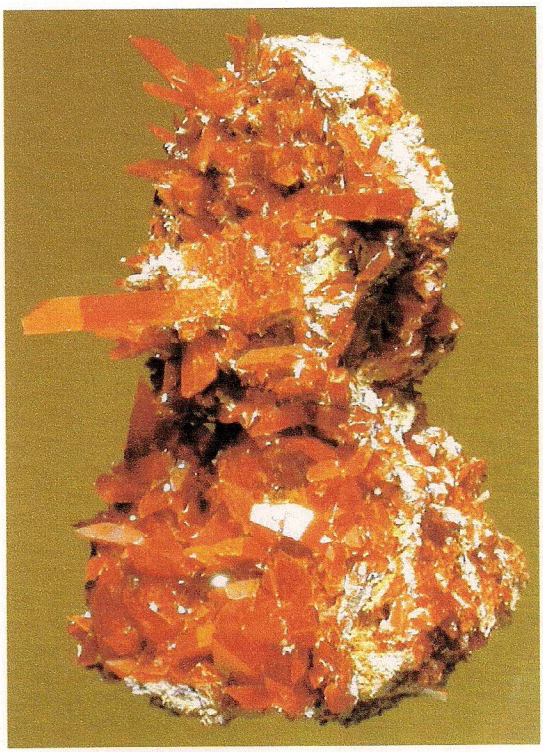


THE ADELAIDE MINE

DUNDAS

ZEEHAN MINING DISTRICT

TASMANIA, AUSTRALIA

OLD SURVEY DATA

1.0 INTRODUCTION

The following text, tabulations and mine plans have been prepared from historical data part on record at the Department of Infrastructure, Energy and Resources in Hobart and from records and survey plans provided by Mr F. Mihajlowits.

Tabulated survey data attributed to Godfrey Chrisp dated 1909 appears to have been undertaken on behalf of Northern Territory Mines of Australia Ltd and it is this tabulated data that appears as subsequent level plans dated 1913. Three A1 size plans may however be of different ages as at least one is attributed to Alex McD Reed, 1913 and may postdate the other two that reflect the work by Chrisp.

i THE 1909 DATA:

This consists of two sheets (A3 Size) of tabulated survey data and two plans (A1 Size) depicting level surveys and sections. The level plans accompanying this report were prepared from those data. All critical measurements were converted from "Imperial" units into "Metric" units. Map scale was set at 1:360 being close to the original scale of 1 inch = 30 feet. It should be noted that no data existed for parts of the Levels 3 and 4 and all of Level 5 survey plots. It is believed that these underground works were completed during 1910, after the completion of the Chrisp survey.

In order to plot those levels data was measured from the old level plans, some errors in transposition may have occurred due to the poor reproduction quality of the original maps. Several errors were picked up in original plots mainly in transposition of distance measurements from tables to plans.

ii THE 1913 DATA:

This consists of one plan (A1 Size) depicting adit openings in relation to lease corner pegs and the main Shaft. Some features of the original plan were indistinct and only those data able to be accurately interpreted were plotted. This work is attributed to Alex McD Reed who was a Government Surveyor of the time.

It has proved impossible to transpose any definitive geological information from the old reports of the period onto these plans. The current workings are located well above the No 1 Level probably not far from the location of No 2 Adit .

In order to provide some geological background the contents of the 1926, Departmental Report on the Dundas Mineral Field as it refers to the Adelaide Mine are repeated here in their entirety.

2.0 DUNDAS MININNG FIELD:

The following is a complete extract taken from:

"The Dundas Mineral Field, A. McIntosh Reid. 1926.
Department of Mines, Tasmania
Geological Survey Bulletin No. 36."

ADELAIDE MINE

The Adelaide Mine, with which may be incorporated the former Red Lead Mine and Anderson's Prospect, lies about 1 mile SE of Dundas township. A former small silver and lead producer, the Adelaide is now a source of the rare mineral crocoite, and specimens for collectors are currently being obtained from this mine.

This area was first taken up by T. Anderson in 1890 as a lease 2302 – 87M and the next year was acquired by the Adelaide Pty. Silver Mining Co. N.L. who commenced driving on the principal lode. By 1893 a good deal of tunnelling had been done without much result so a shaft was sunk to 176 feet and levels opened at 116 feet and 170 feet.

In 1895 the mine closed down. The property was held in 1897 – 1900 by Adelaide Silver Mining Company, 1900 – 01 by C. Kingsley, 1901 – 04 by E. J. Burgess, 1905 – 06 by T. J. Dyson and 1907 – 1910 by Northern Territory Mines of Australia Ltd., but very little work was done. In 1908 a third level was opened at 220 feet and the shaft was sunk to 309 feet. The following year saw the extension of No. 3 level, the opening of the No. 4 level at 271 feet and limited stoping between Nos. 2 and 3 levels. In 1910, No. 5 level was opened and the No. 4 level was extended.

After this, the mine apparently closed down. In 1911 the adjoining property, Anderson's Section, through which passes a continuation of the same lode, was purchased and part of the workings unwatered, but very little further development occurred.

There was some production of ore up until 1915, when again the mine closed. The leases have been held since by the following interests: 7755M, 10 acres, 1917 - 1924, Comet Tribute Prospecting Syndicate N.L.; 9827M, 10 acres, 1926 – 1929, South Comet Lead and Zinc Mines N.L.; and 9827M, 10 acres, 1929 – 1930, J. McDonald and W. Hutchins; 47M / 57, 10 acres, since 1957, A. R. Smith.

GEOLOGY

The striking surface gossans which led to the development of the Adelaide and Anderson's Lode lie about the contact of an ultrabasic intrusion, now almost completely serpentinized, into the Oonah Quartzite and Slate.

