

75-10603
14531
14532



August 20, 2009

DRAFT

RMEA 09-0078

Mr. Jerry Rigby
Rigby, Thatcher Andrus Rigby & Moeller Chartered
25 N 2nd E
Rexburg, ID 83440

Re: Review and Evaluation of Felton Heltsley Ditch, North Fork, Idaho

Dear Mr. Rigby,

This letter was prepared to document my visit to the Felton/Heltsley site near North Fork, Idaho. At issue is whether or not a segment of stream is a ditch or a natural stream. I was accompanied by Ann Heltsley and Stewart Felton in the field.

My observations in the field took me up the ditch to near the Murphy house where we encountered a confederate of Mr. Murphy (Ms. Hull?) and were not welcome whereby we turned back. I was not able to closely observe the spring source of the ditch. I was only able to observe the spring source from the distance of the highway.

From the lay of the land where we entered from the highway, there appeared to be a slight slope from the North Fork towards the ditch. The riparian vegetation surrounding the ditch was similar to that surrounding the North Fork both in variety and maturity. The flows in the ditch were estimated to be between 1 and 2 cfs. The ditch did not meander significantly. It is located between the base of the slope and a meadow to the east.

A large expanse of meadow lies between the ditch and the North Fork. It is estimated that about 30 acres of lands exist in that particular meadow. Grasses were thick and lush and were providing feed to horses currently grazed there. We did not venture out into the meadow since the ditch ran along the bottom of the hillside. Of interest is the relationship of the location of the spring-fed ditch to the North Fork River. At the top of the meadow, the North Fork meander is near the base of the slope and furthest west from the highway. It is at that location that was represented the beginning of the spring. The spring-fed ditch then travels along the base of the slope southward while the North Fork meander curves its way eastward towards the highway. Along about where the Murphy driveway crosses the ditch, it is represented that additional springs discharge into the ditch thereby increasing flows in the ditch. This phenomena is represented by the abundance or lack of vegetation; for there is significantly less vegetation above (north) of Murphy's driveway as below. The ditch

progresses southward to a headgate control structure. Below the headgate is the lower ditch that conveys the majority of the water towards cultivated fields. Any excess water is conveyed back into the North Fork near Hughes Creek Road via waste ditch.

Of significant interest is why the ditch does not enter into the North Fork earlier or higher up in the meadow. Especially since it appears that both the ditch and the North Fork occupy the same flood plain.

As a part of my review, I have viewed aerial photos available through the Idaho of Department of Water Resources (IDWR) website for the years 2004 and 2006. Also observed was the 1:24,000 topographic map and oblique view aerial photos provided by Ms Heltsley.

The aerial photos were sought out to determine subtle differences in vegetation caused by changes in soil type due to ancestral and natural changes of location of the stream bed and banks of the North Fork or of the Natural creek/ditch prior to settlement. From this observation, I viewed arcuate paths across the meadows that appear to originate from both surface water sources. This is particularly visible in the upper areas of the meadow where an arc of lush vegetation and trees traverse down through the center of the meadow and then back towards the North Fork. A more subtle arc appears to exist from the original spring-fed stream area in the lower portion of the meadow.

The opportunity to observe the ditch and the North Fork without benefit of any outside knowledge might easily lead one to believe that the ditch is not a ditch but a natural stream of itself conveying spring water from its origins to the lower ditch with excess wasted back to the creek and the North Fork near Hughes Creek Road. However, information obtained by Heltsley and Felton lead one to conclude otherwise. It is described in the documents that the original homesteader was the first woman homesteader in Idaho and that she was also the Mother of able sons who it was described were tasked with providing irrigation water from the local resources for the irrigation of some 600 fruit trees. Knowing their goals of irrigation would have directed the way they constructed said ditches. For instance, the lower ditch turns sharply towards the west and is excavated onto the hillside preserving its optimum elevation for maximum capability of irrigation of the lower meadow lands near Hughes Creek Road and south of the same road. However, in areas of the higher ditch, the ditch is not excavated into the slope so carefully for perhaps two reasons. 1. It was premature to begin excavations into the slope to keep it higher. There was not that much to be gained. And 2. Portions of the stream already existed along the base of the slope. It was only required to straighten portions of the stream in order to keep it proximal to the base of the slope until it was closer to the bottom of the meadow whereby all of the ditch was excavated manually and preservation of ditch elevation was possible by excavation into the slope.

Another likely scenario for the original homesteaders was to clear a functioning meadow for the cultivation of hay for wintering in the location with common farm animals. It would have been more difficult to deal with a small meandering creek. With incentives to irrigate the orchards and preserve the expanse of the meadow for hay cultivation, the creek would likely have been straightened significantly to the extent that it was no longer a creek but a ditch.

Conversation with Felton and Heltsley indicate that thereafter the ditch was cared for annually by walking and pulling and clearing debris by hand. This is reasonable since the water is from a spring source suitable for drinking purposes. It is likely that the manual maintenance was employed to preserve the quality of the water. All involved with use of the ditch cared for it in this manner and have continued to this day. For this reason, the ditch does not appear as a ditch but appears as a natural stream.

Please feel free to call if you have any questions.

Sincerely,

W. Roger Warner, Hydrologist
Vice-President

enclosures:

Site topographic Map,
Site Location Aerial Photo 2004,
Area Location Aerial Photo 2006,
Site Location Aerial Photo 2006.