

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	1037	(W)	Press
B.P. No.			Mis.
Dated	23-4-	1876	

Not to be folded or roughly handled

4815-1000-1

*Proceedings of the Madras Government, Public Works Department,
25th April 1876.*

Read the following papers :—

No. 356. From Lieutenant-Colonel J. F. FISCHER, R.E., District Engineer, Madura, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Moothanainthel, 7th April 1876, No. 86.

I HAVE the honor to forward, for the consideration and orders of the Government, Major Law's Administration Report for the year 1875-76, the substance of it will of course be included in the District Administration Report, but as he is on *special* duty I have sent up a copy of the original for such orders as may be considered necessary.

1 Copy of a letter from Major Law, No. 1, dated 1st April 1876.

2. Major Law commenced work in June last, nine months ago, and has opened a trace of about $12\frac{1}{2}$ miles in length in that time besides reconnoitring other parts of these hills, of which no details are given; but as his health was known to be in an unsatisfactory state, and he has met with some accidents, I suppose this amount of work may be considered highly satisfactory, but I have had no experience of this in my service in the department.

3. The line through the Ambahvy valley, as I had expected, affords the easiest descent from these hills, and I trust a more careful and searching examination of the Pullamullay valley than Major Law has yet been able to make will enable him to connect "the Neutral Saddle" by the Pullamullay valley with the Ambahvy valley and the plains westward of Batlagoondoo; the trace for the Imperial ghaut will then run through the most fertile tracts of these hills, and afford the Government some return for the large outlay contemplated on this work.

4. I regret so much time has been lost in searching for a trace *via* Punnikad, I have all along been opposed to this direction, and a very cursory examination of the ground should have convinced an experienced officer of its impracticable nature; but I believe a very careful examination of it has been made before it was abandoned, and I only hope equal care and pains may be bestowed on the Pullamullay valley line towards Ambahvy.

5. In conclusion, I would beg respectfully to solicit permission to employ a special Overseer for Major Law to assist him in his operations; there is an East Indian lad here who has been educated at the American Mission, and has had considerable training and experience in ghaut works under Lieutenant Greer on the Goodaloor ghaut; he bears a very good character indeed amongst all who know him, and it is at the instance of Dr. Chester of Dindigul that I submit this application on his behalf to the Government to employ him as an Overseer on the hills on Rupees 60 a-month with treble horse allowance. This lad has lived for some years on these hills, and is well acquainted with them and thoroughly acclimatized.

Proceedings of the Madras Government, Public Works Department,
25th April 1876.

From Major G. V. LAW, Special Executive Engineer, Pulni Hills, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, (through the District Engineer of Madura,) dated Kodakanal, 1st April 1876, No. 1.

I HAVE the honor to report briefly on my special work during the past official year.

2. The following sums were placed at my disposal.—

Provincial Funds.				RS.	A.	P.
New Kodakanal ghaut	...	...	...	2,000	0	0
Local Funds.						
Traces on the Pulni Hills sanction	...	...	...	1,000	0	0
Expenditure on Colonel Fischer's traces before my arrival	...	...	...	493	1	6
Transferred from unexpended balances of other ranges	...	...	...	800	0	0
Total receipts				3,306	14	6
Expenditure				3,306	14	6
Balance				...	...	...

3. The following traces have been opened to bridle-path, except a few rocks:—

	MILES.
From Kodakanal to Shembaganur...	3½
Shembaganur to Neutral Saddle	4
Neutral Saddle towards Punnikad	3½
Pulni...	1½
Total bridle-path	12½

4. On the 10th of February, whilst tracing in the Ambahvy valley, Lower Pulnis, my right leg below the knee suddenly swelled and eventually a tumour formed, and I have been more or less *hors de combat* ever since. For weeks I had no medical attendance, but I have now been kindly attended, and my leg cauterized by the Rev. R. Meadows and am almost well.

5. It is owing to the accident that I am only able to show 12½ miles of permanent trace opened to bridle-path, though I have run many more miles of trial traces.