OREBODIES

Like many of the orebodies of the Dundas Field, these show a very prominent surface expression of gossan and oxidation extends several hundred feet below the surface. They resemble the Comet and Maestries lodes except for the development of large masses of crocoite due to the proximity of the ultrabasic intrusion.

According to Montgomery (1890) there are three sub-parallel lodes each about 30 feet wide and containing small ore-shoots which lie at an angle to the main strike. Reid (1925a) stated that the lodes are 20 to 40 feet in width and over 400 feet in length, striking N 15° W and dipping east at 50° – 65°. In the upper part ferromanganese gossan and crocoite are the chief components, but melancroite, cerussite, dundasite, phosgenite, minium and bindheimite are not uncommon, while below the zone of oxidation the ore consists of galena, sphalerite, pyrite and jamesonite set in a gangue of mangano-siderite, associated with dolomite and serpentinite.

The lower levels are in primary ore, which is of low average grade.

WORKINGS

Apart from three short adits, the mine was worked from a main shaft of about 300 feet. Levels were opened at 117, 171, 220 and 271 feet. They were driven on the lode and ran in a general southerly direction from the shaft, the longest being No. 3 level, about 500 feet long.

The lode was stoped between Nos. 3 and 1 levels, close to the shaft and a little above No. 1 level.

Table 42A – Production – Adelaide Mine

Mine	Ore (Tons)	Lead (Tons)	Silver (Ozs)
Adelaide			
(Galena)	2,959	1,479	147,900
(Flux)	2,879	144	14,400
Red lead (Flux)	2,498	125	12,500
Anderson's Lode (Galena)	225	112	11,200
		1,860	186,000

Notes:-

1 *Lead and Silver contents estimated on the basis of an average of 50% lead and 50 ounces silver per ton for galena and 5% lead and 5 ounces silver per ton for flux.*

2 *Since 1957, A. R. Smith has sold small quantities of crocoite as collectors' specimens.*

CONCLUSIONS

These orebodies are very wide and persistent at the surface and although they are oxidized to a greater depth than normal, there are enrichments in the form of cross lenses of galena. However, the grade apparently deteriorated at depth and apart from a limited output of crocoite, it would appear that there are no present prospects of re-developing the orebodies.

3.0 GENERAL COMMENTS

Replotting of old data has highlighted some aspects of the setting at the Adelaide Mine, specifically:

a Reid (1926) and previous workers make specific mention of three lodes in outcrop. This appears to be supported by the original development of three adits (See "All Adit Plan"). Evidence suggests however that at least one of those lodes did not conform to the quoted N 15° W strike.

This is supported in the plans. The Main Adit reported as being developed on a gossan lode was initially worked in 105° to 115° M direction ,that is N 65 – 75° W , for a distance of about 30 metres at which point the driving direction changed dramatically to the reported N 15° W strike direction.

This feature is also reflected in the plots of No. 1 level where No. 1 and 2 Drives appear to be developed on a down dip extension of the Main Adit lode and to a lesser extent on the No. 2 Level, No. 2 Drive.

b The main workings developed from the Main Shaft appear to have been developed on the N 15° W (345° M) lode first intersected at the 30 metre point in the Main Adit. These can be traced from the Main Adit down through the No.1, No. 2 to No. 3 Levels and on to the No. 4 Level.

Unfortunately it is unclear why the No. 3, 4 and 5 Levels were initially driven in almost a north south direction form the shaft however at a point about 30 metres south to south-east of the shaft they then develop along the original lode strike. Evidence suggest, that a lode was intersected that trends north – south, this is reflected in the development of workings in a northwards direction on Levels No. 1 and 4.

The small lateral distance between these development drives suggests a steeply dipping body not conforming to the 50° to 60° south west dip of the other bodies.

c Adit No 2 appears to have been developed at about the same level as the Main Shaft and thus on a second of the three lodes, the strike of this Drive conforms to the N 15° W lode direction.

d Adit No 1 strikes north – south and appears to mirror thte strike of the drives north from the line of the shaft.

e The Intermediate Level appears to have been driven on the main lode to provide ore haulage from stoping between No. 3 and No. 1 Levels.

f The Western Adit is an unknown, it does not appear to be driven on a lode direction that is reflected in the main workings and may in fact be driven on a completely unrelated feature.

There is evidence to suggest that while the original records indicate the Adelaide Mine deposits consisted of three 30 foot wide gossan lodes other mineralised features also exist. Specifically these are:

- A Lode that trends south eastwards at between 105° and 115° M first encountered in the Main Adit and thence in the No 1 and 2 Levels.
- This lode appears to have intersected a second lode or have been skewed by faulting to the reported lode direction of 165° M. This is the main lode that was developed from the shaft, the lode appears to dip 50° to 60° south west.
- An opening was made on a second 165° M striking lode in the No 2 Adit. This lode does not appear to have been intersected in any of the drives from the Main Shaft.
- A third lode striking north-south appears to have been intersected on the No. 1, No. 3, No 4 and possibly the No. 5 Levels, this lode dips near vertical and may have been traced southwards in the extension of No. 3 Level workings.
- Many of the cross-cuts and short offset drives may have been developed on cross-cutting high grade galena veins, the same veins as mentioned by Montgomery in his reports of the 1890's.

Recent observations by the author in the current workings indicate that this development is just below the level of the collar of the Main Shaft and may well closely mirror the No. 2 Adit. The current opening accesses old stoping above the drive. The current drive is well above the No. 1 level workings and still well above the stoping from that level.

