

Your Reference:

**Louis Dreyfus Armateurs (LDA)**

28 Quai Gallieni  
92158 Suresnes Cedex  
France  
Tel: +33 (0)1 7038 6000  
www.lda.fr  
Mr. Cedric Guilbert

For the attention of

Report no. MX-0065-02-2019  
Date of report 31-Dec-19  
Vessel Arctic Tern  
Location Tuxpan  
Product Olmeca Crude Oil, Isthmus Crude Oil  
Outturn date 31-Dec-19

**DISCHARGED :**

We have pleasure in enclosing herewith, our report for the above referenced inspection.

Please note the following with regard to the inspection carried out.

Letters of Protest were issued by ourselves regarding the following:

- the Letter of Protest on discrepancy between Bill of Lading and ship's figures
- the Letter of Protest on traces of water found in ship's tanks after loading.

Report distribution has been effected as follows:

To yourselves in original only together with our relevant invoice.

CC: . Attn

	<b>Gross Metric Tons in Vacuo</b>	<b>Gross Metric Tons in Air</b>
<b>Vessel after loading</b>	<b>43,061.682</b>	<b>43,006.843</b>
<b>Vessel before discharge</b>	<b>43,058.997</b>	<b>43,004.162</b>
<b>Difference</b>	<b>-2.685</b>	<b>-2.681</b>
<b>Difference, %</b>	<b>-0.006%</b>	<b>-0.006%</b>
<b>Bill of Lading</b>	<b>43,076.918</b>	<b>43,022.062</b>
<b>Outturn quantity</b>	<b>42,943.110</b>	<b>42,654.281</b>
<b>Difference</b>	<b>-133.808</b>	<b>-367.781</b>
<b>Difference, %</b>	<b>-0.311%</b>	<b>-0.855%</b>

Should you have any query, or require any additional information, please contact Robin Fromon

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Chief Officer of MV "Arctic Tern": Robin Fromon

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
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 Location Tuxpan  
 Product Olmeca Crude Oil, Isthmus Crude Oil  
 Outturn date 31-Dec-19

**TIME LOG**

Time	Date	Operations
08:00	29-Dec-19	Vessel arrived at "End of Sea Passage"
20:00	29-Dec-19	Notice of Readiness tendered
21:30	29-Dec-19	Anchor dropped
22:45	29-Dec-19	Free pratique granted
02:20	30-Dec-19	Pilot on board
04:00	30-Dec-19	First line ashore
04:48	30-Dec-19	All Fast
04:55	30-Dec-19	Inspector on Board
06:20	30-Dec-19	Commenced connecting hoses 2 x 16"
06:30	30-Dec-19	Sampling of Vessel's tanks completed
06:30	30-Dec-19	Measurements Completed
06:54	30-Dec-19	Hoses 2 x 16" connected
06:54	30-Dec-19	Notice of Readiness received / accepted
07:18	30-Dec-19	Commenced Discharge
06:24	31-Dec-19	Completed Discharge
07:00	31-Dec-19	Commenced disconnecting hoses
07:24	31-Dec-19	Ship's tanks inspected / dipped
07:36	31-Dec-19	Hoses disconnected
08:00	31-Dec-19	Documents on board
08:30	31-Dec-19	Inspector left vessel
10:00	31-Dec-19	Vessel sailed (ETS)

DELAYS				REASON
From		To		
07:42	30-Dec-19	08:06	30-Dec-19	Discharge suspended for line displacement measurements. Crude Oil Washing procedure.
21:12	30-Dec-19	06:00	31-Dec-19	

Remarks: ( \* ) - As per information received from the Master of the vessel  
 Average delivery rate for each grade is as follows:  
 1674.121 Mt in vacuo per hour for Olmeca Crude Oil, i.e. Outturn Mt in vacuo divided by 13 hours 54 minutes.  
 1415.312 Mt in vacuo per hour for Isthmus Crude Oil, i.e. Outturn Mt in vacuo divided by 13 hours 54 minutes.

Chief Officer of MV "Arctic Tern": Robin Fromon  
 Terminal Representative: Juan Gachez

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Outturn date 31-Dec-19

**SUMMARY OF QUANTITIES**

Comparison of Ship's figures, Bill of Lading and Outturn quantity  
 ASTM calculation by ASTM D 1250-2004

**Gross Quantities**

**Net Quantities**

Totals of the Bills Of Lading	Olmecca Crude Oil	Isthmus Crude Oil				Total	Olmecca Crude Oil	Isthmus Crude Oil				Total
<b>Including OBQ/ROB</b>	<b>CUBIC METRES AT 15°C (GROSS STANDARD VOLUME)</b>					<b>CUBIC METRES AT 15°C (NET STANDARD VOLUME)</b>						
Vessel after loading	27,964.277	23,286.460				51,250.737	27,901.274	23,243.054				51,144.328
Vessel before discharge	27,959.586	23,287.911				51,247.497	27,896.593	23,244.503				51,141.096
Difference	-4.691	1.451				-3.240	-4.681	1.449				-3.232
% Difference	-0.017%	0.006%				-0.006%	-0.017%	0.006%				-0.006%
Bill of Lading	27,969.697	23,299.107				51,268.804	27,906.681	23,255.677				51,162.358
Outturn quantity	27,888.635	23,221.002				51,109.637	27,825.805	23,177.722				51,003.527
Difference	-81.062	-78.105				-159.167	-80.876	-77.955				-158.831
% Difference	-0.290%	-0.335%				-0.310%	-0.290%	-0.335%				-0.310%
<b>Including OBQ/ROB</b>	<b>US BARRELS AT 60°C (GROSS STANDARD VOLUME)</b>					<b>US BARRELS AT 60°C (NET STANDARD VOLUME)</b>						
Vessel after loading	175,976.24	146,537.77				322,514.01	175,579.76	146,264.62				321,844.38
Vessel before discharge	175,946.72	146,546.90				322,493.62	175,550.31	146,273.73				321,824.04
Difference	-29.52	9.13				-20.39	-29.45	9.11				-20.34
% Difference	-0.017%	0.006%				-0.006%	-0.017%	0.006%				-0.006%
Bill of Lading	176,010.35	146,617.35				322,627.70	175,613.81	146,344.05				321,957.86
Outturn quantity	175,500.23	146,125.85				321,626.08	175,104.85	145,853.49				320,958.34
Difference	-510.12	-491.50				-1,001.62	-508.96	-490.56				-999.52
% Difference	-0.290%	-0.335%				-0.310%	-0.290%	-0.335%				-0.310%
<b>Including OBQ/ROB</b>	<b>METRIC TONS IN AIR (GROSS WEIGHT)</b>					<b>METRIC TONS IN AIR (NET WEIGHT)</b>						
Vessel after loading	23,303.471	19,703.372				43,006.843	23,231.230	19,658.054				42,889.284
Vessel before discharge	23,299.562	19,704.600				43,004.162	23,227.333	19,659.279				42,886.612
Difference	-3.909	1.228				-2.681	-3.897	1.225				-2.672
% Difference	-0.017%	0.006%				-0.006%	-0.017%	0.006%				-0.006%
Bill of Lading	23,307.988	19,714.074				43,022.062	23,235.734	19,668.731				42,904.465
Outturn quantity	23,096.662	19,557.619				42,654.281	23,096.662	19,557.619				42,654.281
Difference	-211.326	-156.455				-367.781	-139.072	-111.112				-250.184
% Difference	-0.907%	-0.794%				-0.855%	-0.599%	-0.565%				-0.583%
<b>Including OBQ/ROB</b>	<b>METRIC TONS IN VACUO (GROSS WEIGHT)</b>					<b>METRIC TONS IN VACUO (NET WEIGHT)</b>						
Vessel after loading	23,333.393	19,728.289				43,061.682	23,261.059	19,682.914				42,943.973
Vessel before discharge	23,329.479	19,729.518				43,058.997	23,257.157	19,684.140				42,941.297
Difference	-3.914	1.229				-2.685	-3.902	1.226				-2.676
% Difference	-0.017%	0.006%				-0.006%	-0.017%	0.006%				-0.006%
Bill of Lading	23,337.915	19,739.003				43,076.918	23,265.568	19,693.603				42,959.171
Outturn quantity	23,270.277	19,672.833				42,943.110	23,198.139	19,627.585				42,825.724
Difference	-67.638	-66.170				-133.808	-67.429	-66.018				-133.447
% Difference	-0.290%	-0.335%				-0.311%	-0.290%	-0.335%				-0.311%

