

Managing environmental data in Esdat to meet regulatory requirements and support efficient workflows

Presenters:

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Nick Tumney, Senior Implementation Specialist @ ESclS

Land Acknowledgement

- Skwxwú7mesh (Squamish) Nation
- Xʷməθkʷəy̓əm (Musqueam) Nation
- səlilwətaʔ (Tsleil-Waututh) Nation





GWALL

ENGINEERING

CIVIL & ENVIRONMENTAL ENGINEERING
PROJECT & CONSTRUCTION MANAGEMENT



Our Services

- Civil Engineering
 - Land development
 - Site servicing
 - Municipal Infrastructure
- Environmental Engineering
 - Investigation / Remediation
 - Monitoring / Compliance
 - Permitting
- Planning
- Project Management
- Design/Build Capability



**Strength Through
Relationships**

TRENT FORCEMAIN

JACOB BROS

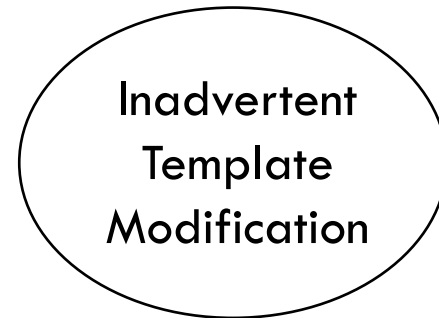
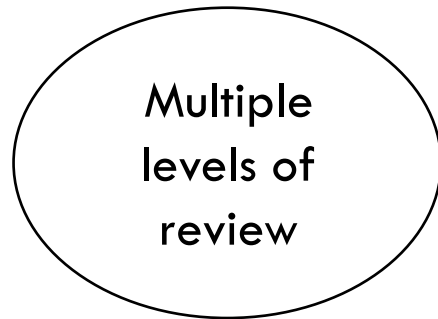
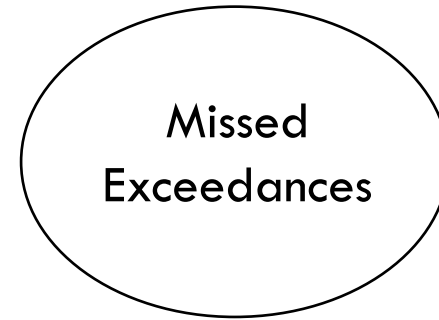
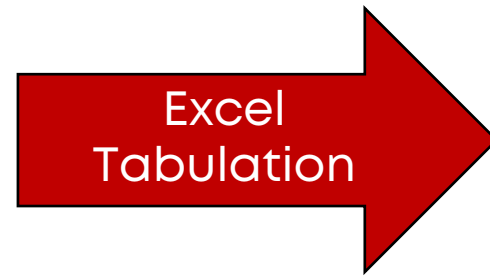
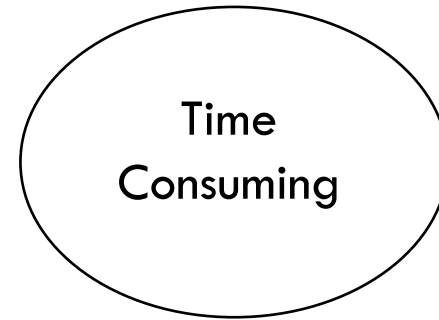
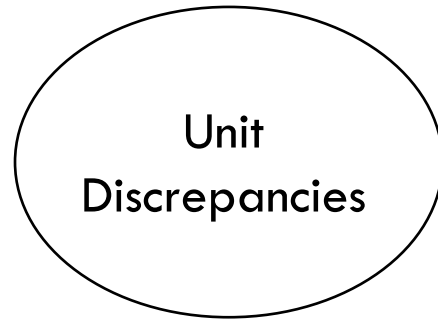
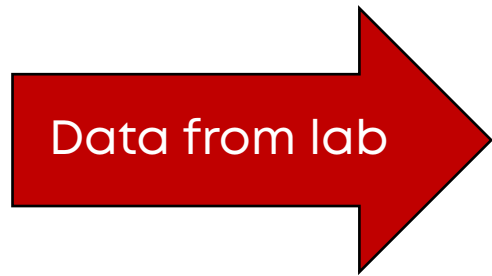
- Part of the CRD Wastewater Treatment Project
 - 1.9 km of pipe including sections along foreshore
- \$100k Monitoring / Investigation
- MAIN DELIVERABLES:
 - Environmental Protection Plans
 - Construction Monitoring
 - Contaminated Soils Investigation and Disposal