The reported 30 foot wide gossan zones are known to contain rich shoots of crocoite ore that probably relate to high grade galena shoots developed at the intersection of the main gossan lodes with crosscutting high grade galena lodes. The best crocoite of recent time has been extracted from one such shoot.

Since the work of Montgomery and Reid specimen extraction has added to the list of minerals reported from the mine. The upper levels represented by the main Adit and current workings down to perhaps as far as the No. 4 level contain in the main oxidized material. The component minerals vary apparently dependent on which lode the workings intersect.

The Main Adit (upper adit) is reported to contain abundant dundasite, crocoite and superb specimens of chrome cerussite. Also reported are bindheimite, pyromorphite (yellow and green) embolite, mimetite, specimens of bladed, brown siderite (Tomahawk Ore), cerussite and phosgenite.

The current workings have yielded superb blood-red terminated crocoite specimens and where patches and pods of un-oxidized galena are found, cerussite, anglesite and phosgenite have been recovered.

4.0 RECOMMENDATIONS:

While the old mapping is an invaluable guide as to the extent of the workings and the quantity of material produced from those workings there is a requirement to relate those data to current mine openings. Specifically it is recommended that:

i The current site be re-surveyed and where possible all old openings picked up, accessed and mapped;

and

ii All openings be geologically mapped to determine controlling structure and position if possible of rich shoots.

5.0 TABULATED SURVEY DATA

After Chrisp (1909) and Reed (1913)

ADELAIDE MINE

SURVEY FILE - MARCH 13TH 1909 Godfrey Chrisp

STATION	MAG	DIST m	BEARING	N ft	S ft	E ft	W ft	D. LONGT N ft	D. LONGT S ft	DIST LONGT E ft	DIST LONGT W ft
No. 1 LEVEL - No. 1 DRIVE											
A - B	89° 23'	381.0	N89° 23'E	13.45		1250		13.45		1250	
B - C	151° 00'	14.6	S29° 00'E		41.92	23.23			28.47	1273.23	
C - 1	61° 00'	2.2	N61° 00'E	3.43		6.19			25.04	1279.42	
1 - 2	61° 00'	0.8	N61° 00'E	1.33		2.4			23.71	1281.82	
2 - 3	134° 09'	3.1	S45° 51'E		6.5	6.69			30.21	1288.51	
3 - 3A	4° 52'	9.5	N4° 52'E	31.06		2.64		0.85		1291.15	
3 - 4	106° 38'	11.0	S73° 22'E		10.38	34.73			40.59	1323.24	
4 - 5	82° 29'	4.5	N82° 29'E	1.93		14.62			38.66	1337.86	
5 - 6	327° 15'	6.2	N32° 45'W	17.24			11.09		21.42	1326.77	
5 - 7	37° 00'	4.1	N37° 00'E	10.85		8.17			27.81	1346.03	
5 - 8	143° 26'	11.9	S36° 34'E		31.32	23.23			69.98	1361.09	
8 - 9	137° 35'	7.8	S42° 25'E		19.01	17.37			88.99	1378.46	
9 - 10	160° 41'	9.2	S19° 19'E		28.62	10.03			117.61	1388.49	
10 - 11	135° 10'	5.1	S44° 50'E		11.93	11.87			129.54	1400.36	
No. 1 LEVEL - No. 2 DRIVE											
3 - 4	227° 50'	6.6	S47° 50'W		14.49		16.00		14.49		16.00
4 - 5	322° 10'	4.8	N37°50'W	12.44			9.66		2.05		25.66
5 - 6	299° 52'	5.5	N60° 08'W	8.92			15.54	6.87			41.2
6 - 7	270° 28'	5.7	N89° 32'W	0.15			18.75	7.02			59.95
No. 2 LEVEL - No. 1 DRIVE											
1 - 2	61° 00'	1.9	N61° 00'E	2.95		5.32		2.95		5.32	
2 - 3	168° 22'	4.5	S11° 38'E		14.45	2.97			11.5	8.29	
3 - 4	170° 50'	4.8	S9° 10'E		15.63	2.52			27.13	10.81	
4 - 5	209° 00'	4.3	S29° 00'W		12.24		6.79		39.37	4.02	
4 - 6	143° 49'	16.8	S36° 11'E		44.39	32.47			71.52	43.28	
6 - 7	149° 57'	13.3	S30° 03'E		37.72	37.82			109.24	65.1	
No. 2 LEVEL - No. 2 DRIVE											
2 - 3	112° 40'	4.1	S67° 20'E		5.14	12.3			5.14	12.3	
3 - 4	78° 09'	8.8	N78° 09'E	5.95		28.38		0.85		40.68	
4 - 5	65° 42'	8.8	N65° 42'E	11.93		26.43		12.74		67.11	
5 - 6	63° 31'	14.0	N65° 31'E	20.52		41.17		33.26		108.28	
6 - 7	340°00'	7.3	N20° 00'W	22.55			8.21	55.81		100.07	

