

Case Study – **HydroGRS** in Sichuan Shale Gas Wells, China

Improves casing running efficiency substantially in horizontal Internals

BACKGROUND

Onshore horizontal well of 4,702m TD (3,505m TVD), 1,002m of horizontal sections (1,377m horizontal departure) at Sichuan Shale Gas. The inclination is 93deg and dogleg is 6.23deg/30m.

CHALLENGES

- ✧ Long horizontal section, poor wellbore quality.
- ✧ Encountered tight spot at horizontal section, unable running casing to TD.
- ✧ Wiper trip cannot solve this issue.

SOLUTION

VERTECHS HydroGRS™ (HGRS-0512)

RESULTS

The HydroGRS™ (guide/reamer shoe) is a guide shoe designed to assist in getting the casing to bottom in difficult environments saving time and overall costs.

- Eccentric rotary guide/reamer nose assists to negotiate the casing string through troublesome hole conditions quickly.
- Nose is free to rotate as needed to “follow” the hole while running casing but can be rotated with pump pressure to actually ream the hole if necessary.

Unit	Size (in)	Body OD (in)	Max. OD @Roller (in)	Length (in)	Circulating Ports (Number × Size, in)
HGRS-0512	5.5	6.3	6.535	25.2	3 × 2.17
	Pump Rate (bbl/min)	Pressure Drop (psi)	Speed (rpm)	Torque (ft-lb)	
	7.2-10.2	218-363	700-1200	169.7-280.3	



PERFORMANCE SUMMARY

Running casing to TD in **19.5hrs**. Successfully passed through the tight spot with circulations. The HydroGRS™ has a proven track record of getting casing to bottom in a significantly shorter time when swelling shales, ledges and/or washed out areas are hampering the ability to get casing to TD successfully.