

ENGINEERING—continued.**CONSTRUCTION—continued.****CADDY, J. S.**

- engineer in charge of contracts Nos. 25 and 41 since May, 1879, 642.
- staff: three division engineers and fourteen assistants, 643.
- goes over the line every month, 643.
- trains now run 150 miles, 643.
- on contract No. 25, road-bed not completed when he took charge, 649.
- great deal of muskeg, 649.
- not now up to full width of road-bed or to grade, 650.
- on contract No. 41, when he took charge, work staked out, centre-lined, cross-sectioned and bench-marked, 650.
- contractors not delayed, 651.
- character of country changeable, 651.
- quantities much reduced and line shortened since letting contract, 651.
- saving from \$400,000 to \$500,000, 652.
- reflections on previous location, 652.
- about one-third rock and muskeg, 653.
- fourteen hundred men employed 653.
- character of work satisfactory, 653.
- disputes with contractors, 654.

ROWAN, J. H.

- from Rat Portage to Fort Pelly, 689.
- appointed engineer in charge in June, 1875, 689.
- had partial supervision of telegraph construction, 690.
- telegraph located on preliminary survey, 690.
- plans and trial locations of section 14 sent to Ottawa, 1874-75, 693.
- approximate profile and quantities made, 693.
- about two-fifteenths of section required cross-sectioning, 694.
- muskegs: depth not known, 695.
- deviations caused work to be largely in excess of estimates, 695.
- Julius Muskeg, 698.
- contractor no ground for claim, 699.
- nineteen feet deep instead of three or four as estimated, 701.
- no boring tools used, 701.
- muskeg material makes good road-bed, 701.
- contractor on contract No. 15 not justified in complaining that information was withheld, 715.
- witness ordered from Ottawa what to communicate and what not, 715.
- plenty of earth discovered, 716.
- some truth in Whitehead's statement as to trestles being impracticable, 716.
- change to embankment advantageous, 716.
- reasons for statement, 716.

JENNINGS, W. T.

- in charge of section 42, May, 1879, 759.
- had detailed data as to quantities, 759.
- contractors not delayed, 759.
- changes: grade improved, 760.
- rock cuttings reduced, 760.
- earth reduced, 760.
- all except one approved by Schreiber, 761.
- iron pipe culverts dispensed with, 761.
- bridge masonry reduced 50 per cent., 762.
- Manning's estimate an exaggeration, 762.
- piling increased, but timber in trestles not much in excess, 763.
- section will cost \$1,500,000 less than estimate, 765.
- one-third being due to trestle work, 765.
- exhaustive borings made, 766.
- Manning wrong in placing some borings at 200 feet, 767.
- generally as to improvements of location, 767.

JARVIS, E. W.

- presents report of inspection of contracts Nos. 14 and 15, made at request of Commissioners, 772.

SMITH, M.

- examined contract No. 13 and part of contract No. 25 in 1877, 1588.
- contract No. 13 nearly complete, 1589.