ADELAIDE MINE

SURVEY FILE - MARCH 13TH 1909 Godfrey Chrisp

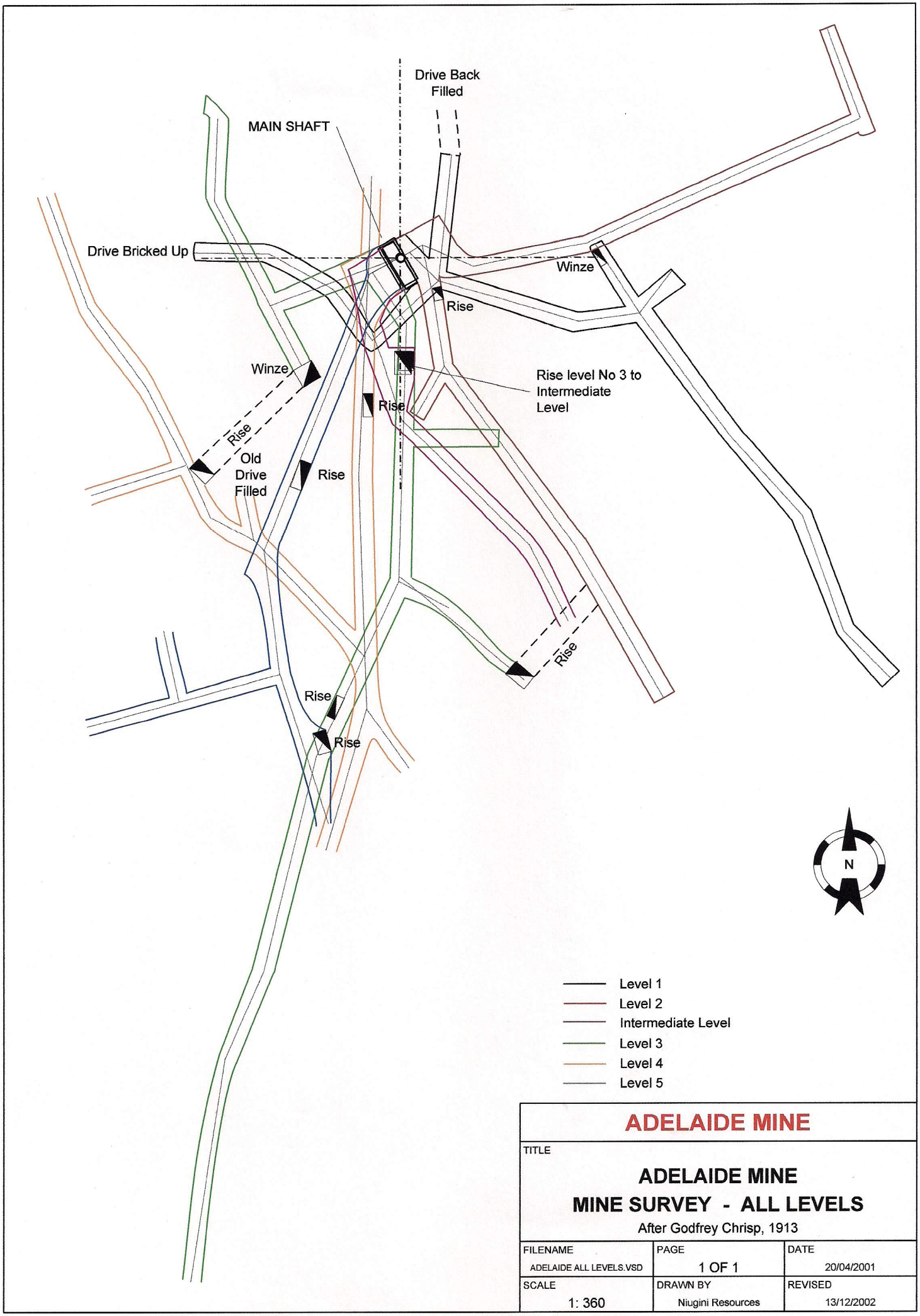
STATION	MAG	DIST m	BEARING	N ft	S ft	E ft	W ft	D. LONGT N ft	D. LONGT S ft	DIST LONGT E ft	DIST LONGT W ft
No. 3 LEVEL - No. 1 DRIVE											
1 - 2	241° 00'	2.4	S61° 00'W		3.88		7.00		3.88		7.00
2 - 3	146° 11'	4.6	S33° 49'E		12.45	8.36			16.33	1.36	
3 - 3A	181° 12'	8.4	S1° 12'W		27.50		0.57		43.83		0.79
3A - 4	181° 12'	11.1	S1° 12'W		36.50		0.76		80.33		1.55
3A - 3B	91° 12'	7.2	S88° 48'E		0.49	23.5			44.32	22.71	
4 - 5	117° 00'	4.3	S63° 00'E		6.36	12.47			86.69	10.92	
4 - 6	205° 13'	14.6	S25° 15'W		43.41		20.47		123.74		22.02
6 - 7	194° 00'	16.8	S14° 00'W		53.53		13.35		177.27		35.37
7 - 8	204° 00'	7.2	S24° 00'W		21.47		9.56		198.74		44.93
8 - 9	188° 29'	17.2	S8° 29'W		55.88		8.34		254.62		53.27
9 - 10	184° 58'	8.6	S4° 58'W		28.22		2.45		282.84		55.72
10 - 11	179° 20'	19.9	S0° 40'E		65.33	0.76			348.17		54.96
11 - 12	193° 42'	11.2	S13° 42'W		35.63		8.69		383.7		63.65
12 - 13	185° 28'	28.5	S5° 28'W		93.00		8.90		476.7		72.55
13 - 14	169° 53'	6.7	S10° 07'E		21.44	3.83			487.14		68.72
No. 4 LEVEL - No. 2 DRIVE **Measured from old plan, ? Accuracy**											
1 - 15	249° 25'	10.5									
15 - 16	152° 15'	5.0									
15 - 17	239° 30'	3.6									
15 - 18	332° 00'	9.0									
18 - 19	2° 00'	5.9									
No. 4 LEVEL - No. 1 DRIVE											
1 - 2	241° 00'	2.8	S61° 0 0'W		4.45		8.02		4.45	10.59	8.02
2 - 3	182° 57'	15.2	S2° 57'W		49.93		2.57		54.38		25.66
3 - 4	178° 02'	13.7									
4 - 5	178° 21'	3.9									
5 - 6	145o 00'	5.4									
5 - 7	196° 25'	11.1									
4 - 9	316° 30'	12.2									
9 - drive	349° 00'	3.6									
9 - 10	298° 00'	3.6									
10 - 13	335° 00'	4.3									
13 - drive	253° 00'	7.5									
13 - 11	333° 00'	6 8									
11 - 12	322° 58'	7.2									
12 - end	340° 00'	9.1									
2 - drive	1° 37'	6.1									

