



Your Reference:

**Tengizchevroil**

For the attention of:

|                 |                 |
|-----------------|-----------------|
| Report no.      | RU 0122         |
| Date of report  | October 1, 2012 |
| Vessel          | TBA             |
| Location        | Taman, Russia   |
| Inspection date | October 1, 2012 |

## **Inventory**

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

Report distribution has been effected as follows:  
To yourselves in original only together with our relevant invoice.

Should you have any query, or require any additional information, please contact Mr. A. Sharipov at our Taman office (telephone number +7 495 123 45 67).

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Date of report October 1, 2012  
Vessel TBA  
Location Taman, Russia  
Inspection date October 1, 2012

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Report no.: RU 0122  
 Date of report: October 1, 2012  
 Location: Taman, Russia  
 Inspection date: October 1, 2012  
 Vessel Name: TBA  
 Operation: Inventory

## CRUDE OIL SUMMARY REPORT

Quantity calculations are based on  
 ASTM D 1250-2004

### BILLS OF LADING

| <b>Totals: Gross</b> | Cubic Metres at<br>15°C | US barrels at 60°F | US gallons at 60°F | Metric Tons in<br>vacuo | Metric Tons in air | Long tons |
|----------------------|-------------------------|--------------------|--------------------|-------------------------|--------------------|-----------|
| Tengiz Crude Oil     |                         |                    |                    |                         |                    |           |

| <b>Totals: Net</b> | Cubic Metres at<br>15°C | US barrels at 60°F | US gallons at 60°F | Metric Tons in<br>vacuo | Metric Tons in air | Long tons |
|--------------------|-------------------------|--------------------|--------------------|-------------------------|--------------------|-----------|
| Tengiz Crude Oil   |                         |                    |                    |                         |                    |           |

### CRUDE OIL SHORE TANKS

| <b>Totals: Gross</b> | Cubic Metres at<br>15°C | US barrels at 60°F | US gallons at 60°F | Metric Tons in<br>vacuo | Metric Tons in air | Long tons |
|----------------------|-------------------------|--------------------|--------------------|-------------------------|--------------------|-----------|
| Tengiz Crude Oil     | 123,561.140             | 777,571.00         | 32,657,982.00      | 97,675.025              | 97,539.108         | 95,998.57 |

| <b>Totals: Net</b> | Cubic Metres at<br>15°C | US barrels at 60°F | US gallons at 60°F | Metric Tons in<br>vacuo | Metric Tons in air | Long tons |
|--------------------|-------------------------|--------------------|--------------------|-------------------------|--------------------|-----------|
| Tengiz Crude Oil   | 122,867.962             | 775,992.00         | 32,591,664.00      | 97,416.624              | 97,281.067         | 95,744.61 |

### CRUDE OIL PIPELINES

| <b>Totals: Gross</b> | Cubic Metres at<br>15°C | US barrels at 60°F | US gallons at 60°F | Metric Tons in<br>vacuo | Metric Tons in air | Long tons |
|----------------------|-------------------------|--------------------|--------------------|-------------------------|--------------------|-----------|
| Tengiz Crude Oil     | 8,942.100               | 56,273.00          | 2,363,466.00       | 7,077.670               | 7,067.836          | 6,956.19  |

| <b>Totals: Net</b> | Cubic Metres at<br>15°C | US barrels at 60°F | US gallons at 60°F | Metric Tons in<br>vacuo | Metric Tons in air | Long tons |
|--------------------|-------------------------|--------------------|--------------------|-------------------------|--------------------|-----------|
| Tengiz Crude Oil   | 8,924.689               | 56,164.00          | 2,358,888.00       | 7,059.837               | 7,050.024          | 6,938.68  |

Representative of "Tamanneftgas": A. Sharipov

Representative of "SGS": A. Lotkov



Report no.: RU 0122  
 Date of report: October 1, 2012  
 Location: Taman, Russia  
 Inspection date: October 1, 2012  
 Vessel Name: TBA  
 Operation: Inventory  
 Measurements by: Tank Radar