McLOUGHLIN POINT WWTP

- Investigation & Remediation concurrent with plant construction
- \$1M Investigation
- MAIN DELIVERABLES:
 - PSI / DSI / COR
 - DW Exemption
 - Exemption from delineation
 - Site Remediation / Risk Assessment





DATA MANAGEMENT CHALLENGES



Expensive

Manual
updates

Limited
alternate
services...

Internal
Database

Limited
standards

OPTIONS FOR DATA MANAGEMENT





OPTIONS FOR DATA MANAGEMENT



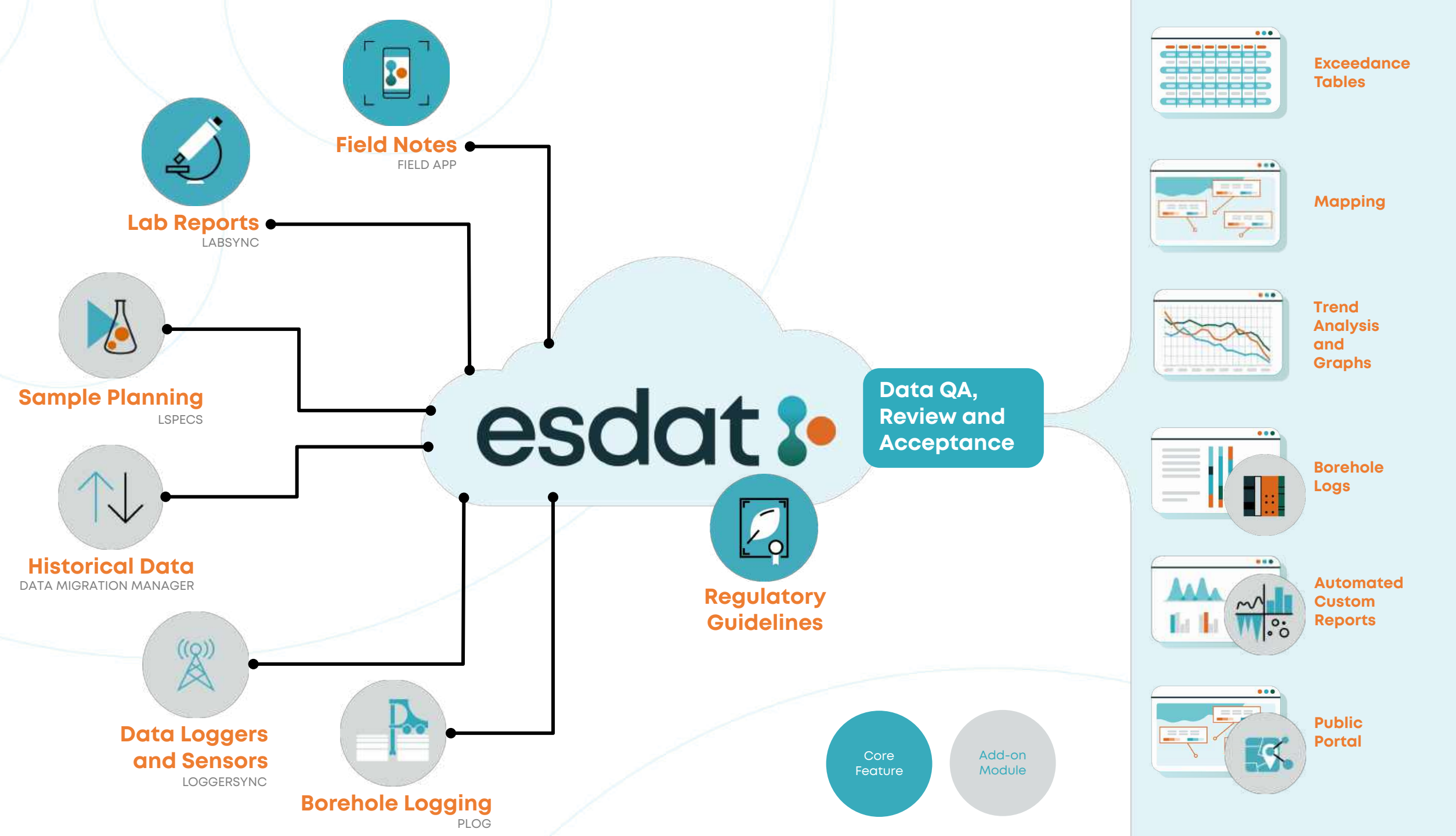


- An Environmental Data Management Software (EDMS) and Solutions company.
- Develop Esdat: our all-in-one EDMS platform
- Used by government, industry, energy, mining, and environmental consultants in Canada and internationally.

Fast

Intuitive

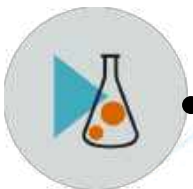
Accurate



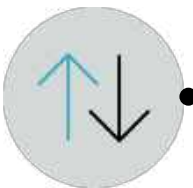
Field Notes
FIELD APP



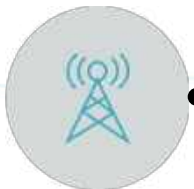
Lab Reports
LABSYNC



Sample Planning
LSPECS



Historical Data
DATA MIGRATION MANAGER



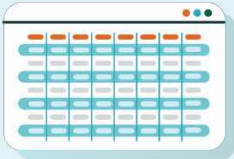
Data Loggers and Sensors
LOGGERSYNC



Borehole Logging
PLOG



Regulatory Guidelines



Exceedance Tables



Mapping



Trend Analysis and Graphs



Borehole Logs



Automated Custom Reports



Public Portal



Lab Reports

LABSYNC

- LabSync provides a dedicated email address for receipt of laboratory analytical results.
- Canadian laboratories that support Esdat format include:





Lab Reports

LABSYNC



- Received lab reports are validated against Esdat specifications.
- Non-conformances with the format are automatically reported back to the lab for resolutions and reissue.
- Escis engage with labs directly to help resolve issues.



