Navscape User Guide – SeismicQC

Document:
Release: 01
Revision: A
Released: 11/7/2025
4D Nav, LLC

REL	REV	ISSUE DESCRIPTION	PREPARED	REVIEWED	APPROVED	DATE
01	A	Initial release	AS			Nov 7, 2025

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3. NAVSCAPE-SEISMIC

Navscape-Seismic is an extension for the 4D Nav Web-app which allows QC of seismic node receiver data. This document gives a quick overview of the processes and features available within this module.
The system consists of a SeismicConnector server which receives and processes seismic data, and provides it for display to the NavScape web app in the form of reports, excel sheets, and map layers. As a project is completed offshore using NavView-Node Dashboard, a secure link is set up which continuously provides uploads logged node dashboard data to SeismicConnector, so that it is available for QC anywhere in the world.

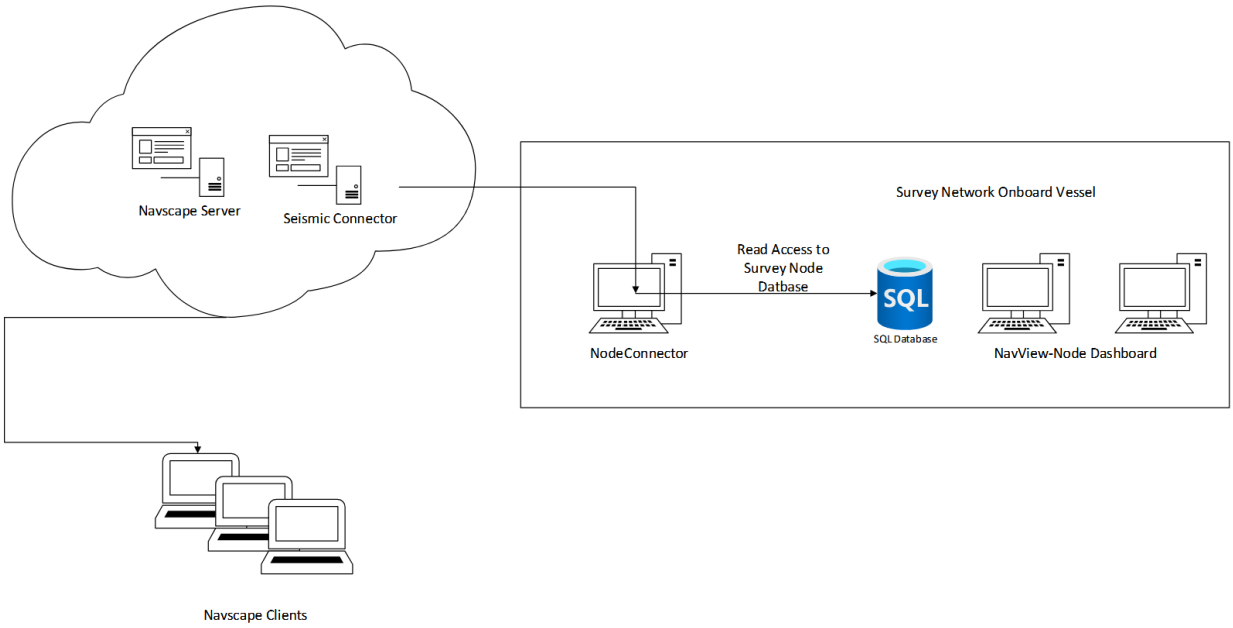


FIGURE 1 SYSTEM ARCHITECTURE

3.1 ACCESS

To access the web-app, follow the url provided by your 4D Nav representative, and enter your provided credentials. For any connection issues please reach out to 4D Nav support.

3.2 NAVIGATION

Figure 2 shows the overall layout of Navscape, with important items numbered so they can be explained below.

