

ATTACHMENT TO FORM 3160-3 (APD)
UNION TEXAS PETROLEUM
NESTE WILLIAMS FED. #4
EDDY COUNTY, NEW MEXICO

Eight Point Drilling Plan

I. Geologic Marker Tops

<u>Formation</u>	<u>Top</u>
Quaternary Alluvium	Surface
Bottom of Salt & Anhydrite	± 1600
Yates	1750
Queen	2850
San Andres	3800
Bone Spring	5200
1st Bone Spring Carb	7400
2nd Bone Spring Sand	7650

II. Mineral, Water, Oil, or Gas Bearing Formations

<u>Formation</u>	<u>Top</u>	<u>Possible Content</u>	<u>Plan for Protection</u>
Santa Rosa	400'	Water	13-3/8" casing cemented to surface
Yates	1,750'	Gas	8-5/8" casing cemented to surface
Queen	2,800'	Oil or Gas	5-1/2" casing
Bone Spring Carb	7,650'	Oil	5-1/2" casing cemented to surface
Bone Spring Sand	7,500'	Oil	5-1/2" casing cemented to surface

III. Specification for Pressure Control

The 13-3/8" surface pipe will have 2M WP equipment, installed while the 8-5/8" will have 3M WP equipment installed. BOP's to be tested to 500 psi prior to drilling out under surface casing and 2000 psi prior to drilling out intermediate casing. The BOP's will be tested when installed, prior to drilling out of surface and intermediate casing, and once each week. The well control equipment used will comply with API RP 53 specifications. Drawings are attached.

IV. Casing and Cementing Program

A. Casing Program

<u>Depth</u>	<u>Hole Size</u>	<u>Csg. Size</u>	<u>Wt</u>	<u>Grade</u>	<u>Coupling</u>	<u>Type</u>
0 - 650'	17-1/2"	13-3/8"	48#	H-40	STC	Surf.
0 - 2100'	11"	8-5/8"	24#	K-55	STC	Int.
2100-3000'	11"	8-5/8"	24#	S-80	STC	Int.
0 - 5300'	7-7/8"	5-1/2"	17#	K-55	LTC	Prod.
5300-8500'	7-7/8"	5-1/2"	17#	L-80	LTC	Prod.

B. Cementing Program

<u>Casing</u>	<u>Top of Cement</u>	<u>Cement Type</u>	<u>Sacks</u>
Surf.	Surface	Class C w/2% CaCl ₂	610
Int.	Surface	Lead: Lite w/10% salt	515
		Tail: Class C Neat	390
Prod.	Surface	Lead: 85/15 C/Poz w/4% Gel	691
		Tail: Class "C"	270

V. Drilling Fluids Program

A.

<u>Depth</u>	<u>Hole Size</u>	<u>MW ppg</u>	<u>VIS sec</u>	<u>WL cc/30 min</u>	<u>Comments</u>
0- 650'	17-1/2"	8.5-9.2	35-45	NC	Fresh wtr. spud mud
500-3000'	11"	9.8-10.2	30-32	NC	Brine w/salt gel
3000-7000'	7-7/8"	8.8-9.4	28-30	NC	Cut brine, lime
7000-8500'	7-7/8"	9.0-9.4	30-32	15-20	Cut brine w/salt gel and starch

- B. The mud system volume will be approximately 800 barrels.
- C. No weighting material should be necessary, but barite will be kept on site.
- D. The level of the mud pits will be monitored visually, and a flow rate indicator will be installed.
- E. Chemicals kept on site to control a possible H₂S inflūx are sodium and calcium hydroxide to raise the pH and zinc carbonate as a scavenger.

VI. Formation Evaluation

- A. Testing - No drill stem tests anticipated.
- B. Logging - the following log runs are anticipated
 - TD - 5000' DLL/GR/Cal
 - CNL/LDT
 - TD - 3000' GR/Cal
 - TD - 0' GR
- C. Cores - None anticipated
- D. Anticipated Completion Program
 - 1. Run 5-1/2" casing and cement to surface.
 - 2. Pressure test casing to .2 psi/ft.
 - 3. Perforate appropriate pay section of the Bone Spring.
 - 4. Stimulate the formation with acid or a frac job.
 - 5. Flow and/or swab test.
 - 6. If commercial, produce through 2-7/8" tubing.

VII. BHP and Abnormal Conditions

- A. BHP at 8500' is expected to be approximately 3250 psi.
- B. No abnormal pressures are anticipated.
- C. Hydrogen sulfide is present in the Bone Spring formatin.
H₂S monitoring equipment will be installed when the surface casing is drilled out.
- D. No abnormally high temperatures are anticipated. Bottom hole temperature is approximately 130°F.

VIII. Additional Information

None at this time. Should conditions change which alter any part of this drilling plan, the Bureau of Land Management will be promptly notified.