









NORTH SHORE

Environmental Consultants

Orphan Well Association

SiteView Implementation, Data Management and ARO

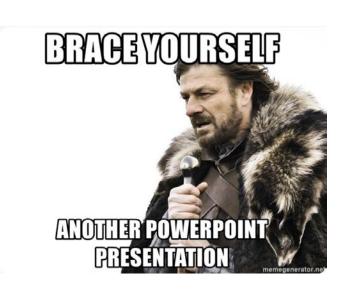
SiteView®

Construction, Reclamation, Pipeline, Facilities & Water Data Management

Introduction

- Overview & Project Scope
- Data Challenges
- Workflow
- SiteView Setup
- OWA Specific Requirements
- Data Sharing
- Questions





Recent History

Inventory							
Year Wells (ABD) PL Segs (ABD) Sites (Rec)							
2015	705	730	451				
2019/2020	2,538	3,447	3,566				

Work Completed							
Year Wells (ABD) PL Segs (ABD) Rec Certs Expens							
2015	43	18	36	\$17MM			
2019/2020	982	>1000	146	\$122MM			



Recent History

- 2017 \$235MM Provincial Staged
- 2020 \$100MM Provincial
- 2020 \$200MM Federal
- All loans are repayable



Project Scope

Only company in world using for Intake, Abandonment, Decom and Reclamation.

- Historical data review
- Requirements gathering
- Workflow and process coordination/development
- SiteView configuration
- Data conversion, mapping, and migration
- QA/QC of converted and migrated data
- Report development
- Security setup
- User acceptance testing
- Training and rollout



Data Challenges

- Access Database (7500+ wells, 500+ facilities, 6600+ PL segments)
- Volume, Relationships/Structure, Consistency
- Conversions
- Individual Asset Tracking
- Spreadsheets

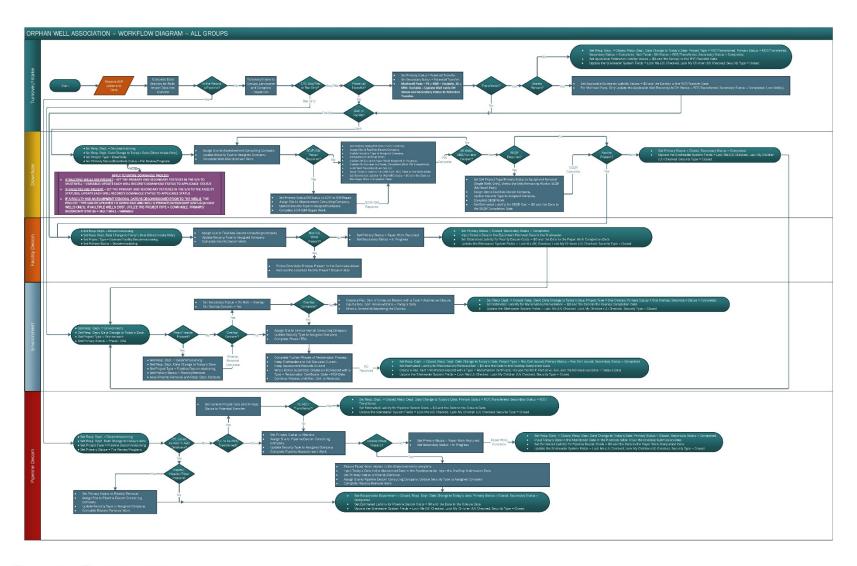


Workflow





Workflow





Naming Convention

- Single well **09-10-086-17W4 (100)**.
- Single well directional drill 09-10-086-17W4 (100/08-10)
- Multiwell 09-10-086-17W4 (Multi)
- Facility e.g. 09-10-086-17W4 (Facility)
- Spills e.g. 09-10-086-17W4 (Spill)
- Pipelines e.g. 12345-4 (PL)



Why SiteView?

