## Limitations in the Use and Interpretation of this Geotechnical Report

Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties, either expressed or implied.

The geotechnical report was prepared for the use of the Owner in the design of the subject facility and should be made available to potential contractors and/or the Contractor for information on factual data only. This report should not be used for contractual purposes as a warranty of interpreted subsurface conditions such as those indicated by the interpretive boring and test pit logs, cross-sections, or discussion of subsurface conditions contained herein.

The analyses, conclusions and recommendations contained in the report are based on site conditions as they presently exist and assume that the exploratory borings, test pits, and/or probes are representative of the subsurface conditions of the site. If, during construction, subsurface conditions are found which are significantly different from those observed in the exploratory borings and test pits, or assumed to exist in the excavations, we should be advised at once so that we can review these conditions and reconsider our recommendations where necessary. If there is a substantial lapse of time between the submission of this report and the start of work at the site, or if conditions have changed due to natural causes or construction operations at or adjacent to the site, this report should be reviewed to determine the applicability of the conclusions and recommendations considering the changed conditions and time lapse.

The Summary Boring Logs are our opinion of the subsurface conditions revealed by periodic sampling of the ground as the borings progressed. The soil descriptions and interfaces between strata are interpretive and actual changes may be gradual.

The boring logs and related information depict subsurface conditions only at these specific locations and at the particular time designated on the logs. Soil conditions at other locations may differ from conditions occurring at these boring locations. Also, the passage of time may result in a change in the soil conditions at these boring locations.

Groundwater levels often vary seasonally. Groundwater levels reported on the boring logs or in the body of the report are factual data only for the dates shown.

Unanticipated soil conditions are commonly encountered on construction sites and cannot be fully anticipated by merely taking soil samples, borings or test pits. Such unexpected conditions frequently require that additional expenditures be made to attain a properly constructed project. It is recommended that the Owner consider providing a contingency fund to accommodate such potential extra costs.

This firm cannot be responsible for any deviation from the intent of this report including, but not restricted to, any changes to the scheduled time of construction, the nature of the project or the specific construction methods or means indicated in this report; nor can our firm be responsible for any construction activity on sites other than the specific site referred to in this report.

Figure 2

Site Plan

Geology and Soils Study Wallowa Falls Hydroelectric Project



## Figure 2

## Penstock Access Road Alignment

Geology and Soils Study Wallowa Falls Hydroelectric Project



H	PENSTOCK ACCESS ROAD ALIGNMENT	NOV 2012 PROJ. 2258
	GEOLOGY AND SOILS STUDY WALLOWA FALLS HYDRO PROJECT	FIG. <b>2</b>

Photo Exhibits

1 through 7

Geology and Soils Study Wallowa Falls Hydroelectric Project



A. VIEW LOOKING SOUTH AT WALLOWA FALLS FOREBAY.



B. VIEW LOOKING NORTH (DOWNSTREAM) AT PENSTOCK (APPROXIMATE ACCESS ROAD STATION 0+00).



VIEW LOOKING SOUTHEAST AT 8-INCH PVC PIPELINE DIVERTING WATER FROM ROYAL PURPLE CREEK TO THE FOREBAY.



A. VIEW LOOKING WEST UP ACCESS ROAD TO THE DAM BETWEEN ROYAL PURPLE CREEK AND THE EAST FORK WALLOWA RIVER. NOTE SLOUGHING MATERIAL ON CUT SLOPE.



B. VIEW LOOKING SOUTHEAST DOWN ACCESS ROAD FROM THE DAM.



VIEW LOOKING NORTH-NORTHWEST AT THE UPPER PENSTOCK TRESTLE (APPROXIMATE ACCESS ROAD STATION 8+85).



VIEW LOOKING SOUTHWEST AT DEBRIS FLOW CHANNEL ON SLOPE WEST OF THE EAST FORK WALLOWA RIVER. REPORTEDLY, THIS EVENT OCCURRED IN 2006 (PHOTO TAKEN BY OTHERS ON 10-24-2012).



A. VIEW LOOKING EAST AT SECTION OF PENSTOCK LOCATED ABOVE GRADE (APPROXIMATE ACCESS ROAD STATION 20+30).



B. VIEW LOOKING NORTHEAST AT PENSTOCK ALONG TOE OF TALUS SLOPE (APPROXIMATE ACCESS ROAD STATION 21+45). PENSTOCK HAS BEEN ENCAPSULATED IN TALUS TO PROTECT FROM ROCKFALL.



A. VIEW LOOKING SOUTHWEST AT LOWER PENSTOCK TRESTLE OVER THE EAST FORK WALLOWA RIVER (APPROXIMATE ACCESS ROAD STATION 57+00).



B. VIEW LOOKING SOUTHWEST AT LOWER PENSTOCK TRESTLE OVER THE EAST FORK WALLOWA RIVER.