

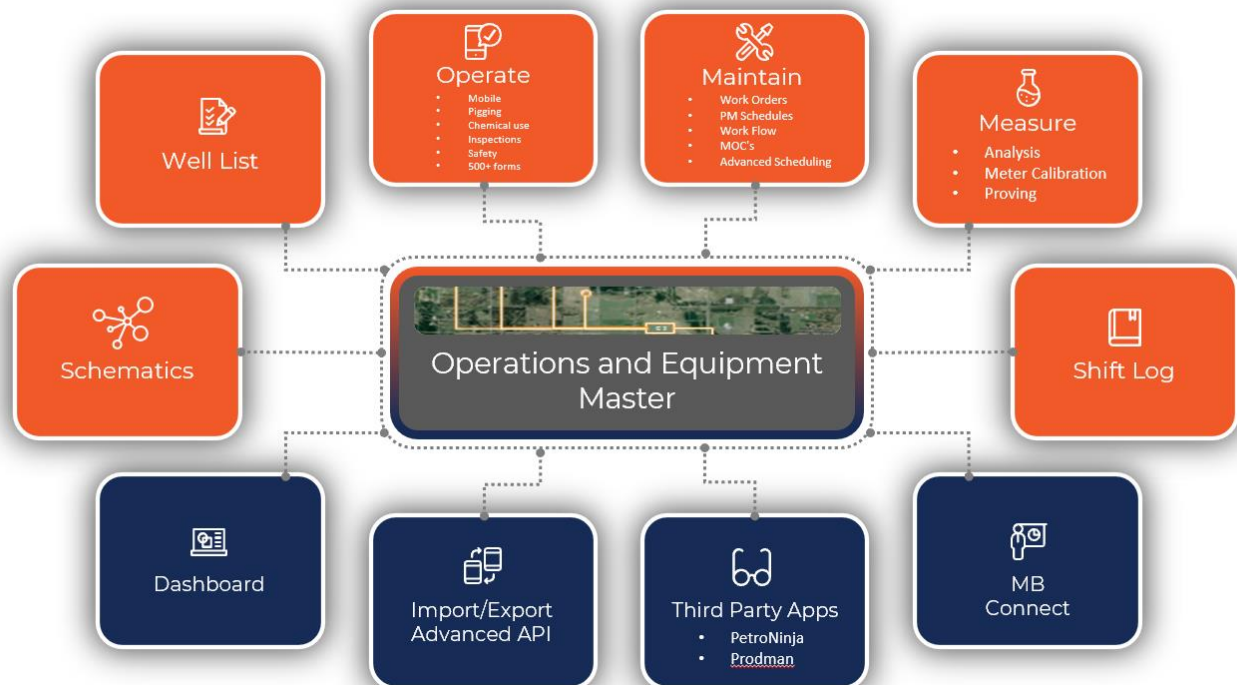
Software for Your Operation

Providing your workforce with an integrated, customizable mobile solution to efficiently manage operations.

At Muddy Boots Inc. we believe that having one piece of software that handles many facets of the operation is very cost-effective. With an integrated platform for operations software you have:

- One system instead of many, **saving you money.**
- All your data in one place, increasing data accuracy and **saving you time.**
- All your people using the same software, **saving you effort.**
- Line of sight into all areas, **making operations visible.**

The diagram below illustrates the integrated set of modules in the Muddy Boots software suite. A description of the key uses for each module and the associated features follow.



Software for Operations

Modules:

Schematics – Best in class schematics tool.

Well List – Store all your corporate well data.

Operate – Mobile operations tool handles any task.

Maintain – Your right sized oil and gas maintenance software.

Measure – Manage analysis, calibrations, and proving's.

MOC – Customizable change management solution integrated with your assets.

Shift Log – Record shift events and manage the handover.

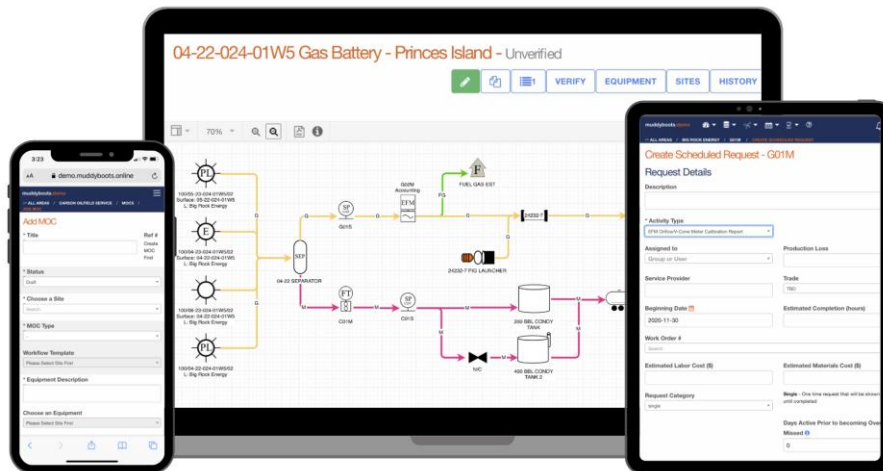
Features:

Dashboard – Customize by role or individual.

