



# Mineral Titles *Information Update*

## No. 8 – Guide to the Evaluation of Physical Work for Assessment Credit on Claims

Revision Date: March 28, 2017

### INTRODUCTION

Sections 1 and 15 of the Mineral Tenure Act Regulation describe acceptable physical exploration activities on mineral and placer claims as follows:

- trenches, open cuts (for collecting and sampling of mineralized rock), adits, pits, shafts and other underground activity for the purpose of collecting samples or other geological or technical information;
- reclamation related to exploration and development activities;
- ground control surveys, line cutting and grids that support an activity described in paragraphs (b) to (h) of the definition of technical exploration and development in section 1 of the Mineral Tenure Act Regulation;
- precision survey techniques such as global positioning or surveys conducted by a practicing land surveyor;
- in relation to a placer claim only, panning, digging or washing of gravels to test for the presence of economically significant minerals.

**The purpose of physical exploration and development is to support technical exploration and development.**

The registration of exploration and development for the purpose of claim maintenance is conducted using Mineral Titles Online (MTO). **Within 30 days of the date of the registration of physical exploration and development, a report must be submitted.** The report may be uploaded as a PDF into MTO, submitted in paper format to the Vancouver Mineral Titles office or emailed digitally as a PDF attachment to [Mineral.Titles@gov.bc.ca](mailto:Mineral.Titles@gov.bc.ca).

A physical report template is available at: <http://www.mineraltitles.gov.bc.ca/mineral-placer-titles/forms-maps-publications/forms-mineral-placer-titles#Physical>

A guide to producing an acceptable map can be found at: <http://www.mineraltitles.gov.bc.ca/mineral-placer-titles/forms-maps-publications/publications-general-information>

The intent of allowing the registration of physical work is to promote exploration in the province by advancing the knowledge of claim areas. With this in mind, please do not forget to provide/show the results that you achieved as required by the Regulation.

## TYPES OF PHYSICAL WORK

Allowable Physical Work	Conditions
Trenching, Open Cuts, Shafts, Adits, Pits and Underground activity, tunneling	Must have an appropriate Notice of Work (NOW) if required (any mechanized disturbance may require a permit)
Placer panning or sluicing	Must be on a placer claim or lease (sluicing may require a permit)
Drilling	Drilling for physical work purposes refers to shorts holes drilled for blasting only or holes drilled to test placer gold. Drilling requires an approved <i>Mines Act</i> permit.
Preparatory Survey	Line cutting or grid establishment must be in support of a technical program
BCLS Survey	A copy of the approved survey is required
Road and Trail Work	Must be in support of a physical work program and an appropriate NOW must have been acquired; standalone work road and trail work will not be accepted
Clearing Land	Must be in support of a physical work program and an appropriate NOW must have been acquired; standalone clearing work will not be accepted

**For all physical work reports please include: dimensions of work area(s), location of work on map, GPS coordinates, a description of the work completed, a description of how the work was completed, a list of equipment that was used, and the results you obtained. Photographs or digital images are recommended although not required.**

## COST STATEMENT

The following information is intended as a guide to approximate costs for the various types of labour, machinery, etc., that may be used to determine the value of physical exploration and development work. The figures in this Guide may be taken as approximations although amounts in excess of these guidelines may be questioned and refused. Receipts are not mandatory but must be provided if requested by the Chief Gold Commissioner. It is a good idea to complete the Cost Statement before you record the work, as this will give you an idea of the value of work you have done. Information is presented in order of column headings on the cost statement form of the physical report template.

## TRANSPORTATION / TRAVEL EXPENSES - COLUMN B

Transportation and travel costs may be included but only to a maximum of 20% of the value allowed for the exploration and development work completed on the claim(s). When aircraft are used, up to 50% of the cost of the exploration and development work completed may be included for transportation/travel costs. The actual value of the transportation/travel must be sufficient to justify the 20% or 50% and receipts must be provided if requested. If the actual cost for transportation/travel is less than the 20% or 50% (as applicable) of the work value, then only the actual costs may be claimed. Transportation/travel costs cannot be included in the work details except as an addition to the value in the cost statement for the total work costs which are exclusive to any transportation and travel. Transportation costs are not stand alone costs and must be part of an overall exploration program.

