

**OFFICIAL CORRESPONDENCE
REGARDING THE
EXISTENCE OF COAL
AND IRON IN THE PUNJAB**

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Official correspondence regarding the existence of coal and iron in the Punjab by Punjab

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PUNJAB

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*From R. H. DAVIES, Esquire, Secretary to the Government of Punjab,
to Lieutenant Colonel H. YULE, Secretary to the Government of
India, Public Works Department, Calcutta,—Nos. 373—1819.*

Lahore, 5th August 1859.

SIR,—I AM directed to enclose in original a letter and its enclosures this day addressed by order of the Hon'ble the Lieutenant Governor to Professor Oldham, of Calcutta, relative to certain researches for Coal and Iron in the Hills about Murree, which His Honour has recently caused to be instituted. The specimens have been forwarded this day to your address in two separate packets by banghy post.

2. I am to request that after the enclosures have been perused by His Excellency the Viceroy, they may be forwarded, with the specimens, to Professor Oldham for analysis.

3. It is of great importance to have a speedy reply from Professor Oldham, the Committee now being on the spot, and the Lieutenant Governor trusts there may be no delay in his reporting.

*From R. H. DAVIES, Esquire, Secretary to Government of Punjab, to
Professor OLDHAM, Calcutta,—No. 1818.*

Lahore, 5th August 1859.

SIR,—THE Hon'ble the Lieutenant Governor has recently appointed a Committee for the purpose of examining and reporting on the existence of Coal and Iron in the Hills about Murree. The Committee have just furnished their first report, a copy of which I have the honour

to annex. The specimens have been forwarded in two separate packets to the Secretary to the Government of India, Public Works Department, with a request that they may be forwarded to you with this letter.

2. His Honour will be much indebted to you if you will analyze these specimens and communicate the result at the earliest date possible. Should the specimens from the north-east face of Mount Nir prove to be Coal, as supposed by the Committee, it will be a great incentive to vigorous exertions. The Mountain is on the banks of the Jhelum River, and there is water carriage within a few hundred feet of the locality.

Proceedings of a Committee assembled by order of the Hon'ble Sir ROBERT MONTGOMERY, K. C. B., Lieutenant Governor of the Punjab and its Dependencies, to examine and report upon certain deposits in ranges of Mountains around Murree, supposed to be Coal.

PRESIDENT :

Major A. ROBERTSON, Offg. Supt., Lahore and Peshawur Road.

MEMBERS :

Captain H. C. JOHNSTONE, Surveyor, Derajhat.

" H. P. BARRAGE, Assistant Commissioner, Murree.

T. A. S. H. WILSON, Esquire, Assistant Engineer, Offg. Executive Engineer, Goojrat Division, Lahore and Peshawur Road.

THE Committee having assembled pursuant to order at the village of Bugla, about 12 miles from Murree, on Wednesday, the 20th day of July 1859, and having received the attached instructions from the Secretary to the Punjab Government, occupied from the 20th to the 29th July in visiting various localities where the deposits had been found, and report as follows :—

1st.—The deposits under the village of Bugla, two in number, and two others in the same ravine, but some miles further down, and all within a short distance of the bottom of the ravine, were found to be small isolated irregular masses of a substance which the Committee consider to be lignite ; all the specimens with one exception were completely dug out. The exception, a small irregular mass in the face of a cliff, was so similar to others dug out that the Committee did not deem it necessary to incur the expense of blasting it.

2nd.—A specimen, similar in all respects to those above referred to, was completely excavated from the side of the ravine between the villages of Bail and Chuckka.

3rd.—Under the villages of Bulannia and Bhun, in ravines, two other specimens were completely dug out; these the Committee also consider lignite.

4th.—A very thin vein, not exceeding one inch in thickness, and about 40 or 50 feet long, was examined about a mile to the north-east of the village of Kotlee. It is in the face of a sand-stone cliff, and was so insignificant that the Committee did not deem it necessary to incur expense in blasting it out.

5th.—On one of the spurs of Mount Nir, under the village of Thoon, a deposit was found in the face of an isolated rock; it appeared so similar to others dug out, that nothing was done with it.

6th.—The examination of the specimens sent into Murree led the Committee to look with most confidence to the deposit on the south-east side of Mount Nir near the village of Kundole. Mount Nir seems to have been the centre of considerable disturbance. The main portion of the Mountain is formed of alternate layers of sand-stone and clay in nearly horizontal strata, having only a slight dip to W. S. W. A lower range, close to it on the south-east has the strata dipping to the north, almost at an angle of 45° . The ranges to the north parallel to Mount Nir, as far as and including the Murree range, have the strata dipping also to the north at from 30° to 35° , while the mountains to the east across the Jhelum River have the strata dipping only slightly to the east.

On the east face of Mount Nir,* about 800 or 1,000 feet above the level of the River Jhelum, and at no great distance from the River, is situated the deposit above referred to. It is in an irregular vein at the foot of a sand-stone cliff, having a blue clay both above and below it. The main portion of the vein is about seven feet long, of an irregular form, 16 inches wide at the centre, and 8 inches at the ends, thus—

* About 20 miles south-east of Murree.

It shows again irregularly to the right and left, but much thinner, and altogether extends as far as can be seen about 30 feet in length. The deposit is mixed with slate, and appears to the Committee to be Coal of a fair quality.

