

- Appendix 2 to Exhibit F -

Value Adjustment Procedure

PROCEDURE FOR ESTABLISHING DATA FOR THE VALUE ADJUSTMENT

The Parties have agreed that a synthetic assay will be used for the application of Exhibit F to the Agreement.

The following procedure will be used to establish a synthetic assay and to establish a “dead sample” of each Field’s Crude Oil for use in Exhibit F to the Agreement.

1. YIELDS

| | |
|--|----------------|
| - C ₁ – C ₄ (Y _{C₁-C₄} %) | Light Ends |
| - C ₅ – 180°C (Y _{Naphtha} %) | Naphtha |
| - 180°C - 260°C (Y _{Kerosene} %) | Kerosene |
| - 260°C - 370°C (Y _{Gas oil} %) | Gas oil |
| - 370°C - 535°C (Y _{Vacuum Gas oil} %) | Vacuum gas oil |
| - 535°C + (Y _{Vacuum Residue}) | Vacuum Residue |

C₄- content and Naphtha yields shall be established from the data in the Allocation Procedure and calculated as the allocated mass of C₁-C₄ and Naphtha, respectively, in proportion to the allocated total mass of Components;

$$Y_{C1-nC4}\% = \frac{\sum_{c=C1}^{c=nC4} AM_{E,CO,c}}{\sum_{c=C1}^{c=C12+} AM_{E,CO,C,,dry}} * 100\%$$

$$Y_{Naphtha}\% = \frac{AM_{E,Naphtha}}{\sum_{c=C1}^{c=C12+} AM_{E,CO,C,,dry}} * 100\%$$

$$AM_{E,Naphtha} = F_{C11-Naphtha} * AM_{E,CO,C11} + \sum_{c=C5}^{c=C10} AM_{E,CO,c}$$

where

AM_E is the allocated mass of Components to each Entrant

F_{C11-Naphtha} is proportional mass of Naphtha in the total mass of C₁₁

Kerosene, gas oil, Vacuum Gas oil and Vacuum Residue yields and

Kerosene Density at 15°C (ρ_{Kero})

Gas oil Density at 15°C (ρ_{Gas oil})

Vacuum Residue weight per cent sulphur (S_{Residue})

Vacuum Residue viscosity (V_{Residue})

are established from sampling of “dead crude oil samples” i.e. stabilised Crude Petroleum taken for each Entrant on the Gorm “E” Platform.

Collection of “dead crude oil sample” at the Gorm “E” Platform:

- a. A sample of minimum ten (10) litres of each Entrant’s Crude Petroleum will be collected from a fast loop sample point immediately downstream the export pumps.
- b. The sample shall be flashed to atmospheric conditions on the Gorm “E” Platform to create the “dead crude oil Sample” from each Entrant.
- c. The sample shall be transported in approved sample can(s) to the onshore approved laboratory.
- d. The Sample shall be collected as average over the Month for which it is to be applied.

2. SULPHUR

The analysis of sulphur shall be established from the additional sampling requirements re “dead crude oil samples” i.e. stabilised crude oil taken for each Entrant on the Gorm “E” Platform.

3. VISCOSITY AT 50°C

The analysis of viscosity shall be established from the additional sampling requirements re “dead crude oil samples” i.e. stabilised crude oil for each Entrant on the Gorm “E” Platform.

4. CRUDE OIL DENSITY

It is not possible by sampling and analyses to determine the density of each Entrant’s Allocated Crude Oil due to the commingling of Crude Petroleum of different qualities. Hence, the density of each Entrant’s Allocated Crude Oil shall be determined by a best approximation based on analyses of Crude Petroleum samples on Gorm “E” Platform and the allocated Components as determined under the Allocation Procedure, Exhibit G to the Agreement.

Determination of each Entrant’s Allocated Crude Oil density shall be determined from analysis (density and composition) obtained from the Monthly sample of the Entrant’s Crude Petroleum at the Delivery Point on the Gorm “E” Platform and taking into account the quantity of water separated from the dewatering facilities and the Degassing Facilities as well as the C₁-C₅ Components removed as Fuel Gas, Propane, and Butane from the Crude Petroleum in proportion to the total mass of the Components removed from the Crude Petroleum (Fuel Gas, Propane and Butane (only H₂O, CO₂ and C₁ – C₅) and Crude Oil).

The conversion from mass to volume for water and the Components CO₂ and C₁-C₅ in Allocated Crude Oil, shall be determined from agreed standard Density values. The density of water will be measured after separation and immediately the dewatering facilities and the Degassing Facilities.

For any Entrant the calculated density for Allocated Crude Oil shall be calculated from;

$$D_{ACO} = \left((Frac, AM_{crude\ pet} * D_{crude\ pet, wet, d}) - (Frac, AM_{H2O, rem} * D_{H2O} + Frac, AM_{CO2, rem} * SD_{CO2} + Frac, AM_{C1, rem} * SD_{C1} + Frac, AM_{C2, rem} * SD_{C2} + Frac, AM_{C3, rem} * SD_{C3} + Frac, AM_{iC4, rem} * SD_{iC4} + Frac, AM_{nC4, rem} * SD_{nC4} + Frac, AM_{iC5, rem} * SD_{iC5} + Frac, AM_{nC5, rem} * SD_{nC5}) \right) / Frac, AM_{ACO}$$

where

SD_c = Standard Density from HYSYS

$Frac, AM_{crude\ pet}$ = Mass fraction of Crude Petroleum

$Frac, AM_{c, rem}$ = Mass fraction of allocated Components in Fuel Gas, Propane and Butane removed from Crude Petroleum

$Frac, AM_{c, ACO}$ = Mass fraction of Allocated Crude Oil

Further adjustments may be performed depending on the need to match the appropriate volume unit.

For any Entrant the inverse density of Allocated Crude Oil can then be calculated as: $= \frac{1}{density}$ however, subject to mutual agreement between Transporter and Producers and Other Producers.

When calculating the inverse density, both temperature and volume shall be aligned in accordance with ASTM D1250.