Appendix No. 1 – Technical Specification



FRACTURING EQUIPMENT

The Frac Fleet consists of the following equipments, comprising of:

- Frac Units FC-1251 truck mounted 4 qty.
- Frac Unit TPT-2250 trailer mounted 1 qty.
- Manifold IC-230 skid mounted,
- Blender MC-60 truck mounted,
- Sand transporter + tractor

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Monitoring of Frac Fleet MB VAN AH2-4R.





TRUCK MOUNTED FRAC UNIT – FC 1251



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TRUCK MOUNTED FRAC UNIT – FC 1251

Technical parameters of Frac Unit is as follow:

- Steward & Stevenson manufacturer,
- Mercedes Benz chassis type 2538 6x4 381HP,
- Detroit Diesel deck engine 16V-92TAB 1250 HP,
- SPM TWS 1300 triplex pump 1300 BHP,
- Allison Transmission DP 8962,

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- Overall Length: 35 ft. 9 in. (10.83 meters),
- Overall Width: 8 ft. 0 in. (2.44 meters),
- Overall Height: 12 ft. 5 in. (3.80 meters),
- Approximate weight: 55115.5 Lbs. (25,000 Kgs).



TRUCK MOUNTED FRAC UNIT – FC 1251

SPM TWS 1300 triplex pump is mounted on each four (4) Frac Unit FC-1251. Currently SPM triplex pumps on the Frac Unit FC-1251 are rigged up with the following Fluid End sizes:

-Two (2) Frac Units FC-1251 are fitted with SPM Fluid End with 3.75" plunger diameter,

-Two (2) Frac Units FC-1251 are fitted with SPM Fluid End with 5" plunger diameter,

Maximum Working Pressure of Frac Unit as below:

| Plunger Size | : | 6" |
|--|---|----------------------------|
| Maximum Discharge Pressure | : | 7,075 PSI (488 bar) |
| Maximum Discharge Rate | : | 882 GPM (3,338 LPM) |
| Plunger Size Maximum Discharge Pressure | : | 5″ 10,000 PSI (689 bar) |

Maximum Discharge Rate

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10,000 PSI (689 bar) 612 GPM (2,316 LPM)



TRUCK MOUNTED FRAC UNIT – FC 1251

Plunger Size Maximum Discharge Pressure Discharge Rate 3.75" 15,000 PSI (1,034 bar)Maximum 345 GPM (1,300 LPM)

In addition, there are the following sizes of SPM TWS 1300 Fluid Ends (as a spare) that can be interchangeably mounted to Frac Unit FC-1251 depending on your job:

- Four (4) SPM TWS 1300 Fluid Ends with 5" plunger diameter,
- Two (2) SPM TWS 1300 Fluid Ends with 6" plunger diameter,



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TRAILER MOUNTED FRAC UNIT – TPT 2250



TRAILER MOUNTED FRAC UNIT – TPT 2250

- Rolligon manufacturer,
- Detroit diesel deck engine 12V4000 2250 HP,
- Heavy duty oilfield type trailer with 2" king pin,
- Allison transmission S9810M,
- SPM TWS 2250 triplex pump 2250 BHP,
- o Plunger size 5"

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- Maximum working pressure 11,459 PSI (790 bar),
- Maximum discharge rate 673 GPM (2,547 LPM),
- Height 12'4" (3.8 m),
- Width 8'4" (2.55 m),
- Length (kingpin to bumper) 39'4" (12.0 m),
- Weight 62,000 lb (28,000 kg).







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MANIFOLD IC-230

- Steward & Stevenson manufacturer,
- Skid mounted,
- Capable to connect up to six (6) Frac Units,
- Low and high pressure manifolds,
- ➢ Max. working pressure 15,000 PSI,
- \succ HP inputs to the manifold 6 x 2" F fig.1502,
- \succ HP outputs from manifold 2 x 3" M fig.1502,
- Length: 8.0 m,
- ➢ Width: 2.50 m,
- Height: 2.75 m,

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Weight: 13,000 kg.



BLENDER MC-60



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BLENDER MC-60

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- Steward & Stevenson manufacturer,
- Mercedes 2644 6X4 truck mounted unit,
- Fluid rate : 60 BBL/Min (9. 5 m3/min),
- Max. discharge press : 70 psi (4.8 bar),
- Max. discharge dens. : 20 lbs. sand added per gallon of water,
- Dry chemical rate : 1.3 ft3/min total maximum (0.037 m3/min),
- Liquid chemical rate : 15 USGPM total maximum (57 LPM),
- Proppant input 15,500 lb/min (7000 Kg/min.) max.



SAND TRANSPORTER WITH TRACTOR



Trailer mounted sand/proppant transport box with feeding system,

- Storage capacity 23 tons,
- Dual box type compartment,
- Lifting feeding system.

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FRACTURING INSTRUMENT AND MONITORING VAN AH2-4R



FRACTURING INSTRUMENT AND MONITORING VAN AH2-4R

Stewart & Stevenson model AH2-4R VAN, Mercedes Van mounted allows you to control, monitor and record a progress of treatment operations.

The system can monitor:

- Operation of max. up to six (6) Frac Units FC-1251,
- Sand concentration,
- Blender output and input flow rate,
- Working pressure,
- Annulus pressure.

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FRACTURING INSTRUMENT AND MONITORING VAN AH2-4R

The operator interface device is separate and installed in the cabin of VAN. Device includes a graphic LCD display complete with keypad and hot keys. This panel is used to program frequency K-Factors, current scaling values and offset values.

Meyer's MView is a versatile software package that are used to display real time data in a number of different formats (digital meter, time based graphs, gauges, etc.).