# CRUDE OIL SHORE TANK REPORT

Quantity calculations are based on ASTM D 1250-2004  
 Volume Correction Factor: by Table 54A

|                                    |              | Shore tank No. 2 |                  | Shore tank No. 3 |                  |
|------------------------------------|--------------|------------------|------------------|------------------|------------------|
|                                    |              | Open             | Close            | Open             | Close            |
| Grade of Crude Oil                 |              | Tengiz Crude Oil | Tengiz Crude Oil | Tengiz Crude Oil | Tengiz Crude Oil |
| Gauge                              | Metres       | 23.162           |                  | 6.394            |                  |
| Total Observed Volume              | Cu Metres    | 37,748.616       |                  | 10,355.607       |                  |
| Free Water Gauge                   | Metres       |                  |                  |                  |                  |
| Free Water Volume                  | Cu Metres    |                  |                  |                  |                  |
| Roof correction (calculated)       | Cu Metres    | 0.617            |                  | 0.618            |                  |
| Status of the line                 |              | Full             |                  | Full             |                  |
| Line                               | Cu Metres    |                  |                  |                  |                  |
| Calculated Shell correction factor |              | 0.99990          |                  | 0.99988          |                  |
| Gross Observed Volume              | Cu Metres    | 37,748.000       |                  | 10,354.990       |                  |
| G.O.V. corrected for shell         | Cu Metres    | 37,744.230       |                  | 10,353.750       |                  |
| Density at 15°C                    | Mt vac/Cu m  | 0.7902           |                  | 0.7894           |                  |
| Observed temperature               | °C           | 15.800           |                  | 15.000           |                  |
| Volume Corrected Factor            | by Table 54A | 0.99921          |                  | 1.00000          |                  |
| Gross Standard Volume at 15°C      | Cu Metres    | 37,714.410       |                  | 10,353.750       |                  |
| Total Sediments, Water             | volume %     | 0.203            |                  | 0.196            |                  |
| Net Standard Volume, at 15°C       | Cu Metres    | 37,637.670       |                  | 10,333.480       |                  |
| Gross Metric Tons                  | (Vac)        | 29,801.927       |                  | 8,173.250        |                  |
| Total Sediments, Water             | mass %       | 0.265            |                  | 0.256            |                  |
| Net Metric Tons                    | (Vac)        | 29,722.952       |                  | 8,152.326        |                  |
| Difference, GSV at 15°C            | Cu Metres    | 37,714.41        |                  | 10,353.75        |                  |
| Difference, Gross Metric Tons      | (Vac)        | 29,801.93        |                  | 8,173.25         |                  |
| Difference, NSV at 15°C            | Cu Metres    | 37,637.67        |                  | 10,333.48        |                  |
| Difference, Net Metric Tons        | (Vac)        | 29,722.95        |                  | 8,152.33         |                  |

