

## CONDENSATE 1

TABLE 1: CONDENSATE GENERAL PROPERTIES ANALYSIS

| CHARACTERISTICS                    | UNITS                     | RESULT | TEST METHOD |
|------------------------------------|---------------------------|--------|-------------|
| Specific Gravity @ 15.56 /15.56 °C | ---                       | 0.7327 | ASTM D4052  |
| API Gravity                        | °API                      | 61.6   |             |
| Sulfur Content (Total)             | wt.%                      | 0.25   | ASTM D4294  |
| H2S Content                        | ppm                       | <1     | UOP 163     |
| Mercaptan Content                  | wt.%                      | 0.17   | UOP 163     |
| Nitrogen Content (Total)           | ppm                       | <10    | ASTM D4629  |
| Water Content                      | vol.%                     | <0.025 | ASTM D4006  |
| Salt Content                       | P.T.B                     | <1     | ASTM D3230  |
| <b>Hydrocarbon Types:</b>          |                           |        |             |
| Saturates                          | vol.%                     | 89.5   | ASTM D1319  |
| Olefins                            | vol.%                     | 2.0    |             |
| Aromatics                          | vol.%                     | 8.5    |             |
| Kinematic Viscosity @ 0 °C         | mm <sup>2</sup> /s        | 1.061  | ASTM D445   |
| Kinematic Viscosity @ 10 °C        | mm <sup>2</sup> /s        | 0.862  |             |
| Kinematic Viscosity @ 20 °C        | mm <sup>2</sup> /s        | 0.777  |             |
| Cloud Point                        | °C                        | -44    | ASTM D2500  |
| Pour Point (Upper)                 | °C                        | -57    | ASTM D97    |
| Reid Vapor Pressure                | psi                       | 11.0   | ASTM D5191  |
| Wax Content                        | wt.%                      | 0.40   | BP 237      |
| Corrosion Copper Strip (3h/50°C)   | ---                       | 1a     | ASTM D130   |
| Total Acid Number                  | mg KOH/g                  | <0.05  | ASTM D 664  |
| Aniline Point                      | °C                        | 60     | IP2         |
| Molecular Weight                   | g/mol                     | 112.6  | Osmomat     |
| Saybolt Color                      | ---                       | 20     | ASTM D156   |
| Bromine Index                      | mg Br <sub>2</sub> /100 g | 807    | IP 130      |
| Lead Content                       | mg/kg                     | <1     | ASTM D 5863 |

TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892)

| Frac. No. | Boiling Range, °C | Yield, wt.% | Cumulative Yield, wt.% | Sp.Gr. @ 15.56/15.56 °C | Yield, vol.% | Cumulative Yield, vol.% |
|-----------|-------------------|-------------|------------------------|-------------------------|--------------|-------------------------|
| 1         | IBP-15            | 6.02        | 6.02                   | 0.5831                  | 7.56         | 7.56                    |
| 2         | 15-65             | 13.17       | 19.19                  | 0.6395                  | 15.09        | 22.65                   |
| 3         | 65-100            | 18.14       | 37.33                  | 0.7163                  | 18.56        | 41.21                   |
| 4         | 100-125           | 14.33       | 51.66                  | 0.7455                  | 14.08        | 55.29                   |
| 5         | 125-150           | 10.85       | 62.51                  | 0.7652                  | 10.39        | 65.68                   |
| 6         | 150-175           | 9.33        | 71.84                  | 0.7747                  | 8.82         | 74.50                   |
| 7         | 175-200           | 6.81        | 78.65                  | 0.7855                  | 6.35         | 80.85                   |
| 8         | 200-225           | 5.38        | 84.03                  | 0.7997                  | 4.93         | 85.78                   |
| 9         | 225-250           | 4.78        | 88.81                  | 0.8068                  | 4.34         | 90.12                   |
| 10        | 250-275           | 4.23        | 93.04                  | 0.8163                  | 3.80         | 93.92                   |
| 11        | 275-300           | 2.88        | 95.92                  | 0.8266                  | 2.55         | 96.47                   |
| 12        | 300-325           | 2.04        | 97.96                  | 0.8352                  | 1.79         | 98.26                   |
| 13        | 325+              | 2.04        | 100.00                 | 0.8600                  | 1.74         | 100.00                  |