Import/Export/API – Connect with other systems.

Third Party APPS – Tight Integration with other applications.

Muddyboots Connect – Link your service providers into the system.



muddyboots.online 2024 Summary

Operating Company and Service Provider Customers	70 +
Site Count	67,000 +
Well Count	75,000 +
Equipment Count	425,000 +
Work Orders Generated	80,000 +
Activities Completed	2,500,000 +
Scheduled Tasks / PMs	2,170,000 +

Client Overview

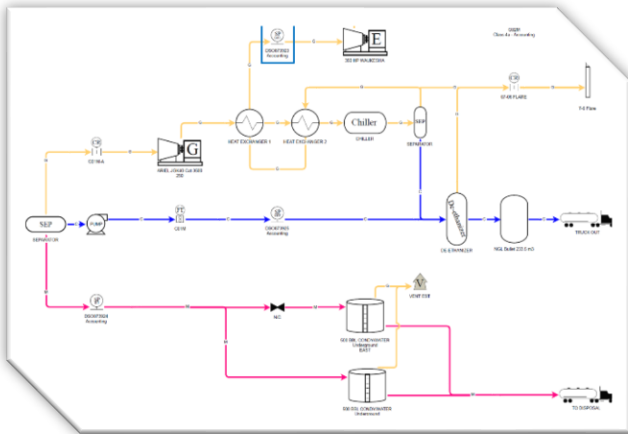
Muddy Boots started in the oil and gas sector in Western Canada and now has oil and gas clients in Canada, the US and Argentina. The company now serves building management, Municipal/Medical clients, as well as clients in Education, Lumber, and Agriculture.

<u>Oil and Gas</u>	<u>Building Management</u>	<u>Municipal/Medical</u>	<u>Other</u>
Imperial Oil	Oxford Properties	Alberta Health Services	Tolko Lumber
ARC Resources	Telus Convention Centre	Olds Fertilizer	NAIT Education
XTO USA	Quadreal Properties		Royal Helium
Hilcorp USA			
Birchcliff			
Lynx			
TAQA			
NuVista			
IPC Canada Ltd.			
Whitecap Resources			
Surge Energy			
(many more)			

Key Pilots/Proposals Underway

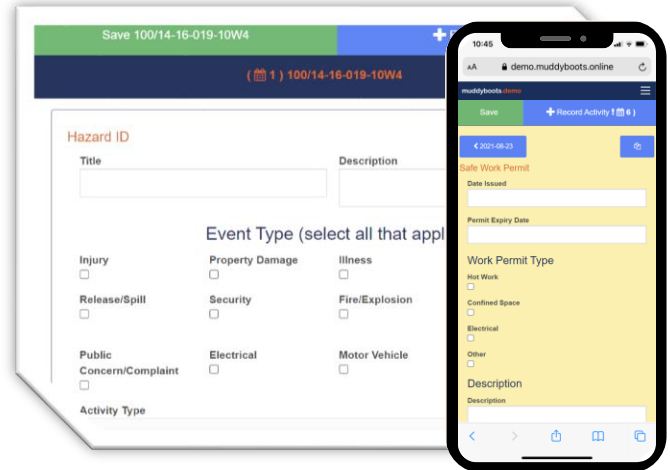
Chevron - Canada
Exxon Mobile Pipeline - Worldwide
Bridger Pipeline - USA
Energy Transfer - USA
Bureau Veritas - USA
PTW Energy Services - Canada

Schematics <https://muddyboots.online/schematics/>



- Easily create and maintain flow schematics for all your operations.
- The process of creating schematics also builds out your master database of sites and equipment. There are over 300 equipment types to choose from in the system, with new types as required.
- View equipment details directly on the schematics.
- Schematics meet all **AER D017** requirements. Track all historical changes and use the automated notification feature to keep staff aware of changes.
- Muddy Boots schematics can be linked together to quickly follow product flow through a system.
- Combine with the Operate, Maintain, or Measure Modules to view previously recorded reports directly on the schematics through the shared master dataset.

