RoQC Tools

Plug-ins for Petrel[†]

Advanced data management tools

Manage your data rather than just reporting on it!

Release Notes

March 2020

1. **About RoQC Data Management AS**

RoQC Data Management AS is a company registered in Tau, Norway that specializes in Data Management consultancy and develops Data Management software for Landmark and Schlumberger G&G environments.

RoQC Data Management AS was founded in 1998 and has clients all over the world.

The sister company **RoQC Data Management LLC** registered in Houston, Texas, USA started in 2011 and specialises in Data Management & Project Management.

RoQC also develops and sells an advanced data management software package called RoQC Tools. These tools have been developed in close cooperation with some of the world's largest, and smallest, oil companies. RoQC Tools exist for both the Landmark OpenWorks environment and Schlumberger's Petrel & Studio Manager environments.

RoQC's success is due not only to its unmatched experience base and its ability to merge geological and computing skills with E&P experience, but also to its ability to rapidly develop tools tailored to individual clients needs.

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Product Information

RoQC Tools module for Petrel

Product version:

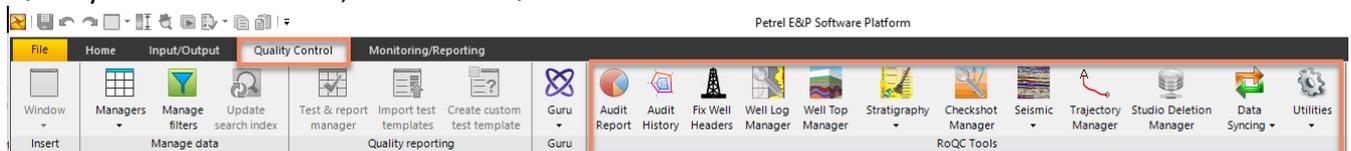|	
RoQC Tools for Petrel	201x.16.20
Release date:	March 2020
Petrel version:	2019, 2018, 2017, 2016
Country of origin:	Norway
ECCN:	EAR99 origin Norway
Public key token:	ebf4237475de9287

4.   Introduction

RoQC Tools for Petrel is a Petrel plug-in that enables you to manage your data in Petrel. The central tool is Audit Report which provides you with a quality check on many of your data items. Directly from the Audit Report interface you can start modules that help you fix the data quality issues highlit by the report. For example if you were looking at the report of duplicate Global Well Logs you can, directly from Audit Report, open the 'Well Log Manager' module and fix the problems.

RoQC Tools make it possible to manage your Petrel data, improving your data quality, and dramatically reducing your decision risk.

These release notes cover all the modules in the plug-in. Details specific to any particular module are highlit as only being relevant to that module.

5.   Plug-in Menu Location

Click on 'Home' on the selector bar then on 'Perspective' → 'Data Management' Then make the Quality Control tab active, and the RoQC Tools will show as shown below.

6.   New Features

The new functionality included in the 201x.16.20 release of RoQC Tools for Petrel was: -

Bug Fix
[PET-479] - Well Log Manager – preserve values vs convert - count error
[PET-491] - Well Log Manager - Duplicate GWL count incorrect after fix ?
[PET-689] - Petrel Batch Manager - Project selector fails to populate projects from "DataEnvironementFiles" in local settings.-
[PET-707] - Trajectory Manager - upgrade ….to MD… button collapses expanded wells
[PET-745] - RoQC Sync - OW - filter errors
[PET-748] - GENERAL - Petrel file selector not always finding files

[PET-749] - Petrel Batch Manager - Petrel Version not showing
[PET-750] - Tag Manager - improve display of project owner
[PET-753] - NPD DISKOS - Write borehole attributes to Petrel when loading from DISKOS
[PET-756] - GENERAL - roqc_startup.bat error handling
[PET-759] - Audit Report - Incorrectly flagging some 'Well top invalid depths' due to numeric precision
[PET-760] - RoQC Sync - Paging sometimes fails
[PET-761] - Trajectory Manager - Delete button can cause crash
[PET-762] - GENERAL - Upgrade DevExpress to 19.2
[PET-766] - RoQC Sync - Overlays disappear before loading is finished
[PET-767] - GENERAL - Upgrade .NET Reactor
[PET-771] - Well Top Manager - Slow performance when updating obs numbers
[PET-777] - Seismic Manager - Add cumulative file sizes on collection rows
[PET-778] - GENERAL - 'Load' is breaking filters in trees
[PET-781] - Audit Report - update the trailing nulls audit
[RSYNC-85] - Landmark Sync - EDM - use wellbore_id + survey_id + sequence_no as survey identifier
[RSYNC-87] - Landmark Sync - EDM - use deepest survey component when naming a composite survey
[RSYNC-104] - Studio - CDF - Sync can crash Studio Manager
[RSYNC-108] - Landmark Sync - Broken surveys (eg on rfUo8xecvj) don't have a validation message
[RSYNC-111] - Landmark Sync - Don't show all columns for trajectory details in OW popup.
[RSYNC-113] - Studio-CDF - add source filter "EDM" to wells
[RSYNC-114] - Landmark Sync - EDM Sync missing key in dictionary
[RSYNC-115] - RoQC Sync - some OW pos logs can't be used by Petrel
[RSYNC-116] - Landmark Sync - Rest server configuration setup not working correctly
[RSYNC-118] - Landmark Sync - OW sync Pooled connection oracle error
[RSYNC-121] - Landmark Sync - EDM Rest Server close connections
[RSYNC-122] - Landmark Sync - EDM Rest server not returning consistent structure
[RSYNC-125] - Landmark Sync - OW Rest server and EDM. Selection not including mandatory folders
[RSYNC-126] - Landmark Sync - OW Rest server Sync order and selection should work regardless of sort