## CONDENSATE 2-3

TABLE 1: CONDENSATE GENERAL PROPERTIES ANALYSIS

| CHARACTERISTICS                    | UNITS                     | RESULT | TEST METHOD |
|------------------------------------|---------------------------|--------|-------------|
| Specific Gravity @ 15.56 /15.56 °C | ---                       | 0.7326 | ASTM D4052  |
| API Gravity                        | °API                      | 61.6   |             |
| Sulfur Content (Total)             | wt.%                      | 0.28   | ASTM D4294  |
| H2S Content                        | ppm                       | <1     | UOP 163     |
| Mercaptan Content                  | wt.%                      | 0.21   | UOP 163     |
| Nitrogen Content (Total)           | ppm                       | <10    | ASTM D4629  |
| Water Content                      | vol.%                     | <0.025 | ASTM D4006  |
| Salt Content                       | P.T.B                     | <1     | ASTM D3230  |
| <b>Hydrocarbon Types:</b>          |                           |        |             |
| Saturates                          | vol.%                     | 88.0   | ASTM D1319  |
| Olefins                            | vol.%                     | 1.6    |             |
| Aromatics                          | vol.%                     | 10.4   |             |
| Kinematic Viscosity @ 0 °C         | mm <sup>2</sup> /s        | 0.980  | ASTM D445   |
| Kinematic Viscosity @ 10 °C        | mm <sup>2</sup> /s        | 0.874  |             |
| Kinematic Viscosity @ 20 °C        | mm <sup>2</sup> /s        | 0.808  |             |
| Cloud Point                        | °C                        | -36    | ASTM D2500  |
| Pour Point (Upper)                 | °C                        | -57    | ASTM D97    |
| Reid Vapor Pressure                | psi                       | 10.7   | ASTM D5191  |
| Wax Content                        | wt.%                      | 0.30   | BP 237      |
| Corrosion Copper Strip (3h/50°C)   | ---                       | 1a     | ASTM D130   |
| Total Acid Number                  | mg KOH/g                  | <0.05  | ASTM D 664  |
| Aniline Point                      | °C                        | 61     | IP2         |
| Molecular Weight                   | g/mol                     | 108.5  | Osmomat     |
| Saybolt Color                      | ---                       | 22     | ASTM D156   |
| Bromine Index                      | mg Br <sub>2</sub> /100 g | 914    | IP 130      |
| Lead Content                       | mg/kg                     | <1     | ASTM D 5863 |

TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892)

| Frac. No. | Boiling Range, °C | Yield, wt.% | Cumulative Yield, wt.% | Sp.Gr. @ 15.56/15.56 °C | Yield, vol.% | Cumulative Yield, vol.% |
|-----------|-------------------|-------------|------------------------|-------------------------|--------------|-------------------------|
| 1         | IBP-15            | 4.57        | 4.57                   | 0.58                    | 5.80         | 5.80                    |
| 2         | 15-65             | 17.83       | 22.40                  | 0.64                    | 20.41        | 26.21                   |
| 3         | 65-100            | 16.79       | 39.19                  | 0.7143                  | 17.22        | 43.43                   |
| 4         | 100-125           | 12.30       | 51.49                  | 0.7442                  | 12.11        | 55.54                   |
| 5         | 125-150           | 9.40        | 60.89                  | 0.7630                  | 9.03         | 64.57                   |
| 6         | 150-175           | 8.60        | 69.49                  | 0.7757                  | 8.12         | 72.69                   |
| 7         | 175-200           | 7.80        | 77.29                  | 0.7853                  | 7.28         | 79.97                   |
| 8         | 200-225           | 7.30        | 84.59                  | 0.8012                  | 6.68         | 86.65                   |
| 9         | 225-250           | 5.20        | 89.79                  | 0.8069                  | 4.72         | 91.37                   |
| 10        | 250-275           | 3.71        | 93.50                  | 0.8196                  | 3.32         | 94.69                   |
| 11        | 275-300           | 2.39        | 95.89                  | 0.8280                  | 2.11         | 96.80                   |
| 12        | 300-325           | 2.00        | 97.89                  | 0.8476                  | 1.73         | 98.53                   |
| 13        | 325+              | 2.11        | 100.00                 | 1.0539                  | 1.47         | 100.00                  |