Operate <https://muddyboots.online/operate/>



- Use Operate to capture any and all required data while out in the field. Use this module for all regulatory **compliance and operational needs**. Capture pigging records, tanks inspections, pressure inspections, crossing inspections, chemical checks and much more.
- There are several hundred pre-built forms in the system to choose from. See attached "Activities Summary" for a summary overview.
- Operate is your safety system, capture **Incidents, Hazard ID's** and **Near Misses**. Use corrective actions (work orders) to follow up on safety issues.
- Hauling out waste? Use the standard **AER Waste Form**.
- Limited network connectivity? Make use of the **mobile capability**.

Measure <https://muddyboots.online/measure/>

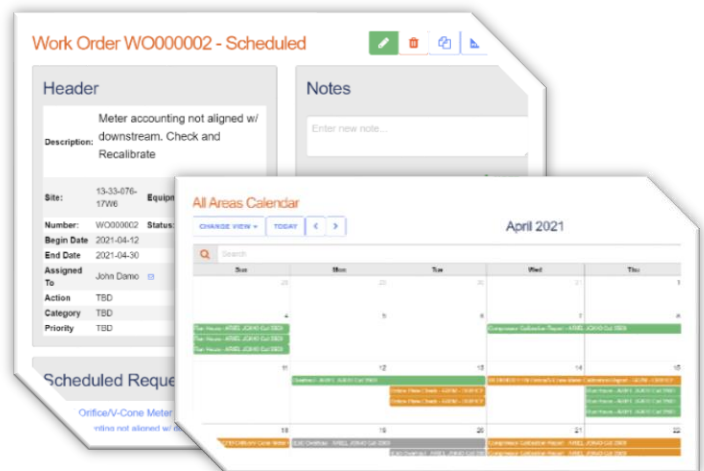
Review for Gas Analysis on Apr 12, 2021

by Automated DataLoad, Apr 12, 2021 23:59 for 0015
Accepted by Doug McEwen, 2021-05-04 14:10:09 -0500

Site Name	Equipment	Pool Names	Schematic
Remote MWB Battery	0015 - GAS SAMPLEPOINT		Cardinal Battery MWB
Meter / Well / SP UWI	Field / Area Name	Pool / Zone Name	
100/14-02-019-10W4/00	KARIR	MONTHLY B	
Date Sampled	Date Received	Date Reported	
2021-04-12	2021-04-14	2021-04-18	
Properties	Rule	SD	Apr 12, 2021
Source Pressure (kPa)			Apr 12, 2019
Received Pressure (kPa)			Apr 12, 2018
Source Temp (°C)			Apr 12, 2017
Received Temp (°C)			
Field H2S (ppm)			
Molmass C7+			
C7+ Ate Density (kg/m³)			
Sample Ate Density (kg/m³)			
1+ iC4 Ratio			
Position	Rule	SD	Apr 12, 2021
			Apr 12, 2019
			Apr 12, 2018
			Apr 12, 2017

- Manage your compositional **analysis** with measure. Automatically load analysis directly from laboratories and vet it based on pre-set criteria to determine if the analysis is acceptable.
- Push valid analysis to downstream applications or SCADA.
- Digitally record meter **calibrations** and meter **provings**. Set these up in a schedule and review the results.
- Analysis, calibrations and provings are automatically linked and viewable from the schematic.

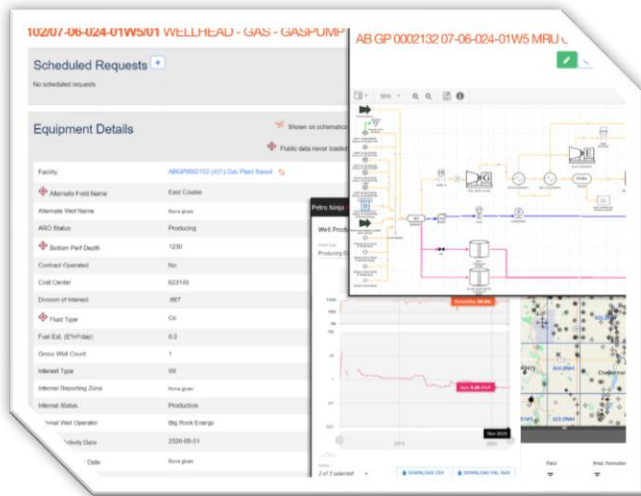
Maintain <https://muddyboots.online/maintain/>



- Use the Muddy Boots Maintain module as your fit for purpose maintenance system.
- Schedule all **PM's**.
- Generate simple or complex **work orders**.
- Schedule work assignments and review results with the **calendar** display. The calendar display will show work by location or by assignee.
- Schedule maintenance at predefined intervals or based on equipment run hours.

