

## **IT. Kent Lease Navarro County, Texas Re-Entry Projects**

Re-entry projects involve locating well bores that were drilled in the past that were plugged and abandoned. The process generally involves finding the specific location of a previously drilled well and uncovering the site. Sites are frequently buried under several feet of soil and are often overgrown with trees and brush. Once uncovered a rig is moved on to the site and begins drilling through cement "plugs" that were placed during the plugging process. Sometimes there are numerous plugs in the well bore, each of which must be drilled out, down to the zone of interest for the re-entry.

Once the desired total depth is reached, work begins on the placement of casing, or pipe, in the hole. Frequently, casing already exists and must simply be extended or slightly modified to create a producing well,

Various other completion tasks such as perforation, stimulation (gasgun fracturing, acidizing, etc), and swabbing are then performed to create a well bore from which hydrocarbons can be recovered.

### **Advantages of Re-Entry**

**Re-entry and re-completion have exciting advantages over speculation and drilling of new wells, and the United States Department of Energy has fully endorsed this new approach. Furthermore, the state of Texas currently has an incentive program that grants an exemption from 10 years of state severance tax for these types of wells.**

New cutting-edge technologies have made the re-entry a profitable venture for independent exploration companies. Geophysicists can now map subterranean rock far more accurately, and new revolutionary imaging techniques greatly increase the possibilities of petroleum discovery. The newest generation of powerful microprocessors on the market is now able to support the processor-intensive imaging software.

For most re-entry candidates, exploration geologists and/or geophysicists have already identified petroleum-producing zones, and the exploration companies that abandoned these had only partially extracted hydrocarbons from the wells they drilled.

**Re-entries usually cost much less than new drills and are procedurally advantageous.** They often significantly reduce risk by using geographically known petroleum production zones, and can generate quicker returns than new drilling ventures. Re-entries average significantly less time to completion versus drilling a new well.