1895/1927

1927
1664
1617
1359
1182

# STAR

Coffin

Office of Mines,

Melbourne August 25th 1893.

Alfred W. Howitt, Esq., F.G.S.

Secretary for Mines &c.

Melbourne.

Sir,

I have the honor to report having visited the Redcastle Goldfield in accordance with your instructions to that effect, and beg to submit the following report partly from personal observation and partly from information, which I have reason to believe is reliable.

Redcastle proper is essentially a reefing field for though famous in that respect some thirty years ago very few of the gullies, even in the immediate vicinity of rich reefs, appear to have yielded much alluvial gold. The reefs themselves by all accounts yielded richly when worked by co-operative parties; the great length of old workings on the several lines of reef, and the extensive stoping visible from surface downwards testify to this, but it appears that, as on many other fields, the mines were abandoned when water was met with or when interruptions to the downward continuance of rich stone were encountered, and for more than twenty years no proper efforts were made to explore the lodes below the water level. It is a somewhat remarkable fact that the present commencement of a revival of the field is in a large measure due to the enterprise of residents in South Australia induced by the representations of Mr Charles Nagel, a miner of long experience in the district , now Manager of the Redcastle G. M. Company, whose mine is the deepest in the vicinity and of which I was able to make an underground inspection. The main shaft of the Redcastle G.M. Company is on the line of reef known as the Welcome or Clarke's reef which has here been closely worked from surface to about 250 feet for nearly half a mile in length, though with occasional blank intervals it can be traced by the old workings for two or three miles.

In

In the workings adjacent to the main shaft it is stated that yields up to as much as 42 ozs. of gold per ton were obtained from the surface to water level. The lode has a bearing of about N.W. by N. and S.E. by S. with an underlay to the south westward of about 1 to 5.

At about 250 feet I was shown an old level where the very rich stone worked in former days suddenly ceased just where a well defined wall, having a north-easterly underlay, met the lode. Below this the lode was disturbed and contained little stone for a few feet, but formed again and continued on its S.W. underlay, but not so rich as above, nor- so it is stated- carrying the same character of stone or gold.

On the north-eastern side the strata are disturbed and broken but contain quartz veins trending north-eastward and containing a little gold. At the 275 feet level the lode, still underlying S.W. has been followed for 110 feet north-westward. The formation is about 4 feet wide between somewhat uneven walls; the thickest stone is on the hanging wall and varies from two or three inches to a foot in thickness. The stone on the hanging wall is thinner, but on each wall the quartz is very rich in gold- every piece knocked out in my presence from either side containing fine gold well disseminated not only in the veiny portions but in the solid stone itself. The general appearance of the stone is most favorable, well laminated and mineralised , and, judging from what I saw, it should , if crushed by itself, yield several ounces to the ton. There is some antimony in the stone that may render treatment more difficult. A crushing now being put through at Bendigo was taken from the whole thicknessof the lode formation and should afford a fair test. In this level I observed a smooth wall passing away eastward, forming a sort of small saddle with the lode and carrying a thin vein of quartz rich in gold.

The deepest level is at 352 feet and here the lode has been followed about 90 feet similar in character to what it is at the 275 feet level.

Considering the amount of gold bearing stone actually in sight and the quantity likely to be available by driving in either direc-

tion

tion along the lode it appears absolute ... no longer delay the erection of a battery with which the mine could be speedily made self supporting and very likely dividend paying. Crosscutting eastward is also to be recommended in order to find out whether stone makes again in that direction on the easterly underlying wall above referred to.

It is noticeable that all the water in the mine comes from the disturbed ground at the 250 feet level, the lowest level being dry.

About 400 feet easterly from the Welcome is the Mountain Maid line of reef, also worked for a long distance and stated to have yielded up to 3 ozs. per ton for 3 feet in width down to water level. This reef underlies south-westerly and is stated to have contained more antimony than the Welcome. Between the Welcome and the Mountain Maid is a small line of reef underlying north-easterly said to have yielded from 1 oz. to 3 ozs. per ton.

Adjoining and north-west of the Redcastle Company's line is the ground taken up by the Redcastle Extended Company containing the extensions of the same reefs closely worked along the surface. The stone here is stated to have yielded up to 12 ozs. per ton and to have contained much antimony.

Eastward of the Mountain Maid line here, is the Mary Ann, next the Leviathan and another reef some 200 feet further eastward. All of these have been closely worked and are stated to have yielded well.

Next to the Redcastle Extended is the ground of the Eureka Company containing the extensions of the same lines of reef all worked along the surface at short intervals. There are other lines of reef which have been worked both to the eastward and westward of those mentioned.

About a mile eastward from Redcastle is the Union Gold and Antimony Mine, a recent discovery. The shaft is down about 100 feet and the antimony has been traced down from surface in pipe shoots up to as much as 12 feet long and 2 feet thick. The antimony ~~ore~~ ore(stibnite) is very pure and contains a considerable quantity of visible gold.

Three

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Three

Three miles eastward from Redcastle is the Curly Dog Reef- worked for about a mile in length, the gully alongside of it having yielded a large amount of alluvial gold. This reef, which was abandoned on account of water about 30 years ago has been worked for nearly a mile in length and is reported to have yielded up to 10 ozs. per ton and up to 5 ozs. from a thickness of 4 feet. It is stated that 200 feet was the greatest depth reached and that auriferous stone was left underfoot. The old stopes show an easterly underlay.

The Why Not Mine, which I did not visit, is said to be on the line of extension of this reef and to contain a formation of Bullock and Quartz veins 12 feet thick from which bulk crushings of about 1 oz. per ton have been obtained.

With the exception of the Redcastle Mine, I was not able to explore the underground workings of the various abandoned lines of reef above described, no work being in actual progress on them, and the statements as to yields- given me by Mr Wapel- were obtained by him from the owner of the old battery.

In the slight mention of Redcastle Reefs made by R. Brough Smyth in " gold fields and mineral districts" yields of 3 ozs. and 5 ozs. per ton are recorded.

I am quite aware how necessary it is to be cautious in accepting hearsay evidence as to former yields, causes of abandonment, of rich reefs, and gold bearing stone being left underfoot &c.

At the same time it is impossible to see such long persistent lines of reef as those of Redcastle, evidently closely worked at a time when small fields could not pay, without coming to the conclusion that the returns must have been good, and that as has been done in other districts, a little further exploration will show that they continue downward. It seems incredible that such a field should have been left so long neglected, but its somewhat remote position is no doubt a principal cause, and it is not unreasonable to expect that the present revival of mining throughout the country will, in a marked degree, affect the district under notice and bring it into prominence.

I have the honor to be, &c
REGINALD A. F. MURRAY
Govt. Geologist.

Redcastle S95/1182 6/3/95

Parliament House

North Terrace, Adelaide

Mar.2nd 1895.

To

The Honorable,

The Minister of Mines,

Melbourne.

