

VAREL V2 AUTO-FILL VALVE

The Industries Leader in Float Equipment

APPLICATION

Casing Deployment: 13-3/8"
Total Depth: 1587 meters
Open Hole Size: 17-1/2"

TECHNOLOGY

Double Valve Float Shoe and Collar
with Auto-Fill

LOCATION

Pakistan

CUSTOMER CHALLENGE

A major operator in Pakistan encountered significant challenges when running casing through weak formations. Preventing formation surge and excessive losses, the casing running speed was reduced, and the top fill requirement every five joints resulted in increased operational downtime.

Premium float equipment with auto-fill features was the chosen solution to address these issues; however, they specifically avoided ball-drop, pressure-activated equipment due to concerns that pressure events could adversely affect the formation. As well as having a flapper valve which posed limitation in holding higher back pressure.

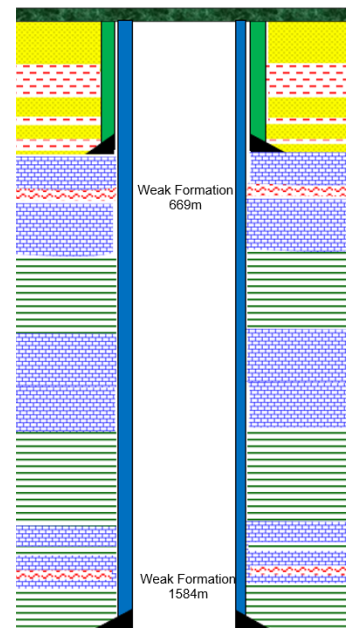
VAREL SOLUTION

The Varel V2 auto-fill float equipment has proven its exceptional durability and reliability under challenging conditions. Manufactured in Saudi Arabia and certified to API 10F standards (D36/R15, D24/R20, T400, P10, AF12), it embarked on a rigorous journey.

The 13-3/8", 72 PPF, TN-110 HC / P-110 double valve shoe and collar were transported by land to Dubai for unpacking, threading, and crating. It was then shipped by sea to Karachi, moved by ground to Islamabad, and finally transported 1,500 km to a remote location. Despite this extensive journey, the auto-fill mechanism remained fully intact upon inspection at the rig site.

During operation, the equipment performed flawlessly in auto-fill mode, breaking circulation at the 20" shoe at 577 m and again at 1,086 m with a 200 GPM flow rate. It continued to auto-fill to a depth of 1,586 m before converting at 300 GPM. The result led to 5+ less hours in casing running time compared to a previous casing run that was 200 m shallower, with successful casing and cementing achieved without mud loss, even in low fracture gradient formations at 669 m and 1,584 m.

Premium Float Valve with Auto-Fill



CUSTOMER VALUE

- Ability to run casing without top filling
- Reduced surge on formation
- No mud loss
- 5 hours casing run time saved
- 10,000 psi rated float valves after auto-fill deactivation