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## SUMMARY OF QUANTITIES

Calculation of Net figures  
 ASTM calculation by ASTM D 1250-2004

Olmeca Crude Oil	Isthmus Crude Oil			
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### CUBIC METRES AT 15°C

							Total
<u>Bill of Lading</u>	Gross	27,969.697	23,299.107				51,268.804
	Sediments & Water	63.016	43.430				106.446
	Net	27,906.681	23,255.677				51,162.358
<u>Shore quantities</u>	Gross	27,888.635	23,221.002				51,109.637
	Sediments & Water	62.830	43.280				106.110
	Net	27,825.805	23,177.722				51,003.527
<u>Vessel's discharged quantity</u>	Gross	27,932.405	23,279.498				51,211.903
	Sediments & Water	62.932	43.393				106.325
	Net	27,869.473	23,236.105				51,105.578

### US BARRELS AT 60°C

							Total
<u>Bill of Lading</u>	Gross	176,010.35	146,617.35				322,627.70
	Sediments & Water	396.54	273.30				669.84
	Net	175,613.81	146,344.05				321,957.86
<u>Shore quantities</u>	Gross	175,500.23	146,125.85				321,626.08
	Sediments & Water	395.38	272.36				667.74
	Net	175,104.85	145,853.49				320,958.34
<u>Vessel's discharged quantity</u>	Gross	175,775.67	146,493.95				322,269.62
	Sediments & Water	396.02	273.06				669.08
	Net	175,379.65	146,220.89				321,600.54

### METRIC TONS IN AIR

							Total
<u>Bill of Lading</u>	Gross	23,307.988	19,714.074				43,022.062
	Sediments & Water	72.254	45.343				117.597
	Net	23,235.734	19,668.731				42,904.465
<u>Shore quantities</u>	Gross	23,096.662	19,557.619				42,654.281
	Sediments & Water						
	Net	23,096.662	19,557.619				42,654.281
<u>Vessel's discharged quantity</u>	Gross	23,276.911	19,697.482				42,974.393
	Sediments & Water	72.158	45.304				117.462
	Net	23,204.753	19,652.178				42,856.931

### METRIC TONS IN VACUO

							Total
<u>Bill of Lading</u>	Gross	23,337.915	19,739.003				43,076.918
	Sediments & Water	72.347	45.400				117.747
	Net	23,265.568	19,693.603				42,959.171
<u>Shore quantities</u>	Gross	23,270.277	19,672.833				42,943.110
	Sediments & Water	72.138	45.248				117.386
	Net	23,198.139	19,627.585				42,825.724
<u>Vessel's discharged quantity</u>	Gross	23,306.799	19,722.391				43,029.190
	Sediments & Water	72.251	45.361				117.612
	Net	23,234.548	19,677.030				42,911.578

### Criteria used for calculations:

Density at 15°C: (BOL)	0.8344	0.8472				
Average Sediments & Water, % mass:	0.31000	0.23000				
Average Sediments & Water, % vol.:	0.22530	0.18640				
US bbls at 60°F by Ch. 11.5 ex Cu M	6.292894290	6.292831331				
Density at 15°C: (Shore)	0.8344	0.8472				
Average Sediments & Water, % mass:	0.31000	0.23000				
Average Sediments & Water, % vol.:	0.22530	0.18640				
US Bbls@60°F/CuM@15°C by Ch. 11.5	6.292894290	6.292831331				
Density at 15°C: (Ship)	0.8344	0.8472				
Average Sediments & Water, % mass:	0.31000	0.23000				
Average Sediments & Water, % vol.:	0.22530	0.18640				
US Bbls@60°F/CuM@15°C by Ch. 11.5	6.292894290	6.292831331				

Remarks:

based on BOL

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 Loadport Coatzacoalcos

**CERTIFICATE OF QUANTITY**

Olmecca Crude Oil

Bill of Lading No.	OCO/1
Bill of Lading date	28-Dec-19
Gross Metric Tons in vacuo	12,561.727
Net Metric Tons in vacuo	12,522.786
Gross Metric Tons in air	12,545.618
Net Metric Tons in air	12,506.727
Gross Long Tons	12,347.47
Net Long Tons	12,309.19
Gross US barrels at 60°F	94,738.28
Net US barrels at 60°F	94,524.84
Gross US gallons at 60°F	3,979,007.76
Net US gallons at 60°F	3,970,043.28
Gross Cubic Metres at at 15°C	15,054.802
Net Cubic Metres at at 15°C	15,020.884
B/L Density at 15°C in vacuo	0.8344
API gravity from Density at 15°C as per Chapter 11.5.	38.00

Above quantities determined by Louis Dreyfus Armateurs.

**Criteria used for calculations:**

Conv. factor from cu m at 15°C to US Bbls as per Chapter 11.5  
 Conv. factor from US Bbls to US Gallons by Table 1  
 Metric Tons in Air = GSV at 15°C \* by Density at 15°C in air  
 Long Tons = Metric Tons in Air \* by

6.29289429
42
0.83333
0.984206

B/L Gross Metric tons (vac) were determined by loadport Oil Terminal.  
 Bill of Lading GSV at 15°C= B/L Metric Tons vacuo / B/L density at 15°C.

Net Volume (Cu M or Bbls or Gall) = Gross Volume (Cu M or Bbls or Gall) \* ((100 - (S + W)vol%)/100)  
 Net Metric Tons (in vacuo or in air) = Gross Metric Tons (in vacuo or in air) \* ((100 - (S + W)mass%)/100)

Test results by loadport Oil Installation Laboratory:

Sediments, % mass	ASTM D4807	0.0800
Water, % mass	ASTM D4006	0.2300
Sediments, % volume	calculated	0.0334
Water, % volume	calculated	0.1919

Chief Officer of MV "Arctic Tern": Robin Fromon

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**CERTIFICATE OF QUANTITY**

Olmecca Crude Oil

Bill of Lading No.	OCO/2
Bill of Lading date	28-Dec-19
Gross Metric Tons in vacuo	10,776.188
Net Metric Tons in vacuo	10,742.782
Gross Metric Tons in air	10,762.370
Net Metric Tons in air	10,729.007
Gross Long Tons	10,592.39
Net Long Tons	10,559.560
Gross US barrels at 60°F	81,272.07
Net US barrels at 60°F	81,088.97
Gross US gallons at 60°F	3,413,426.94
Net US gallons at 60°F	3,405,736.74
Gross Cubic Metres at at 15°C	12,914.895
Net Cubic Metres at at 15°C	12,885.797
B/L Density at 15°C in vacuo	0.8344
API gravity from Density at 15°C as per Chapter 11.5.	38.00

Above quantities determined by Louis Dreyfus Armateurs.