Improvement
[PET-196] - Well Log Manager - delete when count = 0
[PET-458] - Well Log Manager - upgrade to MVVM
[PET-527] - Trajectory Manager - Add create date
[PET-667] - Trajectory Manager - Handle events from Boreholes and update child trajectory GUI models
[PET-698] - NPD DISKOS - add filtering by well type
[PET-741] - Petrel Batch Manager - Add help tab to match plugins
[PET-747] - NPD DISKOS - precision and tolerance improvement
[PET-752] - NPD DISKOS - Add additional fields to the GUI
[PET-754] - General - Change default cell editing behavior
[PET-757] - GENERAL - new security certificates for the installers
[PET-764] - GENERAL - Identify best pattern for locking trees/grids when loading/updating data
[PET-768] - Trajectory Manager - Add trajectory record viewer
[PET-775] - RoQC Sync - OW DSIS needs Expand/contract all
[RSYNC-54] - Landmark Sync - EDM - Casings/Liners
[RSYNC-109] - RoQC Sync - Rename classes to reflect RoQC Sync name.
[RSYNC-124] - Landmark Sync - OW Rest server installer not creating link for launch
[RSYNC-128] - Landmark Sync - OW and EDM Rest client pull-down list data sources

[RSYNC-129] - Landmark Sync - add 0,0,0 entry to tophole trajectory
[RSYNC-131] - Landmark Sync - OW and EDM Rest clients display server version
[RSYNC-133] - Landmark Sync - Rest Server Configuration interface
New Feature
[PET-779] - Well Log DM - Find Duplicate Well Log Curves

The new functionality included in the 201x.16.19 release of RoQC Tools for Petrel was: -

Bug Fix
[PET-717] - Seismic Manager - search error on name column
[PET-718] - Seismic manager - duplicate seismic(global) sometimes shows single files as a group
[PET-725] - Seismic data manager - move seismic file size change / better moving and export behavior
[PET-727] - Windows path tool - pet vs ptd exception log
[PET-732] - Audit History - filter error (%)
[PET-734] - GENERAL - Improve filtering
[PET-737] - Seismic Manager - Unlinked seismic files not found
[PET-738] - GENERAL - Project Selector - Can't cancel files search
New Feature
[PET-715] - List Petrel versions - added to several apps
[PET-719] - Windows Path Tool - add ability to find and fix long path names
[PET-728] - Batch Upgrade - add petrel version column
Improvement
[PET-525] - Seismic Manager - missing min/max amplitude for 2D
[PET-626] - Well Log Manager - when merging duplicate GWLs auto delete duplicates
[PET-711] - Log DM - multi delete GWLs with zero count
[PET-716] - Seismic Manager - add delete button to orphan seismic
[PET-720] - Seismic Manager - Bulk upgrade projects
[PET-724] - Audit History - add batch upgrade of Petrel Projects
[PET-733] - Seismic Manager - Reparent multiple seismic lines at a time
[PET-736] - GENERAL- Auto filter background color

The new functionality included in the 201x.16.18 release of RoQC Tools for Petrel was: -

Bug Fix
[PET-668] - Seismic Data Manager - Moved file extension is not always correct
[PET-676] - Audit Report - non-orthogonal value not showing in pop-up
[PET-677] - NPD DISKOS - Show xxx not working on filtered lists
[PET-679] - Seismic Data Manager - Cannot delete original seismic file after a move
[PET-682] - Seismic Manager - crash while running batch extraction
[PET-683] - GENERAL - move license warning pop-ups from Petrel Startup to RoQC Startup
[PET-684] - General - Logging system file location could be incorrect
[PET-686] - NPD DISKOS - Operator showing blank
[PET-687] - NPD DISKOS - spud date reacting to time
[PET-688] - Audit History - Hard to read labels
[PET-690] - CheckShot Manager - License checking is missing
[PET-694] - Audit Report - no instance of an object
[PET-697] - Audit Report - KeyNotFoundException - well symbol error
[RSYNC-69]- Petrel - EDM - incl and azi are displaying in radians instead of deg