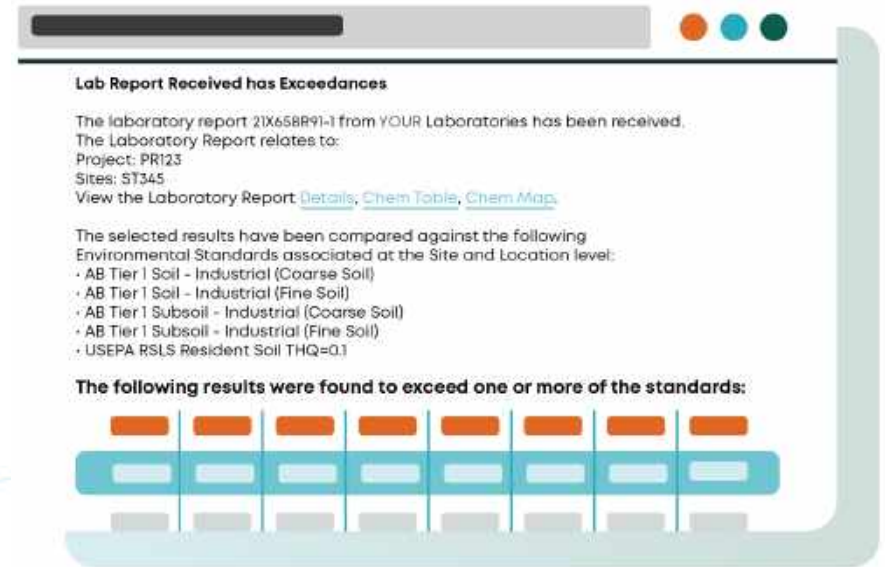
Lab Reports

LABSYNC

- Email notifications are triggered by upload
- Notify the Project Manager of



- Receipt
- Upload errors
- Exceedances





Lab Reports

LABSYNC

- Imported lab reports are listed by Project



Lab Reports: Details Edits Chem Tables QA Map Outliers Exceedances Other Formats

Add Lab Report ⓘ

All Sites & Projects

<input type="checkbox"/>	Date Added	Lab Name	Lab Report Number	Project ID	Site ID	Matrix Types	Status	
<input type="checkbox"/>	22 Feb 2022	EV Data	EVW0521	EV_Demo	EV_Site	Water	⌘	✕
<input type="checkbox"/>	17 Feb 2022	BriaLab	BL20200723	01_ESdat_Training			⌘	
<input checked="" type="checkbox"/>	12 Nov 2021	Tute Laboratory	TLEDD001	01_ESdat_Training	01_ESdat_Training	Water	⌘	
<input type="checkbox"/>	23 Jul 2020	TVLab	20200722	01_ESdat_Training		Soil	⌘	
<input type="checkbox"/>	10 Oct 2018	Tute Laboratory	DEMO001	05_No_Site		Water	⌘	
<input type="checkbox"/>	18 Jan 2018	ESD	Site A Historical 2010	04_Example Meeting	04_Mine_Site_1	Water	⌘	
<input type="checkbox"/>	27 Oct 2017	Lab01	EGDDemo01	03_Soil Vapour	03_Demo_Site	Water	⌘	
<input type="checkbox"/>	27 Oct 2017	Lab02	EGDDemo02	03_Soil Vapour	03_Demo_Site	Water	⌘	
<input type="checkbox"/>	01 Dec 2016	GISLab	Q16713	01_ESdat_Training	01_ESdat_Training	Water	⌘	
<input type="checkbox"/>	08 Jun 2016	Historical	Historical	01_ESdat_Training	01_ESdat_Training	Soil, Water	⌘	
<input type="checkbox"/>	01 Jun 2016	LabTrain-SYD	16713	01_ESdat_Training	01_ESdat_Training	Water	⌘	
<input type="checkbox"/>	01 Jun 2016	LabTrain-SYD	16716	01_ESdat_Training	01_ESdat_Training	Water	⌘	