**Criteria used for calculations:**

Conv. factor from cu m at 15°C to US Bbls as per Chapter 11.5  
 Conv. factor from US Bbls to US Gallons by Table 1  
 Metric Tons in Air = GSV at 15°C \* by Density at 15°C in air  
 Long Tons = Metric Tons in Air \* by

6.2929
42
0.83333
0.984206

B/L Gross Metric tons (vac) were determined by loadport Oil Terminal.  
 Bill of Lading GSV at 15°C= B/L Metric Tons vacuo / B/L density at 15°C.

Net Volume (Cu M or Bbls or Gall) = Gross Volume (Cu M or Bbls or Gall) \* ((100 - (S + W)vol%)/100)  
 Net Metric Tons (in vacuo or in air) = Gross Metric Tons (in vacuo or in air) \* ((100 - (S + W)mass%)/100)

Test results by loadport Oil Installation Laboratory:

Sediments, % mass	ASTM D4807	0.0800
Water, % mass	ASTM D4006	0.2300
Sediments, % volume	calculated	0.0334
Water, % volume	calculated	0.1919

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**CERTIFICATE OF QUANTITY**

Isthmus Crude Oil

Bill of Lading No.	ICO/3
Bill of Lading date	28-Dec-19
Gross Metric Tons in vacuo	10,621.324
Net Metric Tons in vacuo	10,596.895
Gross Metric Tons in air	10,607.910
Net Metric Tons in air	10,583.511
Gross Long Tons	10,440.37
Net Long Tons	10,416.360
Gross US barrels at 60°F	78,893.06
Net US barrels at 60°F	78,746.00
Gross US gallons at 60°F	3,313,508.52
Net US gallons at 60°F	3,307,332.00
Gross Cubic Metres at at 15°C	12,536.974
Net Cubic Metres at at 15°C	12,513.605
B/L Density at 15°C in vacuo	0.8472
API gravity from Density at 15°C as per Chapter 11.5.	35.44

Above quantities determined by Louis Dreyfus Armateurs.

**Criteria used for calculations:**

Conv. factor from cu m at 15°C to US Bbls as per Chapter 11.5  
 Conv. factor from US Bbls to US Gallons by Table 1  
 Metric Tons in Air = GSV at 15°C \* by Density at 15°C in air  
 Long Tons = Metric Tons in Air \* by

6.2928
42
0.84613
0.984206

B/L Gross Metric tons (vac) were determined by loadport Oil Terminal.  
 Bill of Lading GSV at 15°C= B/L Metric Tons vacuo / B/L density at 15°C.

Net Volume (Cu M or Bbls or Gall) = Gross Volume (Cu M or Bbls or Gall) \* ((100 - (S + W)vol%)/100)  
 Net Metric Tons (in vacuo or in air) = Gross Metric Tons (in vacuo or in air) \* ((100 - (S + W)mass%)/100)

Test results by loadport Oil Installation Laboratory:

Sediments, % mass	ASTM D4807	0.0200
Water, % mass	ASTM D4006	0.2100
Sediments, % volume	calculated	0.0085
Water, % volume	calculated	0.1779

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**CERTIFICATE OF QUANTITY**

Isthmus Crude Oil

Bill of Lading No.	ICO/4
Bill of Lading date	28-Dec-19
Gross Metric Tons in vacuo	9,117.679
Net Metric Tons in vacuo	9,096.708
Gross Metric Tons in air	9,106.164
Net Metric Tons in air	9,085.220
Gross Long Tons	8,962.34
Net Long Tons	8,941.730
Gross US barrels at 60°F	67,724.29
Net US barrels at 60°F	67,598.05
Gross US gallons at 60°F	2,844,420.18
Net US gallons at 60°F	2,839,118.10
Gross Cubic Metres at at 15°C	10,762.133
Net Cubic Metres at at 15°C	10,742.072
B/L Density at 15°C in vacuo	0.8472
API gravity from Density at 15°C as per Chapter 11.5.	35.44

Above quantities determined by Louis Dreyfus Armateurs.

**Criteria used for calculations:**

Conv. factor from cu m at 15°C to US Bbls as per Chapter 11.5  
 Conv. factor from US Bbls to US Gallons by Table 1  
 Metric Tons in Air = GSV at 15°C \* by Density at 15°C in air  
 Long Tons = Metric Tons in Air \* by

6.2928
42
0.84613
0.984206

B/L Gross Metric tons (vac) were determined by loadport Oil Terminal.  
 Bill of Lading GSV at 15°C= B/L Metric Tons vacuo / B/L density at 15°C.

Net Volume (Cu M or Bbls or Gall) = Gross Volume (Cu M or Bbls or Gall) \* ((100 - (S + W)vol%)/100)  
 Net Metric Tons (in vacuo or in air) = Gross Metric Tons (in vacuo or in air) \* ((100 - (S + W)mass%)/100)

Test results by loadport Oil Installation Laboratory:

Sediments, % mass	ASTM D4807	0.0200
Water, % mass	ASTM D4006	0.2100
Sediments, % volume	calculated	0.0085
Water, % volume	calculated	0.1779

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## VESSEL TANK AFTER DISCHARGE REPORT

Product Olmeca Crude Oil, Isthmus Crude Oil Date of tank inspection:  
 Outturn date 31-Dec-19 Time of tank inspection:

We hereby report that we, Louis Dreyfus Armateurs, attended on board the Vessel for the purpose of visually inspecting the nominated cargo tanks.  
 Inspection carried out using sounding rod.

CARGO DISCHARGED:	Olmeca Crude Oil	Isthmus Crude Oil			
PORTTANKS	1, 5	2, 3			
CENTRAL TANKS	Not available	Not available			
STARBOARD TANKS	5	1, 2, 3			

Each of the listed tanks is equipped with vapour lock for manual measurements.

Each of the listed tanks were inspected by us. In our opinion the listed cargo tanks have been found to be well drained.  
 Inspection carried out from deck level.

### PUMP(S) AND LINES

The line connections to the aforementioned cargo tanks were closed and/or blanked off at the time of inspection.

HEATING COILS WITHIN THE CARGO TANKS: None  
TANK CONSTRUCTION MATERIAL reported by the Vessel to be:

Mild Steel

TANK COATING as reported by the Vessel ;

We have been informed that the interior of the cargo tanks is:

The type of coating was reported by the Vessel to be epoxy.

PREVIOUS 3 CARGOES CARRIED BY THE VESSEL reported to be

CARGO TANK	All cargo tanks
First Last Cargo	
Second Last Cargo	
Third Last Cargo	

### TANK CLEANING:

We have been informed by the vessel that tank cleaning was carried out as follows:  
 Well drained only.