|                                    |              | Shore tank No. 4 |                  | Shore tank No. 6 |                  |
|------------------------------------|--------------|------------------|------------------|------------------|------------------|
|                                    |              | Open             | Close            | Open             | Close            |
| Grade of Crude Oil                 |              | Tengiz Crude Oil | Tengiz Crude Oil | Tengiz Crude Oil | Tengiz Crude Oil |
| Gauge                              | Metres       | 23.167           |                  | 23.163           |                  |
| Total Observed Volume              | Cu Metres    | 37,733.662       |                  | 37,715.259       |                  |
| Free Water Gauge                   | Metres       |                  |                  |                  |                  |
| Free Water Volume                  | Cu Metres    |                  |                  |                  |                  |
| Roof correction (calculated)       | Cu Metres    | 0.602            |                  | 0.597            |                  |
| Status of the line                 |              | Full             |                  | Full             |                  |
| Line                               | Cu Metres    |                  |                  |                  |                  |
| Calculated Shell correction factor |              | 0.99987          |                  | 0.99986          |                  |
| Gross Observed Volume              | Cu Metres    | 37,733.060       |                  | 37,714.660       |                  |
| G.O.V. corrected for shell         | Cu Metres    | 37,728.150       |                  | 37,709.380       |                  |
| Density at 15°C                    |              | 0.7907           |                  | 0.7909           |                  |
| Observed temperature               | °C           | 14.500           |                  | 14.000           |                  |
| Volume Corrected Factor            | by Table 54A | 1.00049          |                  | 1.00098          |                  |
| Gross Standard Volume, at 15°C     | Cu Metres    | 37,746.640       |                  | 37,746.340       |                  |
| Total Sediments, Water             | volume %     | 0.212            |                  | 0.196            |                  |
| Net Standard Volume, at 15°C       | Cu Metres    | 37,448.593       |                  | 37,448.219       |                  |
| Gross Metric Tons                  | (Vac)        | 29,846.268       |                  | 29,853.580       |                  |
| Total Sediments, Water             | mass %       | 0.275            |                  | 0.256            |                  |
| Net Metric Tons                    | (Vac)        | 29,764.191       |                  | 29,777.155       |                  |
| Difference, GSV at 15°C            | Cu Metres    | 37,746.64        |                  | 37,746.34        |                  |
| Difference, Gross Metric Tons      | (Vac)        | 29,846.27        |                  | 29,853.58        |                  |
| Difference, NSV at 15°C            | Cu Metres    | 37,448.59        |                  | 37,448.22        |                  |
| Difference, Net Metric Tons        | (Vac)        | 29,764.19        |                  | 29,777.16        |                  |

| <b>Grandtotals: Gross</b> | Cubic Metres at 15°C | US barrels at 60°F | Metric Tons (vac) | Metric Tons (air) | Long Tons |
|---------------------------|----------------------|--------------------|-------------------|-------------------|-----------|
| Tengiz Crude Oil          | 123,561.140          | 777,571.00         | 97,675.025        | 97,539.108        | 95,998.57 |

| <b>Grandtotals: Net</b> | Cubic Metres at 15°C | US barrels at 60°F | Metric Tons (vac) | Metric Tons (air) | Long Tons |
|-------------------------|----------------------|--------------------|-------------------|-------------------|-----------|
| Tengiz Crude Oil        | 122,867.962          | 775,992.00         | 97,416.624        | 97,281.067        | 95,744.61 |



# CRUDE OIL PIPELINES Before

Report no.: RU 0122  
 Date of report: October 1, 2012  
 Location: Taman, Russia  
 Inspection date: October 1, 2012  
 Vessel Name: TBA  
 Operation: Inventory

Quantity calculations are based on ASTM D 1250-2004  
 Volume Correction Factor: by Table 54A