Dear Sir,

At the request of Mr Henry C.".Ayliffe of this City, Solicitor, you instructed your Geologist |R.A.F.Murray Esq.F.G.S| to visit and report to him on the Redcastle Mine and other mines in the locality of Redcastle, and Mr Ayliffe submitted to my Board a copy of the said report so far as it related to the Redcastle Mine. The report is dated the 25th day of August 1893. In such report Mr Murray when speaking of our mine says |inter alia|-

"It is a somewhat remarkable fact that the present commencement "of a revival of the field is in a large measure due to the "enterprise of residents in South Australia induced by the "representation of Mr Charles Nagel, a miner of long experience "in the district, now Manager for the Redcastle Gold Mining "Company whose mine is the deepest in the vicinity and of which "I was able to make an underground inspection. The main shaft "of the Redcastle G.M.Co. is on the line of reef known as the "Welcome or Clarke's reef, which has been here closely worked "from surface to about 250 feet for nearly half a mile in "length, though with occasional blank intervals it can be "traced by the old workings for 2 or 3 miles.

"In the workings adjacent to the main shaft it is stated "that yields up to as much as 42 ozs. of gold per ton were "obtained from the surface to water level. The lode has a "bearing of about North west by North and South east by South "with an underlay to the South Westward of about 1 in 5.

6

W Murray
Please type up
Minutes every
report & respond
& respond to
Mr Wilson's letter

E.T. Hayter
D.R.
entd
5/3/95

Noted. Will arrange accordingly
RJ4M
6/3/95

Can W Murray get made a note as to
Renewal each week

Report herewith
RJ4M
12/3/95

th
12.3.95

"At about 250 feet I was shown an old level where the very "rich stone worked in former days suddenly ceased just where a "well defined wall having a North easterly underlay met the "lode. Below this the lode was disturbed and contained little "stone for a few feet but formed again and continued on its "South west underlay but not so rich as above nor - it is stated "- carrying the same character of stone or gold.

"On the North Eastern side the strata are disturbed and "broken but contain quartz veins trending North Eastwards and "contain a little gold. At the 275 feet level the lode still "underlying South West has been followed for 110 feet North "Westward. The formation is about four feet wide between "somewhat uneven walls: the thickest stone is on the hanging "wall and varies from 2 to 3 inches to a foot in thickness.

"The stone on the hanging wall is thinner but on each wall "the quartz is very rich in gold every piece knocked out in my "presence from either side containing fine gold well disseminated "not only in the seamy portions but in the solid stone itself. "The general appearance of the stone is most favourable, well "laminated and mineralized and judging from what I saw should "if crushed by itself yield several ounces to the ton. There is "some antimony in the stone that may render treatment more "difficult.A crushing now being put through at Bendigo was taken "from the whole thickness of the lode formation and should "afford a fair test. In this level I observed a smooth wall "passing away eastward forming a sort of small saddle with the "lode and carrying a thin vein of quartz rich in gold.

"The deepest level is at 352 feet and here the lode has been "followed about 90 feet similar in character to what it is at "the 275 feet level.

"Considering the amount of gold-bearing quartz in sight and "the quantity likely to be available by driving in either "direction along the lode it appears absolute folly to longer "delay the erection of a battery with which the mine could be

"speedily made self-supporting and very likely dividend paying.
"Crosscutting eastward is also to be recommended in order to
"find out whether stone makes again in that direction on the
"East of the underlying wall above referred to.

"It is noticeable that all the water in the mine comes from
"the disturbed ground at the 250 feet level, the lowest level
"being dry".

I have the honor to inform you that subsequent to this report and chiefly influenced thereby the Board of which I am a member erected a battery with the view of crushing the stone from the lode at the 275 feet level and other stone recently discovered but it was found that there was no payable stone in the 275 foot level. I am visiting the Mine as Director and shall be exceedingly obliged if Mr.Murray can accompany me to make a close inspection of it. I may state that some time back I inspected the Mine and came to the conclusion that the lode has been cut by a fault. I need hardly point out to you that if such is the case and the lode is picked up again it will be the key to open up a large mining district.

I shall be in Melbourne on Thursday next and would be obliged if you could arrange for me to meet Mr.Murray on that day with a view to making an appointment with him to visit the mine on Friday or Saturday. I have to attend a meeting of the Broken Hill Central Company at eleven on Thursday but will be free after 1 p.m. Kindly send your reply to me c|o

W.Stawell Esq.,
Bank Place
Collins St., MELBOURNE.

Yours faithfully,

C.W.Bacon

P.S. If I can be arranged I should like Mr Murray to go up to Healesville with me on Thursday evening

9

Redcastle

Mr Mann

Could any more
advantage for Bundoja
undergoing treatment
Mr Allen at Kindon
— Query? Mr Tubes.

2.3.91

So Mr Shirley's recommendation that
Fodder & Water p D Tombuliso to make
Rapid survey.
I think that if Mr Allen
is to have assistance it should be in the
way suggested by himself — by that young
Barapumatha be employed as a trainee at
low wage — say 5/- per day.

5/3/95

10

201 – 204 — BC – 2 – 4"
241 — BC 14' —
275 — BC 4. 2
2902 — — BC 2 —
22 . 6"

11

x attached

Whereas so many trainees left I was unable to recommend any further additions to their number. However if Messrs Forbes & Waters can be spared for field work I shall be glad to be informed at their convenience

Ac
7.8.95

Mr Allan and his assistant Mr Barapanath certainly require someone as laborer, chainman &c & failing the appointment of young Barapanath Forbes or Waters, or both, might be put on. I have in view however some underground work at Redcastle on which Forbes and Waters showed to be employed for a week before going elsewhere. I mentioned this work orally to the Secretary this morning

Ac
11/8/95

Instruct Mr Forbes D make a survey of the Redcastle mine taking note and marking sections of all the features therein. The workings are not extensive so a compass will suffice. Mr Boyd manager will afford facilities, but arrangements should be made D have the water out of the lowest level

D F M
14/3/95 B 12.3.95

12/3/95

13

NOTE.—All communications on Departmental business to be addressed to the Secretary.

Department of Mines,

CORR. No.

M.D. 9 1

Melbourne, 4 - 12 - 1895

MEMORANDUM.

Dear Murray.

Re Forbes. I intend to recommend that Forbes & Walters now with him go to Tenterfield to make survey there. After completion of work at Tenterfield they can go to Grey Town

James Stirling

The Secretary.

Messrs Forbes and Walters are now engaged connecting the township of Tenterfield with the Surveys at Grey Town — The work should be completed in three months. As Mr Forbes desires the Survey of the Redcastle Estate at once — Mr Forbes from his knowledge and experience at Bendigo being well qualified to perform same — Mr Walters should accompany him to Redcastle which can be reached in one day from Grey Town —

18.3.96

James Stirling

Redcastle

Office of Mines

Melbourne March 12th 1895.

S95/1664 Redcastle 30/3/95.

Memorandum for the Secretary

I beg to report having visited and inspected the Redcastle Gold mine at Redcastle in Company with Mr Hawker M.P representing the directorate of the Redcastle company which owns and works the mine.

The reef is known as Clarkes reef and was worked in early times for some distance along the surface and down to between 200 and 300 feet with good results. I was informed that as much as 42 ounces of gold per ton was obtained and a former shareholder now resident on the field stated that he knew of various crushings yielding from 12 ounces to 22 ounces per ton the latter yield being from a parcel of 12½ tons. The ground has been stoped out down to No 4 level at 200 feet and above that the old workings are difficult and dangerous of exploration.

