



A FIELD GUIDE

The vision of Bonanza Drilling is to grow with operator demands without compromising our family oriented atmosphere.



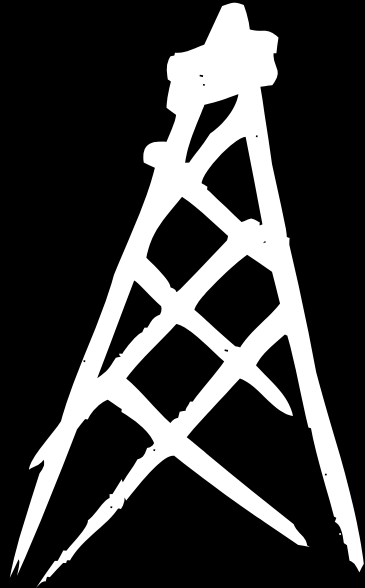
OUR COMPANY

OUR COMPANY AND CONTACT

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MAXIMIZED UTILIZATION

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OUR COMPANY

Bonanza Drilling is a dynamic and growing business committed to excellence and outstanding service to the energy industry.

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From inception, Bonanza has maintained family culture and ideals. Our dedicated team of experienced professionals share a common vision and goal to provide exceptional service to our clients. In addition, the commitment to safety demonstrated by our management team and highly skilled operators has resulted in one of the lowest incident frequencies in the industry.

Bonanza Drilling builds superior equipment designed to meet and exceed the demands of the energy industry. Specializing in horizontal drilling, our “Elite” rigs provide advanced solutions for all applications including vertical, directional, and underbalanced drilling. As a result, Bonanza Drilling is among the leaders in rig utilization.

Our success is a combination of strong management, premium rigs, experienced staff and the ability to grow with operator demands without compromising our family culture.

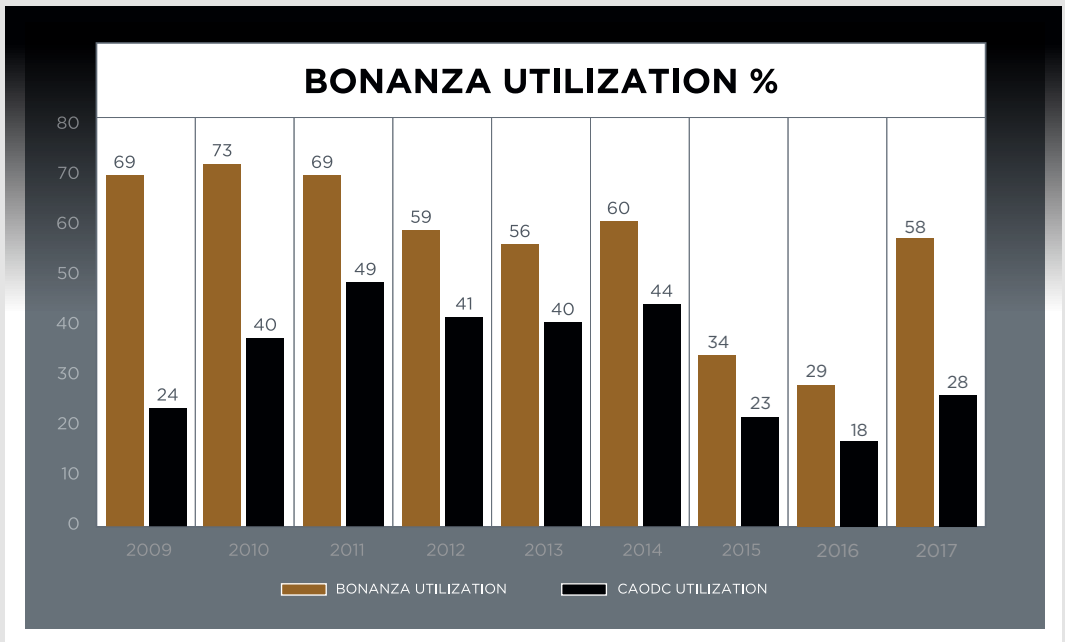
BONANZADRILLING.CA

PONDEROSARENTALS.CA



MAXIMIZED UTILIZATION

Bonanza Rigs have a proven track record and have exceeded the industry standard for utilization and overall productivity for the past ten years.



Bonanza's Total Recordable Incident Frequency (TRIF) has been well below the Canadian Association of Oilwell Drilling Contractors (CAODC) since inception.



SAFETY AND PERSONNEL

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SAFETY AND PERSONNEL

Bonanza Drilling Safety Policy

The Health and Safety of our People, our Assets, the Public, and the Environment is of the highest priority and cannot be compromised.

Bonanza Drilling is committed to incorporating, monitoring and maintaining all applicable legislation into our safety program. Everyone employed by Bonanza Drilling is responsible for maintaining the safety program. Managers and supervisors are responsible for identifying safety needs, communicating safety hazards, investigating hazardous conditions and incidents, provide training, ensuring all equipment is properly maintained and meets legislated safety standards. Their role is supported by input from all employees.

All personnel on Bonanza Drilling work-sites are responsible for adhering to our safety standards. This includes regulations, safe work practices, use of PPE, safety training programs, and reporting. All personnel have the right to refuse unsafe working conditions.

By fulfilling our safety responsibilities, everyone associated with Bonanza Drilling will share the benefits of a safe workplace.

Jason Hemsing
President



Each of us has the responsibility to make safety a primary concern for ourselves, co-workers, customers and the general public. This is fundamental to our well being contributes to the efficient operation of our business and the people we work for.



Partners in Safety



Bonanza is committed to a safe workplace, environmental stewardship, and innovation in the energy industry. We integrate health, safety, and environmental (HSE) management processes into all of our work activities. We have partnered with ISNetworld, a global company, to ensure we maintain safety, insurance, quality, and regulatory information for contractors and suppliers. Another partner, COMPLYWORKS, provides compliance management solutions that help us mitigate operational risk in our organization.

Rover Program

Having trained and competent workers is crucial in any successful operation. In addition to the Apprenticeship program, Bonanza Drilling has an “on the job” training program that is measured through Competency Evaluations which are reviewed with each employee on a quarterly basis.

Bonanza Drilling’s “Rover Program” provides our field personnel the ability to gain experience in all areas of our operation. Once completed, these highly skilled people also provide the opportunity to mentor new employees and provide them with the necessary knowledge to fulfill their duties at the highest level and then advance as opportunities arise. This program was initiated and funded by Bonanza Drilling.





OPERATIONS

RIG INVENTORY AND LAYOUT

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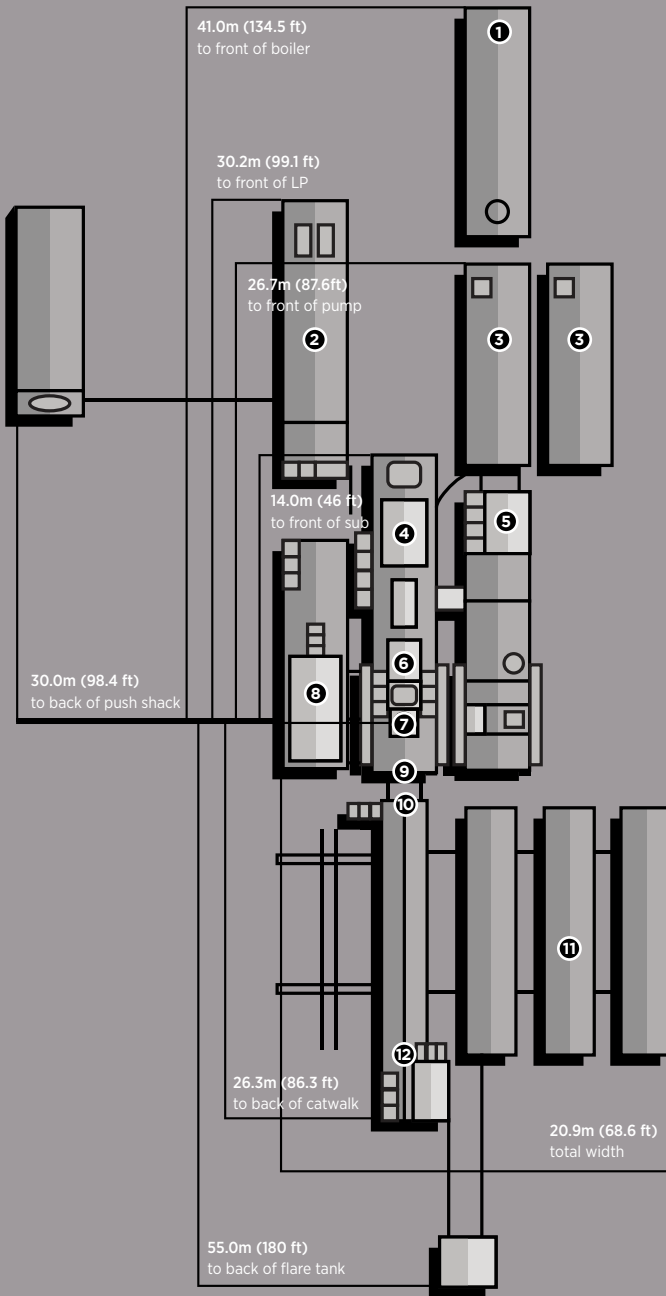


RIG #1

**89,000 DAN / 200,000 LBS
MAX HOOKLOAD**

**2,200M / 7,200'
VERTICAL DEPTH RATING**

BONANZA
DRILLING
RIG 1



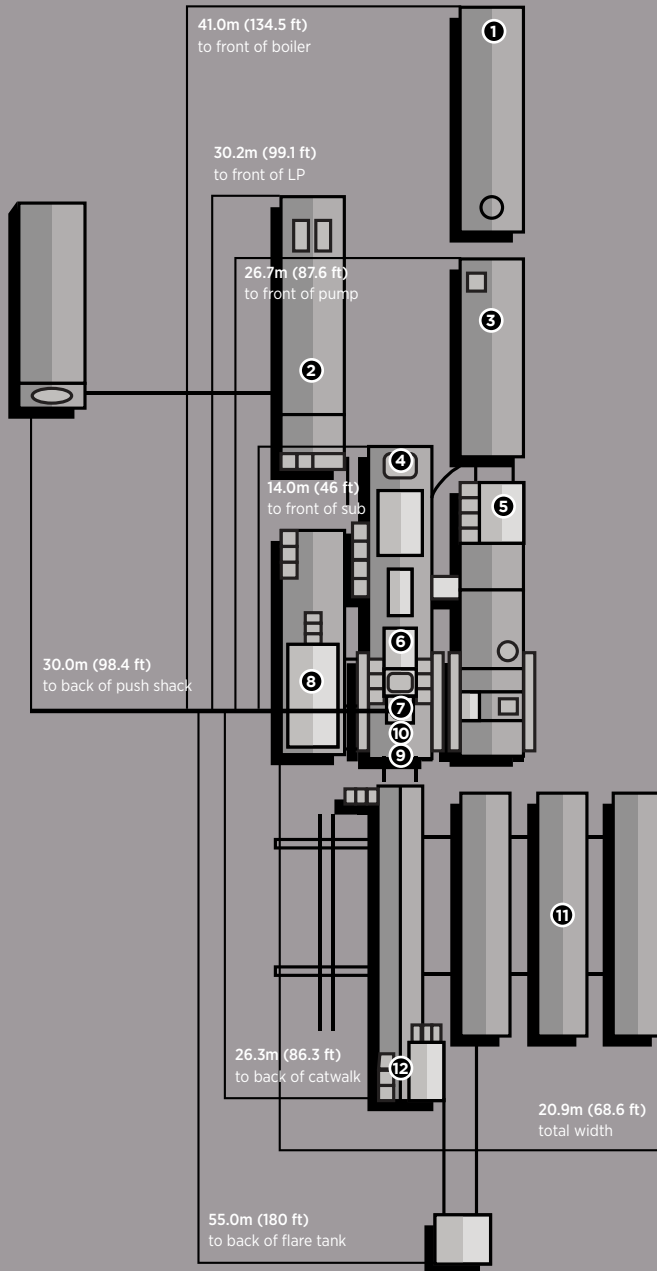
- 1 BOILER:**
 1 - 100hp Liberty Boiler with self-contained 10,000L (265 gal) fuel and 8m³ (2110 gal) water tank.
- 2 COMBINATION BUILDING:**
 2 - 590kw Marathon Generators powered by 2 - 630hp Detroit Series 60 (14L) engines.
 Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series. Houses a 12 man change shack, and contains a 14,000L (3,700 gal) Fuel Tank.
- 3 MUD PUMP:**
 1 - F-1000 triplex pump, powered by 1 - Detroit Series 2000, w/XDR Pacific-Rim hydraulic clutch.
- 4 MAST:**
 Mascto Range 3 Elite Stiff Mast - hydraulically raising (Max static hook load 89,000 daN (200,000 lbs) - 8 lines).
- 5 MUD TANKS:**
 1 - 50m³ (315 bbl), 3 Compartment circulating system, with additional pill and trip tank. Agitator situated in suction tank; low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps.
- 6 DRAW WORKS:**
 TSM 3000 (400hp), Powered by 1 - Detroit Series 60 (14L), w/6 speed Allison transmission. Auxiliary braking by Eaton 124-disc brake.
- 7 TOP DRIVE:**
 FDS 150T Split Block Top Drive with 2-Speed Haglund and Electric HPU (Max Static Load 133,000 daN (300,000 lbs)). Also has 8,000 daN (18,000 lbs) pull down capability. Max Speed @180rpm Max Torque @ 20,000ft/lbs.
- 7 TABLE:**
 Howard Turner 17.5" (444mm) powered hydraulically-for auxiliary use only.
- 8 WATER TANK/DOGHOUSE:**
 Hydraulic raising system-separate sub-storage room. Pason drilling recorder system. 60m³ (380 bbl) useable water tank.
- 9 SUBSTRUCTURE:**
 Mascto Carrier with 24-wheel tridem Axel hydraulic self-leveling trailer-substructure (89,000 daN (200,000 lbs) Max Rotary Capacity, 80,000 daN (180,000 lbs) Max Setback Capacity) KB - Ground 4.0m (13').
- 10 BLOWOUT PREVENTERS:**
 1 - 228.6mm X 21,000 kPa (9" x 3,000 psi) Steel-Tech TA Annular
 2 - 228.6mm X 21,000 kPa (9" x 3,000 psi) Steel-Tech TGR Single Gate Ram
- 11 PIPE TUBS:**
 3 - Hydraulically controlled range 3 tubs.
TUBULARS:
 2200m (7,200') 102mm (4") x 4" FH, X-95 Drill pipe
 4 - 159mm (6 1/4") x 4 1/2" XH, Drill Collars
 8 - 127mm (5") x 3 1/2" IF, Drill Collars
 Available - 102mm (4") x 4" FH, HWDP
- 12 CATWALK:**
 Mascto Skate Catwalk, with hydraulic skate, and leveling racks attached. Also houses NACE trim 52mm & 76mm 21,000 kPa (2" x 3" 3,000 psi) manifold.

