# \*Cover page\*

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# About this Tutorial

In this tutorial, you will learn to create a feature code library in Origin. The tutorial will walk you through importing a job file (in the downloaded folder), containing points from a parking lot survey. This tutorial does not involve a lot of technical procedure (setting up a survey), it will just walk you through how to create a feature code library in Origin. You will learn how to do the following:

* Upload a job file
* Create a feature code library in Origin and assign it to the job
* Change, edit, and make notes on points with codes.
* Key in points, using the feature codes

This tutorial will take approximately 15-20 minutes to complete.

# Understanding Feature Codes in Origin

A feature code library is a text file that contains the definitions of features, attributes, linework, and control codes. When measuring a point in the field, you can assign it a feature code to define what that point represents.

You can download or create a feature code library prior to field work. Typically, it is best practice to create a feature code library in the office and to have a standard process for coding points consistently. If you do not have one, Origin has a tool to create these libraries on the fly or add codes to the library if you find there are codes missing. Users can configure a very limited set of properties in Origin; however, using the feature definition manager allows for more configuration.

# What You Will Need

* **Origin Field Software:** Origin LT, Origin Max, Origin GNSS, or Origin Total Station
* **Device**: computer or data collector
* **Data**: Ensure the jobXML file, downloaded in the **CreatingaFeatureCodeLibrary** folder, is located on your device.

# Step 1: Create a Project and Job

1. In the **Projects** screen, tap **New**.
2. Fill in the project details:

**Name** the project “*Feature Codes*”

(Optional) Provide a **Description** *“learning to create feature codes”*

1. Tap **Enter** and **Create**
2. In the **New job** screen, select **Create from JobXML or DC file** and change the settings to the following

