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Hon. Wm. Sloan.
Minister of Mines,
Victoria. B.0.

Sir:-
In November I made another extended exeminetion of our Keystone Drilling work at Harpers Camp and ss a result beg to submit to you this brief report summarising the results so far attained ont on outline of the probabilities for the future. HOLES DRTLIFD.

The drilling may be divided into two parts:- (1) that done lest winter, art 0 2) that done his summer and fall. In 02) ten holes were drilled averaging about 45 feet in depth. none of which reached bedrock. This work was done on ground held by the International Dredging Company and as their plant will not handle ground below s depth of forty feet there was not much object $\&$ in drilling below that depth. This work proved conclusively that there was no ground in the ares held by the company which could be worked at a profit. In fact practically no values were obtained at all. This work further iemonstretod that the old-timers stories of rich ground and patstreak were wholly unreliable. While negative in result this work has been useful.

In (2) the drilling was commenced on a plan to put a cross section of holes scyros an old valley of the Horsefly fiver with the hope of locating a feeding channel to the pay area
previously worked out in Ward's workinge. The probebility of the existence of this feeding chonnel wes atrongly advoceted by Bob. Campbell and others. The first hole was put down 216 feet where bed-rock wae reached. No apprecisble valuea were obtained. This depth wee considerably grester than hed been expected and it was quite apparent from the surpece topography thst the next holes in our projected cross section would be still deeper. Without more equipment we could not have arille d depper holes se we hod reached our limit in the firet hole. By this time I had arrived gt my own conclusions in regsra to the matter and felt sure thet furthor drfliing in thie direction would not show pay ground. So I ebondoned this cross section snd commenced a line of holes which would yield eseful information and also test the ground held by Kenneay end partners. Who hed appiled to heve ârilling done.

Seven holes were drilled in this work oll of which ware put down to bed-rock. Wo appreciable velues were obte ined although the last hole tested ground where Werd left off work and where ground rich enough to pay Jrifting wes supposed to exist. I wes anticfied that we hed done enough arilline to determine thet there was no extension of the pey eres in that locality so ortered the work stopped. I instructea Joveridee to move the arill serazs the river tox ond commence drilling the groand held by Cempbell. Cempbell and three partners have been worting ell sumper on this grount and heve sunk three shafte on it. They found some values but not sypficient to pey to Aript out. Howevec they consitered the freund worth surthar testing snd atill have lots of faith in it. Some time ago they applied to you to have the ground drilled. Campell saye that two
holea will satisy him whether or not he sags has anything but I expect that about four holez will be required to tell much. This ground is on the restorly edge of the pey area workea by Rard. COMOLUSIONS ARRXVID AT.

I an of the opinion thet the rich deposit of geldbesring gravel which wes known ae Ward' Horsofily" and mainly worked out by R. w. Ward, wes pomed by peculler 200 col condtions and wes not $s$ part of $s$ rich gold-booring grovel chamel runnt g through the country, as ia commonly suppocid to be the case. At this point the Forsefly river takes a conaiderable bond and also runs over $\varepsilon$ point $0^{\prime \prime}$ high bed-rock which pitchea downward going unatrabm. Theae oonditions made tho bed-rock et this point act $s$ a riffle on a lerge scele. In the course of time onarmous quentities of gravel carroing smell emounts of gola worm have beeh Wabhed dexn by the river end in pext the gold TFs colleotad end xome concentrated on the high bedurock. In this wey s smsill exee of very rich ground wec formod with the volues exaduenly fecting swey in ell airectione. Allthe evibence of dillifrg ant sheftr shows that the deop ground in thie locelity cermies tho velues.

## Readoranuaciods.

I woll reoomment that the drilline be continued until Campbenlis ground is tected wid should bo occomplished in two or three woeka. The poscibility in Compeli's ground is thet there mey be a remant of the ola rich aroe left which res not morked out. Afte that I yowa recompona thet the drinling should ho stopped ot least for the ginter - So foz wo havo hed mild neother but with severe cold werthor drilling in the pinter tive ie vezs inefficiont.

