



**CHRISTOHOUSTON ENERGY INC.**

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## **CHE SURFACE PRODUCTION FACILITY BROCHURE**

### **DESIGN, FABRICATION AND MAINTENANCE OF SURFACE EQUIPMENT:**

The company's aim is to offer an integrated service that, by starting from the analysis phase, develops an on-site maintenance and management design capable to optimize plant production.

**We are dedicated to planning and managing the operation and maintenance of oil and gas plants to ensure that safe operational performance is optimized, that availability is maximized and that cost is minimized.**



**ChristoHouston Energy Limited**

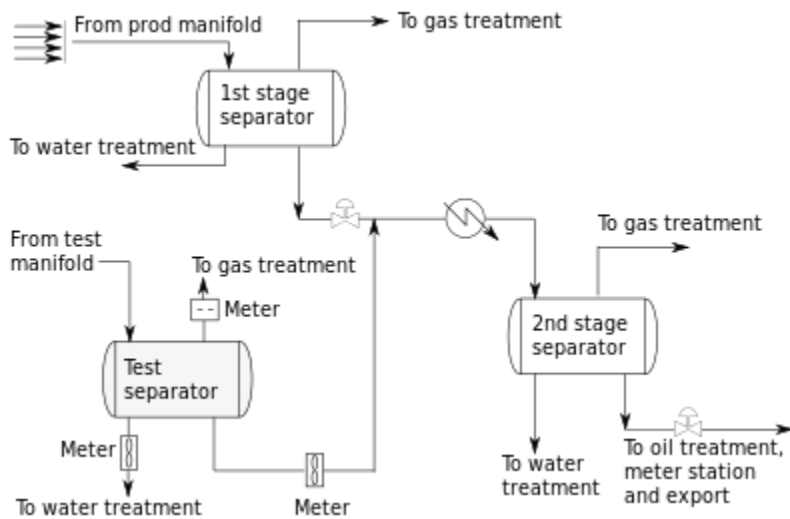
No 30 Bourdillon Road Ikoyi Lagos Nigeria, Ph: 234 908-206-5651

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In short, we are specialized in maintaining our clients' production facilities so that they do what they should at minimum cost while upholding the highest safety and environment standards in the industry.

Our thorough knowledge of all the major types of oil and gas plant, equipment and components means that otherwise disparate and specific maintenance activities can be consolidated, coordinated and managed by a trusted independent partner.



**30"OD X 10' L X 1440 PSI 3 PH Horizontal Production Separator**

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## A comprehensive, specialized activity

Operation & Maintenance services

Is a comprehensive, specialized activity that starts with understanding the plant and its processes, together with the objectives of the owner. Effective maintenance increases the 'up-time' of the facilities – the time the plant is available for production. In addition to increasing operating revenue, professional maintenance also extends the productive lifetime of the assets, resulting in a reduction in the clients' capital expenditure as well as environmental risks.

**For plant owners, CHE's Integrated Operation and Maintenance concept:**

- Reduces exposure in remote regions.
- Significantly reduces management time input.
- Allows for a multi-level independent maintenance review, followed by clear interfaces between CHE management and the client:
  - Procedures and manuals are written by CHE and validated by the client.
  - The client supplies standard technical specifications.
  - In turn, CHE reviews and updates technical documentation before the contract documents are prepared and signed.
  - As CHE starts the implementation of the scope of work, it is the client who audits our performance.
  - CHE writes reports on the technical and contractual aspects of the project, allowing the client to analyze the results of its work.



**36"OD X 15' L X 1440 PSI Production Separator**

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**CHE's IOM concept is based on partnership principles.**

**These include:**

- An integrated project team, comprising both CHE and client personnel.
- An incentive scheme to align the objectives of CHE and its client, including:
  - HSEQ management.
  - Reliability and availability.
  - Plant integrity.
  - Production objectives.
  - cost reduction.



**54"OD X 15' L X 285 PSI 3 PH Horizontal Production Separator**

## **Production Separators:**

CHE Production Service dedicates ourselves to satisfying the needs of our customers with manufacturing units that endure the harshness of the industry. CHE understands that every separation process is critical to the success of each job. This is why we offer a range of production separators suitable for each job you may have. We offer 2 and 3 phase separators, vertical and horizontal, and any sizes you may need. We can add a mud bucket to blow down solids. All of our separators are high pressure and are guaranteed to get the job done with high efficiency in production.

