

GROUNDHOG

MINE DIGITIZATION & AUTOMATION

**User Guide for
Drilling Activity:
FMS Operator App**

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Overview

The FMS Operator App has been designed to accommodate various workflows, and this user guide specifically focuses on the `drilling workflow. This comprehensive document is intended to guide users through the fundamental steps of utilizing the app for drilling activities. Below is an elaborate overview of the key functionalities covered in this guide:

Task Acceptance / Creation:

- **Navigation:** Learn how to navigate through the app's interface to start an assigned task or create a new one.
- **Task Details:** Enter essential task information such as engine hours, location, etc.

Recording Information:

- **Data Entry:** Enter data to record pertinent details during the drilling activity, including destination location, material type, bucket counts, photo capture, and any notable observations.
- **Sample Bag Information:** Learn to capture sample bag data before completing the drilling task.

Delay and Downtime Tracking:

- **Log Delays:** Understand how to log delays or downtime incidents during drilling operations.
- **Reason Codes:** Familiarize yourself with the predefined reason codes for delays, ensuring accurate and consistent reporting.

Switching Tasks:

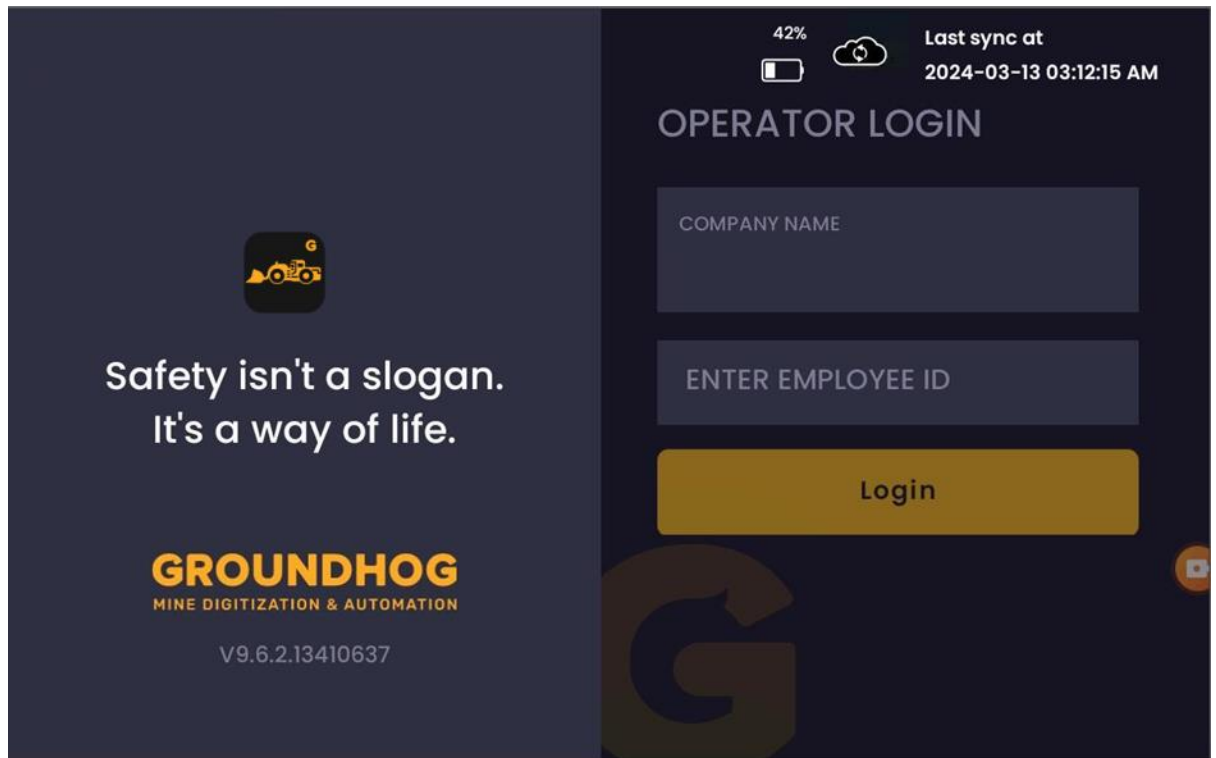
- **Task Transition:** This feature seamlessly transitions between different drilling tasks.

By following this user guide, operators can navigate the FMS Operator App seamlessly, ensuring a smooth and efficient drilling workflow while leveraging the full capabilities of state-of-the-art technology for enhanced productivity and data accuracy.

How to get started

Task Acceptance/Creation

1. Login to the FMS UG Operator App with your ID.



2. The task list screen is displayed. This screen presents all tasks assigned to the Operator.
 - a. Click on the task list button at the screen's bottom left corner. Another view of tasks will appear. Click "Start" on this screen.
 - b. Pre-inspection
 - c. Add engine hours, Electrical hours, percussion hours.
 - d. Select depth of the round.
 - e. The operator will be directed to the face drilling activity screen.

Last sync at
2024-03-20

32%
17:33 pm

John Miller

Welcome John Miller! You have 2 task(s) for today.

Equipment ID	Task	Primary Location		
JUM006	FACE DRILLING	FAC_1523_01	ADDITIONAL INFO	Start
Start Date & Time	EXPECTED DURATION	Expected Count		
AM 2024-03-20	2H 42M	65 Hole(s)		

Equipment ID	Task	Primary Location		
JUM006	FACE DRILLING	FAC_2456_03	ADDITIONAL INFO	Start
Start Date & Time	EXPECTED DURATION	Expected Count		
AM 2024-03-20	2H 42M	65 Hole(s)		

Continue

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Last sync at
3-20 17:33:11 P

32%
17:33 pm

John Miller

Back **Welcome John Miller**
You have 2 task(s) for today.

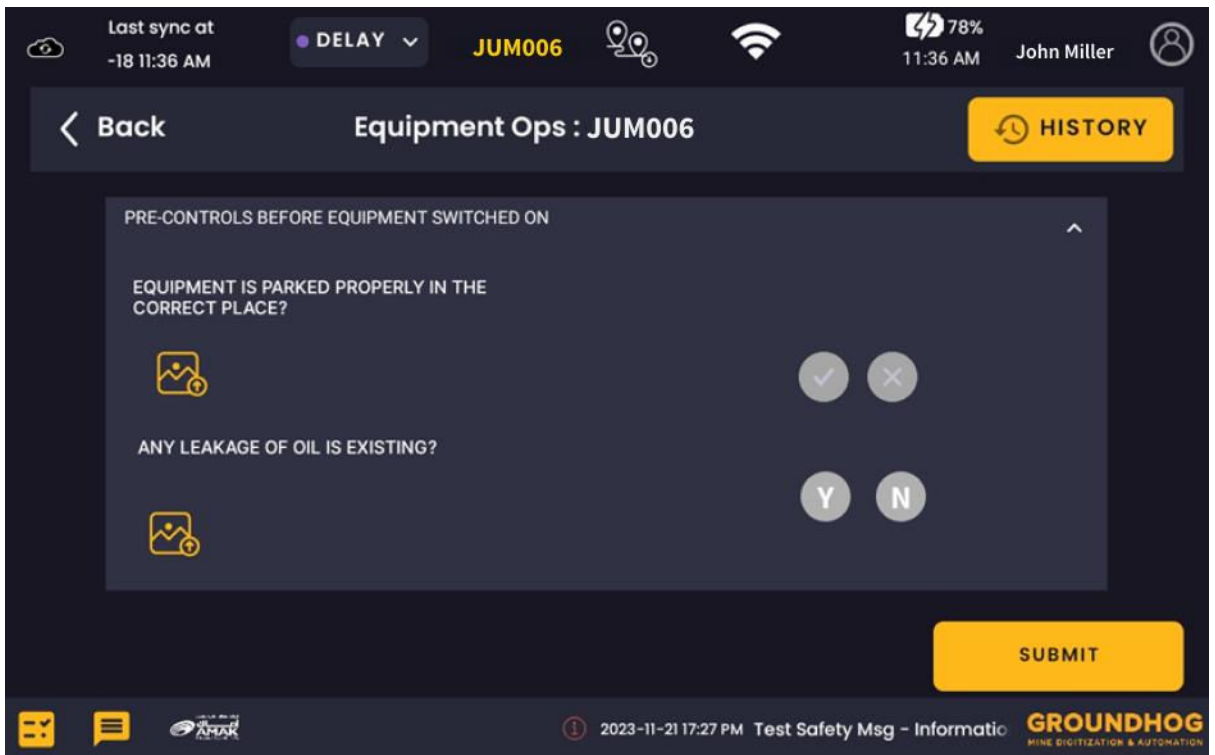
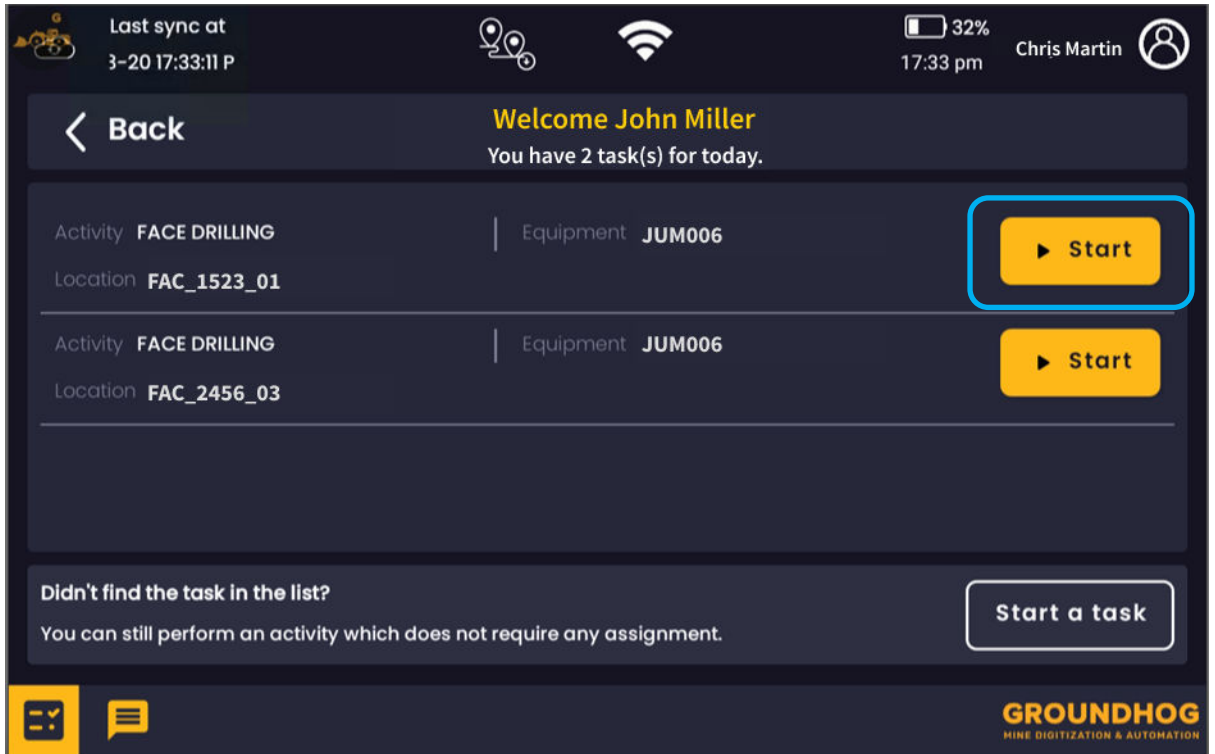
Activity	Equipment	
FACE DRILLING	JUM006	▶ Start
Location FAC_1523_01		

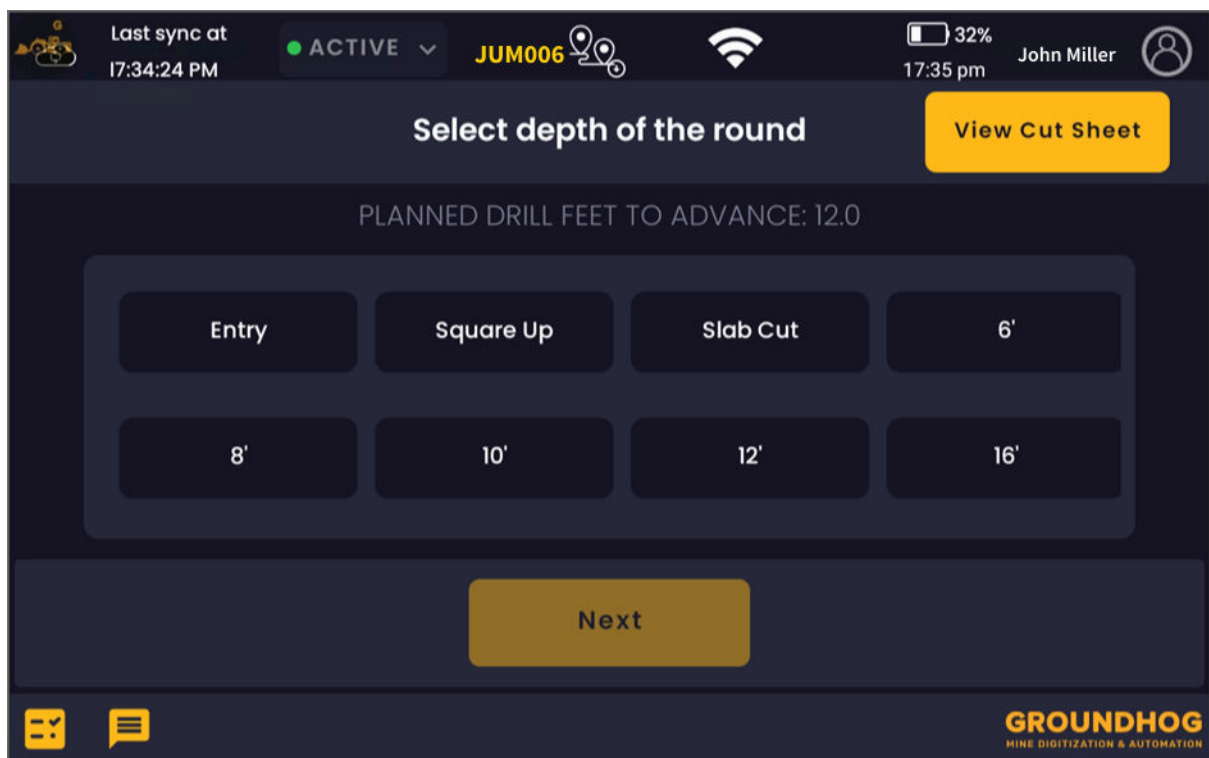
Activity	Equipment	
FACE DRILLING	JUM006	▶ Start
Location FAC_2456_03		

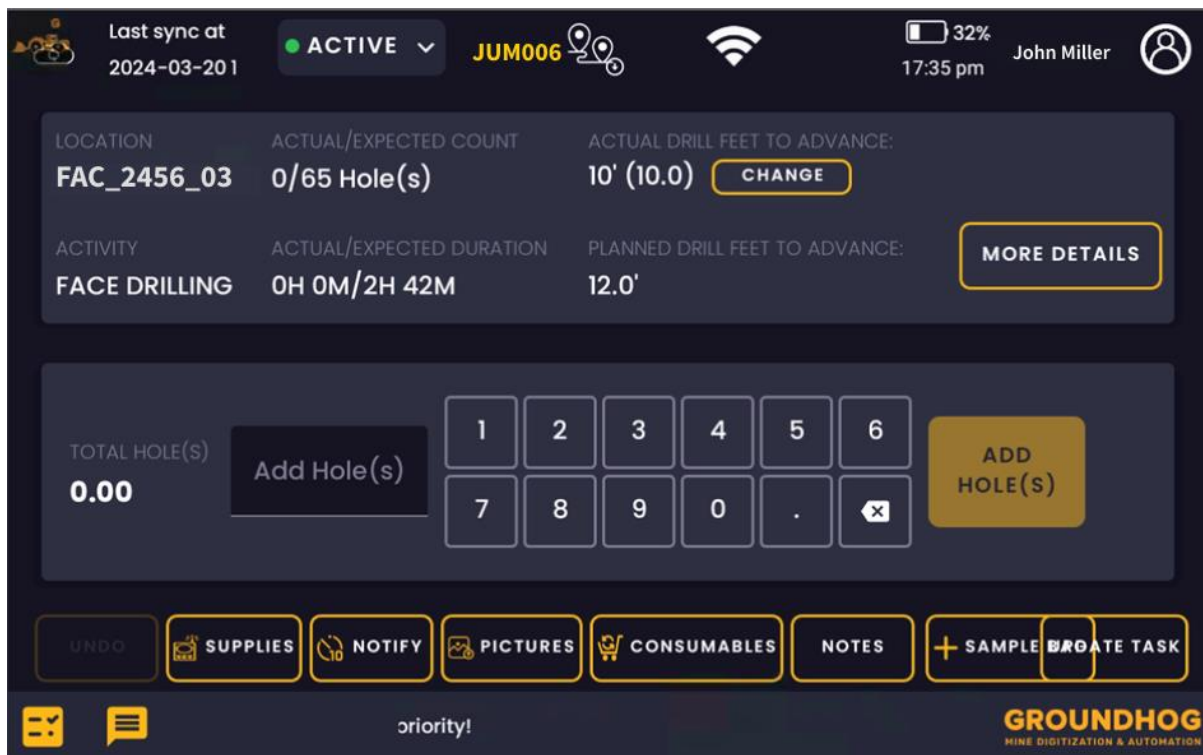
Didn't find the task in the list?
You can still perform an activity which does not require any assignment.