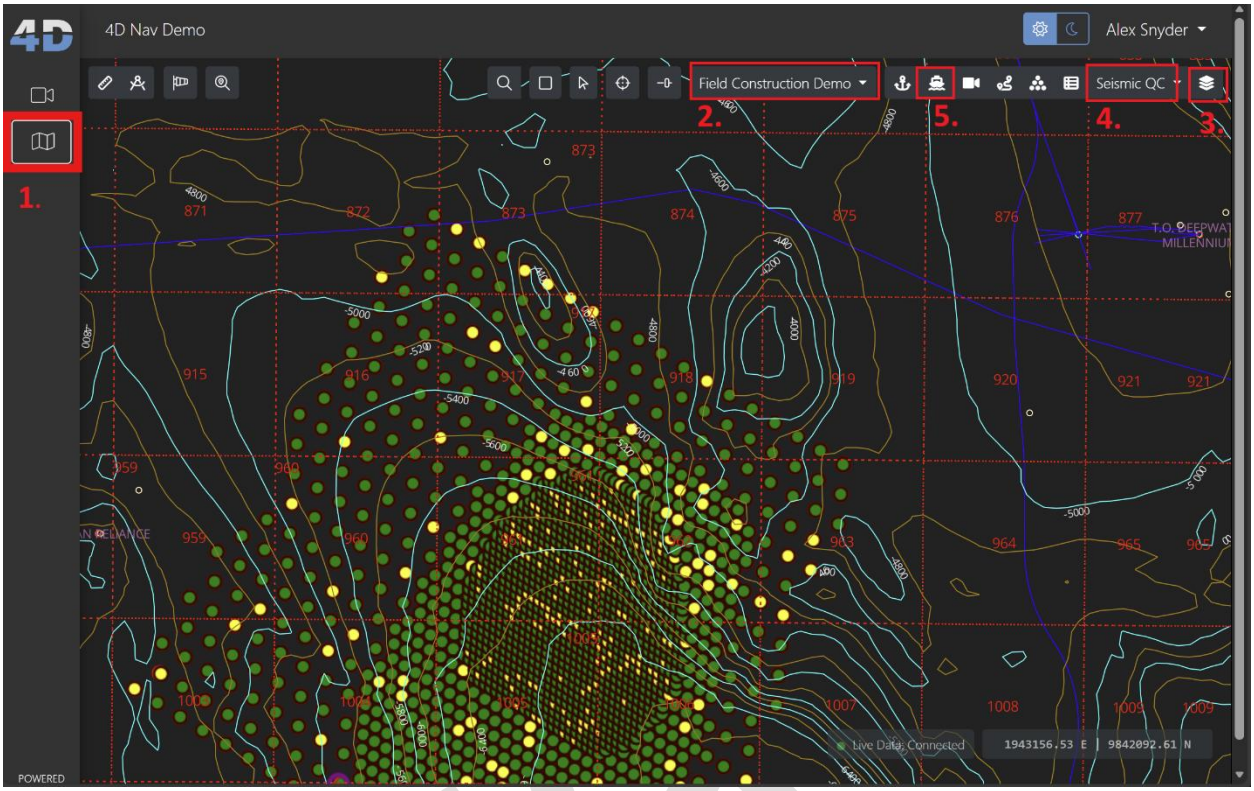


FIGURE 2 OVERALL VIEW

1. 2D Map button. Use this to get to the main map view.
2. Project selection menu. Multiple projects may be setup within your organization – use this menu to switch between projects for display.
3. Layers button – opens the layers panel
4. Seismic QC Menu – opens the Seismic QC Menu
5. Vehicles Button – opens the vehicles panel.

3.3 LAYERS PANEL

The layers panel opens as a floating window in front of the map view. This panel shows all layers currently available in the project. There any SHP/DWG backgrounds that are loaded into the project are listed here where they maybe hidden or displayed. Seismic QC layers are grouped into a category, where individual parts of the seismic QC data may be displayed.

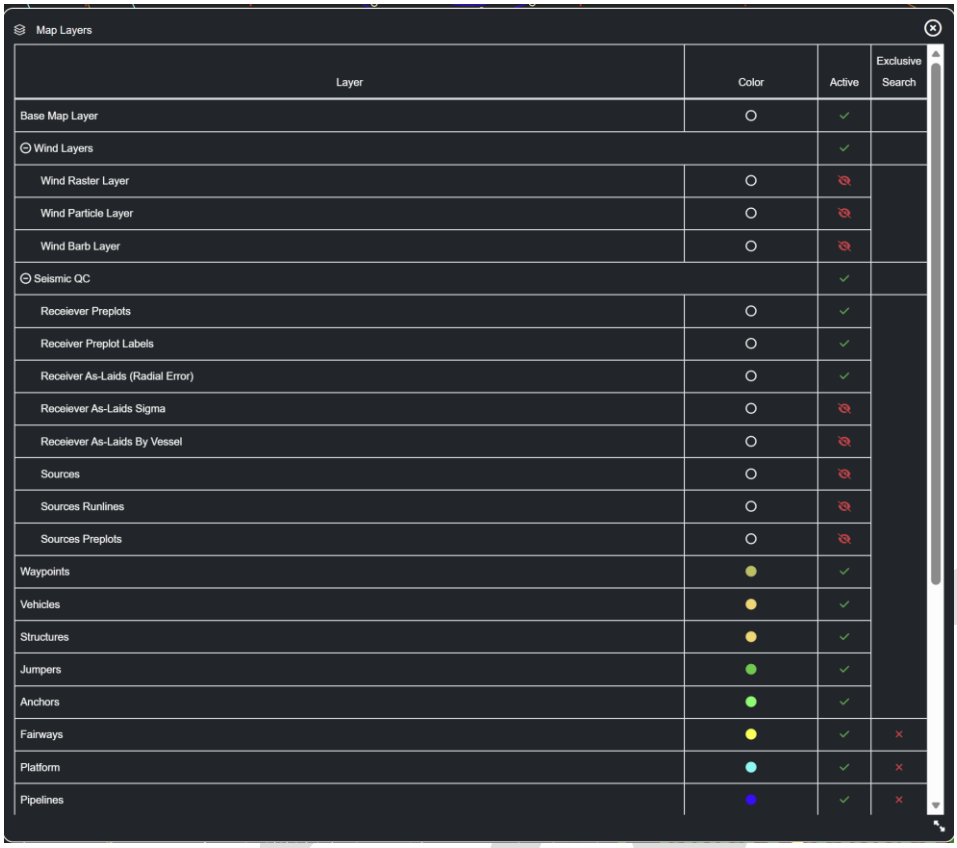


FIGURE 3 MAP LAYERS PANEL

To turn on or off a layer, click the Icon for that layer in the Active column. A checkmark indicates it is active, while a red crossed out eye indicates it is hidden from view.

