

OUR RIGS

BENNEVIS OFFSHORE JACK-UP RIG



DESIGN FEATURES

Bennevis is a Self-propelled, self-elevating Jack – up drilling rig with cantilevered drill-floor and derrick thus combining the ocean-going capability of a normal ship with the proven drilling performance of a self- elevating platform.

This Drilling unit has an ideal configuration to carry out exploratory and development drilling, work-over and interventions on offshore oil and gas wells.

This exceptionally maintained Rig was built on the Clyde in Scotland in 1971 and has been upgraded on a regular basis to meet operators' ever-changing requirements. For example, the unit was converted from slot – type to cantilever – type drilling unit in 1985 and this cantilever was subsequently extended in 1992 to give now a maximum drilling area of 60 ft outreach by 20 ft transversely. In 201 two AC engines CAT D-399 were replaced by two new engines CAT 3516 B to increase the performance of the rig.

Bennevis has successful track record within the offshore industry and is an ideal unit for use in either drilling, side-tracking, workover, well maintenance or well repairs.

Bennevis was built and maintained under ABS (American Bureau of Shipping) classification society rules for Self-propelled , self-elevating drilling units, IMO MODU and international Load-line rules and is registered in the Republic of Panama.

Maximum drilling depth is 20,000 ft. Water Depth range for drilling is 250 ft (maximum) to 20ft (minimum). Large (51 ft X 29.5 ft) rectangular auxiliary footings. The top100 ft of leg (in two sections) can be removed for increased strength and stability during world- wide ocean voyages.

OPERATING LIMITS

When in transit, maximum allowable wind speed is 100 Knots. When drilling, maximum allowable wind speed is 50 knot with 20 ft waves and 1.5 knots current. Operations can be continued up to 70 knot wind speed, 30 ft waves and 1.5 knot current with reduced cantilever substructure load. When wind speeds exceeded 70 knots, if elevated, normal operations are stopped and the extended cantilever is moved forward.

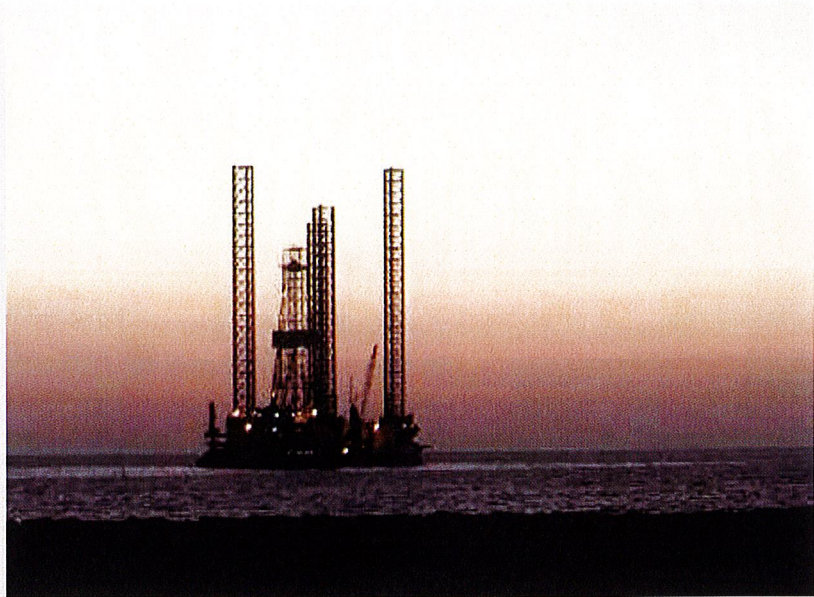
PRINCIPAL DIMENSIONS

Length overall	297ft
Breadth overall	141ft
Hull depth at side	22ft
Minimum Depth afloat (keel to top of derrick)	224.5ft
Total leg length	356 ft
Leg centers	
Longitudinal	124ft
Transverse	103ft
Leg chord centers	20ft
Maximum transit draught	17.75ft
Max transit displacement	15077ST
Helicopter rotor diameter	62ft

Deck cranes: Sea King, Two to port, one to starboard.

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LOAD LIMITS

Total Variable load
)Maximum – subject to limitations(

2789st

Maximum Cantilever Loads:

Hook Load	800,000lbs
Rotary Load	800,000lbs
Setback load	400,000lbs
Cantilever pipe racks	600,000lbs
Total hook, rotary, setback (Subject to limitations)	800,000lbs

Individual variable limits:

Tubular in pipe racks	about 400st
Liquid mud	1600 bbls
Sack Materials	about 1400 sacks (for easy handling)
Drill water	3470 bbls
Potable water	740bbls
Fuel oil	9637bbls
Bulk mud & cement	840bbls
Preload & Surge tanks	5354bbls

DRILLING EQUIPMENT & LAYOUT

Derrick: Lee C. Moore, 30 ft X45 ft base x 160 ft high. Rated at 1,300,000 lbs.

