

**ASSOCIATION OF CANADA LANDS SURVEYORS
BOARD OF EXAMINERS**

**SCHEDULE III / ITEM 1
ACTS AND REGULATIONS RELATING TO SURVEYS OF CANADA LANDS**

March 2007
(March 18, 1999 Regulations)

Notice to Candidates:

This examination is based on the e-Edition to the Manual of Instructions for the Survey of Canada Lands.

This examination consists of 8 questions on 4 pages

Marks

Q. No

Time: 3 hours

Value Earned

1	A Canada Lands Surveyor is retained by a major Canadian mining company to locate mineral claims in a treeless area of the Nahanni Mining District of the Northwest Territories. He is instructed to cover a belt of mineralization extending in an approximately straight east-west line for a distance of 45,000 feet with a width of 7,500 feet. The claims are to be centred on the mineralization which has been identified on the ground by a geophysical survey base line marked with wooden tripods and 1 in. by 2 in. wooden stakes.		
	a. Draw and dimension the optimum configuration of mineral claims required to cover the desired area. Indicate by small open circles the locations at which legal posts for the claim block will be placed. Use Imperial dimensions as prescribed in the governing legislation.	5	
	b. Identify the legislation pursuant to which the mineral claims are being located.	2	
	c. The claims are located in the summer months when there is almost continual daylight. It is planned to complete the staking of the claims on Saturday, June 30, but because of swampy ground conditions encountered, it cannot be completed until July 1, Canada Day. Will this fact invalidate the location? If so, what option is available to the locator?	3	
	d. Describe two options for marking each corner of the claim on the ground.	6	

2	State the maximum size, in acres, of territorial lands in the Northwest Territories which may be:		
	<ul style="list-style-type: none"> a. leased b. sold 	3	3
to any one person without the approval of the Governor in Council. The lands are assumed to be unsuitable for hay production, grazing or muskrat farming.			

3	A Yukon telecommunications provider, NorthwesTel Inc. has negotiated an easement along the rear of a ten lot residential block in the Village of Carmacks to accommodate the installation of a buried fibre optic cable. The block is rectangular in shape, with each of the ten lots having a 40.00 metre depth and a 20.00 metre frontage on Highway No. 2, the Klondike Highway. The original survey of the 10 lot block was made in 1998 and the plan was confirmed as Plan 71222 CLSR and recorded in the Land Titles Office under 86554. The block is surrounded on the other three sides by unsurveyed Commissioner's land which was not available for the utility company to use. The easement required is 4.0 metres wide.		
	a. As the Canada Lands Surveyor engaged by NorthwesTel, neatly compile a complete explanatory plan suitable for registration in the Land Titles Office. Assume any missing information required.	10	
	b. In inspecting the parcels to confirm the condition of the existing monumentation, you discover that one of the monuments has been obliterated by fence construction. All other monuments are in undisturbed condition and random measurements made agree with the measurements on the official plan. What options are available to you for dealing with the lost monument?	6	
	c. If the fibre optic cable was to be an overhead installation, what difference, if any, would it make to your explanatory plan prepared in part a.?	2	

4	Answer TRUE or FALSE to each of the following statements;		
	a. It is not necessary for a Canada Lands Surveyor to sign a plan of survey of mineral claims made pursuant to the <i>Quartz Mining Act (Yukon)</i> .	2	
	b. Under certain circumstances, a grant of title in fee simple may be made by Her Majesty in Right of Canada based on either a metes and bounds description or an explanatory plan approved by the Surveyor General.	2	
	c. The <i>Canada Lands Surveys Act</i> deals with the examination, licensing and discipline of Canada Lands Surveyors.	2	
	d. Line cutting and blazing for boundaries are not required in developed townsites or subdivisions.	2	
	e. A mineral claim located pursuant to the <i>Quartz Mining Act (Yukon)</i> is invalid if it completely encloses a cemetery.	2	
	f. The Chief of an <i>Indian Act</i> band may issue a certificate of possession to an Indian who is in lawful possession of land in a reserve, provided that the Band Council Resolution approving the issuance was passed unanimously.	2	
	g. The Minister of Natural Resources has the administration, direction and control of surveys under the <i>Canada Lands Surveys Act</i> .	2	
	h. The Surveyor General of Canada has the responsibility for the direction of the issuance of instructions for surveys of claims pursuant to the <i>Placer Mining Act (Yukon)</i> .	2	
	i. The surrender of lands in a reserve for Indians must be made to the Minister of Indian Affairs and Northern Development.	2	
	j. The determination of the ordinary high water mark of a tidal water may be made by traverse and offset measurements.	2	

5	Locator A locates quartz mining claim A on June 1, 2006. Locator B locates quartz mining claim B on June 2, 2006. Unbeknown to Locator B, his claim overlaps approximately one half of Claim A. Both are claims of the full size.		
	a. Draw the configuration of claims A and B, assuming that each locator makes application to record his claim in the allowed time.	4	
	b. Draw the configuration of claims A and B, knowing that locator A failed to make application to record his claim in the allowed time.	4	

6	<p>The availability of Global Positioning Systems provides more accurate coordinate determination in the offshore than previously used techniques provided. Using an appropriate sketch, indicate and explain how the Canada Oil and Gas Land Regulations accommodate the discordance over the position of a boundary of a grid area, permit area, section or unit shown on one approved plan of legal survey and the same grid area, permit area, section or unit shown on a subsequently approved plan.</p>	10	
7	<p>Describe three approved types of marker posts used to protect legal survey monuments and make them easier to find.</p>	9	
8	<p>A section of the Bonanza Creek surveyed base line in the Klondike gold fields has bearings of 180° 00' 00" from Angle 4 to Angle 5 and 215° 00' 00" from Angle 5 to Angle 6. Each base line course is in excess of 1,000 feet in length and is evident by the cut line which has been maintained since its original establishment in 1901.</p> <p>Matthew Grove discovers that in spite of historical mining activity on both creek and bench claims in the area almost continuously since the Gold Rush, the creek and bench areas in the vicinity of Angle 5 are currently "open" ground.</p> <p>Grove places legal post 1 for the MATT creek claim downstream along the base line 400 feet north of Angle 5. He places legal post 2 on the base line 95 feet southwesterly from Angle 5 in the direction of Angle 6. On the same day, his mining partner Ray Park locates the DOTTY claim adjoining the MATT claim on the upstream side. He places his legal post 1 with the MATT legal post 2 and places his legal post 2 on the baseline 550 feet upstream from his legal post 1 in the direction of Angle 6.</p>		
	<p>a. Draw the configuration of the resulting MATT and DOTTY claims and dimension the <u>principal</u> boundaries of the claims. Indicate Bonanza Creek and its direction of flow. Do not attempt geometric calculation of boundaries.</p>	8	
	<p>b. Three months later, Grove returns to the site and locates a first tier right bank bench claim adjacent to his MATT claim by measuring perpendicularly to the baseline from his MATT legal post 1 a distance of 1,100 feet to establish his legal post 1 for the NUG bench claim. He walks (in the direction) 180° in a straight line and establishes his upstream legal post 2 524 feet distant from his NUG legal post 1. Using an identifying colour, draw on your sketch the configuration of the NUG bench claim he has located and indicate its dimensions and relationship to the base line.</p>	5	
	<p>Total Marks</p>	100	