## CONDENSATE 4-5

TABLE 1: CONDENSATE GENERAL PROPERTIES ANALYSIS

| CHARACTERISTICS                    | UNITS                     | RESULT           | TEST METHOD |
|------------------------------------|---------------------------|------------------|-------------|
| Specific Gravity @ 15.56 /15.56 °C | ---                       | <b>0.7330</b>    | ASTM D4052  |
| API Gravity                        | °API                      | <b>61.5</b>      |             |
| Sulfur Content (Total)             | wt.%                      | <b>0.31</b>      | ASTM D4294  |
| H2S Content                        | ppm                       | <b>&lt;1</b>     | UOP 163     |
| Mercaptan Content                  | wt.%                      | <b>0.21</b>      | UOP 163     |
| Nitrogen Content (Total)           | ppm                       | <b>&lt;10</b>    | ASTM D4629  |
| Water Content                      | vol.%                     | <b>&lt;0.025</b> | ASTM D4006  |
| Salt Content                       | P.T.B                     | <b>&lt;1</b>     | ASTM D3230  |
| <b>Hydrocarbon Types:</b>          |                           |                  |             |
| Saturates                          | vol.%                     | <b>88.0</b>      | ASTM D1319  |
| Olefins                            | vol.%                     | <b>1.7</b>       |             |
| Aromatics                          | vol.%                     | <b>10.3</b>      |             |
| Kinematic Viscosity @ 0 °C         | mm <sup>2</sup> /s        | <b>1.009</b>     | ASTM D445   |
| Kinematic Viscosity @ 10 °C        | mm <sup>2</sup> /s        | <b>0.899</b>     |             |
| Kinematic Viscosity @ 20 °C        | mm <sup>2</sup> /s        | <b>0.815</b>     |             |
| Cloud Point                        | °C                        | <b>-36</b>       | ASTM D2500  |
| Pour Point (Upper)                 | °C                        | <b>-57</b>       | ASTM D97    |
| Reid Vapor Pressure                | psi                       | <b>11.2</b>      | ASTM D5191  |
| Wax Content                        | wt.%                      | <b>0.20</b>      | BP 237      |
| Corrosion Copper Strip (3h/50°C)   | ---                       | <b>1a</b>        | ASTM D130   |
| Total Acid Number                  | mg KOH/g                  | <b>&lt;0.05</b>  | ASTM D 664  |
| Aniline Point                      | °C                        | <b>61</b>        | IP2         |
| Molecular Weight                   | g/mol                     | <b>111.2</b>     | Osmomat     |
| Saybolt Color                      | ---                       | <b>22</b>        | ASTM D156   |
| Bromine Index                      | mg Br <sub>2</sub> /100 g | <b>886</b>       | IP 130      |
| Lead Content                       | mg/kg                     | <b>&lt;1</b>     | ASTM D 5863 |

TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892)

| Frac. No. | Boiling Range, °C | Yield, wt.% | Cumulative Yield, wt.% | Sp.Gr. @ 15.56/15.56 °C | Yield, vol.% | Cumulative Yield, vol.% |
|-----------|-------------------|-------------|------------------------|-------------------------|--------------|-------------------------|
| 1         | IBP-15            | 3.18        | 3.18                   | 0.56                    | 4.14         | 4.14                    |
| 2         | 15-65             | 19.54       | 22.72                  | 0.64                    | 22.35        | 26.49                   |
| 3         | 65-100            | 16.42       | 39.14                  | 0.7197                  | 16.72        | 43.21                   |
| 4         | 100-125           | 12.29       | 51.43                  | 0.7439                  | 12.11        | 55.32                   |
| 5         | 125-150           | 10.72       | 62.15                  | 0.7630                  | 10.30        | 65.62                   |
| 6         | 150-175           | 9.58        | 71.73                  | 0.7774                  | 9.03         | 74.65                   |
| 7         | 175-200           | 6.58        | 78.31                  | 0.7854                  | 6.14         | 80.79                   |
| 8         | 200-225           | 4.68        | 82.99                  | 0.8021                  | 4.28         | 85.07                   |
| 9         | 225-250           | 4.51        | 87.50                  | 0.8106                  | 4.08         | 89.15                   |
| 10        | 250-275           | 4.00        | 91.50                  | 0.8154                  | 3.60         | 92.75                   |
| 11        | 275-300           | 3.80        | 95.30                  | 0.8248                  | 3.38         | 96.13                   |
| 12        | 300-325           | 2.71        | 98.01                  | 0.8368                  | 2.37         | 98.50                   |
| 13        | 325+              | 1.99        | 100.00                 | 0.9745                  | 1.50         | 100.00                  |