**Name** the job “C*reate a Feature Code Library*”

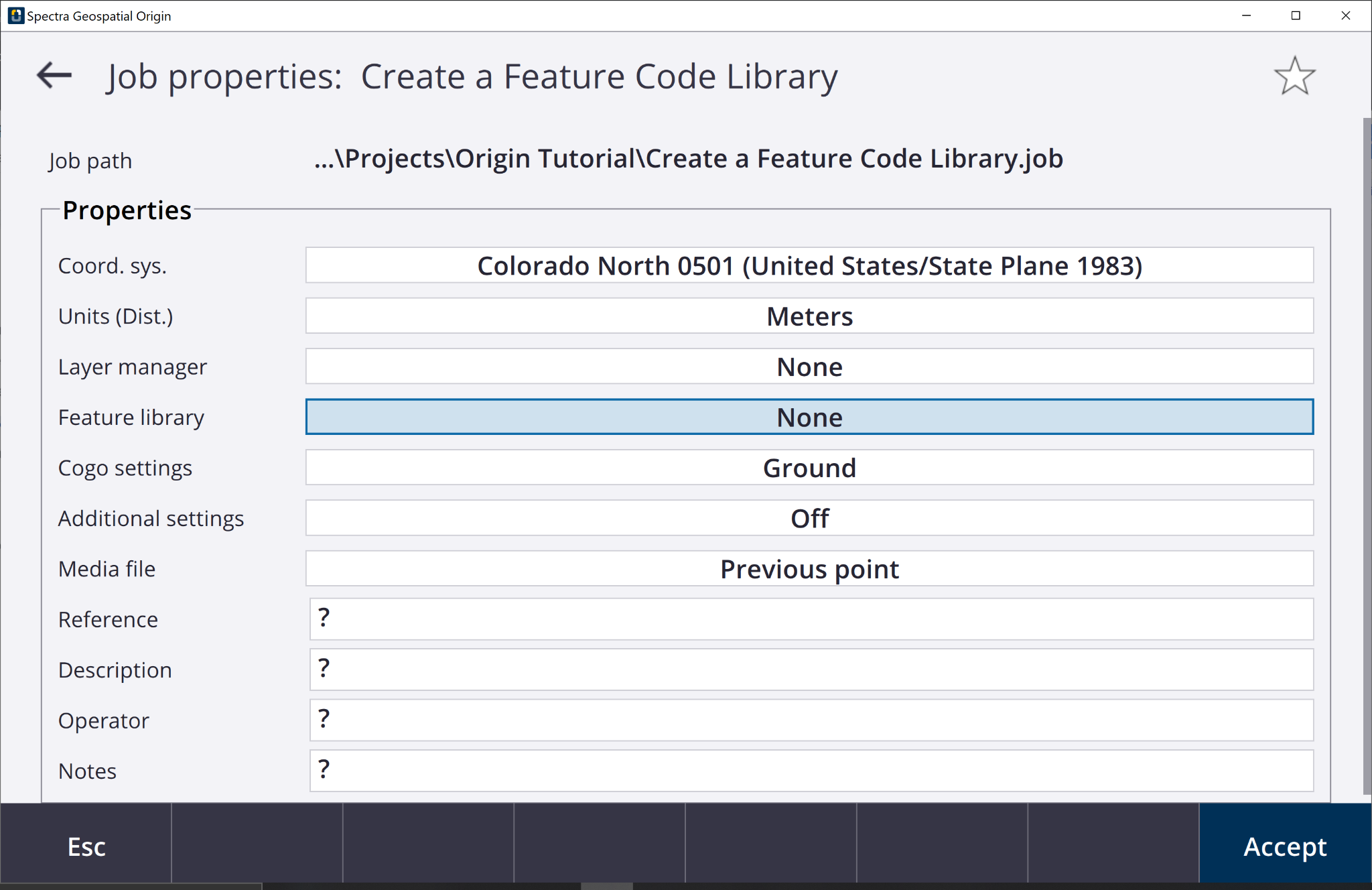
For **File format,** select **JobXML**

For **From file**:

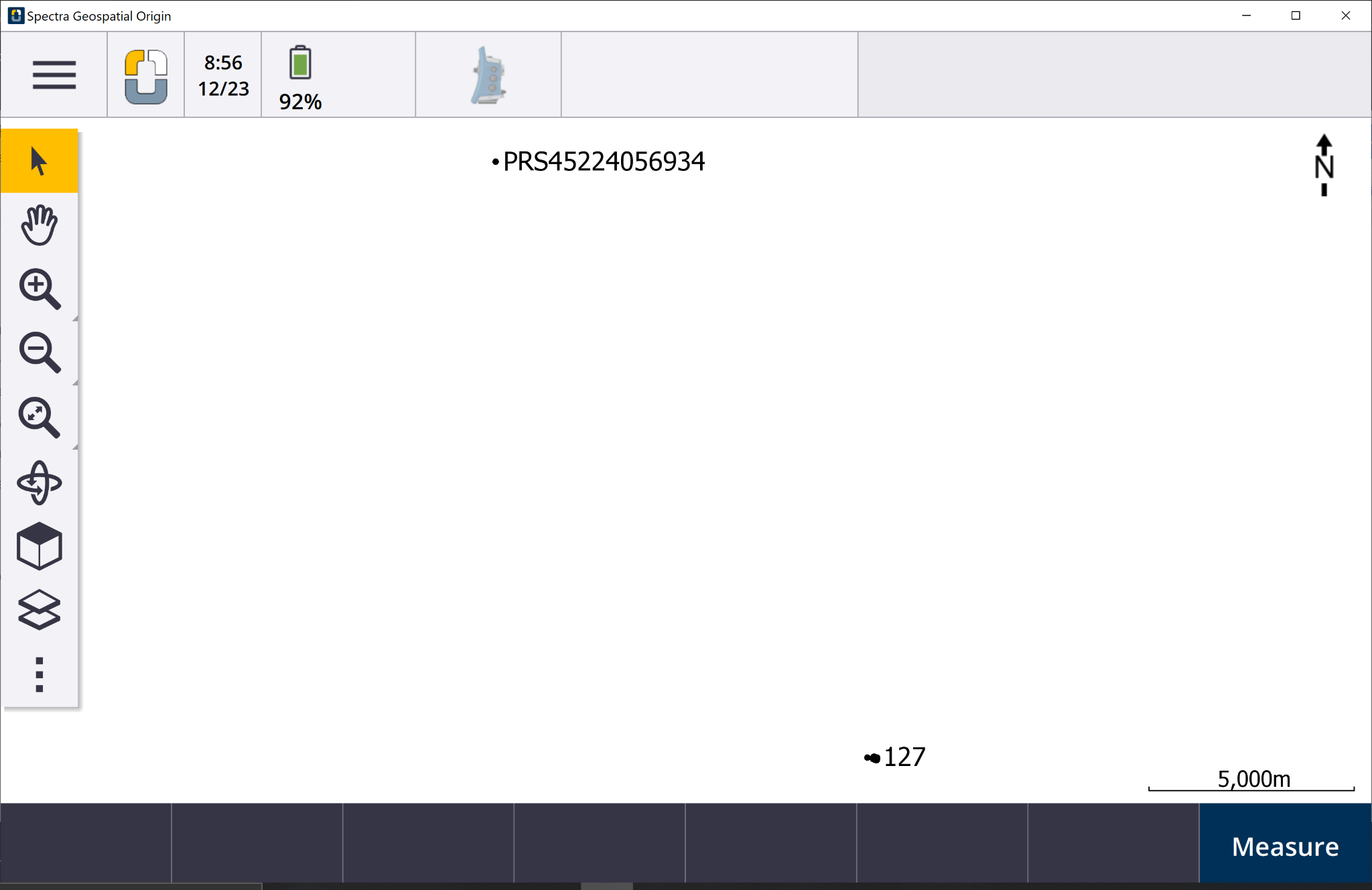
Browse to the downloaded **CreatingFeatureCodeLibrary.jxl** file and select.