### TYPE OF ROB:

This report does not cover the state of cleanliness and dryness of Vessel tanks, pump(s) and line systems at inaccessible spots and/or possible release of components of previous cargoes during loading, discharge or transport of the cargo, for which the Vessel is fully responsible.

This report represents our findings at the time and on the date of our inspection

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Olmeca Crude Oil, Isthmus Crude Oil  
 Outturn date 31-Dec-19

## ON BOARD QUANTITY (ROB) REPORT

Draft : FWD: 4.10 m, AFT: 5.60 m, Trim 1.50 m, List: 0.7° Port

Tank No	Total Actual	Total Observed Volume	Free Water		Gross Observed Volume	Non-Liquid	Liquid, Cu Mtrs	
	Dip, Mtrs	Cu Mtrs	Dip, Mtrs	Cu Mtrs	Cu Mtrs		by Trim correction	by Wedge formula
1P	0.030	1.542	0.015	0.329	1.213	1.213		
1S		3.561	0.020	0.295	3.266	2.395		0.871
2P		4.732			4.732	3.270		1.462
2S		3.681			3.681	3.681		
3P	0.030	1.455	0.030	1.455				
3S	0.020	1.533	0.025	1.533				
4P	0.095	11.246		0.809	10.437	3.037	7.400	
4S	0.095	2.922		0.388	2.534	2.534		
5P								
5S								
6P	0.010	2.072	0.010	2.072				
6S	0.025	2.769	0.025	2.769				
7P								
7S								
8P								
8S								
9P	0.115	6.701	0.035	2.625	4.076		4.076	
9S	0.110	9.835	0.040	4.180	5.655		5.655	
SP								
SS								
Tanks for reference onl		52.049		16.455	35.594	16.130	17.131	2.333

### SUMMARY OF QUANTITY

Total Observed Cu Mtrs	Free Water Cu Mtrs	Gross Observed Cu Mtrs	Liquid Volume Cu Mtrs	Non-Liquid Volume Cu Mtrs
52.049	16.455	35.594	19.464	16.130

Previous product in tanks reported by the Vessel to be

Measurements by representative of the vessel and witnessed by Juan Gachez, Terminal Representative.

Calculations by Robin Fromon. Chief Officer of MV "Arctic Tern".

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan

**LIQUID ROB CALCULATION  
 BY WEDGE FORMULA**

Product Olmeca Crude Oil, Isthmus Crude Oil

Outturn date 31-Dec-19

Draft (m) : FWD: 4.10 AFT: 5.60 Trim : 1.50 List: 0.7° Port

Formulae :  $((U - (D \times F)) \times F) + S_1 = A$   $(A \times A \times W \times 0.5) / F = \text{Cubic Metres}$

Tank	L Metres	U Metres	D Metres	D x F	S_1 Metres	A	A x A	W Metres	Volume Cu Mtrs
1P									
1S	18.612	1.940	17.631	0.152	0.042	0.057	0.003	4.556	0.871
2P	10.016	1.940	17.634	0.152	0.039	0.054	0.003	8.517	1.462
2S									
3P									
3S									
4P	10.008	2.405	17.634	0.152	0.075	0.094	0.009	10.508	5.432
4S	10.006	1.570	17.623	0.152	0.066	0.078	0.006	10.510	3.729
5P									
5S									
6P									
6S									
7P									
7S									
8P									
8S									
9P	9.391	7.170	17.627	0.152	0.055	0.116	0.013	5.707	4.416
9S	9.397	7.155	17.634	0.152	0.086	0.146	0.021	5.708	7.092
SP									
SS									

FIELD INFORMATION			L.B.P.	Length between perpendiculars
+Draft of ship Aft of	5.60	metres	L	Length of tank
-Draft of ship Forward of	4.10	metres	U	Distance from ullage point to aft bulkhead
=Trim of ship of	1.50	metres	D	Total gauge height
divided by L.B.P. of	173.90	metres	F	Trim factor
=Trim Factor of	0.00863	(F)	S_1	Sounding (Innage) of liquid oil corrected for list
			A	Adjusted innage at aft bulkhead
			W	Width of tank

Measurements by representative of the vessel and witnessed by Juan Gachez, Terminal Representative.  
 Calculations by Robin Fromon. Chief Officer of MV "Arctic Tern".

Remarks

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

Report No. MX-0065-02-2019  
 Date 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Olmeca Crude Oil, Isthmus Crude Oil  
 Outturn date 31-Dec-19

## VESSEL EXPERIENCE REPORT

The following "Vessel Experience Factor" (VEF), has been calculated according to IP Petroleum Measurement Manual Part 16 (Annex C, Method 1), in which the following is noted (see also remarks, below):

- (a) There must be a minimum of five qualifying voyages, but more are preferred.
- (b) Voyages prior to any structural modification which may affect cargo capacities do not qualify.
- (c) Voyages where shore quantities are not available do not qualify.
- (d) No minimum percentage capacity is specified for qualification.
- (e) It is not advised whether quantities should be stated as weight or volume.

Voyage	Date	Port	Cargo	Vessel's figure (A) Metric tons	Shore Figure (B) Metric tons	Vessel Load/Disch Ratio	Qualify
Last	28-Dec-19	Coatzacoalcos	Olmeca / Isthmus C.O.	42,959.171	42,914.309	1.00105	Yes
2nd last	11-Dec-19	Coatzacoalcos	Olmeca Crude Oil	45,991.197	45,989.534	1.00002	Yes
3rd last	3-Dec-19	Coatzacoalcos	Olmeca Crude Oil	46,927.118	46,970.699	0.99906	Yes
4th last	31-Oct-19	Coatzacoalcos	Olmeca Crude Oil	46,240.587	46,269.615	0.99937	Yes
5th last	13-Oct-19	Coatzacoalcos	Olmeca Crude Oil	47,883.001	47,948.643	0.99862	Yes
6th last	6-Oct-19	Coatzacoalcos	Isthmus Crude Oil	49,630.103	49,651.340	0.99958	Yes
7th last	26-Sep-19	Coatzacoalcos	Isthmus Crude Oil	48,816.467	48,794.713	1.00043	Yes
8th last	7-Sep-19	Coatzacoalcos	Isthmus Crude Oil	49,610.103	49,651.340	0.99917	Yes
9th last	28-Aug-19	Coatzacoalcos	Olmeca Crude Oil	42,571.009	42,558.696	1.00028	Yes
10th last	10-Jul-19	Coatzacoalcos	Olmeca Crude Oil	41,803.914	41,792.686	1.00026	Yes
11th last	28-Jun-19	Coatzacoalcos	Isthmus Crude Oil	47,923.053	47,948.012	0.99948	Yes
12th last	28-Jun-19	Coatzacoalcos	Olmeca Crude Oil	41,426.013	41,476.915	0.99877	Yes
13th last	28-Jun-19	Coatzacoalcos	Isthmus Crude Oil	43,220.125	43,251.177	0.99928	Yes
14th last	31-May-19	Coatzacoalcos	Olmeca Crude Oil	44,682.610	44,651.478	1.00072	Yes
15th last	30-May-19	Coatzacoalcos	Olmeca Crude Oil	44,124.453	44,098.781	1.00057	Yes
16th last	30-May-19	Coatzacoalcos	Isthmus Crude Oil	42,424.587	42,412.706	1.00028	Yes
17th last	14-May-19	Coatzacoalcos	Olmeca Crude Oil	41,457.025	41,458.576	0.99995	Yes
18th last	7-Apr-19	Coatzacoalcos	Isthmus Crude Oil	44,978.644	45,020.476	0.99909	Yes
19th last	5-Apr-19	Coatzacoalcos	Isthmus Crude Oil	42,442.310	42,477.979	0.99915	Yes
20th last	4-Apr-19	Coatzacoalcos	Olmeca Crude Oil	41,921.394	41,919.587	1.00002	Yes