RIG #2

89,000 DAN / 200,000 LBS
MAX HOOKLOAD

2,200M / 7,200'
VERTICAL DEPTH RATING





- 1 BOILER:**
 1 - 100hp Liberty Boiler with self-contained 10,000L (2,600 gal) fuel and 8m³ (2,100 gal) water tank.
- 2 COMBINATION BUILDING:**
 2 - 590kw Marathon Generators powered by 2 - 630hp Detroit Series 60 (14L) engines. Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series. Also Houses a 12 man change shack and a 14,000L (3,700 gal) fuel storage tank.
- 3 MUD PUMPS:**
 1 - F-1000 triplex pump, powered by 1 - Detroit Series 2000, w/XDR Pacific-Rim hydraulic clutch.
- 4 MAST:**
 Mascto Range 3 Elite Stiff Mast - hydraulically raising (Max static hook load 89,000 daN (200,000 lbs) - 8 lines)
- 5 MUD TANKS:**
 1 - 40m³ (250bbbl), 3 Compartment circulating system, with additional pill tank and trip tank. Agitator situated in suction tank; low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps.
- 6 DRAW WORKS:**
 TSM 3000 (400 hp), Powered by 1 - Detroit Series 60 (14L), w/6 speed Allison transmission. Auxiliary braking by Eaton 124-disc brake.
- 7 TOP DRIVE:**
 FDS 1510 Split Block Top Drive with 2-Speed Haglund and Electric HPU (Max Static Load 133,000 daN (300,000 lbs)). Max speed @180rpm. Max torque @ 20,000 ft/lbs.
- 7 TABLE:**
 Howard Turner 17.5" (444mm) powered hydraulically-for auxiliary use only.
- 8 WATER TANK/DOGHOUSE:**
 Hydraulic raising system-separate sub-storage room. Pason drilling recorder system. 60m³ (380 bbl) useable water tank.
- 9 SUBSTRUCTURE:**
 Mascto Carrier with 24-wheel tridem Axel hydraulic, self-leveling trailer-substructure (89,000 daN (200,000 lbs) Max Rotary Capacity, 80,000 daN (180,000 lbs) Max Setback Capacity) KB-Ground 4.0m (13').
- 10 BLOWOUT PREVENTERS:**
 1 - 228.6mm X 21,000 kPa (9" x 3,000 psi) - Steel-Tech TA Annular
 2 - 228.6mm X 21,000 kPa (9" x 3,000 psi) - Steel-Tech TGR Single Gate Ram
- 11 PIPE TUBS:**
 3 - Hydraulically controlled range 3 tubs

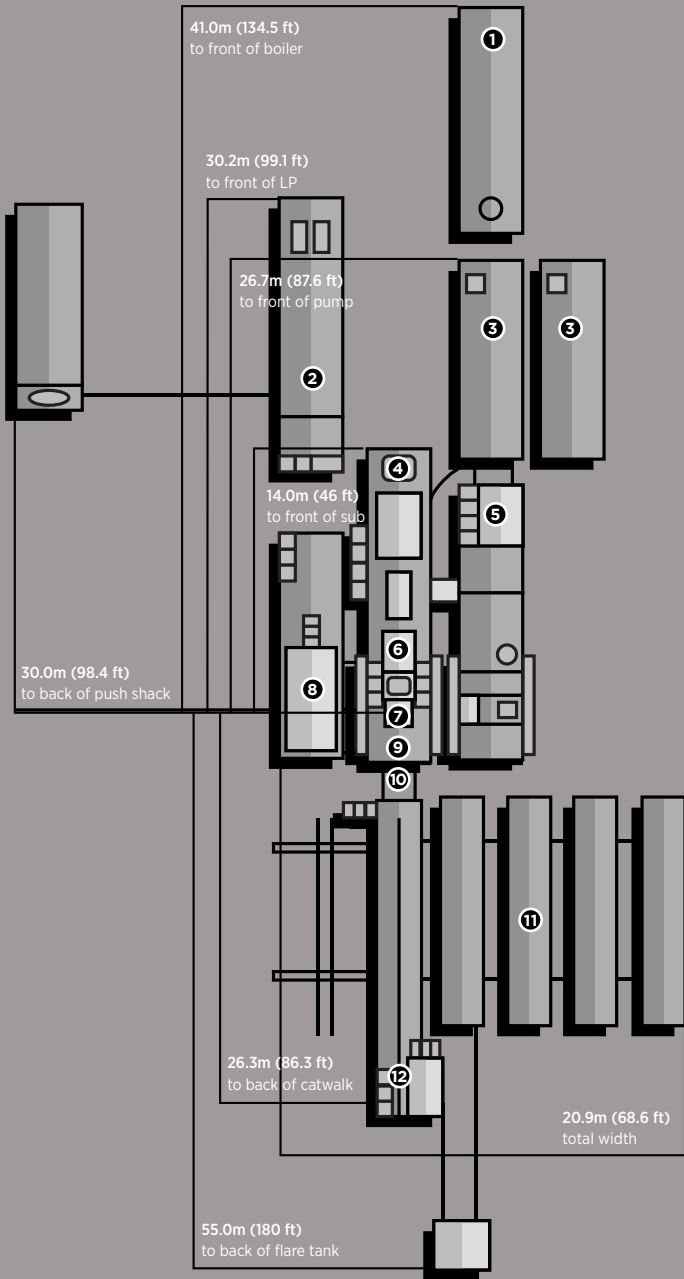
TUBULARS:
 2,200m (7,200') 102mm (4") - 4" FH, X-95 Drill pipe
 4 - 159mm (6 1/4") x 4 1/2" XH, Drill Collars
 8 - 127mm (5") x 3 1/2" IF, Drill Collars
 Available - 102mm (4") - 4" FH Hwdp
- 12 CATWALK:**
 Mascto Skate Catwalk, with hydraulic skate, and leveling racks attached. Also houses nace trim 52mm & 76mm 21,000 kPa (2" x 3" 3,000 psi) Manifold.

RIG #3

111,000 DAN / 250,000 LBS
MAX HOOKLOAD

3,000M / 10,000'
VERTICAL DEPTH RATING





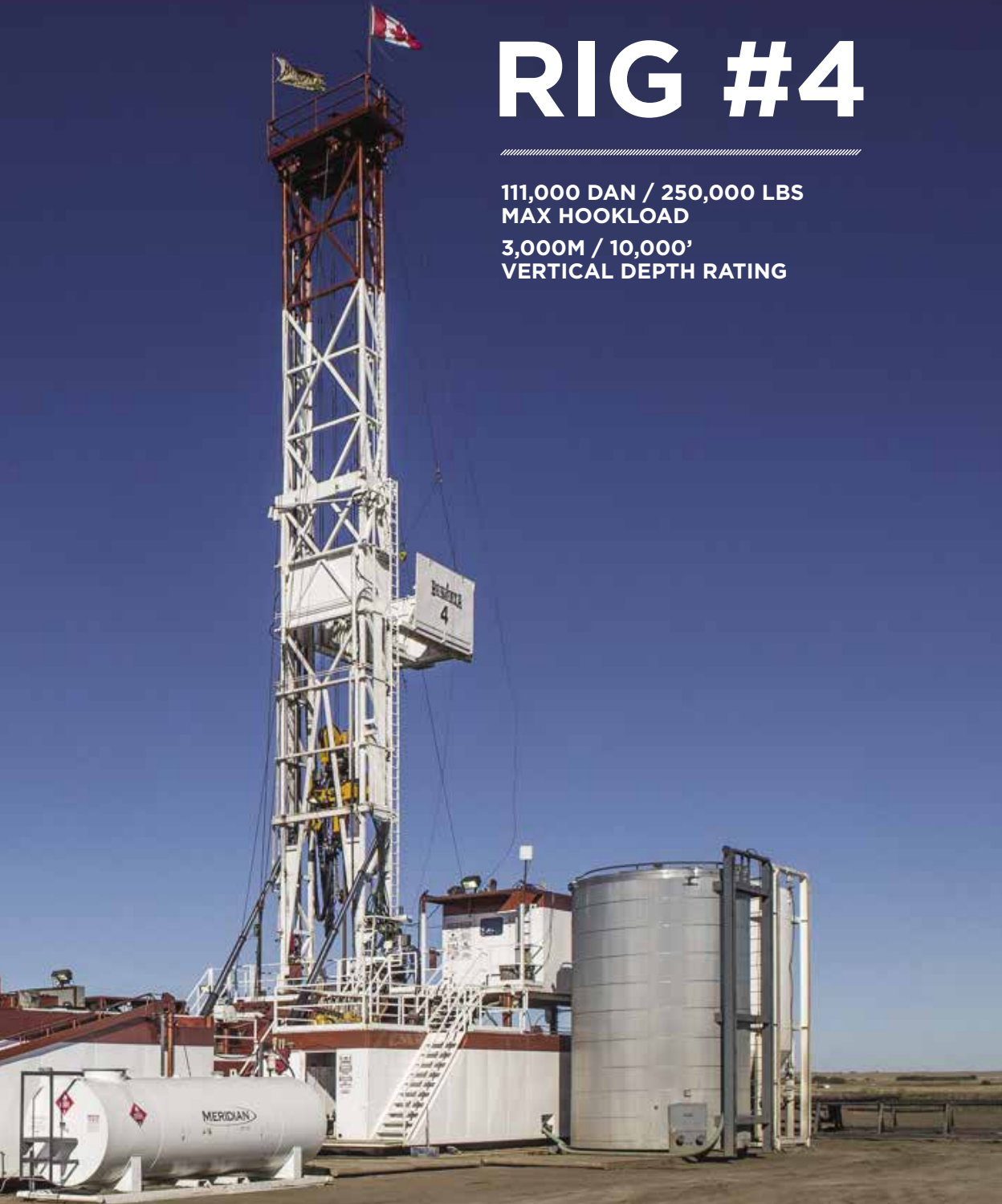
- 1 BOILER:**
 1 - 100hp Hurst Boiler with self-contained 10,000L (2,600 gal) fuel and 8m³ (210 gal) water tank.
- 2 COMBINATION BUILDING:**
 2 - 540kw Stamford powered by 2 - 630hp Detroit Series 60 (14L) engines. Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series. Also houses a 12 man change shack, and a 14,000L (3,700 gal) fuel storage tank.
- 3 MUD PUMPS:**
 1 - F-1000 triplex pump, powered by 1 - Detroit Series 2000 (V-12-1005hp), w/XDR Pacific-Rim hydraulic clutch.
- 4 MAST:**
 Hodgson Telescopic Range 3 Single Mast. Hydraulically raising (Max static hook load 133,000 daN (300,000 lbs) - 8 lines)
- 5 MUD TANKS:**
 1 - 50m³ (315 bbl), 3 Compartment circulating system, with additional pill tank and trip tank. Agitator situated in suction tank; low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps.
- 6 DRAW WORKS:**
 TSM 500 (500hp), Powered by 1 - Detroit Series 60 (14L), w/6 speed Allison transmission. Auxiliary braking by Eaton 224-disc brake.
- 7 TOP DRIVE:**
 Warrior 150 Split Block Top Drive with 2-Speed Haglund and Electric HPU (Max Static Load 133,000 daN (300,000 lbs)). Also has 8,000 daN (18,000 lbs) pull down capability. Max rotary @160rpm Max torque at 25,000 ft/lbs
- 7 TABLE:**
 Howard Turner 17.5" (444mm) powered hydraulically-for auxiliary use only.
- 8 WATER TANK/DOGHOUSE:**
 Hydraulic raising system-separate sub-storage room. Pason drilling recorder system. 60m³ (380 bbl) useable water tank.
- 9 SUBSTRUCTURE:**
 Hodgson Substructure. Hydraulic Self Leveling. KB-Ground 4.15m (14').
- 10 BLOWOUT PREVENTERS:**
 1 - 279mm X 21,000 kPa (11" x 3,000 psi) - HEC Annular Preventer
 2 - 279mm X 21,000 kPa (11" x 3,000 psi) - HEC Single Gate Ram Preventers
- 11 PIPE TUBS:**
 3 - Hydraulically Controlled Range 3 tubs
 1 - Loader Accessible Range 3 tub

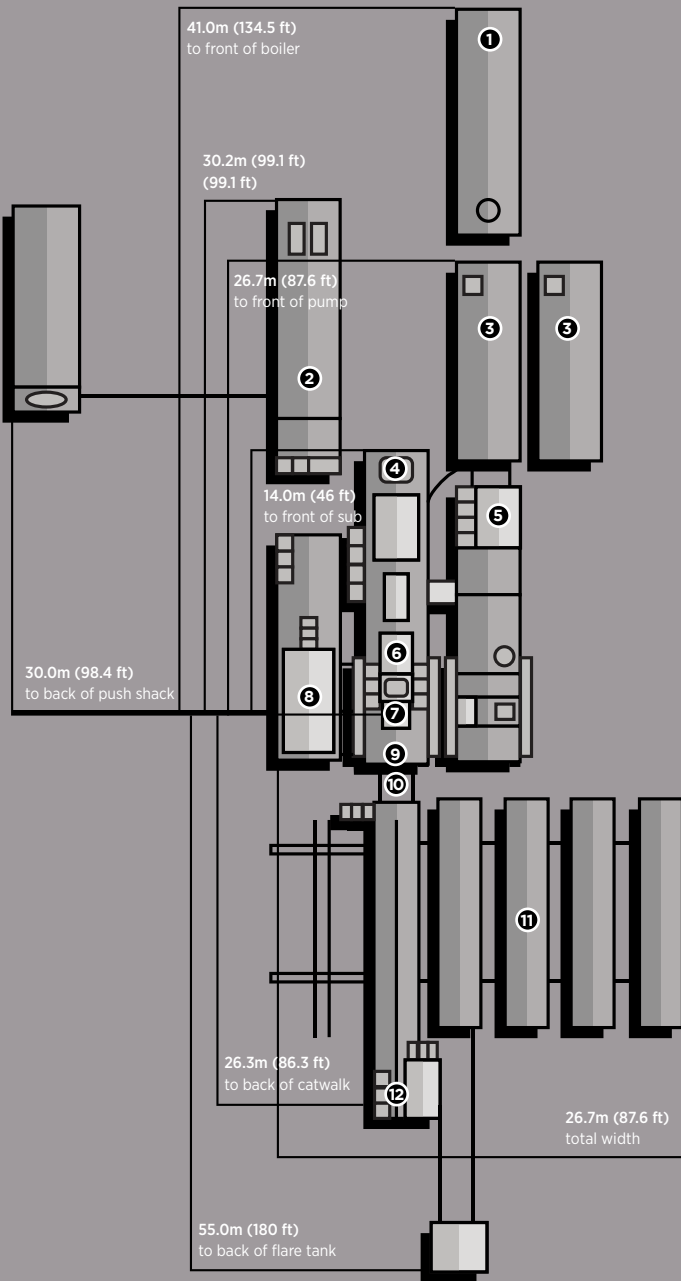
TUBULARS:
 3000m (9,800') 102mm (4") - 4 FH, X-95 Drill pipe
 4 - 159mm (6 1/4") x 4 1/2" XH, Drill Collars
 8 - 127mm (5") x 3 1/2" IF, Drill Collars
 Available - 102mm (4") - 4 FH, HWDP
- 12 CATWALK:**
 Hydruke Skate Catwalk, with hydraulic skate, and leveling racks attached. Also houses Nace trim 52mm & 76mm 21,000 kPa (2"x 3" 3,000 psi) Manifold.

