

Real Time Reservoir and Production Illumination

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Illuminating inflow and outflow behaviors are provided through real time Reservoir Monitoring and Control for production optimization and ultimately IOR. Schlumberger permanent monitoring has gained exceptional growth in deployments and development of new technologies to deliver system approaches classified Intelligent Completions. The worlds first multi-lateral Level 6 system with intelligent completion was deployed successfully in Indonesia. The asset requirements were around a minimum facilities platform with limited slots, requiring a multi-lateral level 6 systems to maximize the existing slot structure and maintain a re-entry design. Deploying an ESP with flow control valves and permanent monitoring required delivery of an optimized completion solution. After reservoir modeling, a completion was set inside one leg of the multi lateral system, which offers inflow control from both legs, i.e. tubing production from leg-one and annulus production from leg-two utilizing a through tubing and side entry flow control technologies. The commingled flow is throttled back by means of the flow control tools controlling each leg to gain a better sweep of the targets. Sustaining optimal performance and controlled watercut influx as the objective. The gauge system offers effective pressure maintenance to manage the differential pressure across the targets, also allows for high transient and dynamic monitoring of build up data in either of the legs without shutting down the ESP. A proven compact multi phase Vx flow meter was installed on surface for quantitative individual phase measurements from each leg and further quantification of asset drainage and sweep.