3.4 SEISMIC QC MENU

The Seismic QC menu is the hub of information available within the Seismic QC module. This is broken down into sections of receivers and sources. The menu is shown below in Figure 4. Each menu item will be described in this section.

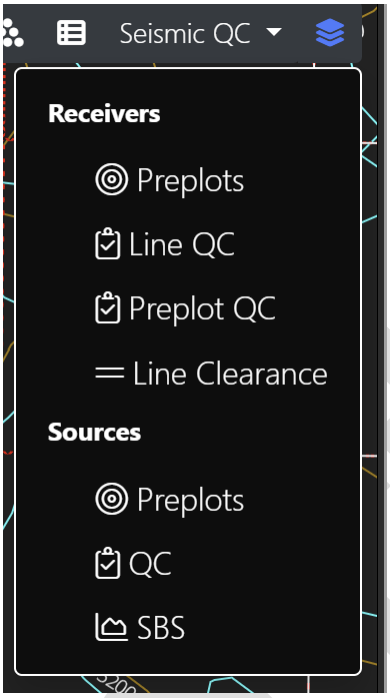
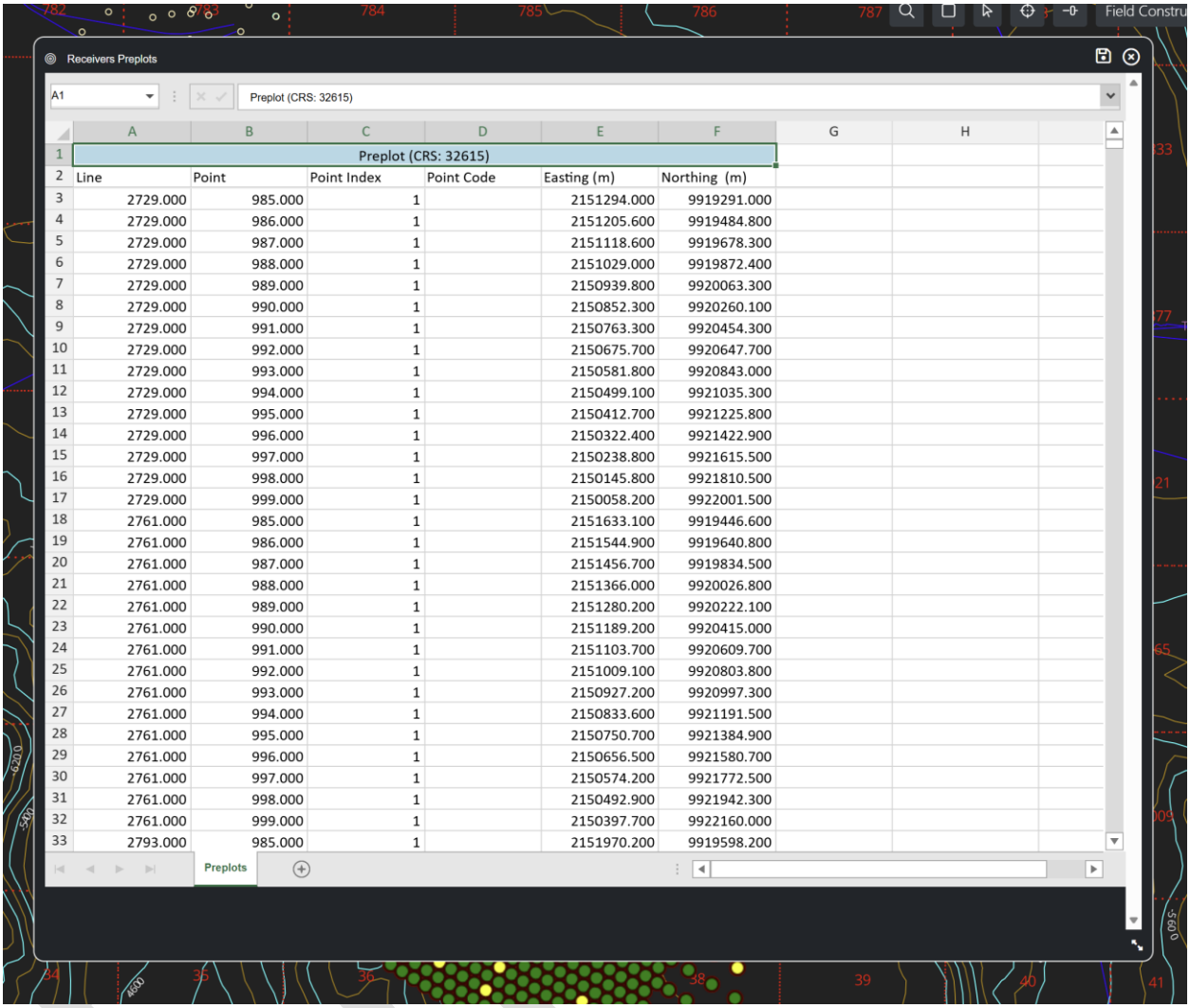


