



## **MANGALA DEVELOPMENT PIPELINE OPERATIONS**

### **PROCEDURE FOR CALCULATING PILOTAGE CHARGES OF BHOGAT SPM TANKER OPERATIONS**

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## 1.0 BACKGROUND

Tanker loading operation from Bhogat SPM involves deployment of external resources like vessels, dive manpower etc. Few of these resources are call-out based/ continuously deployed and exclusive for tanker operations while few others are continuously deployed but not exclusive to tanker operations. As per the agreement with Crude oil Buyers, cost incurred by Cairn for carrying out tanker loading operation (Pilotage Charges) are reimbursable based on conditions stipulated.

This procedure sets out a clear set of guidelines in arriving at the per tanker operation cost from Bhogat SPM for invoicing buyers along with review and approval mechanism.

The applicability of this document shall be effective from succeeding financial year.

## 2.0 RESOURCES INVOLVED

Following resources are deployed at Bhogat SPM who involve in the tanker operations along with the type of deployment:

S. No.	Description of Services	Continuous	Callout
1	Vessel - Pull Back Tug	√	
2	Mooring Masters		√
3	Vessel - Service Boat	√	
4	Dive Spread – Personnel & Equipments	√	

Note: Fuel for vessels are being procured based on the field consumption. Lodging and Boarding for dive team, mooring masters are being provided from maintenance vessel which was deployed for maintenance of SPM.

## 3.0 CALCULATION OF AVERAGE PILOTAGE COST PER TANKER OPERATION

The average pilotage cost per tanker operation is prepared at the beginning of every financial year by the operations finance team as shown below which shall be used by the Sales team for invoicing the buyer.

Service Description	UoM	Qty (A)	Unit Rate (B)	Sub-Total
Pull Back Tug	Days	365 / No of Tanker operation as per GOI nomination	Day rate as per ongoing contract.	A x B
Mooring Master services	LS	1.00	LS rate as per ongoing contract	A X B
Service Boat	Days	5.00	Day rate as per ongoing contract	A X B

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Dive/Maintenance Team & dive/maintenance equipment's	Days	5.00	Day rate as per ongoing contract	A X B
Lodging/Boarding Charges	EA	60	Unit rates as per ongoing support vessel contract	A X B
Fuel	KL	476.5 (1.2 KL/Day X 365) +(0.35KL/DayX5XNo of Tanker Operations Planned)	Fuel price as per actual purchase price.	A X B
Expenses of port charges, vessel inspection and bunker supply survey of pull back tug	LS	At actuals	At actuals submission of invoices from respective services	LS

The above calculation shall be reviewed and approved by VP - Finance and shall be used by Sales team for billing the Buyer. The minimum of above calculation or the max pilotage charges agreed with the Buyer (term sheet) shall be used for billing the buyer.

#### 4.0 RECONCILIATION CALCULATIONS

Reconciliation of pilotage charges shall be carried out by the operations finance team for the previous financial year in the succeeding year on the actual cost booking as per the resource wise calculation shown below:

##### 4.1 Vessel – Pullback Tug

Pullback tug is exclusively being used for carrying out the tanker mooring/ un-mooring, berthing/ un-berthing and holding the tanker in its position during loading operations. It is deployed continuously at Bhogat SPM, or Port anchorage based on weather conditions. And also used for transporting mooring master/ Asst. Mooring master, crew & materials as and when required from the nearby port. The charges for pull-back tug are on per-day basis and paid for the entire given month. Considering the above, following methodology shall be adopted for arriving at per tanker operating cost of Pull back tug:

Pullback Tug Operation Cost per tanker operation (INR) **(A)** = Day rate of Pullback Tug as per ongoing contract x (Actual number of days tugs deployed / Total no. of tanker operations in the given financial year) + (Mobilization or Demobilization charges / Total no. of tanker operations in the given financial year).

In case of monsoon operations additional tug may be required to deployed based on the weather conditions / company discretion. The additional charges calculation for the same will be as per methodology stated above only.

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#### 4.2 Mooring/ Asst. Mooring Master

Mooring master and Asst. Mooring master are call-out based and used only for carrying out tanker operations based on the vessel lay can dates. The charges consist of lump sum per tanker operation cost for both mooring/asst mooring master (max 5 days) including mob-demob. In case the tanker loading operations gets extended beyond 5 days due to delay in tanker arrival, weather conditions etc., charges for these additional days shall be paid on man-day basis. Considering the above, following methodology shall be adopted for arriving at per tanker cost of Mooring/ Asst. Mooring Master:

Mooring/ Asst. Mooring Master Cost per tanker operation (INR) (B) = Lump sum Charge of Tanker Operation + Additional Man-day Charges (applicable in case of delay in tanker arrival beyond lay can dates, reasons for delay shall be captured in the invoice).