| Line No.   | Grade Before     | TOV, Cu M | Ambie<br>nt t°C | Shell<br>correction | Corrected<br>TOV, Cu M | Density<br>at 15°C | Actual<br>t°C | Press-<br>ure,<br>kg/cm2 | VCF     | GSV at<br>15°C, Cu M | Gross Mt,<br>vacuo |
|------------|------------------|-----------|-----------------|---------------------|------------------------|--------------------|---------------|--------------------------|---------|----------------------|--------------------|
| 106/14     | Tengiz Crude Oil | 1,534.415 | 16.00           | 0.99987             | 1,534.221              | 0.7915             | 14.80         | 4.80                     | 1.00061 | 1,535.351            | 1,215.230          |
| 106/14, 13 | Tengiz Crude Oil | 32.800    | 16.00           | 0.99987             | 32.796                 | 0.7915             | 14.80         | 4.80                     | 1.00061 | 32.820               | 25.977             |
| 106/13 (1) | Tengiz Crude Oil | 1,968.766 | 16.00           | 0.99987             | 1,968.517              | 0.7915             | 14.80         | 4.80                     | 1.00061 | 1,969.967            | 1,559.229          |
| 106/13a    | Tengiz Crude Oil | 2,026.169 | 16.00           | 0.99987             | 2,025.914              | 0.7915             | 14.80         | 4.80                     | 1.00061 | 2,027.405            | 1,604.691          |
| 106/17     | Tengiz Crude Oil | 166.000   | 16.00           | 0.99987             | 165.979                | 0.7915             | 14.80         | 4.80                     | 1.00061 | 166.101              | 131.469            |
| 106/60     | Tengiz Crude Oil | 592.822   | 16.00           | 0.99987             | 592.747                | 0.7915             | 14.80         | 4.80                     | 1.00061 | 593.184              | 469.505            |
| 106/61     | Tengiz Crude Oil | 531.829   | 16.00           | 0.99987             | 531.762                | 0.7915             | 14.80         | 4.80                     | 1.00061 | 532.153              | 421.199            |
| 106/4      | Tengiz Crude Oil | 549.366   | 16.00           | 0.99987             | 549.297                | 0.7915             | 14.80         | 4.80                     | 1.00061 | 549.701              | 435.088            |
| 106/5      | Tengiz Crude Oil | 505.733   | 16.00           | 0.99987             | 505.669                | 0.7915             | 14.80         | 4.80                     | 1.00061 | 506.041              | 400.531            |
| 106/6      | Tengiz Crude Oil | 5.475     | 16.00           | 0.99987             | 5.474                  | 0.7915             | 14.80         | 4.80                     | 1.00061 | 5.478                | 4.336              |
| 106/7      | Tengiz Crude Oil | 3.011     | 16.00           | 0.99987             | 3.011                  | 0.7915             | 14.80         | 4.80                     | 1.00061 | 3.013                | 2.385              |
| 106/15     | Tengiz Crude Oil | 4.575     | 16.00           | 0.99987             | 4.574                  | 0.7915             | 14.80         | 4.80                     | 1.00061 | 4.578                | 3.623              |
| 106/16     | Tengiz Crude Oil | 2.400     | 16.00           | 0.99987             | 2.400                  | 0.7915             | 14.80         | 4.80                     | 1.00061 | 2.401                | 1.900              |
| 21/112     | Tengiz Crude Oil | 1.544     | 16.00           | 0.99987             | 1.544                  | 0.7915             | 14.80         | 4.80                     | 1.00061 | 1.545                | 1.223              |
| 106/13 (2) | Tengiz Crude Oil | 974.245   | 16.00           | 0.99987             | 974.122                | 0.7915             | 14.80         | 4.80                     | 1.00061 | 974.839              | 771.585            |
| LACT meter | Tengiz Crude Oil | 37.500    | 16.00           | 0.99987             | 37.495                 | 0.7915             | 14.80         | 4.80                     | 1.00061 | 37.523               | 29.699             |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |
|            |                  |           |                 |                     |                        |                    |               |                          |         |                      |                    |

**Remark:** CTL calculated by 2004

| <b>Grandtotals: Gross</b> | Cubic Metres at 15°C | US barrels at 60°F | Metric Tons (vac) | Metric Tons (air) | Long Tons |
|---------------------------|----------------------|--------------------|-------------------|-------------------|-----------|
| Tengiz Crude Oil          | 8,942.100            | 56,273.00          | 7,077.670         | 7,067.836         | 6,956.19  |

| <b>Grandtotals: Net</b> | Cubic Metres at 15°C | US barrels at 60°F | Metric Tons (vac) | Metric Tons (air) | Long Tons |
|-------------------------|----------------------|--------------------|-------------------|-------------------|-----------|
| Tengiz Crude Oil        | 8,924.689            | 56,164.00          | 7,059.837         | 7,050.024         | 6,938.68  |

Representative of "Tamaneftegas": A. Sharipov

Representative of "SGS": A. Lotkov



Отчет №: RU 0122  
Дата отчета: 1 октября 2012 года  
Место: Тамань, Россия  
Дата инспекции: 1 октября 2012 года  
Название судна: ТВА  
Операция: Инвентаризация

