

GENESIS OILFIELD LOGISTICS BASE DEVELOPMENT NEWS



ISSUE 2: 27 JUNE 2013

GENESIS OILFIELD LOGISTICS BASE

Welcome to the second issue of '*Oilfield Logistics Base—Development News*', the newsletter that keeps you up to date with everything that is going on with the development of Genesis' onshore logistics facility at our site in Takoradi.

Within this issue, we will be looking at the next stage of the construction process, which involves laying the foundations for the new facility, building the drainage system, and installing the culvert crossing at the site entrance—all of this being done to an HSE standard in line with internationally accepted best practice.

Laying The Foundations ...



PIC 1: EARTHWORKS TO STABILIZE THE SITE BY EXCAVATING UNSUITABLE SOIL IN PREPARATION FOR LAYING OF SUB-BASE



PIC 2: FILLING AND COMPACTING LOW WATERCOURSE AREAS WITH GRANULAR HARD-CORE MATERIAL

Given the intention to use the site as a logistics facility for oilfield equipment such as OCTG casing and tubing, it is crucial that the foundations for the site are properly laid. So one of the major aspects of construction during June has been the site stabilization earthworks, which commenced once the top-soil had been stripped and the vegetative layer cleared.

Next was to begin what civil engineers refer to as “cut and fill” work. “Cutting”

involves excavating unsuitable (clayey) soil and high-lying areas in order to achieve a more even level across the entire site.

“Filling”, on the other hand, refers to the laying of more suitable material in order to raise the height of low-lying areas across the site.

In terms of quality control, the contractor and Project Manager both kept a strong focus on when and how the fill material was placed. The site stabilization earthworks have been completed successfully, and “cut and fill” work is underway.

Building the Drainage System ...

Another major work item completed during June was the construction of the drainage channels for the site. This involved building a “U-drain” across the front of the site which would join the major earth drain running across the eastern border of the site.



PIC 3: FRONT DRAIN EXCAVATED WITH SIDES BEVELED

For a site of this size (20 acres or 81,000m²) it goes without saying that the drainage system needs to be very well built from the onset. To ensure this, the areas earmarked for the drainage ditches

were re-surveyed in order to establish the appropriate “levels” and slopes before any excavation commenced. With the drainage channels having been fully excavated according to the survey results, work is ongoing to complete the concrete base (and cemented sides) of the drainage channels before month-end.



PIC 4: EXCAVATION OF DRAINAGE DITCH ON THE EAST SIDE OF THE SITE

HIGHLIGHTS

- ◆ Construction work continues to progress in line with schedule
- ◆ Major Upcoming Work Item(s):
 - ◆ Major “cut and fill” site work
 - ◆ Installation of culvert crossing at entrance
- ◆ Improved HSE Performance, in line with internationally accepted best practice

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Pictures are worth a thousand words ...

“WHEN NOTHING SEEMS TO HELP, I LOOK AT A STONECUTTER HAMMERING AWAY AT HIS ROCK, PERHAPS A HUNDRED TIMES WITHOUT AS MUCH AS A CRACK SHOWING IN IT. YET AT THE HUNDRED AND FIRST BLOW IT WILL SPLIT IN TWO, AND I KNOW IT WAS NOT THAT BLOW THAT DID IT, BUT ALL THAT HAD GONE BEFORE.”

GREG POPOVICH



PIC 5: EARTHWORKS AND SOIL STABILIZATION CONTINUES



PIC 7: FILLING AND COMPACTING WATERCOURSE AREAS



PIC 6: TECHNICAL CONSULTANT (CONTI GHANA) SUPERVISING A CLIENT SITE VISIT



PIC 8: EQUIPMENT MOBILIZED FOR EARTHWORKS

Installing the Culvert Crossing ...

With the drainage system including a “U-drain” across the front of the site, the design engineers have incorporated a reinforced concrete culvert crossing at the front entrance to allow access to the site.

In terms of sequencing, the construction of the culvert will proceed as follows alongside other work items during the month of July:

- Step1: laying a 25cm concrete foundation along the section of the U-drain on which the culvert will rest
- Step 2: placing pre-cast reinforced concrete pipes on the concrete foundation
- Step 3: Installation of timber formwork and steel reinforcements around the concrete pipes
- Step 4: Pouring concrete around the pipes to finish the culvert, and curing the concrete for a fortnight before use.

