GBRC Meadows

The GBRC meadows snow course is located up Ephriam Canyon on the San Pitch watershed at elevation 10000 ft msl. It is in a large open meadow and has a very deep annual swe catch. The vegetation here is largely the same as it was when the course was first initiated with the exception of some encroaching willows at sample point number 2. This point now catches a little more snow than the surrounding points due to wind deposition. Winds from any westerly direction hit the willows which act as an obstruction, allowing deposition downwind of the willows. The remaining points are relatively un-impacted. This area has also had substantial weather modification over the years, beginning in the 70s.
Potential weather modification: 74-83, 88-

Looking from the south to north along the course axis.

Looking perpendicular to the course to the east.

In the previous two photos from 1936, notice the open meadow (the snow course runs through the meadow and is one of the longest courses in the state), the trees to the east, and lack of willows near the stream beds. The stream itself is cobbly, rocky and scoured from earlier times when overgrazing caused persistent flooding and debris flows. The GBRC snow courses are named after the "Great Basin Research Center" which was instituted as a grazing research facility to deal with problems of over grazing.

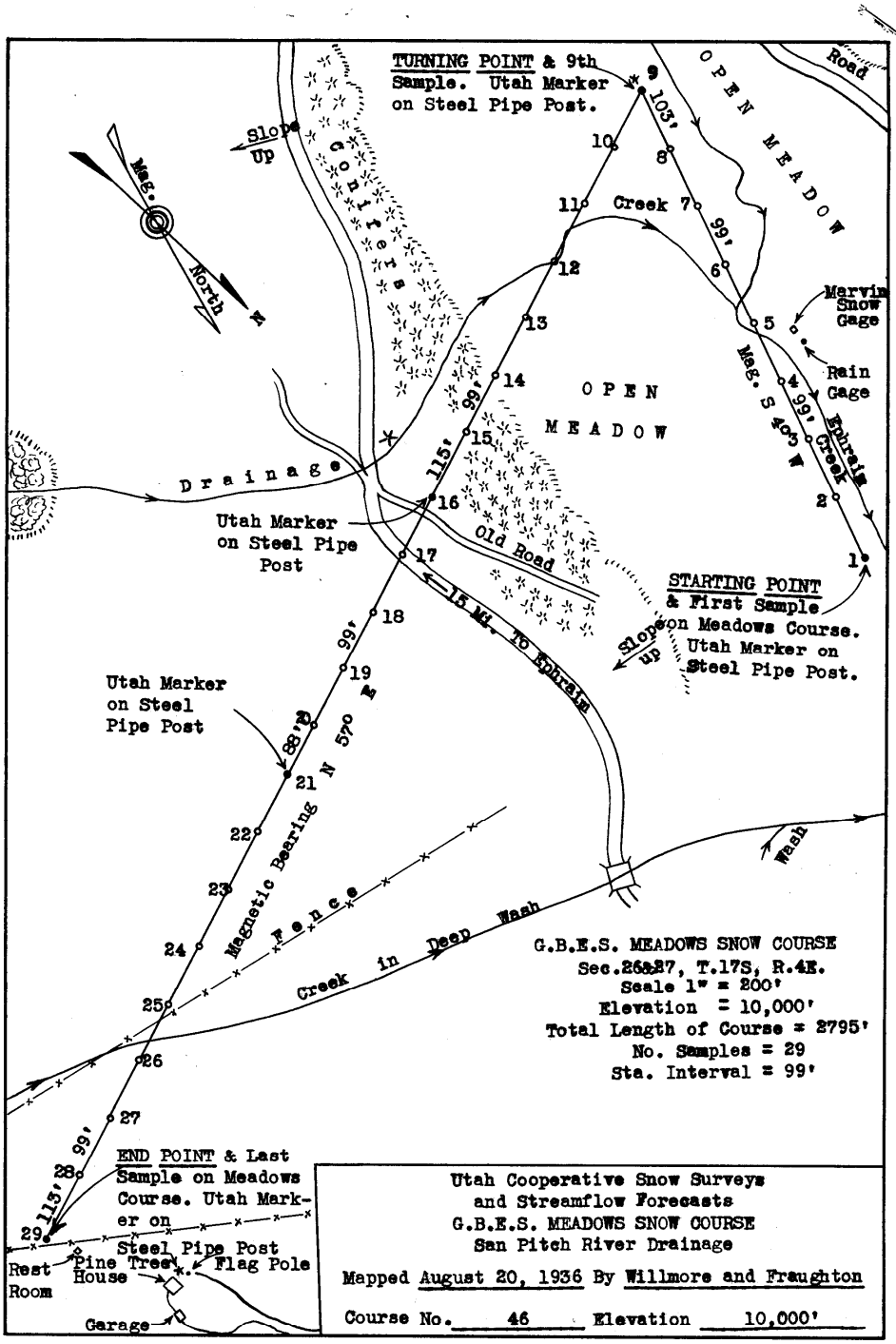
In this 2002 photo, sample points 1 and 2 are visible next to the encroaching willow stands. The remainder of the course is unobstructed.