## СВОДНЫЙ ОТЧЕТ ПО СЫРОЙ НЕФТИ

Подсчеты количества на основе  
ASTM D 1250-2004

### КОНОСАМЕНТЫ

| <b>Итого: Брутто</b> | Кубические<br>метры при 15°C | Баррели США при<br>60°F | Галлоны США при<br>60°F | Метрические<br>тонны в вакууме | Метрические<br>тонны на воздухе | Длинные<br>тонны |
|----------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|
|----------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|

|                  |  |  |  |  |  |  |
|------------------|--|--|--|--|--|--|
| Тенгизская нефть |  |  |  |  |  |  |
|------------------|--|--|--|--|--|--|

| <b>Итого: Нетто</b> | Кубические<br>метры при 15°C | Баррели США при<br>60°F | Галлоны США при<br>60°F | Метрические<br>тонны в вакууме | Метрические<br>тонны на воздухе | Длинные<br>тонны |
|---------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|
|---------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|

|                  |  |  |  |  |  |  |
|------------------|--|--|--|--|--|--|
| Тенгизская нефть |  |  |  |  |  |  |
|------------------|--|--|--|--|--|--|

### БЕРЕГОВЫЕ РЕЗЕРВУАРЫ СЫРОЙ НЕФТИ

| <b>Итого: Брутто</b> | Кубические<br>метры при 15°C | Баррели США при<br>60°F | Галлоны США при<br>60°F | Метрические<br>тонны в вакууме | Метрические<br>тонны на воздухе | Длинные<br>тонны |
|----------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|
|----------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|

|                  |             |            |               |            |            |           |
|------------------|-------------|------------|---------------|------------|------------|-----------|
| Тенгизская нефть | 123,561.140 | 777,571.00 | 32,657,982.00 | 97,675.025 | 97,539.108 | 95,998.57 |
|------------------|-------------|------------|---------------|------------|------------|-----------|

| <b>Итого: Нетто</b> | Кубические<br>метры при 15°C | Баррели США при<br>60°F | Галлоны США при<br>60°F | Метрические<br>тонны в вакууме | Метрические<br>тонны на воздухе | Длинные<br>тонны |
|---------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|
|---------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|

|                  |             |            |               |            |            |           |
|------------------|-------------|------------|---------------|------------|------------|-----------|
| Тенгизская нефть | 122,867.962 | 775,992.00 | 32,591,664.00 | 97,416.624 | 97,281.067 | 95,744.61 |
|------------------|-------------|------------|---------------|------------|------------|-----------|

### ТРУБОПРОВОДЫ СЫРОЙ НЕФТИ

| <b>Итого: Брутто</b> | Кубические<br>метры при 15°C | Баррели США при<br>60°F | Галлоны США при<br>60°F | Метрические<br>тонны в вакууме | Метрические<br>тонны на воздухе | Длинные<br>тонны |
|----------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|
|----------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|

|                  |           |           |              |           |           |          |
|------------------|-----------|-----------|--------------|-----------|-----------|----------|
| Тенгизская нефть | 8,942.100 | 56,273.00 | 2,363,466.00 | 7,077.670 | 7,067.836 | 6,956.19 |
|------------------|-----------|-----------|--------------|-----------|-----------|----------|

| <b>Итого: Нетто</b> | Кубические<br>метры при 15°C | Баррели США при<br>60°F | Галлоны США при<br>60°F | Метрические<br>тонны в вакууме | Метрические<br>тонны на воздухе | Длинные<br>тонны |
|---------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|
|---------------------|------------------------------|-------------------------|-------------------------|--------------------------------|---------------------------------|------------------|

|                  |           |           |              |           |           |          |
|------------------|-----------|-----------|--------------|-----------|-----------|----------|
| Тенгизская нефть | 8,924.689 | 56,164.00 | 2,358,888.00 | 7,059.837 | 7,050.024 | 6,938.68 |
|------------------|-----------|-----------|--------------|-----------|-----------|----------|



