Improve Soku Metering Reliability from current status to 90% by October 2020

Soku gas plant metering system has been plagued with a lot of reliabilities issues ranging from equipment failure, inadequate vendor support due to equipment obsolesce, passing valves etc.

This has mostly led to inadequate oil and gas measurements, unavailability of gas composition, inaccurate dew point measurement, inaccurate or no online water cut determination, inability to carry out safe meter validation and incorrect flared gas measurement. This has led to Production Loss due to inaccurate meter measurement, heavy reliance on manual sampling with the attendant risks of errors, financial losses for pipeline repairs etc.

The objective of this initiative is to identify all teething challenges that are the causes of low reliability of the gas plant volumetric and qualitative metering measurements and develop actions plan for replacing and/or revamping faulty equipment.

The intent is to achieve 95% reliability and restoration of redundancy in some instances.

Potential Benefits & Measurement:

1. Real time water cut measurements thereby eliminating manual sampling and taking full value for exported product

2. Achieve good quantity and financial value of oil and gas exported to third party

3. Ease to carry out monthly meter re-validation/Calibration exercises

4. Determine real time export Gas composition.

Material gain;

1. Cost of repairing pipeline >1M USDdue to corrosion

2. Gain 20 Mmscfd day by resolving discrepancy between GTS1 and EGGS1 metering

3. A 1% gain in BS&W from accurate measurement amounts to gain of about 250Bbld of oil/condensate

4. Achieve redundancy in GTS1 metering by replacing/repairing DOF and avoid production loss of about 300Mmscfd

5. Replacement of GC for accurate gas composition measurement assures correct energy value is billed to the customer. Our current calculated BTU is 1092/SCF of gas. A BTU of natural gas is about 2.7 USD. A 1BTU/day gain from accurate composition measurement will amount to a gain of about 1755 USD base on current gas production of 650Mmscfd.