**Example:**

Work Costs:	\$1,000.00	
<u>Maximum</u> transportation/travel allowable:	<u>\$ 200.00*</u>	(20% of \$1,000.00)
Total claimable assessment:	\$1,200.00	

\*the **actual** value of the transportation/travel must be claimed if less than the percentage maximum

**Vehicle rate as per transportation costs:**

**Pick-up Truck**

4x4	\$0.68 per km
4x2	\$0.60 per km
Trailer	\$0.10 cents/km

<b>ATV</b>	\$1.00 per km OR \$123.35/day
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**LABOUR – COLUMN C**

	<u>Per Hour</u>
Foreman/Supervisor	\$40.00
Labourers/Additional workers	\$30.00

Other rates will only be accepted if invoices and a written description are provided which justify the use of specialized personnel on the property.

**MACHINERY AND EQUIPMENT – COLUMN D**

The rates for machinery and equipment rental are based largely on the rates published in *The Blue Book: 2015-2016 Equipment Rental Rate Guide*, published by the B.C. Road Builders & Heavy Construction Association and Authorized by the Government of British Columbia ([www.roadbuilders.bc.ca](http://www.roadbuilders.bc.ca)). Exceptions to this are noted.

Common models are provided for the most recently produced model year. For any model produced prior to 2005, including some of the common models listed, the appropriate adjustment factor is noted at the bottom of the table. The adjustment factors are as follows:

- 0.96 for model years 2010-2007
- 0.92 for model years 2006-2002
- 0.88 for model years 2001 or older

To adjust rates for the model year of your equipment, multiply the rental rate provided by the appropriate adjustment factor.

In most cases equipment shown with an hourly ‘all found rental rate’ is not subject to standby charges.

**Please include the model and year of the equipment you used in your report.**

## 1. EXCAVATORS

### Compact Excavators – under 9526 kg (21000lbs)

Weight tonnes (lbs)	Common Models		All Found Rental Rate
	Bobcat	Kubota	
1.36 – 2.72 (3000 – 5999)	324, E26	KX41-3V	\$67.90
2.72 – 4.08 (6000 – 8999)	E32, E35	KX71-3, KX91-3, U35	\$72.00
4.08 – 5.9 (9000-12999)	E42, E45	KX040-4HG, KX057-4	\$77.00
5.9 – 7.71 (13000 – 16999)	E60		\$79.35

### Heavy Hydraulic Excavators

Weight tonnes (lbs)	Common Models						All Found Rental Rate
	Case	Cat	Deere	Hitachi	Hyundai	Link-Belt	
Under 14.51 (32000)	CX130 CX135	313FGC	120D 135G	ZX120-3 ZX130-5	130LC-3 140LC-7	130-X2 130-X3	\$106.05
14.51 – 19.05 (32000 – 42000)	CX160B	312E 314E	130G 160D-LC	ZX160-3/5 135US-5	160LC 180LC	145X3	\$114.00
19.05 – 20.41 (42000 – 45000)	9030B <sup>1</sup>	318EL	200LC	EX200		210LX	\$124.20
20.41 – 23.13 (45000 – 51000)	CX210	323	200D-LC 210D-LC	ZX200CL-3	210LC3-7	210X3	\$142.45
23.13 – 26.76 (51000 – 59000)	CX225 CX250C	320, 321, 322, 324	130G 225D-LC 250G-LC	ZX225USC-3 ZX245USL C-5	250LC	235-X3	\$147.40
26.76 – 30.84 (59000 – 68000)	CX300C	324 325 326	290G-LC	ZX290LC-5 ZX300LC-6	290LC	SK260L V-9	165.35
30.84 – 39.92 (68000 – 88000)	CX350C	328D, 329E	330G-LC 350G-LC 380G-LC	ZX350LC	320LC 370LC	350-X3	\$200.10
39.92 – 43.54 (88000 – 96000)	220B	336F					\$212.75
43.54 – 46.72 (96000 – 102000)	CX460 CX800	345	450LC	ZX450 EX450	450LC	460LX	\$254.95
46.72 – 53.98 (103000 – 119000)	CX470C	349	450	ZX450 ZX470LC-5		470-XC	\$263.85
53.98 – 68.95 (119000 – 152000)		365BL	600CLC	EX550LC-3 ZX600LC			\$312.15
Over 68.95 (152000)	CX700B CX800B	374 390	650 670	ZX670LC-5 ZX870LC-5		700-X2 800-X3	\$355.85