Start a task

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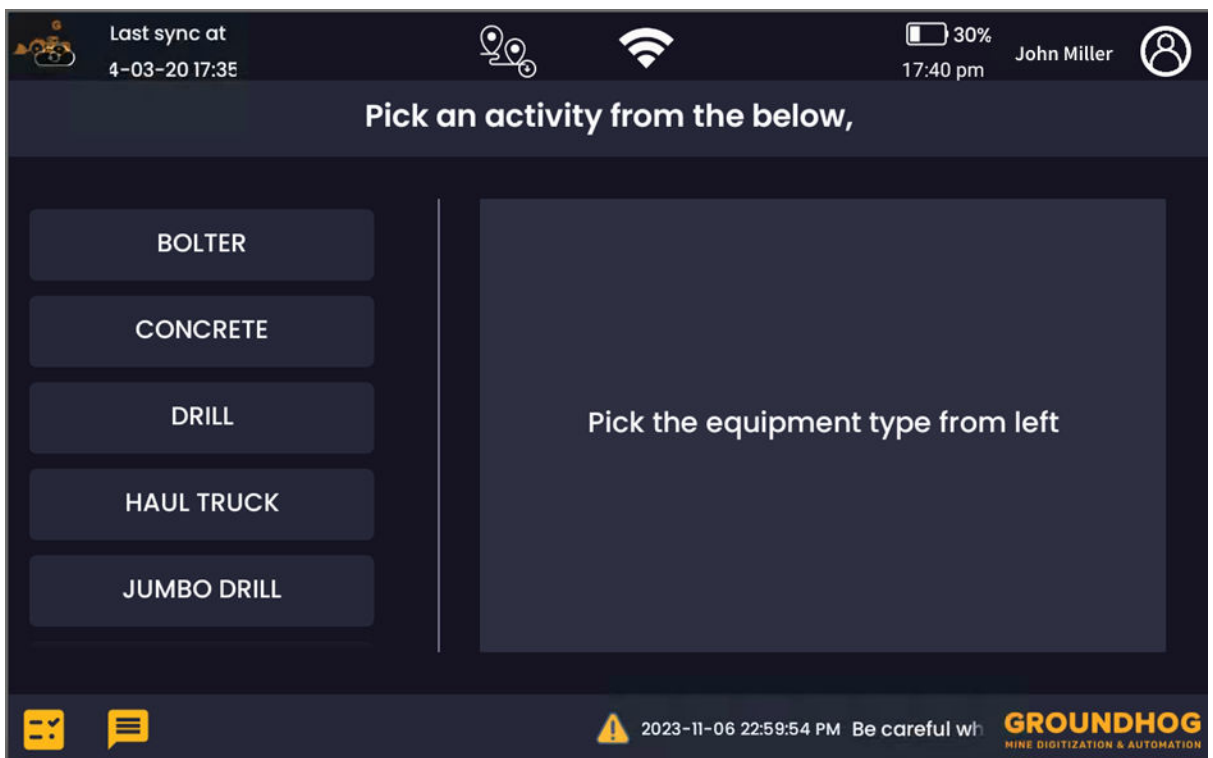
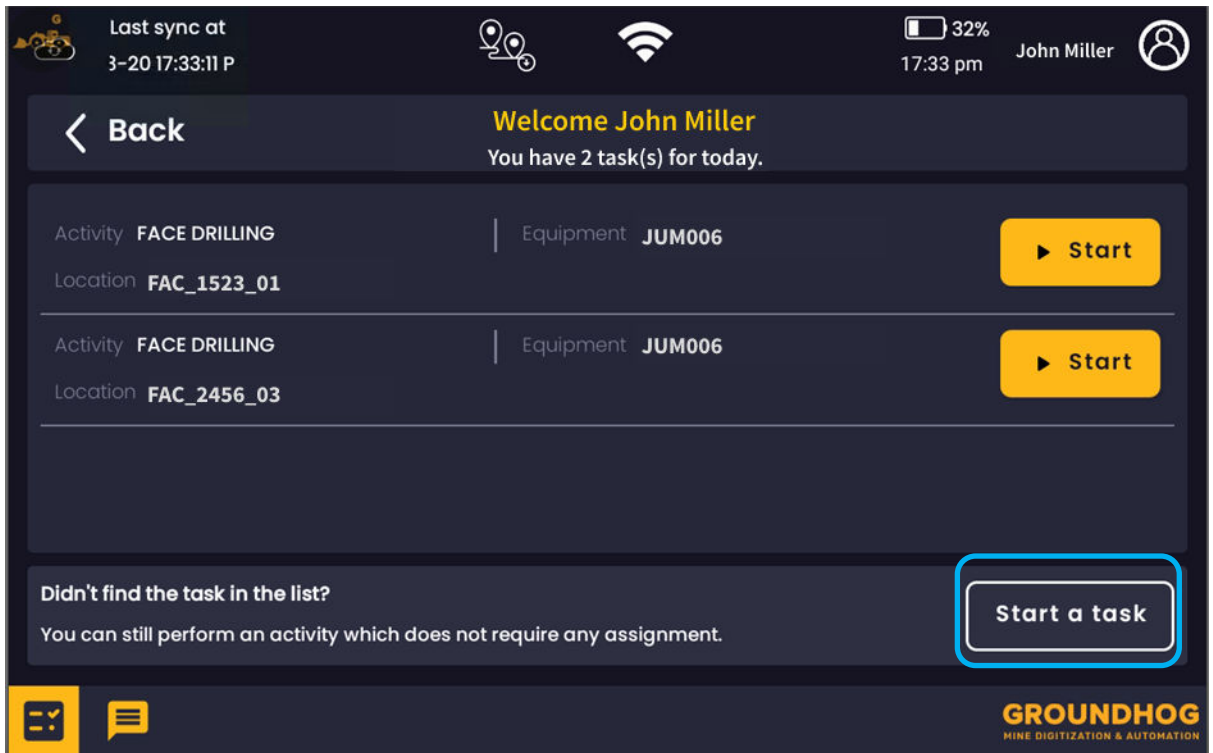


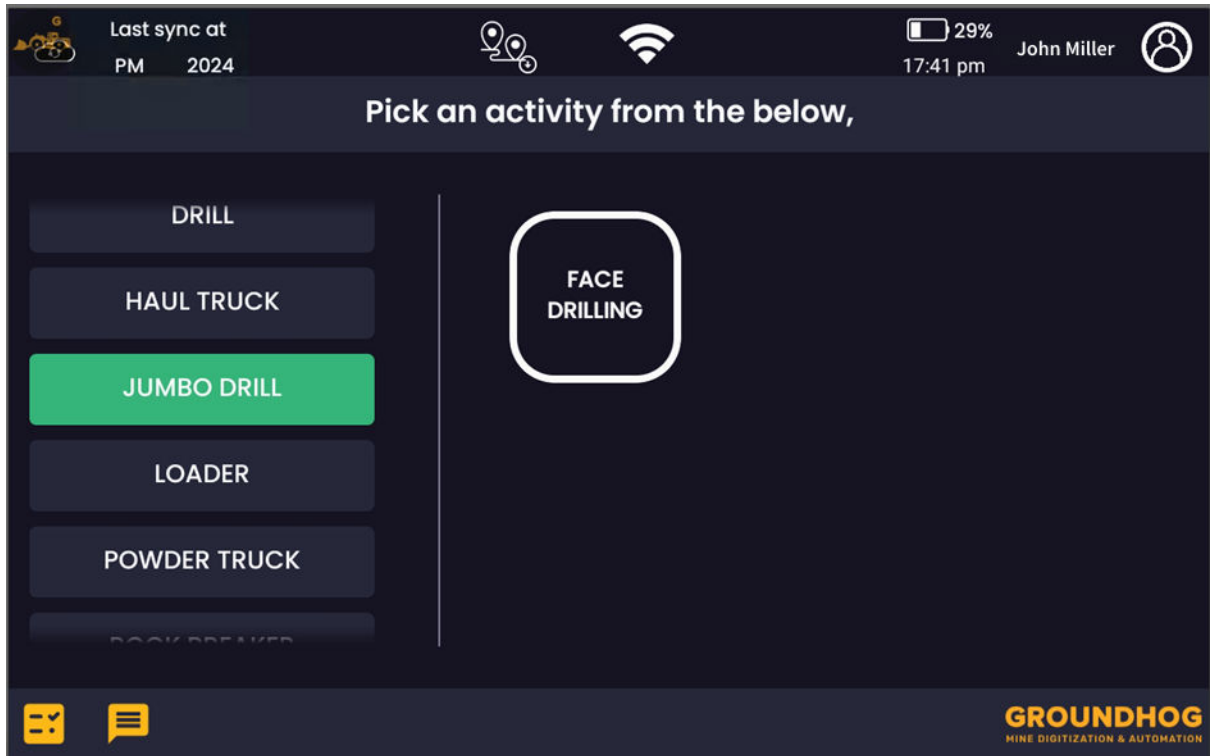
3. Face Drilling

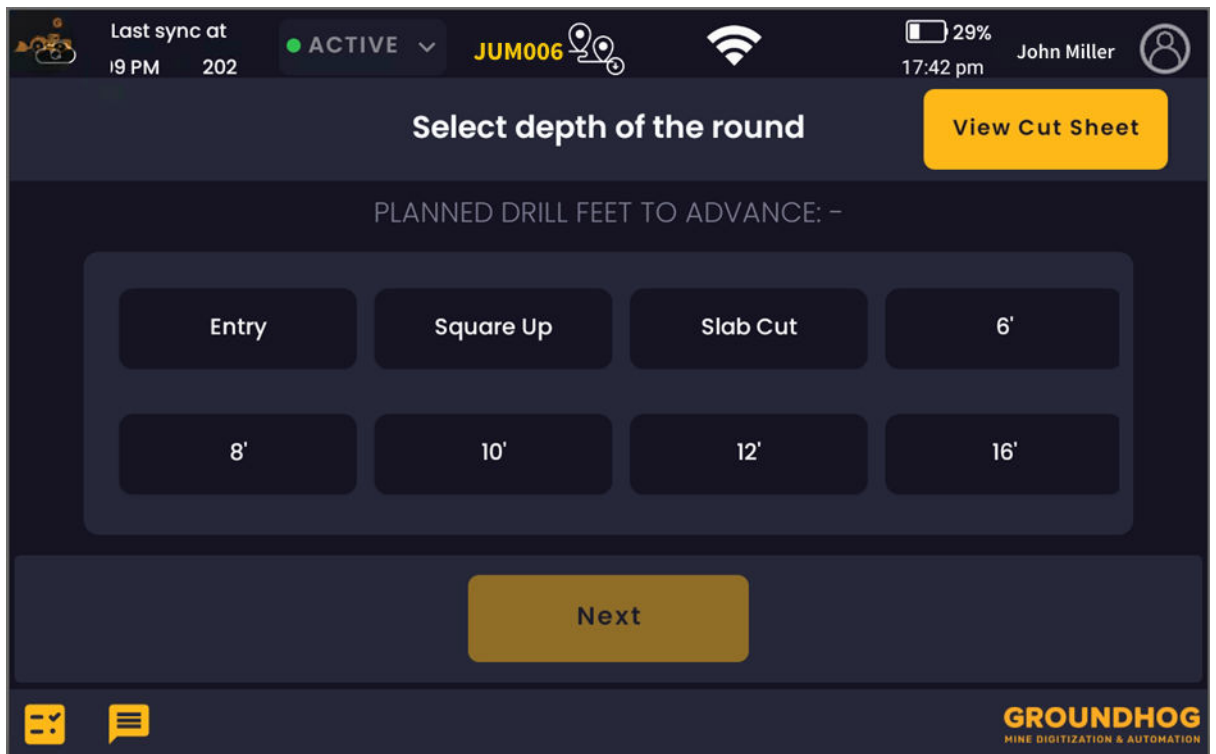
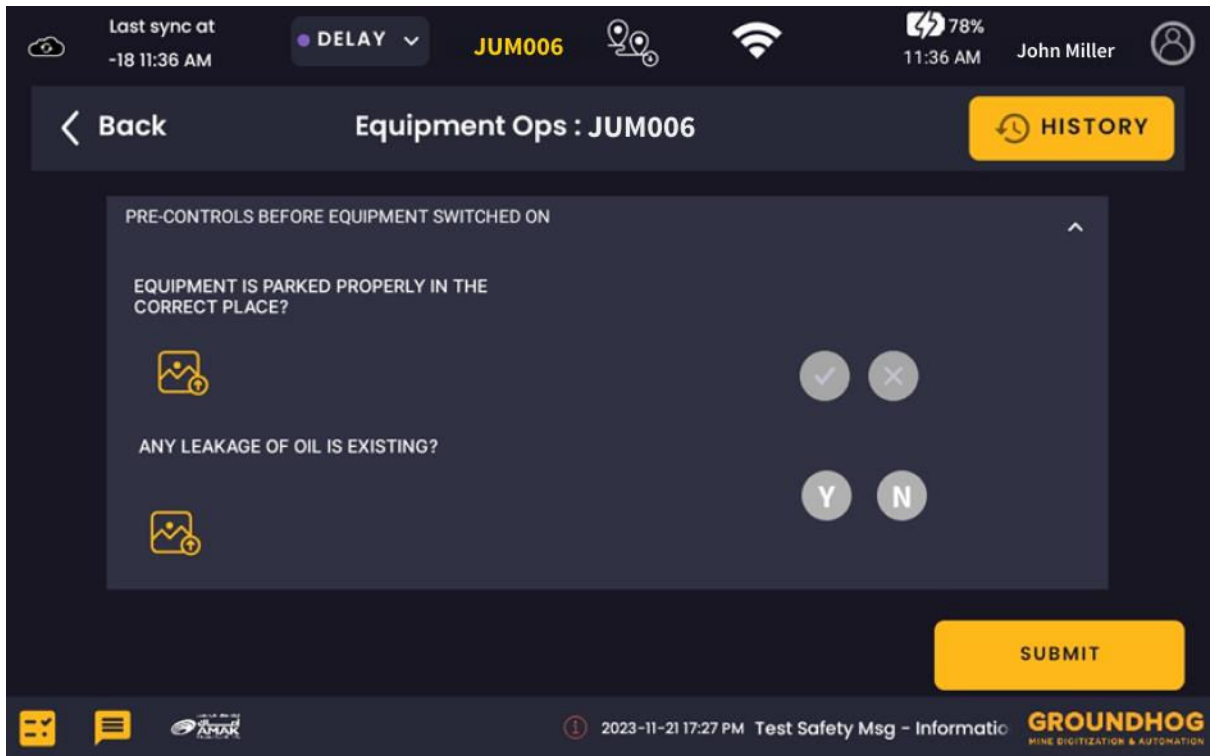
If no tasks are assigned or the Operator wants to do a task that is not listed, the Operator can initiate a task independently by clicking the "Start a Task" button. They will then proceed to:

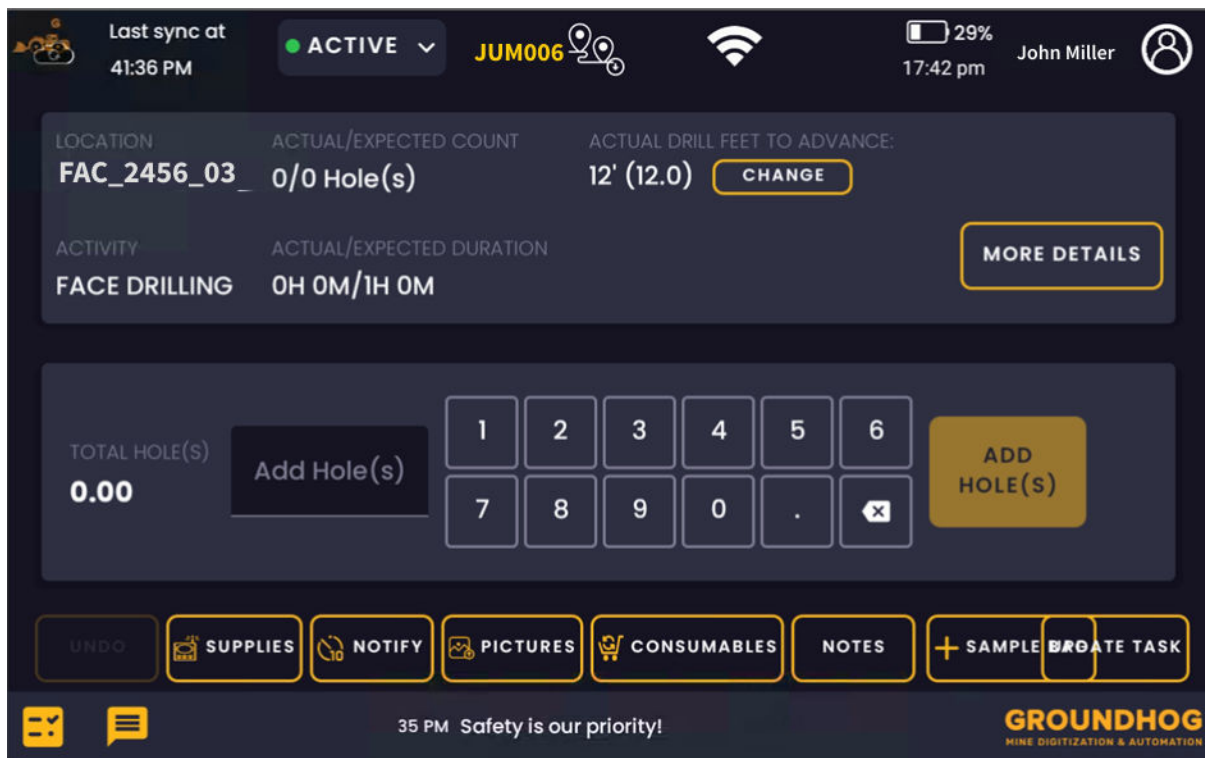
- a. Pick an activity.
- b. Select the equipment type and activity type.
- c. Input engine hours if applicable.
- d. Choose the location where they will be working.

Following these steps, the Operator will be directed to the face drilling activity screen to begin their assigned task.









4. Long Hole Drilling

Operator can initiate a task independently by clicking the "Start a Task" button. They will then proceed to:

1. Pick an activity.
2. Select the equipment type and activity type.
3. Input engine hours if applicable.
4. Choose the location where they will be working.

Following these steps, the Operator will be directed to the drilling activity screen to begin their assigned task.

Last sync at 24-03-18 11:30

11:35 AM 78% John Miller

What is your current state?

PRIMARY REASON

- No Equipment
- Safety Meeting
- Waiting

SECONDARY REASON

Please select primary reason

Welcome John Miller

You have 2 task(s) for today.

Plan Shift

Activity	LONGHOLE DRILLING	Equipment	JUM006
Location	FAC_1523_01		
Activity	LONGHOLE DRILLING	Equipment	JUM006
Location	FAC_2456_03		

Proceed with the planned task? **Proceed**

Didn't find the task in the list?
You can still perform an activity which does not require any assignment. **Start a task**

Icons: Home, Messages, AMAR, GROUNDHOG MINE DIGITIZATION & AUTOMATION

Last sync at 18 11:35 AM

11:35 AM 78% John Miller

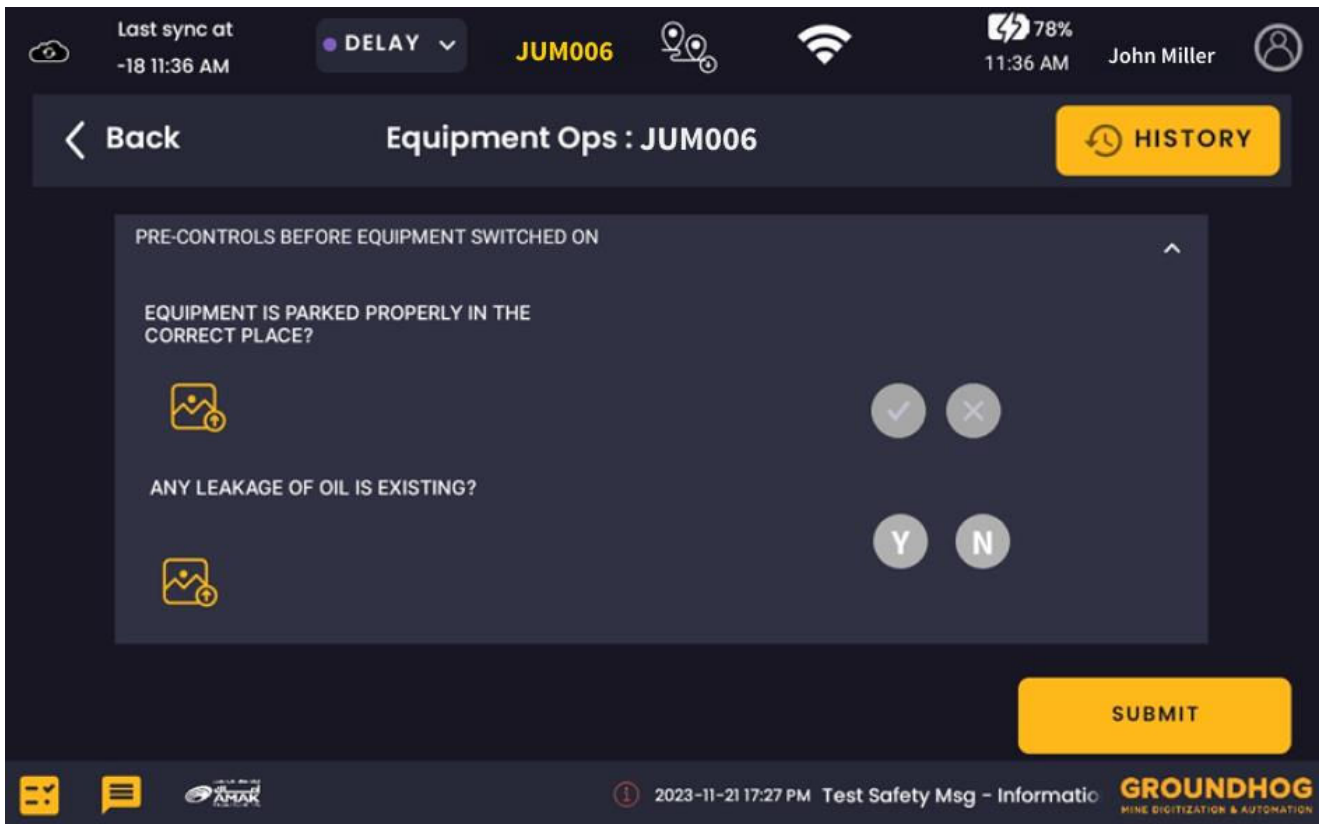
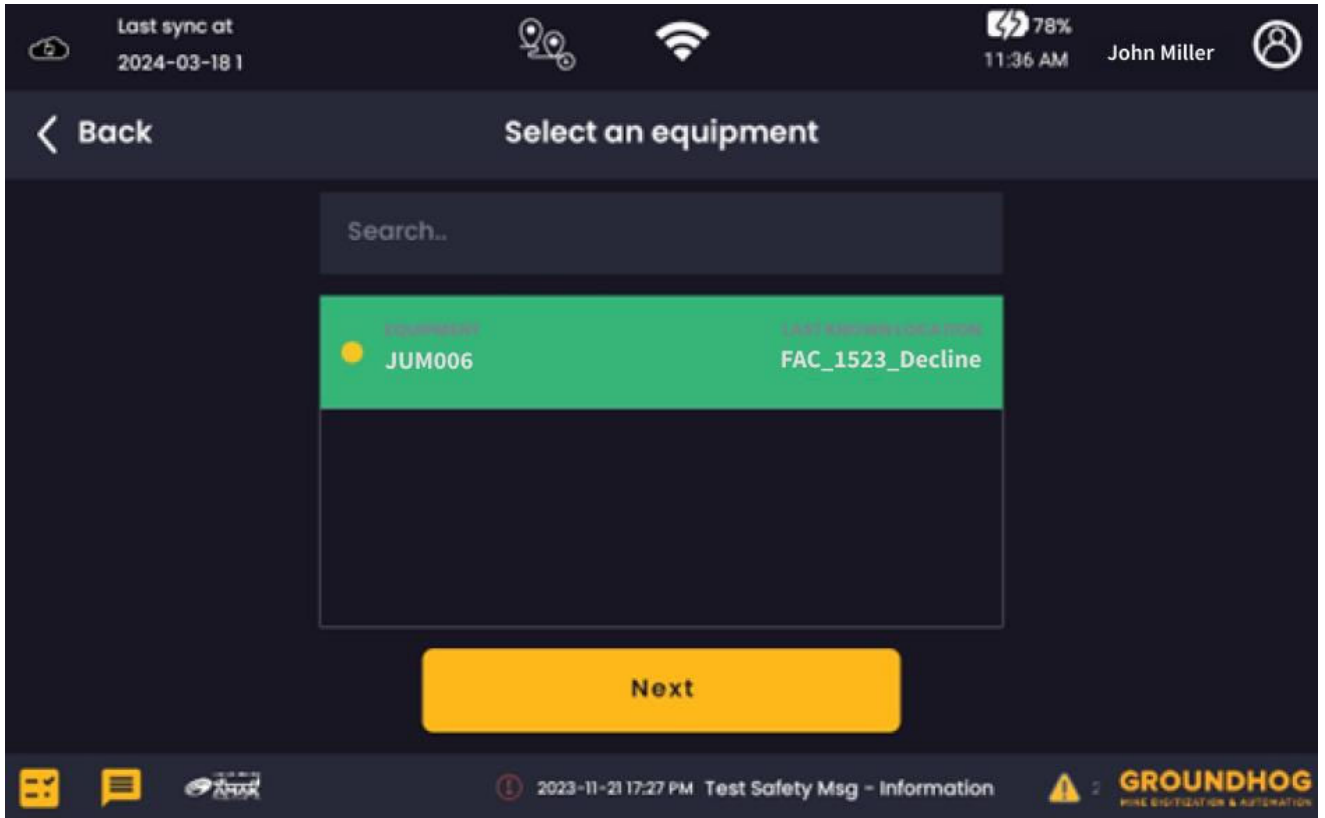
Back **Select an equipment**

Search..

EQUIPMENT	LAST KNOWN LOCATION
<input checked="" type="radio"/> JUM006	FAC_1523_Decline

Next

Icons: Home, Messages, AMAR, GROUNDHOG MINE DIGITIZATION & AUTOMATION



Last sync at 2024-03-18 1
DELAY
JUM006
79%
11:37 AM
John Miller

Back Engine Hours : JUM006

Inspection Items

Diesel Hours *

650

DONE

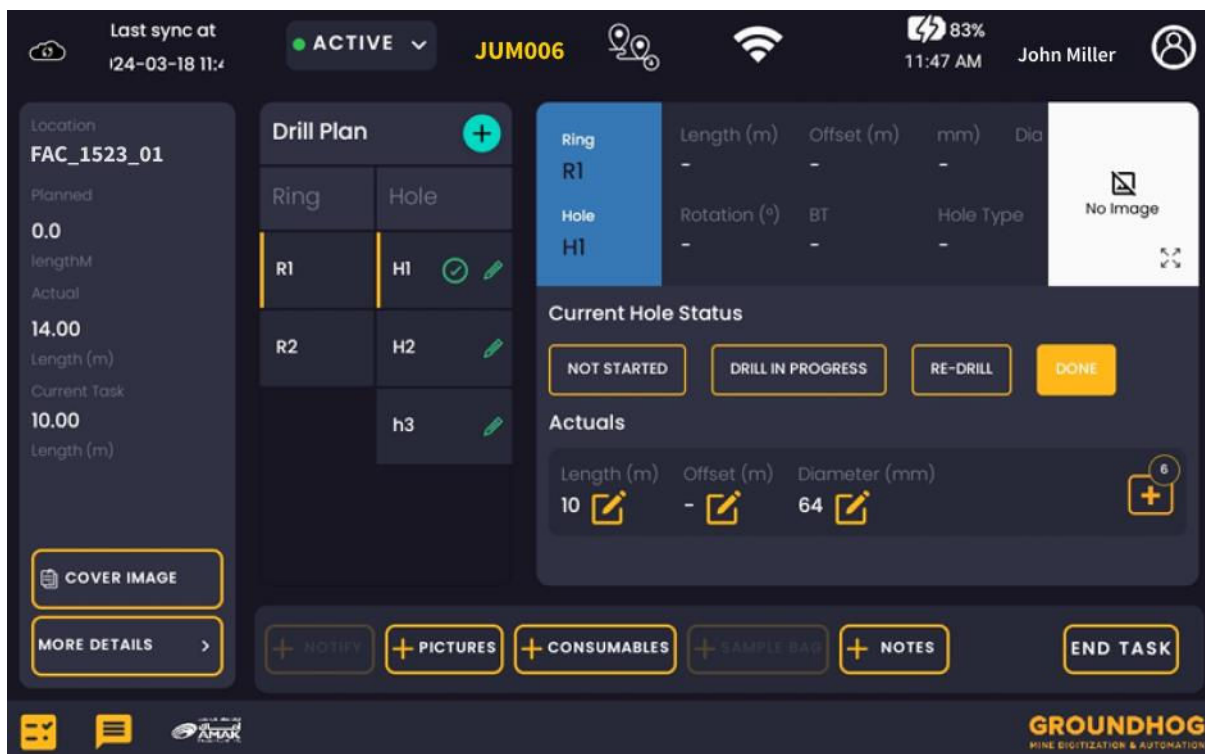
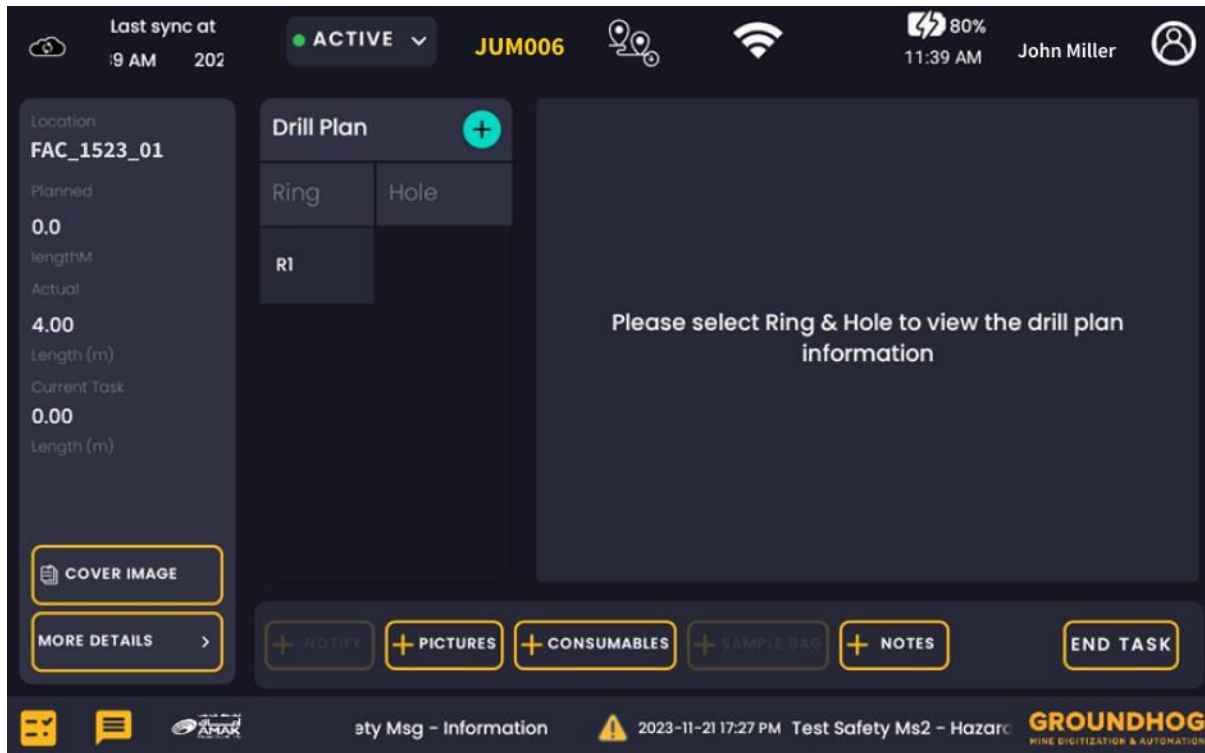
1 Test Safety Msg - Hazard
2023-09-29 13:34 PM Safety is necessa
GROUNDHOG MINE DIGITIZATION & AUTOMATION