6. Owing to the great drought in Pereacolum taluq, laborers have flocked to me for several weeks, and my sanctions were expended early in March.

7. As the supply of labor on these hills is entirely dependant on want of rain (every laborer returning to his cultivation when rain falls), I was unwilling to lose the opportunity, and supported over 200 laborers for several weeks from private funds. I have this week been reimbursed by a transfer of Rupees 800 from unexpended Local Funds in Pereacolum Taluq.

8. When I first applied for extra funds I fully hoped to have been able to have spent them on the new Pulni Ghaut, I was however unable to complete more than 1½ miles of permanent trace, and was obliged to employ the laborers in widening between Kodakanal and Neutral Saddle, which can be easily adjusted in next official year. About 4 miles have been widened another yard out of the solid.

9. My new camp at Neutral Saddle has been a great success, I have been able to accommodate 150 coolies; the water is excellent and plentiful and the site so far has been very healthy.

10. My greatest difficulty has been a want of supervising establishment. There are hardly more than a dozen resident laborers and no shops or bazaars. The laborers from the plains

Proceedings of the Madras Government, Public Works Department,
25th April 1876.

come up with a few days' provisions; I have had to pay them every alternate Saturday evening, and as soon as received, maistries, laborers and all have bolted down to the plains.

11. With a single writer I have had to arrange for tools and works scattered over 12 miles of country and no certainty of labor; every alternate Monday morning uncertainty as to what maistries, what laborers would return, sometimes half the week passing with fifteen or twenty coolies, swelling by its end to 250.

12. I have thoroughly examined the valleys south and east of Neutral Saddle. The Pullamullay and Neutral Saddle valleys end abruptly in walls of precipices, and are quite unworkable. The Ambahvy valley is the only *break* in the walls of precipices that bound the whole southern face of the Upper Pulnis and extend along the south of the Pullamullay and Neutral Saddle valleys. Down this valley runs a steep cattle ghaut from Punnikad to Davada-naputty, whilst to the east of it the walls of precipices of the Iyampolliem valley again commence, by far the finest crags and precipices I have yet seen, sheer descents of over 2,000 feet.

13. From Neutral Saddle the first 4 miles of new trace descending eastward are very favorable. Then 2 miles of very difficult ground, which I am afraid will necessitate reverse slopes to reach a low saddle leading into the Ambahvy valley. From this valley my trial traces were very favourable, and I had reached bamboo range, due west of Yeddatrakad, when rendered *hors de combat*.

14. The necessity for reversed slopes is caused by a low range of hills of solid rock, with sides of perpendicular precipices, perfectly impassable, which separate the Pullamullay and Neutral Saddle valleys from the Ambahvy valley, and which I was obliged to head before commencing what I hope will prove a final descent to the plains under Yeddatrakad and Shatanmullay, throwing the foot of the ghaut at the end of the spur half a mile north of Batla-goondoo and some 12 miles from Ummanakanoor station.

15. At one time I felt much discouraged at the reverse slopes and wished to try the northern slopes of the Pulnis, which from above seemed far easier to work; a recent short inspection has, however, shown me that that side has equal if not greater difficulties than the south, and I wish to work both sides before finally deciding which shall be the Imperial line. The work must, however, be deferred till the south-west monsoon has fairly broken, as the Lower Pulnis are deadly during March, April, May, and June.

16. Under any circumstances, my labors in the Ambahvy valley will not be thrown away. The valleys of Punnikad, Auladdipatti, Ambahvy, and the low ranges south of them teem with coffee, cardamons, and plantains, but little rice is grown, and a very small proportion of dry crops. The villages are therefore almost entirely dependent on the plains for the commonest necessities of life, whilst from the constant practice of bartering their valuable crops for the comparatively cheaper (though necessary) products of the plains, they have become singularly prosperous, wealthy, and so independent that it is difficult to obtain even a coolie to carry a load from village to village, and not a single hill-man has as yet joined my works. The Board are therefore very anxious that these fertile valleys be opened by passable communications.