RIG #4

111,000 DAN / 250,000 LBS
MAX HOOKLOAD

3,000M / 10,000'
VERTICAL DEPTH RATING





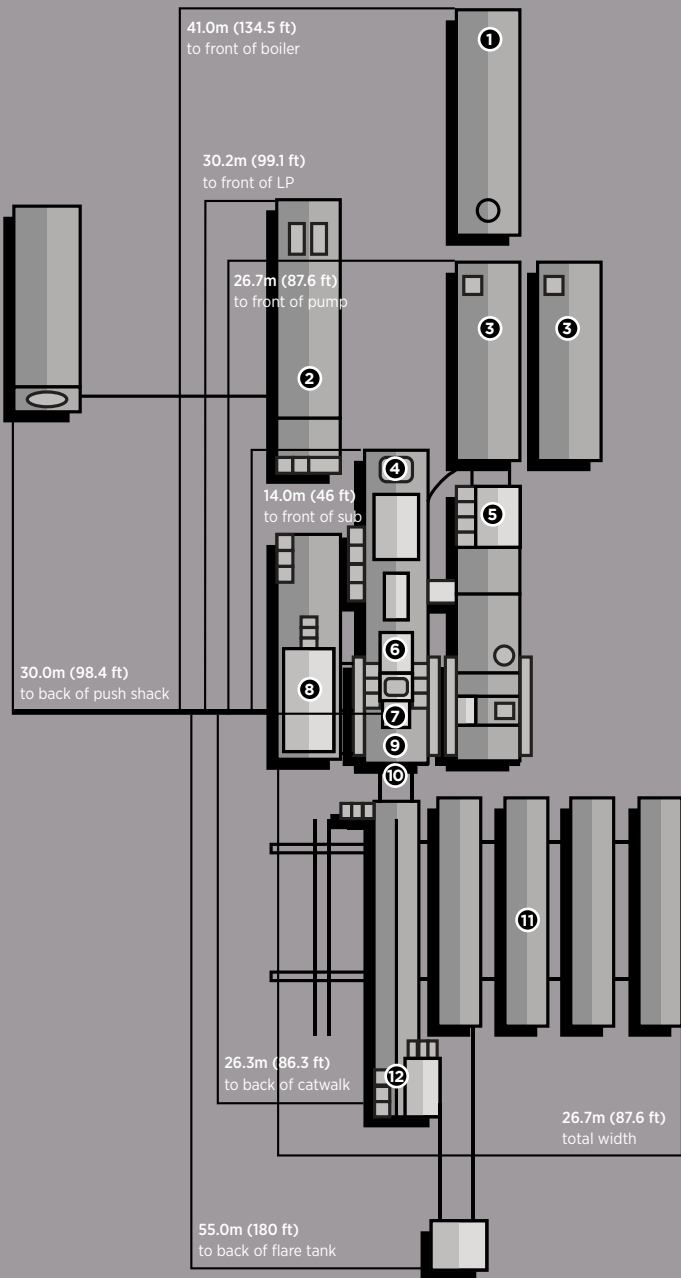
- 1 BOILER:**
 1 - 100hp Hurst Boiler with self contained 10,000L (2,600 gal) fuel and 8m³ (210 gal) water tank.
- 2 COMBINATION BUILDING:**
 2 - 540kw Stamford powered by 2 - 630hp Detroit Series 60 (14L) engines. Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series. Also houses a 12 man change shack, and a 10,000L (2,600 gal) fuel storage tank. Separate 10,000L (2,600 gal) extra fuel tank on skid.
- 3 MUD PUMPS:**
 2 - F-1000 triplex pumps, powered by 2 - Detroit Series 2000 (V-12-1005hp), w/XDR Pacific-Rim hydraulic clutch.
- 4 MAST:**
 Hodgson Telescopic Range 3 Single Mast. Hydraulically raising (Max static hook load 133,000 daN (300,000 lbs) - 8 lines)
- 5 MUD TANKS:**
 1 - 50m³ (315 bbl), 4 Compartment circulating system, with additional pill tank and trip tank.
 2 - Agitators situated in suction tanks, low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps, one with 14" impellor for pumping aerated mud systems.
- 6 DRAW WORKS:**
 TSM 500 (500hp) Rated for 111,000 daN (250,000 lbs), Powered by 1 - Detroit Series 60 (14L), w/6 speed Allison transmission. Auxiliary braking by Eaton 224-disc brake.
- 7 TOP DRIVE:**
 Warrior 150 Split Block Top Drive with 2 - Speed Haglund and Electric HPU (Max Static Load 133,000 daN (300,000 lbs)). Also has 8,000 daN (18,000 lbs) pull down capability, Max TD rotary @160rpm Max continuous torque @25,000 ft/lbs
- 7 TABLE:**
 Rostel 17.5" (444mm) powered hydraulically-for auxiliary use only.
- 8 WATER TANK/DOGHOUSE:**
 Hydraulic raising system-separate sub-storage room. Pason drilling recorder system. 60m³ (400 bbl) useable water tank.
- 9 SUBSTRUCTURE:**
 Hodgson Substructure. Hydraulic Self Leveling. KB-Ground 4.3m (14').
- 10 BLOWOUT PREVENTERS:**
 1 - 279mm X 21,000kPa (11" x 3,000 psi) HEC Annular
 2 - 279mm X 21,000kPa (11" x 3,000 psi) HEC Single Gate Ram
- 11 PIPE TUBS:**
 3 - Hydraulically controlled range 3 tubs
 1 - Loader Accessible range 3 tub
- TUBULARS:**
 3,000m (9,800') 102mm (4") - 4 FH, X-95 Drill pipe
 6 - 159mm (6 1/4") x 4 1/2" XH, Drill Collars
 12 - 127mm (5") x 3 1/2" IF, Drill Collars
 Available - 102mm (4") - 4 FH, HWDP
- 12 CATWALK:**
 Skate Catwalk, with hydraulic skate, and leveling racks attached. Also houses nace trim 52mm & 76mm 21,000kPa (2" x 3" 3,000 psi) Manifold.

RIG #5

111,000 DAN / 250,000 LBS
MAX HOOKLOAD

3,000M / 10,000'
VERTICAL DEPTH RATING





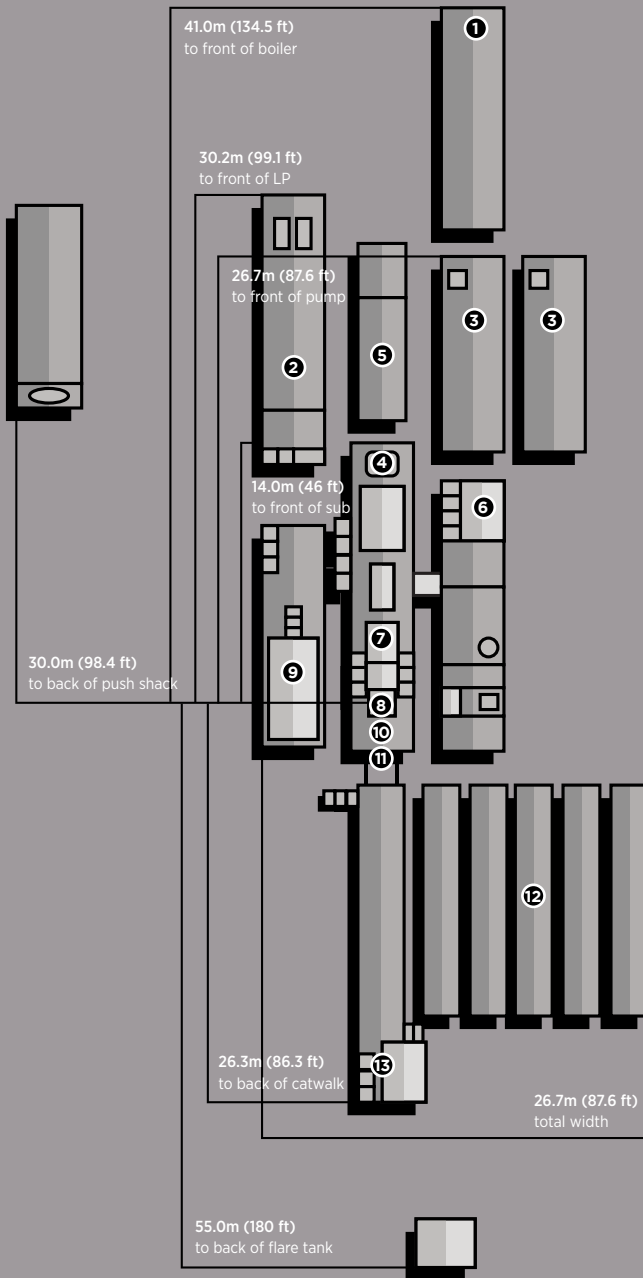
- 1 BOILER:**
 1 - 100hp Williams&Davis Boiler with self contained 10,000L (2,600 gal) fuel and 8m³ (2100 gal) water tank.
- 2 COMBINATION BUILDING:**
 2 - 540kw Stamford powered by 2 - 630hp Detroit Series 60 (14L) engines. Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series. Also houses a 12 man change shack, and a 20,000L (5,200 gal) fuel storage tank.
- 3 MUD PUMPS:**
 2 - F-1000 triplex pump, powered by 2 - Detroit Series 2000 (V-12-1005hp), w/XDR Pacific-Rim hydraulic clutch. Max 125spm. 2nd pump available on request.
- 4 MAST:**
 Hodgson Telescopic Range 3 Single Mast. Hydraulically raising (Max static hook load 133,000 daN (300,000 lbs) - 8 lines)
- 5 MUD TANKS:**
 1 - 50m³ (315 bbl), 4 Compartment circulating system, with additional pill tank and trip tank.
 2 - Agitators situated in suction tanks; low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps, one with 14" impeller for pumping aerated mud systems.
- 6 DRAW WORKS:**
 TSM 500 (500hp) Rated for 111,000 daN (250,000 lbs), Powered by 1 - Detroit Series 60 (14L), w/6 speed Allison transmission. Auxiliary braking by Eaton 224-disc brake.
- 7 TOP DRIVE:**
 Warrior 175T Split Block Top Drive with 2 - Speed Haglund and Electric HPU (Max Static Load 155,000 daN (350,000 lbs)). Also has 8,000 daN (18,000 lbs) pull down capability. Max TD rotary @ 160rpm
 Max continuous torque @ 25,000 ft/lbs
- 7 TABLE:**
 Rostel 17.5" (444mm) powered hydraulically-for auxiliary use only.
- 8 WATER TANK/DOGHOUSE:**
 Hydraulic raising system-separate sub-storage room. Stream recorder system. 60m³ (400 bbl) useable water tank.
- 9 SUBSTRUCTURE:**
 Hodgson Substructure. Hydraulic Self Leveling. KB-Ground 4.3m (14').
- 10 BLOWOUT PREVENTERS:**
 1 - 279mm X 21,000 kPa (11" x 3,000 psi) Spherical Annular
 2 - 279mm X 21,000 kPa (11" x 3,000 psi) Townsend Pipe/Blind Single Gate Ram
- 11 PIPE TUBS:**
 3 - Hydraulically controlled range 3 tubs
 1 - Loader Accessible range 3 tub
- TUBULARS:**
 3,000m (9,800') 102mm (4") - 4 FH, X-95 Drill pipe
 8 - 159mm (6 1/4") x 4 1/2" XH, Drill Collars
 12 - 127mm (5") x 3 1/2" IF, Drill Collars
 Available - 102mm (4") - 4 FH, HWDP
- 12 CATWALK:**
 Skate Catwalk, with hydraulic skate, and leveling racks attached. Also houses nace trim 52mm & 76mm 21,000 kPa (2" x 3" 3,000 psi) Manifold.