Lab Reports

LABSYNC

- Review and assign sample information



Lab Reports: EVW3521

Selected Lab Report: EVW3521 | Date Reported: 23 Nov 2019

Lab Name: EV_Demo | Project ID: EV_Demo

Lab Report Number: EVW3521

Lab Signatory: [Blank]

Lab Report Files are not available for Download

Comments: [Blank] | Approved: No | [Reject] [Approve]

Lab Report Samples

Matrix Type	Field ID	Sample Date	Site Location	Assign	Well	Depth	Sample Type	Parent Sample	Sample Code	Sampling Met...	Matrix Descri...	Sample Com...	Conditional Matrix Typ
Water	GW01_20191114	14 Nov 2019 2:25 PM	EV_Site / GW01	✓	-	*	Normal		BPW3521GW025				
Water	GW02_20191115	15 Nov 2019 10:41 AM	EV_Site / GW02	✓	-	*	Normal		BPW3521GW026				
Water	GW03_20191115	15 Nov 2019 4:45 PM	EV_Site / GW03	✓	-	*	Normal		BPW3521GW027				
Water	GW04_20191115	15 Nov 2019 10:27 AM	EV_Site / GW04	✓	-	*	Normal		BPW3521GW028				
Water	GW05_20191116	16 Nov 2019 9:33 AM	EV_Site / GW05	✓	-	*	Normal		BPW3521GW029				
Water	GW06_20191116	16 Nov 2019 2:18 PM	EV_Site / GW06	✓	-	*	Normal		BPW3521GW030				
Water	GW07_20191116	16 Nov 2019		✓	-	*	Parent_S	BPW3521GW029	BPW3521GW106				
Water	GW07_20191116	16 Nov 2019 9:10 PM	EV_Site / GW07	✓	-	*	Normal		BPW3521GW113				
Water	GW08_20191116	16 Nov 2019 8:45 PM	EV_Site / GW08	✓	-	*	Normal		BPW3521GW114				
Water	GW09_20191116	16 Nov 2019 3:44 PM	EV_Site / GW09	✓	-	*	Normal		BPW3521GW115				
Water	GW10_20191117	17 Nov 2019 4:38 PM	EV_Site / GW10	✓	-	*	Normal		BPW3521GW134				
Water	GW11_20191118	18 Nov 2019 10:47 AM	EV_Site / GW11	✓	-	*	Normal		BPW3521GW142				

