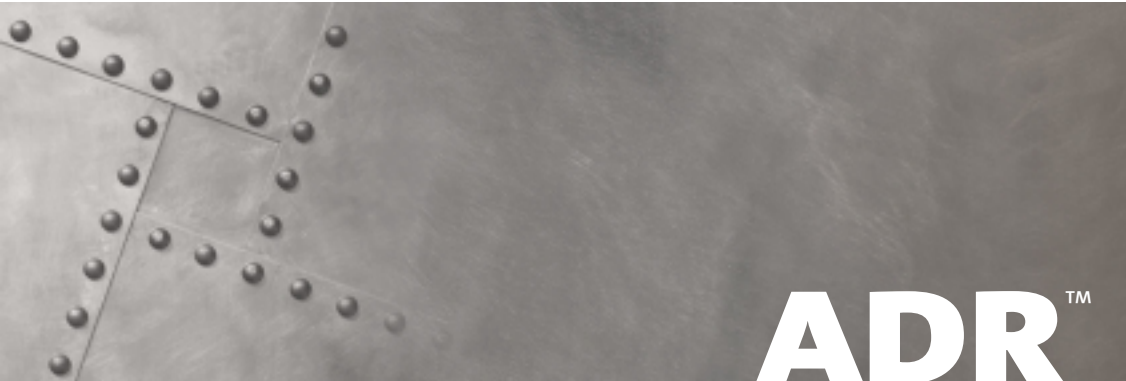


ENSIGN INTRODUCES



ADRTM

Automated Drill RigTM

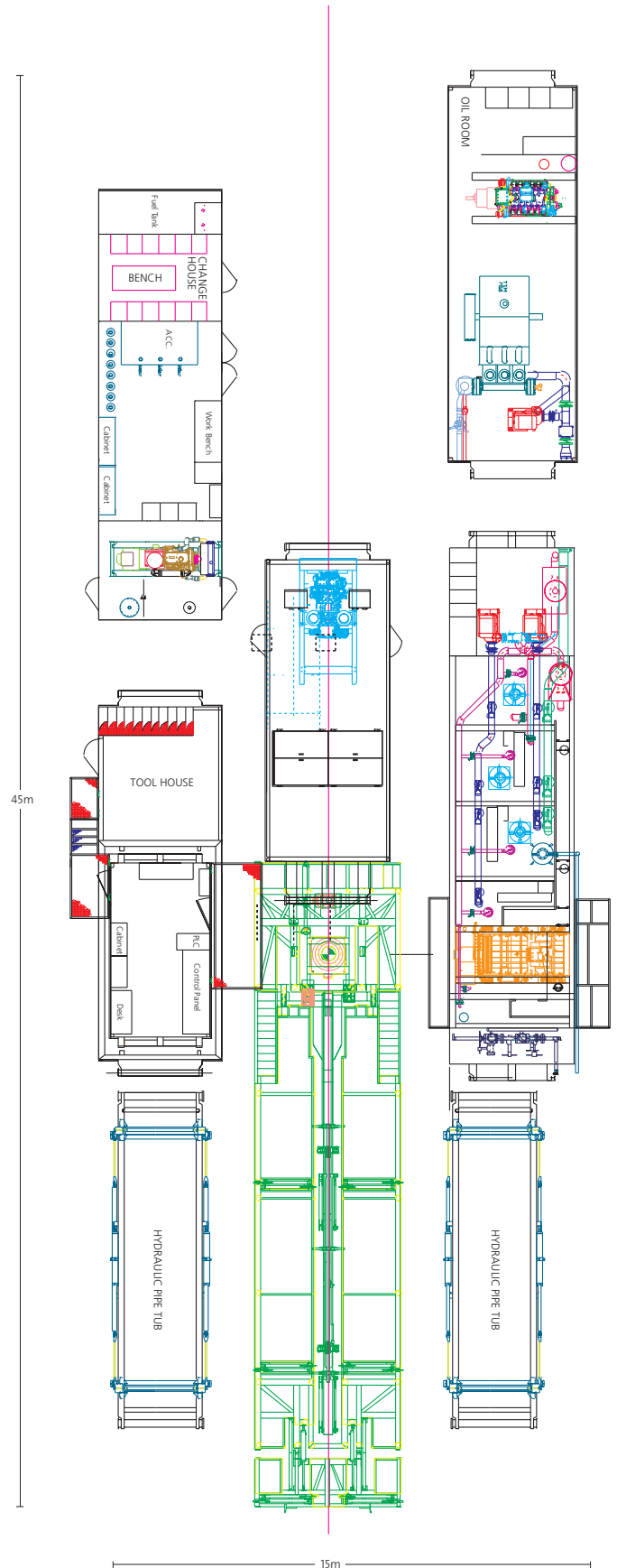
FAST

INNOVATIVE

SAFE

Developed in 1995, the ADR prototype has quietly **cut its teeth during the last five years in the very competitive 600-metre shallow gas market.** The production model of the ADR incorporates all the pedigree of the shallow gas prototype, yet has an expanded depth range to **2,000 metres.** Because the ADR has **no drawworks,** it becomes a 2,000-metre rig simply by adjusting hydraulic ram pressure.