Отчет №: RU 0122  
 Дата отчета: 1 октября 2012 года  
 Место: Тамань, Россия  
 Дата инспекции: 1 октября 2012 года  
 Название судна: ТВА  
 Операция: Инвентаризация  
 Замерное средство: Танк Радар

## АКТ ЗАМЕРОВ РЕЗЕРВУАРОВ НЕФТИ

Страница 1

Подсчеты количества на основе ASTM D 1250-2004  
 Объемный поправочный коэффициент: по Таблице 54А

|                               | Резервуар № 2    |                  | Резервуар № 3    |                  |
|-------------------------------|------------------|------------------|------------------|------------------|
|                               | До               | После            | До               | После            |
|                               | Tengiz Crude Oil | Tengiz Crude Oil | Tengiz Crude Oil | Tengiz Crude Oil |
| Тип сырой нефти               |                  |                  |                  |                  |
| Замер                         | 23.162           |                  | 6.394            |                  |
| Общий измеренный объем        | 37,748.616       |                  | 10,355.607       |                  |
| Взлив продтоварной воды       |                  |                  |                  |                  |
| Объем подтоварной воды        |                  |                  |                  |                  |
| Поправка на крышу / понтон    | 0.617            |                  | 0.618            |                  |
| Статус трубы                  | Full             |                  | Full             |                  |
| Труба                         |                  |                  |                  |                  |
| Коэффициент сжатия стенок     | 0.99990          |                  | 0.99988          |                  |
| Брутто измеренный объем       | 37,748.000       |                  | 10,354.990       |                  |
| Откорректиров. брутто объем   | 37,744.230       |                  | 10,353.750       |                  |
| Плотность при 15°C            | 0.7902           |                  | 0.7894           |                  |
| Измеренная температура        | 15.800           |                  | 15.000           |                  |
| Поправ. объемн. коэффициент   | по Таблице 54А   |                  | 1.00000          |                  |
| Брутто стандарт. объем (15°C) | 37,714.410       |                  | 10,353.750       |                  |
| Мех. примеси и вода           | 0.203            |                  | 0.196            |                  |
| Нетто стандарт. объем (15°C)  | 37,637.670       |                  | 10,333.480       |                  |
| Брутто метрические тонны      | 29,801.927       |                  | 8,173.250        |                  |
| Мех. примеси и вода           | 0.265            |                  | 0.256            |                  |
| Нетто метрические тонны       | 29,722.952       |                  | 8,152.326        |                  |
| Разница, GSV at 15°C          | 37,714.41        |                  | 10,353.75        |                  |
| Разница, Брутто метрич. тонны | 29,801.93        |                  | 8,173.25         |                  |
| Разница, NSV при 15°C         | 37,637.67        |                  | 10,333.48        |                  |
| Разница, Нетто метрич. тонны  | 29,722.95        |                  | 8,152.33         |                  |