## CONDENSATE 6-7-8

TABLE 1: CONDENSATE GENERAL PROPERTIES ANALYSIS

| CHARACTERISTICS                    | UNITS                     | RESULT | TEST METHOD |
|------------------------------------|---------------------------|--------|-------------|
| Specific Gravity @ 15.56 /15.56 °C | ---                       | 0.7346 | ASTM D4052  |
| API Gravity                        | °API                      | 61.1   |             |
| Sulfur Content (Total)             | wt.%                      | 0.27   | ASTM D4294  |
| H2S Content                        | ppm                       | <1     | UOP 163     |
| Mercaptan Content                  | wt.%                      | 0.15   | UOP 163     |
| Nitrogen Content (Total)           | ppm                       | <10    | ASTM D4629  |
| Water Content                      | vol.%                     | <0.025 | ASTM D4006  |
| Salt Content                       | P.T.B                     | <1     | ASTM D3230  |
| <b>Hydrocarbon Types:</b>          |                           |        |             |
| Saturates                          | vol.%                     | 87.0   | ASTM D1319  |
| Olefins                            | vol.%                     | 2.0    |             |
| Aromatics                          | vol.%                     | 11.0   |             |
| Kinematic Viscosity @ 0 °C         | mm <sup>2</sup> /s        | 1.068  | ASTM D445   |
| Kinematic Viscosity @ 10 °C        | mm <sup>2</sup> /s        | 0.943  |             |
| Kinematic Viscosity @ 20 °C        | mm <sup>2</sup> /s        | 0.828  |             |
| Cloud Point                        | °C                        | -34    | ASTM D2500  |
| Pour Point (Upper)                 | °C                        | -57    | ASTM D97    |
| Reid Vapor Pressure                | psi                       | 10.7   | ASTM D5191  |
| Wax Content                        | wt.%                      | 0.30   | BP 237      |
| Corrosion Copper Strip (3h/50°C)   | ---                       | 2a     | ASTM D130   |
| Total Acid Number                  | mg KOH/g                  | <0.05  | ASTM D 664  |
| Aniline Point                      | °C                        | 62     | IP2         |
| Molecular Weight                   | g/mol                     | 113.8  | Osmomat     |
| Saybolt Color                      | ---                       | 24     | ASTM D156   |
| Bromine Index                      | mg Br <sub>2</sub> /100 g | 857    | IP 130      |
| Lead Content                       | mg/kg                     | <1     | ASTM D 5863 |

TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892)

| Frac. No. | Boiling Range, °C | Yield, wt.% | Cumulative Yield, wt.% | Sp.Gr. @ 15.56/15.56 °C | Yield, vol.% | Cumulative Yield, vol.% |
|-----------|-------------------|-------------|------------------------|-------------------------|--------------|-------------------------|
| 1         | IBP-15            | 5.49        | 5.49                   | 0.58                    | 6.98         | 6.98                    |
| 2         | 15-65             | 16.86       | 22.35                  | 0.65                    | 19.02        | 26.00                   |
| 3         | 65-100            | 15.70       | 38.05                  | 0.7147                  | 16.14        | 42.14                   |
| 4         | 100-125           | 10.86       | 48.91                  | 0.7443                  | 10.72        | 52.86                   |
| 5         | 125-150           | 9.70        | 58.61                  | 0.7626                  | 9.34         | 62.20                   |
| 6         | 150-175           | 9.04        | 67.65                  | 0.7778                  | 8.54         | 70.74                   |
| 7         | 175-200           | 7.50        | 75.15                  | 0.7876                  | 7.00         | 77.74                   |
| 8         | 200-225           | 6.41        | 81.56                  | 0.7997                  | 5.89         | 83.63                   |
| 9         | 225-250           | 4.98        | 86.54                  | 0.8107                  | 4.51         | 88.14                   |
| 10        | 250-275           | 4.52        | 91.06                  | 0.8200                  | 4.05         | 92.19                   |
| 11        | 275-300           | 3.25        | 94.31                  | 0.8275                  | 2.89         | 95.08                   |
| 12        | 300-325           | 2.29        | 96.60                  | 0.8327                  | 2.02         | 97.10                   |
| 13        | 325+              | 3.40        | 100.00                 | 0.8614                  | 2.90         | 100.00                  |

