VR 1928A/30-34 REPORT ON THE DEVON MINE

INTRODUCTION

The Devon Mine is not being worked at the present time nor has it been worked for several years. The workings, especially the older ones, can only be inspected to a small extent on account of falls of rocks and filling in in some places, while the deeper portions are under water. An inspection at the present time, is, therefore, restricted to a few parts of the mine only, and information as to other parts has to be obtained from previous reports.

The Mine has been previously reported on by J. Harcourt Smith (1898), G. A. Waller(1901), W. H. Twelvetrees (1907 and 1913), A. McIntosh Reid (1919) and J. B. Scott (1928).

LOCATION AND LEASES

The mine is situated on Lease 10285/M of 40 acres (in the name of A. G. Omant) in the valley of the Dove River. It is three miles south-west of Lorinna and seven miles south-south-east of Moina.

ACCESS

The Devon Mine is situated in the deep gorge of the Dove River which on its northern side is approximately 1500 feet deep and which renders access difficult.

Access has to be gained from either Lorinna or Wilmot. By the Wilmot route the road is followed to the south until it joins the old V.D.L. road through Middlesex. This latter road (which is almost overgrown by scrub) is then followed to the east for 1½ miles (this same point can also be reached by following the same road westwards from Lorinna up the Five-Mile Rise). Mr. Horton proposes a pack track from the saw mill, ½ mile north of the junction with the Middlesex road, in an east-south-easterly direction to the same point, and has already cut a foot-track along this route for some distance. Whichever route is taken to this point, the descent of 1500 feet down to the Dove River has then to be made. The older tracks used are now overgrown and cannot be followed, but Mr. Horton has cut and formed a track along another route. As far as possible this track has been cut on a uniform grade from top to bottom and has a length of approximately 1½ miles, the average grade being therefore about 1 in 5¼.

The only alternative route is that from Lorinna along the northern side of the Dove gorge. If the country is at all suitable for a pack track this would be the natural route to follow. It would avoid the greater part of the ascent of the side of the gorge, but cliffs and steep sidelongs might interfere with the location of the track. Winspear's track followed this general route.

GEOLOGY

The highest parts of the country near the old road between Lorinna and the junction with the Wilmot road are occupied by tubicolar and other sandstones of Silurian age.

The lower country to the north and east are occupied by Tertiary basalt. The greater part of the new track of Mr. Horton into the Dove is occupied by granite and quartz-felspar porphyries. These two rocks are also in evidence near the Devon mine, as are also quartzites represented by limited outcrops to the west.

Still further west it was reported by Smith (1898) that slates, sandstones and grits occur.

The porphyry at the mine has been considered to be the marginal portion of the granite and these igneous rocks have been considered to be intrusive into the sedimentary rocks.

HISTORY, PRODUCTION, &c.

The Devon lode was discovered in1892 by Malcolm Campbell. The leases were later acquired by the Devon Mining Coy. N.L. which was formed in November,1897. This Company existed until 1915 although mining was not carried on continuously until that year. The most active period was fromMay 1899 until September 1902 during which time the recorded production (from Nos. 1 and 2 adit levels) was 248 tons of argentiferous galena which realised approximately £5494.

The mine was not worked during the greater part of 1903 and shaft sinking was then commenced. The mine was again idle until the end of 1906 when active operations were again commenced. From March, 1907 until December 1908, the recorded production was 134 tons valued at £2308. Work continued intermittently throughout the following years, but there was no recorded production until 1912 when 18 tons realised £332. The total production by the Company was 397 tons which realised approximately £8134.

After the leases were abandoned by the Devon Mining Coy. they were taken up and transferred to the Mt. Farrell Mining Coy. The latter carried out operations during 1923 and 1924 chiefly of a prospecting nature, but ceased in 1924.

No mining work is being carried out at present.

MINE WORKINGS.

The mine workings consist of two main adit levels (Nos. 1 and 2) and the drives from these on the lodes. A main winze or shaft has been sunk from the No. 2 adit and the No. 3 level opened up from it. Another winze connects the Nos.2 and 3 levels, and the latter is also connected to the surface by a shaft sunk to the north of the No. 2 adit. Three other adits occur above the Nos. 1 and 2 adits, two of which have been driven in recent years for prospecting purposes.

The No. 3 level was worked chiefly from the winze in the No. 2 adit level which was equipped with a pumping and winding plant.

THE ORE BODIES

Devon Lode - The above workings were all carried out in order to prospect and mine the Devon lode. This lode was exposed in open cuts at the surface and in the drives at Nos. 1, 2 and 3 levels.

The following description has been prepared from the previous reports; the material on the dump, and the limited observations during the present trip:-

The lode had a general north and south strike being generally west of north at the north end and west of south at the south end. The dip was generally high to the east but above the No. 2 adit it was certainly reversed and at high angles to the west.