Tap **Enter.**

1. A pop-up box will appear showing **Transfer complete**.
2. The properties page will appear, there will be no changes made to the job right now.



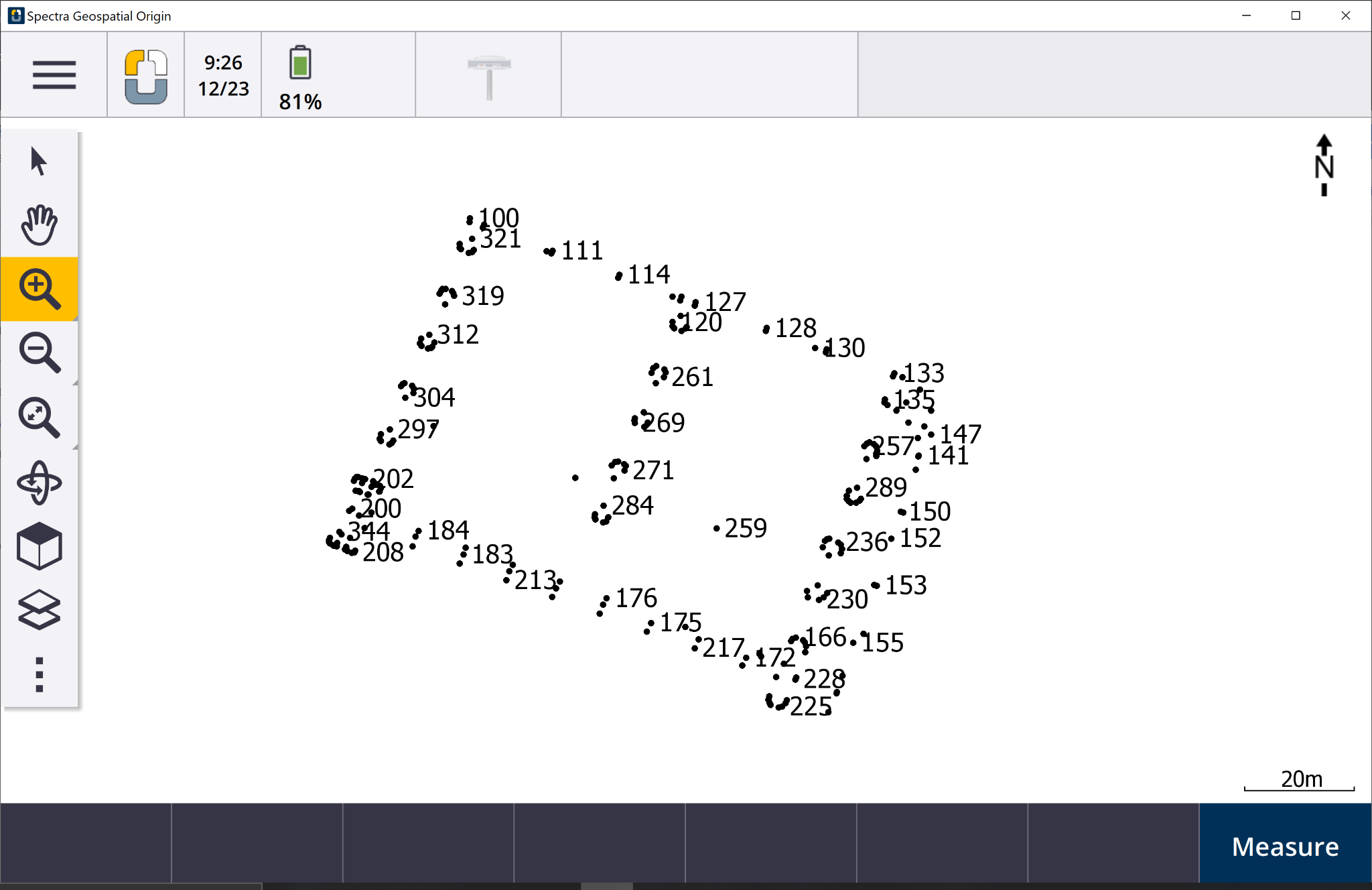
1. Tap **Accept** and the **Map** screen will appear with the data.



1. Tap and hold the **Zoom In** toolbar for 3 seconds, tap in the map multiple times to zoom in on point **127**.

Additionally, you can tap **Zoom in** and drap a box around point **127**.

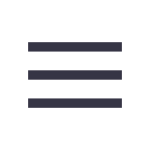
1. There are several data points collected from a parking lot survey.



1. This job contains many points, lines, and polygons. However, there is not a feature library assigned so the codes have no definitions.

