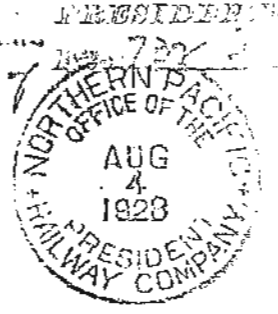


*Present. It seems obvious that under present conditions  
we are not justified in considering any of  
these tunnel projects.*

Saint Paul, August 3, 1928.

*Aug 9/28*

Mr. Charles Donnelly:



On August 11, 1926 you authorized me

**NOTED BY**  
C. D.   
B. O. J.   
J. H. P.   
E. M. W.   
F. W. D.   
A. M. G.

to make a survey to determine the feasibility and advisability of constructing a new tunnel through the Cascade Range. This survey was completed in 1927, and from the data so obtained we have made up topographic maps and projections for seven alternate schemes, as outlined in Mr. Thian's report to me of February 1, 1928, handed you herewith.

*Report to Mr. [unclear]  
August 11, 1928*

In brief, our survey proved conclusively the contention we have consistently made that the Northern Pacific crossing of the Cascades was the most favorable of any of the Northern Routes, and could be reduced to a one percent controlling grade against eastbound traffic and six-tenths percent against westbound traffic by the construction of a tunnel not in excess of five miles in length.

It has been extremely difficult to obtain information on the actual cost of long tunnels, both on account of their scarcity and the apparent reluctance on the part of owners to give out information on this point. We have never been able to obtain from the Canadian Pacific the actual cost of their six mile Connought tunnel and have reason to suspect that their costs were rather high. The Moffat tunnel has just been completed and the best information we have been able to obtain indicates a cost of about two and one-