17. In conclusion, I have the honor to report that I propose to devote the present hot weather to boring, blasting, revetting, and other works between Kodakanal and Neutral Saddle, and opening as much as possible to 12 feet, besides minor traces above fever range.

No. 356-A. Memorandum by the Chief Engineer, Public Works Department.

I GATHER from Lieutenant-Colonel Fischer's letter, giving cover to Major Law's report, that he is satisfied with the upper 7½ miles of the latter officer's trace, viz., from Kodakanal to the Neutral Saddle, a point which has long been determined to be the key of the position as regards opening ghaut roads on the Pulnis, either east,

*Proceedings of the Madras Government, Public Works Department,
25th April 1876.*

south or north. He also seems to approve the line of the Ambahvy valley, by which Major Law is trying to make his way towards Batlagoondoo. But he considers that the Ambahvy valley should have been reached by Major Law by way of the Pullamullay valley, and not as he has done by heading all the valleys between the Neutral Saddle and Auladdipatti, and descending the last of them into the Ambahvy valley.

2. Lieutenant-Colonel Fischer acknowledges in the second paragraph of his letter that he has had no experience of this kind of work in his service in the department. Major Law has consequently been obliged to consult the Chief Engineer in all his difficulties as they arose, and it is perfectly plain to Major-General Walker from the minutely detailed descriptions of the work that he has received, that Lieutenant-Colonel Fischer's proposals have met with every consideration from Major Law, and have had to be thrown out as absolutely impracticable, because the hill range dividing the Pullamullay and Ambahvy tracts of ground is excessively rocky, and its southern extremity a mass of impassable precipices. It would seem to the Chief Engineer that Lieutenant-Colonel Fischer has not actually inspected Major Law's work below the Neutral Saddle, otherwise he cannot understand the failure to appreciate it.

3. The Chief Engineer has still great doubts whether the nature of the ground will permit of Major Law's working out his idea of running a continuous line south of Yeddatrakad and Shatanmullay near Mankurdu to Batlagoondoo. He considers it most probable that he will be intercepted by precipices which will force him to zig-zag and bring the foot of his ghaut as near Devadanaputty as Batlagoondoo, which would be a pity as by so much lengthening the distance to the railway station at Ammanai-kanoor. But that the trace of the future main ghaut road of the Pulni has been accurately determined by Major Law for two-thirds of its entire length the Chief Engineer has little doubt.

4. Major Law has also taken in hand, on behalf of the Local Fund Board, the trace of a Northern Ghaut to Pulni, and opened it for $1\frac{1}{2}$ miles below Neutral Saddle. He has not yet been able to explore the whole of his ground, and has not therefore been able to realize the full extent of the difficulties before him. His attention was chiefly directed to the southern line by desire of the Chief Engineer.

COONOOR,
18th April 1876.

(Signed) G. W. WALKER, Major-General, R.E.,
Chief Engineer, P.W.D.

No. 357.

ORDER THEREON, 25th April 1876, No. 1,037.

CIVIL WORKS, No. 24.

His Grace the Governor in Council has read with great interest the report of Major Law's first season's operations on the Pulni Hills; and is satisfied that in the course of his investigations he has given the fullest consideration to every alternative that presented itself, and has been guided in his final decisions by the great experience gained by him on similar works during the last twenty years.

*Proceedings of the Madras Government, Public Works Department,
25th April 1876.*

2. There is no objection to the entertainment by Major Law of a temporary Overseer when he may require him. But as directed in G.O., No. 780, of 28th March 1876, the selection of his own agency for such peculiar work will be in this instance left to him.

(True Extract.)

Colonel,
Offg. Under Secy. to Govt., P.W.D.

To the District Engineer, Madura.
„ Examiner of Public Works Accounts.

Erd. S. T. Austin.
Spare Copies

N^o 2

Memorandum.