ADELAIDE MINE

SURVEY FILE - Adit Pick-up Alex Mc D Reed Feb 1913

STATION	MAG	DIST m	BEARING	N ft	S ft	E ft	W ft	D. LONGT N ft	D. LONGT S ft	DIST LONGT E ft	DIST LONGT W ft
No. 5 LEVEL - No. 1 DRIVE											
S - 1	241° 00'	2.7									
1 - 2	197° 00'	4.0									
2 - 3	201° 30'	18.4									
3 - 4	172° 51'	9.4									
4 - drive	161° 50'	11.9									
4 - 5	254° 40'	7.9									
5 - 6	254° 40'	7.2									
5 - 7	348° 00'	5.4									
ADIT SURVEY											
Cnr Peg											
-2	322° 43'	20.11									
2 - A	226° 35'	23.73									
A - 3	118° 54'	16.54									
3 - 4	69° 55'	14.58									
MAIN ADIT											
4 - 5	111° 26'	7.92									
5 - 6	127° 46'	6.5									
6 - 7	102° 08'	7.19									
7 - 8	106° 03'	5.64									
8 - 9	95° 28'	6.81									
9 - 10	165° 15'	25.26									
10 - 11	158° 55'	9.65									
11 - 12	165° 26'	6.01									
12 - 13	150° 11'	7.75									
to NE Shaft											
- A	142° 00'	14.33									
No 2 ADIT											
A - 14	161° 10'	22.33									
14 - 15	153° 24'	32.59									
No 1 ADIT											
A - 16	176° 25'	43.7									
16 - 17	181° 06'	14.02									

6.0 SURVEY PLOTS



ADELAIDE MINE

TITLE

ADELAIDE MINE
MINE SURVEY - ALL LEVELS

After Godfrey Chrisp, 1913

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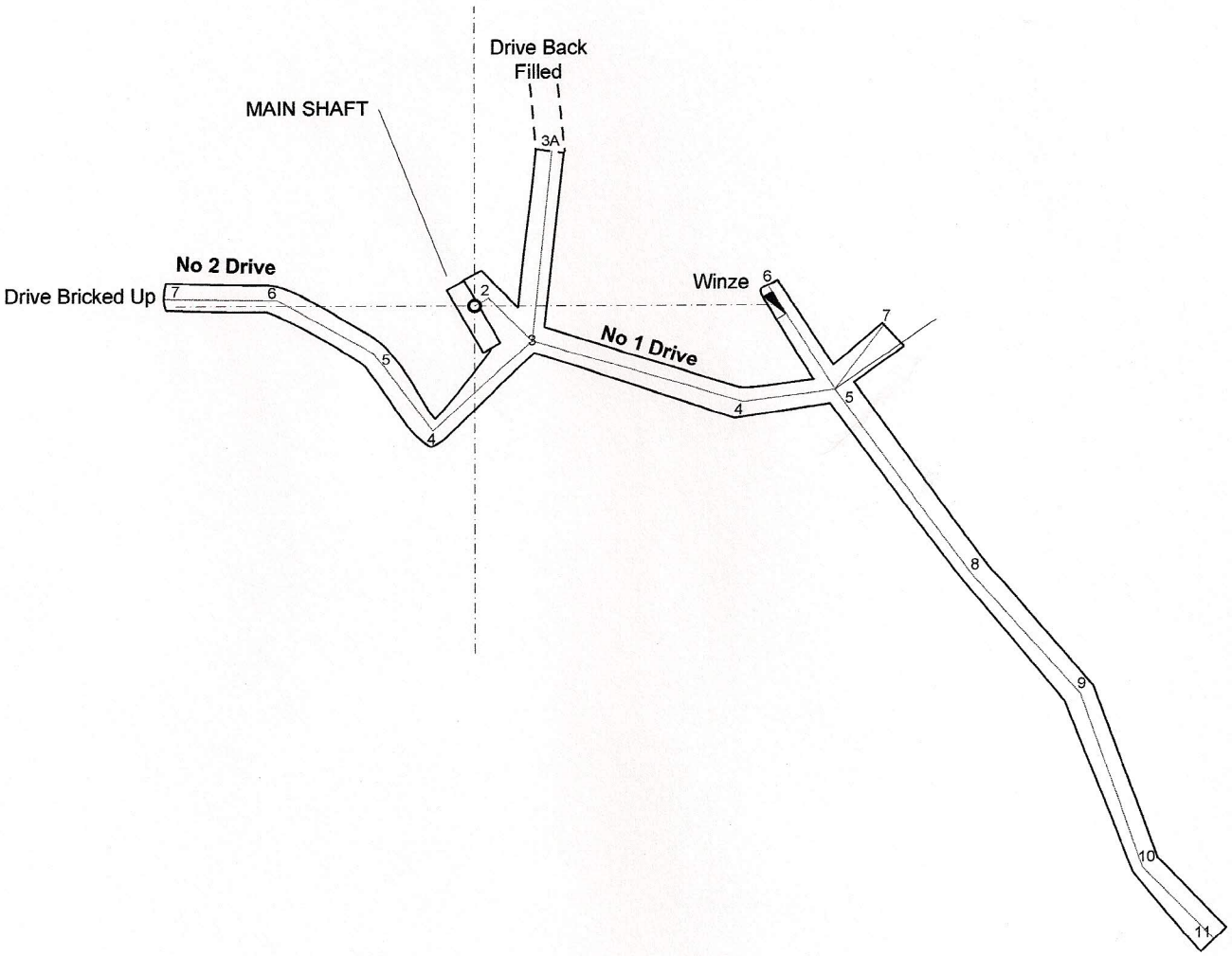