Another view from the end marker looking north along the course to sample points 1 and 2.

This photo is looking south from the other end of the snow course at sample points 5, 4 and 3. Notice the large fetch area to the west (right) which allows the deposition of additional snow at sample point 2 - as much as a foot in the early season (March) measurements.

Here are the willows on the March 2007 survey. By April, and in normal accumulation years, they are mostly covered in snow and likely do not impact the accumulation or average of the course too much.

The snowscape is fairly homogenous across the meadow.  This is an intensely used recreation area but to date there have been no impacts to the course.




Original snow course map in 1936, 29 sample points at 99 foot intervals.

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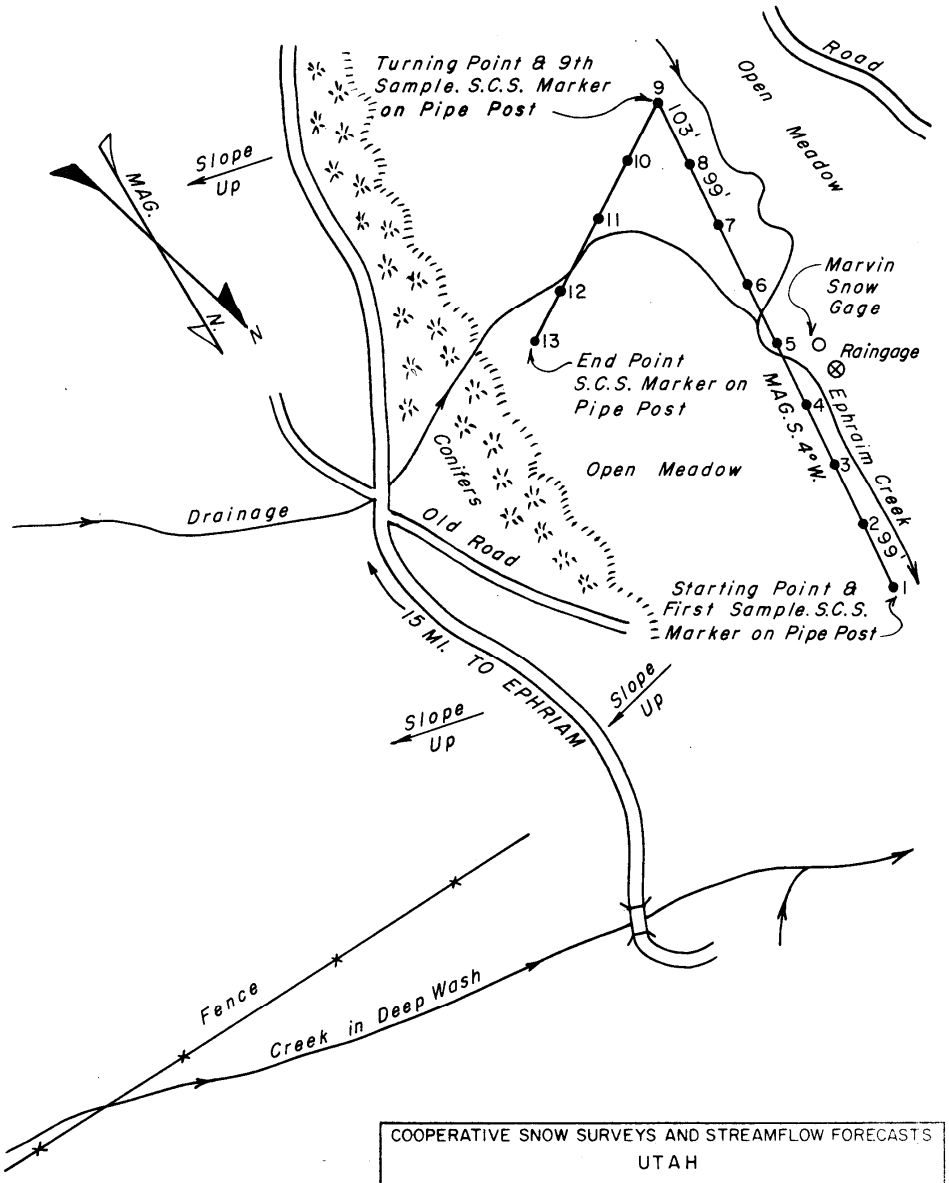