## 2. FRONT END LOADERS

### Crawler Front End Loaders

Bucket Capacity – m <sup>3</sup> (cu yd)	Common Models			All Found Rental Rate
	Case	Cat	Deere	
0.96 – 1.14 (1.25- 1.5)		933C <sup>1</sup>	455G	\$94.15
1.15 – 1.33 (1.5 – 1.75)	855E/D	939C	605C	\$100.40
1.53 – 1.71 (2 – 2.5)	1155E		6.55B <sup>2</sup>	\$112.20
1.72 – 1.9 (2.25 – 2.5)		953C/D	655C-II	\$118.10
1.91 – 2.09 (2.5 – 2.75)		963		\$124.95
2.1 – 2.67 (2.75 – 3.5)		963C, 936D	755C-II/D	\$137.50

### Rubber Tired Front-End Loaders (4-wheel drive)

Bucket Capacity – m <sup>3</sup> (cu yd)	Common Models			All Found Rental Rates
	Case	Cat	Deere	
Under 0.76 (1)	21E, SR130, SR150, SR175, SR200	216B, 226B, 232B, 236B, 242B, 903C	313, 315, 318, 320, 328, 332	\$84.15
0.76 (1)	121E, 221E, 321E	906, 907, 908	244J, 244K, 304J	\$87.25
1.15 (1.5)	W14C	914G2	444K	\$100.15
1.53 (2)	521E	924HZ	344J	\$105.70
1.91 (2.5)	621F	924K	444K, 524K	\$113.40
2.29 (3)	721F	910, 914, 930	544K	\$120.75
2.68 (3.5)	721C	938K	624K	\$132.15
3.06 (4)	821C	950	644K	\$150.65
3.44 (4.5)	921F	962K	724K	\$154.30
3.82 (5)	921C	966K	744K	\$182.70

## 3. TRACTORS WITH BACKHOES

FWHP (KW)	Common Models					All Found Rental Rate	
	Case	Deere	Ford – N.H.	Kubota	Massey Ferguson	4x2	4x4
Crawler							
Under 75 (55.93)		450J				\$94.75	
Rubber Tired 4x2 and 4x4							
40 – 49.9 (29.8 – 37.2)	885	1250, 2040, 5200, 5210	3010S	L4850 <sup>2</sup> , L5450 <sup>2</sup> , M5030DT	240 <sup>2</sup> , 253 <sup>2</sup>	\$63.45	\$78.90
50 – 59.9 (37.3 – 44.7)	3230, 585, 595	5310	4630	M5950	4225 <sup>1</sup>	\$65.75	\$82.65
60 – 69.9 (44.7 – 52.1)	1394, 685, 4210	5410, 6110	5030	M7030 M6950	283 <sup>1</sup> 375, 384S	\$67.80	\$85.10
70 – 79.9 (52.2 – 59.6)	1494, 4230	5510, 6210	5610S	M8030	4243	\$69.05	\$87.60
80 – 89.9 (59.7 – 67)	1594, 5220	2750, 6310	7600, 7810	M8950	390T, 393, 396, 6150, 398, 3075	\$70.60	\$89.45
90 – 99.9 (67.1 – 74.5)	1896, 5230	6410, 7200	7610S		399, 6170	\$72.10	\$91.65

#### 4. TRUCKS

Dump Truck w/ Belly Dump, Clam or End Dump	
Capacity	Hourly Rental Rate
10.7 m <sup>3</sup> (14 cu yd)	\$102.50
11.5 m <sup>3</sup> (15 cu yd)	\$105.75
12.2 m <sup>3</sup> (16 cu yd)	\$109.35
13.0 m <sup>3</sup> (17 cu yd)	\$112.00
13.8 m <sup>3</sup> (18 cu yd)	\$115.60
14.5 m <sup>3</sup> (19 cu yd)	\$118.20
15.3 m <sup>3</sup> (20 cu yd)	\$120.85

