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E.L. 2/82 FIRST ANNUAL REPORT

AVOCA TRANSPORT COMPANY PTY. LTD.
14 Montague ST. Invermay,
Launceston, TAS. 7250

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CONTENTS

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1.0 INTRODUCTION

This report details the results of exploration carried out in the license area in the first twelve months period since its granting on the 1st of July 1983 and the proposed program of exploration in the next 12 month period. It supports an application for renewal for which is due on the 1st of July 1984.

Avoca Transport Co. in August 1983 also applied for an area adjoining the E.L. to the south. Part of the application area was exempted from exploration, but subsequently became available during the period. The area initially applied for by the Company has recently been approved by the Department and will be incorporated in E.L 2/82.

It was proposed by the Company to carry out an integrated exploration program over this area, and also the exploration license area in the vicinity of the old Merrywood Coal Mine (E.L. 21/82). This will have considerable cost advantages, which are important to the Company because of its limited resources and the long period before any financial returns could be expected from mining.

The confusion over the exempt area and the subsequent delay in the incorporation of the additional area has meant that exploration during the period has been restricted to a review of literature and limited site investigations. The drilling proposed in the initial license application was not commenced as this was delayed until the final license area was determined.

However, considerable information was available on previous exploration and mining, and during the period, Department geologists completed a review of the area (Bacon, 1983). This has provided an excellent basis for an understanding of the area.

Avoca Transport Co. is a Tasmanian civil engineering and earthmoving contractor and its interests in coal exploration are in proving up areas with potential for surface mining. This includes coal left in abandoned underground mines in the form of pillars.

2.0 PREVIOUS EXPLORATION AND MINING

Bacon (Bacon, 1983) has documented most of the information available on the geology and mining history of the area, and only the material directly relevent to future exploration and possible surface mining are addressed in this report.

Mining in the area was almost continuous from 1923 until the closure of the New Stanhope Mine in 1973. Production over this period was in the vicinity of 400,000 tonnes. Extensive faulting was always the major problem for mine management.

Mr. D. Fenton has a mining lease in the centre of the E.L. and he is presently developing a drive to the north of the Old Workings.

The extent of the underground mining in the Old Workings, Stanhope and the N & D. Fenton mine, near what was known as the Mt. Christie mine, is shown in Figure 1. New Stanhope is shown in Figure 2. The relevent features of each of these mines are discussed below;

Old Workings

This mine was initially called the Excelsior and operated from approximately 1923 to 1937. The coal seam has been recorded as being badly faulted and banded, and mining difficult because of extensive faulting and some seam thinning. Mining in this area appears to have been restricted to a downthrown block.

Mining to the south was limited by a major (20m) fault, and in the north and east other more minor faults had similar effects. These faults are shown in Fig. 1. Some pillars were extracted by surface mining in the period 1931-1939. This appeared to have occured mainly at the eastern end of the workings where the seam is still burning as a result of a bushfire in the 1960's.

There is no record of the amount of coal mined from this area, but its history, and the fact that surface mining was undertaken, indicates that some coal may be left in the workings in the form of unrecovered pillars, providing they are not burnt.

Stanhope

Mining was transfered to the "New Workings" in 1937 and continued in this area until 1957. These are located east of a five metre fault, adjacent , but not connected to the Old Workings. Coal was mined mainly by bord and pillar and troubled with a large number of small faults. These often caused driving to be abandoned and pillars to be removed. Many of these faults are shown in Fig. 1. The main drive is shown in the Fig. to terminate against dolerite, and further to the south-east, against a fault. In the west the ground is recorded by Hughes (Hughes, 1954) to be faulted, which probably limited development in this direction. To the east is where the major development occurred. This also appears to have been limited by faulting, and apparently terminated when drilling to the east revealed a major (22m) fault. Dip of the seam is recorded by Hughes as being to the south-west at 4 to 5^0, with a strike of about 150^0. This is of course, complicated by faulting.

Hughes in his report regarding future operations made mention of these faults, the dolerite boundary, and that most sections of the underground workings were inaccessible, apparently due to pillar removal. This was in 1954 when the Stanhope management were looking for a site for a new development. At this time operations where limited to

recovering pillars from the workings. Apparently this continued for another 2 or 3 years and it can therefore be assumed that little coal remains in the form of pillars.