|                               | Резервуар № 4    |                  | Резервуар № 6    |                  |
|-------------------------------|------------------|------------------|------------------|------------------|
|                               | До               | После            | До               | После            |
|                               | Tengiz Crude Oil | Tengiz Crude Oil | Tengiz Crude Oil | Tengiz Crude Oil |
| Тип сырой нефти               |                  |                  |                  |                  |
| Замер                         | 23.167           |                  | 23.163           |                  |
| Общий измеренный объем        | 37,733.662       |                  | 37,715.259       |                  |
| Взлив продтоварной воды       |                  |                  |                  |                  |
| Объем подтоварной воды        |                  |                  |                  |                  |
| Поправка на крышу / понтон    | 0.602            |                  | 0.597            |                  |
| Статус трубы                  | Full             |                  | Full             |                  |
| Труба                         |                  |                  |                  |                  |
| Коэффициент сжатия стенок     | 0.99987          |                  | 0.99986          |                  |
| Брутто измеренный объем       | 37,733.060       |                  | 37,714.660       |                  |
| Откорректиров. брутто объем   | 37,728.150       |                  | 37,709.380       |                  |
| Плотность при 15°C            | 0.7907           |                  | 0.7909           |                  |
| Измеренная температура        | 14.500           |                  | 14.000           |                  |
| Поправ. объемн. коэффициент   | по Таблице 54А   |                  | 1.00098          |                  |
| Брутто стандарт. объем (15°C) | 37,746.640       |                  | 37,746.340       |                  |
| Мех. примеси и вода           | 0.212            |                  | 0.196            |                  |
| Нетто стандарт. объем (15°C)  | 37,448.593       |                  | 37,448.219       |                  |
| Брутто метрические тонны      | 29,846.268       |                  | 29,853.580       |                  |
| Мех. примеси и вода           | 0.275            |                  | 0.256            |                  |
| Нетто метрические тонны       | 29,764.191       |                  | 29,777.155       |                  |
| Разница, GSV at 15°C          | 37,746.64        |                  | 37,746.34        |                  |
| Разница, Брутто метрич. тонны | 29,846.27        |                  | 29,853.58        |                  |
| Разница, NSV при 15°C         | 37,448.59        |                  | 37,448.22        |                  |
| Разница, Нетто метрич. тонны  | 29,764.19        |                  | 29,777.16        |                  |

| Итого: Брутто    | Куб. метры 15°C | Баррели США 60°F | Метр. тонны (вак.) | Мет. тонны (возд.) | Длинные тонны |
|------------------|-----------------|------------------|--------------------|--------------------|---------------|
| Tengiz Crude Oil | 123,561.140     | 777,571.00       | 97,675.025         | 97,539.108         | 95,998.57     |

| Итого: Нетто     | Куб. метры 15°C | Баррели США 60°F | Метр. тонны (вак.) | Мет. тонны (возд.) | Длинные тонны |
|------------------|-----------------|------------------|--------------------|--------------------|---------------|
| Tengiz Crude Oil | 122,867.962     | 775,992.00       | 97,416.624         | 97,281.067         | 95,744.61     |



# АКТ ЗАМЕРОВ ТРУБОПРОВОДОВ НЕФТИ До

Отчет №: RU 0122  
 Дата отчета: 1 октября 2012 года  
 Место: Тамань, Россия  
 Дата инспекции: 1 октября 2012 года  
 Название судна: ТВА  
 Операция: Инвентаризация

Подсчеты количества на основе ASTM D 1250-2004  
 Объемный поправочный коэффициент: по Таблице 54А