- Project Management
- Group by Program Elements
- Configurable
- Security Access
- Streamlined Workflows
- Organize by Multiple Parameters
- Automated Reporting



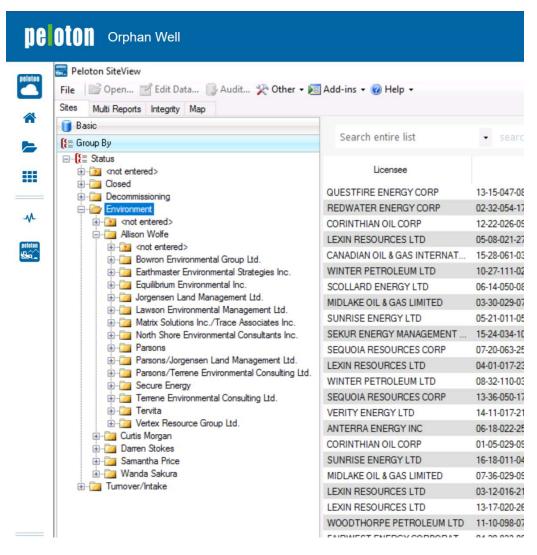


SiteView - Cloud

pe ot well focu	ON ised®	
Sign In		
Username / Email		
orphanwell		
Password		
•••••		
Sign In		
Forgot password?	Log in with SSO	

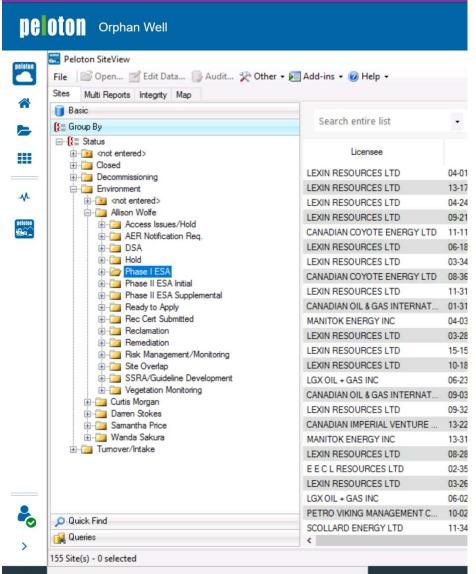


Site and Vendor Assignment

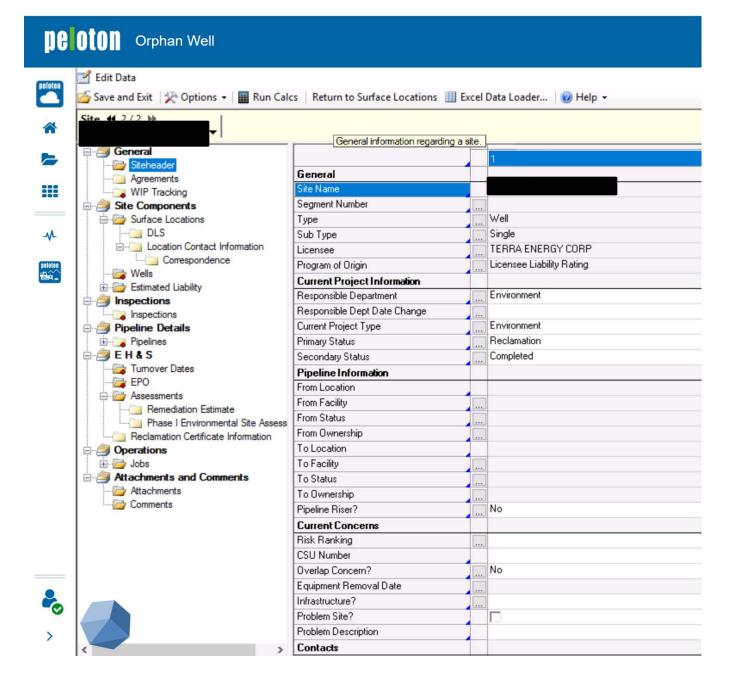




Site and Vendor Assignment



SiteView Layout





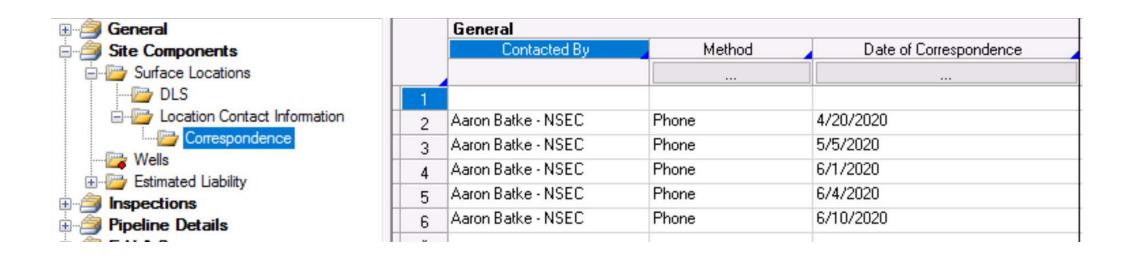
Surface Location and Landowner Information