RIG #6

144,000 daN / 325,000 LBS
MAX HOOKLOAD

3,500M / 11,500'
VERTICAL DEPTH RATING





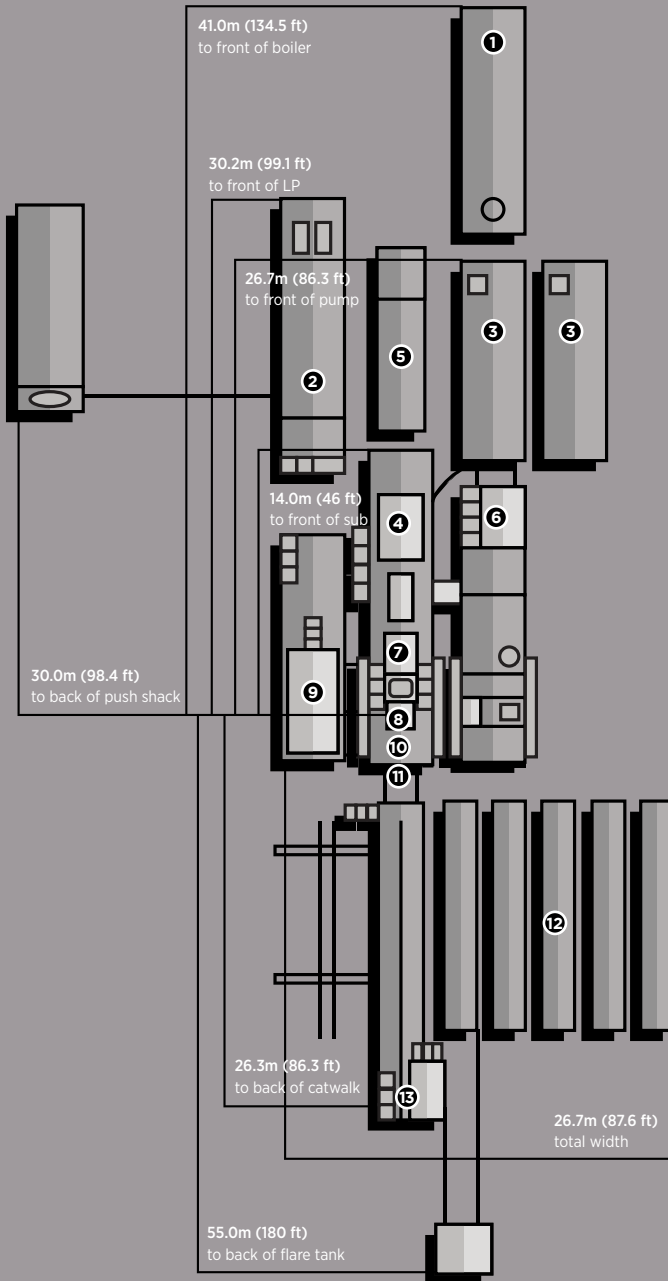
- 1 BOILER:**
1 - 125hp Williams&Davis Boiler with self contained 8m³ (2,100 gal) water tank.
 - 2 COMBINATION BUILDING:**
2 - 540kw Stamford powered by 2 - 685hp Detroit Series 60 (14L) engines. Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series. Also houses a 12 man change shack.
 - 3 MUD PUMPS:**
2 - F-1000 triplex pump, powered by 2 - Detroit Series 2000 (V-12-1005hp), w/XDR Pacific-Rim hydraulic clutch.
 - 4 MAST:**
Hodgson Telescopic Range 3 Single Mast. Hydraulically raising (Max static hook load 144,000 daN (325,000 lbs) - 8 lines)
 - 5 HPU BUILDING**
Electric HPU with 35,000L (9,200 gal) fuel storage tank
 - 6 MUD TANKS:**
1 - 75m³ (450 bbl), 4 Compartment circulating system, with additional pill tank and trip tank. 2 - Agitators situated in suction tanks, low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps, one with 14" impellor for pumping aerated mud systems.
 - 7 DRAW WORKS:**
TSM 7000 (850hp) Rated for 144,000 daN (325,000 lbs), Powered by 1 - Detroit Series 60 (14L), w/6 speed Allison transmission. Auxiliary braking by Eaton 324-disc brake.
 - 8 TOP DRIVE:**
Warrior 175 Split Block Top Drive with 2-Speed Haglund and Electric HPU (Max Static Load 155,000 daN (350,000 lbs)). Also has 8,000 daN (18,000 lbs) pull down capability. Max TD rotary @160rpm Max continuous torque @25,000 ft/lbs
 - 8 TABLE:**
Rostel 17.5" (444mm) powered hydraulically-for auxiliary use only.
 - 9 WATER TANK/DOGHOUSE:**
Hydraulic raising system-separate sub-storage room. Pason drilling recorder system. 60m³ (400 bbl) useable water tank.
 - 10 SUBSTRUCTURE:**
Hodgson Substructure. Hydraulic Self Leveling. KB-Ground 4.3m (14.1').
 - 11 BLOWOUT PREVENTERS:**
1 - 279mm X 21,000 kPa (11" x 3,000 psi) HEC Annular
2 - 279mm X 21,000 kPa (11" x 3,000 psi) HEC Single Gate Ram
 - 12 PIPE TUBS:**
3 - Hydraulically controlled range 3 tubs
2 - Loader Accessible range 3 tubs
- TUBULARS:**
3,500m (11,500') 114mm (4 1/2") - 4 1/2" DS-40, S-135 Drill pipe
6 - 159mm (6 1/4") x 4 1/2" XH, Drill Collars
12 - 127mm (5") x 3 1/2" IF, Drill Collars
Available - 114mm (4 1/2") - DS-40, HWDP
- 13 CATWALK:**
Skate Catwalk, with hydraulic skate, and leveling racks attached. Also houses nace trim 52mm (2") & 76mm (3") 21,000 kPa (3,000 psi) Manifold.

RIG #7

144,000 daN / 325,000 LBS
MAX HOOKLOAD

3,500M / 11,500'
VERTICAL DEPTH RATING



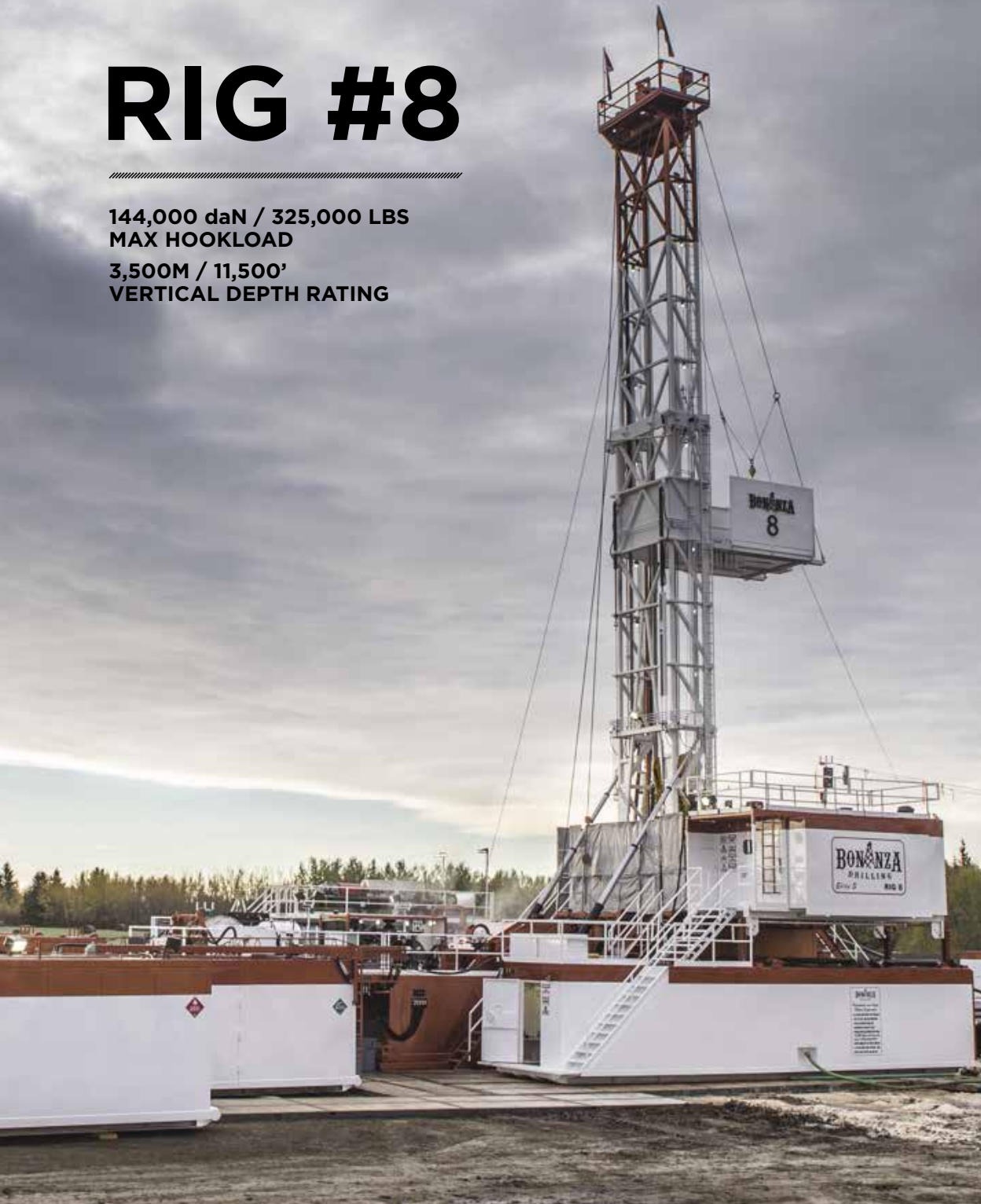


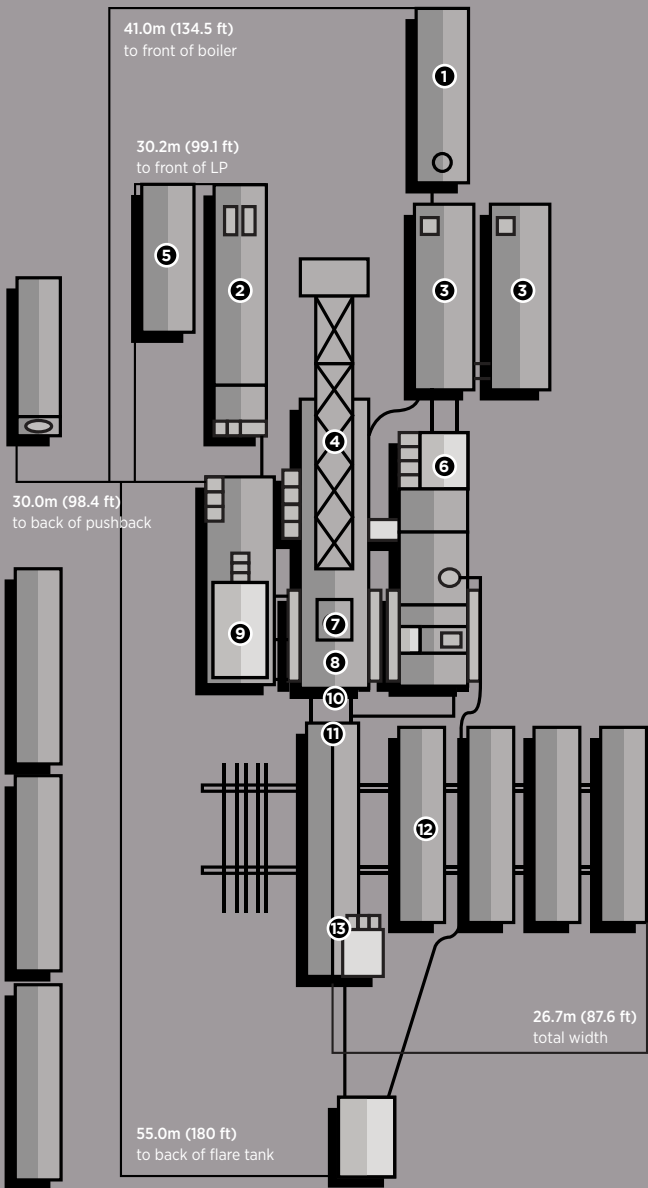
- ① **BOILER:**
1 - 125hp Hurst Boiler with self contained 8m³ (2100 gal) water tank.
 - ② **COMBINATION BUILDING:**
2 - 540kw Stamford powered by 2 - 685hp Detroit Series 60 (14L) engines. Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series. Also houses Electric HPU for Top Drive.
 - ③ **MUD PUMPS:**
2 - F-1000 triplex pump, powered by 2 - Detroit Series 2000 (V-12-1005hp), w/XDR Pacific-Rim hydraulic clutch. Rated for 35,000 kPa (5,000 psi).
 - ④ **MAST:**
Hodgson Telescopic Range 3 Single Mast. Hydraulically raising (Max static hook load 144,000 daN (325,000 lbs) - 8 lines)
 - ⑤ **CHANGE SHACK/FUEL TANK**
12 - Man change shack with 35,000L (9,200 gal) TC-44 Fuel Tank
 - ⑥ **MUD TANKS:**
1 - 75m³ (450 bbl), 4 Compartment circulating system, with additional pill tank and trip tank.
2 - Agitators situated in suction tanks, low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps, one with 14" impellor for pumping aerated mud systems.
 - ⑦ **DRAW WORKS:**
TSM 7000 (850hp) Rated for 144000 daN. Powered by 1-Detroit Series 60 (14L), w/6 speed Allison transmission. Auxiliary braking by Eaton 324 disc brake.
 - ⑧ **TOP DRIVE:**
Warrior 175 Split Block Top Drive with 2-Speed Haglund and Electric HPU (Max Static Load 155000 daN (350,000 lbs)). Also has 8,000 daN (18,000 lbs) pull down capability. Max TD rotary @160rpm Max continuous torque @ 25,000 ft/lbs.
 - ⑨ **TABLE:**
Rostel 17.5" (444mm) powered hydraulically-for auxiliary use only.
 - ⑩ **WATER TANK/DOGHOUSE:**
Hydraulic raising system-separate sub-storage room. Pason drilling recorder system. 60m³ (400 bbl) useable water tank.
 - ⑪ **SUBSTRUCTURE:**
Hodgson Substructure. Hydraulic Self Leveling. KB-Ground 4.3m (14.1').
 - ⑫ **BLOWOUT PREVENTERS:**
1 - 279mm X 21,000 kPa (11" x 3,000 psi) HECI Annular
2 - 279mm X 21,000 kPa (11" x 3,000 psi) Townsend Type 82 Single Gate Ram Preventers
 - ⑬ **PIPE TUBS:**
3 - Hydraulically controlled range 3 tubs
3 - Loader Accessible range 3 tubs
- TUBULARS:**
3,500m (11,500') 114.3 mm (4 1/2"), DS-40, G-105 Drill pipe
6 - 159mm (6 1/4") - 4 1/2" XH, Drill Collars
12 - 127mm (5") - 3 1/2" IF, Drill Collars
Available - 114.3mm (4 1/2") DS-40 HWDP
- ⑬ **CATWALK:**
Skate Catwalk, with hydraulic skate, and leveling racks attached. Also houses nace trim 52mm (2") & 76mm (3") 21,000 kPa (3,000 psi) Manifold.