Last sync at -03-18 11:38 A
ACTI
JUM006
79%
11:38 AM
John Miller

Welcome JORGE Test Operator! You have 2 task(s) for today.

EQUIPMENT ID JUM006	TASK LONGHOLE DRILLING	LOCATION FAC_1523_01	Start
START DATE & TIME 2024-03-18 12:00 PM	EXPECTED DURATION 1H 0M	EXPECTED COUNT 50 Meter(s)	
EQUIPMENT ID JUM006	TASK LONGHOLE DRILLING	LOCATION FAC_2456_03	Start
START DATE & TIME 2024-03-18 14:00 PM	EXPECTED DURATION 1H 0M	EXPECTED COUNT 40 Meter(s)	

2023-11-21 17:27 F
GROUNDHOG MINE DIGITIZATION & AUTOMATION



Last sync at 1-18 11:59 AM ACTIVE **JUM006** 88% 11:59 AM John Miller

Welcome JORGE Test Operator! You have 2 task(s) for today.

EQUIPMENT ID	TASK	LOCATION	
JUM006	LONGHOLE DRILLING	FAC_1523_01	COMPLETED
ACTUAL DURATION	EXPECTED DURATION	EXPECTED COUNT	
0H 13M	1H 0M	49/0 Meter(s)	

EQUIPMENT ID	TASK	LOCATION	
JUM006	LONGHOLE DRILLING	FAC_2456_03	COMPLETED
ACTUAL DURATION	EXPECTED DURATION	EXPECTED COUNT	
0H 4M	1H 0M	28/0 Meter(s)	

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[Back](#) Update

Ring + Hole +

R1

Ring: R1 Hole: H2

Current Hole Status

NOT STARTED
DRILL IN PROGRESS
RE-DRILL
DONE

Actuals


Length (m)	Offset (m)	Diameter (mm)	
-	-	-	
Rotation (°)	BT	Hole Type	
-	-	-	
Direction	LithoCode	Hole Cleaning	
-	-	-	


DONE

Last sync at 2024-03-18
ACTIVE
JUM006
85%
11:52 AM
John Miller

Back
Reference Pictures

CAPTURE FACE IMAGES




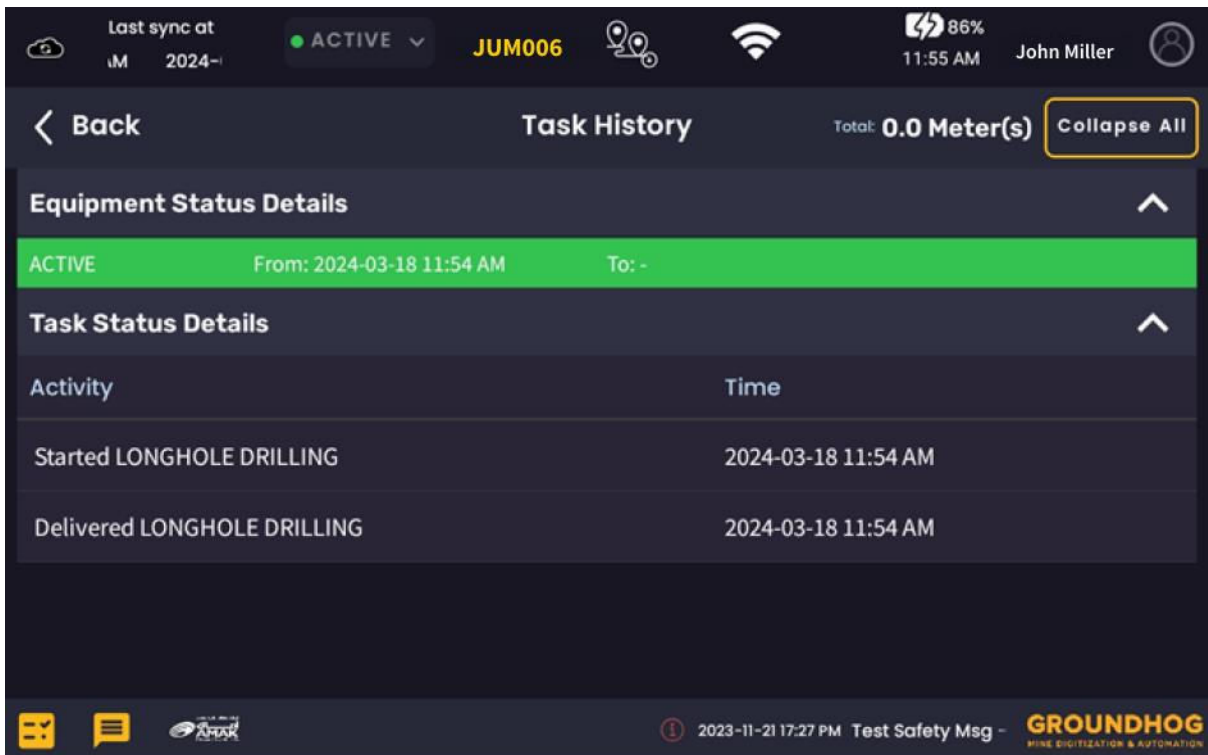
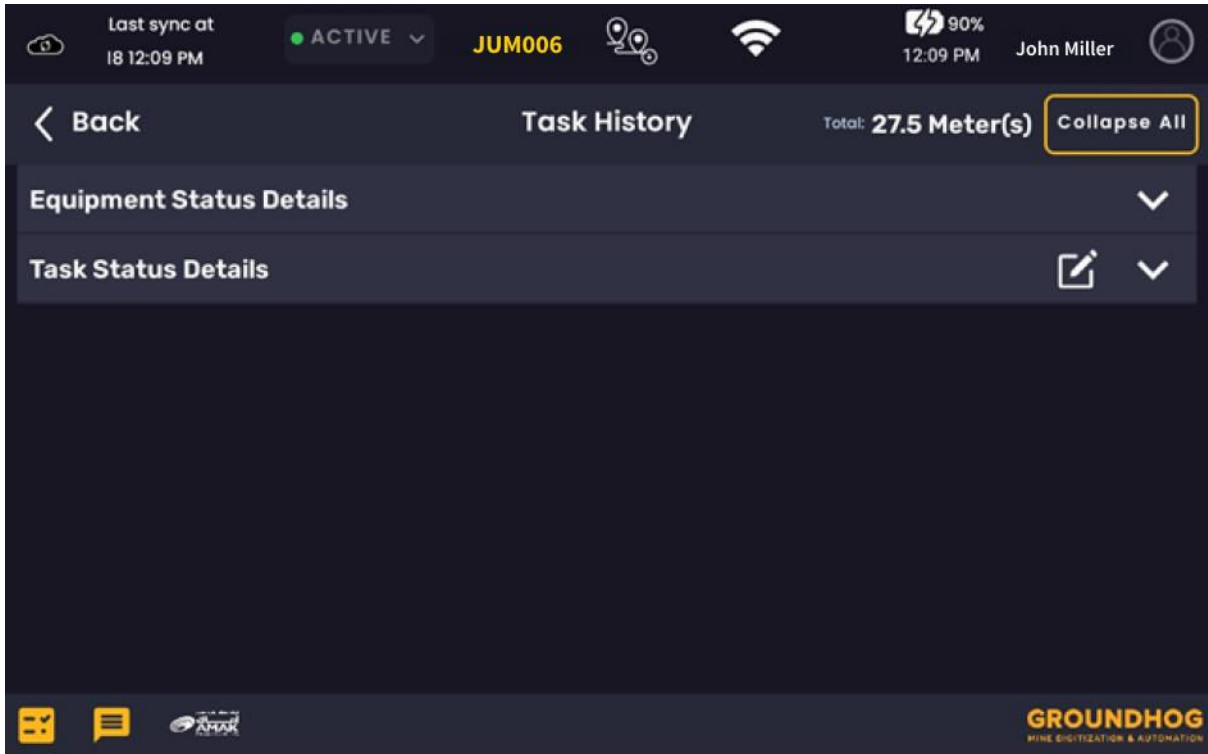

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Last sync at -03-18 11:52 A
ACTIVE
JUM006
86%
11:54 AM
John Miller

Back
Shift Summary
TRIPS HISTORY

EQUIPMENT ID	TASK	PRIMARY LOCATION	STATUS :
JUM006	LONGHOLE DRILLING	FAC_1523_01	Completed
ACTUAL DURATION	EXPECTED DURATION	COUNT	<a>TASK HISTORY
0H 13M	1H 0M	49/0 Meter(s)	


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Last sync at
12 PM 202

● ACTIVE

JUM006

88%
12:02 PM

John Miller

[Back](#)

Task History

Total: **49.0 Meter(s)**

[Collapse All](#)

Equipment Status Details ^

ACTIVE	From: 2024-03-18 11:39 AM	To: 2024-03-18 11:52 AM	Duration: 0h 13m 19s
--------	---------------------------	-------------------------	----------------------

Task Status Details 📝 ^

Activity	Time
Ended LONGHOLE DRILLING	2024-03-18 11:52 AM
Added hole H3 to ring R2	2024-03-18 11:45 AM
Added hole h3 to ring R1	2024-03-18 11:45 AM
Added hole 1 to ring R2	2024-03-18 11:45 AM

safety Ms2 - Hazard

2023-11-21 17:27 PM Test Safety Msg - Hazard

Recording Information

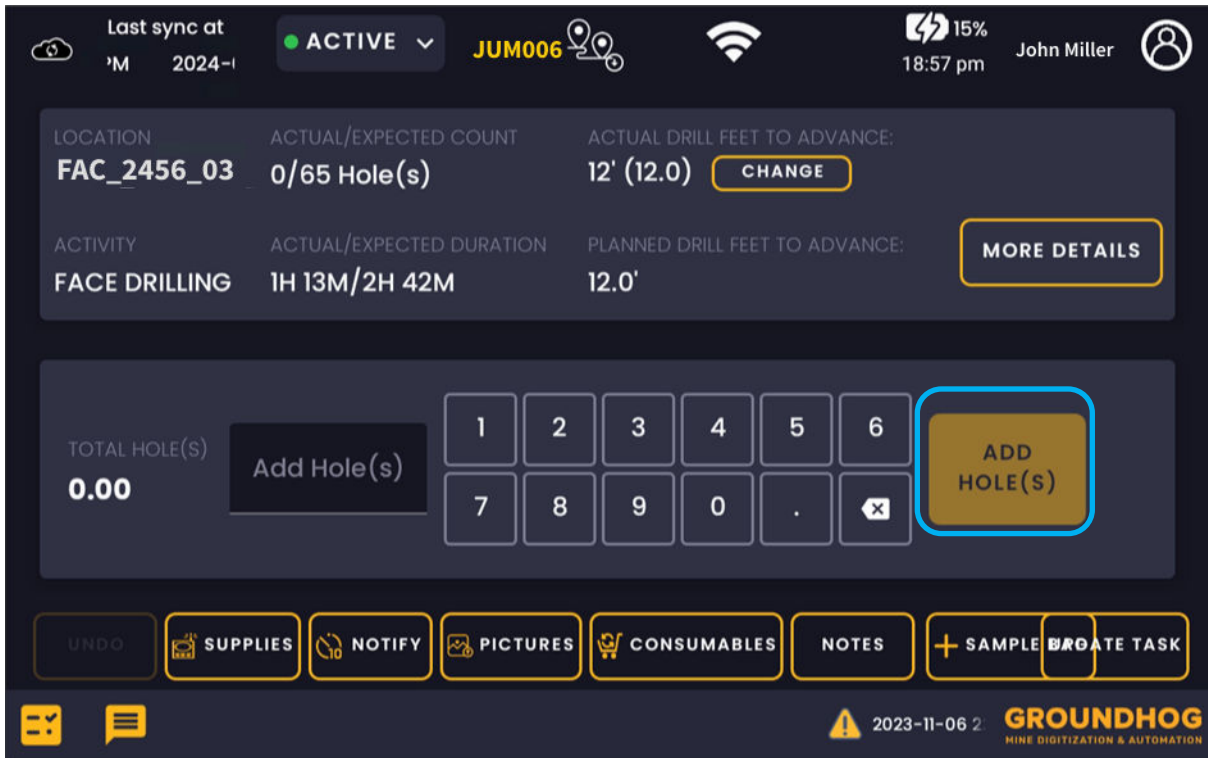
The Operator will be directed to the drilling activity screen to begin their assigned task.

How to record Face drilling details

In the highlighted box, you can observe the work location, actual and expected hole counts, actual drill feet advance (adjustable), actual and expected duration, and planned drill feet to advance.

