

RIG #8

1. 25 loads to move rig
2. Fuel consumption – 2000 L/day
3. 1 – 855 Cummins Generator
4. 1 – Series 60 Generator
5. 2 – Series 60 Drawworks
6. 2 – F- 800 Triplex Mud Pumps
7. 160” Clear Height

RIG #8 EQUIPMENT LIST

Item	Description
DEPTH RATING	- 3300 metres
DRAWWORKS	- Steelcraft 850, Namco right-angle gear box, Allison 6061 transmission, HVA Compound, 2 – Witchita 14” clutches, 2 – Detroit Series 60 engines rated @ 425 HP each, shaft driven rotary table.
ROTARY TABLE	- 17 ½” Continental Emsco rotary with split master bushings.
SUBSTRUCTURE	- Edmonton Fabricators (built March 15/98) One piece 16’ h x 13’6” w x 47’ l Max pipe setback: 250,000# / 111,000 daN Max table load: 300,000# / 133,000 daN S/N 076-02-980-430 Hydraulic raised wings (includes compressor & hydraulic unit)
DERRICK	- Dreco S/N E6739484 Mast height 131’ (39.9m) Maximum static hook load: 340,000# / 151,250 daN (8 lines) 306,000# / 136,100 daN (6 lines)
BLOCKS	- 200 Ton Gardner Denver with Web Wilson 150 ton hook Sheaves grooved for 1 ½” line
MUD PUMPS #1	- EMSCO F-800 triplex driven by two 425 HP 60 Series Detroits. Clutches are twin disc PO 314 complete in a 12’ x 40’ triple skidded building with lighting and piping.
#2	- Citation 800 (Ideco T800) Triplex, belt driven by two Detroit Series 60 engines – 425 HP each. Clutches are twin disc PO 314 complete in a 12’ x 40’ triple skidded building with lighting and piping. - Includes accumulator, lighting and piping.
MUD TANKS	- Suction Tank: 3 compartments and a fill tank, mud mixer, 12’ x 12’ mix room with mix pump and precharge pump. Comes equipped with skimmers, mud guns and lighting. - Shaker Tank: 3 compartments and a hole fill tank. Double life linear motion shaker with scalping deck, double life centrifuge mounted on push-out rails on top of the mud tank. 12’ x 12’ pump room for hole fill pump, centrifugal feed pump and 5’ x 6’ pump for mud guns, all equipped with lighting and piping as required (120m ³ system)

Item	Description
FUEL TANK/DOG HOUSE	<ul style="list-style-type: none"> - Water: 84m³, Fuel: 28m³ Doghouse on pull-up raising system, 3 lockers, bench, knowledge box, workbench and heaters (steam and electric)
SWIVEL	<ul style="list-style-type: none"> - Oilwell PC 225 Rated @ 200 tons
GENERATORS	<ul style="list-style-type: none"> - 1 – Series 60 Detroit, 300 kW generator 1 – Cummins NTA 855 with 300 kW Stamford generator All electrical in a 11’ x 40’ triple skidded building with tool house and change room
CATWALK	<ul style="list-style-type: none"> - 6’ w x 50’ l with pipe racks on both sides
BLOWOUT PREVENTERS NACE SPEC	<ul style="list-style-type: none"> - 1 – 11” Shaffer annular preventer 5,000# - 1 – 11” Shaffer double gate 5,000# Blind Rams 4 ½” pipe rams - 1 – 11” HYDRIL Type “V” single gate 5,000# 4 ½” pipe rams
ACCUMULATOR	<ul style="list-style-type: none"> - 5 station Koomey accumulator c/w 12 – 10 gallon bottles 4 – N2 back up
MANIFOLD NACE SPEC	<ul style="list-style-type: none"> - 5,000# double out National
DRILL STRING	<ul style="list-style-type: none"> - 320 joints Grant Prideco with 4 ½” pipe, plastic-coated and hardbanded with 4 ½” XH connections
DRILL COLLARS	<ul style="list-style-type: none"> - 21 – 6 ½” OD x 2 ¼” ID drill collars, slip recessed with 4 ½” XH connections - 2 – 9” OD x 3” ID drill collars with 6 ⅝” reg. Connections
MISCELLANEOUS	<ul style="list-style-type: none"> - 1 set BJ Type B tongs - 1 – Cameron Type C weight indicator - Satellite Automatic Driller - 2 – 2” x 3” water circulating pumps - 2 – 1 ½” x 1” fuel transfer pumps - PASON penless recorder - TOTCO 8° survey unit - Complete Katch KAN system
BOILER	<ul style="list-style-type: none"> - 1 – 80 HP Napasee with self-contained building (water and fuel tanks)

EMSCO CONTINENTAL F-800 SERIES TRIPLEX PUMP

SPECIFICATIONS		
Nominal Horsepower Rating	800 @ 150 spm	811(metric) @ 150 spm
Size Maximum Liner by Stroke	6 ¾ x 9 “	171 x 229 mm.
Gear, Herringbone, Ratio	4.31:1	
Suction Manifold Fem. Thd.	10 in.	
Discharge Outlet	5” flange 5000 API	127 mm flange
Pinion Shaft Diameter	7 in.	178 mm.
Extension Length	12 – 7/16 in.	316 mm.
Keyway	1 ¾ x 7/8 in.	44 x 22 mm.
Overall Length	13 ft.	3962 mm.
Overall Width	6 ft. 9 in.	2057 mm.
Overall Height (Less P.D.)	5 ft. 5 ¼ in.	1657 mm.
Skid Width	5 ft. 1 ¾ in.	1568 mm.
Approx Wt.	27,659 lbs	12,546 kg.

