Opportunities for the Surveying Practice in the Oil and Gas Sector Post FID

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Tilenga Overview

Tilenga project is key part of Uganda’s Lake Albert Oil & Gas Development

- A development on Contract Area-1 and Licence Area-2 North; In Buliisa and Nwoya Districts
- 31 well pads: 10 North of Nile + 21 South
- 426 Development wells (OP/WI/OBS)
  - 3 Rigs (1 North Nile / 2 South Nile)
- Under Nile crossing (HDD, 1.5 Km) and other onland flowlines
- Industrial Area
  - Central Processing Facility
    - 204 kbopd capacity and Liquid: 710 kbpd
    - 100% of Produced Water reinjected.
    - Connected to the Electricity Grid
    - 40-80 kT/y LPG recovery plant
  - Operator and drilling Support bases
- Lake water abstraction facility
- Feederline 95 km x 24” - EHT Feeder Line exporting to Kabaale Delivery Point, Hoima
- Strong Environmental & Social constraints
a) Achievements Pre-FID

A lot of surveying work done pre-FID, during exploration, appraisal and project de-risking.

Examples ,
- Geodetic network establishment (MBW Consulting, 2012)
- Land acquisition / Cadastral surveying – with RAP, land tenancy work since 2012 to date (Survesis, Newplan, ATACAMA, etc)
- Engineering surveying – during civil construction explo wellpads, social investment projects, access temporary roads, etc (MBW, Pearl, SLL, Excel, KNWI, etc)
- Bathymetric surveying – e.g Lake Albert (Tullow-Gardline, 2017), Nile crossing/Teclab
- Drone Aerial Surveying (Photogrammetry and remote sensing) – e.g Yamasec
- Topographic surveying – during most civil works since inception to date
- Quantity Surveying – material estimation during construction (Resettlement housing)
- LiDAR Survey; covering Tilenga and EACOP (Furgo Geoid., 2013 & 2017)
Opportunities for the Surveying Practice on Tilenga

b) Post-FID opportunities

1- Enabling Infrastructure

- Topographic surveying – happening now during civil works for CFT 1, 2, 3 and 4, until 2022/3
- Engineering surveying – during civil works for construction, earth works etc
- Road surveys
- Quantity Surveying – in house or 3rd Party
- Valuation surveying: access to sites valuation surveys (ongoing, ATACAMA Consulting)
- GIS (inhouse or outsource)

- Example of Surveying Companies involved:
  - ZWE Consulting
  - Spot surveyors
  - Yamasec Ltd (Drones)

- Construction Companies involved:
  - Mota-Engil Uganda
  - Pearl Engineering
  - Terrain /Excel
  - Gauff Consultants
b) Post-FID opportunities
2- Surface facilities

- A Consortium comprising CB&I UK Limited (a McDermott Company) and Sinopec International Petroleum Service Corporation (SINOPEC) is responsible for the Engineering, Procurement, Supply, Construction and Commissioning (EPSCC) of the Central Processing Facility (CPF), flowlines, and other associated surface facilities.

- The EPSCC is largely a lumpsum contract. McDermott/Sinopec have several opportunities for Engineering surveyors and Quantity surveyors which are under procurement (including being advertised where applicable). The procurement and subcontracting process is managed directly by the EPSCC contractor. It is McDermott/Sinopec and their subcontractors that shall engage any survey service providers and not TotalEnergies.

  - Engineering surveying:
    - Building surveying at the CPF, including Yard and bases constructions
    - Interconnecting flowlines
    - Topographic surveys for Pipeline and construction surveys
    - As-built surveys etc
    - Bathy surveys at Lake water abstraction

  - Quantity Surveying – e.g EPSCC is already subcontracting these services; Other Tier-1 contractors shall also need these services – inhouse or outsourced to 3rd-party.

  - GIS

Typical CPF Construction

Typical Flowlines Construction

Typical Wellpads Construction
Concluding Remarks

Important to note

- Surveying services is ring fenced for local service providers
- NSD registration is a MUST to offer such services
- Be on the look out for opportunities with ESPCC Contractors and their subcontractors
- TotalEnergies is not directly contracting surveying services

Future opportunities (monitoring surveys)

- Monitoring surveys post commissioning (2025 onwards)

End.