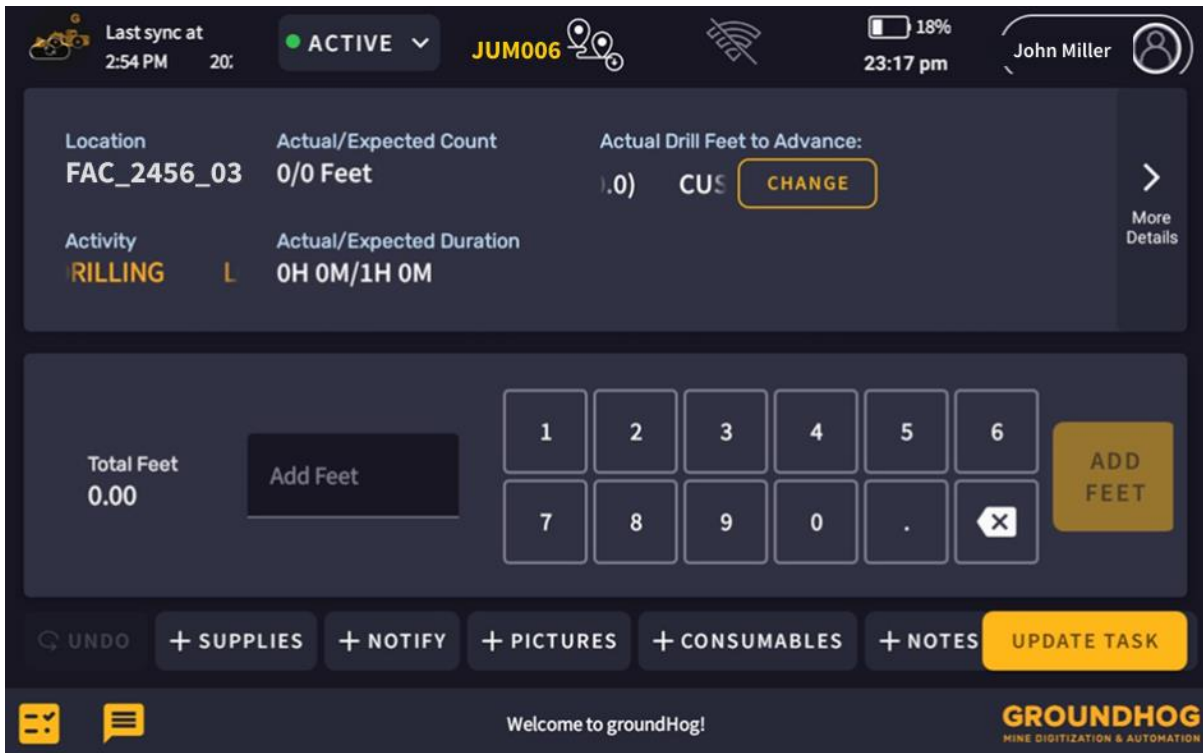


Operators can add the number of holes by pressing the "Add Holes" button.

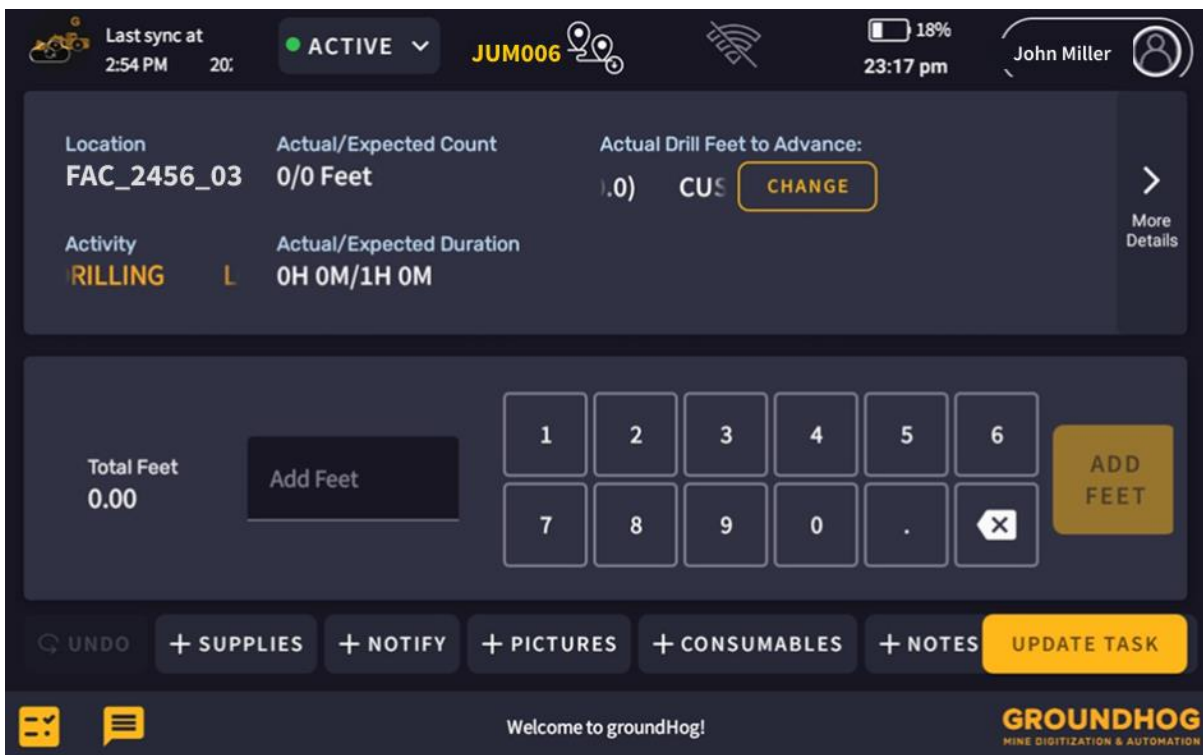


How to record Long Hole Drilling details

The highlighted box shows the work location, actual and expected drill feet, and actual and expected duration.

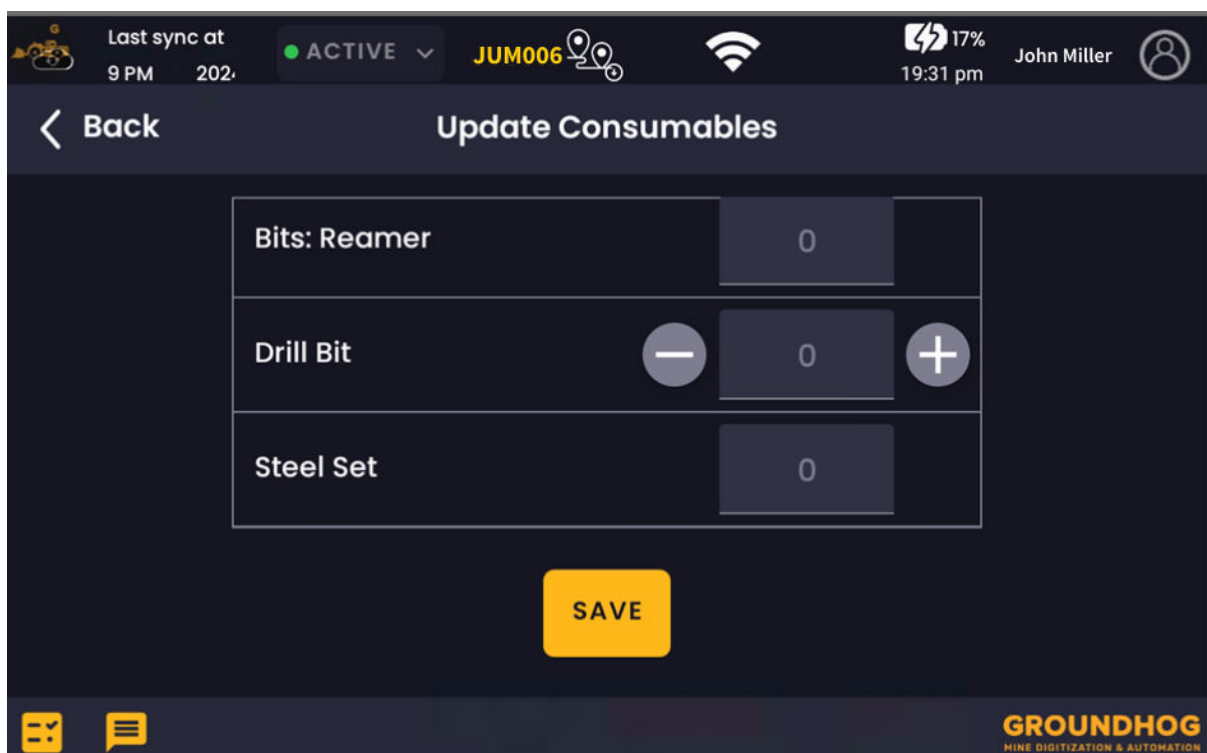
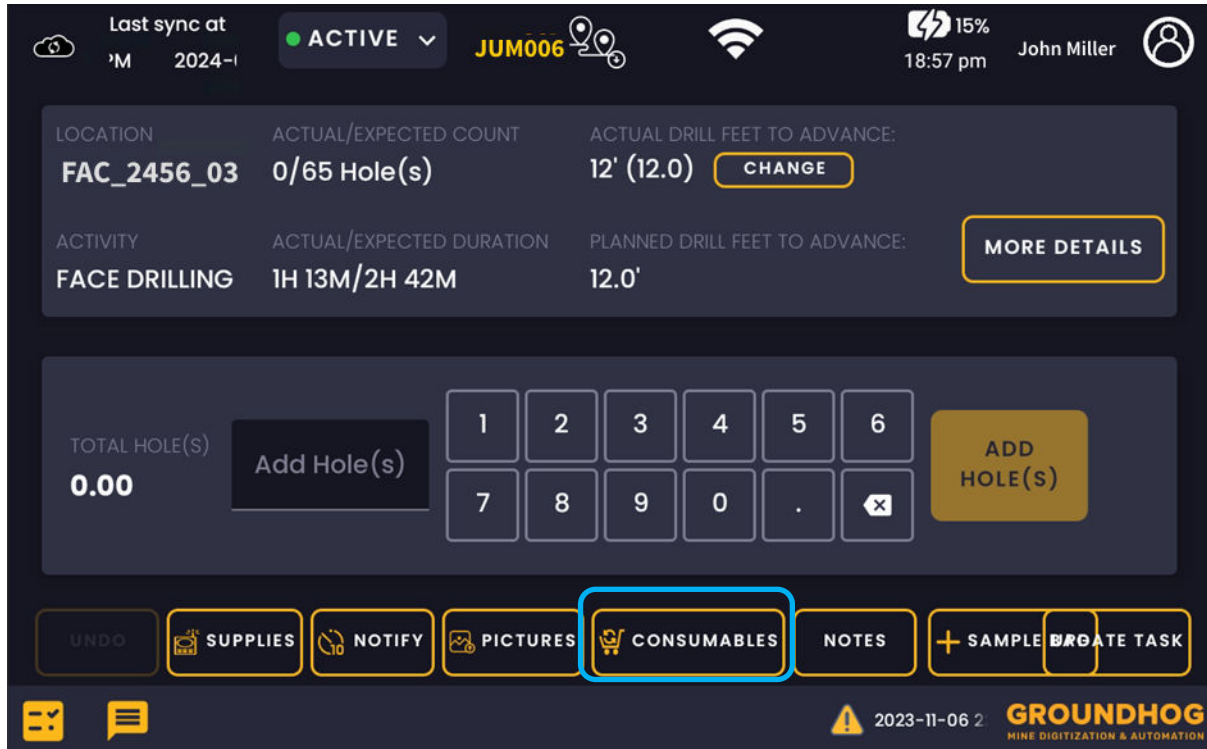


Operators can add the number of drill feet by pressing the "Add Feet" button



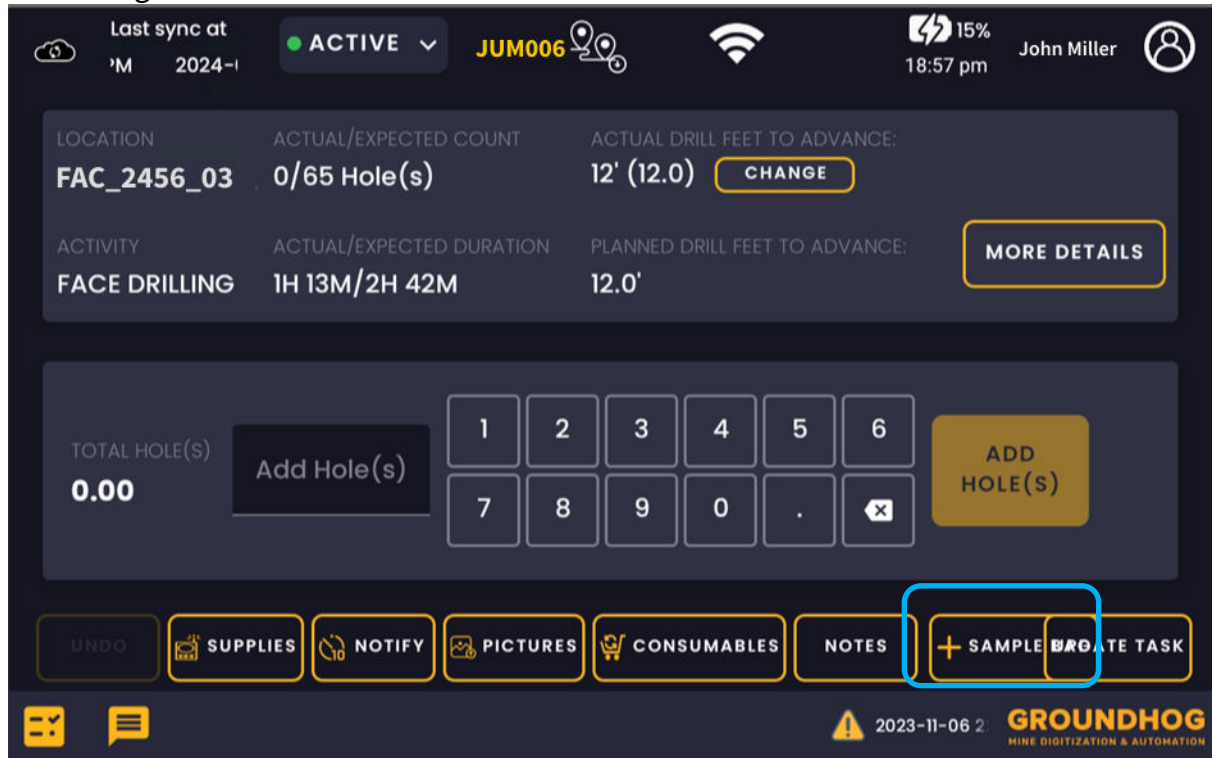
How to record Consumables

Click on "Consumables." On the next screen, you will find an option to add a consumable. Add the consumable, then click on "Save."

