

## SupaVac™ SV400 Pumping System

### Challenge

Vacuum systems are used extensively in drilling operations to transfer and collect both liquids and drill cuttings. In areas where environmental regulations prohibit discharging or dumping waste material, it must be properly handled and contained at the rigsite until the collected material can be transported to a treatment area. Operators seek an environmentally compliant solution to effectively transfer drilling associated waste while helping ensure optimal HSE performance.

### Overview

Halliburton Baroid improves the process associated with cuttings transfer from offshore and onshore locations with the automated SupaVac™ 400 cuttings collection and pumping system. The system pneumatically conveys materials such as drill cuttings, tank bottoms, heavy crude sludge and sand slurries to any location on the rig site, or to Halliburton Baroid's HCB™ tanks on a boat for ship to shore transfer. The unit is applicable for all types of contaminated cuttings, both wet and dry.

The SupaVac SV400 unit is the most compact and versatile air-operated vacuum/blower unit in the oil industry. The unit is highly portable and can be installed anywhere on the rig without modifications.

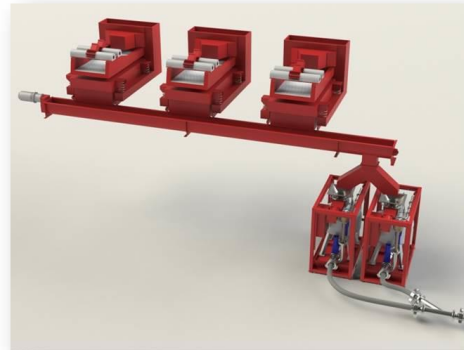
This robust system is designed to operate in hazardous locations, safely collecting and pumping materials. Drill cuttings discharged by the rig solids control equipment are collected from the shale shakers and centrifuges and fed into a feed hopper situated close to the primary SupaVac units, either directly or via an auger system. To introduce feed the unit, the SupaVac system can operate on suction mode or be gravity fed like traditional vacuum blowers. Further versatility allows the unit to be placed directly underneath the solids control discharges and gravity fed during higher ROP drilling operations. Cuttings move through the air-operated system entirely enclosed, eliminating the risk of spills and helps ensure minimal Non-Productive Time (NPT).

The SupaVac SV400 unit is flexible, easy to install and does not require any major rig modifications. The system is fully pneumatically operated and contains no electrical components. It is intrinsically safe and can be placed almost anywhere on the rig including hazardous zones.

### Benefits and Features

To deliver a totally customized cuttings handling and transport solution to you, our equipment is designed in a modular format enabling the implementation of unique configurations that fit a wide range of operating locations. Baroid's SupaVac™ SV400 pumping system can simply and safely transfer bulk cuttings and other oilfield wastes.

- Modular design offers a highly portable system that can also be installed permanently
- Automatic or manual operations
- Easy to install, does not require major rig modifications to install system
- High Capacity unit with high vacuum and airflow for movement of difficult materials
- Improved HSE, unit has no electrical components or moving parts in contact with material being pumped
- Increased capability, unit can handle particle sizes up to 3 inches (80 mm) and pump cuttings, sludges, slurries and brines



*Baroid's SupaVac™ SV400 units can easily be installed with no rig modifications.*