Step (b) - Totals, excluding present cargo	897,032.884	897,257.262
Step (c) - Average Vessel Discharge Ratio (VDR), (A)/(B)	0.99975	
Permissible VDR range (plus / minus 0.3%)	1.00275	0.99675
Step (g) - Totals of qualifying voyages only	897,032.884	897,257.262
Step (h) - Average VDR as step (c), qualifying voyages only	0.99975	
VDR (VEF) range (plus / minus 0.3%)	1.00275	0.99675

Vessel's figures this voyage (Excluding ROB)	43,029.190
Outturn this voyage	42,943.110
Vessel discharged ratio this voyage	1.0020

Number of qualifying voyages: 20

<b>Vessel Experience Factor</b>
<b>0.9998</b>

The above mentioned quantities are for the last 0 voyages as obtained from ship's record supplied by Robin Fromon, Chief Officer of MV "Arctic Tern".

Cargo information can be verified in accordance with IP Petroleum manual Manual Part 16 (Annex C, Method 1).  
 Shore quantities derived from ship cargo measurements do not qualify, whether adjusted for VEF or not.

Remarks:

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

Report No. MX-0065-02-2019  
 Date 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Olmeca Crude Oil, Isthmus Crude Oil  
 Outturn date 31-Dec-19

## VOID/BALLAST TANKS REPORT

### BALLAST TANKS

Compartment / Tank	Before Loading		After Loading	
	Contents	Volume, cu m	Contents	Volume, cu m
Fore peak	River water	144.000	Sea water	23.000
Ballast tank 1P	River water	436.000	Empty	
Ballast tank 1S	River water	419.000	Empty	
Ballast tank 2P	River water	373.000	Empty	
Ballast tank 2S	River water	354.000	Empty	
Ballast tank 3P	River water	359.000	Empty	
Ballast tank 3S	River water	378.000	Empty	
Ballast tank 4P	River water	378.000	Empty	
Ballast tank 4S	River water	359.000	Empty	
Ballast tank 5P	River water	220.000	Empty	
Ballast tank 5S	River water	200.000	Empty	
After peak	River water	126.000	Sea water	66.000
<b>Total:</b>		<b>3,746.000</b>		<b>89.000</b>

### IDLE CARGO TANKS

Compartment / Tank	Before Loading		After Loading	
	Contents	Volume, cu m	Contents	Volume, cu m
<b>Total:</b>				

Remarks:  
 Chief Officer of MV "Arctic Tern": Robin Fromon  
 Terminal Representative: Juan Gachez

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan

## ULLAGE REPORT (Loadport inclusive OBQ)

Product Olmecca Crude Oil, Isthmus Crude Oil

**ASTM calculation by ASTM  
D 1250-2004**

Bill of lading date Loadport: Coatzacoalcos

Draft: FWD: 6.70 m, AFT: 6.84 m, Trim: 0.14 m, List: 0.6° Stbd

Tank No	Ullage Mtrs		Total Obs. Volume Cu Mtrs	Free Water		Gross Obs. Volume Cu Mtrs	Temp °C	V.C.F. by T 53A	*	Gross Standard Volume Cu Mtrs
	Actual	Corrected		Dip Mtrs	Volume Cu Mtrs					
1P	1.705	1.713	2,854.610	0.010	1.372	2,853.238	29.7	0.98698	1	2,816.089
1S	1.890	1.875	2,833.876	0.010	1.681	2,832.195	29.6	0.98707	1	2,795.575
2P	1.650	1.662	2,597.696			2,597.696	29.8	0.98729	2	2,564.679
2S	1.680	1.669	2,586.764			2,586.764	29.8	0.98729	2	2,553.886
3P	1.645	1.648	2,732.232	0.020	2.972	2,729.260	29.8	0.98729	2	2,694.571
3S	1.615	1.617	2,726.163	0.010	1.308	2,724.855	29.8	0.98729	2	2,690.222
4P	1.755	1.764	2,812.397			2,812.397	29.7	0.98698	1	2,775.780
4S	1.710	1.701	2,810.548			2,810.548	29.9	0.98680	1	2,773.449
5P	1.455	1.465	2,867.740			2,867.740	29.3	0.98734	1	2,831.434
5S	1.440	1.437	2,853.798			2,853.798	29.4	0.98725	1	2,817.412
6P	1.765	1.768	2,817.723	0.005	1.935	2,815.788	29.7	0.98737	2	2,780.225
6S	1.785	1.775	2,802.280	0.015	2.945	2,799.335	29.6	0.98746	2	2,764.231
7P	1.325	1.327	2,875.182			2,875.182	29.3	0.98734	1	2,838.782
7S	1.330	1.323	2,870.369			2,870.369	29.4	0.98725	1	2,833.772
8P	1.230	1.236	2,846.800			2,846.800	29.5	0.98755	2	2,811.357
8S	1.255	1.252	2,826.439			2,826.439	29.6	0.98746	2	2,790.995
9P	1.755	1.769	2,779.242	0.015	1.586	2,777.656	29.7	0.98698	1	2,741.491
9S	1.740	1.720	2,777.290	0.020	0.898	2,776.392	29.6	0.98707	1	2,740.493
SP	1.140	1.156	827.536			827.536	29.7	0.98737	2	817.084
SS	1.145	1.140	829.471			829.471	29.4	0.98763	2	819.210
<b>Totals</b>			<b>51,928.156</b>		<b>14.697</b>	<b>51,913.459</b>				<b>51,250.737</b>

Product Code (*)	Product Name(s)	Factor by Chapt. 11.5	TOV Cu Mtrs	Free Water Cu Mtrs	GOV Cu Mtrs
1	Olmecca Crude Oil	6.29289	28,335.052	5.537	28,329.515
2	Isthmus Crude Oil	6.29283	23,593.104	9.160	23,583.944
Long Tons = Metric tons (air) x 0.984206		<b>Totals:</b>	<b>51,928.156</b>	<b>14.697</b>	<b>51,913.459</b>

Product Code (*)	Density @ 15°C	W.C.F. Chapt. 11.5.	G.S.V. @15°C Cu Mtrs	OBQ (GOV) Cu Mtrs	G.S.V. @15°C Cu Mtrs	G.S.V. @60°F US bbbs	Metric Tons (in air)
1	0.8344	0.83333	27,964.277		27,964.277	175,976.240	23,303.471
2	0.8472	0.84613	23,286.460		23,286.460	146,537.770	19,703.372
<b>Totals:</b>			<b>51,250.737</b>		<b>51,250.737</b>	<b>322,514.010</b>	<b>43,006.843</b>

Origin for Densities: Density at 15°C in vac is based on Bill of Lading density 15°C by T 53A.

