

PLUGGING AND ABANDONMENT

The following is intended for use by Commission personnel only as a guide or check list in preparation of plugging programs. The guide is not all inclusive and care must be exercised in establishing special plugging programs in unique or unusual cases.

A. To be determined

1. Land type: State, Private or Federal. The USGS normally formulates and/or approves plugging on federal or Indian lands.
2. Depth and thickness of:
 - (a) pay zone (perforations or open hole)
 - (b) porosity zones not covered by casing and cement, and
 - (c) artesian and fresh water zones (including zones of non-drinkable water having total dissolved solids concentrations of 10,000 mg/l or less).
3. Casing to be pulled and depth of casing shoes.
4. Formation tops.
5. Hole use and age (production, disposal, injection, drilling well, etc.).

B. Requirements for old holes

1. Minimum plug size.
 - (a) Not less than 100 feet or 25 sacks, whichever is greater; or,
 - (b) a cast iron bridge plug with 35 feet of cement if put in place by bailer.
2. Plugs to be tagged.
 - (a) Bottom plugs
 - (b) Plugs at casing shoe or cut-off point
 - (c) Other isolation plugs if the hole does not stand full
3. Mud to be used
 - (a) Salt gel mud consisting of 10-pound brine with 25 pounds of gel per barrel.
 - (1) Load hole from total depth to first casing cut-off point.
 - (2) Fill hole to make certain it will hold fluid.
4. Plugs to be set
 - (a) A bottom plug across or above pay.
 - (b) Above and below casing cut points (even if casing is not recovered).
 - (c) To isolate other oil, gas, or water zones exposed in the hole.
 - (d) Across casing shoes.
 - (e) Minimum surface plug of 10 sacks.
 - (f) Above and below artesian water zones.
 - (g) Across fresh water zones (inside and outside the casing)

C. Requirements for new holes

1. Minimum plug size
 - (a) same as for old holes
2. Plugs to be tagged.
 - (a) In unusual cases such as for a well having a water flow, isolation plugs will be tagged.
3. Mud to be used.
 - (a) Drilling mud or salt gel mud as for old wells.
 - (1) Hole should remain full at least 30 minutes after the last plug is set and all tubing is pulled.
4. Plugs to be set
 - (a) Same as for old wells except bottom plug may not be required.

NOTE: Cased holes -- plugs every 3000' * Open hole -- plugs every 2000'