All of our units come with an As Built Data Book for your convenience that will contain all components of the vessel built and with all tests and certifications.

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**Financial Benefits**

- Sustained reduction of OPEX in a very short period of time.
- Spare parts optimization.
- Independent interface between OEM and client will save time and money.
- Dramatically reduced expatriate costs.
- Longer asset life, leading to postponed decommissioning costs



**HRM Benefits**

- Flexibility.
- Improved utilization of own client's own personnel resources.
- Increased safety.
- Fewer human resource issues.

**48"OD X 10' L X 2160 PSI 3 PH Horizontal Test Separator**



**30"OD X 10' L X 2160 PSI 3 PH Horizontal Test Separator**

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## **Test Separators**

CHE Production Service offers custom test separators that have a vigorous construction and deliver flexibility to oil production. Our test separators function in a comparable manner as other separators function. When the vessel is full and steady conditions are attained, gas, oil, and condensate separate. After this is done, the water and oil rates can then be precisely measured.

The units can be skid or trailer-mounted, and can also be equipped ready to use, with all appropriate controls and piping. Mud buckets can be added for solids blown down. Units that are used in the Northern States come equipped with winterized housing, ensuring no freeze ups.

All of our units come with an As Built Data Book for your convenience that will contain all components of the vessel built and with all tests and certifications.

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**24"OD X 10' L X 10000 PSI**

## **Sand Separators**

Sand Separators have been utilized for a long time to remove solids, such as sand or silt, from the well stream. This is a highly common piece of equipment used in oil production. They require good architecture and a vigorous construction. The sand separators

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manufactured by CHE Production Service are top of the line and are designed and fabricated with trouble free service in mind, as well as maximum working ability ensured. This is why CHE sand separators have a diverter inlet and screen outlet. (Most sand separators only have a divider plate internally.) These are removable and can be replaced without cutting the vessel. The inlet spins the incoming product and drops the sand down. Our sand separators can be built in 3, 5, 10, or 15K.

All of our units come with an As Built Data Book for your convenience.



**1.5 MM BTU Line Heater**

### Line Heaters

CHE Production Service is a leading manufacturer of custom line heaters. Line heaters offer a diversity of applications. They range from the heating of natural gas to the heating of sour crude. They deliver a reliable resource in processing petroleum products.

All of our units come with an As Built Data Book for your convenience.



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### **Water Knockouts:**

Water Knockouts are critically important to effectively separate oil, water, and gas. CHE Production Service manufactures and designs water knockouts that are effective and efficient to get the job done with the best results. Each unit consists of vertical or horizontal vessels that enable the separation procedure. Retention time throughout separation is a critical issue, as are other aspects for example the density differentials between liquids and the temperature at which they are flowing. During this process, the water is removed and discarded into a waste water disposal unit or storage tank, then the oil or gas is re-combined.

All of CHE Production Service units are top of the line and are designed and fabricated with trouble free service in mind, as well as maximum working ability ensured.

**54"OD X 15' L X 250 PSI Horizontal Water Knockout**

### **Dehydration Units:**

CHE Production Service manufactures custom dehydration units. These units efficiently remove water vapor from natural gas and oil. These units include a tower, regenerator, pumps, heat exchanger, filters, and a scrubber/separator assembly. All of these apparatuses, except the towers, are all assembled on one skid, and include all piping and instrumentation. The towers are installed on location.

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### **Surge Tanks:**

CHE Production Service is a custom manufacturer of surge tanks. Surge tanks are placed in a flow line so that liquids or gases are flowed to counteract abrupt pressure surges.

**72"OD X 20' L X 250 PSI Vertical Surge Tank**

### **Optimum performance at minimum cost:**

As the market leader, we maintain an installed base of tens of thousands of different pieces of equipment and parts, for all production facility components, in multiple configurations. The equipment and parts are suitable for the extremes of environment in which we work, from the Arctic to the Tropics, and from arid deserts to humid rainforests. Similarly, we have accumulated a wealth of experience concerning the effects on plant, equipment and parts of the variety of products processed, from aggressive high-acid oil to sulphur gas. All this information is continuously analyzed and applied in the Integrated Operation & Maintenance of our clients' extremely valuable assets, ensuring the optimum performance of their facilities at minimum costs.

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