

Preston Hudlow

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GEOG 404

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## Assignment 2

**Question 1a:** Examine the set of aerial photos 'Stream Deposits'. Describe the terrain in at least three sentences (e.g., is it flat, gently sloping, hilly, etc).

This picture is in black and white, so it shows a clear distinguishment between the sand and streamlines being used for the draining. The sand's texture is fine and smooth whereas the trees look rough. In this photo, you can also see the different sizes in height. The more the water travels through a path creates a pattern and over long use is lower than the surrounding areas.

**Question 1b:** What is the scale of the set of aerial photos 'Stream Deposits'? Using the grid system along the side of the image, what feature do you think is at the place (B.7, 2.2) in the stereograph? and why?

The scale within the image is 1:22,200. Since this is in Alaska draining into the Arctic Ocean you could assume that the feature is ice. It appears to have cracks which also further supports this assumption.

**Question 2a:** On which date was the set of aerial photos 'Volcanic Features' taken? What feature do you think is at the place (B.6, 1.7) in the set of aerial photos? and why?

This photo was taken on October 8, 1960. I believe that this location is the peak of the volcano. This is because the rim looks darker creating a cone-shaped appearance.

**Question 2b:** What elements of aerial photo/image interpretation can you use to determine the feature at (B.6, 1.7) in the set of aerial photos 'Volcanic Features'?

You can use many elements like color, pattern, shape, and texture.

**Question 3a:** Where was the set of aerial photos 'Cultural Features and Urban Areas' taken? What feature do you think is at the place (B.7, 2.7) in the set of aerial photos? and why?  
Question

This was taken in Hawaii. This location appears to be suburbs at the rim of the large crater. The pattern represents neighborhoods with streets connoting.

**Question 3b:** Write a short paragraph to describe the primary land use types (e.g., urban, forest, & water) shown in the set of aerial photos 'Cultural Features and Urban Areas'.

The top of the photo shows the ocean with what appears to be a water canal going into the town. As you get to land it shows the beach and the start of large buildings and urban use. As you get deeper on the island most of the land is urbanized for suburbs and businesses. However, some of the land is left alone as there are craters from extinct volcanos from the past.

**Question 4:** What was the cloud cover when the image LC09\_L2SP\_014036\_20220922\_20220924\_02\_T1 was acquired?

The cloud cover was .07.

**Question 5:** What was the Sun azimuth when the image LC09\_L2SP\_014036\_20220922\_20220924\_02\_T1 was acquired?

The Sun azimuth was 148.21190022.

**Question 6:** Which path and row the satellite was in when the image LC09\_L2SP\_014036\_20220922\_20220924\_02\_T1 was acquired

The path was 14 while the row was 36.

**Question 7:** What is the projection information (projection & datum) for the dataset?

The projection information is UTM with the WGS84 datum set.

**Question 8:** What is the pixel size of layer 1? What about layer 5 and layer 7? Units must be included in your answer.

Layer 1 uses 30x30 meters.

Layer 5 uses 30x30 meters.

Layer 7 pixel size is 30x30 meters.

**Question 9:** Propose one (for undergraduate students)/two (for graduate students) different projects that you could develop by using this Landsat dataset. Each proposal must use one paragraph (at least 5 sentences) to address the objective(s), significance, and study area.

With this Landsat data, you could propose an objective to see the changes in sea level rise and the shoreline. Climate change is affecting the world and has changed the temperatures of the oceans which has led to water expansion and changes in the environment. It is an important area of study to keep a close watch in to help prevent and find a solution before it is too late and becomes irreversible. With the help of Landsat, you can see the changes in the shoreline and find hazardous areas of focus to help provide the community with proper plans in case of an emergency.

**Question 10:** Which function(s) impressed you the most in USGS LandsatLook Viewer? Explain the potential implementations of this service to a remote sensing project(s).

I think an impressive feature of this viewer is how you can look at and compare older dates to newer data sets. For remote sensing being able to see changes in the environment and trends is an important factor to relay information and create proper plans depending on the project and area observed.