- Track surface location and associated dispositions: access roads, campsites, borrow pits, TFAs and all other disposition types
- Rental Information
- Overlap Information
- Landowner Contact Information
- Correspondence



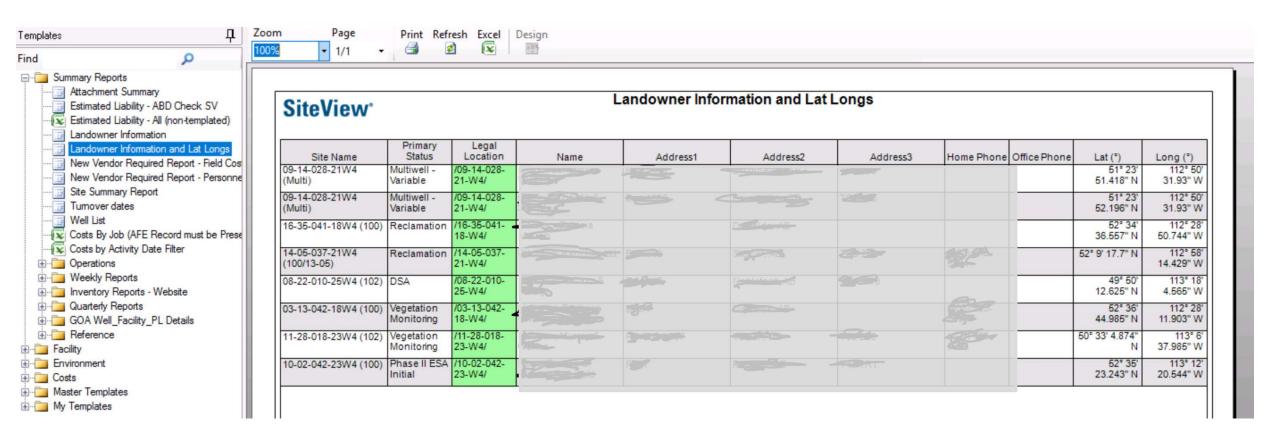


Surface Location and Landowner Information





Landowner Information





Assessments Folder

- Assessment Type
- Status: Pass, Fail or Complete
- Report Submitted Date
- Report Review Date
- Summary and Recommendations







Assessments Folder

	_				
		1	2	3	4
General					
Assessment		Phase I ESA	Phase II ESA Initial	Surface Reclamation	Detailed Site Assessment
Status		Fail	Pass	Reclamation Complete	Pass
Date of Last Fieldwork				4/27/2020 12:00:00 AM	7/29/2020 12:00:00 AM
Vendor		North Shore Environmental Consultants In	North Shore Environmental Consultants In	North Shore Environmental Consultants In	North Shore Environmental Consultants In
One Stop Submission Date					
One Stop Upload #		1782590		N/A	
Report Submitted Date		3/5/2020	3/6/2020	4/27/2020	10/6/2020
Report Reviewed Date		3/12/2020 12:00:00 AM		5/1/2020 12:00:00 AM	
Summary and Recommendations		Phase 2 completed by NorthShore in 2014. Passed the Phase 2. Admixed topsoil identified.	Phase II ESA passed. Adminxed topsoil identified.	Site moved through surface reclamation phase into vegetation monitoring phase, based on field observations	Results of the assessment indicate that the soils, landscape, and vegetation assessment pass the 2010 Reclamation Criteria for Wellsites and Associated Facilities for Cultivated Lands via routine application (10/06/2020, MR).



Phase I ESA Folder

	1
General	
File Review Date	 3/5/2020
Compliance Option Checklist	 Compliance Option 1
Year Drilled	 2006
Production Information	 D&A
Areas of Potential Concern	
Well Centre	 No
Flare Pit	 No
EM Anomaly	 No
Sump	 No
UST/AST	 No
Production Area	 No
Historical Spill	 No
Other	
Comments	
Comment	Admixed topsoil noted during site visit.



