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| 3. | <p>Define the following terms or abbreviations as they apply to official surveys of Canada Lands and private lands in the Northwest Territories:</p> <ul style="list-style-type: none"> a. intervisible b. obliterated monument c. unit factor d. artificial boundary e. CCM | 2 2 2 2 2 | |
| 4. | <ul style="list-style-type: none"> a. What projection is used to represent the shape of the earth for the UTM projection in North America? b. A tabulation on an official plan and field notes lists the UTM Zone 8 coordinates for monuments found and established in the survey depicted. An inverse solution between two monuments from the two sets of coordinates gives a grid azimuth of 0°00'15" and a grid distance of 1,529.663 m and the line approximately straddles the central meridian for the zone. The body of the plan shows the measured distance between the same two monuments as 1,531.010 m. What is the elevation scale factor that has been applied to generate the list of coordinates? c. What is the approximate longitude of the line between the two monuments? | 1 3 2 | |
| 5. | <p>An official combined plan and field notes includes a closed traverse having 9 new courses with a total length of 11,200.60 m.</p> <ul style="list-style-type: none"> a. What was the maximum allowable angular misclosure for this part of the survey? b. What was the required linear accuracy standard, in centimetres, for this part of the survey using the 95% confidence region approach? | 2 3 | |
| 6. | <ul style="list-style-type: none"> a. Prepare a neatly drawn and labelled explanatory plan <u>suitable for registration</u> in the Land Titles Office for a 6.0 m by 6.0 m surface electrical vault easement at the southeast corner of Lot 1, Block 19, Town of Hay River, NWT. Assume any additional details to be included on the plan. b. How will the Surveyor General process this plan once it is in a technically satisfactory form? | 8 1 | |
| 7. | <ul style="list-style-type: none"> a. List three examples of different types statutory reservations normally included in grants from the Crown pursuant to the <i>Territorial Lands Act</i>. b. As a Canada Lands Surveyor, you have been engaged by the holder of an agreement for sale of Yukon Lands to make a survey of a square parcel of land as shown on the sketch plan attached to and forming part of the agreement. The holder indicates that there is a narrow road to the property leading from a nearby major highway. You obtain the appropriate authorities for the survey and upon arrival at the property, you discover that the narrow road extends through the property for several kilometres and that it is regularly used by the public for access to a recreational area. Using a sketch or sketches as necessary, explain in point form what actions you would take to complete the survey. | 3 4 | |
| 8. | <ul style="list-style-type: none"> a. Provide two purposes for which a compiled plan may be prepared by a Canada Lands Surveyor. b. For a compiled plan, can a new boundary be created by computing the bearing and distance between two points which have not been measured or calculated previously? | 2 1 | |

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| 9. | <p>In the spring of 2009, the Government of Yukon enacted Bill No. 58 - <i>An Act to Amend the Quartz Mining Act</i>, the provisions of which came in to effect on April 1, 2009. One significant change involves the issuance of metal claim tags to a locator prior to actual staking in the field.</p> <p>a. What benefit does this procedural change afford a locator?</p> <p>b. What disadvantage does this change pose for a Canada Lands Surveyor conducting legal surveys of "old" and "new" claims?</p> | 2 2 | |
| 10. | <p>a. How many sections are there in each of Grid Areas 70°00', 85°45' and 70°10', 85°30' as prescribed in the Canada Oil and Gas Land Regulations?</p> <p>b. In 1975, a survey was approved by the Surveyor General which determined the position of an offshore well in a particular grid area, section and unit. In 2006, a second survey was made in the same grid area, but because of a more precise positioning technique available, the grid area was determined to be approximately 50 metres north and 70 metres east of the first positioning of that grid area.</p> <p>Draw two neat sketches showing how a Canada Lands Surveyor would relate a wellsite position for a new well located in the original grid area and a new wellsite position located in the grid area immediately east of the original grid area.</p> | 2 6 | |
| 11. | <p>Draw a neat and dimensioned sketch showing a typical placer mining claim on each side of a Yukon river. Assume any other information required.</p> | 6 | |
| 12. | <p>a. What are "surrendered lands" as described in the <i>Indian Act</i>?</p> <p>b. In the <i>Indian Act</i>, who is designated to authorize surveys of reserves?</p> <p>c. Under what statutory authority are surveys of Yukon First Nation Settlement Lands made?</p> | 2 2 2 | |

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| 13. | <p>On April 19, 2006, John Rudding set out to locate two mineral claims in the Watson Lake Mining District in Yukon. His intention was to locate with a northerly location line the two full size claims JR1 and JR2 right of each of his location lines in a straight line, but his second/northerly line actually deviated 10° to the east of his first/southerly line.</p> <p>By the time he reached the end of the second claim, he decided that he had possibly misread the surficial geology and that he should have staked on both sides of his two location lines.</p> <p>He then traveled in a southerly direction retracing his steps and locating two more full size claims JR3 and JR4 to the right of his earlier location lines and using the same three post locations he had established for the two initial claims. He made application to record the claims within the prescribed time limit and was subsequently issued grants for the four claims by the mining recorder.</p> <p>A staking rush in the area of Rudding's four claims occurred late in 2008, and he became concerned when he heard that his claims might have been overstaked by Cory Savage using location lines in an easterly direction and claiming both left and right of the common lines. Savage not only missed Rudding's blazed location line when he crossed it but also incorrectly showed the location of the nearest of his 120 CS claims on his sketch plan over a mile away from the plotted location of Rudding's prior claims. The mining recorder had issued grants to Savage at an appropriate time having no evidence of an overlap of the two claim groups.</p> <p>Rudding engages you as a Canada Lands Surveyor to make a legal survey of his four claims. You retrace his location lines finding that the southerly line has a bearing of 4°10'10" and a length of 1,609.50 feet, with the northerly line continuing at 14°12'15" and 1,605.75 feet. You also retrace the appropriate location lines of the CS group and determine that the CS group completely covers the JR claims with near-parallel location lines in a 95° general direction with location lines all in the 1,450 foot length range. But for the presence of the prior JR claims, the CS claims in conflict would have formed a solid block of claims with no gaps or gores.</p> <p>Upon determining the position of all relevant legal posts for the two groups of claims, you meet with the mining recorder and present him with your evidence. After reviewing the details you have noted in the field and the documentation which Savage submitted for recording, you both conclude that Savage had made two unintentional errors - one in missing the JR location line he had crossed and one in misplotting his claim group on the NTS staking sheet sketch plan. You both agree that his errors were not made with the intention of misleading others locating in the area, and that his CS claims affected are valid subject to the prior JR claims.</p> <p>a. Draw a neat sketch showing the JR claims and add those dimensions which do not require geometric calculation. 4</p> <p>b. To the sketch in a. show the overlapping CS claims using lines in a different colour. Assume any missing details necessary for completeness. 2</p> <p>c. Using hachure marks or a shading in a third colour, indicate the boundaries of the JR claims as you will survey them. Include details of any additional claims which you might locate on behalf of your client in his best interests. 3</p> <p>d. Indicate by solid black circles the locations at which you will place CLS 77 monuments. 3</p> <p>e. What is the moral to this story?</p> | | |
| | Total Marks: | 100 | |