| Трубопровод № | Сорт груза до    | Общий объем, м <sup>3</sup> | Воздух, t°С | Коэффициент сжатия | Откорр. общий объем, м <sup>3</sup> | Плотность (15°С) | Фактический, t°С | Давление, кг/см <sup>2</sup> | VCF (CTL) | Стандарт. объем GSV (15°С), м <sup>3</sup> | Брутто МТ (вакуум) |
|---------------|------------------|-----------------------------|-------------|--------------------|-------------------------------------|------------------|------------------|------------------------------|-----------|--|--------------------|
| 106/14        | Tengiz Crude Oil | 1,534.415                   | 16.00       | 0.99987            | 1,534.221                           | 0.7915           | 14.80            | 4.80                         | 1.00061   | 1,535.351                                  | 1,215.230          |
| 106/14, 13    | Tengiz Crude Oil | 32.800                      | 16.00       | 0.99987            | 32.796                              | 0.7915           | 14.80            | 4.80                         | 1.00061   | 32.820                                     | 25.977             |
| 106/13 (1)    | Tengiz Crude Oil | 1,968.766                   | 16.00       | 0.99987            | 1,968.517                           | 0.7915           | 14.80            | 4.80                         | 1.00061   | 1,969.967                                  | 1,559.229          |
| 106/13a       | Tengiz Crude Oil | 2,026.169                   | 16.00       | 0.99987            | 2,025.914                           | 0.7915           | 14.80            | 4.80                         | 1.00061   | 2,027.405                                  | 1,604.691          |
| 106/17        | Tengiz Crude Oil | 166.000                     | 16.00       | 0.99987            | 165.979                             | 0.7915           | 14.80            | 4.80                         | 1.00061   | 166.101                                    | 131.469            |
| 106/60        | Tengiz Crude Oil | 592.822                     | 16.00       | 0.99987            | 592.747                             | 0.7915           | 14.80            | 4.80                         | 1.00061   | 593.184                                    | 469.505            |
| 106/61        | Tengiz Crude Oil | 531.829                     | 16.00       | 0.99987            | 531.762                             | 0.7915           | 14.80            | 4.80                         | 1.00061   | 532.153                                    | 421.199            |
| 106/4         | Tengiz Crude Oil | 549.366                     | 16.00       | 0.99987            | 549.297                             | 0.7915           | 14.80            | 4.80                         | 1.00061   | 549.701                                    | 435.088            |
| 106/5         | Tengiz Crude Oil | 505.733                     | 16.00       | 0.99987            | 505.669                             | 0.7915           | 14.80            | 4.80                         | 1.00061   | 506.041                                    | 400.531            |
| 106/6         | Tengiz Crude Oil | 5.475                       | 16.00       | 0.99987            | 5.474                               | 0.7915           | 14.80            | 4.80                         | 1.00061   | 5.478                                      | 4.336              |
| 106/7         | Tengiz Crude Oil | 3.011                       | 16.00       | 0.99987            | 3.011                               | 0.7915           | 14.80            | 4.80                         | 1.00061   | 3.013                                      | 2.385              |
| 106/15        | Tengiz Crude Oil | 4.575                       | 16.00       | 0.99987            | 4.574                               | 0.7915           | 14.80            | 4.80                         | 1.00061   | 4.578                                      | 3.623              |
| 106/16        | Tengiz Crude Oil | 2.400                       | 16.00       | 0.99987            | 2.400                               | 0.7915           | 14.80            | 4.80                         | 1.00061   | 2.401                                      | 1.900              |
| 21/112        | Tengiz Crude Oil | 1.544                       | 16.00       | 0.99987            | 1.544                               | 0.7915           | 14.80            | 4.80                         | 1.00061   | 1.545                                      | 1.223              |
| 106/13 (2)    | Tengiz Crude Oil | 974.245                     | 16.00       | 0.99987            | 974.122                             | 0.7915           | 14.80            | 4.80                         | 1.00061   | 974.839                                    | 771.585            |
| LACT meter    | Tengiz Crude Oil | 37.500                      | 16.00       | 0.99987            | 37.495                              | 0.7915           | 14.80            | 4.80                         | 1.00061   | 37.523                                     | 29.699             |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |
|               |                  |                             |             |                    |                                     |                  |                  |                              |           |  |                    |

**Примечание:** CTL подсчитан по ASTM D 1250-2004

| Итого: Брутто    | Кубические метры          | Баррели США          | Метрические тонны           | Метрические тонны на         | Длинные тонны |
|------------------|---------------------------|----------------------|-----------------------------|------------------------------|---------------|
|                  | при 15°С                  | при 60°F             | в вакууме                   | воздухе                      |               |
| Tengiz Crude Oil | 8,942.100                 | 56,273.00            | 7,077.670                   | 7,067.836                    | 6,956.19      |
| Итого: Нетто     | Кубические метры при 15°С | Баррели США при 60°F | Метрические тонны в вакууме | Метрические тонны на воздухе | Длинные тонны |
| Tengiz Crude Oil | 8,924.689                 | 56,164.00            | 7,059.837                   | 7,050.024                    | 6,938.68      |

Представитель "Таманьнефтегаз": А. Шарипов

Представитель "СЖС": А. Лотков