## CONDENSATE 9-10

TABLE 1: CONDENSATE GENERAL PROPERTIES ANALYSIS

| CHARACTERISTICS                    | UNITS                     | RESULT | TEST METHOD |
|------------------------------------|---------------------------|--------|-------------|
| Specific Gravity @ 15.56 /15.56 °C | ---                       | 0.7360 | ASTM D4052  |
| API Gravity                        | °API                      | 60.8   |             |
| Sulfur Content (Total)             | wt.%                      | 0.21   | ASTM D4294  |
| H2S Content                        | ppm                       | <1     | UOP 163     |
| Mercaptan Content                  | wt.%                      | 0.13   | UOP 163     |
| Nitrogen Content (Total)           | ppm                       | <10    | ASTM D4629  |
| Water Content                      | vol.%                     | <0.025 | ASTM D4006  |
| Salt Content                       | P.T.B                     | <1     | ASTM D3230  |
| <b>Hydrocarbon Types:</b>          |                           |        |             |
| Saturates                          | vol.%                     | 89.0   | ASTM D1319  |
| Olefins                            | vol.%                     | 1.1    |             |
| Aromatics                          | vol.%                     | 9.9    |             |
| Kinematic Viscosity @ 0 °C         | mm <sup>2</sup> /s        | 1.012  | ASTM D445   |
| Kinematic Viscosity @ 10 °C        | mm <sup>2</sup> /s        | 0.943  |             |
| Kinematic Viscosity @ 20 °C        | mm <sup>2</sup> /s        | 0.829  |             |
| Cloud Point                        | °C                        | -31    | ASTM D2500  |
| Pour Point (Upper)                 | °C                        | -57    | ASTM D97    |
| Reid Vapor Pressure                | psi                       | 10.7   | ASTM D5191  |
| Wax Content                        | wt.%                      | 0.50   | BP 237      |
| Corrosion Copper Strip (3h/50°C)   | ---                       | 2a     | ASTM D130   |
| Total Acid Number                  | mg KOH/g                  | <0.05  | ASTM D 664  |
| Aniline Point                      | °C                        | 62     | IP2         |
| Molecular Weight                   | g/mol                     | 113.8  | Osmomat     |
| Saybolt Color                      | ---                       | 20     | ASTM D156   |
| Bromine Index                      | mg Br <sub>2</sub> /100 g | 759    | IP 130      |
| Lead Content                       | mg/kg                     | <1     | ASTM D 5863 |

TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892)

| Frac. No. | Boiling Range, °C | Yield, wt.% | Cumulative Yield, wt.% | Sp.Gr. @ 15.56/15.56 °C | Yield, vol.% | Cumulative Yield, vol.% |
|-----------|-------------------|-------------|------------------------|-------------------------|--------------|-------------------------|
| 1         | IBP-15            | 3.47        | 3.47                   | 0.58                    | 4.44         | 4.44                    |
| 2         | 15-65             | 17.01       | 20.48                  | 0.64                    | 19.61        | 24.05                   |
| 3         | 65-100            | 16.09       | 36.57                  | 0.7183                  | 16.49        | 40.54                   |
| 4         | 100-125           | 10.74       | 47.31                  | 0.7413                  | 10.66        | 51.20                   |
| 5         | 125-150           | 11.03       | 58.34                  | 0.7598                  | 10.68        | 61.88                   |
| 6         | 150-175           | 9.01        | 67.35                  | 0.7778                  | 8.53         | 70.41                   |
| 7         | 175-200           | 7.11        | 74.46                  | 0.7869                  | 6.65         | 77.06                   |
| 8         | 200-225           | 6.28        | 80.74                  | 0.8026                  | 5.76         | 82.82                   |
| 9         | 225-250           | 5.51        | 86.25                  | 0.8090                  | 5.01         | 87.83                   |
| 10        | 250-275           | 5.38        | 91.63                  | 0.8162                  | 4.85         | 92.68                   |
| 11        | 275-300           | 3.93        | 95.56                  | 0.8303                  | 3.48         | 96.16                   |
| 12        | 300-325           | 4.44        | 100.00                 | 0.8510                  | 3.84         | 100.00                  |
| 13        | 325+              | 0.00        | 0.00                   | 0.0000                  | 0.00         | 0.00                    |

