



# Kenny Lake Ventures, LLC

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Mr. Brent Hunter, Chairman  
Central Iron County Water Conservancy District  
88 E. Fiddler's Canyon Drive  
Cedar City, Utah 84721

Subject: Reentry of the ARCo Three Peaks No. 1 Wildcat Well

Dear Brent:

ARCo drilled the Three Peaks well at the east end of Iron Springs Gap in the SW quarter of the SW quarter of Section 17, T. 35 S., R. 12 W. in 1984 and 1985. The well reached a total depth of 15,590 feet without detecting any showings of oil and gas. However, the well did penetrate a potential ground water aquifer—the “fractured quartz monzonite,” from 2,322 feet below ground level (BGL) to 6,286 feet BGL.

My review of the “sonic” log run in open hole (before casing was set) disclosed a very porous interval at the depths proposed for perforating. The porous zone is most likely to be a highly fractured portion of the quartz monzonite aquifer.

The well was plugged and abandoned by ARCo on March 15, 1985. Several cement plugs were placed in the 9 and 5/8" casing below 11,590 feet BGL, from 7,050 feet to 6,920 feet BGL, and from 2,350 feet to 2,225 feet BGL. One last plug was set from the surface to 25 feet BGL.

Most important, the 9 and 5/8" casing is open for potential future aquifer testing below 2,350 feet BGL. In order to test the quartz monzonite (Qm) aquifer, a workover rig similar to one available from Grimshaw Drilling in Enoch, would set up over the hole and drill out the surface plug and the next shallow plug present from approximately 2,225 feet to 2,350 feet BGL.

Once the plugs have been drilled out, the well should be pressure tested by filling it with water and applying about 200 psi pressure at the surface. Once the casing is proven to be intact, the next step will be to enter the casing with a perforating gun and fire 24 to 48 shots through the casing in the interval from 2,480 feet to 2,610 feet BGL.

Wells drilled into the same Qm zone at Quichapa Creek and at the base of the Pine Valley Mountains southwest of New Harmony are very productive of high quality water. The closest well (Quichapa) penetrated only the first two hundred feet of the Qm, but was producing at a rate of about 150 gallons per minute by air lift while the well was being drilled. Wells at New Harmony have been pump tested at rates on the order of 2,500 gallons per minute with little drawdown.

If the initial flow of water from the perforated intervals appears to be indicative of high porosity and permeability in the zone tested, then it would be appropriate to fire additional shots, and then set a 5" diameter, gravel packed slotted liner inside of the 9 5/8" casing in order to control possible entry of loose silt and sand during long term production. Exact details of the completion should be settled upon by consulting with your engineering staff and the drilling company chosen to test and then complete the well.

I believe that Grimshaw Drilling could quickly provide the District with a reasonable estimate of the price to reenter and hopefully complete the well. I have retained all available well records, and could provide them as needed.

Sincerely,



Gary F. Player  
Consulting Geologist  
Utah Professional Geologist No. 5280804-2250