The following tutorial steps will make the feature library for this data set and give the points their definitions.

# Step 2: Creating a New Feature Code Library

1. Tap.
2. Tap **Settings** and **Feature libraries**.

You will see the **GlobalFeatures** already listed. This is a default feature code library.

1. Tap **New** and in the **Feature library details** page, give the name “*WCO Parking Lot”*.

Tap **Enter** and **Accept**.

1. Back on the **Feature Libraries** page, select the **WCO Parking Lot** and you will be brought to the feature list.

Since you have not added any features, it will say **No features exist**.

1. On the bottom of the screen, tap **Add**. You will be adding in points, lines, and polygons.
2. On the **Enter feature code** screen. Fill in the following information:

**Feature code**: *BOC*

**Description**: *Back of Curb*

**Feature Type**: *Line*

**Layer**: *0*

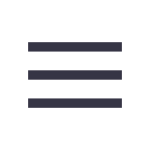
**Line Style**: *Solid Line*

**Line Color**: *Orange*

Tap **Accept** and the new feature code is added to the list.

1. Tap **Add** and repeat Step 6 for the following feature codes:

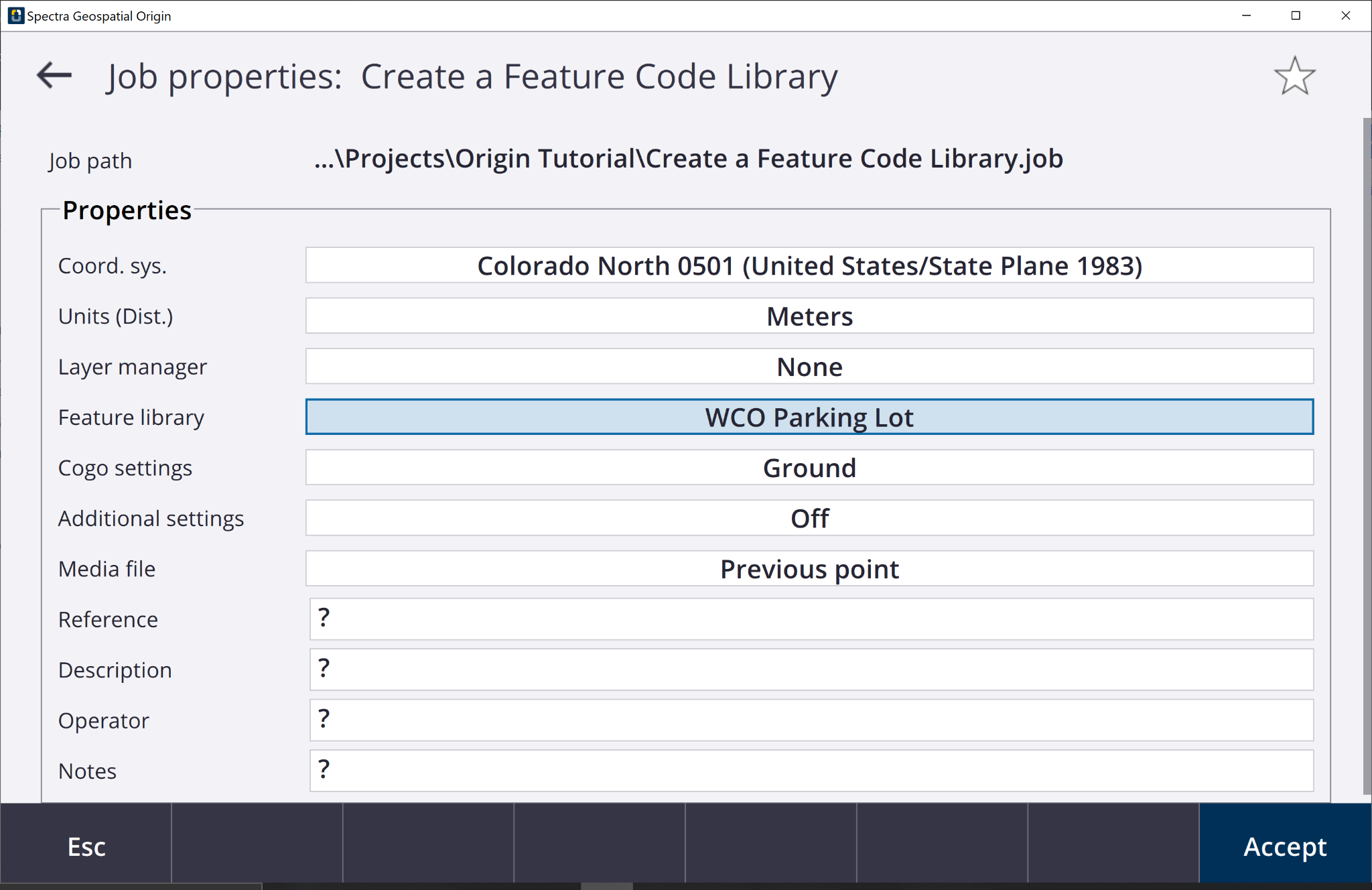
| Feature Code | Description | Feature Type | Layer | Detail:  (Line Style, Line/Border Color,  Control code action) |
| --- | --- | --- | --- | --- |
| LP | Light Pole | Point | 0 | N/A |
| WALL | Wall | Line | 0 | Solid lines  Red |
| CNTL | Control Point | Point | 0 | N/A |
| TREE | Tree | Point | 0 | N/A |
| SW | Sidewalks | Line | 0 | Solid Lines  Yellow |
| LND | Landscape | Polygon | 0 | Solid Lines  Green |
| S | Start Line | Control code | 0 | Start join sequence |
| E | End Line | Control code | 0 | End join sequence |