## CONDENSATE 12

TABLE 1: CONDENSATE GENERAL PROPERTIES ANALYSIS

| CHARACTERISTICS                    | UNITS                     | RESULT           | TEST METHOD |
|------------------------------------|---------------------------|------------------|-------------|
| Specific Gravity @ 15.56 /15.56 °C | ---                       | <b>0.7379</b>    | ASTM D4052  |
| API Gravity                        | °API                      | <b>60.3</b>      |             |
| Sulfur Content (Total)             | wt.%                      | <b>0.21</b>      | ASTM D4294  |
| H2S Content                        | ppm                       | <b>&lt;1</b>     | UOP 163     |
| Mercaptan Content                  | wt.%                      | <b>0.11</b>      | UOP 163     |
| Nitrogen Content (Total)           | ppm                       | <b>&lt;10</b>    | ASTM D4629  |
| Water Content                      | vol.%                     | <b>&lt;0.025</b> | ASTM D4006  |
| Salt Content                       | P.T.B                     | <b>&lt;1</b>     | ASTM D3230  |
| <b>Hydrocarbon Types:</b>          |                           |                  |             |
| Saturates                          | vol.%                     | <b>88.8</b>      | ASTM D1319  |
| Olefins                            | vol.%                     | <b>1.7</b>       |             |
| Aromatics                          | vol.%                     | <b>9.5</b>       |             |
| Kinematic Viscosity @ 0 °C         | mm <sup>2</sup> /s        | <b>1.063</b>     | ASTM D445   |
| Kinematic Viscosity @ 10 °C        | mm <sup>2</sup> /s        | <b>0.920</b>     |             |
| Kinematic Viscosity @ 20 °C        | mm <sup>2</sup> /s        | <b>0.811</b>     |             |
| Cloud Point                        | °C                        | <b>-36</b>       | ASTM D2500  |
| Pour Point (Upper)                 | °C                        | <b>-57</b>       | ASTM D97    |
| Reid Vapor Pressure                | psi                       | <b>10.3</b>      | ASTM D5191  |
| Wax Content                        | wt.%                      | <b>0.30</b>      | BP 237      |
| Corrosion Copper Strip (3h/50°C)   | ---                       | <b>1a</b>        | ASTM D130   |
| Total Acid Number                  | mg KOH/g                  | <b>&lt;0.05</b>  | ASTM D 664  |
| Aniline Point                      | °C                        | <b>62</b>        | IP2         |
| Molecular Weight                   | g/mol                     | <b>114.5</b>     | Osmomat     |
| Saybolt Color                      | ---                       | <b>18</b>        | ASTM D156   |
| Bromine Index                      | mg Br <sub>2</sub> /100 g | <b>807</b>       | IP 130      |
| Lead Content                       | mg/kg                     | <b>&lt;1</b>     | ASTM D 5863 |

TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892)

| Frac. No. | Boiling Range, °C | Yield, wt.% | Cumulative Yield, wt.% | Sp.Gr. @ 15.56/15.56 °C | Yield, vol.% | Cumulative Yield, vol.% |
|-----------|-------------------|-------------|------------------------|-------------------------|--------------|-------------------------|
| 1         | IBP-15            | 5.50        | 5.50                   | 0.59                    | 6.92         | 6.92                    |
| 2         | 15-65             | 13.80       | 19.30                  | 0.64                    | 15.82        | 22.74                   |
| 3         | 65-100            | 16.20       | 35.50                  | 0.7155                  | 16.71        | 39.45                   |
| 4         | 100-125           | 11.60       | 47.10                  | 0.7450                  | 11.49        | 50.94                   |
| 5         | 125-150           | 10.75       | 57.85                  | 0.7658                  | 10.36        | 61.30                   |
| 6         | 150-175           | 9.63        | 67.48                  | 0.7743                  | 9.18         | 70.48                   |
| 7         | 175-200           | 7.57        | 75.05                  | 0.7820                  | 7.14         | 77.62                   |
| 8         | 200-225           | 6.07        | 81.12                  | 0.7966                  | 5.62         | 83.24                   |
| 9         | 225-250           | 5.18        | 86.30                  | 0.8078                  | 4.73         | 87.97                   |
| 10        | 250-275           | 4.78        | 91.08                  | 0.8176                  | 4.31         | 92.28                   |
| 11        | 275-300           | 3.27        | 94.35                  | 0.8300                  | 2.91         | 95.19                   |
| 12        | 300-325           | 2.90        | 97.25                  | 0.8459                  | 2.53         | 97.72                   |
| 13        | 325+              | 2.75        | 100.00                 | 0.8900                  | 2.28         | 100.00                  |