- 4 -

After we finish up with the present work I do not consider thet there is eny use in doing any more around the old Ward's मercefly pit. There are two other plecos near Harper's Comp where you will probably be ssked to do drilling. Ihet heve esmined these palces roughly and camot seo any great chance they contain pey ground. The drilling would be deep and I have not much confidence in findaing veltes in any of the deep ground. The arilling of these pleces can be considered noxt summer aftor I heve medn a more thorough examinetion of them. We will neod a lat of nem squipment for the srill before commencing a further drilling program.
I SD, Sir,

Voura fathfully,

> Reaident magineec.

## Resident Engineer's Office

Hazelton, Dec 2nd 1920.

Hon. Wm. Sloan,
Minister of Mines, Victoria, B.C.

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previously worked out in Ward's workings. The probebility of the existence of this feeding chennel wes strongly advocsted by Bob Campbell and others. The firat hole was put down 216 feet where bed-rock was reached. No apprecieble values were obtained. This depth was considerably greater than hed been oxpected and it was quite apperent from the surface topogrephy that the next holes in our projected cress aection would be still deeper. Without more equipment we could not have drillejd depper holes as we hed reached our limit in the first hoie. By this time I had arrived at my own conoluaions in regerd to the matter and felt sure thet further drilling in this direction would not show pey ground. So I absndoned this eross section and commenced a line of holes whioh would yield aseful information and also fest the ground held by Zennedy ent partners, Who had applied to have drilling done.

Seven holes were drilled in this work all of which were put down to bed-rock. No appreciable values were obterined, although the last hole tested ground where Werd left off work, and where ground rich enough to pay drifting Tes suppose ${ }^{\text {a }}$ to exist. I wes satisfieđ that we had done enough drilling to determine thet there was no extension of the pey area in that locality so ordered the work atopped. I instructed Loveridge to move the drill across the river tax and commence drilling the ground held by Campbell. Campbell and three portners have been working all summer on this ground ond hava sunk three shafte on it. They pound some values but not syficelent to pay to Arift out. सoweve they considered the fround werth further testing and still have lota of faith in it. Some time ago they spplied to you to have the ground drilled. Campbell says that two
holes. Will satisy him whether or not he sayz has anything but I expect that about four holes will be required to tell mach. This ground is on the mesterly edge of the pay srea worked by Ward. CONCIUSIONS ARRIVED AT.

I am of the opinion that the rich deposit of goldbearing gravel which was known as" Ward's Horseriy" and mainly Worked out by R. T. Ward, mes fomed by peculier locel conaitions and wso not a part of a rich gold-bearing gravel chernel cunning through the country, as is commonly suppesed to be the cese. At this point the Horgefly rivex takes a considerable bend and also runs over \& point on high bed-rock whioh pitchee downward going upstraam. These conditions made the bed-rock et this point act as a riffie on a large scale. In the course of time amprmous quantitios of gravel carrying smell amounte of gold terex have been washed down by the river and in pert the gold was colleated and wins concentrated on the high bed-rook. In this way 5 smell area of very rich ground wes formed with the values gredually feding away in all directions, Allthe eviaence of drilling and shafta shows thet the deep ground in this leality carries no values.

## REOOMNBNDATIONS.

I would recommend that the drilling be continued until Campbell's ground is teated which should be accomplished in two or three weeks. The peesibility in Cempbeil's ground is that there may be a remnant of the old rich area left which was not worked out. After that i would recommend that the drilling should be stopped, at least for the minter. So far we have hed mild weather but with severe cold weather, drilling in the vinter time is vexy inefficient.

After we finish up with the present work I do not consider that the re is any use in doing any more around the old Ward's 耳orsemy pit. There are two other places near Harper's Camp where you will probably be asked to do drilling. I have examined these pales roughly and cannot see any great chance they contain pay ground. The drilling would be deep end I have not much confidence in find ding values in any of the deep ground. The drilling of these places con be considered next summer after I have made a more thorough examination of them. We will need a lot of new equipment for the drill before commencing of further drilling program.

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\text { I am, } \quad \text { Sir, }
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Yours faithfully,


Resident Engineer.

