

# CASE HISTORY

## FAST AND ECONOMIC DUAL PLUG AND ABANDONMENT

### APPLICATION

Magnetic Ranging, Wellbore Positioning, Directional Drilling, Plug and Abandonment

### TECHNOLOGY

BlackShark, MagTraC™, GyroMWD, Advanced Survey Management

### LOCATION

Bakersfield, California, USA

### CUSTOMER CHALLENGE

The customer had two wells located approximately 85ft apart which were compromised, each requiring plug and abandonment. Due to the nature of the damages, both wells could not be re-entered from surface and had to be intercepted below 625ft and 871ft respectively.

### SCIENTIFIC SOLUTION

Scientific Drilling offered a complete directional drilling and well intercept package that allowed re-entry into both wells from a single surface location. The package included active (BlackShark) and passive (MagTraC™) magnetic ranging, gyroMWD, intercept well planning, and advanced survey management. Each project phase was planned following the well intercept industry best practices, assessing risks at each step for improved economics. Scientific Drilling's flagship BlackShark active ranging system, with integrated Keeper gyro technology, was used to locate, follow, and optimally align with the target wells for intercept. The mechanical communication with the target casings was confirmed with EDR readings and metal cuttings on the ditch magnet and near-bit magnet sub. The drilling and measurement part of the project, including ranging to and intercepting both target wells, took only nine days; after which the client was able to perform all remaining plug and abandonment steps and successfully finalize the project.

### CUSTOMER VALUE

Scientific Drilling's gyro surveying while drilling and realtime passive magnetic anomaly monitoring via MagTraC™ provided a unique combination of services that solved the uncommon challenges faced by the customer. Proper planning and simultaneous use of these methods reduced the number of wireline active ranging runs required to only three per wellbore, which is the record low for similar intercept scenarios. SDI's scientific approach contributed to swift project completion and improved economics of "complex" plug and abandonment when compared to typical solutions and their associated time and monetary requirements for similar work.