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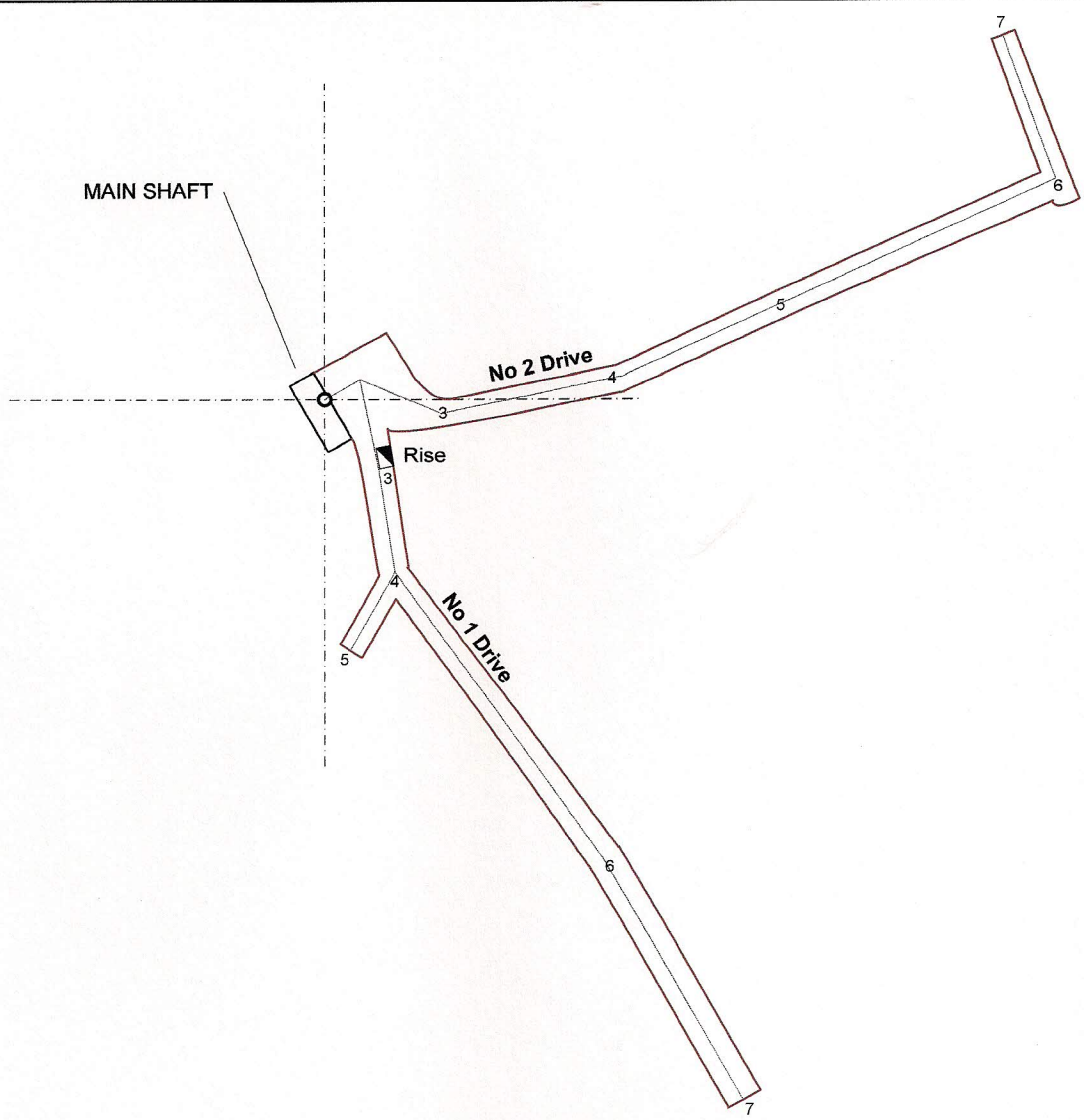

ADELAIDE MINE

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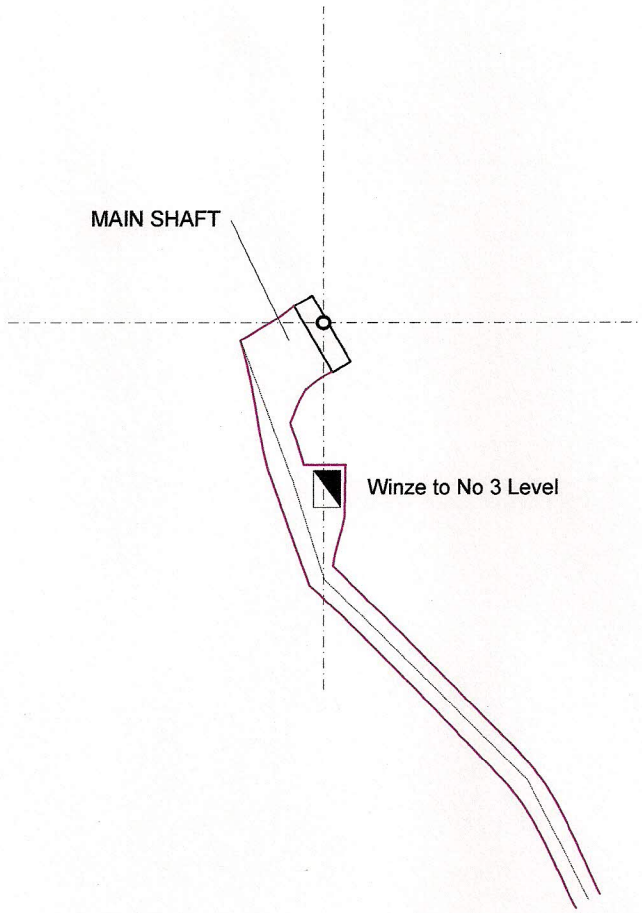

