

igible ground, and to remove it farther into the river, must unquestionably expose the work to a greater hazard, as well from the water of the river, as that confined within the canal.

“ to query 12. I am acquainted with the different surveys and locations mentioned; they were referred to and used by me in the location of the canal in February and March last; they were then deposited in the company's office in the city of Washington, where they may be found.

“ to query 13. I have seen the location of the canal referred to, as it is now established; it varies from the independent location of Roberts.

“ to query 14. The variations from the line run by Roberts, were produced by assuming at each of the difficult passes, except the lower point of rocks, a higher level, or greater elevation above the surface of the river; this necessarily operated to reduce the quantity of rock at each bold and perpendicular cliff, because there was a less height from the bottom of the canal to the top of the rock, and for the same reason there will be less rock to excavate, for any road that may be placed in these cliffs. On sloping ground it is immaterial what level is assumed there being a choice of cutting, consequently, there can be but little difference of expense between any 2 lines. From these considerations, I certainly do not think it more difficult or expensive to construct the rail road now than it would have been, had the independent location of Roberts been adhered to.

“ to query 15. The determination to change the independent location of Roberts was made after a full examination of the subject, and originated in security to the work and economy of construction. There had been several locations for the canal along this ground, made at different times and by different persons, as the U. S. engineers, Geddes and Roberts, Mr. Cruger in 1828, and subsequently by Mr. Roberts. The present location approximates to those made by Geddes and Roberts, and that by Mr. Cruger. At Miller's narrows, and at the upper point of rocks, I am of opinion that if the canal had been permitted to remain as established by the independent location of Roberts, the high floods of the river