FIGURE 4 SEISMIC QC MENU

3.4.1 RECEIVER PREPLOTS

Clicking the Receiver Preplots button will open the Preplots panel. This opens as a floating panel which houses a Microsoft Excel style view. All preplots in the project are shown with their coordinates. Click the save icon in the top right corner of the panel to save the results to disk as a .xlsx file.



	A	B	C	D	E	F	G	H
1	Preplot (CRS: 32615)							
2	Line	Point	Point Index	Point Code	Easting (m)	Northing (m)		
3	2729.000	985.000	1		2151294.000	9919291.000		
4	2729.000	986.000	1		2151205.600	9919484.800		
5	2729.000	987.000	1		2151118.600	9919678.300		
6	2729.000	988.000	1		2151029.000	9919872.400		
7	2729.000	989.000	1		2150939.800	9920063.300		
8	2729.000	990.000	1		2150852.300	9920260.100		
9	2729.000	991.000	1		2150763.300	9920454.300		
10	2729.000	992.000	1		2150675.700	9920647.700		
11	2729.000	993.000	1		2150581.800	9920843.000		
12	2729.000	994.000	1		2150499.100	9921035.300		
13	2729.000	995.000	1		2150412.700	9921225.800		
14	2729.000	996.000	1		2150322.400	9921422.900		
15	2729.000	997.000	1		2150238.800	9921615.500		
16	2729.000	998.000	1		2150145.800	9921810.500		
17	2729.000	999.000	1		2150058.200	9922001.500		
18	2761.000	985.000	1		2151633.100	9919446.600		
19	2761.000	986.000	1		2151544.900	9919640.800		
20	2761.000	987.000	1		2151456.700	9919834.500		
21	2761.000	988.000	1		2151366.000	9920026.800		
22	2761.000	989.000	1		2151280.200	9920222.100		
23	2761.000	990.000	1		2151189.200	9920415.000		
24	2761.000	991.000	1		2151103.700	9920609.700		
25	2761.000	992.000	1		2151009.100	9920803.800		
26	2761.000	993.000	1		2150927.200	9920997.300		
27	2761.000	994.000	1		2150833.600	9921191.500		
28	2761.000	995.000	1		2150750.700	9921384.900		
29	2761.000	996.000	1		2150656.500	9921580.700		
30	2761.000	997.000	1		2150574.200	9921772.500		
31	2761.000	998.000	1		2150492.900	9921942.300		
32	2761.000	999.000	1		2150397.700	9922160.000		
33	2793.000	985.000	1		2151970.200	9919598.200		

FIGURE 5 RECEIVER PREPLOTS

3.4.2 LINE QC

The line QC Panel is used to display receiver QC data for an entire line at a time – typically this would be queried as soon as a line is completed. When first opened, the user can select a line, a radial threshold and a sigma threshold, then click generate. This will generate an excel display of the QC data.

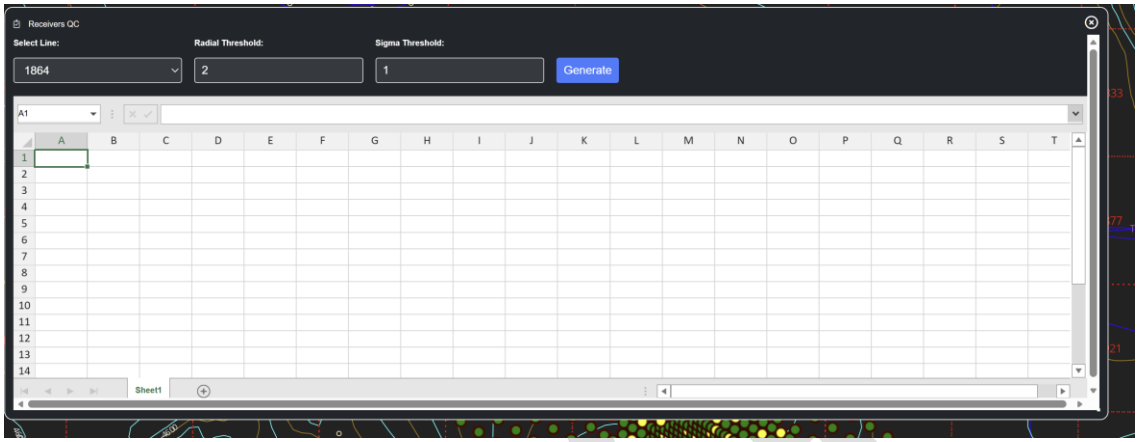


FIGURE 6 LINE QC PANEL

The lines are known based on the preplots that are loaded into the project. The Radial threshold and sigma threshold will highlight data in red when it is out of specifications, such as a deployment being too far from the design preplot location. Once generate is clicked, the data may be viewed in the panel, as shown in Figure 7.