1. Tap **Store** and **Back**. You will be brought to the **Map** screen.
2. Tap.
3. Tap the **Job: Creating a Feature Code Library.**
4. You should be on the **Origin Tutorial** project page, tap the **Creating a Feature Code Library** job.

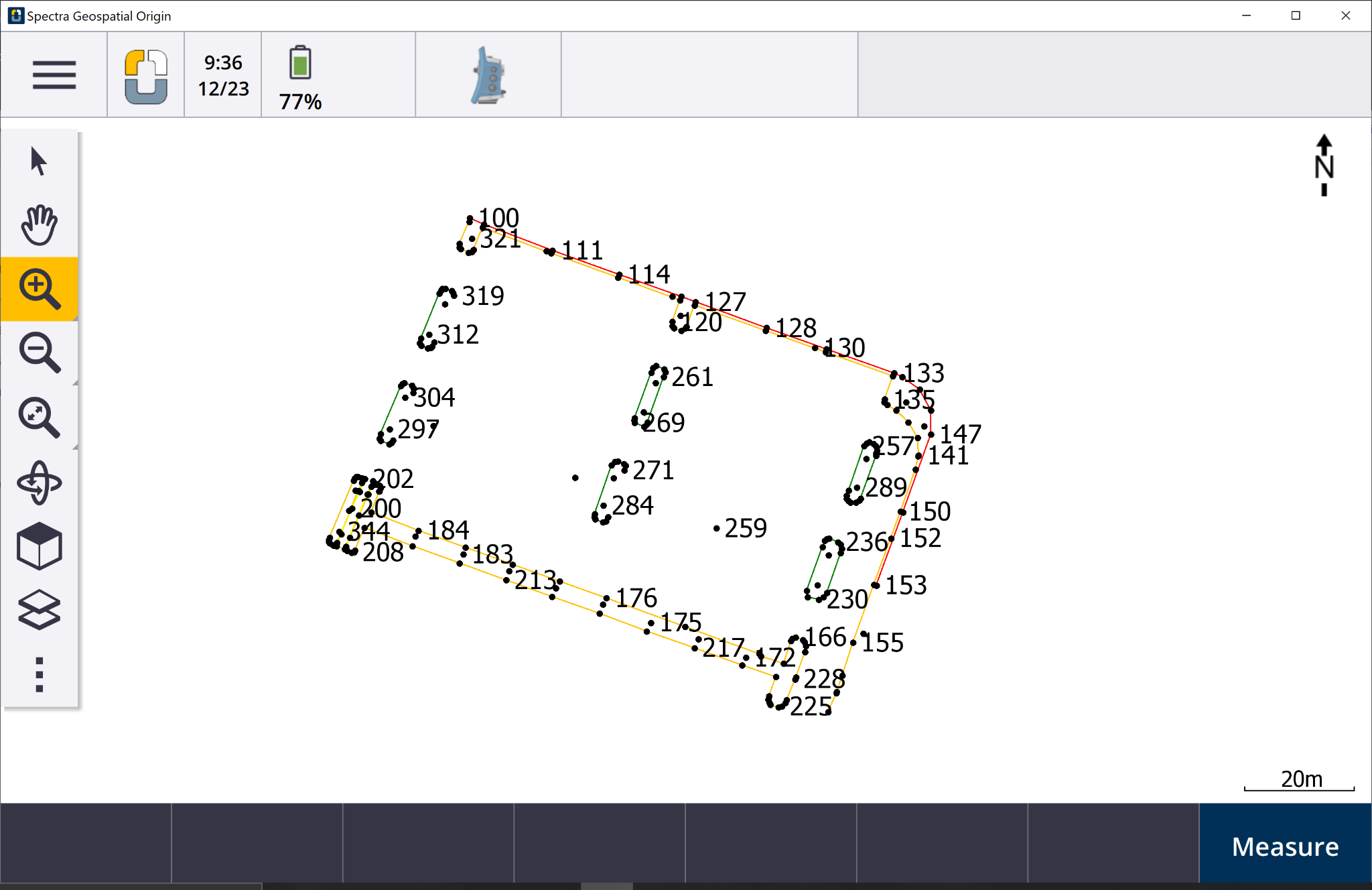
Tap **Properties**.