RIG #8

144,000 daN / 325,000 LBS
MAX HOOKLOAD

3,500M / 11,500'
VERTICAL DEPTH RATING





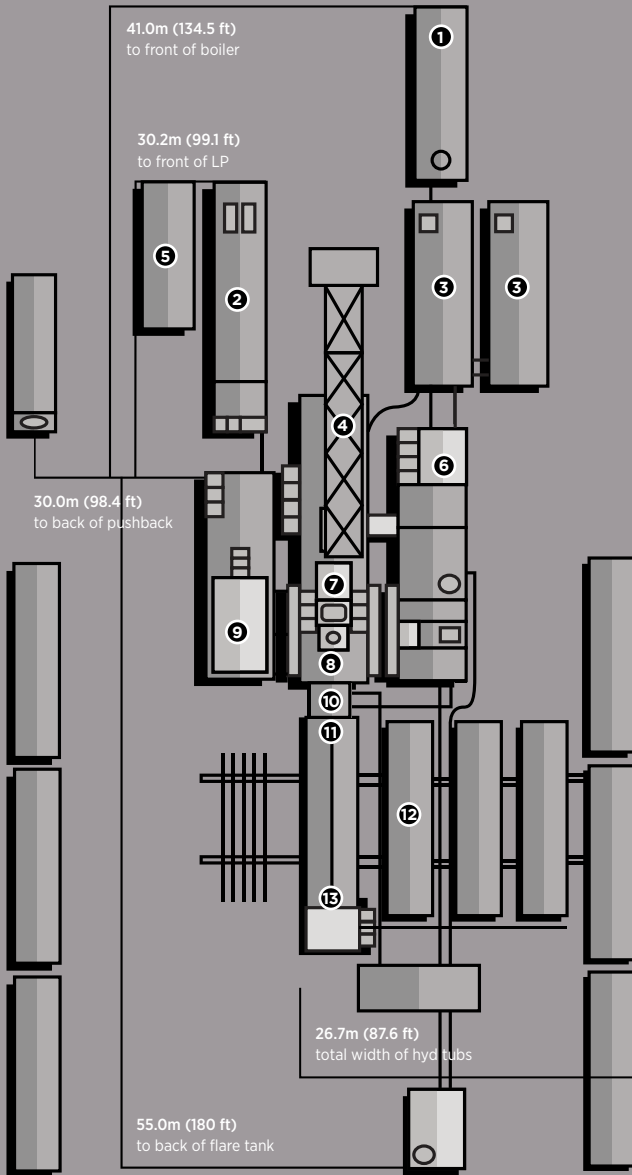
- 1 BOILER:**
1 - 125hp Hurst Boiler with self contained 8m³ (2100 gal) water tank.
 - 2 COMBINATION BUILDING:**
2 - 540kw Stamford powered by 2 - 685hp Detroit Series 60 (14L) engines. Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series. Also houses Top Drive HPU.
 - 3 MUD PUMPS:**
2 - F-1000 triplex pump, powered by 2 - Detroit Series 2000 (V-12-1005hp), w/XDR Pacific-Rim hydraulic clutch. Rated for 35,000 kPa (5,000 psi).
 - 4 MAST:**
Hodgson Telescopic Range 3 Single Mast. Hydraulically raising (Max static hook load 144,000 daN (325,000 lbs) - 8 lines)
 - 5 CHANGE SHACK/FUEL TANK**
12 - Man Change shack with 35,000L (9200 gal) fuel storage tank
 - 6 MUD TANKS:**
1 - 75m³ (450 bb), 4 Compartment circulating system, with additional pill tank and trip tank. 2 - Agitators situated in suction tanks, low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps, one with 14" impellor for pumping aerated mud systems.
 - 7 DRAW WORKS:**
TSM 7000 (850hp) Rated for 144,000 daN (325,000 lbs), Powered by 1 - Detroit Series 60 (14L), w/6 speed Allison transmission. Auxiliary braking by Eaton 324-disc brake.
 - 8 TOP DRIVE:**
Warrior 175 Split Block Top Drive with 2-Speed Haglund and Electric HPU (Max Static Load 155,000 daN (350,000 lbs)). Also has 8,000 daN (18,000 lbs) pull down capability. Max TD rotary @160rpm Max continuous torque @ 25,000 ft/lbs
 - 9 TABLE:**
Rostel 17.5" (444mm) powered hydraulically-for auxiliary use only.
 - 10 WATER TANK/DOGHOUSE:**
Hydraulic raising system-separate sub-storage room. Pason drilling recorder system. 60m³ (400 bb) useable water tank.
 - 11 SUBSTRUCTURE:**
Hodgson Substructure. Hydraulic Self Leveling. KB-Ground 4.3m (14.1').
 - 12 BLOWOUT PREVENTERS:**
1 - 279mm X 21,000 kPa (11" x 3,000 psi) HECI Annular
2 - 279mm X 21,000 kPa (11" x 3,000psi) Townsend Type 82 Single Gate Ram
 - 13 PIPE TUBS:**
3 - Hydraulically controlled range 3 tubs
4 - Loader Accessible range 3 tubs
- TUBULARS:**
3,500m (11,500') 114mm (4 1/2") - DS-40, G-105 Drill pipe
6 - 159mm (6 1/4") x 4 1/2" XH, Drill Collars
12 - 127mm (5") x 3 1/2" IF, Drill Collars
Available - 114mm (4 1/2") - DS-40, HWDP
- 13 CATWALK:**
Skate Catwalk, with hydraulic skate, and leveling racks attached. Also houses nace trim 52mm (2") & 76mm (3") 21,000 kPa (3,000 psi) Manifold.

RIG #9

173,000 daN / 390,000 LBS
MAX HOOKLOAD

4,500M / 15,000'
VERTICAL DEPTH RATING





WELL CONTROL:

Class IV, 279mm (11") x 21,000 kPa (3,000psi) Blow out Preventers with a Class V 79mm (3") x 35,000 kPa (5,000 psi) double gut manifold and Cameron Type M3 Style chokes (adaptable to fit remote actuator), 36" Degasser with 10" vent line installed inside the main mud tank. This rig also comes complete with a cellar spill prevention kit (catch can) & Vac system which is integral to the rig. Class V, 279mm (11") x 35,000 kPa (5,000 psi) Blow out Preventers available also.

IRON ROUGHNECK:

60,000 ft/lb Make Up 80000 ft/lb Break out Hydraulic wrench with spinner. Controls will be optional Console controlled in the doghouse, or remote controlled. Rig will also be fitted with hydraulic rams and rotary make/break tongs for manual backup if required.

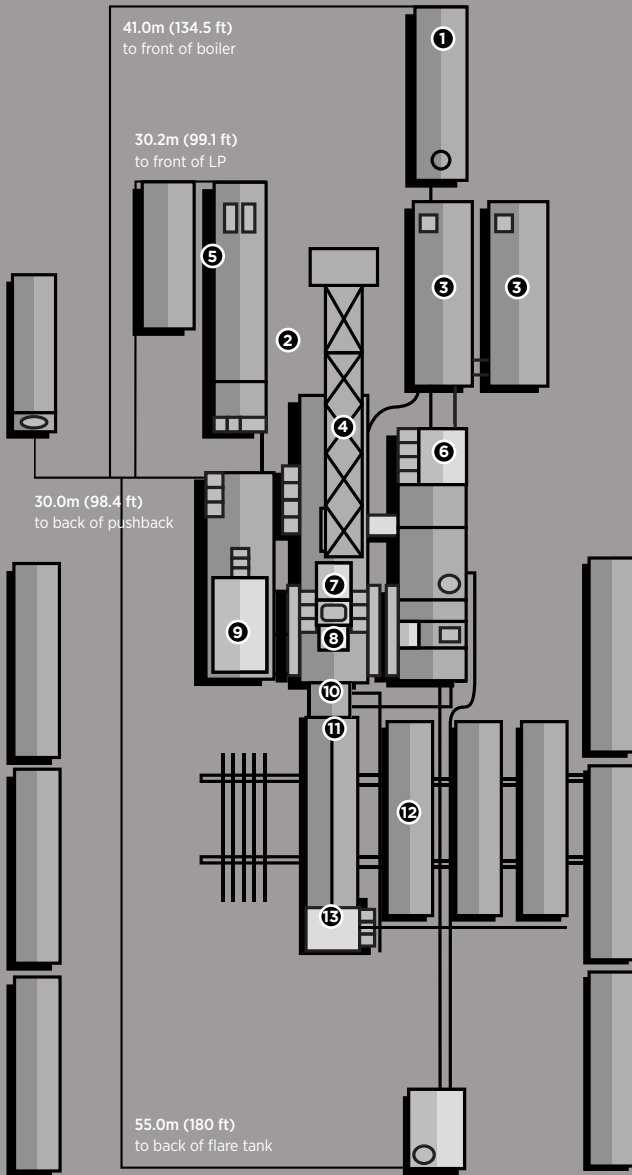
- ① **BOILER:**
1 - 125hp Hurst Boiler with self-contained 8m³ (2,100 gal) water tank
- ② **COMBINATION BUILDING:**
2 - 540kw Stamford powered by 2 - 685hp Detroit Series 60 (14L) engines. Monitoring provided by a Woodward panel, which also synchronizes the two generators, and allows them to run in series.
- ③ **MUD PUMPS:**
2 - F-1300 triplex pump, powered by 2 - Detroit Series 2000 (V-16-1340hp), w/Rouse 2 Speed Gear box and hydraulic clutch. Rated for 350,000 kPa (5,000 psi).
- ④ **MAST:**
Hodgson Telescopic Range 2 Double Mast. Max static hook load 195,000 daN (440,000 lbs) - 10 lines. Racking board capacity 5,000m (16,400') x 4.5" Drill Pipe
- ⑤ **CHANGE SHACK/FUEL TANK**
12 - Man Change shack with 35,000L (9200 gal) fuel storage tank
- ⑥ **MUD TANKS:**
1 - Main Mud Tank 75m³ (450 bbl), 4 Compartment circulating system, with additional pill tank and trip tank. 2 - Agitators situated in suction tanks, low pressure system powered by 2 - 5" x 6" Mission Magnum C-pumps, one with 13" impellor for pumping aerated mud systems. Hydraulic Roof System included for Invert operations
- ⑦ **DRAW WORKS:**
TSM 7000 (850 hp) Rated for 173,000 daN (390,000 lbs). 10 x 1 1/8" drill line. Powered by 1 - Detroit Series 60 w/6 speed Allison transmission. Auxiliary braking by Eaton 324-disc brake.
- ⑦ **TOP DRIVE:**
Warrior 250T Unified Block Top Drive with 2-Speed Haglund and Electric HPU (Max Static Load 222,400 daN (500,000 lbs)). Max TD rotary @ 160rpm Max torque @30,000 ft/lbs. Watercourse rated for 5,000 psi.
- ⑧ **TABLE:**
Emsco Style 20.5" (520mm) powered hydraulically-for auxiliary use only.
- ⑨ **WATER TANK/DOGHOUSE:**
Hydraulic raising system-separate sub-storage room. Pason drilling recorder system, 60m³ (400 bbl) useable water tank. Hydraulic slide on floor side houses drillers console and controls.
- ⑩ **SUBSTRUCTURE:**
Hodgson Substructure. Hydraulic Self Leveling. KB-Ground 5.2m (17") with 24" Risers Max Static Hook-load 195,000 daN (440,000 lbs) with full setback.
- ⑪ **BLOWOUT PREVENTERS:**
Class 4 BOP System (21mPa)
Class 4 BOP System (35mPa)
Class 5 BOP System
- ⑫ **PIPE TUBS:**
3 - Hydraulically controlled range 2 tubs
6 - Loader Accessible range 2 tubs
- TUBULARS:**
500 - 114mm (4 1/2") - CDS40, SS-105 Range 2 Drill pipe
80 - 114mm (4 1/2") - CDS40 Integral HWDP
16 - 159mm (6 1/2") x 4 1/2" XH, Range 2 Drill Collars
3 - 203mm (8") x 6 5/8" Reg Range 2 Drill Collars
- ⑬ **CATWALK:**
Can-Rig Model 3000 Skate Catwalk with scoping deck-adjustable for 16' or 18' sub height optional. Remote controlled.

RIG #10

173,000 daN / 390,000 LBS
MAX HOOKLOAD

4,500M / 15,000'
VERTICAL DEPTH RATING





WELL CONTROL:

Class IV, 279mm x 35,000 kPa (11" x 5000 psi) Blow out Preventers with a Class V 79mm x 35,000 kPa (3" x 5,000 psi) double gut manifold and Cameron Type M3 Style chokes (adaptable to fit remote actuator). 36" Degasser with 10" vent line will be installed inside the main mud tank.

ACCUMULATOR:

1 - 5 station 460L 21,000 kPa (120 gal 3,000 psi) PLC Control Drilling accumulator, with N2 backup system.

- ① **BOILER:**
1 - 125hp Saskatoon Boiler with self-contained 8m³ (2,100 gal) water tank
- ② **COMBINATION BUILDING:**
2 - 540kw x 600V Stamford powered by 2 - 685hp Detroit Series 60 (14L) engines.
- ③ **MUD PUMPS:**
2 - F-1300 triplex pump, powered by 2 - Detroit Series 2000 (V16-1360hp), w/Pac-Rim Gear box and hydraulic clutch. Rated for 5,000 kPa (7,500 psi).
- ④ **MAST:**
Do-All Telescopic Range 2 Double Mast. Max static hook load 182,000 daN (410,000 lbs) - 10 lines. Racking board capacity 5,000m (16,400') x 4" Drill Pipe
- ⑤ **CHANGE SHACK/FUEL TANK:**
16 Man Change shack with 20000L (5283 gal) TC-44 fuel tank
- ⑥ **MUD TANKS:**
1 - Main Mud Tank 75m³ (450 bbl), 4 Compartment circulating system, with additional pill tank and trip tank. 2 - Agitators situated in suction tanks, low pressure system powered by 2 - 5 x 6 Mission Magnum C-pumps, one with 13" impellor for pumping aerated mud systems. Hydraulic Roof System included for Invert operation.
- ⑦ **DRAW WORKS:**
Do-All 850 Rated for 173,000 daN (390,000 lbs) 10 x 1 1/8" drill line. Powered by 1 - Detroit Series 60 w/6 speed Allison transmission. Auxiliary braking by Eaton 324-disc brake.
- ⑦ **TOP DRIVE:**
McKissick 250T Unified Block with CanRig Electric Top and Electric TDSU (Max Static Load 244600 daN). Max TD rotary @ 180rpm Max torque @ 30000ft/lbs. Watercourse rated for 7500psi (51.7mPa).
- ⑧ **TABLE:**
Emsco Style 17.5" (444.5mm) for auxiliary use only.
- ⑨ **WATER TANK/DOGHOUSE:**
Hydraulic raising system-separate sub-storage room. Pason drilling recorder system, 60m³ (400 bbl) useable water tank.
- ⑩ **SUBSTRUCTURE:**
Do-All Substructure. Hydraulic Self Leveling. KB-Ground 5.5m (18") with 24" risers. Max Static Hook-load 182,000 daN (410,000 lbs) with full setback
- ⑪ **BLOWOUT PREVENTERS:**
Class 4 BOP System (21mPa)
Class 4 BOP System (35mPa)
Class 5 BOP System
- ⑫ **PIPE TUBS:**
5 - Loader Accessible Range 2 tubs
- TUBULARS:**
500 - 114mm (4 1/2") - DS40, SS-105 Range 2 Drill pipe
80 - 114mm (4 1/2") - DS40 Range 2 Welded HWDP
20 - 159mm (6 1/2") x 4 1/2" XH, Range 2 Drill Collars
2 - 203mm (8") x 6 5/8" Reg Range 2 Drill Collars
- ⑬ **CATWALK:**
Do-All Hydraulic Skate Catwalk with hydraulic pipe racks. Hydraulically self-levelling catwalk.
- RIG MATS:**
18 - 8' X 40' 3 Runner Rig matting included in inventory
- SOLIDS CONTROL:**
2 - Brandt King Cobra shale shakers - 4.0m³/min (1,050 gpm) capacity-Adaptable slide to Dryer Shaker Possum Belly.