Things you might not have known about Cement and Concrete

Although the terms cement and concrete are often used interchangeably, cement is, in fact, an ingredient of concrete. Concrete is basically a

mixture of cement plus other hydraulic binders, water, air, coarse aggregates (gravel or crushed stone), fine aggregates (sand), and in some applications, reinforcement bars, wires and fibres or pigments are added.

Cement, or other hydraulic binders, comprises 10 to 15 percent of the concrete mix, by mass. Through a process called hydration, the cement combines with water, hardening and binding the aggregates into a rocklike mass. In principle, this hardening process continues indefinitely, meaning that concrete gets stronger with age.

Concrete is also environmentally sustainable, with green credentials that outperform both steel and timber.



PIC 9: INSTALLATION OF CULVERT CROSSING AT THE FRONT ENTRANCE OF THE SITE

Pictures are worth a thousand words (cont'd) ...



PIC 10: SIGNAGE ON THE OUTSIDE OF THE FACILITY



PIC 11: TIPPER TRUCK REMOVING EXCAVATED MATERIAL FROM THE SITE

Improving HSE Performance ...

Reflecting the priority that Health, Safety and the Environment takes in Genesis' operations, the development team have outlined a clear HSE policy and manual for the project, which is in line with the company's broader HSE policy.

The contractor continues to make Health and Safety a priority. Communication with Genesis' development team around site safety and environmental protection remains strong, the aim of this being to ensure that the construction and commissioning of the *Oilfield Logistics Base* is safe and injury free.

On site, the following processes are in place to safeguard the project's overall HSE performance:

- Daily HSE briefings to increase awareness of site workers
- Rigorous enforcement of site safety rules, including with regards to the use of Personal Protective Equipment (PPE) at all times
- Safety signs put up across the site
- Weekly HSE reporting, documenting any breaches, near misses and/or accidents.



PIC 12: SITE SAFETY SIGNS HAVE BEEN PUT UP ACROSS THE ENTIRE SITE TO ENSURE THAT WORKERS AND VISITORS HAVE A VISUAL REMINDER OF SAFETY RULES DURING CONSTRUCTION

In June, the project achieved satisfactory HSE performance, as shown by the following indicators:

- Safety Observations: 1
- Near Misses: 2
- Injuries: 0



PIC 13: SILK COTTON TREE PRE-SERVED DURING THE EARTHWORKS

Carbon Footprint

We are under no illusions that to completely replace our carbon footprint we would need to plant at least a forest or two due to the amount of concrete we will be laying for the development. However, we are committed to offsetting this to some extent.

Therefore, the site plan has taken this into consideration and new tree lines will be planted to surround the site. Also, wherever possible the construction team is avoiding the clearing of certain old trees—such as the Silk Cotton tree shown in the picture above. The Silk Cotton tree is one of the tallest variety in western Africa, easily reaching 130 feet high or more.

“SAFETY DOESN'T HAPPEN BY ACCIDENT. EACH MEMBER OF THE CONSTRUCTION TEAM HAS A DAY-TO-DAY RESPONSIBILITY TO ENSURE THAT WORK AT THE SITE IS PERFORMED AT AN HSE STANDARD IN LINE WITH INTERNATIONALLY ACCEPTED BEST PRACTICE FOR THE OIL AND GAS INDUSTRY.”

FREDA SAM-JONES

(CONSILIUM HSE COORDINATOR)

GENESIS OIL AND GAS SERVICES

Genesis Oil and Gas Services Limited (“Genesis”) is a wholly Ghanaian owned oilfield services company that is focused on delivering world class oil & gas logistics services and infrastructure across West Africa, with Ghana being our first geographical focal point. At Genesis, our people are focused on ensuring that our clients and partners benefit from an unrivalled services package that includes:

- *World class infrastructure and logistics facilities, both physical and “soft”, for companies involved in all aspects of the oil and gas industry*
- *Sound technical capacity within all of our four key business lines:*
 - *Logistics*
 - *Oil Country Tubular Goods—in partnership with Vallourec & Mannesmann Tubes (“Vallourec” or “V&M”)*
 - *Offshore Marine Services*
 - *Engineering & Fabrication*
- *Excellent in-house understanding of the business environment in Ghana and West Africa, as well as the legal and regulatory landscape in the region*
- *Deep network within the energy sector in Ghana, as well as West Africa*

“It is our goal and driving ambition to be the trusted partner of choice for energy companies that are committed to harnessing Ghana’s hydrocarbon potential.”



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