1. You can see there is no **Feature Library** assigned for the project.

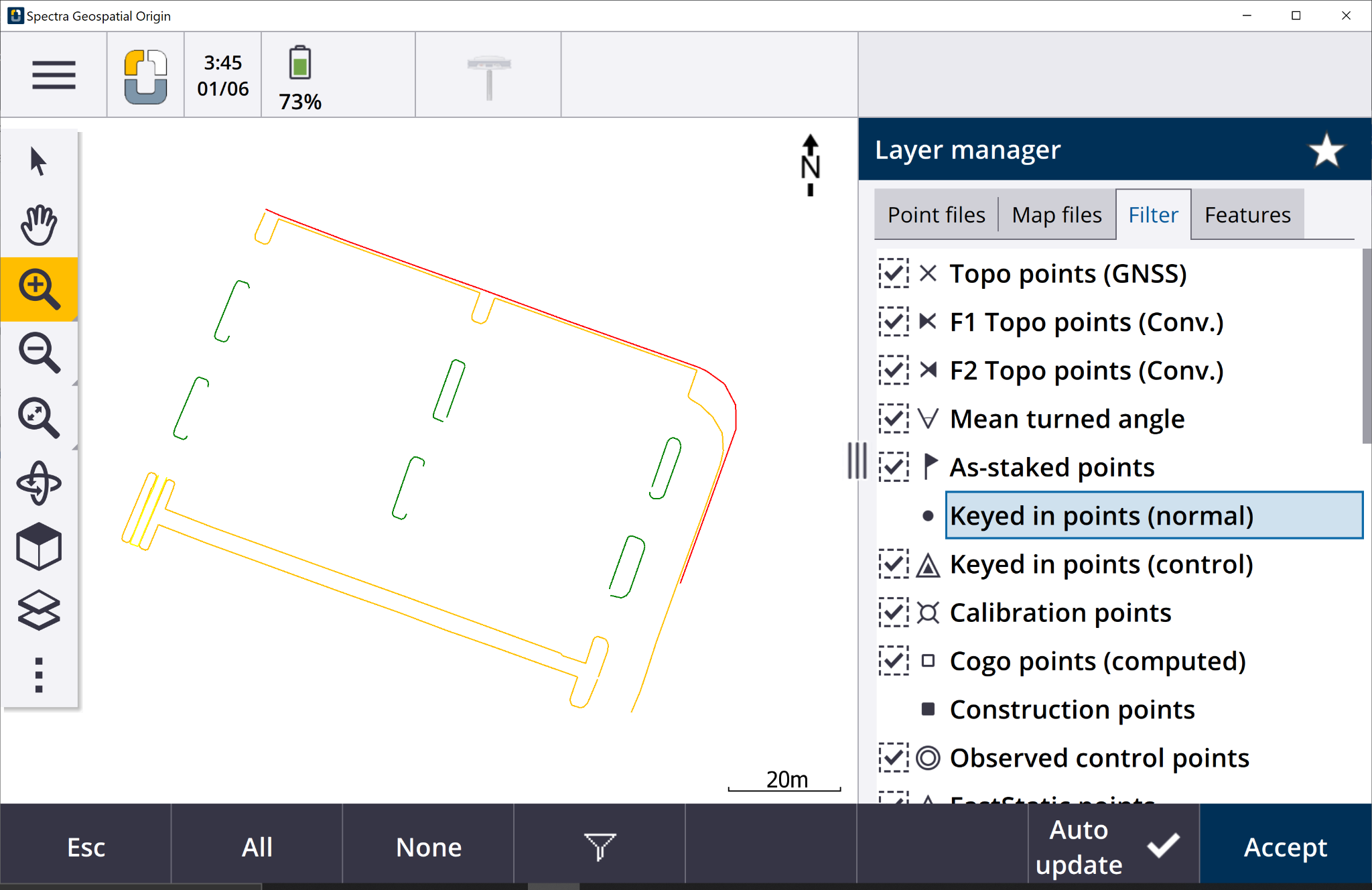
Tap the box and you will see the “*WCO Parking Lot”* library.



1. Tap **Accept**.
2. You have assigned the new Feature Library to the job.
3. Navigate to the Map and you will see the points with the outlined definitions.