BONANZA RIG FLEET QUICK COMPARISON CHART (CAN)

RIG	TYPE	DEPTH RATING	HOOKLOAD	RIG LOADS	KB-GROUND
1	Range 3 Stiffmast Single	2200m (V)	89000 daN	13	4.0m
2	Range 3 Stiffmast Single	2200m (V)	89000 daN	14	4.0m
3	Range 3 Tele Single	3000m (V)	111000 daN	16 + matting	4.15m
4	Range 3 Tele Single	3000m (V)	111000 daN	17 + matting	4.3m
5	Range 3 Tele Single	3000m (V)	111000 daN	17 + matting	4.3m
6	Range 3 Tele Single	3500m (V)	144000 daN	19 + matting	4.3m
7	Range 3 Tele Single	3500m (V)	144000 daN	20 + matting	4.3m
8	Range 3 Tele Single	3500m (V)	144000 daN	21 + matting	4.3m
9	Range 2 Tele Double	4500m (V)	173000 daN	24 + matting	5.48m
10	Range 2 Tele Double	4500m (V)	173000 daN	24 + matting	5.55m

RIG	MUD TANKS	SHAKERS	PUMPS	MAX PUMP PRESS.	BOPS
1	1-50m ³	1-Derrick FLC 504	1-F1000	21000kPa	229mm x 21000kPa
2	1-40m ³	1-Brandt King Cobra	1-F1000	21000kPa	229mm x 21000kPa
3	1-50m ³	1-Swaco Mongoose	1-F1000	28000kPa	279mm x 21000kPa
4	1-50m ³	2-Swaco Mongoose	2-F1000	28000kPa	279mm x 21000kPa
5	1-50m ³	1-Derrick FLC 504	2-F1000	35000kPa	279mm x 21000kPa
6	1-70m ³	1-Derrick FLC 504	2-F1000	35000kPa	279mm x 21000kPa
7	1-70m ³	1-Derrick FLC 504	2-F1000	35000kPa	279mm x 21000kPa
8	1-70m ³	2-Derrick Hyperpool	2-F1000	35000kPa	279mm x 21000kPa
9	1-70m ³	2-Derrick Hyperpool	2-F1300	35000kPa	279mm x 35000kPa
10	1-70m ³	2-Brandt King Cobra	2-F1300	50,000kPa	279mm x 35000kPa



	DRAWWORKS	TOP DRIVE	MAX TD TORQUE	MAX RPM	ROTARY TABLE
	TSM 3000	FDS 1510	20000 ft/lbs	180	Howard Turner 17.5"
	TSM 3000	FDS 1510	20000 ft/lbs	180	Howard Turner 17.5"
	TSM 500	Warrior 150H	30000 ft/lbs	160	Emsco Style 17.5"
	TSM 500	Warrior 150H	30000 ft/lbs	160	Emsco Style 17.5"
	TSM 500	Warrior 175H	30000 ft/lbs	160	Emsco Style 17.5"
	TSM 7000	Warrior 175H	30000 ft/lbs	160	Emsco Style 17.5"
	TSM 7000	Warrior 175H	30000 ft/lbs	160	Emsco Style 17.5"
	TSM 7000	Warrior 175H	30000 ft/lbs	160	Emsco Style 17.5"
	TSM 7000	Warrior 250H	30000 ft/lbs	160	Emsco Style 20.5"
	Do-All 850	CanRig 275E	30000 ft/lbs	180	Emsco Style 17.5"

	PULL DOWN	BOILER	DRILL PIPE	MAX DP TORQUE	CELLAR CLEAR HEIGHT
	8 daN	100hp Liberty	4" NC40 R3 X95	12500 ft/lbs	3.53m w/Trailer Raised 12" from GL
	n/a	100hp Liberty	4" NC40 R3 X95	12500 ft/lbs	3.53m w/Trailer Raised 12" from GL
	8 daN	100hp Hurst	4" NC40 R3 X95	12500 ft/lbs	3.59m w/6"matting
	8 daN	100hp Hurst	4" NC40 R3 X95	12500 ft/lbs	3.74m w/6"matting, 6' pony sub
	8 daN	100hp W&D	4.5" DS40 R3 G105	20000 ft/lbs	3.74m w/6"matting, 6' pony sub
	8 daN	100hp W&D	4.5" DS40 R3 S135	20000 ft/lbs	3.74m w/6"matting, 6' pony sub
	8 daN	125hp Hurst	4" NC40 R3 X95	12500 ft/lbs	3.74m w/6"matting, 6' pony sub
	8 daN	125hp Hurst	4.5" DS40 R3 G105	20000 ft/lbs	3.74m w/6"matting, 6' pony sub
	n/a	125hp Hurst	4.5" DS40 R2 SS105	20000 ft/lbs	4.73m w/ 6"matting, 24' pony sub
	n/a	125hp Saskatoon	4.5" DS40 R2 SS105	20000 ft/lbs	4.84m w/6" matting, 24' pony sub





BONANZA
4

BONANZA
5

BONANZA
DRILLING
RIG 4

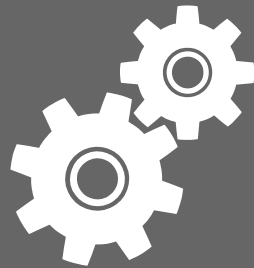
RIG COMPONENTS

HYDRAULIC TOP DRIVES	36
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MECHANICAL DRAWWORKS	37
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RAH 3011 ASSEMBLY	38
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AUTOMATED FLOOR WRENCH	39
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Hydraulic Top Drives

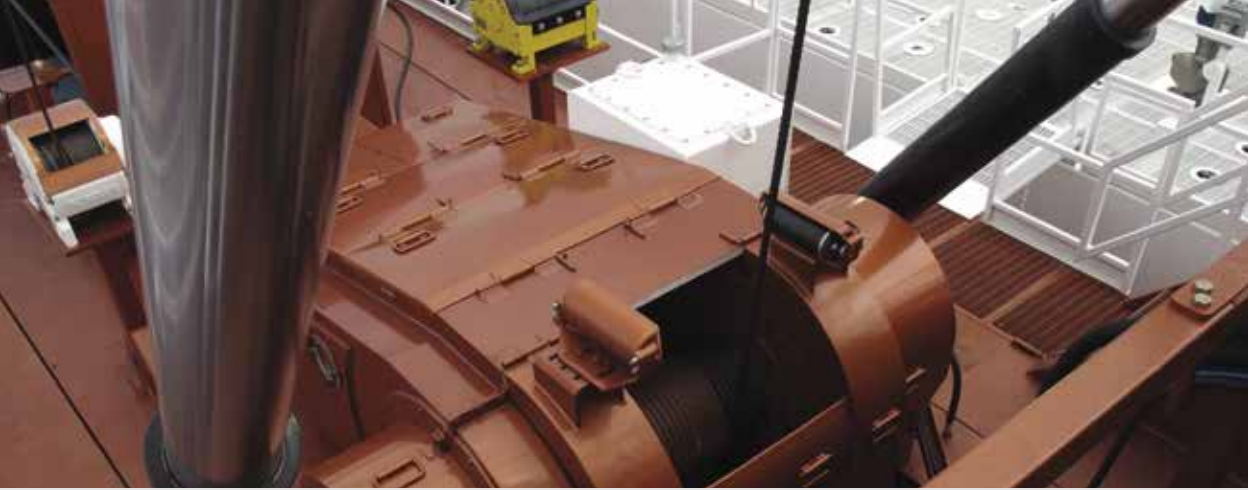
Warrior's hydraulic top drives are designed to fit into small masts for shallow or medium depth drilling and service rigs. They can be set-up as permanent installations (integral to the mast) or as portable units with a removable guide rail in the mast.

All Warrior Top Drives have the following Standard Features:

- Soft stab feature (internal thread compensation)
- Integral Blocks (or links & bail adapter)
- Integral Backup Wrench
- PLC Controlled
- Link Tilt & Elevator Float
- Automated Elevator Option

Warrior can custom-design a complete system consisting of top drive, drillers console, hydraulic power unit (AC or diesel driven), guide rail and accessories to fit each unique rig application.





Tri-Service OilField Manufacturing Ltd.

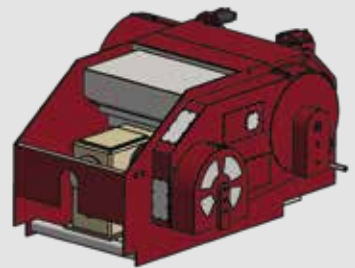
TSM is licensed to design and manufacture drawworks components in accordance with API-7K. This certification meets the demands of the drilling and service rig industry, both domestic and international. We have a wide variety of sizes and selection available ranging from 400 HP to 3,000 HP. These units are powered mechanically or electrically using either DC or AC motor technology.

We have the expertise to design and build turn-key drawworks skid packages customized to suit your requirements.

If the sizes and selections shown do not meet your requirements, please contact us so we can assist you in meeting your specific goals.

Mechanical drawworks

Our mechanical drawworks are powered by an industrial engine and Allison transmission. A driveline enters the right angled gear box which transfers power to the drum or rotary table. All of these units utilize brake band systems and a Wichita or Eaton water cooled brake.





RAH 3011 ASSEMBLY

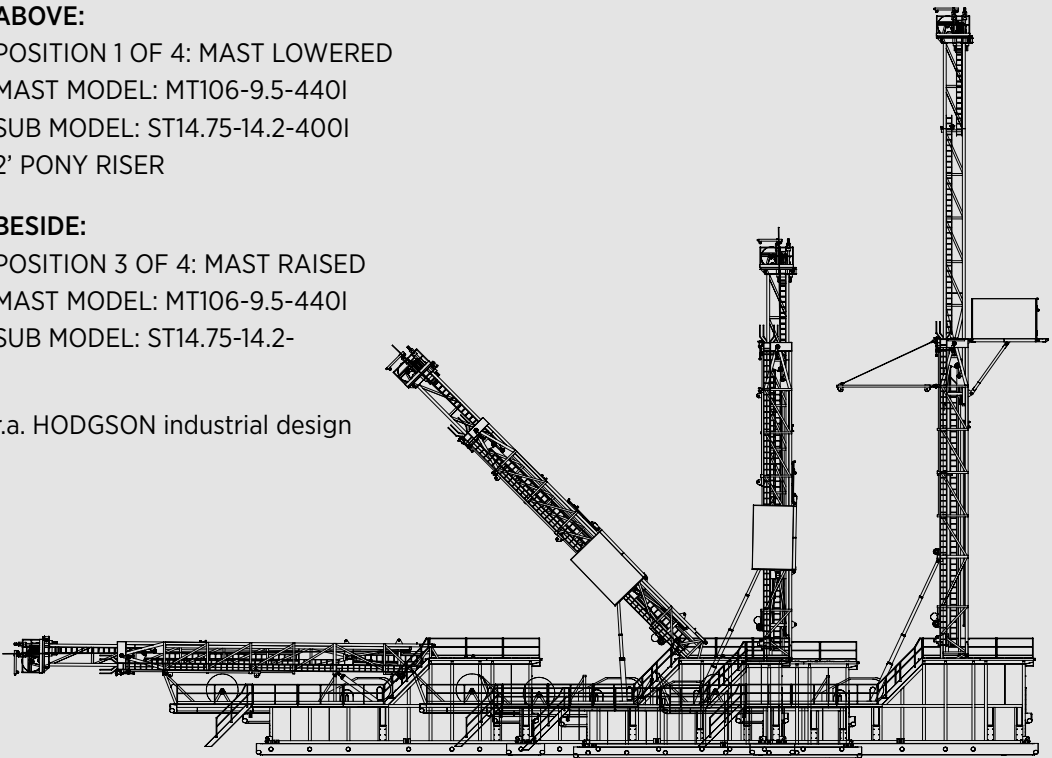
ABOVE:

POSITION 1 OF 4: MAST LOWERED
MAST MODEL: MT106-9.5-440I
SUB MODEL: ST14.75-14.2-400I
2' PONY RISER

BESIDE:

POSITION 3 OF 4: MAST RAISED
MAST MODEL: MT106-9.5-440I
SUB MODEL: ST14.75-14.2-

r.a. HODGSON industrial design





Bulldog 90 - Automated Floor Wrench

WRENCH:

Make-Up Torque: 66,000 FT-LBS / 89,000 N-m
Break-Out Torque: 88,000 FT-LBS / 119,000 N-m
Tubular OD: 3 ½" - 8 ½" / 89 mm - 215 mm

SPINNER:

Torque: 2,500 FT-LBS / 3,400 N-m
Tubular OD: 3" - 9 ¼" / 76 mm - 235 mm
Proportional Speed: 0 - 85 RPM

CONNECTION HEIGHT: 24" - 64" / 609 mm - 1,625 mm

WEIGHT: 8,500 LBS / 3,860 Kg

ELECTRICAL:

Class 1, Zone 1: Bulldog 90 / Wireless Remote / Delivery System
Class 1, Zone 2: PLC / HPU / Drillers Console
HPU: 480V or 600V / 50 HP, PLC: Allen Bradley
Wireless Remote: Cavotech

HYDRAULICS:

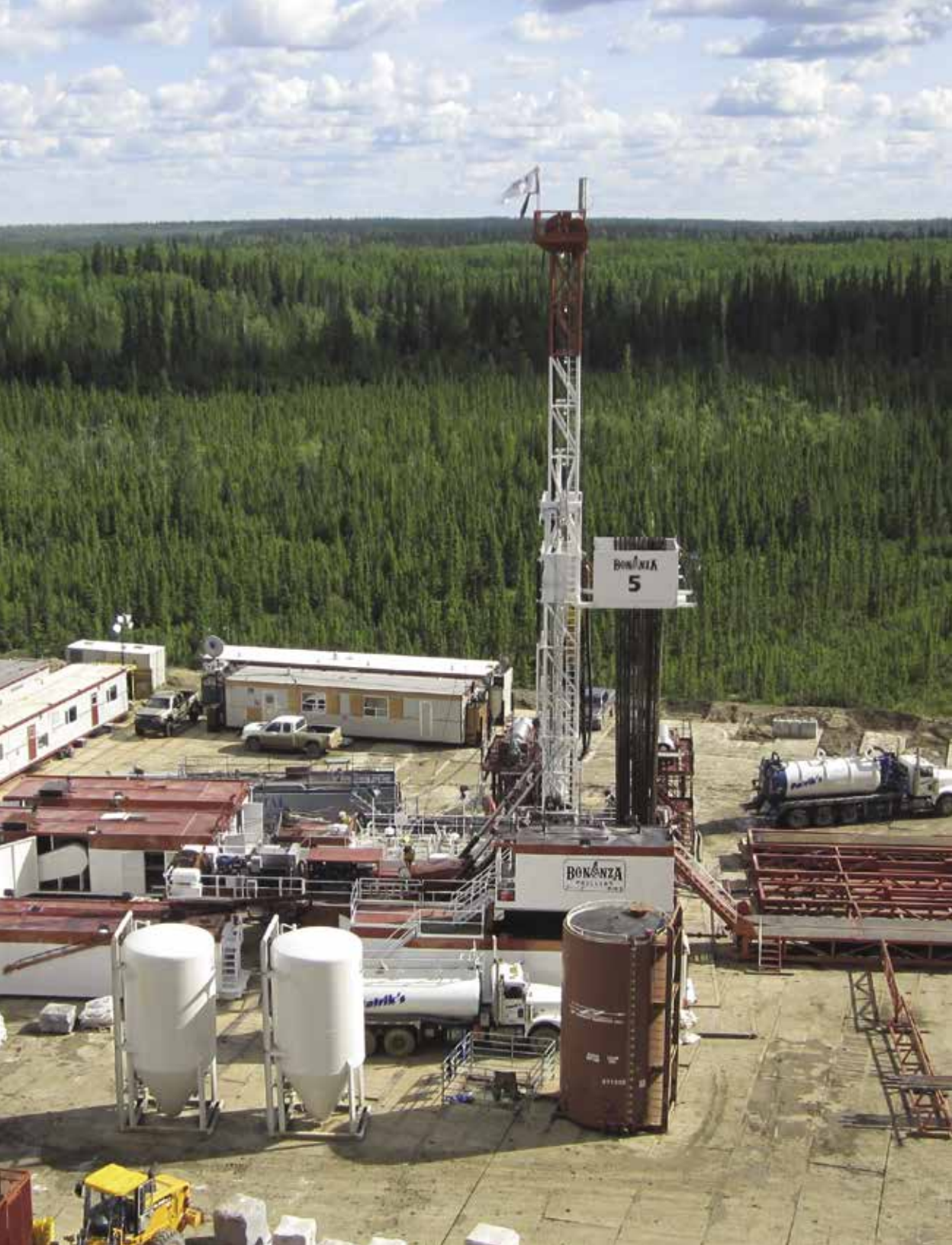
HPU: Drillform, Maximum Flow: 65 GPM / 246 LPM
Maximum Pressure: 4,500 PSI / 31,700 kPa



DRILLFORM
TECHNICAL SERVICES LTD.

