GOOD MECHANICAL INTEGRITY

- CONDUCTOR PIPE
- SURFACE CASING
- PRODUCTION CASING
  - FRESH WATER AQUIFER ZONE
  - SHALLOW PRODUCING ZONE
  - INTERMEDIATE PRODUCING ZONE
  - TARGET PRODUCING ZONE

Southwestern Energy®
CEMENT CHANNELING

CONDUCTOR PIPE

SURFACE CASING

PRODUCTION CASING

PRESSURE BUILDS UP

FRESH WATER AQUIFER ZONE

SHALLOW PRODUCING ZONE

INTERMEDIATE PRODUCING ZONE

TARGET PRODUCING ZONE
LEAK THROUGH CASING

- CONDUCTOR PIPE
- SURFACE CASING
- PRODUCTION CASING
- PRESSURE BUILDS UP
- FRESH WATER AQUIFER ZONE
- SHALLOW PRODUCING ZONE
- INTERMEDIATE PRODUCING ZONE
- TARGET PRODUCING ZONE
INSUFFICIENT CEMENT COVERAGE

PRESSURE BUILDS UP

CONDUCTOR PIPE
SURFACE CASING
PRODUCTION CASING

FRESH WATER AQUIFER ZONE
SHALLOW PRODUCING ZONE
INTERMEDIATE PRODUCING ZONE
TARGET PRODUCING ZONE