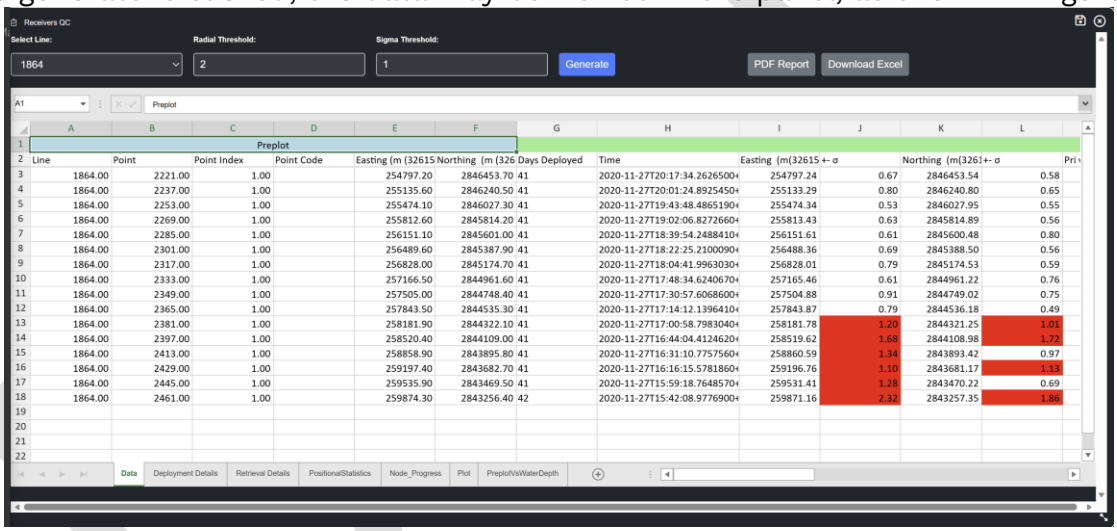


FIGURE 7 LINE QC WITH DATA

To save the results to an excel file, click the **Download Excel** button. The downloaded file will match exactly what is displayed on the panel.
The PDF report button generates a detailed report of the statistics of the data on the selected line.

3.4.3 PREPLOT QC

The preplot QC button allows for querying of the raw data for a specific preplot location. This panel opens as an excel display as well and lets the user select a line, station, and index.

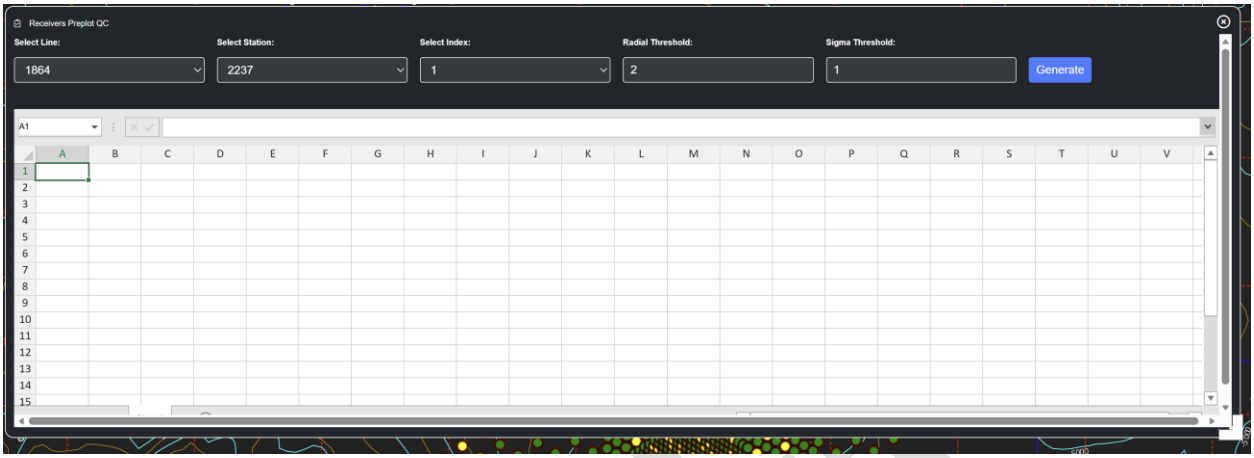


FIGURE 8 PREPLOT QC PANEL

When the Generate button is clicked, a message is sent to fetch the raw data from the vessel, via the 4DNav Node Connector application. If the project is complete, this data can be hosted in the cloud as well, and still be made available.
The Preplot QC report contains all raw data that was logged with the deployment and recovery fixes for a particular preplot. The data stored in the Node Dashboard database is shown at the top of each set. In addition to that, the data is calculated in excel, so easy comparisons can be made, between the raw data and the reported data.