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ADELAIDE MINE

TITLE

ADELAIDE MINE
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After Godfrey Chrisp, 1913

FILENAME	PAGE	DATE
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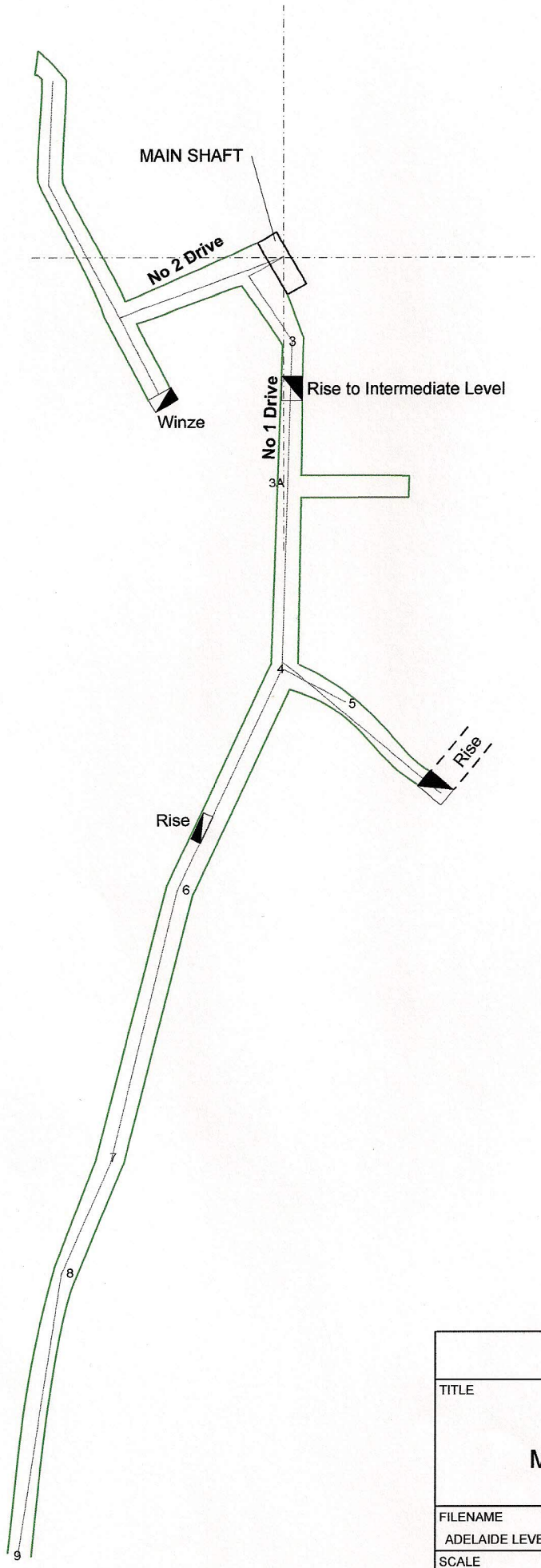

