

True Successes

Revenue Increased \$800,000 with Product Exchange

Challenge

The client required a solution to improve oil-in-water carryovers. The current production was 244m³ oil and 8,000m³ salt water. Oil-in-water carryovers with the incumbent demulsifier/corrosion program were averaging 1,250 ppm, equating to approximately 8m³/day of lost oil.

Solution

Emulsion tendency testing performed by PureChem showed that changing the demulsifier and the corrosion inhibitor could reduce the oil in water carryovers. Test results are shown below:

| Corrosion Inhibitor | Corrosion Inhibitor Concentration (ppm) | Time to Break | Interface Quality | Water Quality |
|---------------------|-----------------------------------------|---------------|-------------------|---------------|
| None | — | > 10 min | N/A | N/A |
| CC-103 | 1,000 | 1 min | Good | Good |
| CC-103 | 2,500 | 1.5 min | Good | Good |
| CC-103 | 5,000 | > 10 min | Poor | Poor |
| CC-1005 | 1,000 | < 1 min | Good | Good |
| CC-1005 | 2,500 | < 1 min | Good | Good |
| CC-1005 | 5,000 | < 1 min | Good | Fair |

PureChem exchanged the incumbent demulsifier with DM-368, which reduced injection rates. The corrosion inhibitor program was replaced with CC-1005.

Benefit

With the revised chemical program, carryovers decreased to 250 ppm, resulting in a production increase of 6m³/day. This escalation in production translates into an increased annual revenue of approximately \$800,000 (based on \$65 per barrel of oil). Additionally, reducing the injection rates on the demulsifier will save the client approximately \$50,000 in chemical costs annually.

Area

SE Saskatchewan

Formation

Midale

Form of Lift

Rod Pump

PureChem Products

DM-368 and CC-1005



Figure 1: CC-103 Emulsion Tendency Test Results



Figure 2: CC-1005 Emulsion Tendency Test Results