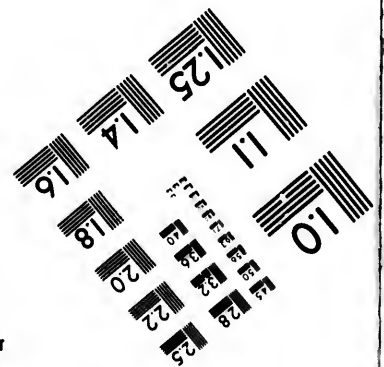
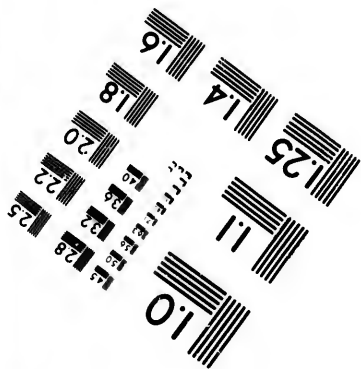
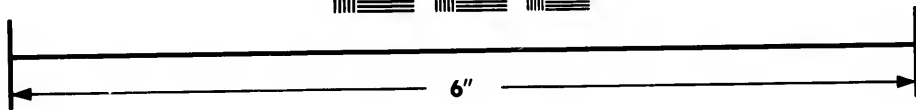
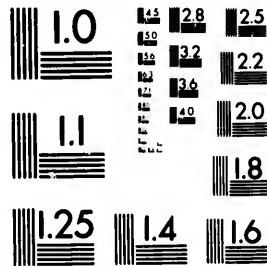


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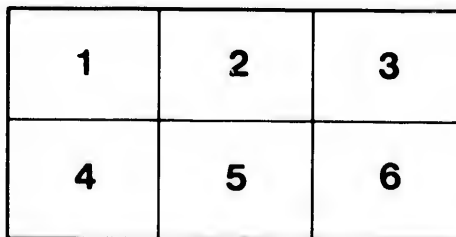
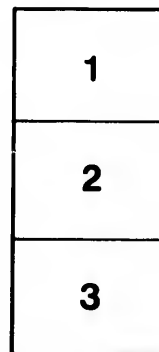
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Map  
P. 15  
1857

Alexander Hume

Applicant's sketch map.  
Nov. 27.

PAPERS READ BEFORE THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.\*

I.

"On the Proposed Railway Communication between the Atlantic and Pacific Oceans, through the British Territories of North America," by Mr. Doull.—I will advert to Mr. Asa Whitney's project for the construction of a railway from Lake Michigan to the Pacific, through the territory of the United States, which has deservedly attracted considerable attention in England. It is quite clear, that in the paper read before the Royal Geographical Society, on the 9th of June, 1851, Mr. Whitney has injured his cause in the estimation of the British public, by taking too wide a range, by claiming for his proposed line the whole of the traffic between Europe and China, and the islands of the North and South Pacific Oceans, discarding alike the existing routes by the Isthmus of Suez, the Cape of Good Hope, and Cape Horn, and by asserting that, should the Isthmus of Panama be swept from its position, and a complete union of the two seas be effected, the commerce between Europe and the rest of the world would not flow to any appreciable extent through that channel, but would be attracted to his proposed line of railway communication. Had Mr. Whitney based his project upon its own intrinsic and legitimate merits and resources, characterized it as a mere local line, or, at most, a United States line, and not designated it as the highway and the only highway of nations, it would have assumed more of a *bona fide* and practical character; and it is quite clear that Mr. Whitney could afford thus to narrow the operations of his project, as it is evident that, if a belt of land thirty miles on each side of a line of railway is colonized, and brought into profitable cultivation (which supposition is the basis upon which the success of this project rests), abundant traffic would be created to work the line, keep it in repair, and to furnish a sinking fund for reward. The project, when divested of all extraneous and adventitious circumstances, appears to be nothing more than this: there has existed for a considerable time, and there still exists, a continuous tide of emigra-

tion setting to the west, but with its frontage extending from the boundary of the British provinces on the north to the Gulf of Mexico on the south. Mr. Whitney, conceiving it desirable to reach the Pacific as soon as possible, proposes to converge the present extended frontage of location to a belt of land sixty miles in extent, and thus to accelerate the westward tendency in proportion to the frontage thus narrowed. In order to change this direction by drawing a sufficient number of settlers into this proposed sixty-mile belt, he must hold out advantages superior to those which can be obtained elsewhere. The project, so far as it has been developed, appears to be totally destitute of any systematic arrangement for the location of settlers, or for their government, civil or municipal. Nor has any thing been said about the mode in which the numerous and hostile tribes of Indians are to be disposed of. Mr. Whitney, not being an engineer, does not appear to apprehend much difficulty in running his railway across the Rocky Mountains; which he admits to be about seven thousand feet high, and so flat on the top as to preclude the possibility of a tunnel of any reasonable length. To rise 7000 feet by a gradient of 1 in 100, would require tailing out for a distance of 132 miles, or with a gradient of 1 in 50, equal to a distance of 66. But suppose that the base of the Rocky Mountains is placed upon an elevation of 1000 feet above the level of the sea, leaving 6000 feet to be overcome by an ascending gradient, which would require, at 1 in 100, a distance of 113 miles, and 1 in 50, 56½ miles. It is scarcely possible, however, to suppose these gradients of the above character could be obtained in passing this somewhat formidable mountain range, and it is highly probable that the ascent is much more abrupt than to admit of even the steepest of the above gradients to be constructed. It is unnecessary to do more than advert to the more prominent features of Mr. Whitney's plan: and that simply in order to show that there are much greater facilities for the construction of a line of railway in the territories of British North America, and to prevent the public mind of England from being led to suppose that the route through the United States is the only practicable one. The superiority

