LAWKEMLAW MINE, MOINA

LOCATION AND ACCESS:

The Lawkemlaw Mine is situated ½ a mile south-east of Moina in the southern part of mineral section 11217/M of 59 acres, H.F. Lawson, Lessee.

Access is gained by way of the old Dolcoath Road, from Wilmot-Middlesex motor road, for a distance of 30 chains, then southerly along a well formed track for a further half mile to the workings.

GENERAL:

The last official report on the area is contained in Bulletin No. 29 "The Mining Fields of Moina, Mt. Claude and Lorinna" by A. McIntosh Reid (then Assistant Government Geologist) in 1919. At that period the All Nations Wolfram Mine was operating in the northern portion of the section (then 7100/M, 55 acres). Development was also proceeding by Lawson and Riley, in the south-east part of the lease (then 7301/M, 5 acres), by way of No.2 or lower adit, now used as an outlet by Burford and Bilson tribute party from a more recently discovered vein. This report deals with three veins developed subsequent to the publication of Bulletin No. 29 and which are now being worked by small tribute parties.

THE ORE BODIES:

These consists of narrow pegmatite veins traversing fracture planes in quartz porphyry of Devonian age along two general directions viz., east-west and north-west - south-east. The veins are composed of quartz with accessory kaolinised felspar. The dominant mineral component of the ore bodies is wolfram, while cassiterite, arsenopyrite, bismuthinite and bismutite are sparsely distributed to a minor degree. The wolfram occurs as coarsely crystallised aggregates, shapeless masses and isolated blades, chiefly in the quartz. Topaz is a prominent associated mineral in the veins.

BURFORD & BILSON TRIBUTE:

(a) Development: This occurs at 8 chains north-west of the south-eastern corner of section 11217/M. Underground workings are in operation at No.2 tunnel (see Bulletin 29, Page 90) on a vein proved over a length of 260 feet, strike 267° and dip 80° to 85° in a northerly direction.

A crosscut, 83 feet from adit portal, extends sinuous manner for 152 feet westerly before reaching the ore body. From this point a drive extends for 216 feet to the west on the course of the vein. The latter is enclosed in soft, white, haolinised, quartz porphyry and ranges in width from one to six inches and averages four inches wide.

Of this distance, stoping is carried overhead along a length of 165 feet to a height of approximately 12 feet above back of drive, the first 35 feet of which were undertaken by H.F. Lawson in 1936 and the remainder by Burford and Bilson to date. At 50 feet from crosscut a shaft connects with the surface.

Surface workings conducted on this vein by Lawson in 1934 consist of underhand stopes spread over a length of 260 feet and carried to a depth of 10 feet approximately.

(b) Production Total production figures for this ore body are not available but for the first quarters of 1937 yields were as follows:-

Quarter ending	Wolfram in tons	Percentage of Tungstic acid in concentrate	Tungstic Acid in tons	Value
				£
March 1937	1.12	70	0.78	156.8
June "	1.53	66	1.00	302.5

In addition to the tungstic acid content, sales assays show tin .05% to .10% with similar percentages of arsenic.

SUTHERLAND & PARTY TRIBUTE:

Seven chains to the south-west of Burford and Bilson tribute, a party of four men under the leadership of K. Sutherland is about to recommence tribute operations on a quartz-wolfram vein previously worked by Burford and party in 1936.

The workings are now inaccessible but consist of 5 vertical shafts spread over a distance of 330 feet, along a general bearing of 290°. The two eastern and the central shafts are connected by a drive, 152 feet long, at 25 feet from surface. The two western shafts do not appear to be connected, but reach a depth of approximately 30 feet.

To the west of the most western shaft, the vein appears to be faulted and is located 20 feet to the south-west, where it was mined by Sutherland, in 1935 by underhand stoping methods. The stopes, which attain a depth of about six feet, are prolonged over a distance of 210 feet, and trend in a similar direction to the eastern portion of the vein. The ore body is reported to vary from three to six inches in width and to be of similar character to Burford and Bilson's vein further east.

In the vicinity of the lode the felspar of the surrounding porphyry has been softened by kaolinisation and stained deep red and brown colours, probably by hydrated iron oxides.

Separate production statistics from this lode are not obtainable, but for the quarter ending March, 1935 it is recorded that Sutherland produced 1.05 tons of wolfram concentrates, containing .74 tons of tunstic acid, valued at £140.37.

NICHOLLS AND SMITH TRIBUTE:

Nicholls and Smith recently commenced work on a quartz-wolfram vein parallel to and situated three chains south of Sutherland and party lode. The workings to date

consist of a trench excavated to a depth of two feet for a length of 23 feet. The ore body was not visible at time of inspection owing to flooding of the trench, but exmination of lode material on the dump suggested characteristics corresponding with those lodes described in the immediate vicinity.

No ore has as yet been sent to market.

MINING AND TREATMENT:

Owing to the soft kaolinised state of the enclosing porphyry, mining expenses are particularly low in this locality.

On extraction , the quartz of the ore bodies separates into small particles and very little treatment is necessary in order to obtain a wolfram concentrate suitable for marketing.

At the present time the only crushing requisite is executed by hand, and this is followed by concentration of the wolfram content in small hand operated jiggs.

PRODUCTION:

The following table illustrates the production of wolfram etc. won from the two veins on which Burford and Bilson, and Sutherland and party are operating. The amount obtained by Sutherland in 1935 is quoted singly, but the full details of the other parties cannot be given separately.

Quarter Ending	Wolfram con. in tons	Percentage of Tungstic Acid in concentrate	Tungstic Acid in tons	Value Sterling.
				£
Sept. 1934	.36	--	.24	41.34
Dec. 1934	.99	68	.67	153.47
Mch. 1935	.99	70	.70	153.45
Mch. 1935 (Sutherland)	1. 05	--	.74	140.37
June	1. 37	--	.89	158.90
Sept. 1935	1. 41	--	1.05	160.47
Dec. 1935	1. 44	--	1.00	170.16
Mch. 1936	1. 46	69	1.00	170.89
June 1936	1. 59	70	1.11	178.00
Sept. 1936	.85	68	.58	83.51
Dec. 1936	1. 66	70	1.16	168.79
Mch. 1937	1. 12	70	0.78	156.81
June 1937	1. 53	66	1.01	302.48

F. BLAKE
ACTING GOVERNMENT GEOLOGIST.

Mines Department,
HOBART.

23rd September, 1937.