ADELAIDE MINE

TITLE

ADELAIDE MINE
MINE SURVEY - LEVEL 3

After Godfrey Chrisp, 1913

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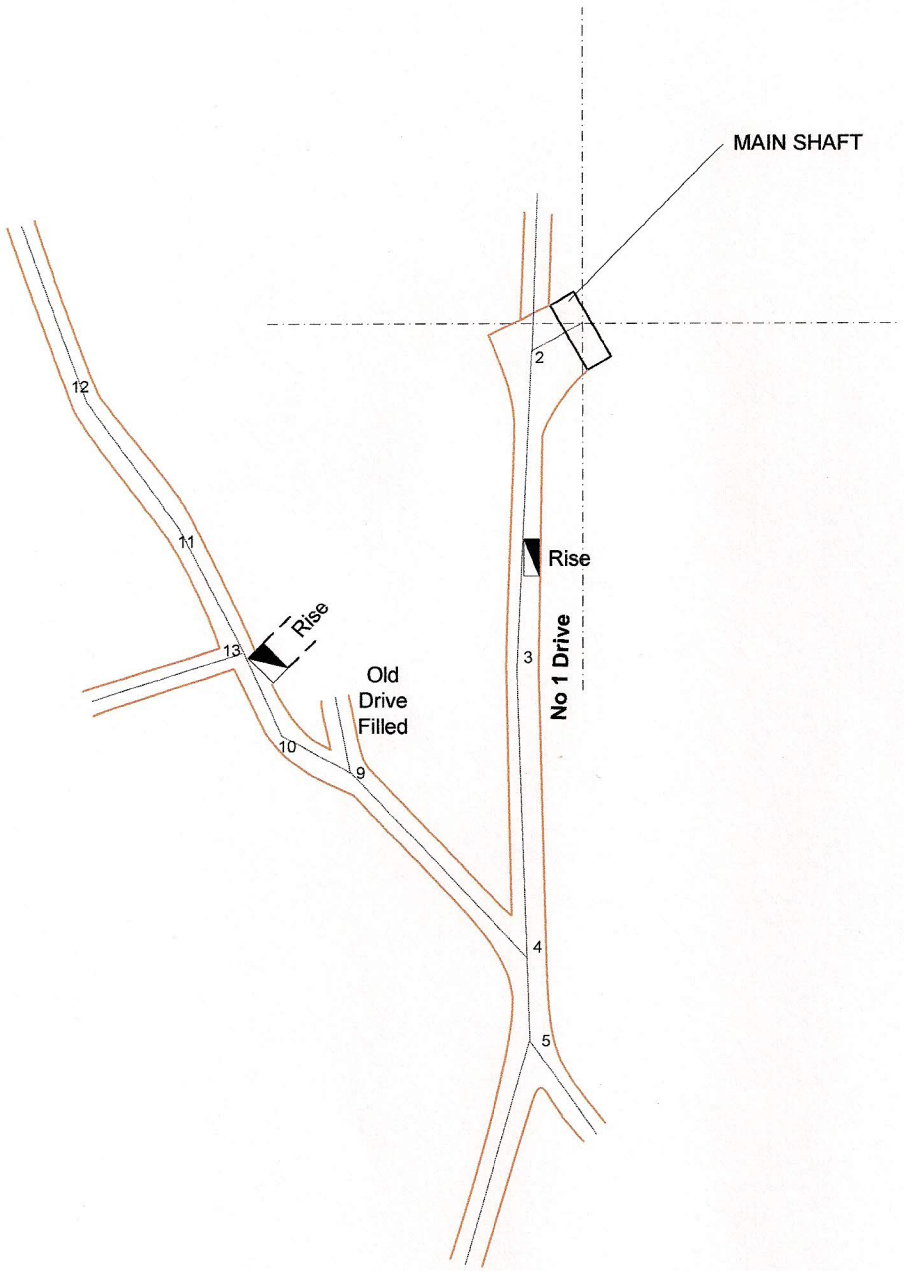

ADELAIDE MINE

TITLE

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MINE SURVEY - LEVEL 4

After Godfrey Chrisp, 1913

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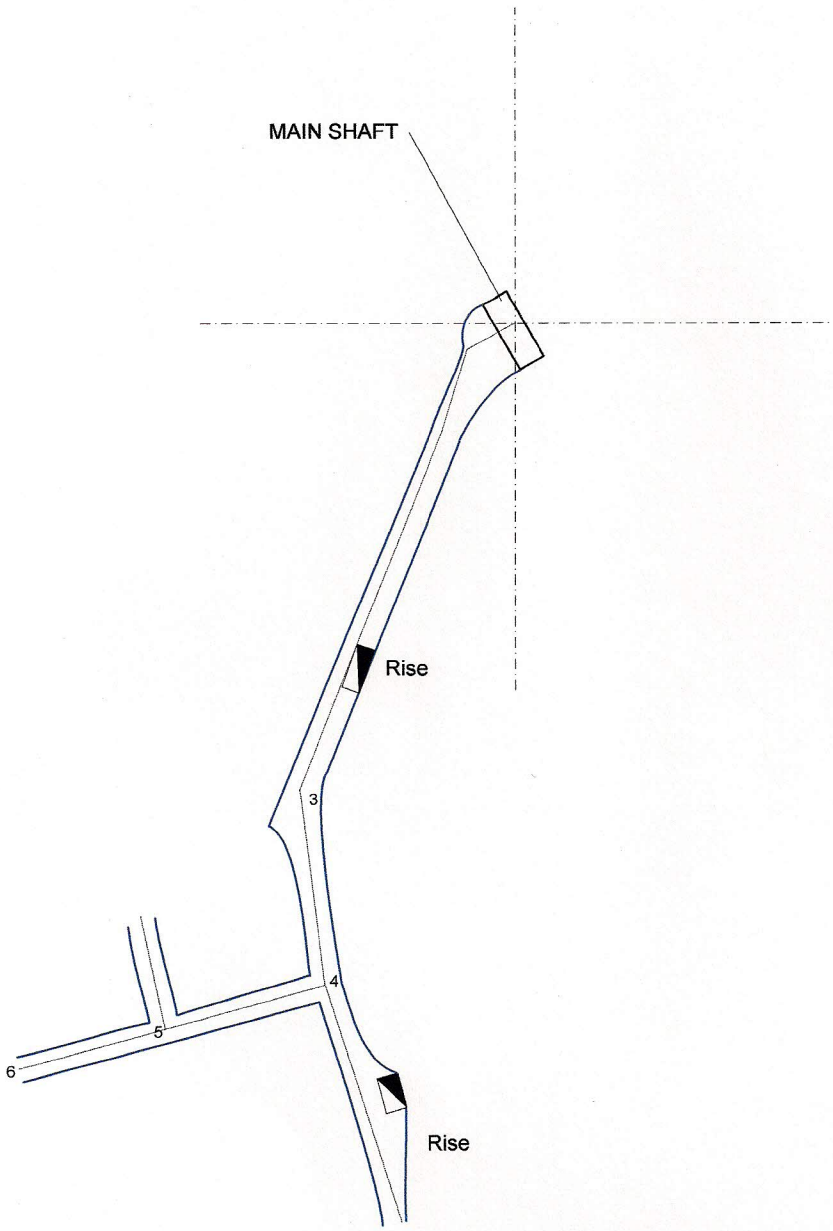

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ADELAIDE MINE

TITLE

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MINE SURVEY - LEVEL 5

After Godfrey Chrisp, 1913

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