Articulated Trucks						
Weight tonnes (tons)	Common Models					All Found Rental Rate
	Cat	Deere	Moxy	Terex	Volvo	
Under 20 (22)	725C	933C <sup>1</sup>		TA250 TA300	A20	\$140.50
20-24 (22-26)	730C	250D-II	5222B	TA350 TA400	A25F	\$162.35
25-29 (28-32)	735B/C 740B EJ	300D-II	MT31	TA27 TA30	A30F	\$179.60
30-34 (33-37)	740B/C EJ 745C	370E 350D-II	MT36-II	TA35	A35F	\$202.05

#### FOOD AND LODGING - COLUMN E

\$50.00 - \$100.00 per day per person

Food and lodging costs acquired while traveling to claim should be inputted under “transportation” (column B)

#### OTHER ACCEPTABLE COSTS - COLUMN F

**Safety Devices** (SPOT, inREACH)- \$10/day

**Chainsaw**- \$30/day

**Report writing cost**- \$25/hr to a maximum of \$200

#### Metal detectors

It is expected that a systematic, grid-like approach be used. The route taken should be tracked and all sample site locations should be recorded along with GPS coordinates. Dimensions of excavations should be noted along with the sampling results. Costs will not be approved for randomly walking around the claim and failing to record sample locations or routes.

Description	Rate/hour (less operator)
Gold detectors up to \$500. Examples: White GMZ, Fisher Gold Bug	\$2/hour
Gold detectors up to \$1500. Examples: Garret AT Gold, Minelab Eureka Gold, White's Spectra V3i	\$5/hour
Gold detectors up to \$2500. Examples: Garret ATX, White's PulseScan TDI Pro	\$8/hour
Gold detectors up to \$4000. Examples: Minelab SDC 2300, Minelab GPX 4500	\$10/hour
Gold detectors up to \$6000. Examples: Minelab GPX 5000, Minelab GPX 4800	\$12/hour
Gold detector up to \$10000+. Example: Minelab GPZ 7000	\$15/hour

**It is expected that all prospectors have the basic tools required to do their jobs.** Basic tools include, but are not limited to: GPS, handheld radio, truck radio, pans, shovels, pick axes, rock sample bags, soil sample bags, aluminum tags, tyvex tags, flagging tape, pens, maps, markers, hand lens, first aid kit, rock hammer, HCL acid, etc.

**It is expected that all equipment is in good working order and claims for back-ups and redundancies (for example two chainsaws) will not be accepted.**

### **WORK DAY STANDARD**

Due to the fact that the cost statement allows for day rates on some categories it is necessary that a minimum work day standard be set. It is expected that at minimum a 6 hour work day be utilized. In situations where the work day is less than 6 hours than it is necessary that the day rates be adjusted. (For example: if a work program consisted of 10 days of work at 3 hours a day, the camp costs and other day rates should be adjusted and calculated as 5 days).

### **UNACCEPTABLE COSTS**

#### **BUILDINGS**

No credit is granted for costs associated with buildings, camp construction, etc. Core storage buildings may be credited as technical work when included in a technical report.

**Activities such as walking around the claim, picking up rocks, planning out or surveying for work sites or roads, and marking the claim boundaries, are not allowed for work credit, and should not be included in physical or technical reports.**

### **PRODUCTION STANDARDS**

Equipment production rates are largely dictated by the capacity of the equipment (ex. size of bucket/machine) the type of material one is in (ex. solid rock vs. loose gravel), the geographical terrain and the cycle time (ex. distance dump truck travels from loading area to wash plant). The above mentioned 'all found rates' assume one has a skilled operator and equipment in good working order.

Hand Panning: In optimum conditions a production rate averaging 100 pans in a ten hour work period is possible, however such conditions will vary considerably depending on a number of factors. Production levels will decrease in situations where the distance between the pay dirt and the wash area increase, the terrain becomes more severe, the weather more inclement or the ground more difficult.

**If there are extraordinary situations causing significantly low production rates please describe the details with your cost statements.** For further information, please contact Mineral Titles.

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For More Information on *Submitting Exploration and Development Work Reports*, please review [Information Update No. 14](#).