STARR F. SCHLOBOHM OIL OPERATIONS

HARTMAN-WINTER-WALTER LEASE (H-W-W) - MEOR FIELD TRIAL CASE HISTORY #101

Oil Field Name: Trapp, Discovered in 1929

Location: NW/4, NW/4, SW/4, SEC 10, T15S, R13W - Russell Co., KS

The H-W-W is a 1 well lease that averaged 75 BOD and 6 BWPD at completion in 1984. When treated in 1989 it averaged about 15 BOD and 10 BWPD. It was selected as a candidate for MEOR treatment because of its estimated reserves, failing production, limestone formation, and moderate down hole temperature.

H-W-W Completion History:

Drilled in 0	3/02/1984
Completion Depth	,360 ft.
Perforations 3	,060-3,072
Casing Depth 3	,350 ft.
Avg. oil production at completion	
Oil production 1990 (Before WP-5 Treatment)	
Oil/Water ratio at completion	.: 0.1
Oil/Water ratio 1990 (Before Treatment)	
Type of FormationL	
Down Hole Temperature 8	
Thickness of Oil Bearing Formation	.2 Ft.
Permeability (k)?	
Porosity 2	
API Gravity 3	
Type OilP	araffinic
Water Saturation:?	
Initial Treatment Date:	1/26/1989

INITIAL TREATMENT METHOD:

The well bore fluids were pumped down, and 20 gallons of #2 diesel were injected through the annulus. A low volume slug of Wel-Prep 5 (15 gallons) was then injected, and followed with three barrels of lease water as a back flush. The well was shut in for 5 days and then turned back into production. Oil production was monitored daily.

PRE-TREATMENT POST-TREATMENT

Oil: 111.9 bbls/wk 124.0 bbls/wk 0il/water ratio: 1:0.75 1:0.75

<u>COMMENTS</u>: The H-W-W lease began to show an response following its second MEOR treatment. For the 72 full production weeks prior to its response the H-W-W averaged 111.0 bbls/wk. The post-response period is 28 full production weeks that average 124.0 bbls/wk or an 11% increase. This equals 339 additional barrels of oil produced as of 12/31/1990.