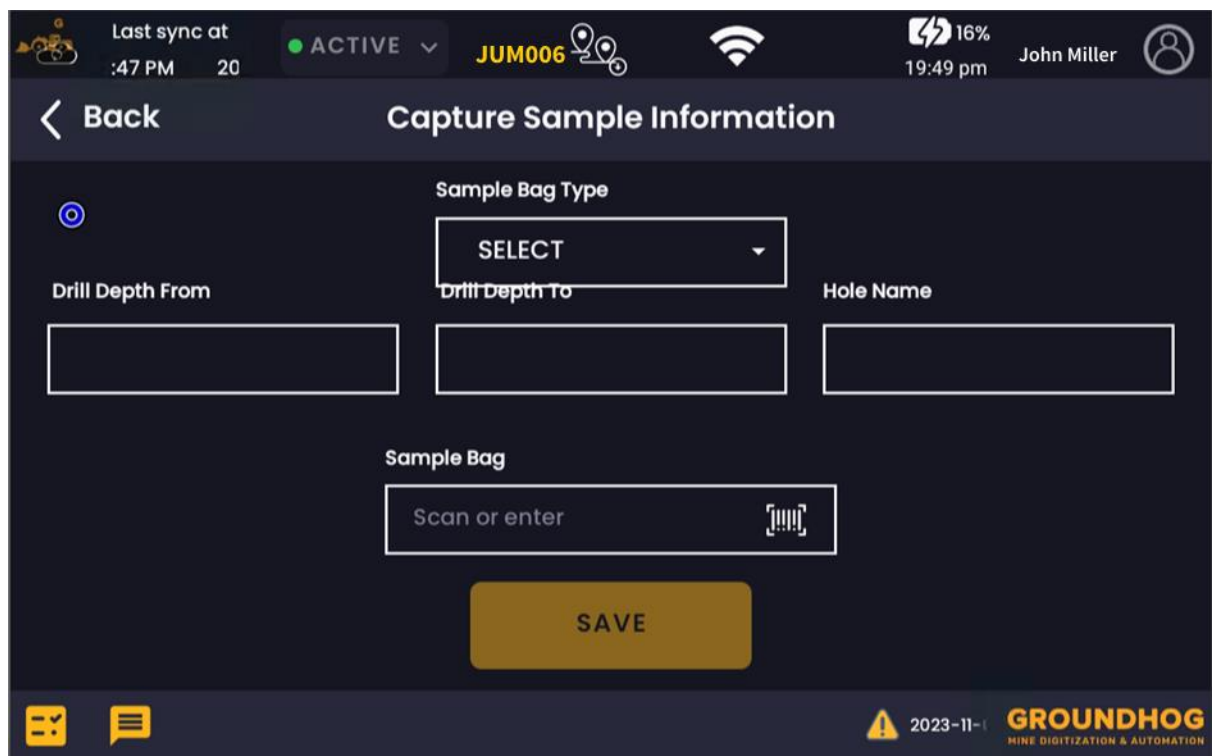
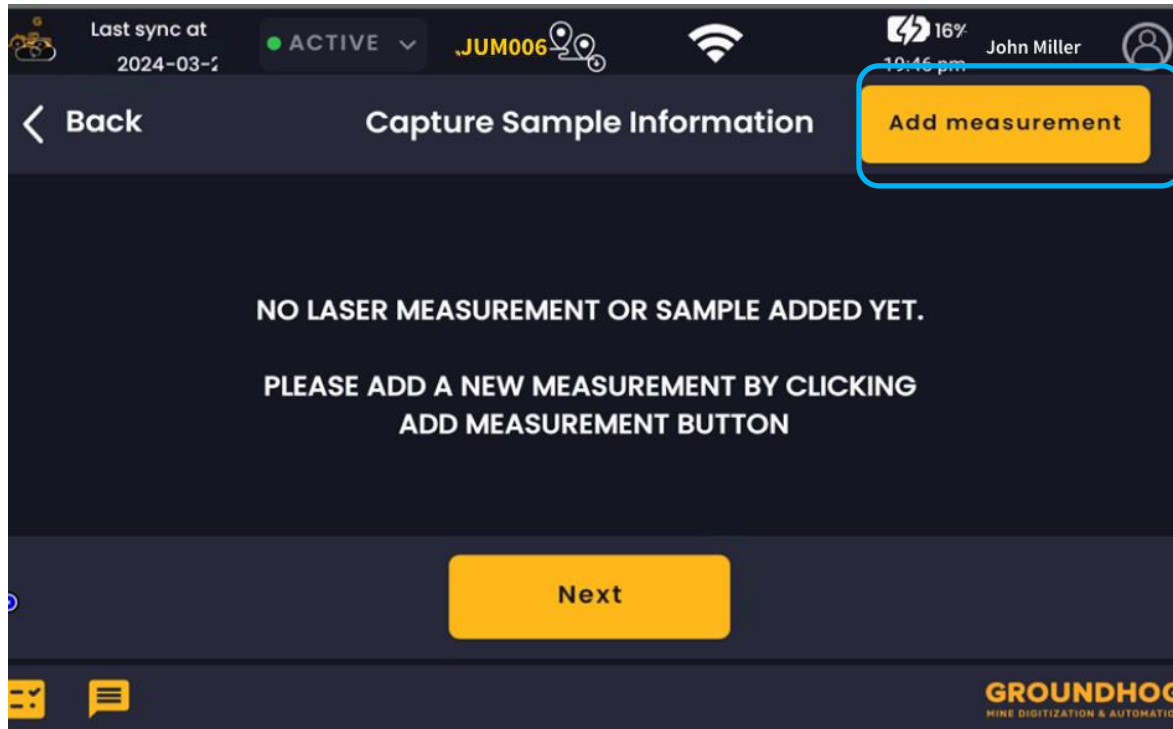


How to add Sample bags

Drillers can add sample bags by clicking on the "Sample Bag" button located at the bottom right corner of the screen.



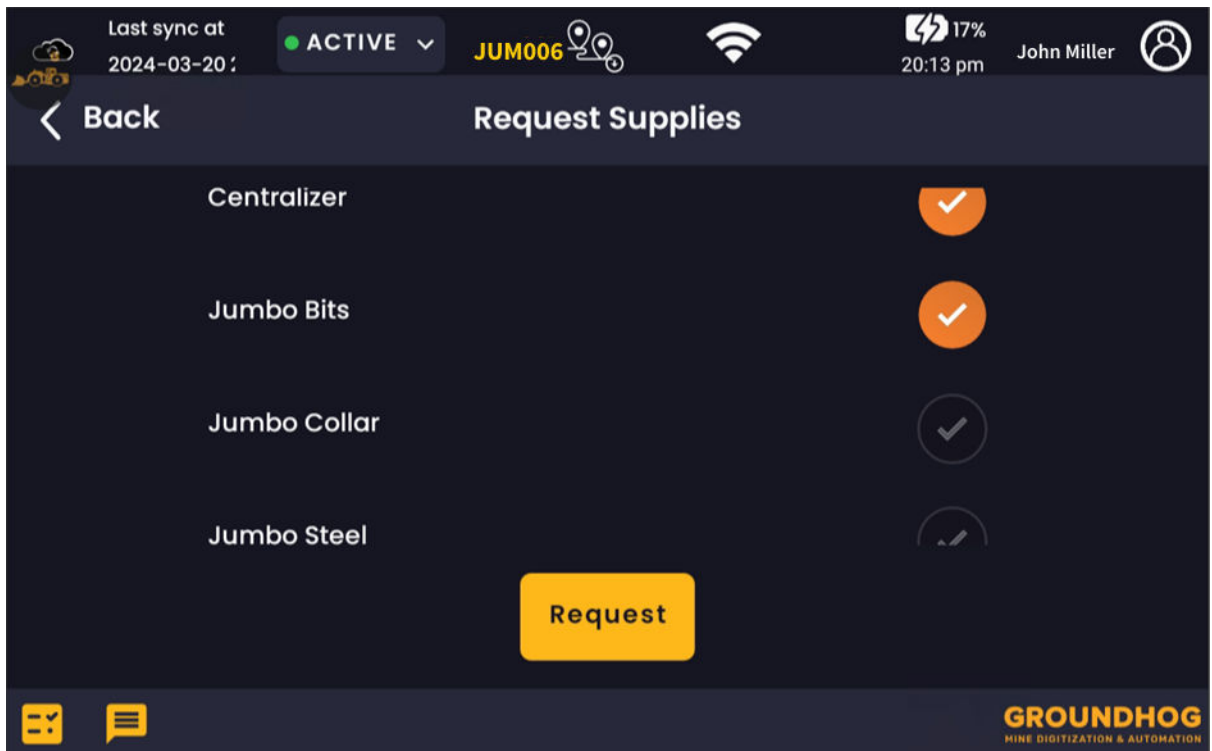
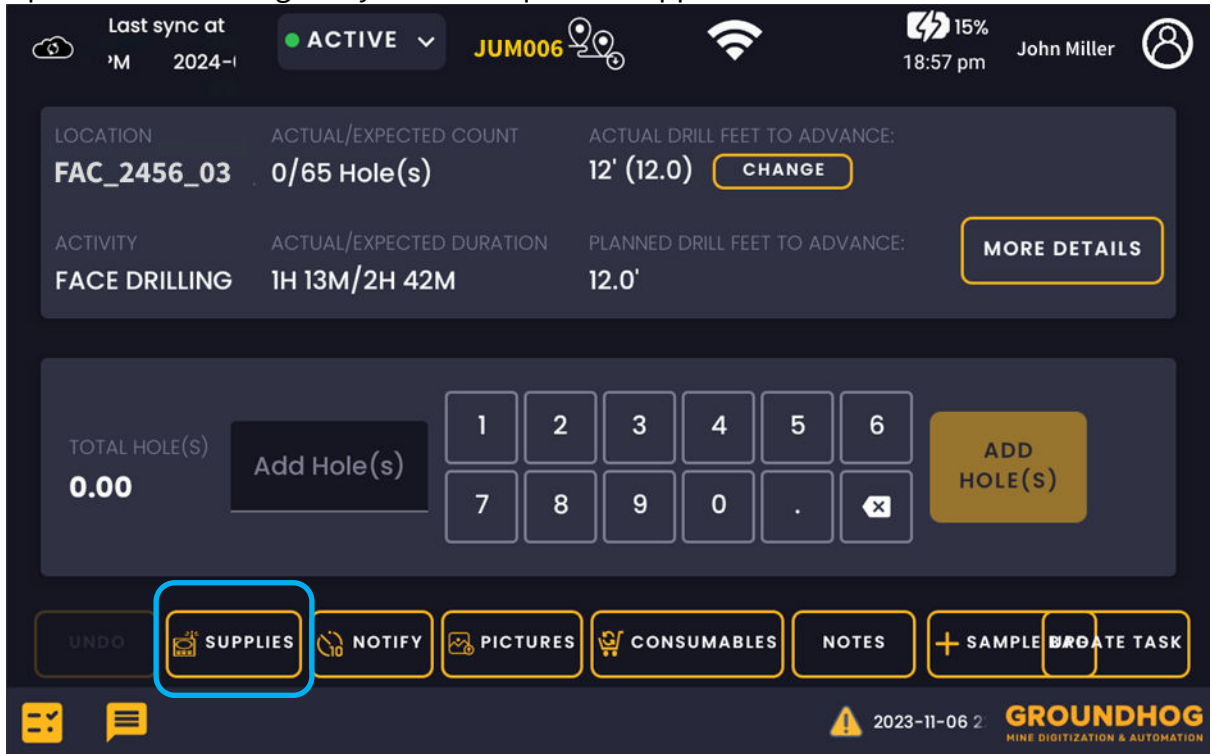
Next, click on "Add Measurement," fill in the mentioned details, and click on "Save" to capture the sample information.



How to Request Supplies

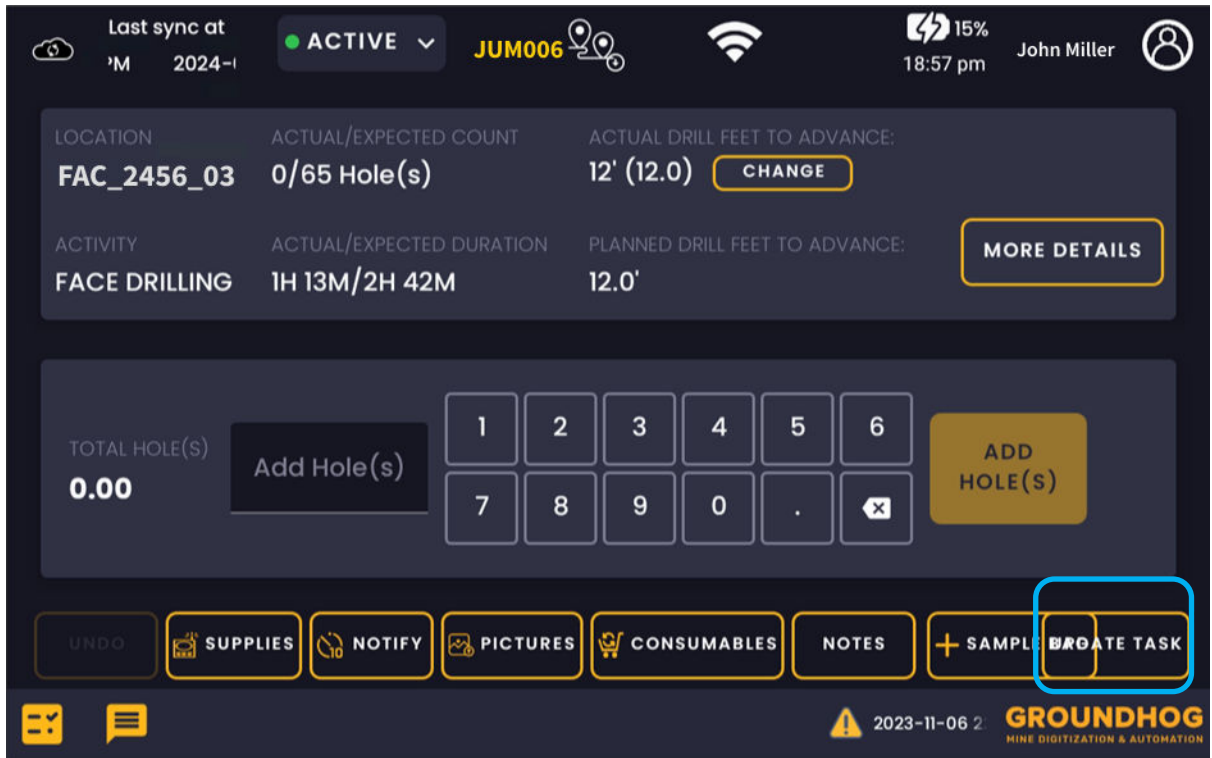
Click on the "Supplies" button located at the bottom left of the screen, select the required supplies, and click on the "Request" button. A notification will be sent to the