No

I gather from Lieut. Col. Fischer's letter giving cover to Major Law's Report, that he is satisfied with the Upper $7\frac{1}{2}$ miles of the latter officer's trace, viz from Kodikanal to the Neutral Saddle, a point which has long been determined to be the key of the position, as regards opening Ghaut Roads on the Pulney, either East, South or North. He also seems to approve the line of the Ambahy Valley, by which Major Law is trying to make his way towards Batlagonda. But he considers that the Ambahy Valley should have been reached by Major Law by way of the Palamallay Valley, and not as he has done by traversing all the valleys between the Neutral Saddle and Auladipatti, and descending the last of them into the Ambahy Valley.

Lieut. Col. Fischer acknowledges in the 1st para of his letter that he has had no experience of this kind of

whole of his ground, and has not
therefore been able to realize the full
extent of the difficulties before him.

His attention was chiefly directed
to the Southern Line by desire of the
Chief Engineer.

Major General R.E.
Chief Engineer R.E. Dept.

Cornwall
April 1876.

Kodakanal S.P.3
April 1st 1876.

No. 1.

From,

Major: L. V. Law
Special Executive Engineer
Puliv Hills.

To,
The Secretary to Government
D. P. W.
(Through the District Engineer of Madurai)

Sir, I have the honor to report briefly
on my special work during the past official
year. —
2. The following sums were placed at my
disposal.

Provincial Funds
New Kodakanal grant 2000

Local Funds
Spans on the Puliv Hills section 1,000
expenditure on Col. Fischer's towers
before my arrival 693-1-6 506-14-6
Transferred from unexpended
balances of other ranges 800-0-0

Total receipts 3,306-14-6
Expenditure 3,306-14-6
Balance nil.

W. H. P. 1876

3. The following traces have been opened - to
bridle path, except a few rocks.

From Kodakanal to Shembaganur 3 1/2 miles

Shembaganur to Neutral saddle 1 1/2

Neutral saddle towards Ouninkad 3 1/2

Pulic 1 1/2

Total bridle path 12 1/2

4. On the 10th of February whilst tracing in
the Umbaray valley Lower Pulic, my right
leg below the knee suddenly swelled and soon
- actually a tumour formed and I have been
more or less "hors de combat" ever since.

For weeks I had no medical attendance, but
I have now been kindly attended, and my
leg cauterized by the Rev. R. Meadows, and
am almost well.

5. It is owing to the accident that I am
only able to show 12 1/2 miles of permanent
trace opened to bridle path, though I have
run many more miles of trial traces.

6. Owing to the great drought in
Pereacolum Salug labourers have flocked
to me for several weeks, and my resources
were expended early in March.

7. As the supply of labour on these hills

is entirely dependant on want of rain (every
labourer returning to his cultivation when
rain falls). I was unwilling to lose the
opportunity and supported over 200 labourers
for several weeks from private funds - I have
this week been re-imbursed by a transfer
of Rs 800 from unexpended Local Funds in
Pereacolum Salug.

8. When I first applied for extra funds
I fully hoped to have been able to have spent
them on the new Pulic ghaut, I was how-
ever unable to complete more than 1 1/2
miles of permanent trace, and was obliged
to employ the labourers in widening between
Kodakanal & Neutral saddle which can
be easily adjusted in next official year.
About 4 miles have been widened another
yard out of the solid.

9. My new camp at Neutral saddle
has been a great success, I have been able
to accommodate 150 coolies, the water is
excellent and plentiful and the site so
far has been very healthy.

10. My greatest difficulty has been a want of supervising establishment. There are hardly more than a dozen resident labourers & no shops or bazaars. The labourers from the plains come up with a few days provisions, I have had to pay them every alternate Saturday evening, and as soon as received, maistries, labourers and all have bolted down to the plains.

11. With a single writer I have had to arrange for tools & works scattered over 12 miles of Country, and no certainty of labour, every alternate Monday morning, uncertainty as to what maistries, what labourers would return sometimes half the week passing with 15 or 20 coolies swelling by its end to 250.

