

Job No. 4 122 89
August, 1991

Client: Snowmass Land Company

Reference: This is a brief summary from Chen-Northern, Inc., reports, Job No. 4 122 89, dated September 11, 1989, May 17, 1990 and May 15, 1991. This letter is to provide general information for the prospective owner and is not for construction or design. The complete reports should be referenced for other uses.

<u>Volume Change</u>	<u>Swell Pressure</u>	<u>Swell Potential</u>
More than 10%	More than 20,000 psf	Very High
3% - 10%	5,000 - 20,000 psf	High
1% - 5%	1,000 - 5,000 psf	Medium
Less than 1%	Less than 1,000 psf	Low

Underdrain System: Foundation underdrains should be installed around all below grade structures. The underdrain system should consist of a perforated pipe placed in a gravel filled trench around the perimeter of the crawl space, basements and retaining walls. Area intercept trench drains may be needed in shallow groundwater areas.

Expansive Soils: Expansive soils and bedrock possess mineral constituents and physical properties which cause volume change with changes in moisture. The behavior and occurrence of expansive soils are complex and not fully understood. They are stable at their natural moisture content but can expand with an increase in moisture or shrink with a decrease in moisture. Expansive soils and bedrock occur in the area. The soils and bedrock and moisture conditions on any particular site can change erratically resulting in conditions which cannot be precisely measured or predicted.

The risk of distress to construction on this site appears low with proper engineering and construction. The recommendations for foundations, floor slabs and drainage presented in this report are based on the scope of the study and the current state of practice in this area. The performance of the building will depend to a large extent on proper maintenance after construction and following the recommendations presented in our reports. Any distress noted in the building should be brought to the attention of a professional.