COOPERATIVE SNOW SURVEYS AND STREAMFLOW FORECASTS
UTAH

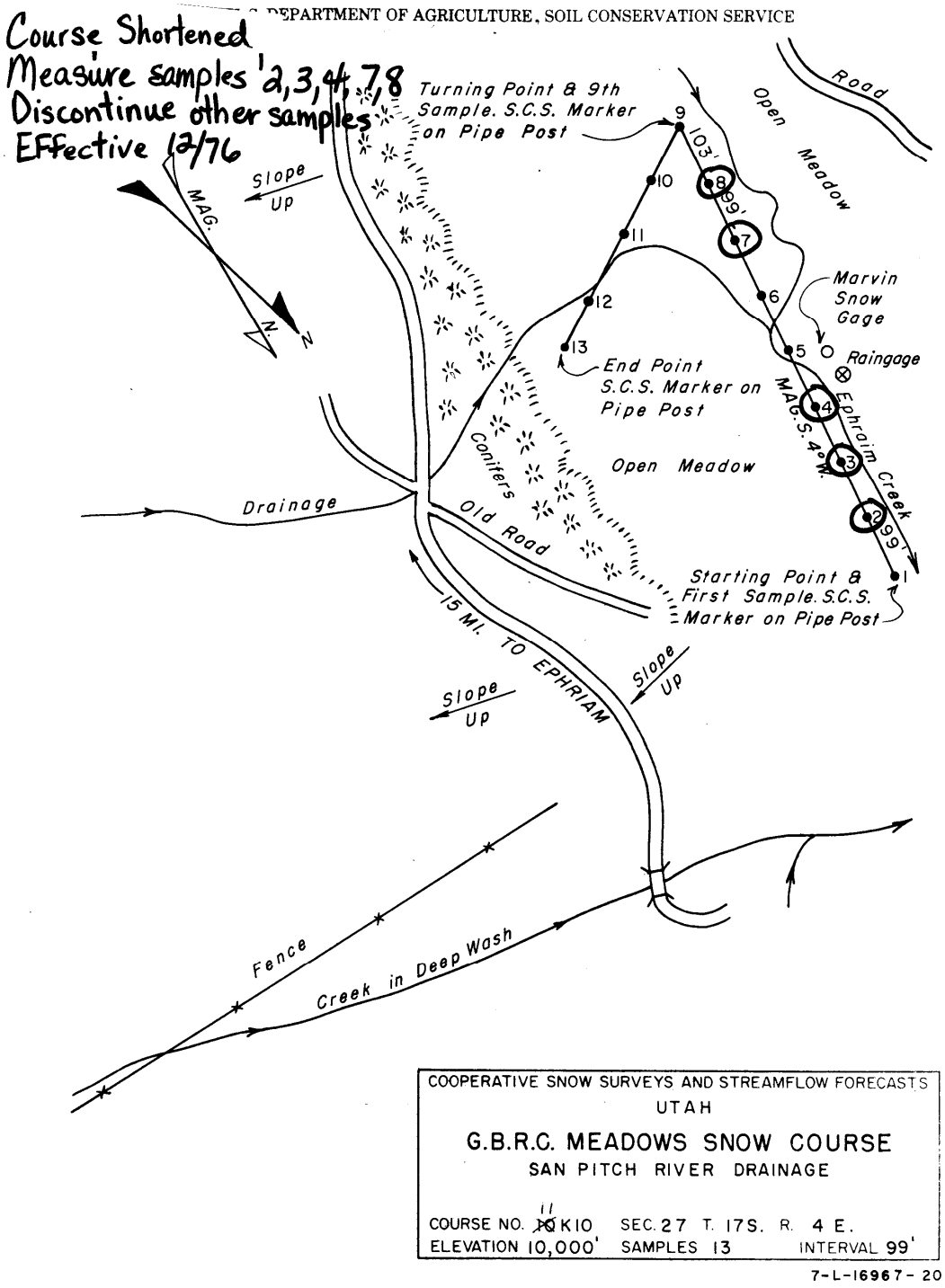
## G.B.R.C. MEADOWS SNOW COURSE

SAN PITCH RIVER DRAINAGE