12. I have thoroughly examined the valleys South and East of Neutral Saddle, the Pallamullay and Neutral Saddle valleys and abruptly in walls of precipices, and are quite unworkable. The Umbahay valley is the only break

in the walls of precipices that bound the whole Southern face of the Upper Puluis & extend along the south of the Pallamullay and Neutral Saddle valleys. Down this valley runs a steep cattle ghaut from Punnikad to Davadanapatti, whilst to the east of it the walls of precipices of the Yampolleri valley again commence by far the finest crags & precipices I have yet seen, sheer descents of over 2000 feet.

13. From Neutral Saddle the first 4 miles of new trail descending Eastward are very favourable. Then two miles of very difficult ground which I am afraid will necessitate reverse slopes to reach a low saddle leading into the Umbahay valley. From this valley my trial traces were very favourable, and I had reached bamboo range due west of Yeddakakad when rendered "hors de combat".

14. The necessity for reversed slopes is caused by a low range of hills of solid rock, with sides of perpendicular precipices, perfectly impassable, which separate the Pallamully

and Neutral saddle valleys from the Umbahoy valley and which I was obliged to head before commencing what I hope will prove a final descent to the plains under Yeddakakad, and throwing the foot of the ghaut at the end of the spur half a mile north of Battagoondos and some 12 miles from Immanickamur station.

15. At one time I felt much discouraged at the reverse slopes and wished to try the northern slopes of the Pulnis, which from above seemed far easier to work; a recent short inspection has however shown me that that side has equal if not greater difficulties than the south and I wish to work both sides before finally deciding which shall be the Imperial line. The work must however be deferred till the southwest monsoon has fairly broken as the Lower Pulnis are deadly during march, April, May and June.

16. Under any circumstances my labourers in the Umbahoy valley will

not be thrown away. The valleys of Punnikad, Kuladipatti, Umbahoy, and the low ranges south of them teem with coffee, cardamoms, and plantains, but little rice is grown and a very small proportion of dry crops. The villages are therefore almost entirely dependant on the plains for the commonest necessaries of life whilst from the constant practice of bartering their valuable crops for the comparatively cheaper (though necessary) products of the plains, they have become singularly prosperous, wealthy and so independent that it is difficult to obtain even a coolie to carry a load from village to village, and not a single hill-man has as yet joined my works. The Board are therefore very anxious that these fertile valleys be opened by passable communications.

17. In conclusion I have the honor to report that I propose to devote the present hot weather to boring, blasting.

revetting, & other works between Kodakaval
and Neutral saddle, and opening as much
as possible to 12 feet, besides minor traces
above fence range.

I have &c

Major George O. Law

Special Executive Engineer

(True Copy)

W. C. C. C. C.
District Engineer, Madras

Mr. 2598/26

Enclosure 1
Copy of letter
from Major Law
No. 1241-2-76

From

Colonel J. J. Fischer R.E.
District Engineer, Madras

To

Major General W. Walker R.E.
Secretary to Government S.W.

Sir,

I have the honor to forward
for the consideration and orders
of the Government Major Law's
Administration report for the
year 1875-76, the substance of it
will of course be included in the
District Administration report, but
as he is on special duty I have
sent up a copy of the original
for such orders as may be considered
necessary.

2. Major Law commenced
work in June last, 9 months ago,
and has opened a trace of about
12 1/2 miles in length in that
time, besides reconnoitering other

Copy of Major
Law's Report

Enclosure 1. via letter from
the District Engineer
to the Secy to Govt. O.D. 8.
No. 8642-2-76.

parts of these hills of which no details are given, but as his health was known to be in an unsatisfactory state, and he has met with some accidents, I suppose, this amount of work may be considered highly satisfactory but I have had no experience of this in my service in the Department.