#### 4.3 Vessel – Service Boat

Service boat, alternatively called line boat, is being used for holding the floating hoses to prevent entanglement with SPM during normal periods, assist in pre-berthing and post-berthing checks, support during tanker operations (mooring/ unmooring/ hose connection/ disconnection) etc. It is deployed continuously at Bhogat SPM or Port anchorage based on weather conditions. And the charges for service boat is on per-day basis and paid for the entire given month. Generally, Service boat gets engaged for 5 days in tanker operation for each of the loading, rest of the time in assisting routine maintenance of SPM. Considering the above, following methodology shall be adopted for arriving at per tanker operating cost of service boat:

Service boat cost per tanker operation (INR) (C) = Day rate of Service boat as per ongoing contract x 5 days

Note: In case of monsoon operations additional service boat may be required to deployed based on the weather conditions / company discretion. The additional charges (vessel day + Mobilization charges) calculation for the same will be as per methodology stated above only.

#### 4.4 Dive Spread (Dive team & Dive equipment's)

Dive spread comprising of Dive team (01 Dive Supervisor + 06 Divers+04 Riggers +01 OSR Sup.) & Associated diving equipment is deployed on continuous basis at Bhogat SPM on the support vessel for carrying out SPM maintenance and tanker loading operations. The charges for dive spread are on per-day basis and paid for the entire given month. This team carries out activities related to tanker operation (pre-berthing/ post-berthing, berthing, mooring/ unmooring/ hose connection/ disconnection etc.) including safety watch. Generally, dive team gets engaged for 5 days in tanker operations for each

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of the loading, rest of the time in carrying out SPM inspection and maintenance. Considering above, following methodology shall be adopted for arriving at per tanker operating cost of dive spread:

Dive spread cost per tanker operation (INR) (D) = Day rate of Dive spread as per ongoing contract x 5 days.

#### 4.5 Lodging and Boarding for Tanker Operating Personnel

Tanker loading operations from Bhogat operations involve the following personnel whose lodging and food facilities are arranged from the maintenance support vessel.

S. No.	Personnel description	No. of personnel	Minimum no. of days/ man-days per tanker operation
1	Dive team	12	5

The total lodging and boarding cost of personnel per tanker operation is calculated based on the following methodology:

Lodging and Boarding Cost of Personnel per tanker operation (E) = (Cost of (Breakfast + Lunch + Dinner) + Cost of Accommodation) as per ongoing Maintenance Support vessel contract x 60 no's Dive team.

#### 4.6 Fuel and Fresh Water Charges

Fuel and Fresh water that is consumed during the tanker loading operation is arrived based on the vessel specifications for fuel and freshwater consumption. Accordingly, total charges are arrived at as per below methodology:

Total Fuel and Fresh water charges per tanker Operations (F) = (Actual Fuel Consumption of Pullback Tug x Number of days + Actual Fuel Consumption of Service boat x Number of days) x Avg. Fuel rate for the month) + (Specific Water Consumption/ Day for Pullback Tug x Number of days + Specific Water Consumption/ Day for Service boat x Number of days) x Fresh water rate)

Note: Specific consumption details are as under

1. Specific fuel consumption for tug – 1.2 KL/Day & for service boat – 0.35 KL/Day
2. Specific water consumption for tug – 03 KL/Day & for service boat – 01 KL/DAY.

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The actual fuel consumption is recorded daily by Radio room at Bhogat Terminal, post completion of month a monthly report will be prepared based upon the daily consumption. This report would be certified by the Auditors and will be shared with the buyer.

#### **4.7 Vessel Inspection, Port charges & Bunkering surveyors Charges**

- (A) Vessel Inspection Charges: During on hire of vessels it required to be inspected and approved by company to validate suitability of proposed vessels. For this purpose, company will engage separate third party.
- (B) Port charges: Birth hire charges, pilotage, anchorage charges, VTMS are the Applicable fees which need to be paid for port / GMB.
- (C) During on hire / off hire & fuel supply time third party surveyors will be engaged for certifications.

Accordingly, total charges are arrived at as per below methodology:

Total cost per tanker loading (G) = ((A + B + C) / Total number of operations) + Applicable Taxes

Total cost per tanker loading = (A + B + C + D + E + F + G) + Applicable Taxes

#### **5.0 RECONCILIATION MECHANISM**

The pilotage invoicing shall be done by the sales team. The pilotage calculation shall be done by operations finance function based on the invoices/ data provided by the user. The calculation after the approval from VP – Finance, shall be shared with sales team for billing. Following is the methodology.

Note: If invoice is consolidated in nature, respective breakup cost mentioned against respective headings in the contract shall be considered for invoicing.

Respective invoice / contract copy will be considered for reconciliation mechanism and will be shared with Buyers.

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