Origin of Measurements: measured by ship's UTI tape and water finding paste.

Remarks: Measurements were taken from ship's tank hatches.

Sea valve Nos.: Starboard: Port:

Chief Officer of MV "Arctic Tern": Robin Fromon  
 Terminal Representative: Juan Gachez

Long Tons	*	Metric Tons (in vacuo)
22,935.42	1	23,333.393
19,392.18	2	19,728.289
<b>42,327.60</b>		<b>43,061.682</b>

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Olmeca Crude Oil, Isthmus Crude Oil  
 Outturn date 31-Dec-19

## ULLAGE REPORT BEFORE DISCHARGE

**ASTM calculation by ASTM  
 D 1250-2004**

Draft: FWD: 6.70 m, AFT: 6.84 m, Trim: 0.14 m, List: 0.4° Port

Tank No	Ullage Mtrs		Total Obs. Volume Cu Mtrs	Free Water		Gross Obs. Volume Cu Mtrs	Temp °C	V.C.F. by T 53A	*	Gross Standard Volume Cu Mtrs
	Actual	Corrected		Dip Mtrs	Volume Cu Mtrs					
1P	1.700	1.695	2,857.312	0.010	1.213	2,856.099	29.8	0.98689	1	2,818.656
1S	1.900	1.911	2,828.444	0.010	0.887	2,827.557	29.7	0.98698	1	2,790.742
2P	1.660	1.651	2,599.193			2,599.193	29.8	0.98729	2	2,566.157
2S	1.660	1.669	2,586.775			2,586.775	29.9	0.98720	2	2,553.664
3P	1.645	1.648	2,732.232	0.020	1.863	2,730.369	29.8	0.98729	2	2,695.666
3S	1.610	1.613	2,726.737	0.010	1.771	2,724.966	29.8	0.98729	2	2,690.332
4P	1.760	1.754	2,813.891			2,813.891	29.8	0.98689	1	2,777.001
4S	1.715	1.722	2,807.433			2,807.433	29.9	0.98680	1	2,770.375
5P	1.455	1.446	2,870.549			2,870.549	29.4	0.98725	1	2,833.950
5S	1.440	1.446	2,852.472			2,852.472	29.4	0.98725	1	2,816.103
6P	1.760	1.760	2,818.918	0.005	1.228	2,817.690	29.7	0.98737	2	2,782.103
6S	1.790	1.799	2,798.696	0.015	1.833	2,796.863	29.6	0.98746	2	2,761.790
7P	1.325	1.326	2,875.282			2,875.282	29.3	0.98734	1	2,838.881
7S	1.330	1.337	2,868.316			2,868.316	29.4	0.98725	1	2,831.745
8P	1.230	1.231	2,847.467			2,847.467	29.4	0.98763	2	2,812.244
8S	1.255	1.261	2,825.131			2,825.131	29.7	0.98737	2	2,789.450
9P	1.755	1.741	2,783.816	0.015	0.750	2,783.066	29.7	0.98698	1	2,746.830
9S	1.740	1.748	2,772.721	0.020	1.587	2,771.134	29.6	0.98707	1	2,735.303
SP	1.140	1.137	828.053			828.053	29.7	0.98737	2	817.595
SS	1.145	1.154	829.091			829.091	29.3	0.98772	2	818.910
Totals			51,922.529		11.132	51,911.397				51,247.497

Product Code (*)	Product Name(s)	Factor by Chapt. 11.5	TOV Cu Mtrs	Free Water Cu Mtrs	GOV Cu Mtrs
1	Olmeca Crude Oil	6.29289	28,330.236	4.437	28,325.799
2	Isthmus Crude Oil	6.29283	23,592.293	6.695	23,585.598
Long Tons = Metric tons (air) x 0.984206		Totals:	51,922.529	11.132	51,911.397

Product Code (*)	Density @ 15°C	W.C.F. Chapt. 11.5.	G.S.V. @15°C Cu Mtrs	ROB (GOV) Cu Mtrs	G.S.V. @15°C Discharged, Cu Mtrs	G.S.V. @60°F Discharged, US bbls	Metric Tons (in air)
1	0.8344	0.83333	27,959.586	27.181	27,932.405	175,775.670	23,276.911
2	0.8472	0.84613	23,287.911	8.413	23,279.498	146,493.950	19,697.482
Totals:			51,247.497	35.594	51,211.903	322,269.620	42,974.393

Origin for Densities: Density at 15°C in vac is based on Bill of Lading density 15°C by T 53A.

Origin of Measurements: measured by ship's UTI tape and water finding paste.

Remarks: Measurements were taken from ship's tank hatches.

Sea valve Nos.: Starboard: Port:

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

Long Tons	*	Metric Tons (in vacuo)
22,909.28	1	23,306.799
19,386.38	2	19,722.391
42,295.66		43,029.190

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Olmeca Crude Oil, Isthmus Crude Oil  
 Outturn date 31-Dec-19

**BUNKER REPORT**  
**(Marine Diesel Oil)**

**ASTM calculation by ASTM D 1250-2004**

Average Bunker consumption per day, according to Vessel's Officer (Quantities in MT VAC)			
While at Sea:	6 Mt	While at Port: Nil	While at Anchor: 2 Mt
Last Port of Call:	Coatzacoalcos	Time / Date of Sailing:	10:45 28-Dec-19
Bunker on Sailing from last port, Mt (vac)	(as advised by Vessel)		29 Mt

<b>UPON BERTHING</b>		Date & Time of inspection		30-Dec-19	06:30	Trim Correction applied		Yes
Draft	FWD	6.70 m, AFT		6.84 m, Trim		0.14 m,	List	0.6° Stbd
Tank No	Innage Mtrs	G.O.V. Cu Mtrs	Temp °C	Density 15°C	VCF Table 54B	G.S.V. Cu Mtrs	Metric Tons (Air)	Metric Tons (Vacuo)
Diesel Oil tank Port	0.990	10.800	30.0	0.8378	0.9872	10.662	8.921	8.933
Service tank	Auto	5.900	45.0	0.8378	0.9744	5.749	4.810	4.817
Settling tank	Auto	2.400	45.0	0.8378	0.9744	2.339	1.957	1.960
Diesel Oil tank Stbd	0.980	14.100	30.0	0.8378	0.9872	13.920	11.647	11.662
<b>Totals:</b>		33.200				32.67	27.335	27.372

<b>UPON SAILING</b>		Date & Time of inspection		30-Dec-19	06:30	Trim Correction applied		Yes
Draft	FWD	4.10 m, AFT		5.60 m, Trim		1.50 m,	List	0.7° Port
Tank No	Innage Mtrs	G.O.V. Cu Mtrs	Temp °C	Density 15°C	VCF Table 54B	G.S.V. Cu Mtrs	Metric Tons (Air)	Metric Tons (Vacuo)
Diesel Oil tank Port	1.110	10.600	30.0	0.8378	0.9872	10.464	8.756	8.767
Service tank	Auto	5.900	45.0	0.8378	0.9744	5.749	4.810	4.817
Settling tank	Auto	2.400	45.0	0.8378	0.9744	2.339	1.957	1.960
Diesel Oil tank Stbd	1.070	14.300	30.0	0.8378	0.9872	14.117	11.812	11.827
<b>Totals:</b>		33.200				32.669	27.335	27.371