The reef however which has a north westerly strike has been well defined and persistent on its westerly underlay down to the No 4 level where it is close to the shaft and is met by what is known as the Jug vein having an easterly underlay. At the intersection of the two at No 4 level the reef turns with the Jug vein for a few feet but appears to regain its underlay though it becomes smaller and less distinct. Auriferous stone has however been found making Eastward with the Jug vein and a quantity has been stoped and

Leader 6 Jno. Newton 13.3.95

Rpt 21/3/95 AC

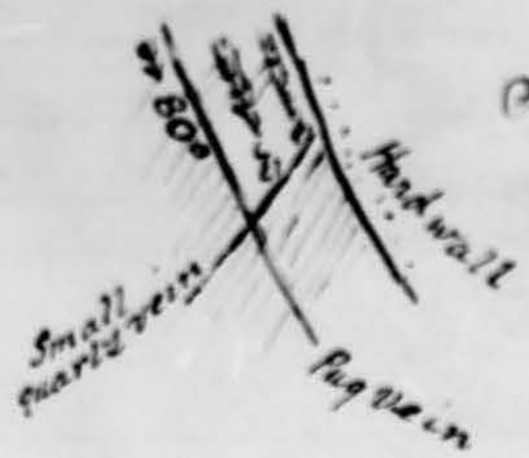
and crushed with good results

Sketch section at No 4 level


In places the peg vein seems to be dislocated by vertical faulting but it would be necessary to clean the exposed faces before any exact examination could be made.

At the No 7 level the workings which followed the irregular quartz deposits to the eastward show the peg vein as a sort of footwall and also a hard solid hanging wall both underlying eastward but filled with several feet of slate having a regular underlie westward which continues through and beyond, or westward, of the peg vein The quartz which here and there accompanied this filling has been found to cease to carry gold on reaching a small quartz vein which passes away with the strata on a westerly underlay through the peg vein

Sketch section at No 7 level.




The same feature is observable in a winze sunk 30 feet below No 7 level and it is also noticeable that the plane of disappearance of the gold as represented by the small vein has a pitch or deepens towards the NW.

So

To the westward however of the shaft, at the No 7 level a crosscut shows a defined reef formation but auriferous but still of promising appearance having a westerly underly. This may be the downward continuation of the main line of reef


The above sketch section gives a general view as it appeared to me from a brief examination but a proper survey and more extended and minute investigation would be necessary before making an attempt to properly connect the various features

The Manager Mr Bagel informs however that the stoppage of gold in the Eastern workings at the little quartz vein underlying westward indicates the existence of another gold bearing shoot in that direction, and this view certainly appears a reasonable one.

Under any circumstances however there are but three alternatives — (1) to abandon the mine — (2) to continue desultory driving and winze sinking — or (3) to sink the shaft boldly another 100 or 150 feet.

The first I consider should not even be entertained as it is impossible to believe that

that the gold has died out and that here are not other shoots to be found below.

The second would be an unsatisfactory and expensive process that might or might not be attended with success and if successful would still entail the deepening of the shaft.

The third alternative, that of sinking the main shaft to 450 or 500 feet is one which commends itself as the proper and indeed the only legitimate course to pursue, as by so doing the disordered ground would be left behind and the next shoot of stone, the existence of which there are sound reasons for believing in, would either be met with in sinking or intersected by cross cutting from a deeper level

Edward R. Marrs
Govt Inspector

In connection with the above I would recommend that Mr Forbes who is at present employed in the vicinity be instructed to make a careful survey of the accessible portions of the mine. This would only occupy a few days or a week at most and would probably afford more reliable data. I could possibly arrange to visit during the survey and supervise the geological portion of the work or instruct Mr Forbes as to the points requiring special attention

EHM

S 95/1617 2831/95

Rebecastle Gold Mining Company, No Liability.

C. A. CLAUSEN,
Legal Practitioner,
59, ROYAL EXCHANGE.

Adelaide, March 19 1895

R. A. J. Murray Esq
Government Geologist
Victoria

Dear Sir.

I am requested by my Board to inform you they would be pleased if we can be in receipt of your report in time for our General Meeting which will be held here on the 29th. instant.

If you can do this we shall be exceedingly obliged

Yours faithfully
C. A. Clausen
Secy

Submitted forwarded copy as requested. A.J.M. 20/3/95

Done 20/3/95 AC

Private A.J.M. to Mr Murray 20 Mch 5 p.m.

I find my lad has missed mail by one day. I trust we will be able to get report in time notwithstanding

Read 19/3/95 Rec'd 13/3/95

Parliament House
Adelaide
12 March 95

The Hon
The Minister of Mines

Dear Sir

I have to thank you on behalf of the Redcastle Coy for sending the Surveyors report with me to inspect the mine. The Coy will be exceedingly obliged if you will send a copy of the Surveys report

Sec'y Redcastle Mine
Royal Exchange
Adelaide

Very Sorry in Melbourne was so short I did not time to call upon you. I hope to have the pleasure of doing so when I next go over

Yrs faithfully
Elsdon Dew

2 Furnish a copy of Mr Murrays report to Mr Clausen

Here is an order to do so

15 3 95

Done 21/3/95

Re papers from 1573/95

Parliament House
Adelaide
5 March 95

The Hon
The Commissioner of Crown Lands

Dear Sir

I find the meeting of the Central Board is not till 2 on Thursday instead of at 11. so I will call at your office shortly after 10.

Yrs faithfully
Elo Hartwig

Plan Cal Mun
supp
to
Norwich
Conn
11/2/95

95-21
1927

Redcastle

Date 10/11/1895.

Regd. 11/11/1895.

J. Darling

Forwards Mr Forbes' report on
the Redcastle Mine

Submitted
I have copy of Mr Forbes report and
tracings of his plans and sections*, prepared for
transmission D the legal manager of the Redcastle
& Co in Adelaide but before sending them
let me see them in order that I may add
such observations of my own as may appear
advisable. 18/4/95

Jno Murray
Esqr
17.4.95

* Mr Everett has these tracings in hand

Having perused Mr Forbes report and plans
I am still of opinion that deeper sinking would
be the proper course D pursue and affords the
only chance of finding the downward continuation
of the lode in less disturbed country
Mr Forbes recommendation is D driving along
the lode at No 1 Level afsthes D the Branch
for other shoots which may or may not exist.

Add copy of the above D Mr Forbes report and
forward with tracings if possible this afternoon as I learn
there is a special meeting in Adelaide on 2/5/95
D consider the question of deeper sinking

30/4/95

Done
30/4/95 AC

The Secretary

Attached report by Mr Gibson his Survey of the Redcastle Mine Cromarty Co Ft Simmary. Has recommended his survey. The Cromarty report and plans be Referred to him for Reading with the

Chas Sterling

10.4.95

Redcastle
5/4/95

The Secretary —

Sir

I have the honor to state that I have, in accordance with instructions made an Underground Survey of the Redcastle Gold Mining Co situated just East of the Township of Redcastle herewith plans are forwarded viz Cross-Section, Longitudinal Section, Plans of No 5 and No 7 Levels, and ground plan shewing position of Main and Ladderways, shaft, Clarke's Reef &c

No 1 X Cut = 180'6" bel Sill. This Crosscut has been driven East 35ft 6ins to Clarke's Reef, the dip of the reef and containing rocks is 65° West and the width of reef 2ins at 4ft East of shaft. There is a small Quartz reef 1/2in wide dipping West and at 20ft East there is a fault dipping 75° East, and cuts Clarke's Reef between Nos 1 & 2 the extent of the slip being 6ins.