No Member of the Committee possesses a sufficient knowledge of Geology to pronounce an opinion upon what may be expected from following up the vein, or whether it is most advisable to push the investigation by further search in the line of the vein above it or below it; Nor have they the means or manipulatory skill definitely to pronounce upon the real nature of the deposit. The test they have applied, and upon which their opinion as to its being Coal of fair quality is based is distillation, under which it yields gas which burns with a white clear flame, and Coal tar; but, as far as they could discover, no trace of acetic acid.

On the north-east spur of the Mountain, but a short distance from the site of the above deposit, but much higher up, a deposit is reported in the face of the sand-stone cliff. The specimen was brought in after the Committee had left. It has the appearance of Cannel Coal or Jet, being hard and polished, and not soiling the hand.

The Committee would recommend that the accompanying specimens of the deposits from Mount Nir, with the above description of the Mountain, be sent at once to Professor Oldham at Calcutta, and his opinion of the specimens and advice as to the best means of conducting the search be solicited. Meantime the Committee recommend that a boring be made from above, and about 60 feet back from the face of the cliff, at the foot of which the vein exists, to ascertain whether the vein extends back, and if so, if it increases in thickness. The Committee are also inclined to follow up the search by sinking shafts, as they look for thicker veins being found below, but they hope to be guided in this matter by Professor Oldham's opinion.

7th.—A large vein of black deposit is reported to exist in the bed of the Jhelum River, under the village of Kotlee, at present under water, but laid bare in the cold weather; this should be examined as soon as the river falls.

8th.—Wherever the deposit was found in rock the rock under was stained red by the wash from the vein. This the Committee believe shews the presence of some of the salts of Iron in all these deposits, probably the sulphuret.

The Committee would also add that in the two latter specimens referred to in para. 1, what they consider iron pyrites was observed, and in the sand-stone close to the vein on the east face of Mount Nir traces of what they consider mica were discovered.

9th.—The Committee propose proceeding to visit other spots where deposits have been found, and will furnish reports in continuation.

From R. H. DAVIES, Esquire, Secretary to Government of Punjab and its Dependencies, to Professor OLDHAM, Calcutta,—No. 1963.

Lahore, 22nd August 1859.

SIR,—In continuation of my letter No. 1818 of the 5th instant, I am directed to annex copies of two more reports of the Proceedings of the Committee appointed for ascertaining the existence of Coal and Iron in the hills about Murree. The specimens therein referred to have been forwarded for analysis by Bullock Train to the address of the Secretary to Government in the Public Works Department, through whom this letter will be forwarded to you.

2. The Hon'ble the Lieutenant Governor requests that you will be so good as to examine the specimens now sent, and give your opinion on them at as early a date as may be practicable.

Supplementary Proceedings (No. I.) of a Committee assembled by order of the Hon'ble Sir ROBERT MONTGOMERY, K. C. B., Lieutenant Governor of the Punjab and its Dependencies, for the purpose of ascertaining the existence of Coal and Iron Mines on the Murree Hills.

PRESIDENT :

Major A. ROBERTSON, Offg. Supt., Lahore and Peshawur Road.

MEMBERS :

Captain H. C. JOHNSTONE, Derajhat Survey.

" H. P. BABBAGE, Assistant Commissioner, Murree.

THE Committee having re-assembled at Derakote dutoon on Tuesday, the 9th day of August 1859, continued their examinations of various

deposits supposed to be coal, until the 14th August, and report the result as follows :—

1st.—The Committee examined a deposit in the bottom of a ravine between Derakote and Chulavera. This was of small extent, and appeared of no value.

2nd.—In the great ravine under Chulavera, the Committee examined two specimens, one about 400 feet up the bank, and the other in the bottom of the ravine. Both specimens were in the face of sand-stone strata; these strata run nearly south-east and north-west, and dip to the south-west at about an angle of 75° , and the two specimens were in lines of sand-stone, only about 200 feet apart, and separated by layers of clay and indurated clay. The upper specimen was not in the form of a vein, but in an irregular hole in the rock, almost at right angles to the line of the strata; the deposit consisted of what appeared to the Committee a branch of a tree in a horizontal position, surrounded by a deposit resembling Coal. The branch was broken up in extracting it; but the pieces, together with a specimen of the rock and the surrounding deposit, are herewith sent.

The lower deposit was found in an irregular vein from 1 inch to 2 inches thick, running parallel to the strata but broken and very irregular; in some places, one vein only being visible, and in other parts two and three parallel ones; the whole extent exposed was about 30 feet in length. The deposit was in contact with clay, some of which appears to the Committee to contain iron; specimens of the deposit clay, contiguous rock, &c., &c., accompany.

3rd.—The next deposit was found close to the village of Bandie, a considerable distance up the hill, and was completely dug out; specimens are submitted.

4th.—The last specimen examined was under the village of Cheganah, in the bottom of the ravine, found in exactly the same description of rock as the second and third specimens, the direction of the strata being the same, but almost vertical instead of dipping to the south-west. The deposit was found in an almost square hole about 18 inches on the side, and in the line of the strata. Specimens of rock and deposit are submitted. The Committee would explain that all these specimens, as well as two referred to in last report, were found in one ravine or its branches, raising near the village of Kotlee and running in N. N. E. direction, until it joins the river Jhelum, under the village of Cheganah. The ravine is