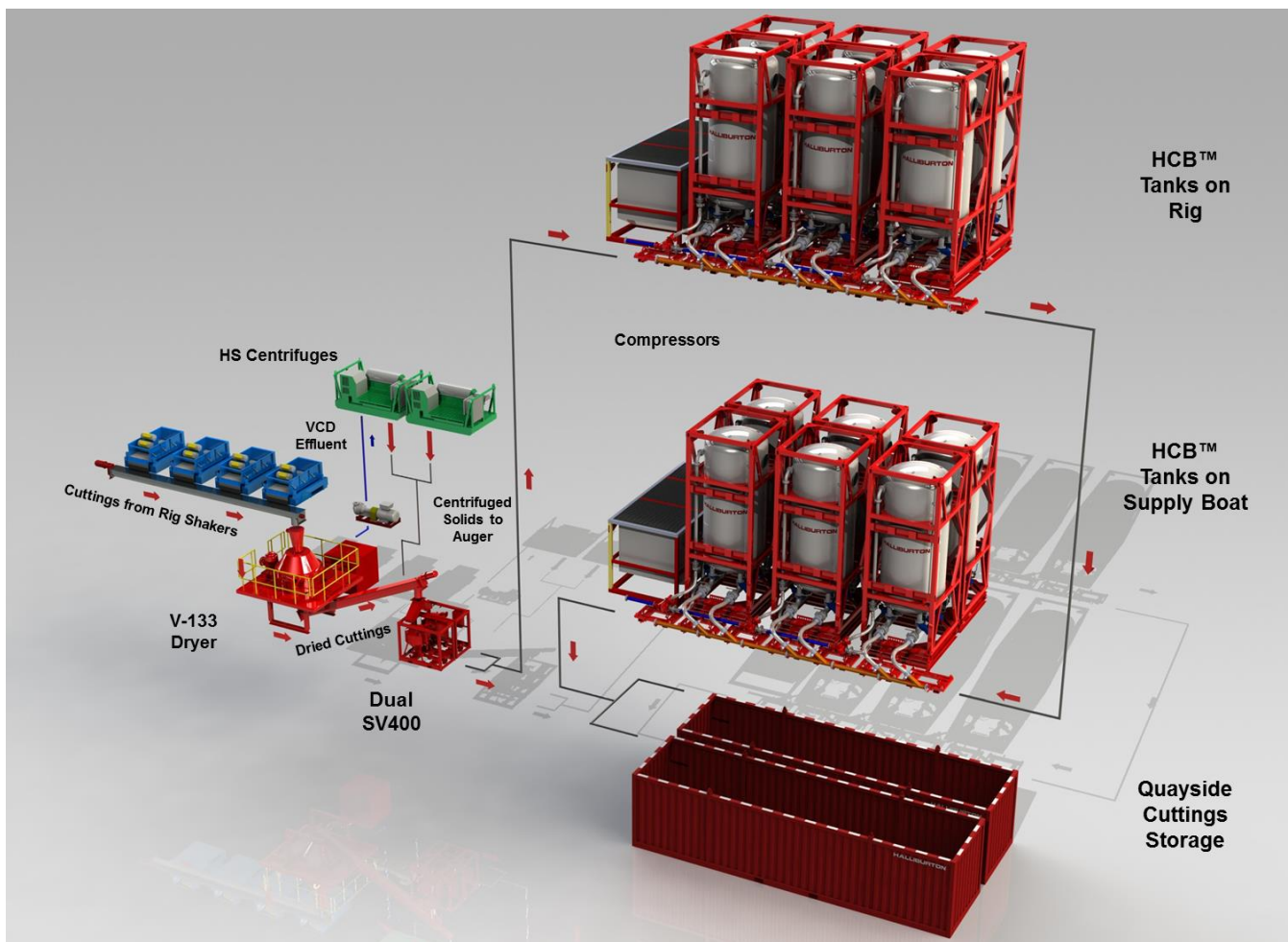
**Conclusion**

Before deploying manpower and equipment, Baroid carefully plans the waste management solution according to local conditions, to help maximize drilling efficiency, ensure sustainability and meet or exceed safety and environmental standards. By adhering to our mainstay processes; deploying the right technology; and integrating people and processes, we are able to help improve drilling performance and avoid NPT.

Our proprietary SupaVac™ vacuum transfer systems are used in conjunction with HCB™ tanks to help reduce risk and increase efficiency in bulk transfer.

This combination of applications makes the SupaVac cuttings transport system the most versatile and unique system available to the drilling industry today. Also, this combination helps to reduce, or remove totally, the need for a crane to lift large numbers of small cuttings skips/containers in order to load them on board a transportation vessel.

The volumes of drilling fluids that can be salvaged around the drilling operation by vacuum systems can quickly cover the cost of these systems, as well as help ensure the operator’s environmental compliance and reduce the chances of unplanned discharges of fluids by quickly cleaning up any spills.



*SupaVac™ System Layout*

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