No 2 X Cut = 218'5" bel sill has been driven 16ft East to Clarke's Reef, the width of reef along top of level going North, averages 2ins in width, on the hanging wall side of reef a small band about 1/2in wide is noticable, and contains a small percentage of Antimony (antimony Glance) - 2ft East of shaft is a fault dipping East and cutting 1/2ins of Glance

and above it- a small reef 1/4 inch wide dipping West - this is the principal fault- that- cuts off Clarke's Reef and here the dips of the rocks alter —

N° 3 X Cut = 237'6" bel Sill has been driven 6 ft- East- to Clarke's Reef and at- this point - Clarke's Reef has been cut- off, the line of fault- crosses N° 4 Cross- Cut- 14 ft East- of shaft- in this Cut- the beds dips 60° West- from the fault-, and in the end of Cut- there are two small reefs 1/2 inch in width —

N° 4 X Cut = 258'8½" bel Sill X Cut- driven 31 ft- East- from shaft- —

N° 5 X Cut = 279'2½" bel sill . driven 7 ft East- in broken ground, at the shaft- the average dips of the beds is 65° West-, the level going S has fallen so I was unable to see anything, the level North has been driven along the line of broken ground, and under the fault- for 145'6", a cross-section is on Plan shewing the main fault- which dips here 60° East- and carries 1/2 inch of flucan and Quartz, and on the West- side of the fault- the stone dips slightly West- and is from 2 inches to 3 inches in width - shews a number of minor faults which move the stone and beds the width of it's beff.

At 51 ft 6 inches along level North from Cut- a Crosscut- has been driven East- 114 ft 10 inches and at- this point a winze has been sunk on the fault- to No 7 level - from N° 5 down winze to the first ↓ mark on X section on plan, there are a few spurs and leaders making off the fault- and dip West- also, threads of Quartz &c dipping East- along joints, from the first ↓ to the second ↓ the Quartz averaged from 1 inch to 1½ inches in width, spurs or leaders make off the fault- and dip West- Quartz from 1/2 inch to a thread continue along the joint planes dipping East-, between these two arrows is where 5 or 6 tons of stone was crushed from,

(Wm. Nagel could not tell me exactly the returns, as the stone was crushed along with the other stone (Seconds) the whole giving something over one thousand pounds worth of Gold. (Half yearly report of R. G. M. Co)

The dip of the fault from No 5 half way down winze is 57° E and 65° East to No 7 level, the beds dips from 68° W at No 5 X Cut down to 55° West at No 7 level.

No 6 X Cut = 295'9" bel sill has been driven East 51ft 9 inches, at 18 ft from shaft, a reef 1½ inches wide was met with and showed a few colors of gold, a winze was sunk on the underlie for 10ft or 12 ft dips 55° West, further East another reef 1 inch wide dips 60° W and at 33 ft E of shaft. a fault carrying ½" fluccan and dipping 62° East (evidently the main fault line).

West of fault the beds dips 55° West and joint planes 65° E, east of fault there are two small reefs ½" and ¼" wide dipping 64° W.

No 7 X Cut = 349'10½" bel sill has been driven East 55ft 2 inches to fault, at 22ft 6 inches from shaft a small reef ½" wide well laminated and slightly faulted is met with dips 55° West, at 34 ft East of shaft joint planes dip 70° East (from this point to reef on West side of shaft, through an error on my part I have shown rather more joints than really exist, but I think it will not materially affect the mine, the joints as shown on cross section from that point to the fault are quite correct) At 42 ft E from shaft a fault is met with carrying ½ inch fluccan and quartz spurs, just to the West is a small reef ½ inch wide, these spurs do carry a little gold. At the end of East winze has been sunk on the underlie, so Wm Nagel informs me to a depth of 25ft the stone on the fault being bulgy and carrying a little gold.

at 50 ft along level North the rise to No 5 is met with, and, at the end of level a winze has been sunk on the fault to a depth of 38 ft; average dip of fault 75° E 1/4" to 1/2" of quartz and fluccan is noticeable on the fault, the quartz is irregular, in places it is pinched out, and will make from a thread to 1/4" or 1/2" and then die out there are a few spurs and leaders making off the fault and dipping West- ward varies from a thread to 1/2 inch in width, at the bottom of this winze, I was shown quartz containing gold, but I did not see any colors at all in the quartz on the fault. On the West side of Shaft a reef has been worked along level N for 117 ft, this reef I'm informed, carries a few Colors, and varies from 2 inches in width at Shaft to 1/2 inch at end of level.

Longitudinal Section - Clarke's Reef

The shoot of gold commenced 66 ft S. from ladder- way shaft, and is worked out to Antonia's shaft a distance of 160 ft., and, 145 ft down from Antonia's. The shoot is worked down at about 25° N pitch to the fault as shown by Line — — — — — (approximate) from what is seen of the reef at present it measures in no place over 2 inches in width in surface Cuttings, and below, I marked the lower boundary (approximate) as Mr. Waters and myself tried various places to get through and were unsuccessful. The ruf is well laminated and of a grey ish color, and averaged from 6 oz to 20 oz to the ton, the rocks change their color about 150 ft below surface, from Creamy white and yellowish to a dense blue, and are hard & fine grained, the bedding being very fine seams of black slate.

Clarke's Reef shows three distinct movements, the Reef at No 7 Cut West shows exactly the same movements, and comparing any part of the reef with Clarke's Reef, the same characteristic's are noticeable, the Strike of Clarke's Reef above the fault is N 28°30'W, the Strike of the Reef at No 7 Cut West is N 28°30'W, the average pitch throughout is 25° at N 28°30'W, the Country proves Clarke's Reef to have moved upwards in a Westerly direction according to my observations, my opinion is that one or the other of the reefs at No 6 Cut, probably the reef on which the winze has been sunk, and the reef at No 7 Cut West is the continuation of Clarke's Reef. The Strike of the fault is N 38°30'W and Average dip 75° N.E.

As Clarke's Reef can be traced further Northwards from shaft along surface, an nothing has been done to prove below, or on the surface, the existance of another shoot of gold, I would suggest that a level be driven, say at No 1 level Northwards along the reef for the purpose of picking up another shoot which may exist - the ground is easily to work, and I think would be less expensive than sinking shafts along the line -

Sometime ago I forwarded a statement that Clarke's Reef averaged from 8" to 15" in width, now that I have been through the workings, and seen for myself, I firmly believe that the reef never averaged over 2 feet in width -

I have the honor to be
Sir
Your Obedient Servant
Walter Yorke's

1895/1927

START

1927
1664
1617
1359
1182

Coffin

Office of Mines,

Melbourne August 25th 1893.

Alfred W. Howitt, Esq., M.A.S.

Secretary for Mines &c.

Melbourne.

Sir,

I have the honor to report having visited the Redcastle Goldfield in accordance with your instructions to that effect, and beg to submit the following report partly from personal observation and partly from information, which I have reason to believe is reliable.