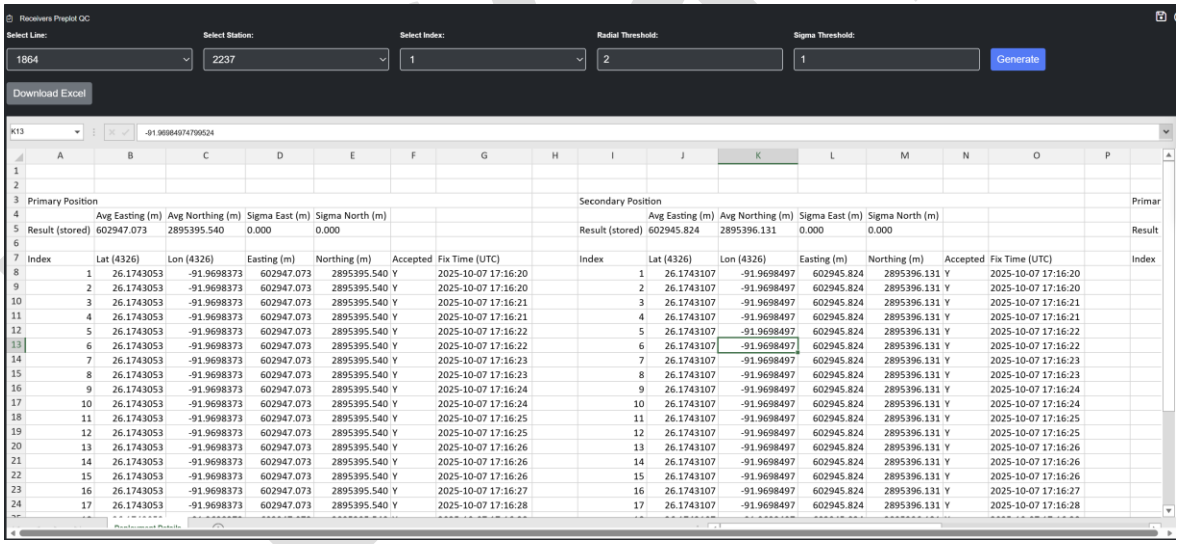


FIGURE 9 PREPLOT QC REPORT

3.4.4 LINE CLEARANCE

The line clearance panel is designed to help determine if a line of nodes may be recovered. A receiver line is selected. The system then shows all source lines that are within a certain buffer, and shows their completion status. The intention is that once

all source lines have been QC'd and approved as completed, then the receiver can be recovered.