\* From the Glasgow Practical Mechanic.

of the British line, not only with respect to facilities of construction, but with reference to the greater variety and the more extensive fields of productive labor which will be opened out in the various rich mineral districts passed through, is so palpable to all who have turned their attention to this important subject, as to force itself upon the attention of the American press. The *New York Tribune* of March 27, 1851, after advertizing to Mr. Whitney's project, and expressing fears that it would fail of meeting that support from the Congress of the United States which its importance deserved, proceeds to state that "the route through British America is in some respects even preferable to that through our own territory. By the former, the distance from Europe to Asia is some thousand miles shorter than by the latter. Passing close to the northern shore of Lake Superior, traversing the water-shed which divides the streams flowing towards the Arctic Sea from those which have their exit southward, and crossing the Rocky Mountains at an elevation some 3000 feet less than at the south pass, the road could here be constructed with comparative cheapness, and would open upon a region abounding in valuable timber and other natural products, and admirably suited to the growth of grain and to grazing. Having its Atlantic seaport at Halifax, and its Pacific depot near Vancouver's Island, it would inevitably draw to it the commerce of Europe, Asia, and the United States. Thus, British America, from a mere colonial dependency, would assume a controlling rank in the world. To her other nations would be tributary, and in vain would the United States attempt to be her rival, for we could never dispute with her the possession of the Asiatic commerce, or the power which that confers." The advantages of a communication from the Atlantic to the Pacific in a northern latitude, to connect the great commercial nations of the world, which are principally situated on the northern hemisphere, was early felt by several nations, and great, though unavailing, efforts have been made to discover a north-west passage through the Arctic Regions. Halifax, in Nova Scotia, will possess considerable advantages over New York, in the United States, as the

Atlantic terminus of a railway communication across the continent of America, inasmuch as a line drawn from Cape Clear, in Ireland, to New York would pass very close to Halifax, and thus the whole of the coasting distance of the sea-passage from Halifax to New York would be saved. The support of the Government to the Halifax and Quebec Railway was not rendered with that promptitude which was anticipated, considering the favorable report of its own officers, consequently the operations of the association have been delayed. But the Imperial Government has now come forward with the offer of every necessary assistance for the construction of a railway from Halifax to Quebec or Montreal, and which the colonies will be happy to accept. So far, therefore, as the present paper is concerned, the construction of this initial portion—about seven hundred miles—of the great Atlantic and Pacific Railway may be considered as amply provided for. The passage of the Rocky Mountains is doubtless a point of considerable importance, and one upon which it must be admitted there is no data for the formation of any definite plan. All authorities, however, concur in viewing this barrier as much less formidable on the British than on the United States territory. Having crossed the Rocky Mountains, either by ascending to the summit upon lateral spurs, or passing through by a tunnel, as circumstances might determine, the line would take the direction of Fraser's River, to the Pacific Ocean. Numerous and spacious harbors, with secure anchorage, and a rare combination of maritime advantages, in the vicinity of Vancouver's Island, with an abundant supply of coal, point to this locality as the site of the future capital of the West.

Mr. Asa Whitney explained at great length the steps already taken by him for inducing the States to support his plans for forming his line on the United States territory, from New York to Columbia River, and showed that, to a certain extent, he accorded with the views of Mr. Doull; as, in case of his own plan not being adopted by Congress, he was prepared to make a similar proposition for running his line on the British territory. Captain Fitz Roy, R. N., ably supported Mr. Whitney's views, demonstrating that

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there was not any serious engineering difficulties to be overcome—that the reason why the plan had not been taken up warmly by the States, was entirely political, and that the slavery question materially interfered with it. Mr. Bayley raised the question of the impediments arising from snow and frost on any line of railway during the winter. Mr. Whitney's line passed from 42° to 46° of latitude, whereas the Canadian line would pass nearly at 50°. The further the line proceeded north the less obstruction there would be from snow. If there was little moisture there must be little snow, and that very light—there was more snow in a southern latitude. Single line, with 64lb. rail, 15,000 dollars per mile. Mr. Doull, in reply, remarked that emigrants going to Canada could find nothing to do, and some left for the States, where they found employment, and were soon independent. The principal intention of the paper is to draw attention to this very anomalous state of things, and to open out public works for the encouragement of emigrants from Great Britain to settle in the British territories instead of the United States.