Bunker loaded at this port: None      Aforementioned densities are as advised by the Vessel.  
 Remarks: Densities are as advised by ship's Chief Engineer

Terminal Representative: Juan Gachez

Chief Engineer of MV "Arctic Tern": R. Penaflor

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Olmecca Crude Oil, Isthmus Crude Oil  
 Outturn date 31-Dec-19

**BUNKER REPORT**  
**(Heavy Fuel Oil)**

**ASTM calculation by ASTM D 1250-2004**

Average Bunker consumption per day, according to Vessel's Officer (Quantities in MT VAC)			
While at Sea:	6 Mt	While at Port:	Nil
		While at Anchor:	1.2 Mt
Last Port of Call:	Coatzacoalcos	Time / Date of Sailing:	10:45 28-Dec-19
Bunker on Sailing from last port, Mt (vac)	(as advised by Vessel)		110 Mt

**UPON BERTHING** Date & Time of inspection 30-Dec-19 06:30 Trim Correction applied Yes  
 Draft FWD 6.70 m, AFT 6.84 m, Trim 0.14 m, List 0° Port

Tank No	Innage Mtrs	G.O.V. Cu Mtrs	Temp °C	Density 15°C	VCF Table 54B	G.S.V. Cu Mtrs	Metric Tons (Air)	Metric Tons (Vacuo)
Fuel Oil tank 1P	0.980	26.210	40.0	0.9326	0.9815	25.725	23.964	23.991
Fuel Oil tank 1S	8.030	78.180	50.0	0.9484	0.9746	76.194	72.182	72.262
Fuel Oil tank 2P	Nil							
Fuel Oil tank 2S	Nil							
Service tank	Auto	9.700	85.0	0.9327	0.9478	9.194	8.565	8.575
Settling tank	Auto	8.200	82.0	0.9327	0.9500	7.790	7.257	7.266
<b>Totals:</b>		122.290				118.903	111.968	112.094

**UPON SAILING** Date & Time of inspection 30-Dec-19 06:30 Trim Correction applied Yes  
 Draft FWD 4.10 m, AFT 5.60 m, Trim 1.50 m, List 0.7° Port

Tank No	Innage Mtrs	G.O.V. Cu Mtrs	Temp °C	Density 15°C	VCF Table 54B	G.S.V. Cu Mtrs	Metric Tons (Air)	Metric Tons (Vacuo)
Fuel Oil tank 1P	1.035	26.210	40.0	0.9326	0.9815	25.725	23.964	23.991
Fuel Oil tank 1S	8.030	78.100	50.0	0.9484	0.9746	76.116	72.108	72.188
Fuel Oil tank 2P	Nil							
Fuel Oil tank 2S	Nil							
Service tank	Auto	9.600	85.0	0.9327	0.9478	9.099	8.477	8.487
Settling tank	Auto	8.200	82.0	0.9327	0.9500	7.790	7.257	7.266
<b>Totals:</b>		122.110				118.73	111.806	111.932

Bunker loaded at this port: None Aforementioned densities are as advised by the Vessel.  
 Remarks: Densities are as advised by ship's Chief Engineer

Terminal Representative: Juan Gachez

Chief Engineer of MV "Arctic Tern": R. Penaflor

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Olmeca Crude Oil, Isthmus Crude Oil  
 Outturn date 31-Dec-19

**RECEIPT FOR DOCUMENTS**

To: Master of MV Arctic Tern (Gildas Maire)

Please sign for receipt of the documents listed below:

ROB report	One
Time Log	One
Void/Ballast Tank Report	One
Vessel Experience Report	One
Ullage Report	One
Document & Sample Receipt	One
Bunker Inspection Reports	Two
Letter of Protest	One
Tank Inspection Report	One
Statement of Facts	One

Instructions regarding documents: 1 set for Vessel's own use

Master of MV "Arctic Tern": Gildas Maire

Louis Dreyfus Armateurs Chief Officer: Robin Fromon

**RECEIPT FOR SAMPLES**

To: Master of mv Arctic Tern (Gildas Maire)

Please sign for receipt of the samples listed below:

Sample Size, Ltr	Number of Samples	Seal Numbers	Sample Description
1.000	2	LDA 10620, LDA 10621 - for vessel	Multiple Ship's Tank Composite Samples (UML before discharge) of Olmeca Crude Oil ex: 1P, 1S, 4P, 4S, 5P, 5S, 7P, 7S, 9P, 9S,
			Multiple Ship's Tank Composite Sample ( before discharge) of Isthmus Crude Oil ex: 2P, 2S, 3P, 3S, 6P, 6S, 8P, 8S, SP, SS,
1.000	1	LDA 234567	Multiple Shore tank composite sample (before loading)
TOTAL	3		

Instruction regarding samples: to be held within a period of 90 days.

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

## CERTIFICATE OF SHORE BASED QUANTITY

Olmeca Crude Oil

Report no.	MX-0065-02-2019
Date of report	31-Dec-19
Vessel	Arctic Tern
Location	Tuxpan
Loadport	Coatzacoalcos

Gross Metric Tons in vacuo	23,270.277
Net Metric Tons in vacuo	23,198.139
Gross Metric Tons in air	23,096.662
Net Metric Tons in air	23,096.662
Gross Long Tons	22,802.56
Net Long Tons	22,731.87
Gross US barrels at 60°F	175,500.23
Net US barrels at 60°F	175,104.85
Gross US gallons at 60°F	7,371,009.66
Net US gallons at 60°F	7,354,403.70
Gross Cubic Metres at at 15°C	27,888.635
Net Cubic Metres at at 15°C	27,825.805
B/L Density at 15°C in vacuo	0.8344
API gravity from Density at 15°C as per Chapter 11.5.	38.00

Above quantities determined by Louis Dreyfus Armateurs.

### Criteria used for calculations:

Conv. factor from cu m at 15°C to US Bbls as per Chapter 11.5	6.29289429
Conv. factor from US Bbls to US Gallons by Table 1	42
Metric Tons in Air = GSV at 15°C * by Density at 15°C in air	0.82817
Long Tons = Metric Tons in Air * by	0.984206

B/L Gross Metric tons (vac) were determined by loadport Oil Terminal.  
 Bill of Lading GSV at 15°C= B/L Metric Tons vacuo / B/L density at 15°C.

Net Volume (Cu M or Bbls or Gall) = Gross Volume (Cu M or Bbls or Gall) \* ((100 - (S + W)vol%)/100)  
 Net Metric Tons (in vacuo or in air) = Gross Metric Tons (in vacuo or in air) \* ((100 - (S + W)mass%)/100)

Average pro rata calculated results based on Shore side calculations:

(Sediments + Water), % mass	0.3100
(Sediments + Water), % volume	0.2253

Terminal Representative: Juan Gachez

## CERTIFICATE OF SHORE BASED QUANTITY

Isthmus Crude Oil

Report no.	MX-0065-02-2019
Date of report	31-Dec-19
Vessel	Arctic Tern
Location	Tuxpan
Loadport	Coatzacoalcos

Gross Metric Tons in vacuo	19,672.833
Net Metric Tons in vacuo	19,627.585
Gross Metric Tons in air	19,557.619
Net Metric Tons in air	19,557.619
Gross Long Tons	19,293.10
Net Long Tons	19,248.73
Gross US barrels at 60°F	146,125.85
Net US barrels at 60°F	145,853.49
Gross US gallons at 60°F	6,137,285.70
Net US gallons at 60°F	6,125,846.58
Gross Cubic Metres at at 15°C	23,221.002
Net Cubic Metres at at 15°C	23,177.722
B/L Density at 15°C in vacuo	0.8472
API gravity from Density at 15°C as per Chapter 11.5.	35.44

Above quantities determined by Louis Dreyfus Armateurs.