Redcastle proper is essentially a reefing field for though famous in that respect some thirty years ago very few of the gullies, even in the immediate vicinity of rich reefs, appear to have yielded much alluvial gold. The reefs themselves by all accounts yielded richly when worked by co-operative parties; the great length of old workings on the several lines of reef, and the extensive stoping visible from surface downwards testify to this, but it appears that, as on many other fields, the mines were abandoned when water was met with or when interruptions to the downward continuance of rich stone were encountered, and for more than twenty years no proper efforts were made to explore the lodes below the water level. It is a somewhat remarkable fact that the present commencement of a revival of the field is in a large measure due to the enterprise of residents in South Australia induced by the representations of Mr Charles Nagel, a miner of long experience in the district, now Manager of the Redcastle G. M. Company, whose mine is the deepest in the vicinity and of which I was able to make an underground inspection. The main shaft of the Redcastle G.M. Company is on the line of reef known as the Welcome or Clarke's reef which has here been closely worked from surface to about 250 feet for nearly half a mile in length, though with occasional blank intervals it can be traced by the old workings for two or three miles.

In

In the workings adjoeent to the main shaft it is stated that yields up to as much as 42 ozs. of gold per ton were obtained from the surface to water level. The lode has a bearing of about N.W. by N. and S.E. by S. with an underlay to the south westward of about 1 to 5.

At about 250 feet I was shown an old level where the very rich stone worked in former days suddenly ceased just where a well defined wall, having a north-easterly underlay, met the lode. Below this the lode was disturbed and contained little stone for a few feet, but formed again and continued on its S.W. underlay, but not so rich as above, nor- so it is stated- carrying the same character of stone or gold.

On the north-eastern side the strata are disturbed and broken but contain quartz veins trending north-eastward and containing a little gold. At the 275 feet level the lode, still underlying S.W. has been followed for 110 feet north-westward. The formation is about 4 feet wide between somewhat uneven walls; the thickest stone is on the hanging wall and varies from two or three inches to a foot in thickness. The stone on the hanging wall is thinner, but on each wall the quartz is very rich in gold- every piece knocked out in my presence from either side containing fine gold well disseminated not only in the seamy portions but in the solid stone itself. The general appearance of the stone is most favorable, well laminated and mineralised , and, judging from what I saw, it should , if crushed by itself, yield several ounces to the ton. There is some antimony in the stone that may render treatment more difficult. A crushing now being put through at Bendigo was taken from the whole thicknessof the lode formation and should afford a fair test. In this level I observed a smooth wall passing away eastward, forming a sort of small saddle with the lode and carrying a thin vein of quartz rich in gold.

The deepest level is at 352 feet and here the lode has been followed about 90 feet similar in character to what it is at the 275 feet level.

Considering the amount of gold bearing stone actually in sight and the quantity likely to be available by driving in either direc-

tion

tion along the lode it appears absolute[ly] [necessary] no longer delay the erection of a battery with which the mine could be speedily made self supporting and very likely dividend paying. Crosscutting eastward is also to be recommended in order to find out whether stone makes again in that direction on the easterly underlying wall above referred to.

It is noticeable that all the water in the mine comes from the disturbed ground at the 250 feet level, the lowest level being dry.

About 400 feet easterly from the Welcome is the Fountain Maid line of reef, also worked for a long distance and stated to have yielded up to 3 ozs. per ton for 3 feet in width down to water level. This reef underlies south-westerly and is stated to have contained more antimony than the Welcome. Between the Welcome and the Fountain Maid is a small line of reef underlying north-easterly said to have yielded from 1 oz. to 3 ozs. per ton.

Adjoining and north-west of the Redcastle Company's line is the ground taken up by the Redcastle Extended Company containing the extensions of the same reefs closely worked along the surface. The stone here is stated to have yielded up to 12 ozs. per ton and to have contained much antimony.

Eastward of the Fountain Maid line here, is the Mary Ann, next the Leviathan and another reef some 200 feet further eastward. All of these have been closely worked and are stated to have yielded well.

Next to the Redcastle Extended is the ground of the Eureka Company containing the extensions of the same lines of reef all worked along the surface at short intervals. There are other lines of reef which have been worked both to the eastward and westward of those mentioned.

About a mile eastward from Redcastle is the Union Gold and Antimony Mine, a recent discovery. The shaft is down about 100 feet and the antimony has been traced down from surface in pipe shoots up to as much as 12 feet long and 2 feet thick. The antimony ore(stibnite) is very pure and contains a considerable quantity of visible gold.

Three

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It is noticeable that all the water in the mine comes from the disturbed ground at the 250 feet level, the lowest level being dry.

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Three miles eastward from Redcastle is the Curly Dog Reef- worked for about a mile in length, the gully alongside of it having yielded a large amount of alluvial gold. This reef, which was abandoned on account of water about 30 years ago has been worked for nearly a mile in length and is reported to have yielded up to 10 ozs. per ton and up to 5 ozs. from a thickness of 4 feet. It is stated that 200 feet was the greatest depth reached and that auriferous stone was left underfoot. The old stopes show an easterly underlay.

The Why Not Mine, which I did not visit, is said to be on the line of extension of this reef and to contain a formation of Lullock and Quartz veins 12 feet thick from which bulk crushings of about 1 oz. per ton have been obtained.

With the exception of the Redcastle Mine, I was not able to explore the underground workings of the various abandoned lines of reef above described, no work being in actual progress on them, and the statements as to yields- given me by Mr Nagel- were obtained by him from the owner of the old battery.

In the slight mention of Redcastle Reefs made by R. Brough Smyth in " gold fields and mineral districts" yields of 3 ozs. and 5 ozs. per ton are recorded.

I am quite aware how necessary it is to be cautious in accepting hearsay evidence as to former yields, causes of abandonment of rich reefs, and gold bearing stone being left underfoot &c.

At the same time it is impossible to see such long persistent lines of reef as those of Redcastle, evidently closely worked at a time when small fields could not pay, without coming to the conclusion that the returns must have been good, and that as has been done in other districts, a little further exploration will show that they continue downward. It seems incredible that such a field should have been left so long neglected, but its somewhat remote position is no doubt a principal cause, and it is not unreasonable to expect that the present revival of mining throughout the country will, in a marked degree, affect the district under notice and bring it into prominence.

I have the honor to be, &c

REGINALD A. F. MURRAY
Govt. Geologist.

Redcastle S95/1182 6/3/95

Parliament House
North Terrace, Adelaide
Mar. 2nd 1895.

To

The Honorable,
The Minister of Mines,
Melbourne.

Dear Sir,

At the request of Mr Henry C.T.Ayliffe of this City, Solicitor, you instructed your Geologist [R.A.F.Murray Esq.F.G.S] to visit and report to him on the Redcastle Mine and other mines in the locality of Redcastle, and Mr Ayliffe submitted to my Board a copy of the said report so far as it related to the Redcastle Mine. The report is dated the 25th day of August 1893. In such report Mr Murray when speaking of our mine says [inter alia]-

"It is a somewhat remarkable fact that the present commencement "of a revival of the field is in a large measure due to the "enterprise of residents in South Australia induced by the "representation of Mr Charles Nagel, a miner of long experience "in the district, now Manager for the Redcastle Gold Mining "Company whose mine is the deepest in the vicinity and of which "I was able to make an underground inspection. The main shaft "of the Redcastle G.M.Co. is on the line of reef known as the "Welcome or Clarke's reef, which has been here closely worked "from surface to about 250 feet for nearly half a mile in "length, though with occasional blank intervals it can be "traced by the old workings for 2 or 3 miles.