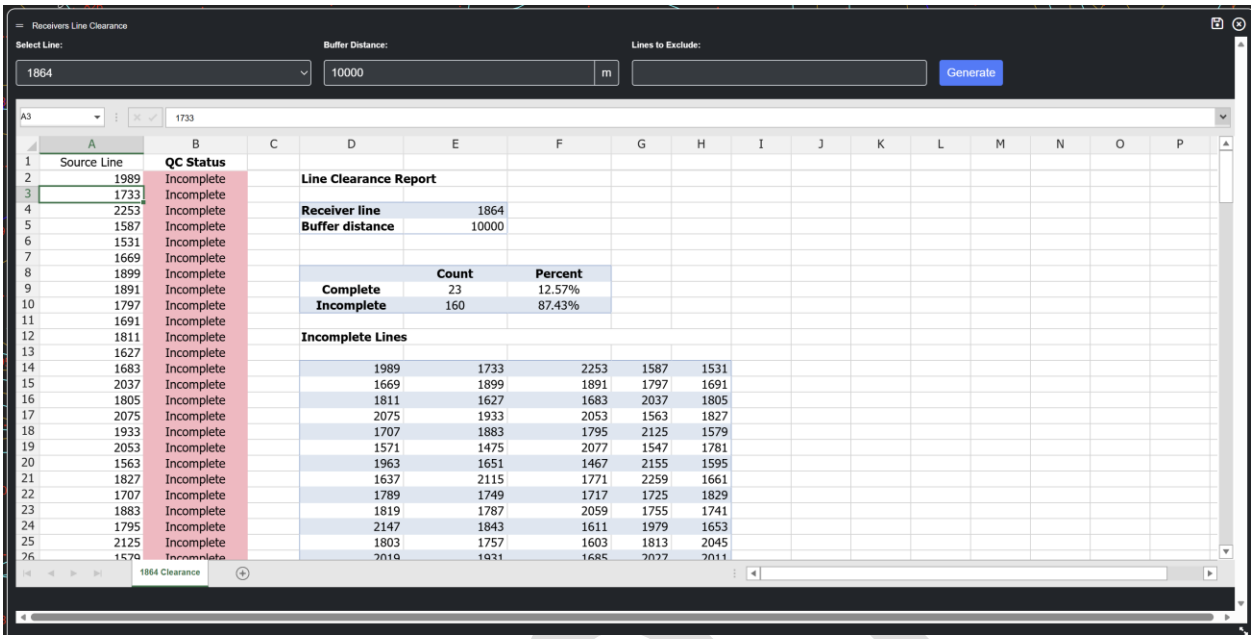
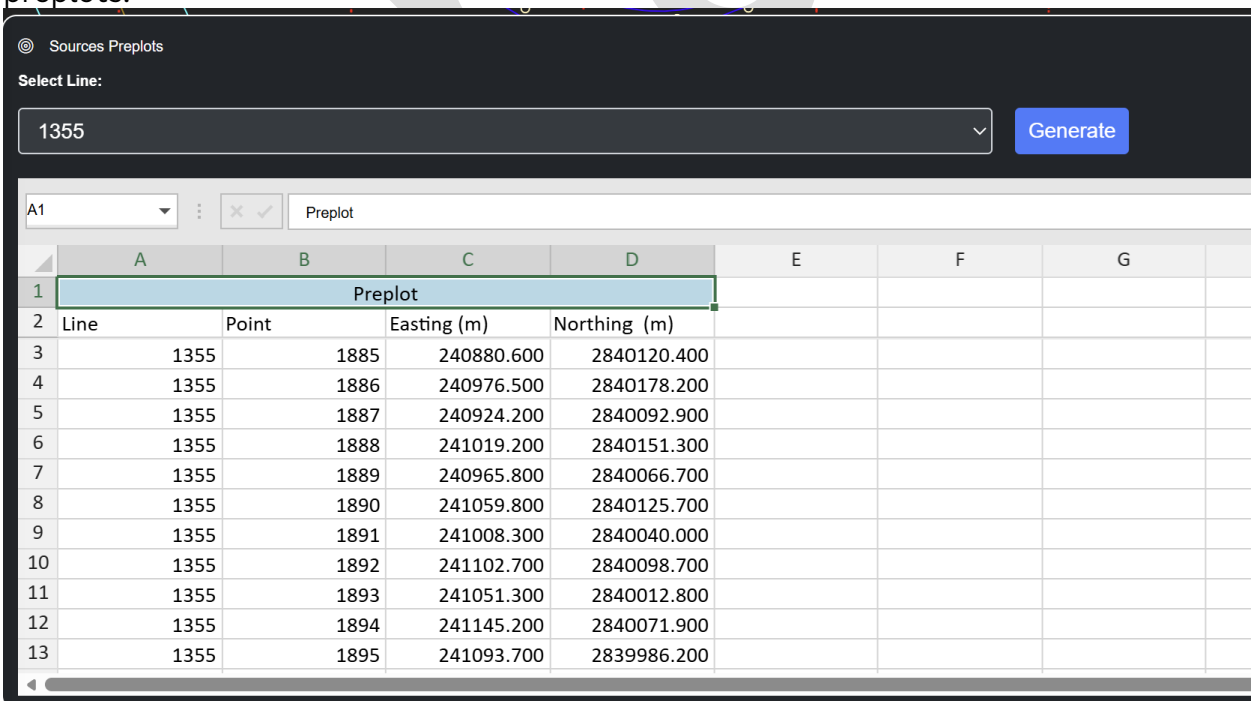


FIGURE 10 LINE CLEARANCE

3.4.5 SOURCE PREPLOTS

The source preplots window shows an excel view of the source preplots. In this case they are shown by line not for the entire project, due to the larger number of source preplots.



	A	B	C	D	E	F	G
1	Preplot						
2	Line	Point	Easting (m)	Northing (m)			
3	1355	1885	240880.600	2840120.400			
4	1355	1886	240976.500	2840178.200			
5	1355	1887	240924.200	2840092.900			
6	1355	1888	241019.200	2840151.300			
7	1355	1889	240965.800	2840066.700			
8	1355	1890	241059.800	2840125.700			
9	1355	1891	241008.300	2840040.000			
10	1355	1892	241102.700	2840098.700			
11	1355	1893	241051.300	2840012.800			
12	1355	1894	241145.200	2840071.900			
13	1355	1895	241093.700	2839986.200			

FIGURE 11 SOURCE PREPLOTS

3.4.6 SOURCE QC

The source QC panes is shown below. This view shows detailed results of the SPS files that have been uploaded, according to specified QC Criteria. At this time, this can be viewed in Navscape, but in order to make changes to the criteria, and upload SPS files, the NavView based SeismicQC Module is required.

