

## THE EXCHANGE NEWS.

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## MINING NEWS.

### TREATMENT OF REPUBLIC ORE.

When D. C. Jackling went out to So-  
kane Sunday morning he was accompa-  
nied by S. N. Johnson, Jr., who has been  
here for some time experimenting with  
ores of the Republic mine. Mr. Johnson is  
connected with a London company which  
has a process of ore treatment which it  
was thought might be successfully applied  
to Republic ores. He brought with him  
an apparatus used in the demonstration  
of the process and was greatly interested  
in the results he obtained.

When Major Leckie was asked if he had  
anything to say about Mr. Johnson's ex-  
periments he replied:

"At the same time Mr. Johnson has  
been conducting his experiments on our  
ores we have been experimenting along  
the line of first roasting the ore and then  
treating by direct leaching. Our experi-  
ence with the ore has convinced us that it  
is impossible to treat the ore raw, from  
the fact that we not only get an indiffer-  
ent solution of values, but at the same  
time consume large quantities of chemi-  
cals. This conclusion was also arrived at  
by Mr. Johnson, after conducting his first  
tests, to the end that he agreed that  
roasting was necessary. The results of the  
experiments, therefore, has demonstrated  
that we can treat ore at a lower cost by  
roasting and leaching than by the employ-  
ment of filter presses. Had we not been  
able to secure successful percolation after  
roasting, we should probably have found  
it profitable to substitute the Johnson  
process for the system of electrolytic pre-  
cipitation formerly used here, as we  
found his process to be much more econ-  
omical and reliable than the former sys-  
tem of treatment. From the experiments  
conducted by Mr. Johnson, it seems to  
us that the process is especially adapted  
to the treatment, raw, of slimes or tal-  
cose ores, which require very fine crush-  
ing, and are not susceptible to direct per-  
colation.

The foregoing statement from Major  
Leckie throws a great deal of light on  
the difficult problem of the treatment of  
Republic ores. It is now certain that any  
process adopted by the Republic Mining  
company will embody as a feature the  
roasting of the ore. As a matter of fact  
the great plant now to be erected under  
the direction of Mr. Jackling has provi-  
sion for the roasting of the ore. The pro-  
cess to be employed in the plant of the  
Republic Reduction company also in-  
cludes roasting. The roasting in both

cases is done after the ore is crushed. The  
process to be used on the Mountain Lion  
plant will not include roasting but the  
Mountain Lion ore is perhaps more fine  
than the other ores of the camp.

A characteristic quality of the ores of  
Republic camp is the fineness of the grain  
of the quartz. The gold is very finely dis-  
tributed and is not extractable by any  
mechanical means so far available. The  
roasting of the ore loosens the matrix  
holding the gold and renders it more  
amenable to the attack of chemical solu-  
tions. The Miner is not in possession of  
the actual results of the experiments made  
by the Republic Mining company, but it  
is a legitimate inference from the state-  
ment of Major Leckie that the problem  
of ore treatment has been solved to the  
company's satisfaction and that they are  
now ready to undertake the working of  
ore on a large scale.—Republic Miner,

### LILLOOET.

The season of 1900 is opening auspicious  
ly for Lillooet and it now looks very  
much as though the high tide of prosper-  
ity would soon be manifest in the rich  
quartz mines that are found tributary to  
that section. Cascoosh Creek, Bridge  
River, McGillvray Creek, the bars of the  
Fraser River and its numerous tributaries  
have long been producers of placer gold,  
not in such quantities of late years as in  
the 60's, but considering the very modest  
way in which mining has been carried  
on for many years, the output has been  
more than would be expected. The Golden  
Cache fiasco did the quartz interests of  
that section much harm, and the pro-  
moters of that company have been very  
severely criticised for the course pursued  
by them in the mine management, etc.  
Undoubtedly before the crash came those  
on the inside had become small stockhold-  
ers, at least the most of them, but the  
surface showing of rock sprinkled with  
gold was enough to deceive men not fami-  
liar with the fact that \$1,000 in free  
gold showing in a ledge readily looks to  
be a hundred times that amount. The  
crash came and it was found that in-  
stead of a million dollar property the  
Cache was at best a low grade propo-  
sition outside of the specimens that had  
been mostly carried down to Vancouver.  
A company known as the Gold Reefs has,  
we believe, acquired all of the properties,  
including the ten-stamp mill and also a  
group of properties from John Marshall  
known as the Ample group. A fifty-ton  
cyanide plant is being erected and we  
understand Superintendent Reeves will have  
it in operation before many weeks more.  
On the results of the operations of this  
company's plant much depends. If it is  
a success Cascoosh Creek will go ahead in  
great strides, if the results are not favor-  
able there will be another setback for  
Lillooet.

