

# New Generation Float Valve Excels in Saudi Arabia

## Peak Performance in Casing while Drilling Applications

### APPLICATION

9-5/8" Casing with Drilling  
Multi-stage Cementing

### TECHNOLOGY

Float Valve  
Conventional Float Equipment

### LOCATION

Saudi Arabia  
Well - ABHD-174

### CASE STUDY #1

#### CUSTOMER CHALLENGE

During casing operations for 9-5/8" deployment, the objective was to isolate the water sensitive Wasia and Biyadh shales and close off the lost circulation zones across the Shu'aiba formation.

#### Key Challenges of the Various Zone Formations:

**Safaniya Formation:** Caving's & Water Influx

**Lower Aruma:** Shales

**Wasia & Biyadh** (Water Sensitive): Bit Balling

**Shuaiba:** Loss Circulation Zones

#### VES PERFORMANCE

Previous Casing Shoe Depth (13-3/8"): 4225'

9-5/8" Total Depth: 6780'

Length Drilled conventionally: 1773' (till 5998')

Length Drilled by CwD: 782' (till 6780')

12-15 BPM

VES Equipment utilized:

9.625", 43.5 PPF, BTC, L80 Float Collars (2 Each)

**Float Equipment Operation: 60 Hours**

(Pick up CwD to displace first stage cement)

### CASE STUDY #2

#### CUSTOMER CHALLENGE

During casing operations for 13-3/8" deployment, the objective was to shut off the lost circulation in the ARUMA and WASIA formations and prevent the WASIA formation from charging the upper formations / isolate the water sensitive WASIA shales.

#### Key Challenges of the Various Zone Formations:

**Aruma:** Loss Circulation Zones

**Aruma & Wasia:** Tight spots / Stuck Pipe

#### VES PERFORMANCE

Previous Casing Shoe Depth (18-5/8"): 75'

13-3/8" Total Depth: 1764'

Length Drilled conventionally: 875' (till 950') (had complete losses at 140').

Length Drilled by CWD: 814' (till 1764')

=<19 BPM

VES Equipment utilized:

13.375", 68 PPF, BTC, J55 Float Collars (2 Each)

**Float Equipment Operation: 32 Hours**

(Pick up CWD to displacing first stage Cement)

VES Float Valve Assembly



**14** SUCCESSFUL DEPLOYMENTS  
**0** OPERATIONAL CHALLENGES  
**350+** TOTAL FLOAT OPERATION HOURS