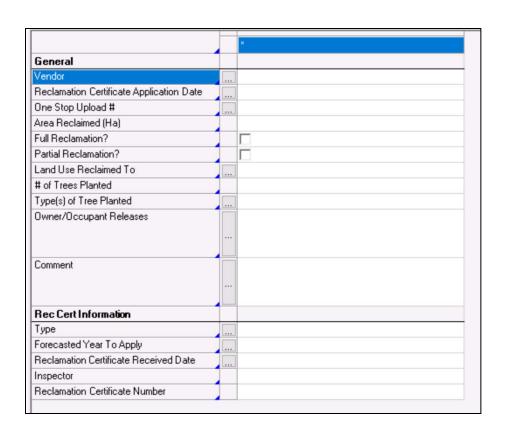
Remediation Folder

	_		
		1	2
Estimate Information			
Estimate Date		9/1/2020	9/1/2020
Remediation Option		Tier 1	Tier 2 (SSGD)
Estimated Cost (\$)		340,000	65,000
Estimate Completed By		North Shore Environmental Consultants Inc.	North Shore Environmental Consultants Inc.
Selected Option		No	Yes
Detailed Information			
Remediation Method		Landfill	Biopile & Landfill
Hydrocarbons		F1-F2	F1-F2
Metals			
Salts			
PAHs			
Comments			



Reclamation Certificates

- Reclamation Certificate Application Date
- Area Reclaimed
- Full or partial reclamation
- Land Use
- # and type of trees planted
- Releases
- Forecasted year to apply
- Reclamation certificate #





Operational Information: Jobs and Costs

- Jobs
 - Downhole
 - Decommissioning
 - Environment
- Commitments
 - Environment Team
 - Phase I to Reclamation Certification Costs
- Activities
- Field Costs



Jobs

3 General			1	2	3	4
Siteheader	General	4	1	2	3	4
Agreements WIP Tracking	Type		Downhole	Downhole	Licensed Facility Decommissioning	Environment
Site Components	Sub Type		Abandon	Cut & Cap	Decommissioning	Phase I ESA
Surface Locations	Primary Status	1		In Progress	In Progress	Complete
DLS	Secondary Status	4				Post of
Location Contact Information	Zone	A LANK.	2020-10	2020-10	2020-10	
Correspondence	Start Date	1				8/10/2020
	End Date	1.22	1			9/10/2020
Estimated Liability	Supervisor/Engineer/Company	1	Environmental Liability Management I	Environmental Liability Management I	Environmental Liability Management I	Aurora Land Consulting Ltd.
Inspections Inspections	Field Supervisor/Consultant	1		Ian Tomalty	Ian Tomalty	-
Pipeline Details	Consultant Job Number	1				
Pipelines E H & S Tumover Dates EPO Assessments Remediation Estimate Phase I Environmental Site Assess Reclamation Certificate Information	Summary				assigned in Q2 2020.	2020.
Operations	Total Expected Job Spend					
∄ <mark>////</mark> Jobs	Total Expected Job Spend (Cost)			\$2,575	\$20,410	
Attachments and Comments	Calculated Values					
	AFE Reference Number			Not Required		
Comments	Cost Center Number					
	Calculated Values + Supp					
	Gross Job Active Estimate + Supp Total (Cost)					
	Net Job Active Estimate + Supp Total (Cost)					
	Calculated Values - Costs					
	Gross Job Field Cost (Cost)			0.00	0.00	
	Net Job Field Cost (Cost)			0.00	0.00	
	Calculated Values - Variance	-				

NORTH SHORE Environmental Consultants

Commitments

What is a Job Commitment?

- Job Cost Estimates
- Approval for next Work Scopes
- Future Cost tracking





Commitments

		1	2	3	4
Committments					
Commitment Date		4/1/2020	5/22/2020	4/1/2021	4/1/2022
Commitment Type	[]	Pre-Reclamation Assessment	Surface Reclamation	DSA	Reclamation Certificate Application
Vendor		North Shore Environmental Consultar	North Shore Environmental Consultar	North Shore Environmental Consulta	North Shore Environmental Consultar
Scope of Work		reclamation cost estimate (04/27/2020, MR).	Site moved through surface reclamation phase into vegetation monitoring phase, based on field observations	DSA Requird. (05/04/2020, MR).	RCA white zone (10/06/2020, MR).
Amount (Cost)		2,500.00	100,000.00	4,000.00	1,500.00
Related AFE	[]				
Consultant Status		Completed	Completed	In Progress	Pending
OWA Coordinator Status		Approved	Approved	Approved	Pending
Total Field Costs Committed (Cost)	1	2,500.00	98,000.00	0.00	0.00
Unspent Commitment (Cost)		0.00	2,000.00	4,000.00	1,500.00
Percent Scope Complete (%)		100.0	98.0	0.0	0.0