The lode formation was two to three feet wide and consisted of country rock (porphyry), gangue and ore minerals. The gangue was chiefly quartz, together with a smaller amount of siderite. The primary metallic minerals were galena, chalcopyrite, sphalerite and pyrites. The oxidised minerals resulting from these were cerussite, malachite, azurite, and limonite.

It is reported that the galena was the most plentiful of the metallic minerals and occurred in veins ranging in thickness from a few up to 15 inches. In the second grade ore on the dump, the galena, etc. is more or less mixed with the quartz gangue.

During the active mining operations the clean galena ore was kept separate and was sent to market. The reported assays of the marketted ore are as follows:

Lead	56 - 70 %
Silver	72 - 87 oz. per ton
Gold	2 - 5 dwts. per ton

The ore was of good grade for hand picked ore with a high lead content, silver to the amount of 1½ oz. per unit of lead, and the unusually high gold content.

The clean galena apparently occurred in shoots in the lode and these have been stoped out down to the No. 2 level at least. The information available does not refer to any stoping from the No. 3 level, but it is probable that all shoots of payable ore between the No. 2 and No. 3 levels were stoped out. The Main ore shoot had a northerly pitch.

The future of mining operations on this lode therefore depends upon the location of any other ore shoots to the north and south of these worked (there is no geological evidence for or against the existence of such shoots and upon the location of payable ore below No. 3 level. Deeper sinking would entail heavier pumping and winding costs and viewing the position generally it would appear that these would be too great unless the payable ore shoots attained greater dimensions than those already worked in the mine.

Other lodes -

Several other small veins and lodes have been exposed in the underground workings. One of these was cut in the entrance of both the Nos. 1 and 2 adits but was not apparently wide or rich enough to warrant any development work. It dipped west and might junction with the Devon lode at depth.

In Bulletin 30, A. McIntosh Reid describes the Nos. 2 and 3 lodes west of the Devon (No. 1) lode. Both these lodes were driven on north and south but apparently payable shoots were not proved by the development work. The No. 3 lode is stated to have a gossan outcrop at the surface assaying 8 dwts. 4 grs. of silver per ton.

At the north end of the surface workings on the Devon lode a formation(called the Diagonal lode) with a little galena appears to run into the footwall to the south-south-west. If this continues to the south, it might be possibly connected with the No. 2 lode in the No. 1 adit.

Further up the hill and about 50 to 80 feet west of the Devon lode, a gossan formation (called the Big Lode) is exposed in two places. At the northern exposure a vertical seam of gossan two feet wide, has a bearing of 161°. At the southern exposure, two seams of gossan occur at the surface with a horse of mullock between, but these unite at depth and a vertical seam of gossan four feet wide is formed. The strike is 170°. A sample across the vertical part gave the following assay results:

Lead	0.3 per cent
Silver	18 dwts. 7 grs. per ton
Gold	trace

It is stated by Mr. Horton that this lode has not been cut underground. It would appear, however, that this is the gossan outcrop correlated by Mr. A. McIntosh Reid, with the No. 3 lode. As the No. 3 lode was 80 feet west of the Devon lode, there is little doubt that this represents the Big Lode.

An adit was driven some six years ago from a point some 50 feet above the No. 1 adit in a westerly direction for 120 feet, but could not at the time of this visit be entered. It was stated that the Devon lode was not cut, but that a wall was passed through at 40 feet, and a lode formation at 60 feet. The latter was believed to be the Diagonal lode. It was said to be vertical and to consist of two feet of gossan. Pieces on the dump showed two to three inches of fairly clean galena in a white argillaceous matrix. If this lode is the Diagonal lode then the Devon lode must have been cut at or near the entrance, and the face of the adit must have been close to the Big or No. 3 lode.

CONCLUSIONS

The only lode on which much development work has been performed is the Devon lode. The lode is narrow and has only been mined where clean galena ore could be obtained. It would appear that all the payable shoots have been removed down to the No. 2 level at least. The future of the mining on this lode therefore depends on:-

(1) Location of other shoots along the line of lode,

(2) Downward continuation, if any, of the shoots worked in the upper levels.

There is no geological evidence for or against these factors and only further development work could prove their existence or otherwise. The narrow width of the lode should be seriously considered before any deeper underground development is attempted.

With regard to other lodes, great reliance is placed by Mr. Horton on the Big lode. The underground workings appear to have cut this lode and proved it of no value.

Nothing can be said as to the continuation or possibilities of the Diagonal lode.

The mine does not therefore appear to have any quantity of payable ore-reserves developed and its future depends entirely upon the proving of them, if any exist, by prospecting or development work.

The mine is badly situated as regards means of communication, but the provision of ready means of access should be delayed until the mine is proved to possess payable ore-reserve except only insofar as the provision of the sufficient means of access may be required for the development of the mine. Definite schemes of development should be formulated before any expenditure is made on tracks, etc.

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