

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

**EXAMINATION P1
ACTS AND REGULATIONS RELATING TO SURVEYS OF CANADA LANDS**

October 2014

This examination consists of 10 questions on 3 pages.

<u>Q. No</u>	<u>Time: 3 hours</u>	<u>Marks</u>	
		<u>Value</u>	<u>Earned</u>
1.	A newly-commissioned Canada Lands Surveyor is investigating opening a corporate geomatics practice in Inuvik NT. What requirements of the Canada Lands Surveyors Act must be met for the surveyor and the firm to engage in cadastral surveys in the territory?	5	
2.	<p>As a Canada Lands Surveyor, you have been engaged by a private developer to survey and prepare a condominium plan in Whitehorse YT, of a 16 unit condominium in a new four storey building being constructed by the developer, where there will be four units on each floor. The building will be constructed on land comprised of two titled lots which are based on a survey made in 1947 in an area where much of the original survey evidence has been lost or destroyed. The Land Titles Office requires one lot to form the parent parcel of a condominium plan.</p> <p>a) Describe the work that the CLS should undertake as a first step.</p> <p>b) What planning approvals are required for this condominium development to proceed?</p> <p>c) What type of survey and plan should be done to consolidate the two titled lots into one parent lot?</p> <p>d) What should be used to define the boundaries of the condominium units, and who should you consult to determine the boundary definition?</p> <p>e) What dimensions must be shown on the condominium plan to define the boundaries of the parent parcel, units and any exclusive use areas. What are the additional requirements the plan must include to define the boundaries of the units?</p> <p>f) What measurements are needed to define the boundaries of the units and, if done, at what stage of the building construction should this be done?</p> <p>g) What planning approval is required for the condominium plan and who needs to sign the plan?</p>	2 2 2 2 4 2 2	
3.	<p>The Government of Northwest Territories has engaged you to survey and prepare an official plan of a 60 ha parcel of unsurveyed Crown land located in a remote part of the territory. The parcel is approximately 1000 m long bordering on the ordinary high water mark of a river by 600 m deep from the river bank. Lot 1005, Plan 70259 CLSR surveyed in 1984 is located 300 m downstream of the parcel. To assist you with the survey the government has provided you with digital high resolution satellite imagery which they recently acquired and orthorectified using a few ground control points and a low accuracy digital elevation model. The estimated spatial accuracy of the orthorectified imagery, which covers 4000 square kilometres, is anywhere from 2 to 10 metres.</p> <p>a) If the digital imagery is used to locate and plot the natural boundary, what additional field survey and survey returns are required to do this?</p> <p>b) What connection / geo-referencing requirements apply to this survey?</p> <p>c) Using assumed information as necessary, draw a neat sketch that would be fully sufficient for the diagram of the combined plan and field notes.</p> <p>d) If the imagery was used to plot the OHWM, provide a statement to be added to the plan that describes how the OHWM was plotted.</p>	4 2 6 2	

4.	<ul style="list-style-type: none"> a) Give two purposes for which an official compiled plan may be prepared. b) What information may be used to compile a plan? c) What limitation is there on the creation of a boundary between two points depicted on a compiled plan? d) What additional statements must be stated on a compiled plan? 	<p>2 2 2 3</p>	
5.	Give the complete Canada Oil and Gas Land Regulations designation for the unit(s) immediately north of Unit N, Section 40, Grid Area 68 ⁰ 00', 132 ⁰ 45', Northwest Territories.	6	
6.	<ul style="list-style-type: none"> a) What is a “notification” prescribed in the Territorial Lands Act (Canada)? b) What reservations from grants of land are specified in the Territorial Lands Act (Canada)? 	<p>2 4</p>	
7.	<p>The Government of Yukon is working to modernize its land titles system, which includes a review of its Land Titles Act and Regulations, its computer system and the business processes used in the Land Titles Office. This review compared the Yukon system against other jurisdictions including that operating in the Northwest Territories. It identified many differences between the way plans of survey of private titled lands are processed and dealt with by the LTO in the Yukon and NWT. The review also identified additional types of plans allowed by the NWT legislation that currently is not offered by the Yukon.</p> <ul style="list-style-type: none"> a) What are the differences between the way plans of survey of titled land are submitted to the LTO in the NWT and Yukon? b) What additional duties does the Registrar, NWT Land Titles have when a plan is registered, that the Registrar, Yukon Land Titles, does not? c) What are two types of plans of titled lands allowed in the NWT that are not enabled by the Yukon legislation? d) How are changes to natural boundaries of a titled parcel dealt with in the NWT versus that in the Yukon? 	<p>3 3 3 3</p>	
8.	Name five different types of official monuments and the authorized abbreviations for each for use in field notes and official plans.	5	
9.	<p>Provide answers to the following questions :</p> <ul style="list-style-type: none"> a) What is the minimum size of monument in cases where the monument marks a corner of a parcel within an Indian Reserve situated in a province? b) What is the minimum distance between monuments being placed on a straight line boundary? c) What term is shown on a plan to note the replacement of an old wood post found in good condition with a CLS77 monument? d) What sides of a tree need to be blazed to mark the approximate location of a new boundary? e) What meridian should the bearings of a new geo-referenced survey be referred to? f) To what accuracy does a natural boundary of a parcel need to be located in relation to the other boundaries of the parcel? g) In what situation do significant natural and made features need to be shown on a combined plan and field notes of survey of a parcel? h) What three methods can be used to define the boundaries of an easement that are dealt with by an Explanatory plan? 	<p>2 2 2 2 2 2 2 3</p>	

10.	<p>On April 2, 2012, Martin Burns staked a full size creek placer claim named BURN on Moose Creek and recorded it with the mining recorder on April 9, 2012. The plan of survey of the Moose Creek baseline in this area shows a 0⁰ bearing.</p> <p>On April 3, Joe Taylor staked four contiguous full-size quartz claims along two location lines on the hillside east of Moose Creek and recorded them with the mining recorder on April 4, 2012. The location lines are staked in a northerly direction with PUP 1 and 3 left of the location lines and PUP 2 and 4 right of the location lines.</p> <p>The mining recorder issues grants for placer and quartz claims. There are no other claims in the area or any other active interests.</p> <p>Joe engages a Canada Lands Surveyor to survey the four quartz claims. The CLS finds all of the location posts, with the PUP 1 and 2 location line on a bearing of 3⁰ with a distance of 1490 feet, and the PUP 3 and 4 location line on a bearing of 15⁰ with a distance of 1480 feet.</p> <p>The CLS makes a connection to the Moose Creek baseline and also locates and ties the legal posts of the BURN placer claim. The No 1 legal post of the placer claim is 50 feet east of the baseline and the No 2 post is 55 feet east of the baseline. The bearing and distance from the No 1 to No. 2 legal posts is 0⁰ 30', 580 feet. The bearing and distance between the No. 1 legal post of the BURN placer claim to the No. 1 posts of the PUP 1 and 2 quartz claims is determined to be 91⁰ 00', 2000 feet.</p> <p>a) Draw a neat sketch at an approximate scale showing the configuration of the surveyed quartz claims and placer claim in relation to the baseline. Show the known dimensions of the placer claims and the quartz claims in cases where no calculations are required and the approximate dimensions of any boundaries that need to be calculated. The sketch shall also show the legal (location) posts of the quartz and placer claims.</p> <p>b) Using distinguishing colours or other suitable means, identify the boundaries of each of the BURN placer claim and PUP 1 quartz claim.</p> <p>c) Describe the responsibility of a CLS in the case of a dispute between overlapping claims.</p>	6 2 2	
	Total Marks:	100	