On Bridge River the success last sea-  
son of the arrastras on the Lorne, where-  
by some some \$8,000 or more was taken  
out, the rock averaging more than \$100  
per ton, and the Pioneer, owned by Allen  
and Atwood, will be worked with arras-  
tras next season, as will several other  
claims along the river. The fact a suc-  
cessful mill runs on the Bend d'Or mine  
whereby some \$26,000 was taken out last  
fall, has been a good thing for the section.  
The ore averages about \$12 per ton and  
the company are now said to have a four  
foot ledge. Quite a force of men are at  
work on this property during the winter.  
The mill building on the Bratt Dr.'s  
claims on McGillvray Creek is about  
completed and a force of mill men are at  
work framing timbers for the mill. The  
building is for the accommodation of 20  
stamps and is a good substantial build-

ing. A Pelton wheel will furnish the  
power for the 20 stamps, the first ten of  
which will be installed in April. John  
Williams with a number of men is en-  
gaged in getting the machinery from the  
lake up the five mile road to the mine.  
The best judges say the ten foot ledge is  
rich in gold and all seem sanguine of suc-  
cess in mining and milling. One of the  
most favorable things about this property  
is the fact that it is free milling, good  
water power, plenty of timber and situat-  
ed so that it can be worked to a great  
depth with natural drainage, and being a  
large ledge the ore can be mined  
and milled cheaply; if it does not prove  
high grade, but only moderate it will  
still be a good property.

Placer mining along the Fraser will oc-  
cupy quite a conspicuous place in Lil-  
looet's mining industries next season.  
Dredging, also is being looked into and  
with good men in charge of machinery  
there is no reason why Lillooet should  
not materially benefit by the dredging  
industry on the bars and low benches of  
the Fraser.

The Prospector, a weekly paper, is do-  
ing good service by calling  
to the attention of the author-  
ities that be, the needs of the section for  
more liberal road appropriations. A camp  
like that of Lillooet and surrounding coun-  
try must have liberal assistance in build-  
ing roads and trails, and the resulting in-  
crease in tax payments will prove that the  
liberal policy is the best and the only  
one.

There are a lot of lively boys in Lillooet  
and poker, black jack and roulette or some  
other game is often mentioned and is  
said to be played at times.—Ashcroft  
Journal.

### MOUNTAIN LION BOILERS.

The two big Mountain Lion boilers got  
up to the mine yesterday. They arrived  
at Republic the day before, but were not  
taken out to the mine till yesterday morn-  
ing. They made the trip from Grand  
Forks without serious mishap. Three of  
the big stamp mortars also arrived yes-  
terday. They are very heavy, weighing  
over 6,000 pounds each. It took six hor-  
ses to get each one up the hill at the  
upper end of Clark avenue. Each mortar  
is for five stamps and there are four of  
them altogether. Now that the boilers  
and mortars are in the Mountain Lion  
mill will be rapidly completed. The ma-  
chinery is all on the ground and there is  
nothing to do but to put it in place. It  
is believed the mill will be ready to start  
up inside of a month.

### THE GRANITE MILL.

The Granite Mill site has been a busy  
scene during the summer, while the new  
mill was being built. The mill, which  
consists of 20-stamps and eight grating  
vanners, a new patent, was supplied by  
the William Hamilton company, of Peter-  
borough, Ont., and installed by Mr. D. J.  
McNally. The mill is considered a very  
fine one by competent experts, and thor-  
oughly up to date in every particular.

### THE WHITEWATER.

The mine is situated near the head of  
Rover creek, and was bonded a couple of  
months back by Mr. J. Mallinson Williams  
acting on behalf of the Mallinson West  
Kootenay Exploration Syndicate for \$50,-  
000. This property had considerable ore  
in sight when bonded, and the results of  
recent developments have been so encour-  
aging that Mr. Williams has, it is said,  
advised the construction of a 10-stamp  
mill on the property next summer.