Set back capacity: 175 stands of 5 inch drill pipe and 7 stands of 9 1/2 inch collars.

Derrick outfit: Deadline anchor - National Type E with Martin Decker E-80 Sensor. Lee C. Moore 3-well, 500t crown block equipped with 7 x 60 inch sheaves. National 60-G500, 500 t combination hook and travelling block, Varco Top-Drive, Model TDS-3, drilling system complete with 1000 hp DC drilling motor assembly reduction gears, torque wrench (pipe handler), support and drillers control consol. Two National Model P-500 swivels.

Draw- Works : National Model 1320 UE driven by two GE 752 DC motors of 1000 hp each. Draw-works complete with Baylor Model 7828 dynamic auxiliary brake, Lebus grooving for 1 3/8 inch wireline. National Type B-1 make-up and breakout catheads, and Crown-o-Matic crown block protector. Halliburton wire line unit complete with 14000 ft of 0.092 inch wire. Totco single shot non- directional survey instrument.

Rotary: National Type C-375 (37-1/2 inch). Rotary is complete with Varco 6600 Type MPCH master casing bushing and Varco type HDP roller Kelly bushing (Rotary is available as back – up to Top Drive system if required.)

CANTILEVER AND SUB- STRUCTRE SKIDDING

Drilling area: 10 ft to 60 ft outreach and 10ft either side of drill centre.

The Cantilever includes a pipe rack. (There is another pipe rack on the main deck.)

BLOW-OUT PREVENTION & WELL CONTROL

Blow-out Prevention: Two Double Cameron 13-5/8" Type U, 10,000 psi Working Pressure. One Hydriil 13-5/8", Type GL spherical BOP- 5,000 psi WP annular type. One Shaffer 20" annular BOP - 2000 psi WP.

Choke Manifold: Cameron 3-1/16" – 10,000 Psi WP.

BOP Control: Koomey Model T-151-60 (160 gals) with remote control Unit Model T .151-80-35

Diverter: Hydriil 29-1/2", Type MSP- 500 Psi WP.

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MUDSYSTEM

Two National Type 12P-160 Mud Pumps. Two Mission 6" x 8" centrifugal mud mixing Pumps. Two Mission 6" x 8" centrifugal Pumps for de-sander and de-silter service. Brandt Dual tandem Screen high speed shale shaker. Three derrick FloLine Mud Cleaners. One Demco Model 123 de-sander with three 12" Cones. One emco Model 416-h de-silter with sixteen 12" Cones. One Swaco mud cleaner with eight 4" Cones. One atmospheric- type de-gasser with vent line to top of derrick and one Swaco vacuum- type de-gasser.

MUDPROCESSING

One re-circulating trip tank - 25 bbls. Four solids removal tanks - 98 bbls each. Two active mud tanks and two reserve tanks - 400 bbls each. One pill tank - 50 bbls. Dual standpipes and standpipe manifold - 5000 psi WP. Two rotary hoses 3-1/2" ID- 5000 psi WP. Six 1400 cu.ft. horizontal pneumatic-type bulk mud/cement storage tanks (three for mud). Two low pressure bulk air compressors.

Cementing unit with re-circulating mixer.

POWER

Generators: Four Alco Model 215-V-12 diesel-electric engines of 2,250 hp each. Four GE GT 608 2,250 hp continuous input DC generators for propulsion and drilling

Two Caterpillar 3516B diesel engine each driving 1825 kW AC generator and one Caterpillar D399-TA diesel engine driving one 800 kW AC generator. One Perkins 4236-56hp diesel engine driving one 30 kW emergency generator.

Propulsion: is provided by twin propellers with power supplied by two GE GT-608 motors of 2,000 hp (Total 8,000 shaft hp.)

JACKING SYSTEM

Electro- hydraulic jacking system operation two jacking cylinders on each of the four triangular legs providing preload pressure of up psi on each leg. Electrical and hydraulic fail-safe 3600 to

Weights jacked up	
Hull and machinery	8323st
Maximum Variable	2789st
Total	11,112st

Jacking Capacity	
Total jacking	3530t/tower
Dead load holding	7,200t/tower
Jacking Speed	60 ft/hour

Locking shims are provided for rig moves.

SAFETY SYSTEMS

Abandonment: Two Watercraft totally enclosed lifeboats for 42 men each (84 men total). Six liferafts for 25 men each (150 men total). One rescue boat. 108 personnel survival suits.

H2S detection and protection: 15 Sabre 20min breathing device with spare 20min cylinders. Texas A alytical four point H2S detection system. Portable H2S detectors and five personal dual H2S detectors.

Communications: ABS- approved GMDSS radio system.

Navigation: Decca RM 729M radar and 01 satellite navigator.

ACCOMMODATION

Fully air- conditioned for 84 people with conference and office space.