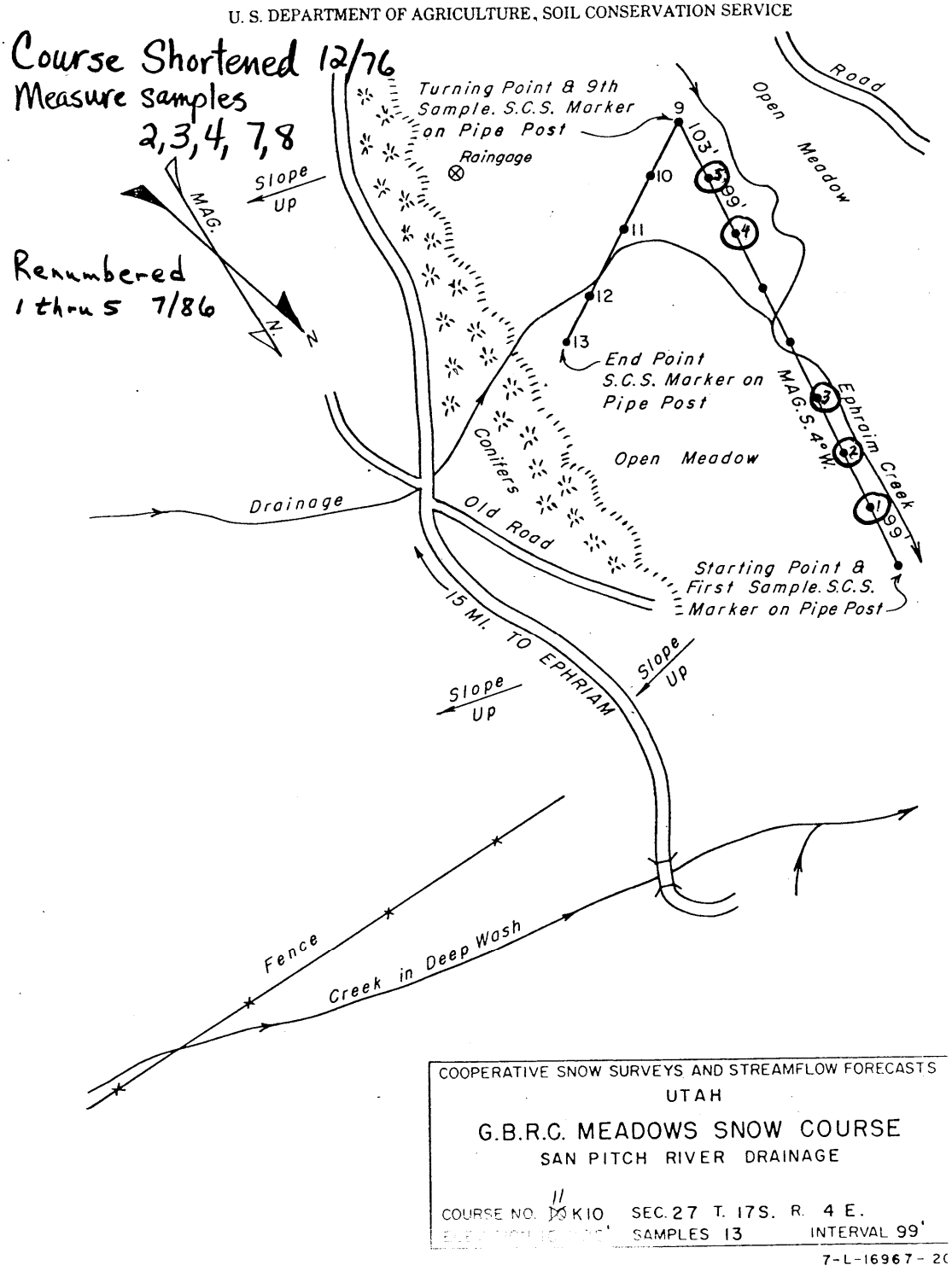
COURSE NO. ~~10~~ 11 K10 SEC. 27 T. 17S. R. 4 E.
ELEVATION 10,000' SAMPLES 13 INTERVAL 99'

