requires that the penetration rate be tabulated in 10-foot increments over the entire hole.

B. Well Cutting Samples:

One set of well cutting samples shall be gathered every 10 feet from the surface to total depth. Each sample is to be cleaned, bagged, and tagged and then grouped into bundles of ten samples per bundle with one bundle representing each 100-feet drilled.

After the drill cuttings have been reviewed by the wellsite geologist, they shall be delivered weekly to Midland Sample Cut, 704 S. Pecos Street, Midland, Texas.

If requested by the wellsite geologist, a second set of samples shall be gathered over the Queen-Penrose-Grayburg interval.

C. Mud Logging: ne

D. Drill-Stem Testing: None

E. Coring: None

F. Well Logging:

Open-Hole Logs

Log	Interval	
	2" = 100'	5" = 100'
CDL-Neutron-GR	T.D. - Surface	T.D. - 2150
Guard -Forxo	T.D. - 2150	T.D. - 2150

Cased-Hole Logs

Log	Interval	
	2" = 100'	5" = 100'
GRN-CCL	T.D. - 2150	T.D. - 2150

Log Distribution

Company	No. of Copies	
	Field Prints	Final Prings
Doyle Hartman 508 C & K Petroleum Building Midland, Texas 79701	5	5
United States Geological Survey P. O. Box 1157 Hobbs, New Mexico 88240	2	2

Company

No. of Copies

Field Prints

Final Prints

2

4

El Paso Natural Gas Company
P. O. Box 1492
El Paso, Texas 79978

Attention: Land Department

Note: Logs shall be delivered to the above parties within 24 hrs. after becoming available.

IX. Blowout Preventer System:

A 10 3/4 2000-psi rotating head will be used while drilling the surface
hole. Before drilling out from under the surface pipe, the well will be
equipped with a 3000-psi 10-inch series 900 double-ram hydraulic
preventer. The blowout preventer shall be used through the running of
the production string.

Attached is a diagram of the required BOP system.

X. Hazardous Zones:

None anticipated.

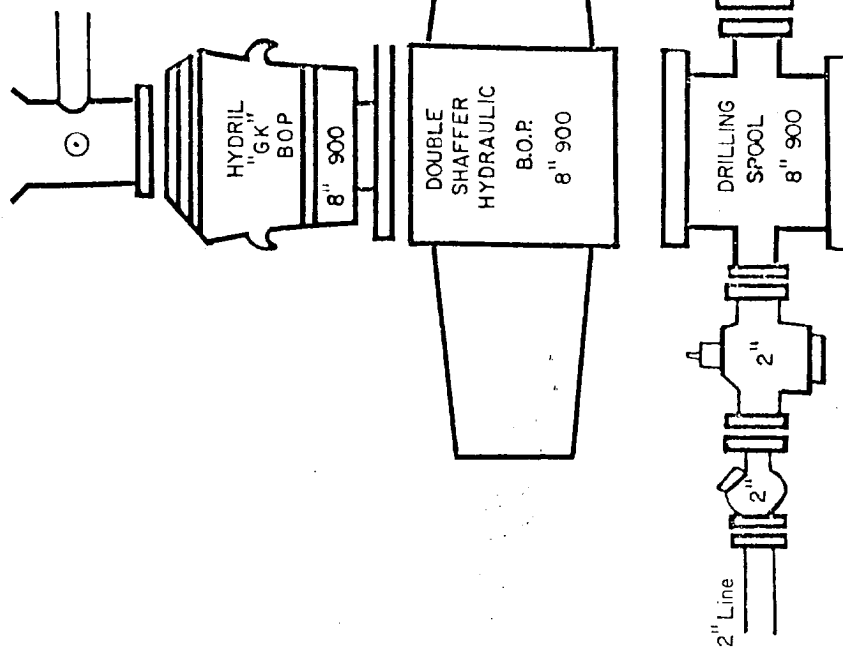
XI. Duration of Operations:

The total elapsed time required for drilling and completing the
subject well is expected to be thirty days.

ASE ROTARY TABLE

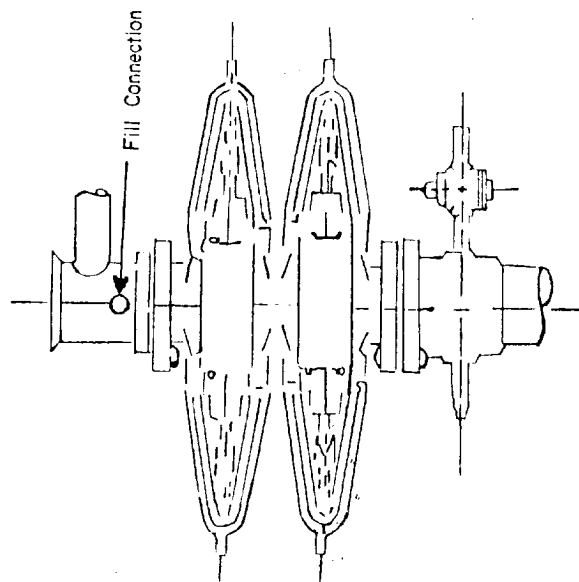
Flow line will have to be made
to fit UNDER Rotary.

Optional



2" 1500
4" 900

KILL LINE
MANIFOLD



Shaffer Type E Series 900 Hydraulic B.O.P.

3000 PSI WORKING PRESSURE
BLOWOUT PREVENTER HOOK-UP

Series 900 Flanges, or Better.

Note: B.O.P. system will meet the conditions of drilling approval
required by the USGS District Office in Hobbs, New Mexico.