PERFORMANCE DATA												
Strokes per minute	Horse Power Ratings	Metric Horse Power Ratings	6 – ¾” 1968 psi	171 mm 138 kg/cm ²	6-1/2” 2120 psi	165 mm 149 kg/cm ²	6” 2490 psi	152 mm 175 kg/cm ²	5” 175 kg/cm ²	152 mm 252 kg/cm ²	4” 5000 psi	152 mm 352 kg/cm ²
160	853	865	669	2532	620	2347	529	2002	367	1389	235	889
150	800	811	627	2373	582	2203	496	1877	344	1302	221	836
140	747	757	585	2214	543	2055	463	1752	321	1215	206	780
130	693	703	543	2055	504	1908	429	1624	298	1094	191	723
120	640	649	502	1900	466	1764	397	1503	275	1041	176	666
110	587	595	459	1737	427	1616	363	1374	252	954	162	613
80	427	433	335	1266	310	1173	264	999	183	693	118	448
			4.18	15.8	3.88	14.69	3.30	12.49	2.29	8.67	1.47	5.6

A600 – PT
SINGLE ACTING TRIPLEX PUMP

SPECIFICATIONS	Measurement

Pump Size (Maximum Piston Dia. X Stroke).....	7 x 8	inches
Standard Piston Sizes.....	4, 4 ½, 5, 5 ¼ 5 ½, 6, 6 ½, 7	inches
Rated Brake Input Horsepower	600 at 175	rpm
Rated Working Pressure:		
Discharge	6000	psi
Suction	275	psi
Hydrostatic Test Pressure:		
Discharge	9000	psi
Suction	425	psi
Fluid Suction Connection (ANSI150 # R.F.)	6	inches
Fluid Discharge Connection API Flange 5,000# RIJ	4	inches
Crankcase Oil Capacity	42	gallons
Gear Ratio.....	46 I or 69 I	
Input Shaft Extension:		
Diameter x Length	4.750 x 5.750	inches
Keyway Width x Depth	1 x ½	inches
Weight with Standard Equipment.....	19,600	pounds

DIMENSIONS

Overall	Length	10' – 11 5 1/16"
Overall	Width	8' – 3"
Overall	Height.....	5' – 5"

PERFORMANCE DATA

English Units									
Piston Size in Inches	Maximum Pressure psi	Gallons Per Rev.	Displacement Gallons/Min. at Pump Speeds of						
			50	75	100	125	150	175	
4	4058	1.31	65	98	131	164	196	229	
4	3207	1.65	82	124	165	206	247	289	
5	2597	2.04	102	153	204	255	306	357	
5 ½	2147	2.47	123	185	247	309	370	432	
5 ¼	1964	2.70	135	202	270	337	405	472	
6	1804	2.94	147	221	294	368	442	514	
6 ½	1537	3.45	172	259	345	432	517	603	
7	1325	4.00	200	300	400	500	600	700	
Brake Input Horsepower			172	258	343	429	515	601	
Input shaft rpm w/6.9I ratio			346	517	690	862	1035	1207	
Input shaft rpm w/4.6I ratio			230	345	460	576	691	806	

Metric Units									
Piston Size in mm	Maximum Pressure KPa	Litres Per Rev.	Displacement Gallons/Min. at Pump Speeds of						
			50	75	100	125	150	175	
102	27979	4.96	4.10	6.18	8.26	10.35	12.37	14.45	
114	22111	6.25	5.17	7.82	10.41	13.00	15.58	18.23	
127	17906	7.72	6.44	9.65	12.87	16.09	19.31	22.52	
140	14803	9.35	7.76	11.67	15.58	19.49	23.34	27.25	
146	13541	10.22	8.52	12.74	17.03	21.26	25.55	29.78	
152	12438	11.1	9.27	13.94	18.55	23.22	27.89	32.43	
165	10597	13.06	10.85	16.34	21.77	27.25	32.62	38.04	
178	9136	15.14	12.62	18.93	25.24	31.55	37.85	44.16	
Kilowatt input.....			128	192	256	320	384	448	
Input Shaft r/min w/6.9I ratio.....			346	517	690	862	1035	1207	
Input Shaft r/min w/4.6I ratio.....			230	345	460	576	691	806	

Based on 90% mechanical and 100% efficiency
 Brake Horsepower - $\frac{\text{gpm} \times \text{psl}}{1714 \times 90\% \text{ Mech. Eff.}}$

Barrels per Day = Gal. Per Rev. x rpm x 34.3

1 inch = 25.4 mm
 1 sq. in = 6.451 6 sq. cm
 1 cu. In = 0.016 386 6 litres

Gal. Per Min. = Gal. Per Rev. x rpm
 Gal. Per Min = $\frac{\text{bpd}}{34.3}$

Gal. Per Rev. = $\frac{\text{Area of Piston} \times (\text{Length of Stroke} \times \# \text{ of Pistons})}{231}$