This is reinforced by figures quoted by Bacon. She records 175,000 tonnes being mined. The workings cover approximately 70,000 m^2, and from this a coal recovery of approximately 2.5 tonnes/ m^2 is derived. This compares with 3 tonnes/m^2 if a seam working thickness of 2.1m is assumed.

For practical purposes therefore, it is assumed that the Stanhope mine area is worked out.

Mount Christie

The workings on the flanks of Greenstone Hill have been collectively called the Mount Christie mine. N & D. Fenton put in a new drive in 1959, and worked the area until 1965. Total production was about 13,000 tonnes.

The coal seam was 2.1m thick with a 230mm mudstone band in the middle.

Fenhope

Mr. D. Fenton opened this mine in 1981, within a mine lease held in his name (Fig. 1). It is not producing commercially, and is operated solely by Mr. Fenton. The seam is 3.1m thick with a 450mm thick dirt band in the middle.

New Stanhope

Production at this mine commenced at the end of the productive life of the Stanhope mine, in 1957. Two adits were driven and No. 1 was worked until No 2 was driven in 1963, and development was concentrated in this area. Complex geology (presumably faulting) and finally roof falls after some pillar extraction caused the abandonment of this area in 1971. Mining was then recommenced in the No. 1 adit where pillars were extracted until the closure of the mine in 1973.

The coal seam was recorded by Bacon as 2.1m thick, and total production for the mine life of approximately 220,000 tonnes. No dips were mentioned by Bacon, but Mines Department drawings (Drg. 3549-48) indicate a dip of almost 5^0 to the north.

The underground workings cover an area of approximately 110,000 m^2, which give a production figure of 2 tonnes/m^2. The No. 1 adit area for practical purposes can be regarded as being worked out. However, there does appear to be some coal left in the No.2 adit area in the form of pillars.

Drilling

The Stanhope management diamond drilled in the vicinity of the stanhope and New Stanhope workings. A summary of the results (from Bacon) is enclosed in Appendix A. Locations are shown in Figures 1 and 2. Unfortunately complete records were not kept, however they are of some assistance in understanding the local geology.

3.0 POTENTIAL COAL RESOURCE

The geology of the area is complicated. The proximity to the Castle Carey Fault has resulted in a large number of smaller associated faults across the area, some of these have been intersected in the mine workings (Figs. 1&2). Jurassic dolerite has also intruded the coal sequence and caps most of the more elevated areas. In the Stanhope area it appears to have been intruded in the form of dykes and therefore removed the coal seam.

These two factors and the limit of oxidation, will therefore determine the extent of the potential coal resource. The geology of the area and some of the faulting is shown in Figs 1&2. An approximate outcrop is also shown. This is based on the dip recorded at each mine, taking into account the known major faults. The main objective of the drilling program is to delineate the outcrop and the loxline in areas suitable for surface mining.

Because of the faulting the correlation of the coal seam is difficult. However, it appears that the one basic seam has been mined, the differences in dip and elevation being caused by faulting.

This seam, called the Beta seam has been described by Hughes and varies in thickness from 4 to 2 m. The coal analysis recorded by Bacon indicates it is a suitable steaming coal.

There are basically four main areas which have been identified as having surface mining potential. These are in proximity to old underground workings.

Stanhope

The area which has been mined is assumed to have been mined out (see above). However, areas to the west and east may have a reasonable coal resource. The dip of the seam (recorded by Hughes) is to the south-west which unfortunately is into the rising topography and will tend to increase overburden ratios. Major faulting in the east may result in down-thrown blocks with more favourable ratios.

Old Workings

A small coal reserve may remain in the workings in the form of pillars. The seam may continue to the north-west which could have favourable overburden ratios.

New Stanhope

The workings in the No. 2 adit area may have a small coal reserve remaining as unmined pillars. The dip of the seam together with the steep topography, in common with the Stanhope area will also tend to rapidly increase overburden ratios.

N&D Fenton

A small coal resource may exist in this area.