"In the workings adjacent to the main shaft it is stated "that yields up to as much as 42 ozs. of gold per ton were "obtained from the surface to water level. The lode has a "bearing of about North west by North and South east by South "with an underlay to the South Westward of about 1 in 5.

"At about 250 feet I was shown an old level where the very "rich stone worked in former days suddenly ceased just where a "well defined wall having a North easterly underlay met the "lode. Below this the lode was disturbed and contained little "stone for a few feet but formed again and continued on its "South west underlay but not so rich as above nor - it is stated "- carrying the same character of stone or gold.

"On the North Eastern side the strata are disturbed and "broken but contain quartz veins trending North Eastwards and "contain a little gold. At the 275 feet level the lode still "underlying South West has been followed for 110 feet North "Westward. The formation is about four feet wide between "somewhat uneven walls; the thickest stone is on the hanging "wall and varies from 2 to 3 inches to a foot in thickness.

"The stone on the hanging wall is thinner but on each wall "the quartz is very rich in gold every piece knocked out in my "presence from either side containing fine gold well disseminated "not only in the seamy portions but in the solid stone itself. "The general appearance of the stone is most favourable, well "laminated and mineralized and judging from what I saw should "if crushed by itself yield several ounces to the ton. There is "some antimony in the stone that may render treatment more "difficult. A crushing now being put through at Bendigo was taken "from the whole thickness of the lode formation and should "afford a fair test. In this level I observed a smooth wall "passing away eastward forming a sort of small saddle with the "lode and carrying a thin vein of quartz rich in gold.

"The deepest level is at 352 feet and here the lode has been "followed about 90 feet similar in character to what it is at "the 275 feet level.

"Considering the amount of gold-bearing quartz in sight and "the quantity likely to be available by driving in either "direction along the lode it appears absolute folly to longer "delay the erection of a battery with which the mine could be

"speedily made self-supporting and very likely dividend paying.
"Crosscutting eastward is also to be recommended in order to
"find out whether stone makes again in that direction on the
"East of the underlying wall above referred to.

"It is noticeable that all the water in the mine comes from
"the disturbed ground at the 250 feet level, the lowest level
"being dry".

I have the honor to inform you that subsequent to this report and chiefly influenced thereby the Board of which I am a member erected a battery with the view of crushing the stone from the lode at the 275 feet level and other stone recently discovered but it was found that there was no payable stone in the 275 foot level. I am visiting the Mine as Director and shall be exceedingly obliged if Mr.Murray can accompany me to make a close inspection of it. I may state that some time back I inspected the Mine and came to the conclusion that the lode has been cut by a fault. I need hardly point out to you that if such is the case and the lode is picked up again it will be the key to open up a large mining district.

I shall be in Melbourne on Thursday next and would be obliged if you could arrange for me to meet Mr.Murray on that day with a view to making an appointment with him to visit the mine on Friday or Saturday. I have to attend a meeting of the Broken Hill Central Company at eleven on Thursday but will be free after 1 p.m. Kindly send your reply to me c/o

W.Stawell Esq.,
Bank Place
Collins St., MELBOURNE.

Yours faithfully,

C.W.Baeocher

P.S. If I can be arranged I should like Mr Murray to go up to Healesville with me on Thursday evening

— 9 Redcastle

Mr Murray

Could any medical
detached for Bundoja
undergo a course
Mr Allen at Wildon
— Query? Mr Forbes.

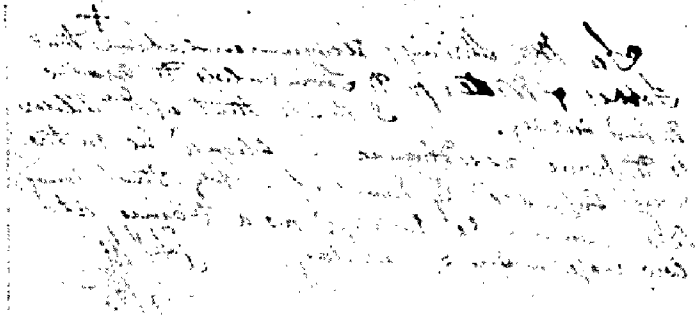
2.3.95

Sir Mr Stirling's recommendation that
Forbes & Watts be detached to make
Rapid survey. I think that if Mr Allen
is to have assistance it should be in the
way suggested by Runcorn — by that young
Barrowmouth be employed as a trainee at
low wage — say 5/- per day.

5/3/95

10

| | | | |
|---|---|---|---|
| 907 – 204 | — | B.C | – 2 – 4" |
| 241 | — | BC | 14' — |
| 275 | — | BC | 4. 2 |
| 2902 – | — | BC | 2 — |
| | | | 22 . 6" |



11

1 attached

I have so many trainees (tt I am unable to recommend any further additions to their number. However if Mess Forbes & Waters can be spared for field and shop work.
Tht the undermentioned is recommended

7/3/95

Mr Allan and his assistant Mr Barapanath certainly require someone as laborer, chainman &c or failing the appointment of young Barapanath Forbes or Waters, or both, ought to be put on. I have in view however some underground work at Redcastle on which Forbes and Waters should be employed for a week before going elsewhere. A[illegible]
confirmed. His work ends on Saturday next morning 1/3/95

Instruct Mr Forbes to make a survey of the Adelaide mine taking note and making sections of all the features therein. The workings are not extensive so a compass will suffice. Mr Kefel manager will afford facilities, but arrangements should be made to have the water out of the lowest level.

14/3/95

13/3/95

13

NOTE.—All communications on Departmental business to be addressed to the Secretary.

Department of Mines,

Code, No.

Melbourne, 4/3/1895

M.D. 9 /

Memorandum.

Dear Murray.

Re Forbes. I intend to recommend that Forbes & Walters now with them go to Lindenliff to make surface survey there after completion of work at Inglewood to Grey Town

James Stirling

Re Secretary.

Messrs Forbes and Walters are now engaged connecting the reefs at Inglewood with the surveys at Grey Town — This work should be completed within a month. As Mr Murray desires the survey of the Redcastle mine at once — Mr Forbes from his knowledge and experience at Bendigo being well qualified & perfect mine — Mr Walters should accompany him to Redcastle which can be reached in one day from Grey Town —

18.3.95 James Stirling

14

# Redcastle

Office of Mines

Melbourne March 12th 1895

S95/1664 Reduced 30/3/95

Memorandum for the Secretary

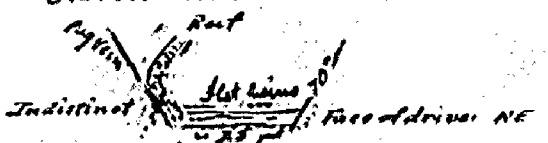
I beg to report having visited and inspected the Redcastle Gold Mine at Redcastle in Company with Mr Newton Mr Bo representing the directorate of the Redcastle Company which owns and works the Mine.