See the ADR at work:
visit www.ensigngroup.com/adr





Depth flexibility means more utility for your well inventory

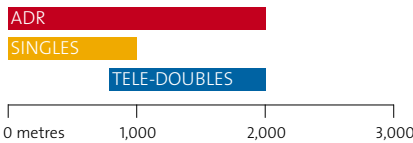
90% of wells in the WCSB fall in the range of the ADR's capacity.

Safety and speed in one package

Drillers, housed in a climate-controlled cabin, operate automated pipe handling arms, make-up break-out machines and auto slips. The crew does not touch the pipe and are not exposed to the typical 'drill floor' hazards.

ADR design replaces two current rig categories

The best of both worlds are achieved. The ADR covers territory of both the typical single and small double drill rig.



Move and be drilling within the hour

Compact loads and PLC technology provide for 30% fewer connections as compared to previous designs.

ADR design complements advances in bit and mud motor technology

With new PDC and TRI-CONE bit technology able drill to 2,000-metre depths in one bit run, the necessity to rack pipe in the derrick is eliminated, hence the advantages of the ADR.

Zero disturbance

Self-leveling loads and no matting allow the ADR to rig up on virgin land with the added benefit that the rig requires no rathole or mousehole.

Micro control of torque and weight on bit

Inherent in the ADR RAM design is the ability to micro-adjust torque and weight on bit. This feature makes coring a breeze and eliminates cumbersome brake jump.

Minimal location size required

The small footprint of the ADR fits into locations half the size of typical doubles.

1/3 less connections

The ADR is designed for range 3 tubulars, 1/3 less connections means tripping in and out is achieved with 33.3% savings.

No drawworks

The ADR is like no other rig in the world. The drill string is worked utilizing a floating crown top drive assembly coupled to two hydraulic ram cylinders.

Pull Down capability

The ADR has inherent pull down capability. This allows for flexibility in horizontal wells where WOB is an issue and also on UB wells where surface pressure deployment is required. The automated Pull Down system instantly turns casing-light situations into routine events for the ADR.

Built-in top drive

Capable of 20,000 ft lbs of torque, the integrated top drive allows the advantage of back reaming, well control, finite rotational control for directional drilling and running casing (no power tongs required).

RAM HOIST
Hydra Hoist 500 (500 HP/373 kW)

MAST
Ensign ADR
Height: 20.04m
G.n.C: 111,200 daN
Static Hook Load: 66,720 daN

SUB
Single Load
KB to Ground: 3:81m
Clear Work Height: 3.35m

MUD PUMP (TRIPLEX)
TSM – 750
Rated: 750 HP/560 kW
Input: Det 12V-2000 (750 HP/560 kW)

MUD TANK
Single Tank
Capacity: 45m³
Shaker – Linear Motion
Mixing Pumps (2): 50 HP/37 kW Each

HYDRAULIC POWER UNIT
Hydraulic Pumps (5)
Input: Det 12V-2000 (850 HP/460 kW)

LIGHT PLANTS
Kato
Rated: 368 HP/275 kW
Input: Det Series 50 (300 HP/224 kW)

B.O.P.s (229mm x 21 Mpa NACE)
Shaffer Annular
Shaffer Lwp Single Gates (2)

MASTER BUSHING SUPPORT
IDECO 444.5mm
Rated: 89,000 daN

TOP DRIVE
Foremost RC – 240
Rated: 90,900 daN

CHOKE MANIFOLD
76mm x 21 Mpa NACE

ACCUMULATOR
5 Station E/H with PLC

DRILL PIPE
101.6mm Range 3

BOILER
Volcano (100 HP/75 kW)

AUXILIARY EQUIPMENT
Pipe Handling Arm
Auto Pipe Handling System
Iron Roughneck
229mm Diverter or B.O.P. Stack
Automated Slips



ADRTM

Automated Drill RigTM

See the ADR at work:
visit www.ensigngroup.com/adr



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