Well List

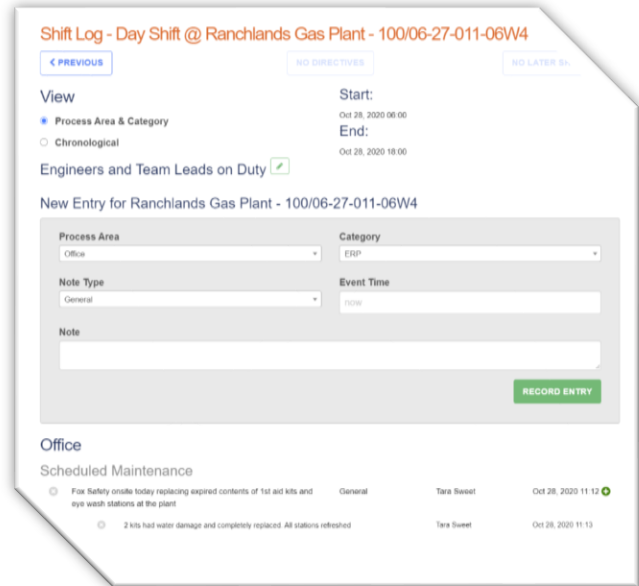
<https://muddyboots.online/well-list/>



- Load well data from the public data sources.
- Maintain internal well data such as ownership and status.
- Map groups of wells.
- Record acquisition and other usage notes.
- Reconcile internal well data with public records.
- Provide a central source of well data for everyone in the company.
- Export full details to Excel.
- Setup a new well workflow.
- Link to your ARO process.
- See wells on a map or flow schematic.

Shift Log

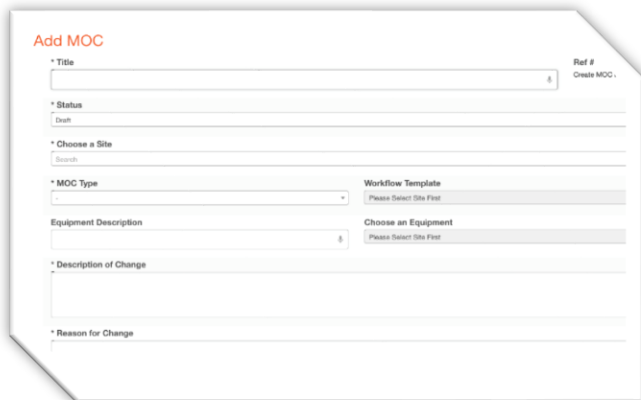
<https://muddyboots.online/shiftlog/>



- Our **ABSA** compliant **Shift Log** allows users to capture daily events and shares that information across shifts and across the company.
- Complete review and sign-off between shifts. The shift log can be accessed and signed off from anywhere on any device with an internet connection.
- Shift log is now used in over 20 plants in the province, by NAIT and by multiple industries: O&G, Forestry, Building Management, etc.
- Setup, training, and rollout can be completed same day.

Management of Change (MOC)

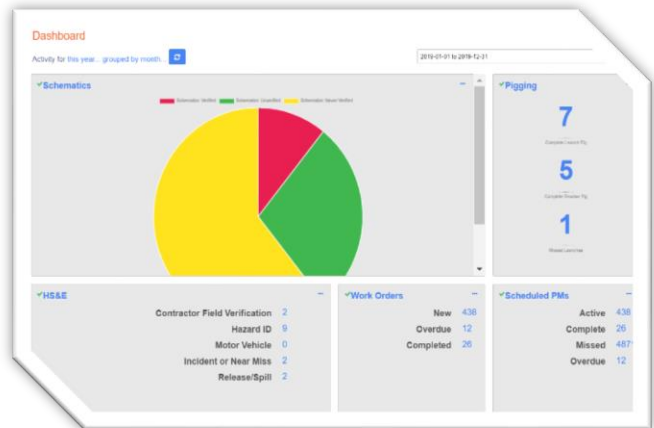
<https://muddyboots.online/moc/>



- Customizable for your operation.
- Once defined, can be ready within a business day.
- Tie to existing site and equipment inventory.
- Link to document management systems.
- Data is always accessible and visible.
- Customizable workflow templates and email notification settings ensure the right staff is involved and informed.
- Important decisions are recorded and supporting documentation and images can be attached directly to the MOC record.
- With Muddy Boots, MOC data is easy to access anytime/anywhere.