3. The line through the Ambury valley as I had expected affords the easiest descent from these hills, and I trust a more careful and searching examination of the Paulamalay valley than Major Saw has yet been able to make will enable him to connect the Neutral saddle by the Paulamalay valley with the Ambury valley and the plains westward of Bullayondor. The trace for the Imperial Road will then run through the most fertile tracts of these hills and afford the Government some return for the

large outlay contemplated on this work.

4. I regret so much time has been lost in searching for a trace via Purnahad. I have all along been opposed to this direction and a very cursory examination of the ground should have convinced an experienced officer of its impracticable nature, but I believe a very careful examination of it has been made before it was abandoned and I only hope equal care and pains may be bestowed on the Paulamalay valley line toward Ambury.

5. In conclusion I would beg respectfully to solicit permission to employ a special permission Major Saw to assist him in his operations, there is an East Indian lad here who has been educated at the American Mission and has had considerable training in the

and experience in that work under
 Saint Leger on the goodaloo that
 he bears a very good character
 indeed amongst all who know
 him, and it is at the instance
 of Doctor Phelker of Dindigul
 that I submit this application
 on his behalf to the Government to
 employ him as an Overseer on the
 hills on Rupees 60 a month with
 treble horse allowance. This lad
 has lived for some years on these
 hills and is well acquainted with
 them and thoroughly acclimatized.

I have the honor to be
 Sir
 Your Most Obedt servant,
W. L. L. L. Saint John AG
 District Engineer.

Recd from Col. 27-4-76.
 C. L. 1874-76 Old 25-4-76
 D. H. 3 and

No 1037
 Proceedings of the Madras Government

Under date the 25th April 76.

Read the following

23

27 April 1876
 1876.

Grace the
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 Council is
 The
 Major Law's
 operation
 of Hills;
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and experience in what works under
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 he bears a very good character
 indeed amongst all who know
 him, and it is at the instance
 of Doctor Chester of Andaman
 that I
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 treble he
 has lives
 hills and
 them as

From 1875 Sept.
 No. 2599
 The District Engineer
 Madras
 To
 The Secretary to Govt.
 P.W.D.
 Madras.

Dated 7th April 1876
 Recd. 10

No. 86.
 Encls. 1
 Chaut. Grace Pulai Hills -
 reports on the Adminis-
 -tration Report of -
 Submitted by Major
 Law

G.O. 28 March 76. No. 437-488.

Ms 356

Recd from 202-276-76.
 Cii-1874-276. Dtd 25-4-76
 A. H. Sub. 3 and

No 1037
 Proceedings of the Madras Government

Under date the 25th April 76.
 Read the following

From
 The Dist. Engineer } H.C. No. 86. of 7 April 1876
 Mem. Madras } H.C. 18: April 1876.
 Chief Eng. Madras

read with great interest
 and satisfaction

Ms 226

His Grace the
 Governor in Council has
~~telegraphed~~ with the
 report of Major Law's
 first seasons operations
 on the Pulney Hills;
 and is ^{satisfied} ~~convinced~~ that
 in the course of his
 investigations he has
 given the fullest
 consideration to every
 alternative that presents
 itself

itself, and has been ~~un~~
guided in his final
decisions by the great
experience ~~that he has~~
^{by him} gained on similar works
during the last twenty
years.

There is no objection
to the entertainment by
Major Law of a temporary
overseer when he may
require him. But as
directed in G.O. No 780 of
28 March 1876 the selection
of his own agency for such
peculiar work ~~must~~ ^{will} be in this instance
left to him.

No 356/57

25
3

J. D. E. Madhuan ✓
E. P. W. ✓

Dettd 8/1/77

Plly. Recd. 27-4-77
A. H. Threl. 3 Apr

2599

Govt. of Madras.
PUBLIC WORKS.

To

The H. C. Madras

Wryen

27-4-

Dated

Issued

Recd

Encl

G. O. 25th April 1876, No. 1037

No. 356/59.

Pulney Hills

Passing orders on
the report of Major
Laws' first seasons
operations on the —

8-5-76

1876. Recd from Govt. 27-4-76
Dr. Chut. 3rd

NEPAU 8707