FLUIDS AND CHEMICALS INVENTORY

Overview:

During a period of significant (50+%) business growth, cash (i.e. working capital) became a significant obstacle to growth for the business. Working with one of the largest drilling fluids companies in the world, JKA's approach to *Materials and Inventory strategy* were deployed to the US Land, Canada Land, US offshore, North Sea, European operations to improve fluids, chemicals and minerals inventory:

- US offshore fluids inventory ↓ $26+mm
- Canada chemicals inventory ↓ $10+mm
- So California fluids/chemicals inventory ↓$1+mm

INVENTORY REDUCTION: $75+MM

Overview: A global drilling fluids company was feeling the pressure of strong revenue and margin growth, but poor cash flow to its shareholders and constituents.

The Business Case established was to evaluate global, regional and local supply chain strategies to determine effectiveness of materials and inventory strategies.

Local supply chain analysis resulted in opportunities in local warehouse (bags, sacks, drums and totes) and rigsite inventory levels (excess supply, excess returns, obsolete product). Evaluation of fluids and liquid mud resulted in opportunities in (offshore) consigned fluids, weighted (fluids) returns, and underutilization of existing weighted and blended fluids.

In each case, materials management and inventory strategies were evaluated and restructured to refine approaches for a) low, slow and/or contingent materials, b) high moving materials, and c) drilling fluids returns (high volume, weighted fluids). Regions impacted included land (Rockies, Canada, Southern California, Kazakhstan, Europe) and offshore (US Gulf, Canada, North Sea, Nigeria, Caspian) operations.

Baseline data:

- Company wide *inventory* >$1.2billion
- Warehouse Inventory turns (avg) <3.5
- Drilling Fluids inventory (>$200+mm)
- $95+mm in consigned fluids (offshore, synthetics)
- Oversupply of weighted mud in liquid mud plants due to large returns and growth of offshore business

Project overview: The project evaluated *utilization* of inventory in (3) separate categories: Type I (top 80% of sales/consumption), Type II (next 15% of sales/consumption and Type III (last 5% of sales/consumption). In all land warehouse operations, type III inventory (<5% of total sales) represented between 44%-72% of total inventory dollars. Changing inventory strategies, replenishment systems and/or adjusting key trigger points for Type III items enabled each location to free up 60+% of type III inventory $ (28-45% of total inventory dollars). Reviewing criteria for offshore consignment, combined with better timing and coordination of offshore deliveries resulted in *customers* approving a30+% reduction in consignment fluids.

New approaches to handling of weighted returns (i.e. centrifuge of returns to create "Spike" fluid + "low weight" fluid) reduced need for new base fluids and new chemicals (i.e. ↓ Inventory). "Spike" fluids enabled higher margins (fluids vs chemical sales)

Results:

- $29+mm reduction in consigned fluids
- $22+mm reduction in warehouse inventory (-32%)
- $18+mm reduction in weighted fluids (returns)
- Inventory turns 8+
- Increased margins 11%
- Reduced mud mixing times 28+% (↑ Capacity)