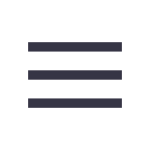


1. To see the linework, tap the **Layer manager** button in the side map controls.
2. Select the **Filter** tab.
3. Uncheck the **Keyed in points (normal)** and you will be able to see the highlighted features.



# Step 3: Changing Point Codes

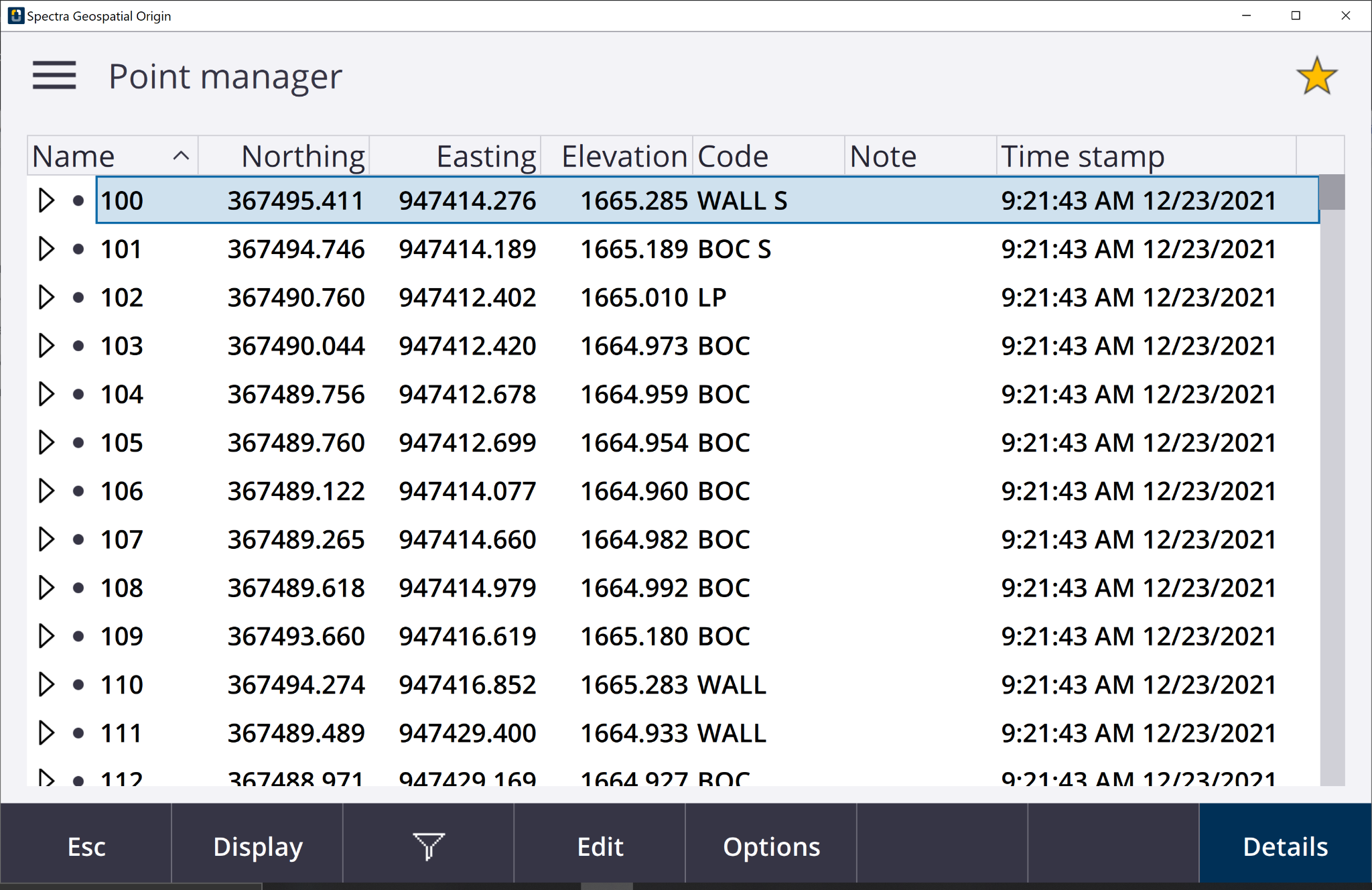
1. Origin allows for users to change the code for a point that has already been measured.

Tap .