## CONDENSATE 15-16

TABLE 1: CONDENSATE GENERAL PROPERTIES ANALYSIS

| CHARACTERISTICS                    | UNITS                     | RESULT | TEST METHOD |
|------------------------------------|---------------------------|--------|-------------|
| Specific Gravity @ 15.56 /15.56 °C | ---                       | 0.7350 | ASTM D4052  |
| API Gravity                        | °API                      | 61.0   |             |
| Sulfur Content (Total)             | wt.%                      | 0.30   | ASTM D4294  |
| H2S Content                        | ppm                       | <1     | UOP 163     |
| Mercaptan Content                  | wt.%                      | 0.20   | UOP 163     |
| Nitrogen Content (Total)           | ppm                       | <10    | ASTM D4629  |
| Water Content                      | vol.%                     | <0.025 | ASTM D4006  |
| Salt Content                       | P.T.B                     | <1     | ASTM D3230  |
| <b>Hydrocarbon Types:</b>          |                           |        |             |
| Saturates                          | vol.%                     | 87.0   | ASTM D1319  |
| Olefins                            | vol.%                     | 2.5    |             |
| Aromatics                          | vol.%                     | 10.3   |             |
| Kinematic Viscosity @ 0 °C         | mm <sup>2</sup> /s        | 0.996  | ASTM D445   |
| Kinematic Viscosity @ 10 °C        | mm <sup>2</sup> /s        | 0.881  |             |
| Kinematic Viscosity @ 20 °C        | mm <sup>2</sup> /s        | 0.813  |             |
| Cloud Point                        | °C                        | -36    | ASTM D2500  |
| Pour Point (Upper)                 | °C                        | -57    | ASTM D97    |
| Reid Vapor Pressure                | psi                       | 10.3   | ASTM D5191  |
| Wax Content                        | wt.%                      | 0.30   | BP 237      |
| Corrosion Copper Strip (3h/50°C)   | ---                       | 2a     | ASTM D130   |
| Total Acid Number                  | mg KOH/g                  | <0.05  | ASTM D 664  |
| Aniline Point                      | °C                        | 62     | IP2         |
| Molecular Weight                   | g/mol                     | 111.7  | Osmomat     |
| Saybolt Color                      | ---                       | 16     | ASTM D156   |
| Bromine Index                      | mg Br <sub>2</sub> /100 g | 858    | IP 130      |
| Lead Content                       | mg/kg                     | <1     | ASTM D 5863 |

TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892)

| Frac. No. | Boiling Range, °C | Yield, wt.% | Cumulative Yield, wt.% | Sp.Gr. @ 15.56/15.56 °C | Yield, vol.% | Cumulative Yield, vol.% |
|-----------|-------------------|-------------|------------------------|-------------------------|--------------|-------------------------|
| 1         | IBP-15            | 4.39        | 4.39                   | 0.58                    | 5.52         | 5.52                    |
| 2         | 15-65             | 16.85       | 21.24                  | 0.65                    | 19.20        | 24.72                   |
| 3         | 65-100            | 16.76       | 38.00                  | 0.7195                  | 17.12        | 41.84                   |
| 4         | 100-125           | 12.41       | 50.41                  | 0.7420                  | 12.29        | 54.13                   |
| 5         | 125-150           | 10.53       | 60.94                  | 0.7645                  | 10.12        | 64.26                   |
| 6         | 150-175           | 9.50        | 70.44                  | 0.7772                  | 8.98         | 73.24                   |
| 7         | 175-200           | 7.28        | 77.72                  | 0.7869                  | 6.80         | 80.04                   |
| 8         | 200-225           | 6.47        | 84.19                  | 0.8002                  | 5.94         | 85.99                   |
| 9         | 225-250           | 5.12        | 89.31                  | 0.8101                  | 4.65         | 90.63                   |
| 10        | 250-275           | 3.76        | 93.07                  | 0.8206                  | 3.37         | 94.00                   |
| 11        | 275-300           | 2.40        | 95.47                  | 0.8266                  | 2.13         | 96.13                   |
| 12        | 300-325           | 4.53        | 100.00                 | 0.8604                  | 3.87         | 100.00                  |
| 13        | 325+              | 0.00        | 0.00                   | 0.0000                  | 0.00         | 0.00                    |