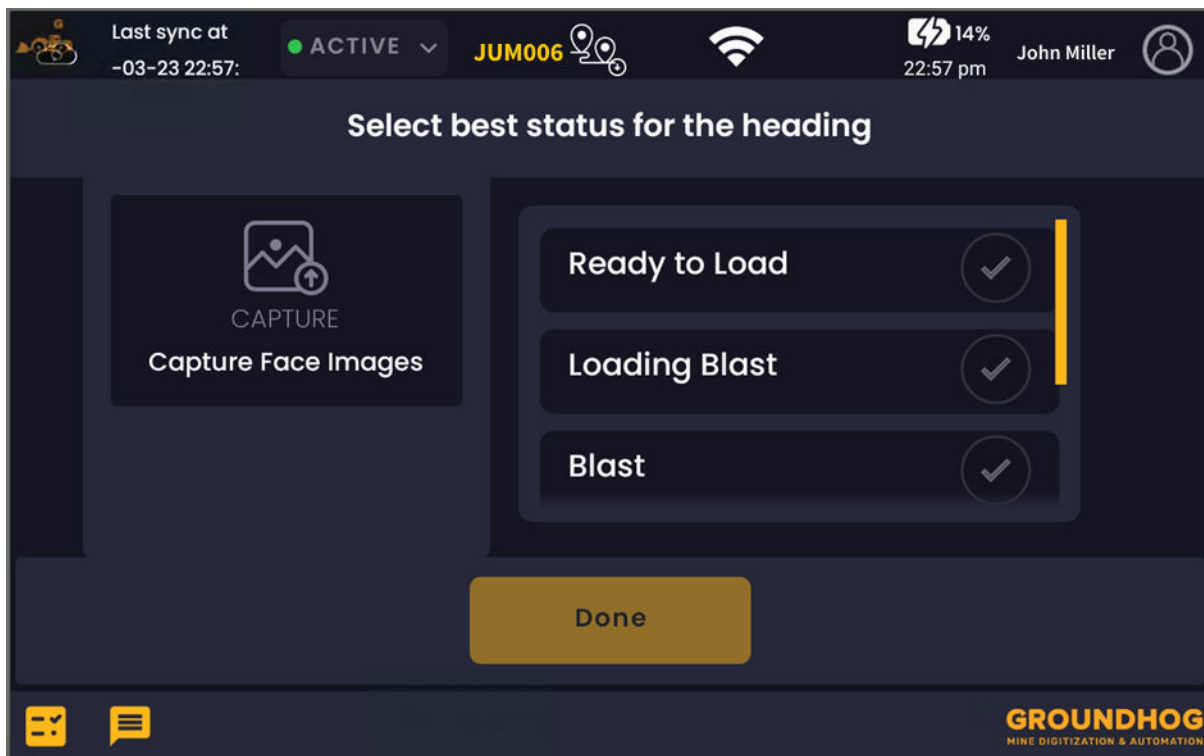
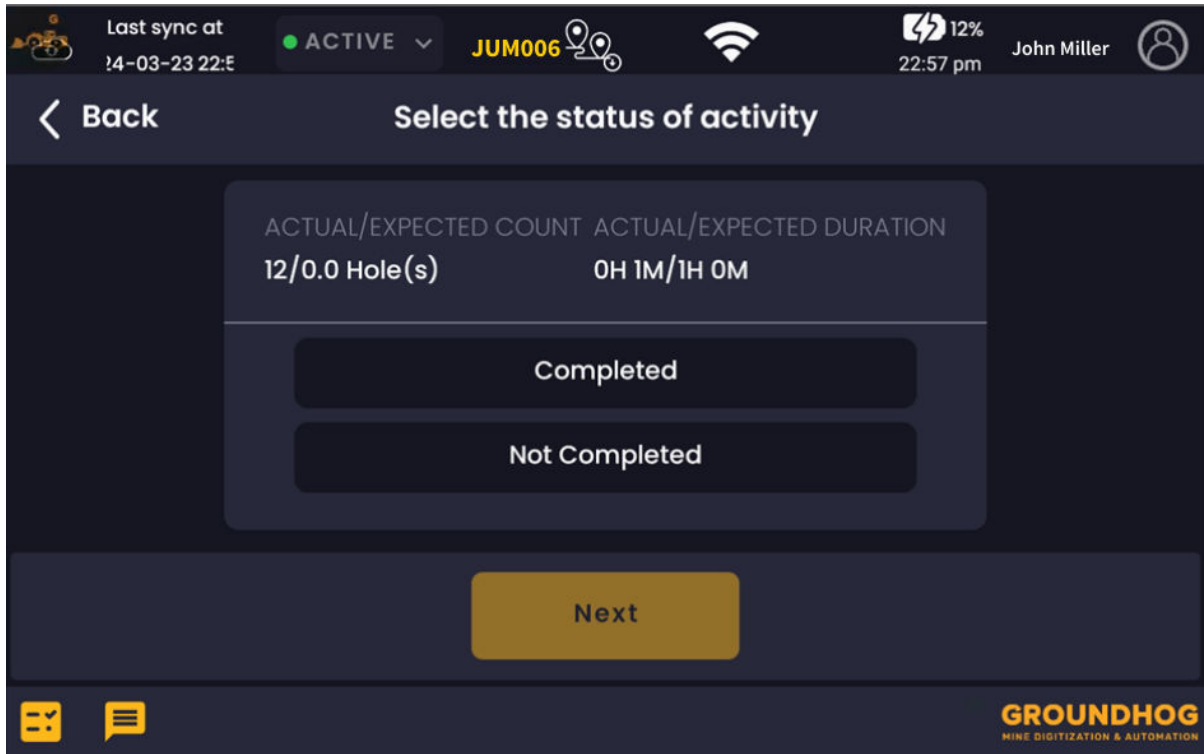
Ops center indicating that you have requested supplies.



How to update task details

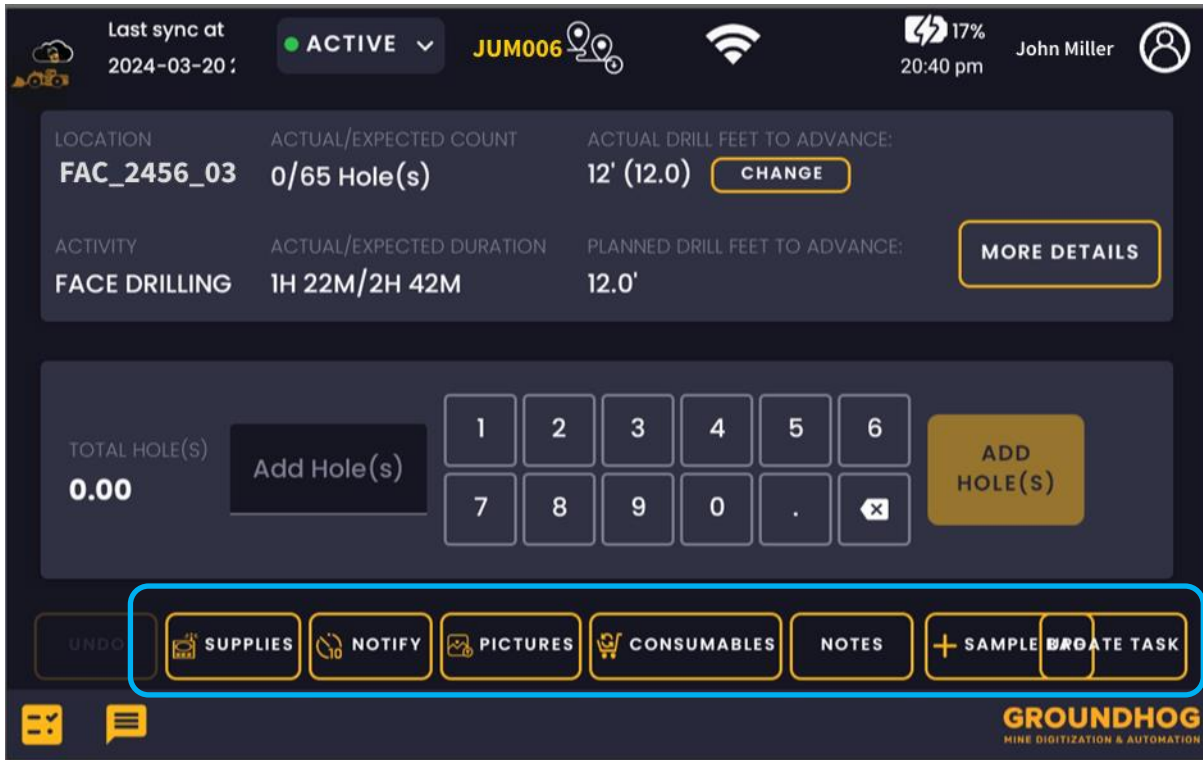
Click on “Update task” -> Update Consumables -> Select status of activity -> Select status of heading.





How to notify supervisors, take pictures, and read notes

The operator can revert the hole count, inform the Admin, capture images as proof of work or issues, access supervisor notes, and record sample bag details.



How to view Task History and Heading History and record task completion:

To access more details, including Task History, Heading History, or Activity Forms linked to the task, click "More Details." This screen also provides information about Supporting Operators involved in the task and any notes from the Supervisor. During task creation, notes from Supporting Operators, Supporting Activities, or the Supervisor can be added via the task OpsCenter.

Last sync at 2024-03-20 | **ACTIVE** | JUM006 | 17% | 20:40 pm | John Miller

LOCATION	ACTUAL/EXPECTED COUNT	ACTUAL DRILL FEET TO ADVANCE:
FAC_2456_03	0/65 Hole(s)	12' (12.0) CHANGE
ACTIVITY	ACTUAL/EXPECTED DURATION	PLANNED DRILL FEET TO ADVANCE:
FACE DRILLING	1H 22M/2H 42M	12.0' MORE DETAILS

TOTAL HOLE(S) **0.00** [Add Hole\(s\)](#)

1 2 3 4 5 6 [ADD HOLE\(S\)](#)

7 8 9 0 .

[UNDO](#) [SUPPLIES](#) [NOTIFY](#) [PICTURES](#) [CONSUMABLES](#) [NOTES](#) [+ SAMPLE](#) [UPDATE TASK](#)

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Last sync at -20 20:43:38 | **ACTIVE** | JUM006 | 17% | 20:43 pm | John Miller

[Back](#) **More Details**

[Task History](#) >

[Heading History](#) >

[Activity Forms](#) >

SUPPORTING OPERATORS

N/A

SUPPORTING ACTIVITY NOTES

No Supporting activity notes available

SUPERVISOR NOTES

ground ⓘ 2023-11-06 23:00:35 PM Safety is our priority! **GROUNDHOG**
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Last sync at **ACTIVE** JUM006 17% 20:44 pm John Miller

Back **Task History** Total: **9.0 Hole(s)** **Collapse All**

Equipment Status Details

ACTIVE	From: 2024-03-20 20:29:48 PM	To: -	
STANDBY	From: 2024-03-20 20:29:46 PM	To: 2024-03-20 20:29:48 PM	Duration: 0h 0m 1s
DOWN	From: 2024-03-20 20:18:56 PM	To: 2024-03-20 20:29:46 PM	Duration: 0h 10m 50s
ACTIVE	From: 2024-03-20 19:18:03 PM	To: 2024-03-20 20:18:56 PM	Duration: 1h 0m 52s

Task Status Details

Activity	Time
Added 5 Hole(s) [Drill advance - 12'(12.0)]	2024-03-20 20:44:55 PM

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Last sync at **ACTIVE** JUM006 17% 20:45 pm John Miller

Back **Task History** Total: **9.0 Hole(s)** **Collapse All**

Equipment Status Details

Task Status Details

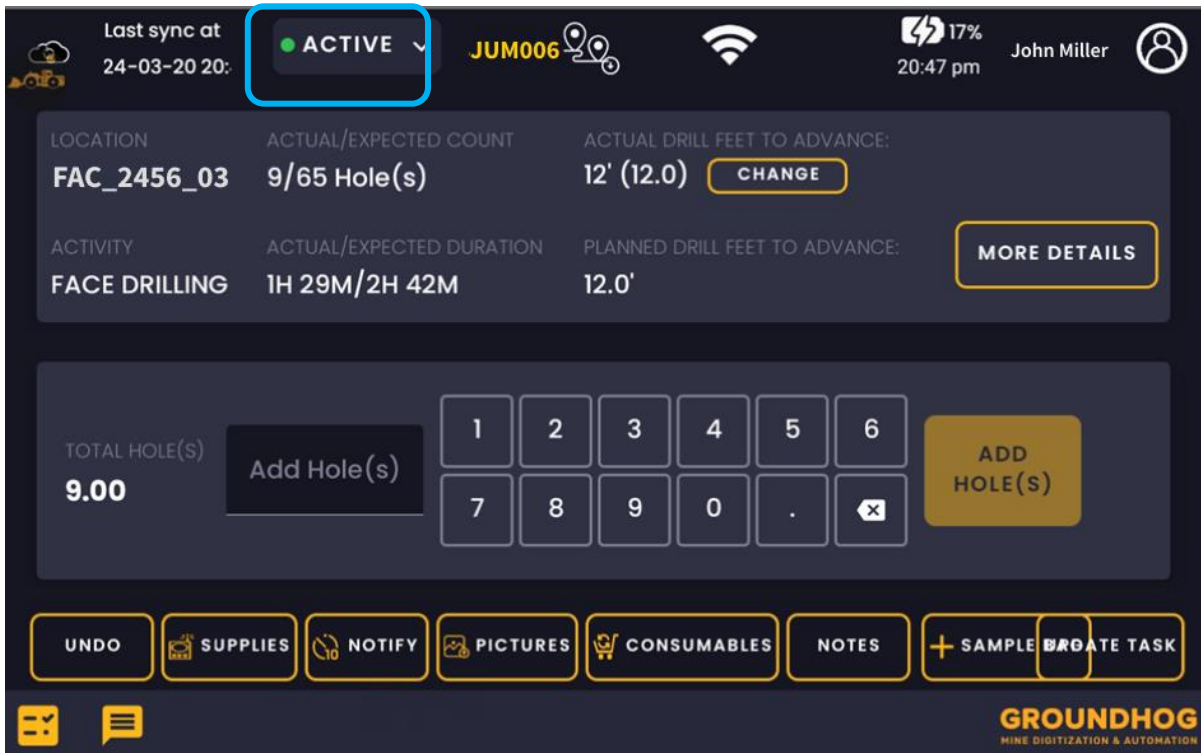
Activity	Time
Added 5 Hole(s) [Drill advance - 12'(12.0)]	2024-03-20 20:44:55 PM
Added 3 Hole(s) [Drill advance - 12'(12.0)]	2024-03-20 20:44:55 PM
Added 1 Hole(s) [Drill advance - 12'(12.0)]	2024-03-20 20:44:52 PM
Started FACE DRILLING	2024-03-20 19:18:33 PM

file entering in to the underground ⓘ 2023-11-06 23:00 **GROUNDHOG**
MINE DIGITIZATION & AUTOMATION

Delays and Downs Tracking

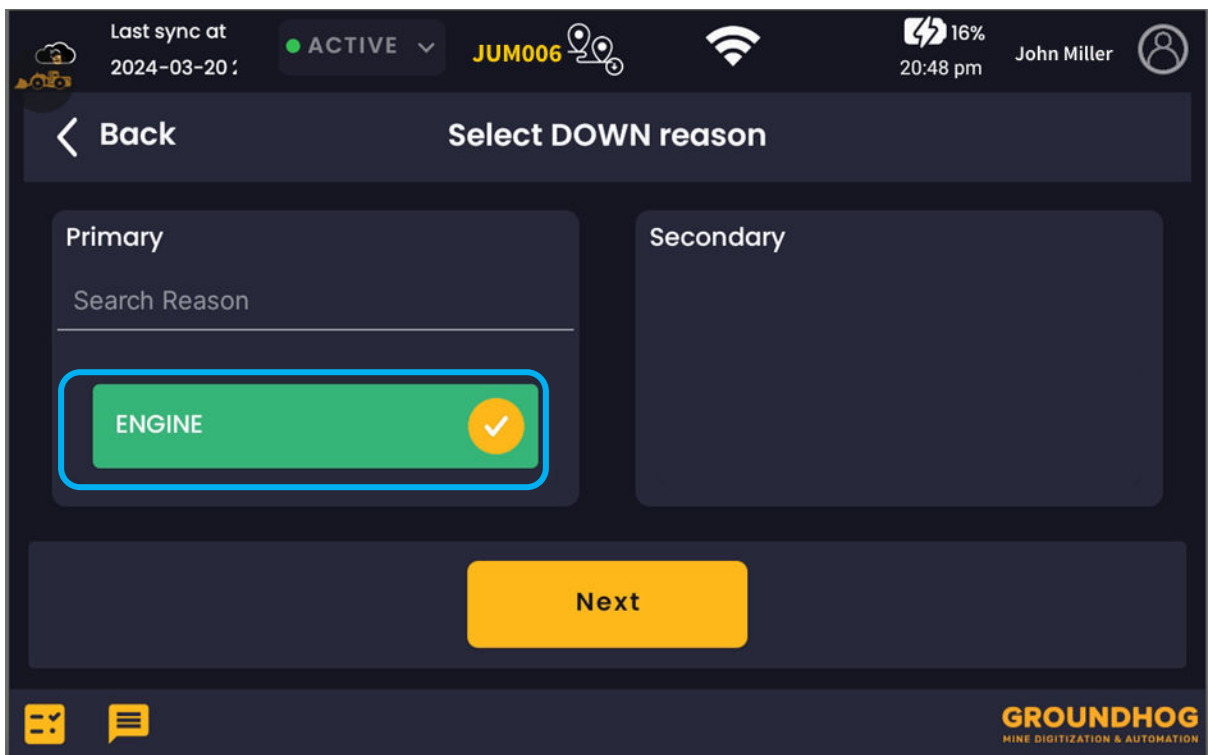
How to log and view downs and delays:

