

### Application to Drill

Western Reserves Oil Co., Inc.

Padre Federal "13" #1

### 9. Cementing and Setting Depth:

13-3/8" Conductor pipe

Set @ 40' cement to surface with Redimix

8-5/8" Surface casing

Set @ 1700' <sup>+</sup> Lead cement with 615 sx class "C" + 4% Gel, 1/4" Flocele/sx, 2% CaCl, Tail in with 200 sx class "C" 2% CaCl, circulate cement to surface

5-1/2" Production casing

Set @ 8500' cement with 500 sx 50/50 POZ + 3% KCL.

10. Pressure Control Equipment: Exhibit "E". A Blow-out Preventer (no less than 900 series 3000 psi working pressure) consisting of double ram type preventer with bag type preventer. Units will be hydraulically operated. Exhibit "E-1" Choke Manifold and Closing Unit. Blind rams on top, pipe rams on bottom to correspond with size of drill pipe in use. BOP will be nipped up on 8-5/8 casing and remain on well until casing is run and cemented. BOP will be tested as well as choke manifold. BOP will be worked at least once each day while drilling and blind ram will be worked on trips when no drill pipe is in hole. Flow sensor PVT, full opening stabbing valve and upper kelley cock will be utilized. No pressures greater than 2000 psi anticipated.

### 11. Proposed Mud Circulating System:

Depth	Mud Wt.	Mud Visc.	Fluid Loss	Type Mud
0 - 1700'	8.6 - 10.4	34-36	No control	Spud mud add <del>6% oil @</del> <sup>AD</sup> <del>if necessary native mud</del> should be adequate to run casing.
1700'-7000'	10.1-10.4	28	No control	Brine water and caustic soda to control corrosion.
7000-8000'	10.1-10.4	36-38		Add salt gel to increase viscosity.
8000-8500'	10.1-10.4	36-38	10 - 15 cc	Lower water loss by adding yellow starch

In order to run a DST, Log & run casing, viscosity may have to be raised and water loss reduced to 8cc or less.