CONTINUOUS
PERFORMANCE IN
EXTREME TEMPERATURES

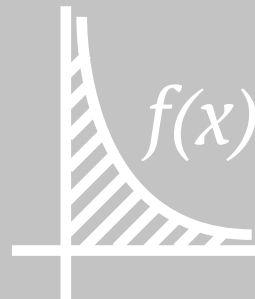




FORMULAS

WEIGHT, LENGTH, TUBULAR, VOLUME,
PRESSURE, TORQUE, AND AREA 42

SHAKER SCREEN CONVERSIONS AND
TRIPLEX PUMP DISPLACEMENTS 43



CONVERSIONS

WEIGHT

daN to lbs	x 2.248
lbs to daN	x 0.445
daN to kg	x 1.0197
kg to daN	x .9806
daN to tons(Short)	x .00112
tons(Short) to daN	x 889.6
lb/ft to kg/m	x 1.4882
kg/m to lb/ft	x 0.6720

LENGTH

mm to inch	x 0.03937
inch to mm	x 25.4
feet to m	x .3048
m to feet	x 3.281
km to miles	x .62137
miles to km	x 1.609

TUBULAR CONVERSIONS

NC38-3.5 IF
NC40-4 FH
NC46-4.5 XH
NC50-4.5 IF

TORQUE

Nm to ft/lbs	x .73756
ft/lbs to Nm	x 1.3558



PRESSURE

kPa-psi	x .14504
psi-kPa	x 6.8948
bar-psi	x 14.5
psi-bar	x 0.068948
bar-kPa	x 100
kPa-bar	x 0.01

VOLUME

Cylinder	$\pi r^2 \times H$
Pyramid	$(L \times W \times H)/3$
Cube	$L \times W \times H$
Sphere	$\frac{4}{3} \pi r^3$
M ³ -BBL (US Oil)	6.2898
BBL(US Oil)-M ³	x .15899



SHAKER SCREEN CONVERSIONS

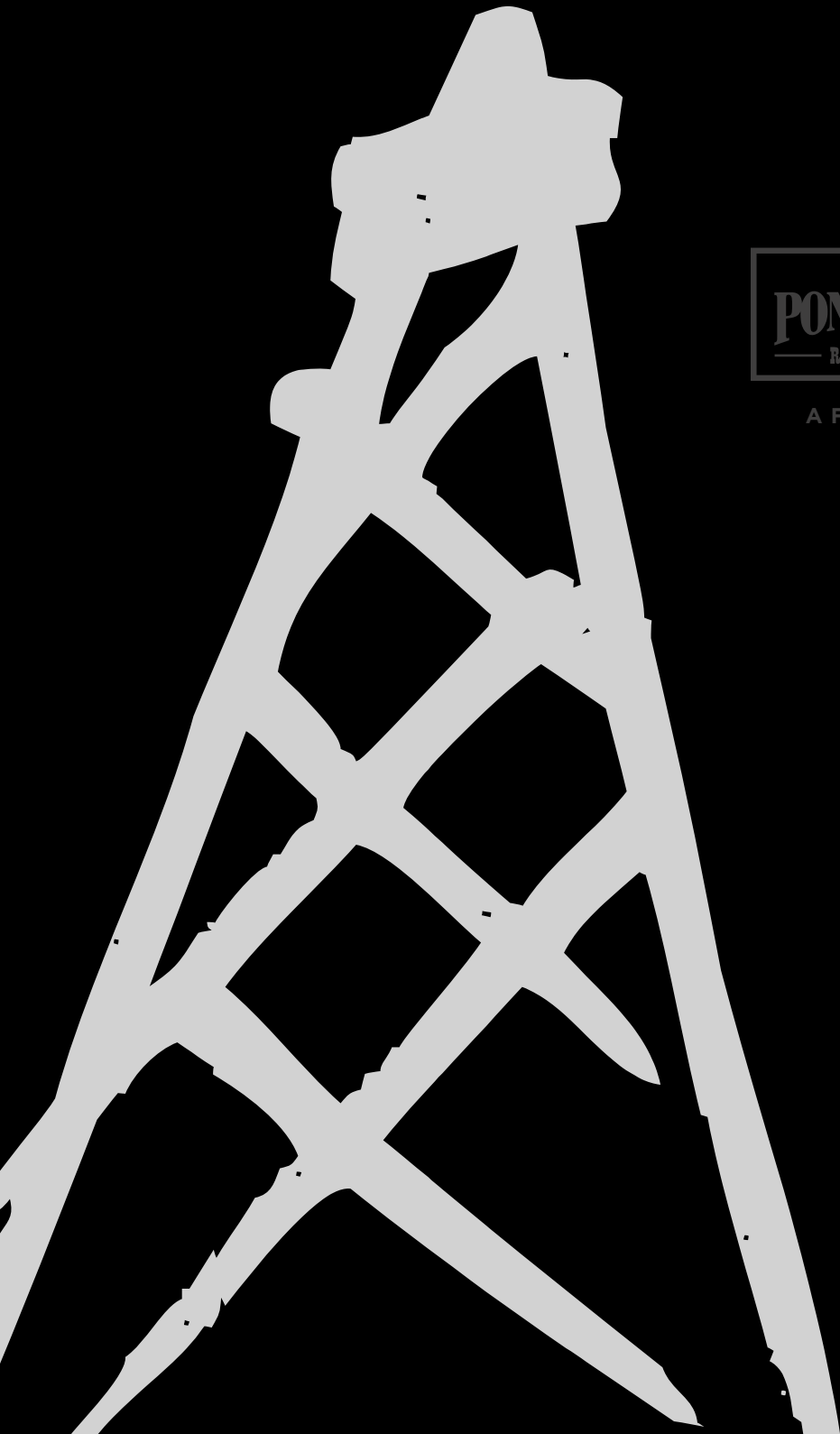
Cut Point	APIRP 13C #	Derrick Screens	Brandt Screens	MI Swaco Screens
275-327	API 50	DX-A50	VNM RHD 89	MON XR 84
231-275	API 60	DX-A60	VNM RHD 105	-----
196-231	API 70	DX-A70	VNM RHD 115	MON XR 105
165-196	API 80	DX-A80	VNM RHD 145	MON XR 120
137-165	API 100	DX-A100	VNM RHD 180/215	MON XR 165
116-137	API 120	DX-A120	VNH RHD 255	MON XR 200
98-116	API 140	DX-A140	VNH RHD 280	MON XR 230
82-98	API 170	DX-A170	VNH RHD 300	MON XR 270
69-82	API 200	DX-A200	VNH RHD 330	MON XR 325

TRIPLEX PUMP DISPLACEMENTS (m³/STROKE)

Stroke Length	Liner Size						
	4.5" 114mm	5" 127mm	5.5" 140mm	6" 152mm	6.5" 165mm	7" 178mm	7.5" 190mm
8" 203mm	0.0063	0.0077	0.0093	0.0111	0.0131	0.0151	0.0174
9" 229mm	0.0070	0.0087	0.0105	0.0125	0.0147	0.0170	0.0195
10" 254mm	0.0078	0.0097	0.0117	0.0139	0.0163	0.0189	0.0217
11" 279mm	0.0086	0.0106	0.0128	0.0153	0.0179	0.0208	0.0239
12" 305mm	0.0094	0.0116	0.0140	0.0167	0.0196	0.0227	0.0261

AREA	
Circle	πr^2
Square	L x W
Triangle	$\frac{1}{2} B \times H$





A FIELD GUIDE

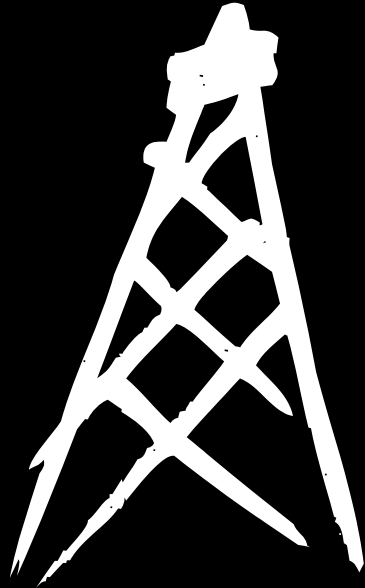


HANDLING
8

OUR COMPANY

OUR COMPANY AND CONTACT

4





OUR COMPANY

Ponderosa Rentals was established to compliment Bonanza Drilling Inc. and provide safe, durable and innovative products to the oilfield industry.

PONDEROSA OFFICE

31 Martin Way
Box 1888, T1R 1C6
P: 403.362.2351
F: 403.362.0357
ponderosarentals.ca

BROOKS OFFICE

20 Martin Way
Box 537, T1R 1B5
P: 403.362.0331
F: 403.362.0357
bonanzadrilling.ca

Ponderosa Rentals is a subsidiary of Bonanza Drilling that was formed in 2011. The primary goal of the organization is to provide a safe, durable and innovative products to the oilfield industry with an emphasis on superior customer service and competitive rates. We currently provide surface, tubular, and B.O.P. (Blow out preventer) rentals to the drilling and service industry in Western Canada.

Moving forward, Ponderosa has dedicated resources to growing the centrifuge division of it's business. With user friendly ergonomic design, technologically advanced monitoring systems, our goal is to lead in the solids control industry with top of the line equipment.

PONDEROSARENTALS.CA

BONANZADRILLING.CA

CALGARY OFFICE

Suite 825
736 6th Ave SW
T2P 3T7
P: 403.238.4442
F: 403.238.4433







SAFETY AND PERSONNEL

SAFETY POLICY

8

TRAINED EMPLOYEES

9



SAFETY AND PERSONNEL

Ponderosa Rentals Safety Policy

Ponderosa Rentals Inc. is committed to a strong safety program that protects its staff, its property, the public and the environment from accidents.

Employees at every level, including management are responsible and accountable for the company's overall safety initiatives. Complete and active participation by everyone, every day, in every job is necessary for the safety of all workers on the job sites.

Management supports participation in the program by all employees and provides proper equipment, training and procedures. Employees are responsible for following all procedures, working safely, and, whenever possible, improving safety measures.

All parties conducting work for Ponderosa Rentals Inc. shall be aware of and understand the legislative requirements, industry standards and company policies and procedures that apply to the work they are conducting. An injury and accident-free workplace is our goal. Through continuous safety and loss control, we can accomplish this.

Jason Hemsing
President



*The safety information in the policy does not take precedence over Occupational Health and Safety Regulations. Everyone must be familiar with the Occupational Health and Safety Regulations.





Trained Employees

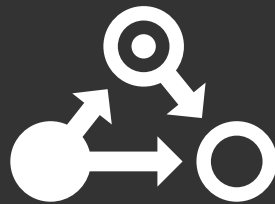
Having trained and competent workers is crucial in any successful operation. In addition to the Apprenticeship program, Ponderosa Rentals has an “On The Job” training program that is measured through Competency Evaluations which are reviewed with each employee on a quarterly basis. Our centrifuge technicians undergo a rigorous training process including class time and instruction from the Lynx group at Alfa Laval.





PRODUCTS

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HITACHI

Hitachi Wheel Loader

Model Code	ZW180PL-5B	
Engine Power	129 kW	(173 HP)
Operating Weight:	15 470 - 15 670 kg	(34 110 - 34 550 lb.)
Bucket ISO Heaped:	2.5 - 3.0 m ³	(3.3 - 3.9 yd ³)

Spacious cab

The air-suspension seat can slide further back, providing more legroom. The tilting telescopic pop-up steering column has also been repositioned to create additional space.

Ultimate comfort

An air-conditioning system regulates the temperature inside the cab and a filter is available for industrial waste job sites. Sound insulation reduces noise levels.

Operator safety

A pillar-less windshield and large sun visor have enhanced visibility levels from the operator's seat.

High productivity

A new hydraulic circuit facilitates the combined operation of the bucket and lift arm for loading and prioritizes use of the bucket for unloading.

Quick and easy service access

The engine cover provides easy access to inspection points and allows for quick maintenance at ground level.

Controlled movement

A new clutch cut-off system allows for smooth operation when the ZWPL-5 loader is loading.

Advanced technology

Comfortable and fuel-efficient traveling performance with the New HST control system.

Transmission control

The automatic transmission selects the appropriate gear for travelling and digging.

Counterweight Provides better stability during the transfer of heavy loads.

Lower fuel costs

The ZWPL-5 loaders can work in two modes, which provide an appropriate level of performance for a job. One is for regular operations with the benefit of efficient fuel consumption; the other is for more demanding tasks and increases productivity. The auto-engine shutdown function avoids fuel wastage while the machine is waiting for a dump truck. Parallel Lift Arm Provides parallel movement from ground level. Perfect for loading and unloading items with increased load control.