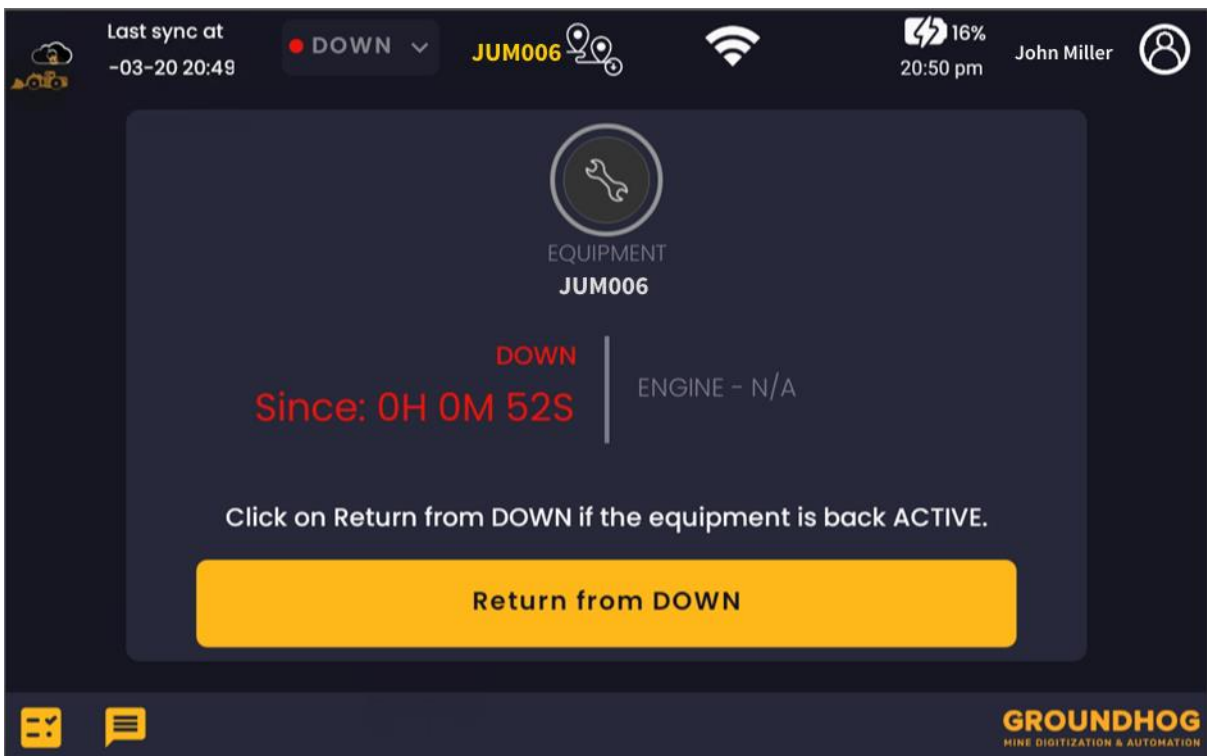
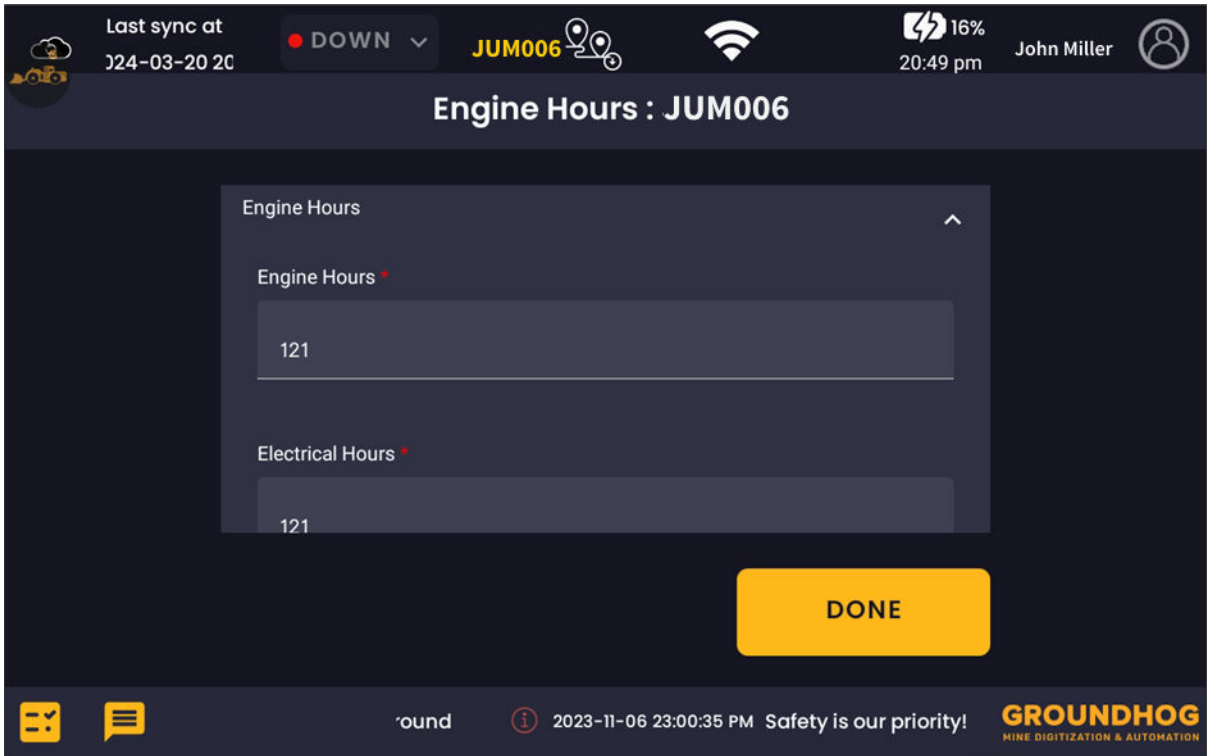
If the equipment is not operational, the operator can select the "Active" status displayed on the header and change it to "DOWN" to accurately reflect the equipment's status.





How to view and select reason codes

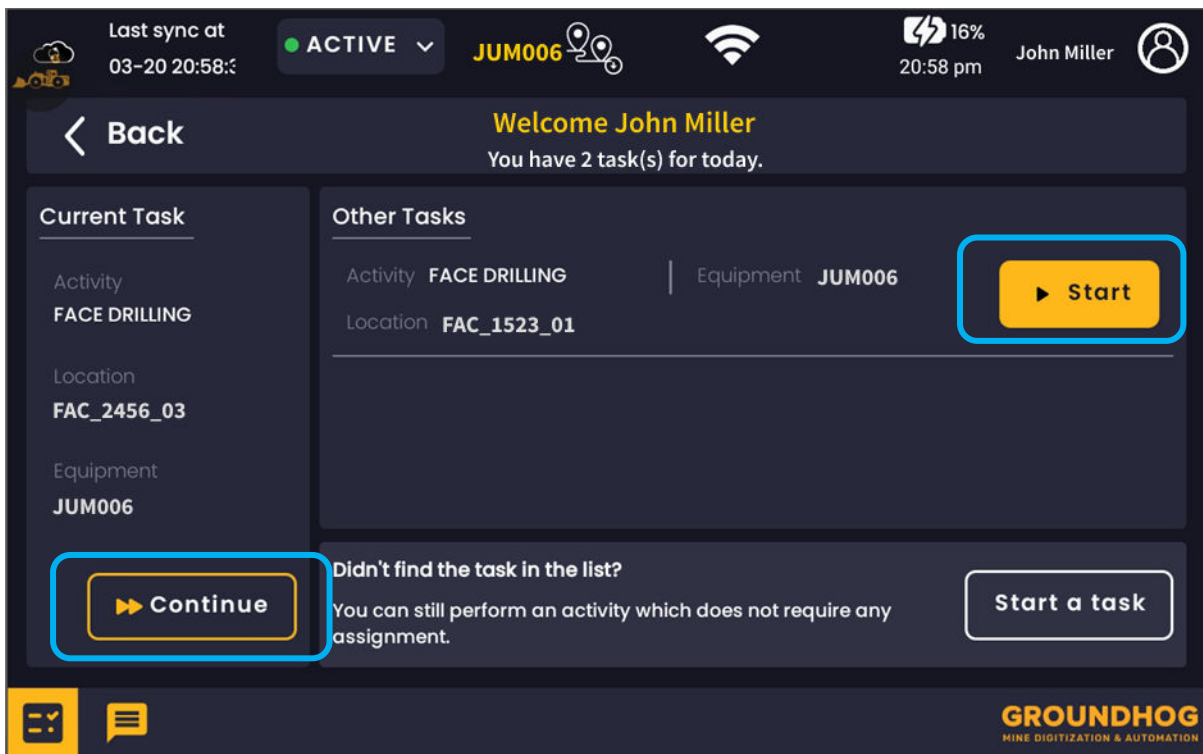




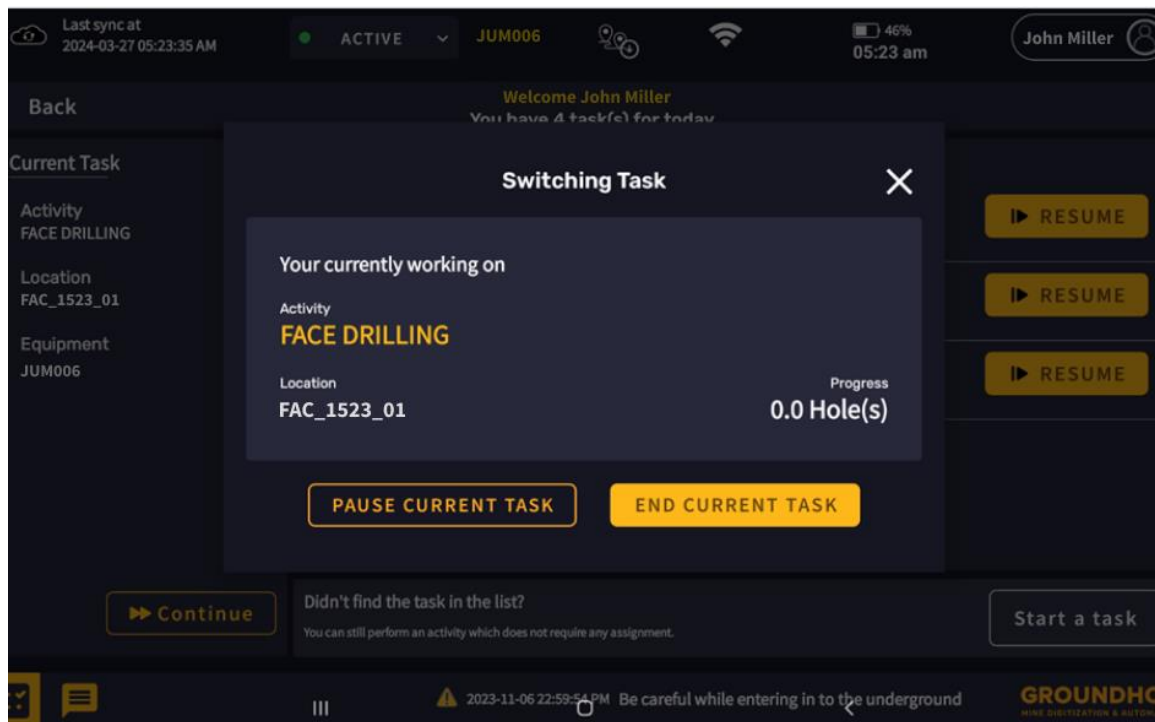
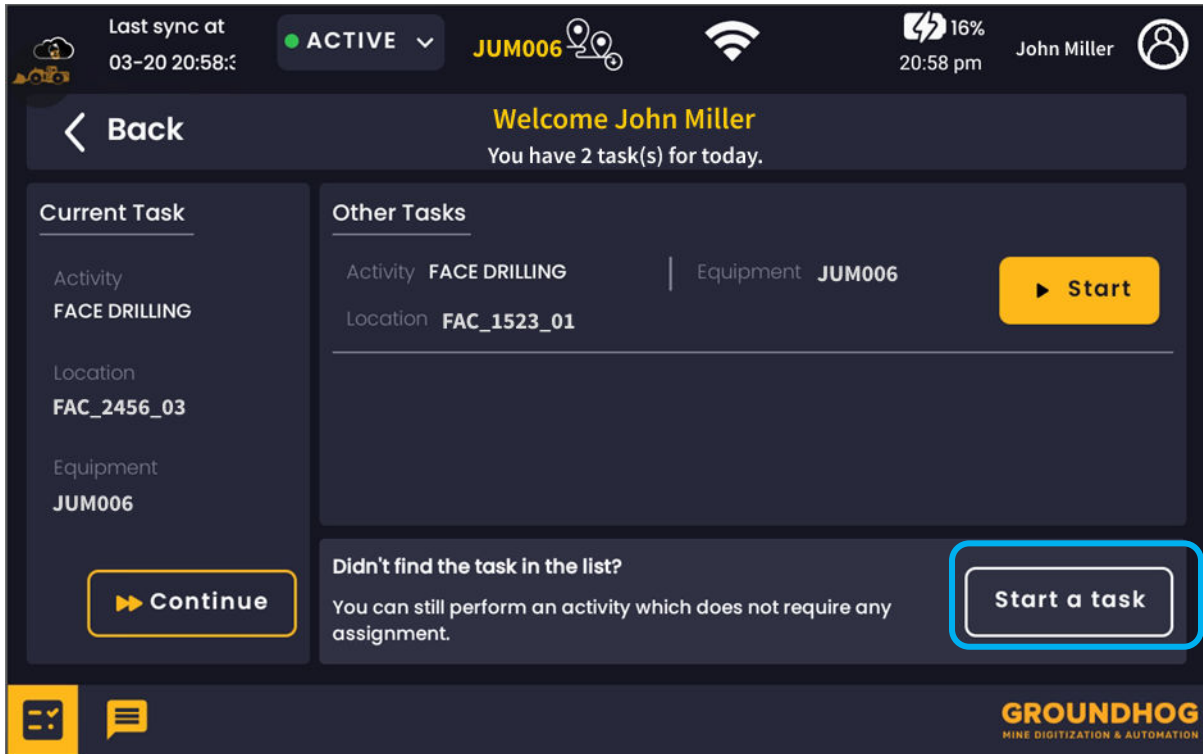
Switching tasks

How to change/switch tasks

From the Task List screen, the operator can initiate a new task while still working on the current one. The current task is displayed on the left side of the screen. Clicking "Continue" allows the operator to proceed with the current task, while clicking "Start" on the right side of the screen enables them to switch to that task.



When clicking "Start a Task," a popup will appear asking if you wish to pause or end your current task.



Communication Protocol

GroundHog has implemented a three-tiered communication protocol to establish a structured and efficient communication framework. Each level addresses specific aspects of support and management, ensuring that concerns are addressed promptly and effectively.

Level 1: Site Support: At the foundation of our communication protocol is Level 1 - Site Support. This level primarily deals with on-site issues and immediately assists field operators and personnel.

Level 2: GroundHog Support Team: Level 2 is the GroundHog Support Team, the intermediate layer between on-site operations and higher management. This level focuses on resolving complex technical issues and providing advanced support.

Level 3: GroundHog Management: The apex of our communication protocol is Level 3 - GroundHog Management. This level involves high-level decision-makers and managers who oversee the entire operational landscape.

Our customer-first approach includes an extremely responsive Customer Service team, intuitive programs to accelerate adoption in the field, and transparent data to increase productivity.

SUPPORT CONTACTS

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Cross functional support

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Mine Control and Digitization Consultant

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7829670307 - India

Cross-functional support