1. In the **Favorites** tab, select **Point manager**.

Alternatively, tap **Job data** and **Point manager**

1. All points, from 100 to 344, are listed in the **Point manager** screen.

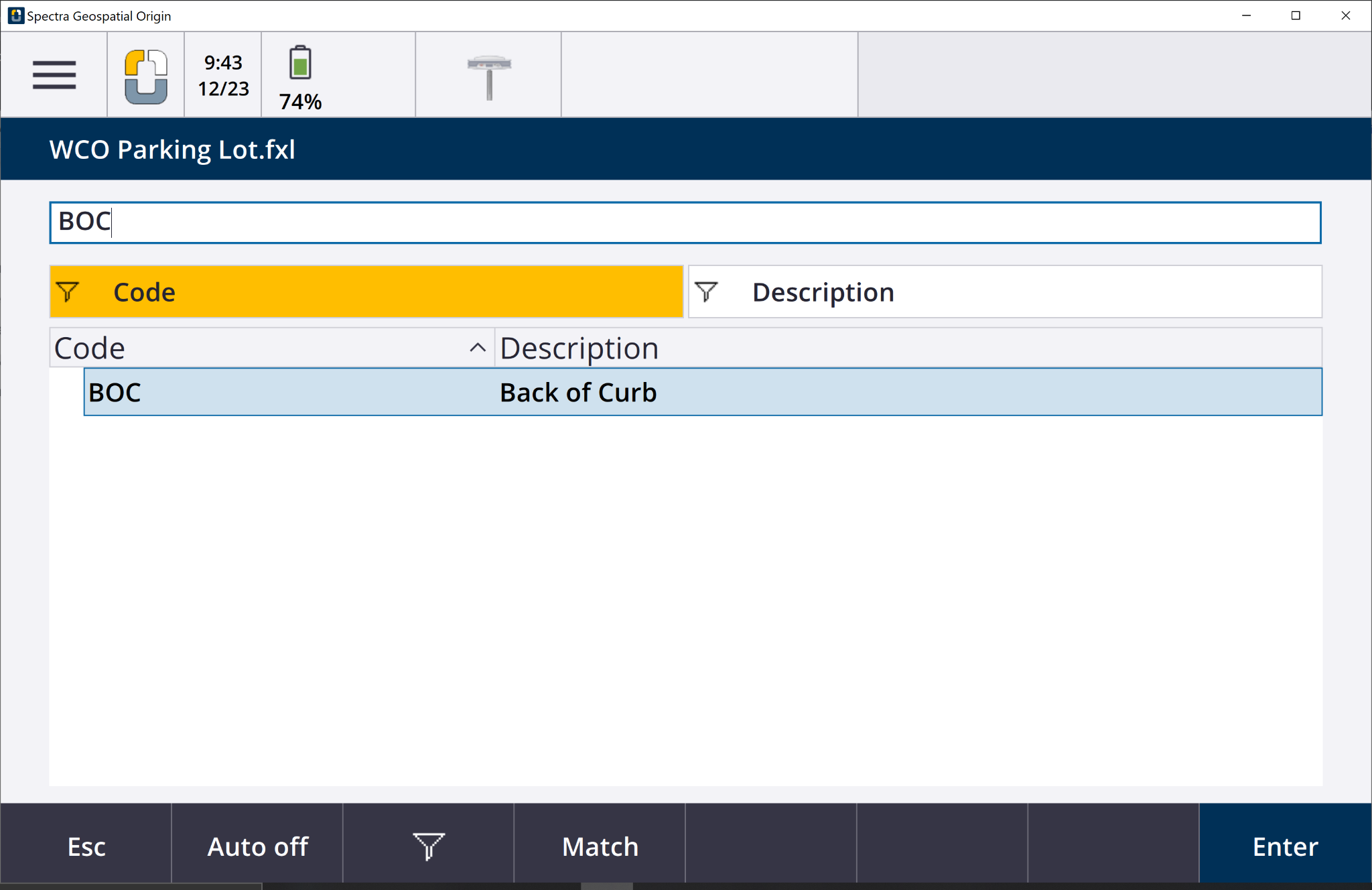


1. Look at point **102**, it has a code of **LP**, indicating it is a light pole. This should have the code **BOC**.

For point **102**, tap directly into the **Code** field to change.

1. Clear the search bar and type **BOC**.

Tap **Enter** to change the code name.



1. Tap **Enter**. Point 102 now has a note that shows it was modified.

Extend the **Notes** column and it says **Modified, Time,** and **Date.**

1. In the **Point manager** page, select point **100.**

Tap **Edit** and then tap **Notes**.

1. In the **Notes** screen, type *Beginning of wall on the edge of the parking lot*.

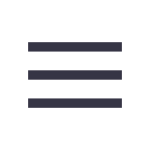
Tap **Enter**.

1. Tap **Esc.** to go back to the menu.

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# Step 4: Key-in Points

Now that you have assigned the feature library and uploaded the data, you will key-in points to use the codes. The Key In tool allows for creating points/lines/polygons and entering coordinates of them.

1. Tapand tap **Key in** and select **Points**.
2. For **Point name** type **345**

For **Code** select **TREE**

Tap the screen near point **321** to automatically fill in the Northing and Easting boxes.

Type the elevation at **1,524m**.

Tap **Store**.



You have completed this tutorial.