1 of 15 items

Save Changes | Undo Changes



Lab Reports

LABSYNC

- Complete QA/QC tasks
 - RPDs
 - Frequency
 - Blanks



QA Settings Chem Profile Env Standards Sample Information Results Excel Export					Inorganics				Metals			
Matrix Type: Water					pH (Lab)	Hardness as CaCO3 (filtered)	Sulfur (filtered)	Sodium (filtered)	Aluminium (filtered)	Ammonia (filtered)	Arsenic (filtered)	Barium (filtered)
					pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL						0.5	3	0.05	0.003	0.0005	0.0001	0.001
Date	Field ID	Sample Type	Lab Report N...	Matrix Type								
11/13/2019	GW02_20191...	Normal	EVW3521	Water	7.44	324	<3	1.1	<0.003	<0.0005	<0.0001	0.0161
11/13/2019	QA01_20191...	Field_D	EVW3521	Water	7.1	1720	482	83.1	<0.015	<0.0025	<0.0005	0.026
RPD					5	137	186	195	0	0	0	47



Lab Reports

LABSYNC

- Complete QA/QC tasks

- Set custom DQOs



QA Config

QA Settings Default Save Changes Duplicate Rename Delete Set as Default

Sample Frequency Validation

- Field or Interlab Duplicates
- Laboratory Duplicates
- Field Blanks
- Laboratory Blanks
- Matrix Spikes
- Trip Spikes
- Surrogates
- Lab Control Samples
- Standard Reference Materials
- Certified Reference Materials
- Inorganics
- Default Formatting

Sample Frequency Validation - Number of QA Samples Required

Non-compliant Cell Style A ▼

+ Add

1	Field_D	for 20	Normal	per			
1	Interlab_D	for 20	Normal	per			
1	Rinsate	for 20	Normal	per	SDG		
1	Field_B	for 1	SDG	per			
1	Trip_B	for 1	Lab Report	per			
1	Lab_D	for 10	Normal	per	Lab Report		