Activity Reports

- Track ongoing Project Activity
- History of work associated with Job





Field Costs

- Costs are tracked under each Activity
- Vendors are linked to costs
- Costs get linked to Commitments









OWA-Specific Requirements Inspections

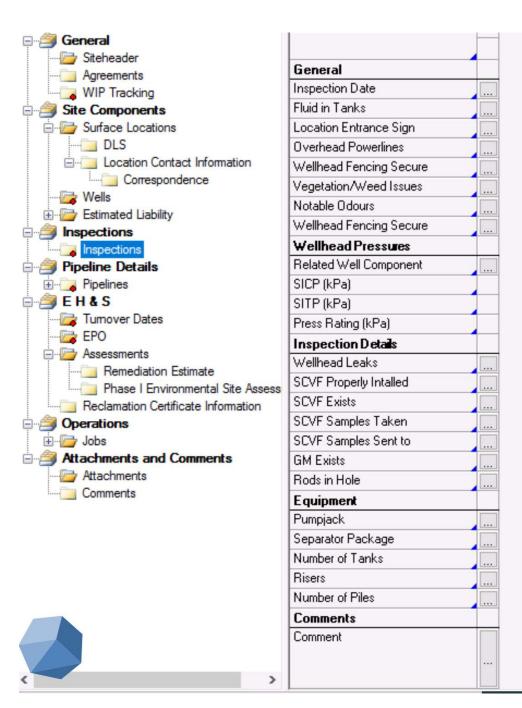
- Observations
 - Hazards
 - Access
 - H2S
 - Signage
 - Equipment
 - Vegetation
 - Fencing

- Wellhead Pressures
 - Hazards
 - Access
 - H2S
 - Signage
 - Equipment

- Inspection Details
 - Leaks
 - Surface Casing vent Flow
 - Holes in rods
- Equipment
 - Pumpjack
 - Separator
 - Tanks
 - Risers
 - Piles



Inspections





Turnovers

- Letters indicating licenses that are now the responsibility of the OWA
- Indicate abandonment, reclamation, or abandonment and reclamation
- Part of intake/inventory process

	1	2
General		
Related Orphan	 0387141, 100/06-32-062-14W5/0	0392159, 102/06-32-062-14W5/2
Туре	 Abandonment and Reclamation Turnover	Abandonment and Reclamation Turnover
Date AER Letter	 4/24/2020	4/24/2020
Date Accepted	 4/24/2020	4/24/2020



- Environmental Protection Orders
- Issued under sections 140 and 241 of EPEA
- Required for the OWA to complete reclamation work

		1	2
General	EPO Issued	by:	
EPO Issued by:		Kaitlin Szacki (AER)	Kaitlin Szacki (AER)
Region			
Municipality			
EPO Number		2020-029	2020-029
Related Orphan		0392159, 102/06-32-062-14W5/2	0387141, 100/06-32-062-14W5/0
Date		4/8/2020	4/8/2020

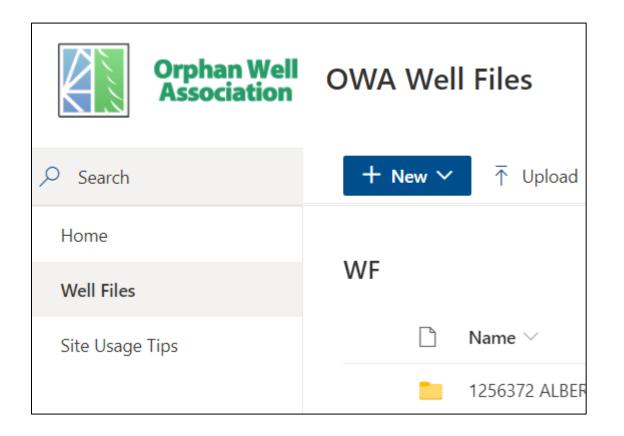


- Estimated Liability/ARO
- Baseline values used
- Updated as more information become available
- Provides a running total of all estimated liability within the OWA program