The reef is known as Clarke's reef and was worked in early times for some distance along the surface and down to between 200 and 300 feet with good results. I was informed that as much as 42 ounces of gold per ton was obtained and a former shareholder even resident on the field stated that he knew of various crushings yielding from 12 ounces to 22 ounces per ton the latter yield being from a parcel of 12½ tons. The ground has been opened out down to No 4 level at 200 feet and above that the old workings are difficult and dangerous of exploration.

The reef however which has a north westerly strike seems to have been well defined and persistent on its westerly underlay down to the No 4 level where it is close to the shaft and is met by what is known as the pug vein having an easterly underlay. At the intersection of the two at No 4 level the reef turns with the pug vein for a few feet but appears to regain its underlay though it becomes smaller and less distinct. Auriferous stone has however been found making Eastward with the pug vein and a quantity has been stoped and

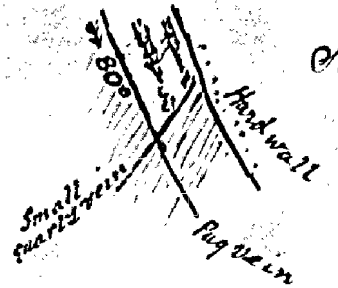
and cracked with fine cracks

Sketch section at No 4 end




It places the fug vein seems to be dislocated by vertical faulting but it would be necessary to clean the exposed faces before any exact examination could be made.

At the No 7 end the workings which followed the irregular quartz deposits to the eastward show the fug vein as a sort of footwall and also a sheet solid hanging wall both underlying eastward but filled with coarse fine of slate having a regular underlie westward which continues through and beyond, or westward, of the fug vein. The quartz which here and there accompanied this filling has been found to cease to carry gold on reaching a small quartz vein which passes away with the strata on a westerly underlay through the fug vein.

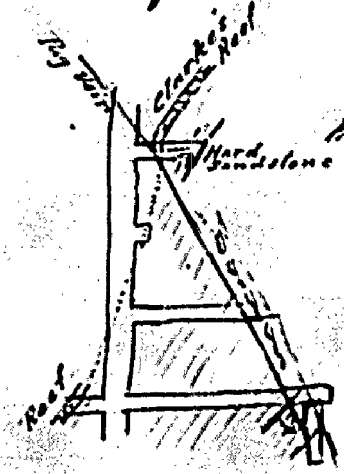



Sketch section at No 7 level.

The same feature is observable in a winze sunk 30 feet below No 7 level and it is also noticeable that the plane of disappearance of the gold as represented by the small vein has a pitch or dipens towards the N.W.

So

To the westward however of the shaft, at the No 7 level a crosscut shows a defined reef formation not auriferous but still of promising appearance having a westerly underlay. This may be the downward continuation of the main line of reef




200 feet

260 feet

350 feet

The above sketch section gives a general view as it appeared to me from a brief examination but a proper survey and more extended and minute investigation would be necessary before making an attempt to properly connect the various features.

The Manager Mr Rafel infers however that the stoppage of gold in the eastern workings at the little quartz vein underlying westward indicates the existence of another gold bearing shoot in that direction, and this view certainly appears a reasonable one.

Under any circumstances however there are but three alternatives — (1st) abandon the mine — (2nd) continue desultory driving and winze sinking — or (3rd) sink the shaft boldly another 100 or 150 feet.

The first I consider should not even be entertained as it is impossible to believe that

that the gold has died out and that there are not other shoots to be found below.

The second would be an unsatisfactory and expensive process that might or might not be attended with success and if successful would still entail the deepening of the shaft.

The third alternative, that of sinking the main shaft to 450 or 500 feet is one which commends itself as the proper and indeed the only legitimate course to pursue, as by so doing the disordered ground would be left behind and the next shoot of stone, the existence of which there are sound reasons for believing in, would either be met with in sinking or intersected by cross cutting from a deeper level

Edward Fitzmaurice
Govt Inspector

In connection with the above I would recommend that Mr Forbes who is at present engaged in the vicinity be instructed to make a careful survey of the accessible portions of the mine. This would only occupy a few days or a week at most and would probably afford more reliable data. I could possibly arrange to visit during the survey and supervise the geological portion of the work or instruct Mr Forbes as to the points requiring special attention

3/4/11

Received 15 Sept 1895 Ans 23 Sept 95

Rocky Hill Gold Mining Company, No Liability

C. A. CLAUSEN,
[illegible]
88, ROYAL EXCHANGE.

Adelaide, March 19 1895

R. A. F. Murray Esq F.G.S
Government Geologist
Victoria

Dear Sir.

I am requested by my Board to inform you they would be pleased if we can be in receipt of your report in time for our General Meeting which will be held here on the 29th instant.

If you can do this we shall be exceedingly obliged

Yours faithfully
C A Clausen
Secy

Submitted forwarded as requested. RAFM 20/9/95

Dated 21/3/95 AL

Private

Sir

R F Murray 20 Mch 5 pm.

I send my Lad has missed mail by midday. I trust we will be able to get report in time notwithstanding bad

Rec'd 13 Mar 95 19

Parliament House
Adelaide
12 March 95

The Hon
The Minister of Mines
Dear Sir
I have to thank you on
behalf of the Redcastle Co
for sending the Surveyor
up with me to inspect the
mine. The Co will be
exceedingly obliged if
you will send a copy
of the Surveyors report

Sec'y Redcastle Mine
Royal Exchange
Adelaide

Very busy in Melbourne was
so short I had not time to
call upon you. I hope to
have the pleasure of doing
so when I next go over
Yrs faithfully
Elliott Archer

I Furnish a copy of
Mr Murray's report to
Mr Clarence
15. 3 95
There is an order to dress on
the papers
15/3/95

21/3/95

20

Parliament House
Adelaide
5 March 95

The Hon
The Minister of Mines

Dear Sir

I find the meeting of the Central Board is not till 2 on Thursday instead of at 11. so I will call at your office shortly after 10.

Yrs faithfully
E.L. Hartley

Ken Calvert
Supp
Hs
Natural
Comm
11/2/95

95-21
1927

Redacted

Date 10/4/1895

Recd. 11/4/1895

J. Sterling

Governor McForbes' report on the Redcastle Mine

Submitted

Have copy of Mr Forbes report and tracings of his plans and sections*, prepared for transmission to the local manager of the Redcastle & M Co in Adelaide but before sending them let me see them in order that I may add such observations of my own as may appear advisable.

18/4/95

17.4.95

* Mr Everard has these tracings in hand.

Having perused Mr Forbes report and plans I am still of opinion that deeper mining would be the proper course to pursue and affords the only chance of finding the downward continuation of the lode in less disturbed country.

Mr Forbes recommendation is to drive from the lode at No 1 level eastwards to the Rewrah for other shoots which may or may not exist.

Add copy of the above to Mr Forbes report and forward with subject if possible this afternoon as I learn there is a special meeting in Adelaide on 2/5/95 to consider the question of deeper mining

30/4/95

Done 30/4/95 AG

The Secretary

Attached report by Mr Hobson his Survey of the Redcastle Irvine Burnett &c Mr Murray. Has recommended his Survey. The Burnett Report and Plans are Referred to him for Reading with

J Lauder Stirling
10.4.95

Redcastle
5/4/95

The Secretary —

Sir

I have the honor to state that I have, in accordance with instructions, made an Underground Survey of the Redcastle Gold Mine, situated just East of the Township of Redcastle. Herewith plans are forwarded viz Cross-Section, Longitudinal Section, Plan of No 5 and No 7 Levels, and ground plan shewing position of main and Ladderways, shaft, Clarke's Reef &c.