## CONDENSATE 17-18

TABLE 1: CONDENSATE GENERAL PROPERTIES ANALYSIS

| CHARACTERISTICS                    | UNITS                     | RESULT | TEST METHOD |
|------------------------------------|---------------------------|--------|-------------|
| Specific Gravity @ 15.56 /15.56 °C | ---                       | 0.7346 | ASTM D4052  |
| API Gravity                        | °API                      | 61.1   |             |
| Sulfur Content (Total)             | wt.%                      | 0.25   | ASTM D4294  |
| H2S Content                        | ppm                       | <1     | UOP 163     |
| Mercaptan Content                  | wt.%                      | 0.17   | UOP 163     |
| Nitrogen Content (Total)           | ppm                       | <10    | ASTM D4629  |
| Water Content                      | vol.%                     | <0.025 | ASTM D4006  |
| Salt Content                       | P.T.B                     | <1     | ASTM D3230  |
| <b>Hydrocarbon Types:</b>          |                           |        |             |
| Saturates                          | vol.%                     | 87.5   | ASTM D1319  |
| Olefins                            | vol.%                     | 1.5    |             |
| Aromatics                          | vol.%                     | 11.0   |             |
| Kinematic Viscosity @ 0 °C         | mm <sup>2</sup> /s        | 1.017  | ASTM D445   |
| Kinematic Viscosity @ 10 °C        | mm <sup>2</sup> /s        | 0.930  |             |
| Kinematic Viscosity @ 20 °C        | mm <sup>2</sup> /s        | 0.815  |             |
| Cloud Point                        | °C                        | -36    | ASTM D2500  |
| Pour Point (Upper)                 | °C                        | -57    | ASTM D97    |
| Reid Vapor Pressure                | psi                       | 10.9   | ASTM D5191  |
| Wax Content                        | wt.%                      | 0.30   | BP 237      |
| Corrosion Copper Strip (3h/50°C)   | ---                       | 1b     | ASTM D130   |
| Total Acid Number                  | mg KOH/g                  | <0.05  | ASTM D 664  |
| Aniline Point                      | °C                        | 62     | IP2         |
| Molecular Weight                   | g/mol                     | 110.0  | Osmomat     |
| Saybolt Color                      | ---                       | 24     | ASTM D156   |
| Bromine Index                      | mg Br <sub>2</sub> /100 g | 822    | IP 130      |
| Lead Content                       | mg/kg                     | <1     | ASTM D 5863 |

TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892)

| Frac. No. | Boiling Range, °C | Yield, wt.% | Cumulative Yield, wt.% | Sp.Gr. @ 15.56/15.56 °C | Yield, vol.% | Cumulative Yield, vol.% |
|-----------|-------------------|-------------|------------------------|-------------------------|--------------|-------------------------|
| 1         | IBP-15            | 4.64        | 4.64                   | 0.59                    | 5.82         | 5.82                    |
| 2         | 15-65             | 15.91       | 20.55                  | 0.64                    | 18.25        | 24.07                   |
| 3         | 65-100            | 17.97       | 38.52                  | 0.7152                  | 18.46        | 42.53                   |
| 4         | 100-125           | 12.59       | 51.11                  | 0.7454                  | 12.41        | 54.94                   |
| 5         | 125-150           | 11.36       | 62.47                  | 0.7679                  | 10.87        | 65.81                   |
| 6         | 150-175           | 8.57        | 71.04                  | 0.7765                  | 8.11         | 73.92                   |
| 7         | 175-200           | 7.77        | 78.81                  | 0.7866                  | 7.26         | 81.18                   |
| 8         | 200-225           | 6.87        | 85.68                  | 0.8063                  | 6.26         | 87.43                   |
| 9         | 225-250           | 4.83        | 90.51                  | 0.8203                  | 4.33         | 91.76                   |
| 10        | 250-275           | 3.50        | 94.01                  | 0.8298                  | 3.10         | 94.86                   |
| 11        | 275-300           | 2.70        | 96.71                  | 0.8473                  | 2.34         | 97.20                   |
| 12        | 300-325           | 3.29        | 100.00                 | 0.8632                  | 2.80         | 100.00                  |
| 13        | 325+              | 0.00        | 0.00                   | 0.0000                  | 0.00         | 0.00                    |