		1
WellAbandonment		
Well Abandonment Costs	T	\$64,578
Date of Well Abandonment Costs		4/24/2020
Facility Decom/Surface Equipment Removal		
Facility Decommissioning Costs		
Date of Facility Decommissioning Costs		
Surface Equipment Removal Costs		\$5,000
Date of Surface Equipment Costs		4/24/2020
Pipeline Decom		
Pipeline Decommissioning Costs	T	
Date of Pipeline Decommissioning Costs		
Remediation/Reclamation		
Remediation Costs		\$27,425
Date of Remediation Costs		4/24/2020
Reclamation Costs		\$31,285
Date of Reclamation Costs		4/24/2020



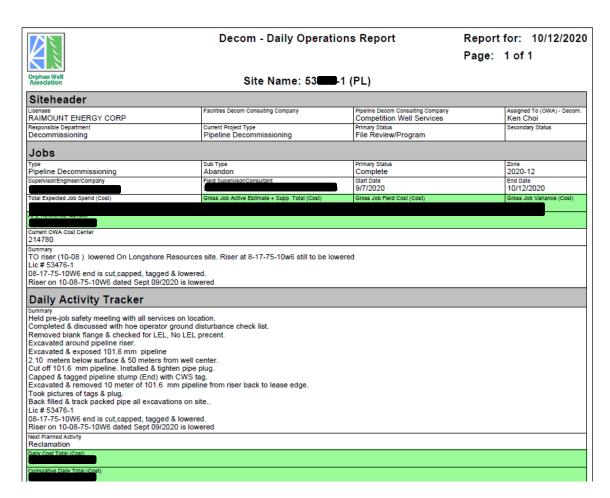
- Streamlined Document Sharing
- SharePoint
- SiteView assignment →
 SharePoint
- Manual processing reduced





Data Sharing - Coordinators

- Automated Reports
- Daily, Bi-Weekly, Monthly
- No manual processing
- Operations
- Intake
- Closures
- Movement
- Inventory





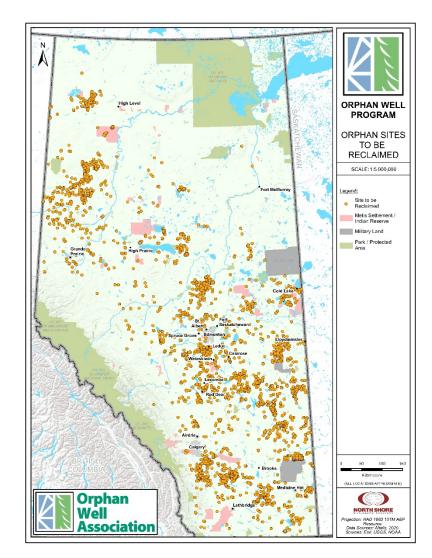
Data Sharing - Board/Public/Government

- Automated Reports
- Monthly, Quarterly
- Board, Public, Government
- Quarterly More Detailed (16+)
- Data Reviews
- Turnovers, abandonments, work completed, statuses, etc.

Sit	eView° 1 - Wells	Turned Over By Date By	y Licensee	
Wells	s Turned Over By Licensee			
Licensee	INCIPIENT EXPLORATION LTD	Count of Idrec (unique record Id)	37	
Licensee	CHALLENGER DEVELOPMENT CORP	Count of idrec (unique record id)	17	
Licensee	LAND PETROLEUM INTERNATIONAL INC.	Count of idrec (unique record id)	16	
Licensee	STONEWATER RESOURCES INC.	Count of Idrec (unique record Id)	3	
Licensee	MANITOK ENERGY INC	Count of Idrec (unique record Id)	3	
Licensee QU	ATTRO EXPLORATION AND PRODUCTION LTD	Count of idrec (unique record id)	2	
Jicensee	ESSEX OIL CORPORATION	Count of Idrec (unique record Id)	9	
Licensee	QUESTFIRE ENERGY CORP	Count of Idrec (unique record Id)	2	
Jicensee	OIL RESERVE INC.	Count of Idrec (unique record Id)	1	
	Total	Count of idrec (unique record id)	90	



Data Sharing - Maps





Data Sharing - Maps