Dashboard

<https://muddyboots.online/integration-dashboard/>



- Customizable by individual.
- Set dashboard tiles to display any system data counts.
- Graphic and tabular display options.
- Ability to copy a standard dashboard to all users.
- Ability to copy the dashboard on a specific user to others.
- Make the dashboard your home screen.
- Navigate to other areas of the system – work orders, MOCs, reports, schedule, schematics.
- Available to ALL system users.

Import/Export/API

<https://muddyboots.online/import-export-api/>

- The ability to configure a flat file or csv import in a day.
- Cross-reference Muddy Boots identifiers (eg. Equipment numbers) to external identifiers.
- Perform basic calculations on data as it is entered.
- Use the workflow feature to alert users to the presence of new data.
- Use the accept/reject function to screen new records.
- Get notification of all import/export activity.
- Application Programming Interface (API): Muddyboots has a robust API to integrate with external systems.

Muddyboots Connect

<https://muddyboots.online/muddy-boots-connect/>

- Link your service providers into the system.
- Instantly access data from your service providers the moment the work is recorded, in one system with Muddy Boots Connect.
- Our unique solution creates a connection between producers, mid-streamers, service providers, and labs to share schedules and data. Data is recorded directly in your Muddy Boots application.
- You're in control of the access you allow.
- You decide who. You decide where. You decide what.

Additional Useability Features

- Muddy Boots operates in the cloud. There is no IT work required to start using MBO. Product enhancements are made continually without any cost nor disruption to you.
- Muddy Boots will run on any device that can access the internet – desktop, laptop, tablet, or smart phone. All common internet browsers are supported.
- Muddy Boots offers the ability to enter operations data where cellular service or internet are not available. The data will be loaded into the system when cellular or internet service become available.

Third Party Application Integration

- The Muddy Boots architecture is specifically designed so that third party applications can be easily connected to the platform. The applications we look at integrating with provide complimentary functionality to the system



Activities Summary

Regulatory General

1. Tank Inspections
2. Well / Lease Inspections
3. Inactive Well / Lease Inspections
4. Pressure Switch (Presco) Inspections
5. Flare Stack Inspections
6. Well Casing Pressure Checks

Pipeline Integrity

7. Pigging Events
8. River Crossing and Right of Way Inspections
9. Corrosion Coupon Replacement
10. Liner Vent Checks

Equipment Logging/Routine Observations

11. Compressor and Engine Logs
12. Separator Readings
13. Dehydrator Readings
14. Chemical Tank Readings
15. Downtime Logging
16. Vehicle Inspections
17. Level Switch Inspections
18. Crane Inspections

Volumetric

19. Daily Readings
20. Tank Level Readings
21. GLR / ECF Reporting
22. SAGD Plant Totals
23. Daily Production
24. Truck Tickets

Measurement/E&I

25. Meter Calibrations
26. Meter Proving
27. Transmitter Calibration
28. Discrete Device Calibration
29. Sampling (Oil, Gas, Water, Emulsion)

Laboratory Analysis Review

30. Gas Analysis
31. Oil Analysis
32. Hydrocarbon Liquid Analysis
33. Water Analysis

Emissions F/F/V

34. Fugitive Emissions Screening
35. Any Shutdown (eg. Compressor shutdown)
36. Pneumatic Device Retrofit Tracking
37. Compressor Blowdowns
38. SCVF Tests
39. Leak detection and repair (LDAR)

HS&E Reporting

40. Incident Reports
41. Hazard ID's
42. Safe Work Permits
43. Safety Meetings
44. Task Observations
45. Incident Investigations

HS&E Compliance

46. Waste Manifest
47. Contractor Verifications
48. Pre-Startup Safety / Compliance Review
49. Safety Device Bypass
50. Permit Audits
51. Lock Out / Tag Out Audits
52. Roadblock Kit Inspections
53. Spill Response Inventory Checks
54. Safety Equipment Inspections
 - a. Portable Monitors (H2S, etc.)
 - b. SCBA / SABA
 - c. Fire Extinguishers
 - d. Eyewash Stations and Safety Showers
 - e. Fall Arrest Equipment

Mechanical Maintenance

55. Compressor Service
56. Generator Service
57. Engine Maintenance
58. Boiler Service
59. Pump Service
60. W.O. Tasks

Well Servicing

61. Pumpjack Inspections
62. Swabbing

Building Maintenance

63. Boiler Routine Readings
64. Boiler Inspections
65. AC / Heater Inspections
66. Fan Checks
67. Alarm Checks
68. Visual Inspections
69. HVAC Programming Recording
70. Filter Replacements

Miscellaneous

71. Operations Bulletin
72. Admin Requests
73. Schematic Review