Lab Reports

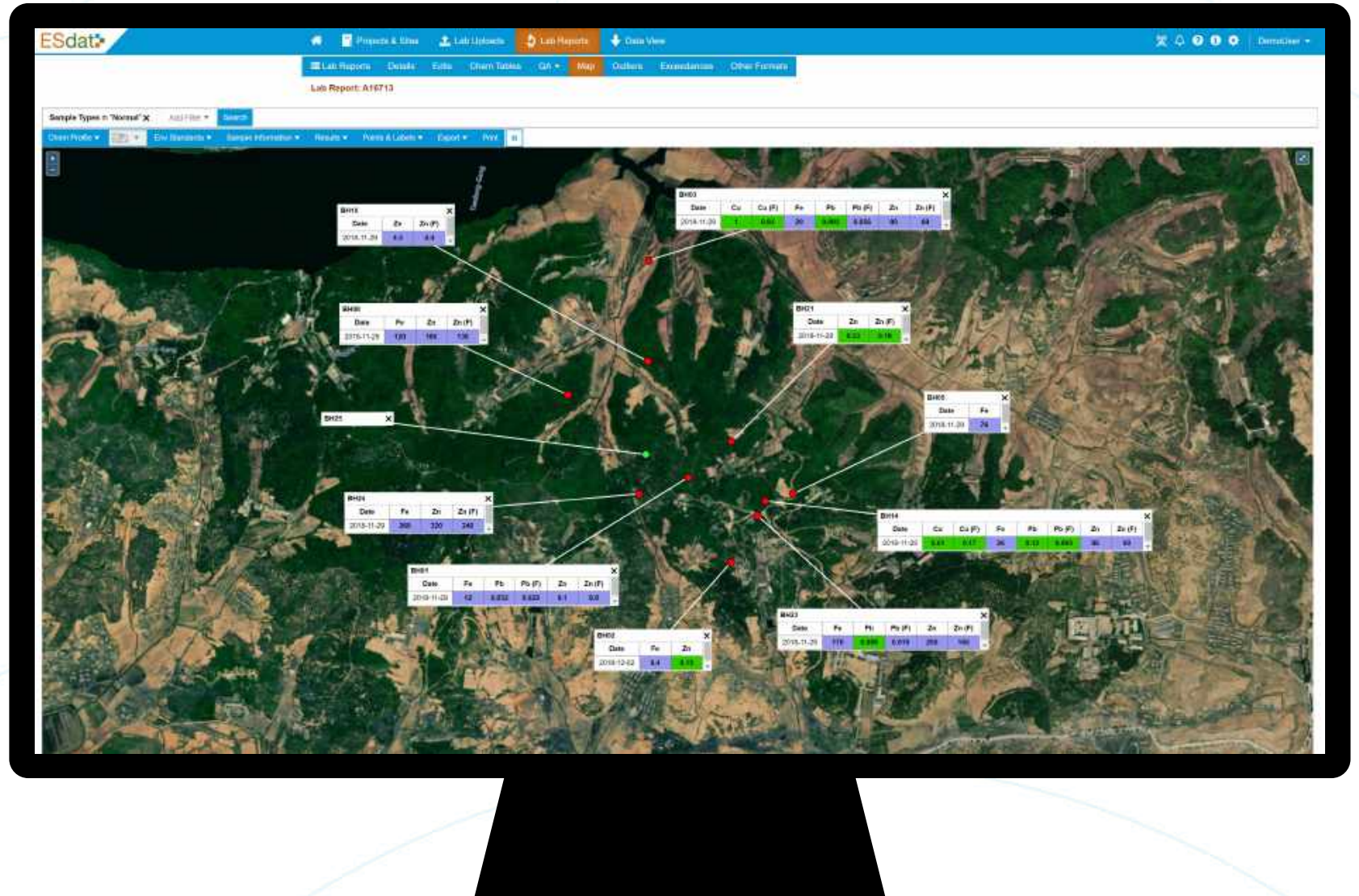
LABSYNC

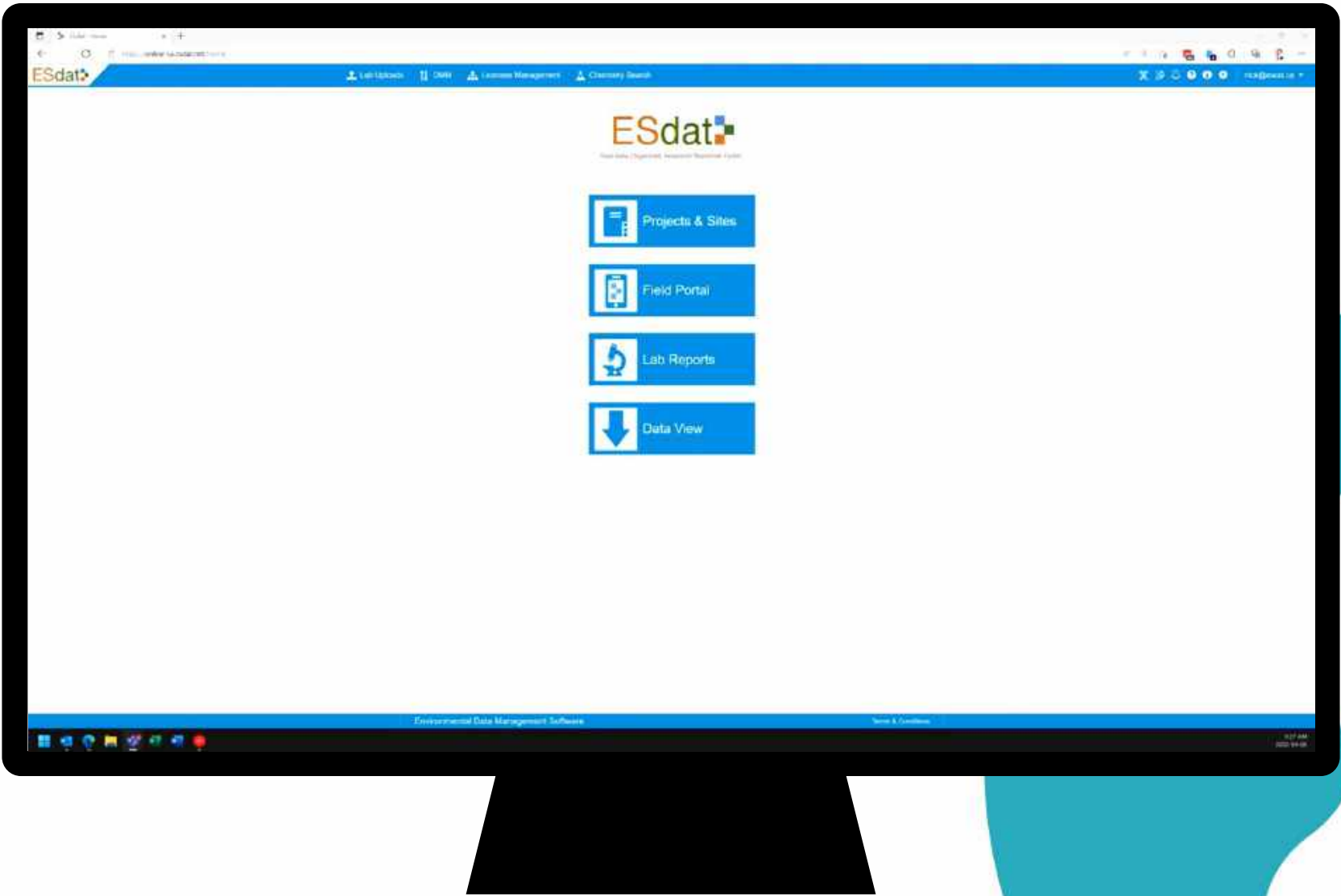


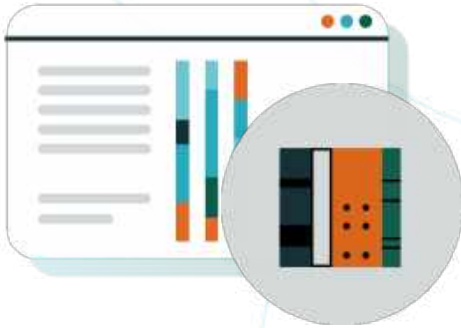
Regulatory Guidelines



Chemistry Maps



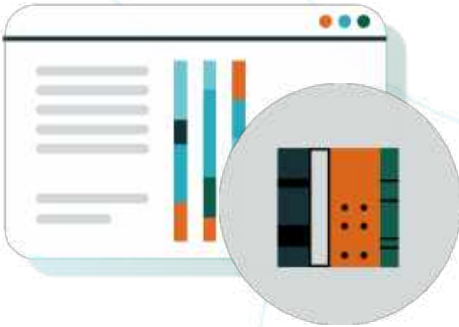




Borehole Logs



- Drilling information
- Soil stratigraphy & descriptions
- Sample information
- Headspace readings
- Well installation and construction



Borehole Logs



ESlog | ENVIRONMENTAL WELL BH04

Selected Log: BH04 | Depth per page: 5 | Start Depth: 0 | End Depth: 4

PROJECT NUMBER (SPECIS_Demo): Sarskaphy | DRILLING COMPANY: COORDINATES: 154748.261 4328141.217
 PROJECT NAME (Demo): Sarskaphy Hydro Gas | DRILLER: COORD SYS: HYD_G4_UTM_zone_51N
 CLIENT: DRILL RIG: SURFACE ELEVATION: 43.25
 ADDRESS: DRILLING METHOD: WELL TOC: A-432; B-42; 15
 DRILLING DATE: 2/02/2005 12:00:00 AM - 3/02/2005 | TOTAL DEPTH: 4.000 | LOGGED BY:
 LICENCE NO.: DIAMETER: 120 mm | CHECKED BY: M. Swart