No 1 XCut = 180' 6" bel Sill, this Crosscut has been driven East 35ft 6ins to Clarke's Reef, the dip of the reef and containing rocks is 65° West and the width of reef 2 inches at 4ft East of shaft. There is a small quartz reef 1/2 inch wide dipping West and at 20ft East there is a fault dipping 75° East, and cuts Clarke's Reef between Nos 1 & 2, the extent of the slip being 6 inches.

No 2 XCut = 218' 5" bel sill, has been driven 16ft East to Clarke's Reef, the width of reef along top of Level going North, averages 2 inches in width, in the hanging wall side of reef, a small band about 1/2 inch wide is noticable, and contains a small percentage of Antimony (antimony glance) - 2ft East of shaft - a fault dipping East and cutting 1/2 inch of Glucan

and above it- a small reef 1/4 inch wide dipping West- This is the principal fault that cuts off Clarke's Reef, and here the dips of the rocks alter —

No 3 X Cut = 237'6" bel Sill has been driven 6 ft- East- to Clarke's Reef, and at this point - Clarke's Reef has been cut off, the line of fault crosses No 4 Cross- Cut 14 ft East of shaft- in this Xcut the beds dip 60° West from the fault, and in the end of Xcut there are two small reefs 1/2 inch in width. —

No 4 Xcut = 258'8 1/2" bel Sill Xcut driven 31 ft- East- from shaft —

No 5 X Cut = 279'2 1/2" bel sill, driven 7 ft East- to broken ground, at the shaft the average dips of the beds is 65° West, the level going S has fallen so I was unable to see anything, the level North has been driven along the line of broken ground, and under the fault- for 145'6", a cross section is on Plan shewing the main fault- which dips here 60° East- and carries 1/2 inch of Glucan and Quartz, and on the West side of the fault- the stone dips slightly West- and is from 2 inches to 3 inches in width, - shews a number of minor faults which move the stone and beds the width of its beff.

At 51 ft 6 inches along level North from Xcut a Crosscut- has been driven East- 14 ft 10 inches and at this point a winze has been sunk on the fault- to No 7 level — From No 5 down winze to the first ↓ mark on Section on plan, there are a few spurs and leaders making off the Vault- and dip West- also threads of Quartz &c dipping East- along joints, from the first ↓ to the second ↓ the Quartz averaged from 1 inch to 1 1/2 inches in width, Spurs or leaders make off the fault- and dip West- Quartz from 1/2 inch to a thread continue along the joint planes dipping East-, between these two arrows is where 5 or 6 tons of stone was crushed from,

(Wm Nagel could not tell me exactly the returns, as the stone was crushed along with the other stone (seconds) the whole giving something over one thousand pounds worth of Gold. (Half yearly report of R.G.M.Co)

The dip of the fault from No 5 half-way down winze is 57° E and 65° East to No 7 level, the beds dip from 68° W at No 5 X cut down to 55° West at No 7 level

No 6 X cut = 295'9" bel sill, has been driven East-51ft-9 inches, at 18 ft from shaft, a reef 1½ inches wide was met with and showed a few colors of Gold, a winze was sunk on the underlie for 10 ft or 12 ft = dip 55° West, further East another reef 1 inch wide, dip 60 W and at 33 ft E of shaft, a fault carrying ½" fluccan and dipping 62° East (evidently the main fault line).

West of fault, the beds dip 55° West and joint-planes 65° E, east of fault there are two small reefs ½" and ¼" wide dipping 64° W —

No 7 X cut = 349'10½" bel sill has been driven East-55ft-2 inches to fault, at 22ft-6 inches from shaft a small reef ½" wide, well laminated and slightly faulted is met with dip 55° West, at 34 ft East of shaft joint-planes dip 70° East (from this point to reef on West side of shaft, through an error on my part, I have shown rather more joints than really exist, but I think it will not materially affect the mine, the joints as shown on cross-section from that point to the fault are quite correct) At 42 ft-6 from shaft a fault is met with carrying ½ inch fluccan and quartz spurs, just to the West is a small reef ½ inch wide, these spurs do carry a little gold — At the end of cut Ea winze has been sunk on the underlie, so, Wm Nagel informs me to a depth of 25 ft, the stone on the fault being bulgy and carrying a little gold —

at 50 ft along level North the rise to No 5 is met with, and, at the end of level a winze has been sunk on the fault to a depth of 38 ft; average dip of fault 75° to 1/4" to 1/2" of quartz and flucan is noticable on the fault, the quartz is irregular, in places it is pinched out, and will make from a thread to 1/4" or 1/2" and then die out there are a few stringers and leaders making off the fault and dipping West- ward varies from a thread to 1/2 inch in width, at the bottom of this winze I was shown quartz containing gold, but I did not see any colors at all in the quartz on the fault. On the West side of Shaft a reef has been worked along level N for 117 ft, this reef I am informed, carries a few Colors, and varies from 2 inches in width at Shaft to 1/2 inch at end of level

Longitudinal Section — Clarke's Reef

The shoot of gold commenced 66 ft S. from ladder- way shaft, and is worked out to Antonia's shaft a distance of 160 ft, and, 145 ft down from Antonia's, The shoot is worked down at about 25° N pitch to the fault as shown by Line — — — — — (approximate) from what is seen of the reef at present it measures in no place over 2 inches in width in surface Cuttings, and below, I marked the lower boundary (approximate) as Mr Waters and myself tried various places to get through and were unsuccessful. The ref is well laminated and of a greyish color, and averaged from 6 oz to 20 oz to the ton, the rocks change their color about 150 ft below surface, from Creamy white and yellowish to a dense blue, and are hard & fine grained, the bedding being very fine seams of black slate.

Clarke's Reef shows three distinct movements, the Reef at No 7 Cut West shows exactly the same movements, and comparing any part of the reef with Clarke's Reef, the same characteristics are noticeable, the Strike of Clarke's Reef above the fault is N 28°30'W, the Strike of the Reef at No 7 Cut West is N 28°30'W, the average pitch throughout is 25° at N 28°30'W, the country proves Clarke's Reef to have moved upwards in a Westerly direction according to my observations, my opinion is that one or the other of the reefs at No 6 Cut, probably the reef on which the winze has been sunk, and the reef at No 7 Cut West is the continuation of Clarke's Reef. The Strike of the fault is N 38°30'W and Avg dip 75° N.E.

As Clarke's Reef can be traced further Northwards from shaft along surface, an nothing has been done to prove below, on on the surface, the existance of another shoot of gold, I would suggest that a Level be driven, say at No 1 Level Northwards, along the reef for the purpose of picking up another shoot which may exist, the ground is easily to work, and I think would be less expensive than sinking shafts along the line —

Sometime ago I forwarded a statement that Clarke's Reef averaged from 8" to 15" in width, Now that I have been through the workings, and seen for myself, I firmly believe that the reef never averaged over 3 Inches in width —

I have the honor to be
Sir
Your Obedient Servant
Walter Yorke's