### Criteria used for calculations:

Conv. factor from cu m at 15°C to US Bbls as per Chapter 11.5  
 Conv. factor from US Bbls to US Gallons by Table 1  
 Metric Tons in Air = GSV at 15°C \* by Density at 15°C in air  
 Long Tons = Metric Tons in Air \* by

6.292831331
42
0.84224
0.984206

B/L Gross Metric tons (vac) were determined by loadport Oil Terminal.  
 Bill of Lading GSV at 15°C= B/L Metric Tons vacuo / B/L density at 15°C.

Net Volume (Cu M or Bbls or Gall) = Gross Volume (Cu M or Bbls or Gall) \* ((100 - (S + W)vol%)/100)  
 Net Metric Tons (in vacuo or in air) = Gross Metric Tons (in vacuo or in air) \* ((100 - (S + W)mass%)/100)

Average pro rata calculated results based on Shore side calculations:

(Sediments + Water), % mass	0.2300
(Sediments + Water), % volume	0.1864

Terminal Representative: Juan Gachez



Report no. MX-0065-02-2019  
Date of report 31-Dec-19  
Vessel Arctic Tern  
Location Tuxpan  
Product Olmeca Crude Oil, Isthmus Crude Oil  
Outturn date 31-Dec-19

**STATEMENT OF FACTS**

To: Whom it may concern

We have been appointed as Inspectors on the aforementioned shipment. On behalf of our Principals we wish to draw attention of all parties to the following:

The following cargo manifold valves were sealed by Louis Dreyfus Armateurs Representative after discharge:

Port FWD:	LDA 12345
Port AFT :	LDA 56732
Starboard FWD:	LDA 35267
Starboard AFT :	LDA 78654

We hereby reserve the right of our Principals to make reference to the above at a later date.

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

**STATEMENT OF FACTS**

Report no. MX-0065-02-2019  
Date of report 31-Dec-19  
Vessel Arctic Tern  
Location Tuxpan  
Product Olmecca Crude Oil, Isthmus Crude Oil  
Outturn date 31-Dec-19

To: Whom it may concern

We have been appointed as Inspectors on the aforementioned shipment. On behalf of our Principals we wish to draw attention of all parties to the following:

Line displacement was not performed because of lack of permission from Oil Terminal.

We hereby reserve the right of our Principals to make reference to the above at a later date.

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Olmeca Crude Oil  
 Outturn date 31-Dec-19

**LETTER OF PROTEST**

To:	Whom it may concern
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We have been appointed as Inspectors on the aforementioned shipment. On behalf of our Principals we do hereby lodge protest in respect of:

The apparent difference noted between the Vessel's quantity including OBQ at loadport and the Vessel's quantity before discharge.

**ASTM calculation by ASTM D 1250-2004**

	<b>GROSS WEIGHT</b>	
	<b>Metric Tons in Vacuo</b>	<b>Metric Tons in Air</b>
<b>Vessel at loadport including OBQ</b>	<b>23,333.393</b>	<b>23,303.471</b>
<b>Vessel before discharge</b>	<b>23,329.479</b>	<b>23,299.562</b>
<b>Difference</b>	<b>-3.914</b>	<b>-3.909</b>
<b>Difference, %</b>	<b>-0.017%</b>	<b>-0.017%</b>

The apparent ship/shore difference noted between the Bill of Lading Quantity and the Outturn Quantity received into shore tanks

	<b>GROSS WEIGHT</b>	
	<b>Metric Tons in Vacuo</b>	<b>Metric Tons in Air</b>
<b>Bill of Lading</b>	<b>23,337.915</b>	<b>23,307.988</b>
<b>Outturn quantity</b>	<b>23,270.277</b>	<b>42,654.281</b>
<b>Difference</b>	<b>-67.638</b>	<b>19,346.293</b>
<b>Difference, %</b>	<b>-0.290%</b>	<b>83.003%</b>

We hereby reserve the right of our Principals to make reference to the above at a later date.

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez

Report no. MX-0065-02-2019  
 Date of report 31-Dec-19  
 Vessel Arctic Tern  
 Location Tuxpan  
 Product Isthmus Crude Oil  
 Outturn date 31-Dec-19

**LETTER OF PROTEST**

To:	Whom it may concern
-----	---------------------

We have been appointed as Inspectors on the aforementioned shipment. On behalf of our Principals we do hereby lodge protest in respect of:

The apparent difference noted between the Vessel's quantity including OBQ at loadport and the Vessel's quantity before discharge.

**ASTM calculation by ASTM D 1250-2004**

	<b><u>GROSS WEIGHT</u></b>	
	<b>Metric Tons in Vacuo</b>	<b>Metric Tons in Air</b>
<b>Vessel at loadport including OBQ</b>	<b>19,728.289</b>	<b>19,703.372</b>
<b>Vessel before discharge</b>	<b>19,729.518</b>	<b>19,704.600</b>
<b>Difference</b>	<b>1.229</b>	<b>1.228</b>
<b>Difference, %</b>	<b>0.006%</b>	<b>0.006%</b>

The apparent ship/shore difference noted between the Bill of Lading Quantity and the Outturn Quantity received into shore tanks

	<b><u>GROSS WEIGHT</u></b>	
	<b>Metric Tons in Vacuo</b>	<b>Metric Tons in Air</b>
<b>Bill of Lading</b>	<b>19,739.003</b>	<b>19,714.074</b>
<b>Outturn quantity</b>	<b>19,672.833</b>	<b>19,557.619</b>
<b>Difference</b>	<b>-66.170</b>	<b>-156.455</b>
<b>Difference, %</b>	<b>-0.335%</b>	<b>-0.794%</b>

We hereby reserve the right of our Principals to make reference to the above at a later date.

Chief Officer of MV "Arctic Tern": Robin Fromon

Terminal Representative: Juan Gachez



Report no. MX-0065-02-2019  
Date of report 31-Dec-19  
Vessel Arctic Tern  
Location Tuxpan  
Product Olmeca Crude Oil, Isthmus Crude Oil  
Outturn date 31-Dec-19

**SAMPLE LIST**

Size, Ltr	Number of samples	Seal Number	Sample Description
2.500	1	Open	Multiple Ship's Tank Composite Sample (UML before discharge) of Olmeca Crude Oil ex: 1P, 1S, 4P, 4S, 5P, 5S, 7P, 7S, 9P, 9S,
0.450	10	Open	Single Ship's Tank Composite Samples (UML before discharge) of Olmeca Crude Oil ex: 1P, 1S, 4P, 4S, 5P, 5S, 7P, 7S, 9P, 9S,
<b>Total: 11 samples</b>			

Retained samples are intended to be held within a period of 90 days.  
Chief Officer of MV "Arctic Tern": Robin Fromon