**Washout Depth**

**Method 1**

Pump soft line or other plugging material down dic drill pipe and notice

bow many strokes are required before the pump pressure increases.

Sample Case : Drill pipe = 3-1/2 inch — 13.3 lb/ft

Capacity = 0.00742 bbl/ft   
 Pump output = 0.112 bbl/stk

(5-1/2 inch by 14 inch duplex @ 90% efficiency)

NOTE : A pressure increase was noticed after 360 strokes

Depth of washout (ft) = 360 stk x 0.112 bbl/stk ÷ (1.00742 bbl/ft

= 5434 ft

**Method 2**

Pump some material that will go through the washout, up the annulus and over the shale shaker. This material must be of the type that can be easily observed as it comes across the shaker. Examples : carbide, corn starch, glass beads, bright colored paint, etc.

Sample Case : Drill pipe = 3-1/2 inch - 13.3 lb/ft  
 Capacity = 0.00742 bbl/ft  
 Pump output = 0.112 bbl/stk

(5-1/2 inch x 14 inch duplex @ 90% efficiency)

Annulus  
 hole size = 8-1/2 inch  
 capacity = 0.0583 bbl/ft (8-1/2 inch x 3-1/2 inch)

NOTE : The material pumped down the drill pipe was noticed coming over the

shaker after 2680 strokes.

Drill pipe capacity plus annular capacity :

0.00742 bbl/ft + 0.0583 bbl/ft = 0.0657 bbl/ft

Depth of washout (ft) = 2680 stk x 0.112 bbl/stk : 0.0657 bbl/ft

= 4569 ft