COMPLETION: CASING | SCREEN

COMMENTS:

Depth (m)	Drilling Method	PID	Graphics	Sample Type	Is Analyzed?	Water	Well Installation Details	Graphic Log	Material Description	Mineralogy	Consistency	Additional Observations	Elevation (m)
0.0 - 0.4		BH04_0.0-0.1			Y				TOPSOIL (PT), dark brown, saturated, high organic content.	S			43.2
0.4 - 2.8									CLAYEY SILTY SAND (SC), fine to medium grained, poorly graded, fat and elongated, subangular, weak cementation, pale greenish brown, little chert, some coal, most, medium bedding thickness, laminated, widely fissured fracture spacing, Calcareous.	M	Iron oxide staining, no odor, weak HCL reaction	42.88	
2.8 - 3		BH04_1.3-1.5			Y				CLAYEY QUARTZ SANDSTONE, medium grained, very dark brownish grey, dry, very hard, thickly crossbedded, silty, non-bedded, very wide fracture spacing, moderately weathered.	D	Iron oxide staining, slight odor	42.00	
3 - 4		BH04_3.5-4.0			SS				GRAFFITE				40.88

Edit Column | Manage Columns | Material Description

Title: Material Description

Data | Label

Text | Add

0-0.4 | TOPSOIL (PT), dark brown, saturated, high organic content.

0.4-2.8 | CLAYEY SILTY SAND (SC), fine to medium grained, poorly graded, fat and elongated, subangular, weak cementation, pale greenish brown, little chert, some coal, most, medium bedding thickness, laminated, widely fissured fracture spacing, Calcareous.

2.8-3 | CLAYEY QUARTZ SANDSTONE, medium grained, very dark brownish grey, dry, very hard, thickly crossbedded, silty, non-bedded, very wide fracture spacing, moderately weathered.

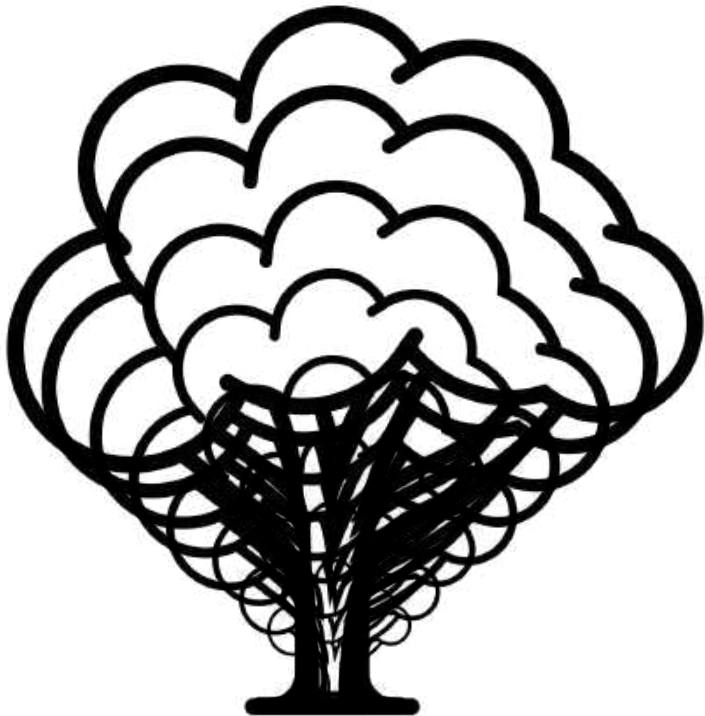
3-4 | GRANITE

Waterstrikes: Add

End Depth Comment: Termination Depth at 4.000 m.

Integrate

- Training
- Exploration
- Adapt



Improve

- Automated data upload & updates
- Consistent table presentation
- Error reduction
- Decreased data tabulation time by over 90%

GWAII OUTCOMES



Thank you

Questions?