7-L-16967- 20

Course reduced to 13 points.

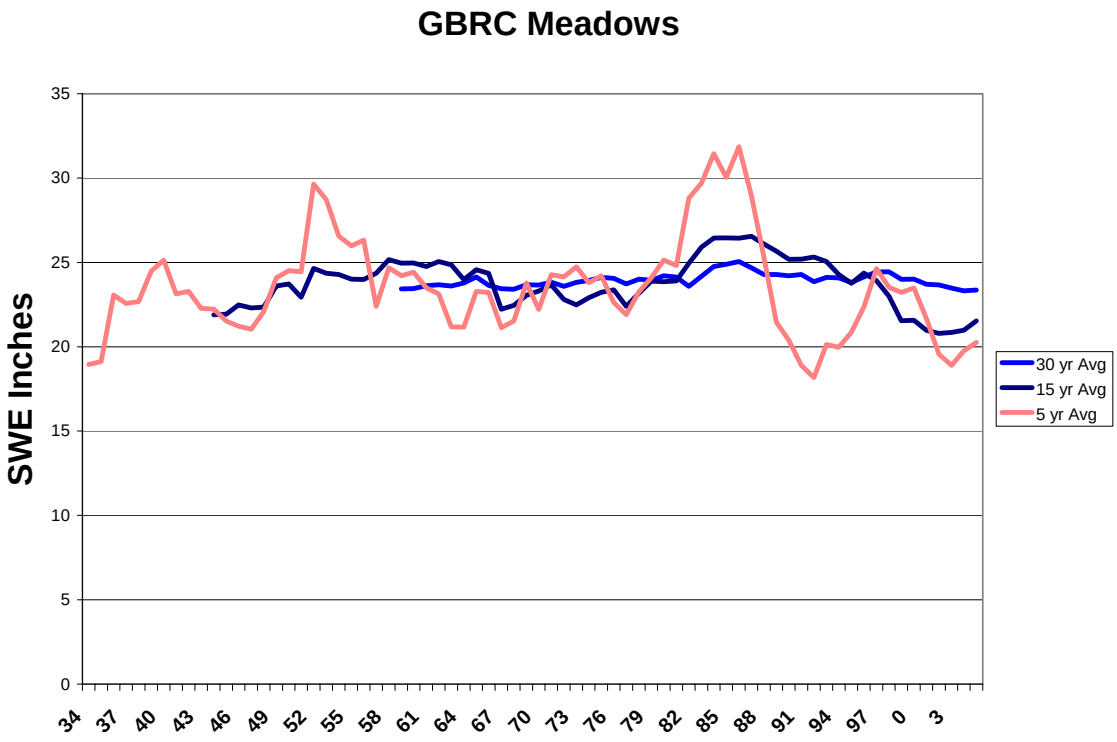



Course shortened to 5 points.




Shortened course sample points renumbered 1-5 in 1986.

When a snow course was shortened, the original points continued to be measured although renumbered, thus points 1,2,3,4 and 5 may have originally been points 13,14,15,16 and 17. This map also shows the relative position of vegetation and other features with respect to the course. Distances are not measured and asterisks do not represent individual trees rather a general depiction of vegetation. The density of vegetation is also relative and not absolute.




This chart shows fairly steady April 1 SWE over the period of record.
This course has had little change due to vegetation or other physical site characteristics, however, it has had long term weather modification that must be addressed. This site would be recommended for long term comparisons.

R Julander
2007