4.0 FUTURE EXPLORATION

The potential coal resource, based on the information discussed above, is unlikely to be very significant and not a particularly attractive target. The thickness of the coal seam and the depth of oxidation will to a large extent determine the mineable reserve.

A small drilling programme is therefore proposed to investigate the continuation of the coal seam in the vicinity of the old mines, as discussed above. These will include;

Stanhope

At least one drill hole to the east and west of the mine workings, with other holes dependent on the results.

Old Workings

Two or three holes close to the road in the old workings, at least one to the north-east.

New Stanhope

At least one hole to the east of the old mine to test the continuity of the seam in this direction. Other holes will be dependent on the results.

The Department will be notified of the location, details of access and agreements with the landowner.

At this stage all drillholes are proposed to be fully cored. All core will be logged by a coal geologist and stored, with selected samples forwarded for analyses. This program will be carried out in conjuction with a similar program in the additional area and in E.L 21/82.

In addition to the drilling, the Company has an application with the Department to use an excavator to uncover the entrances to the old workings. If these are accessible, they will be surveyed for coal reserves and seam dip, strike and faulting. At this stage Stanhope, the No.2 adit at New Stanhope and the western end of the old workings are the targets. Cornwall has volunteered its Mines Rescue Team to assist.

5.0 REFERENCES

Bacon, C. A., 1983. The Mount Christie- Stanhope Coalfield. Department of Mines Tasmania Report 1983/22.

Hughes,T.D., 1954. Future Operations At Stanhope Colliery. Department of Mines Unpublished Reports, 1954.

APPENDIX A

Coal intersections from drill holes in the Mount Christie-Stanhope-Bonneys Plains area*

Drilling by Stanhope mine management

DDH	Date drilled	Location	Depth (m)	Significant coal seam	Comments
1		South-east of old Stanhope workings	35.05	Stanhope Seam	
2			51.35	Nil	Drilled in downfaulted block
3			36.42	Stanhope Seam	
4			36.6	Nil)	
5			-	Nil)	Dolerite *in situ*
6			139.3	Nil)	
7		Bonneys Plains	4.87	-	
8	1954		67.05	-	
9	1962	North and above Stanhope	11.8	Bands only)	Too shallow to intersect
10		workings	-	)	Stanhope Seam
11			26.5	)	
12			22.9	)	
13		Vicinity of New Stanhope	60.9	2.58 m at 54.12 m)	New Stanhope Seam
14		workings	26.97	1.63 m at 8.40 m)	
15			42.1	1.68 m at 22.75 m)	
16			67.0	2.26 m at 64.74 m)	
17			97.7	2.13 m at 92.0 m)	
18			36.6	Nil	
19			19.8	Nil	
20			19.0	1.98 m	
21			37.5	Nil	All in scree
22			37.2	?	-
A	1971	Vicinity of Stanhope	32.0	Nil	Located below the Stanhope
B	-	workings	-	-	Seam outcrop

* compiled from notes made by V.M. Threader in 1972.

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D. FENTON MINE LEASE 1008 P/M 25ha

OLD WORKINGS

STANHOPE

STANHOPE

J. W. STANLEY M.L.

N. & D. FENTON M.L.

285 P M

177 P M

172 P M

314 P M

82 M 39

20

FAULT

DRILL HOLE (Stanhope Mine Management)

APPROXIMATE COAL SUBCROP

5 cm

Scale (1: 3000)

0 100m 200m

E.L 2/82 STANHOPE MINE AREA FIG.1

NUCOA TRANSPORT COMPANY, 009

84-2205

(Base from Dept. of Mines Drg. 3549-48)

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84-2205

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FAULT

● DRILL HOLE (Stanhope Mine Management)

APPROXIMATE COAL SUBCROP

N

0 100m 200m

Scale (1: 3000)

5 cm

E.L 2/82

NEW STANHOPE MINE AREA FIG. 2

AUOCA TRANSPORT COMPANY

(Base from Dept. of Mines Drg. 3549-48)

NEW STANHOPE

No 1 ADIT

No 2 ADIT

D. FENTON MINE LEASE 1008 P/M 25ha