Powerful engine

The 6.7 liter (408.9 in³) six-cylinder water-cooled turbo engine enables a powerful digging performance, impressive travel speeds and benefits from excellent fuel consumption. Heavy-duty axle Hitachi axles are renowned for high performance and durability – ideal for working on demanding job sites.

Hydraulic Quick Coupler Switch attachments from the comfort of your cab. Enables the rapid and seamless replacement of working tools.



Centrifuges

All Centrifuges come installed on fully hydraulic stands that are easy to rig-up; no need for picker or bed truck. Stand styles include cantilever style, single vertical rise, and shale bin models. Dual centrifuge's available on most stand models. Hydraulic cord arms for ease of rig-up, on deck storage for spare parts if needed. All models are able to transport on a single load.

Invert Recovery System

Includes capture tank with control panel, SS1000 centrifuge, pumps, hoses and recovered data reporting.



Lynx 400

1.5m³/min. process capabilities (water)

Diameter = 17"
Length = 69"
Beach angle = 6 degrees
Max RPM = 3800
Back Drive = Variable speed (0-44 RPM)
Solids discharge ports = 8 (fully covered with Tungsten Carbide)
Liquid outlets = 5 (fully adjustable, no need to change)
Feed Tube = 2" diameter (ID)
MD motor = 60hp XPFC VFD
BD motor = 30hp XPFC VFD
FP motor = 30hp XPFC VFD
Gearbox type = Planetary 2 stage DD
Max torque = 3.5kNm
Gearbox ratio = 52:1
G-Force = 3550G's at operating speed
Feed pump = Gorman Rupp Super "T" 4"
Interface = 15" Beijer Electronics HMI touch screen
Remote monitoring capabilities
Requires (1) 100A 480V service



Lynx 500

2.3m³/min. process capabilities (water)

Diameter = 20"
Length = 88"
Beach angle = 6 degrees
Max RPM = 3250
Back Drive = Variable speed (0-36 RPM)
Solids Discharge = 8 ports (fully covered with Tungsten Carbide)
Liquids Outlets = 6 (fully adjustable, no need to change)
Feed Tube = 2.5" diameter (ID)
MD motor = 125hp XPFC VFD
BD motor = 20hp XPFC VFD
FP motor = 30hp XPFC VFD
Gearbox type = Planetary 2 stage
Max Torque = 6kNm
Gearbox ratio = 169:1
G Force = 3011g'S at operating speed
Feed pump = Gorman Rupp Super "U" 4"
Interface = 15" Beijer Electronics HMI touch screen
Remote monitoring capabilities
Requires (2) 100A 480V services



Tecumseh 2075

2.3m³/min. process capabilities (water)

Diameter = 20"
Length = 75"
Beach angle = 8 degrees
Max RPM = 2600
Back Drive = Variable speed (0-50 RPM)
Solids Discharge = 6 (field replaceable, tungsten covered)
Liquids outlets = 6 (fully adjustable, no need to change)
Feed Tube = 2.5" (ID)
MD motor = 150hp XPFC VFD
BD motor = 30hp XPFC VFD
FP motor = 30hp XPFC VFD
Gearbox type = Planetary 2 stage
Max Torque = 11kNm
Gearbox ratio = 56:1
Feed Pump = Gorman Rupp Super "U" 4"
Interface = 12" Phoenix HMI touch screen
Requires (2) 100A 480V services



Pumps



4" Trash Pumps

Flygt model 3127, 480/208V 10hp 1720rpm submersible solids handling pumps. Output of 2.5m³/min. water. Second pump supplied as spare.



4" Flygt Pumps

Flygt Models 2840, 2640 480/208V 8.8hp 3480rpm submersible fluid handling pumps. Output of 2.3m³/min. water.



2" 110V Hertz Pumps

Available upon request.

All pumps supplied with starter boxes and hosing. Goosenecks available upon request.

2" Trash Pumps

Flygt Model 3068, 480/208V submersible solids handling pumps. Output of .5m³/min. water.

Matting



8' X 20' Rig Mats

3 and 4 runner Mats available

8' X 40' Rig Mats

3 and 4 runner Mats available

Custom sizes also available

Light Towers




Doosan Light Towers

8kW/20kW models available

8kW models will run (1) well site shack

20kW models will run (3) well site shacks





**SPECIAL ORDERS
AVAILABLE UPON
REQUEST.**

Tubulars

8" Dc's

8" (203mm) with 6 5/8 Reg. connections, Bell Sub, Pick-up Sub, and Crossover Subs available.

Sub Packages

5" Sub packages include Inside BOP/Stabbing Valve, Crossover Subs.

NC50 Box - NC50 Pin

NC46 Pin - NC46 Pin

NC50 Box - NC 46 Pin

NC50 Box - NC38 Pin

NC50 Box - NC 40 Pin

NC50 IBOP with Tensioning Pin

NC50 Stabbing Valve with Handles/wrench

NC50 Inside BOP

NC40 Pick-up Sub (cut for 4" 18 degree dp elevators)

NC50 Pick-up Nubbin

BOP Components



Crossover Spools

Extension Spools

Working Spools

Rotating Spools

DSA Flanges

7" to 21 1/4" sizing in 2000-5000 psi working pressure

All mounting hardware available



Tanks

Put our tank program to work for you and manage your storage requirements with confidence. Ponderosa provides economical short and long-term solutions for your operation. We have competitive daily and monthly rates, convenient delivery and pick up to and from your jobsite. Other benefits include environmental security of secondary containment and self-contained pumping systems.



400BBL Tanks

Internal Steam coils
Fall Arrests
Level Indicators



Poly Injection Tanks

(2) 1m³ mixing compartments
(2) Agitators with X proof motors
(2) Tuthill pumps with X proof motors
(2) AC VFD drives for ultra-fine pump control
2" Steam line
Fold down walk way
2" Fill line
208/480V capable
X proof lights
150ft. power cable



Hi-Side Shale Bins

10'W x 40'L x 8'H and 12'W x 40'L x 8'H models available. Stackable 10ft. into 12ft. bins for ease of transport and reduced trucking costs.



Lo-Side Shale Bins

10'W x 30'L and 40'L models available. Built in overflow protection in all.

Fold down ramps also available.





**CUSTOM DESIGNED
TANK PACKAGES
AVAILABLE.**



Floc Tanks

60m³, 4 compartment slope walled floc tanks
 4" and 6" suction lines for vacuum hookup
 Walkway grating
 Moveable boom arm and winch for pump suspension
 Low level suction for centrifuge connection
 Stackable on highboy



Flare Tanks

30" - 36" Degasser with degassed, flare and test stacks
 Available with 6" and 8" inlets into degasser for diverter systems
 Tornado remote ignition and pilot systems
 Load line and ground stakes
 Solar powered 12V ignition system W/O degasser also available



Pre-mix Tanks

40m³ Pre-mix tank
 Electric Mixing System
 50hp x 11" impeller pump
 100A 480V service
 3 Electric Agitators
 Heated Pump Room



Handling Tools



Pipe Racks

42" x 32' racks, engineered and certified

Slips

Type Du Slips 5 1/2" x 5" with 5" dies



Bail Extensions

150T certified Bail Links

1 3/4" x 48", 1 3/4" x 96"

175T certified Bail links

Connecting links



Elevators

150T, 5" IEU x 18 Degree CL RG-150

Generators

Well site Generators

Dual 100kW 3 phase 208/480V available

John Deere Engines with Marathon Generators

(10) 220V 30Amp. Twist locks

(1) 480V 3W4P 60Amp

(8) 110V 15Amp

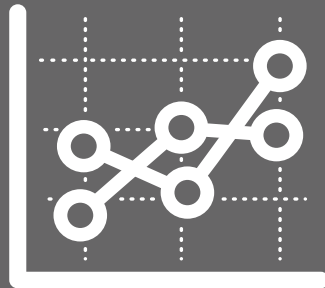
Exterior lighting and ground cables



COMPARISON CHARTS

CENTRIFUGE COMPARISON

20 - 21



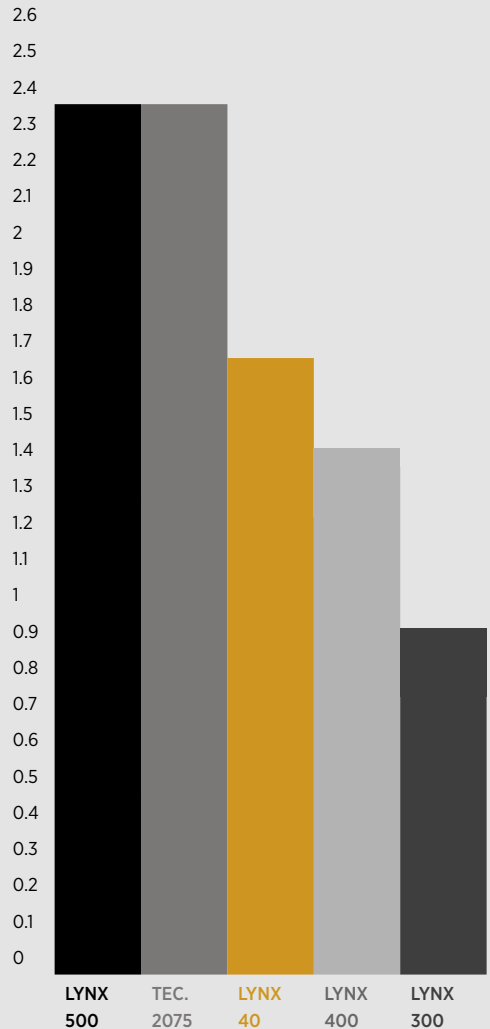
PONDEROSA QUICK COMPARISON CHART

	LYNX 500	TECUMSEH 2075	LYNX 40
HYDRAULIC CAPACITY	2.3m ³ /min.	2.3m ³ /min.	1.6m ³ /min.
BOWL DIMENSIONS	20"D x 88"L	20"D x 75"L	19"D x 79"L
MAIN MOTOR	125HP	150HP	125HP
BACKDRIVE MOTOR	20HP	30HP	20HP
FEED MOTOR	30HP	30HP	30HP
MAX DIFFERENTIAL	36 RPM	50 RPM	40 RPM
GEARBOX RATIO	169:1 Planetary	56:1 G DD	169:1 Planetary
FEED PUMP	U4 Gorman Rupp	U4 Gorman Rupp	T4 Gorman Rupp
FEED TUBE	2.5" ID	2.5" ID	2" ID
REQ ELECTRICAL SERVICE	2-100A x 480V	2-100A x 480V	2-100A x 480V
MAX SPEED	3250 RPM	2600 RPM	3650 RPM
MAX G FORCE	3011 G	2500 G	3500 G
WEIGHT	4500 kg	5000 kg	5000 kg
TORQUE	6kNm	11kNm	6kNm



LYNX 400	LYNX 300
2.0m ³ /min.	1.2m ³ /min.
17"D x 69"L	14"D x 59"L
60HP	50HP
30HP	30HP
30HP	30HP
44 RPM	46 RPM
52:1 DD	52:1 DD
T4 Gorman Rupp	T4 Gorman Rupp
2" ID	2" ID
1-100A x 480V	1-100A x 480V
3800 RPM	4200 RPM
3551 G	3000 G
3200 kg	3200 kg
3.5kNm	3.5kNm

HYDRAULIC CAPACITY M³/MIN. (WATER)





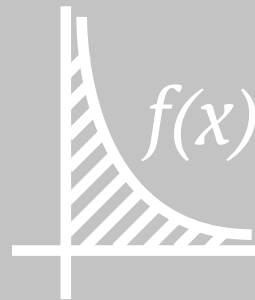
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PHILADELPHIA
2026

FORMULAS

WEIGHT, LENGTH, TUBULAR, VOLUME,
PRESSURE, TORQUE, AND AREA 24

SHAKER SCREEN CONVERSIONS AND
TRIPLEX PUMP DISPLACEMENTS 25



CONVERSIONS

WEIGHT

daN to lbs	x 2.248
lbs to daN	x 0.445
daN to kg	x 1.0197
kg to daN	x .9806
daN to tons(Short)	x .00112
tons(Short) to daN	x 889.6
lb/ft to kg/m	x 1.4882
kg/m to lb/ft	x 0.6720

LENGTH

mm to inch	x 0.03937
inch to mm	x 25.4
feet to m	x .3048
m to feet	x 3.281
km to miles	x .62137
miles to km	x 1.609

TUBULAR CONVERSIONS

NC38-3.5 IF
NC40-4 FH
NC46-4.5 XH
NC50-4.5 IF

TORQUE

Nm to ft/lbs	x .73756
ft/lbs to Nm	x 1.3558



PRESSURE

kPa-psi	x .14504
psi-kPa	x 6.8948
bar-psi	x 14.5
psi-bar	x 0.068948
bar-kPa	x 100
kPa-bar	x 0.01

VOLUME

Cylinder	$\pi r^2 \times H$
Pyramid	$(L \times W \times H)/3$
Cube	$L \times W \times H$
Sphere	$\frac{4}{3} \pi r^3$
M ³ -BBL (US Oil)	6.2898
BBL(US Oil)-M ³	x .15899



SHAKER SCREEN CONVERSIONS

Cut Point	APIRP 13C #	Derrick Screens	Brandt Screens	MI Swaco Screens
275-327	API 50	DX-A50	VNM RHD 89	MON XR 84
231-275	API 60	DX-A60	VNM RHD 105	-----
196-231	API 70	DX-A70	VNM RHD 115	MON XR 105
165-196	API 80	DX-A80	VNM RHD 145	MON XR 120
137-165	API 100	DX-A100	VNM RHD 180/215	MON XR 165
116-137	API 120	DX-A120	VNH RHD 255	MON XR 200
98-116	API 140	DX-A140	VNH RHD 280	MON XR 230
82-98	API 170	DX-A170	VNH RHD 300	MON XR 270
69-82	API 200	DX-A200	VNH RHD 330	MON XR 325

TRIPLEX PUMP DISPLACEMENTS (m³/STROKE)

Stroke Length	Liner Size						
	4.5"	5"	5.5"	6"	6.5"	7"	7.5"
	114mm	127mm	140mm	152mm	165mm	178mm	190mm
8" 203mm	0.0063	0.0077	0.0093	0.0111	0.0131	0.0151	0.0174
9" 229mm	0.0070	0.0087	0.0105	0.0125	0.0147	0.0170	0.0195
10" 254mm	0.0078	0.0097	0.0117	0.0139	0.0163	0.0189	0.0217
11" 279mm	0.0086	0.0106	0.0128	0.0153	0.0179	0.0208	0.0239
12" 305mm	0.0094	0.0116	0.0140	0.0167	0.0196	0.0227	0.0261

AREA

Circle	πr^2
Square	L x W
Triangle	$\frac{1}{2} B \times H$



