



Visitors at Dalby for the demonstration

## New gas industry gets new pipe laying technology

June Cummings reports

Where better to launch, new direct ploughing flexible pipe laying technology, than the black soil plains of Queensland's Darling Downs on the fringe of the energy-rich Surat Basin and its coal seam gas (CSG) industry.

**M**ORE THAN 60 top executives from major energy companies, government authorities and irrigators from across the nation, travelled to Dalby for the field demonstration of the new technology, which uses a FSP 220 Fockersperger ploughing and laying machine from Germany.

A small Brisbane-based pipeline contractor, Pipe and Civil, has introduced the technology to Australia, after a couple of years of research and planning, customizing it for use in coal seam gas upstream gathering.

Pipe and Civil says the innovative technology is an upscaled version of the direct ploughing method used for fibre optic rollout, which offers superior cost and environmental solutions for the laying of flexible pipes for water and gas pipeline industries.

The ploughing technology uses a unique ripper and chute design to displace soil.

The guidance system then pulls the pipe into the trench. Unlike open trenching, the narrow slot in the earth created by the plough closes quickly under its own weight and is easily compacted.

### What is it?

A specially designed all-terrain, all-weather mobile winch vehicle (FWF 80 and FWF82) pulls the plough vehicle (FSP 220 and 22) using a cable. The winch vehicle is anchored into the ground avoiding the churning and mixing of topsoils associated with tracked or wheeled vehicles and trenching.

Every leg of the plough vehicle operates independently, allowing the equipment to work easily in undulating terrain. The tip of the plough blade forms and clears the laying bed at a specific depth up to 2.5m. Then using a patented guidance system, a pipe insertion unit is dragged along the bed and the pipe is inserted into the cavity with minimal risk of damage.

Technically, the patented ripper and chute design adjusts quickly to maintain uniform depth. It has independent hydraulic steering and adjustable wheels for ploughing in varied terrain and tight turning radii. It is rubber tracked and rubber tyred for unrestricted mobility. Pipe and cable reels are easily loaded onto the plough. Winch pulling power is up to 80t single line, 160t double lines, with up to 110m of cable length.

Pipe and Civil claim ploughing is an environmentally superior alternative to trenching and ditching, because it requires a much narrower construction corridor, significantly less site preparation and remediation and operates in a variety of terrain and weather conditions. Its GPS tracking and guiding system has the ability to produce as built data. It has OH&S advantages too: a smaller crew and five times faster project execution.

Coal seam gas upstream gathering, includes the pipelines that usually consist of two gathering pipelines, linking the well-heads to the main water and gas pipelines. The gathering pipelines feed into the main trunk line, which conveys gas from outlying wells to the treatment or compressor plant.

According to Pipe and Civil director Brenton Euler, the company has purchased six FSP 220s with more on order, to become the largest pipeline and cable ploughing contractor in Australia. With the new technology, it is also targeting the civil construction and mining industries.

The small Brisbane firm has experienced unparalleled growth, competing at national level and locally winning Brisbane's Lord Mayor's Business Award.

Some current water pipeline contracts include the Maleny Water Pipeline in Queensland, Bowen Water Alliance in Melbourne, Cardinia Connection Alliance in Victoria and Canberra Bulk Water Alliance. □