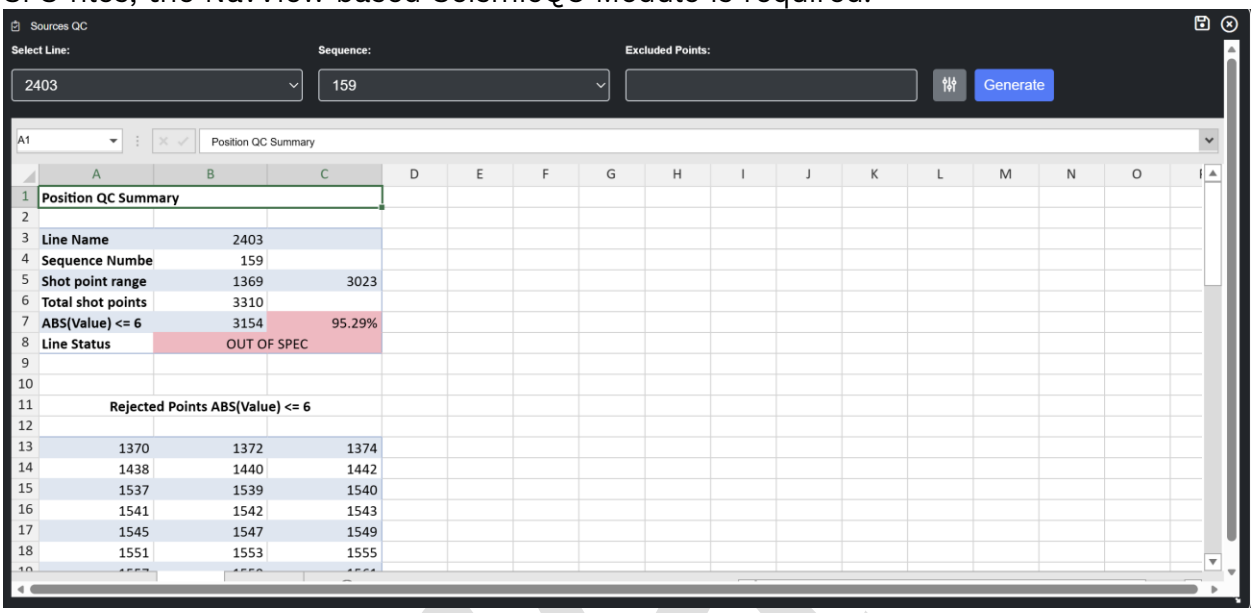


FIGURE 12 SOURCE QC

3.4.7 SBS

The SBS button and panel is currently a placeholder for a feature to be added in the future. For detailed SBS views, the Seismic QC module in NavView can be used.

3.5 VEHICLES PANEL

The Vehicles panel is a standard NavScape feature used to display all the live vehicles available in the project. In order to fly to a particular vehicle on the map, click the eye button in the Fly to column.

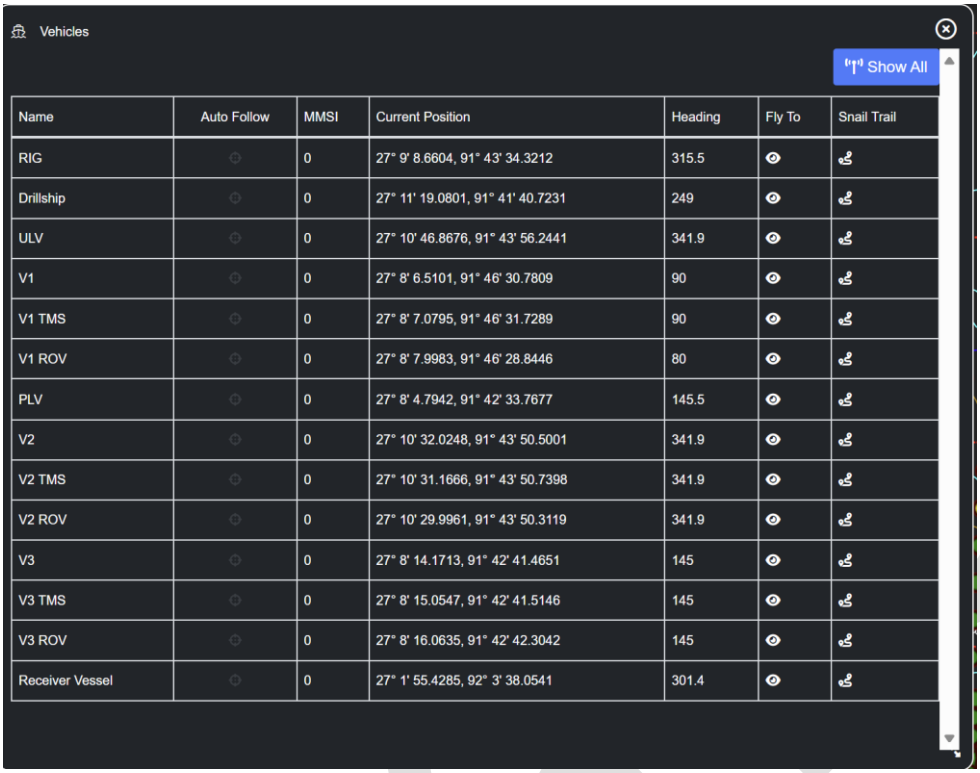


FIGURE 13 VEHICLES PANEL