Improvement
[PET-692] - NPD DISKOS – can't add wells with no trajectory
[PET-693] - NPD DISKOS - add filter to remove _WB from DISKOS UWI

The new functionality included in the 201x.16.17 release of RoQC Tools for Petrel was: -

Bug Fix
[PET-641] - General - Image scaling
[PET-655] - Audit Report - well top invalid depths
[PET-664] - EDM Sync - Fixed a bug where trajectory references in the GUI weren't being tied to Petrel
[PET-666] - Seismic Manager - add ability to retain spaces in names when moving internal seismic
[RSYNC-50] - Petrel - EDM - show connection error messages
[RSYNC-52] - Petrel - EDM - better error message when cannot reach server
New Feature
[PET-583] - NPD Sync - Add DISKOS import
[PET-647] - General - Implement a user specified well identifier setting in the plugins (name vs uwi)
[PET-649] - General - standardize the handling of the Well identifier field (UWI vs Well Name).
[PET-650] - Audit Report - Add Well Identifier radio button to the settings dialog.
[PET-663] - Trajectory manager - find and delete non-active trajectories
RSYNC-36] - Petrel - EDM - Create Advance Installer for EDM Rest Server
[RSYNC-37] - Petrel - EDM - Configuration GUI for EDM server
[RSYNC-38] - Petrel - EDM - File Encryption/Decryption
[RSYNC-39] - Petrel - EDM - File base license
[RSYNC-40] - Petrel - EDM - Code obfuscation
[RSYNC-48] - Petrel - EDM - Implement licensing in Rest servers
[RSYNC-51] - Petrel - EDM - Wire up the license manager to react to immediate configuration changes.
[RSYNC-56] - Petrel - EDM - Rearranged the REST Server configuration GUI
Improvement
[PET-553] - NPD SYNC - Link by UWI or Well Name
[PET-604] - Well Top Manager - add last changed date to display
[PET-640] - Indexer - log more info when the .bat file is run
[PET-643] - NPD Diskos - Add additional NPD fields to a borehole property
[PET-644] - NPD DISKOS - Use Reference Elevation rather than 'KB'
[PET-645] - NPD DISKOS - Add UTM32 N62 & S62 to CRS mappings
[RSYNC-33] - Petrel - EDM - Plans with tie-in ids not always working
[RSYNC-34] - Petrel - EDM - add original datasource – cant add - cant write to Property in Petrel
[RSYNC-53] - Petrel - EDM - add ability to choose match on UWI or name

The new functionality included in the 201x.16.16 release of RoQC Tools for Petrel was: -

Bug Fix
[PET-630] - General - DevExpress filtering change
[PET-633] - GENERAL - % fields displaying incorrectly
[PET-634] - Audit Report - QC Messages weren't getting created in the indexer
[PET-635] - Checkshot Manager - Incorrect flagging cells as multiple TDR
[PET-636] - Studio Indexer issue
[PET-637] - Audit Report - export file error

[PET-638] - Seismic Manager - multiple clicks on Edit button gives error
[RSYNC-31] - Petrel - EDM - trajectories with no tie-in in the parent
New Feature
[PET-623] - General - improve settings storage
[PET-627] - Audit Report - incorrect settings display in feet
[PET-628] - Checkshot Manager - Popup display not reacting to project in feet
[PET-629] - General - Upgrade all projects to DevExpress 18.2.8
[PET-639] - Audit History - Add Last Modifed User and Last Audit Date
[RSYNC-6] - Petrel - EDM - define EDM REST server
[RSYNC-7] - Petrel - EDM - define Petrel REST client plugin
[RSYNC-15] - Petrel - EDM - Configuration UI
[RSYNC-19] - Petrel - EDM - Create Late and Early bound CRS function
Improvement
[RSYNC-13] - Petrel - EDM - WKT
[RSYNC-14] - Petrel - EDM - Load on Demand
[RSYNC-16] - Petrel - EDM - Ensure trajectories normalized to well's kb
[RSYNC-17] - Petrel -EDM - https
[RSYNC-18] - Petrel -EDM - make sure works on both Oracle and SQL Server
[RSYNC-20] - Petrel - EDM - Authentication interface
[RSYNC-21] - Petrel - EDM - Function to match EDM wells to Petrel boreholes by UWI
[RSYNC-22] - Petrel - EDM - Insert/Update boreholes and trajectories based on EDM selections
[RSYNC-23] - Petrel - EDM - Function to generate the required well hierarchy based on EDM GUI selections
[RSYNC-24] - Petrel - EDM - Error checking and handling of REST data reading and Petrel operations.
[RSYNC-25] - Petrel - EDM - Test for preexisting Active Plan or Definitive Survey in Petrel
[RSYNC-26] - Petrel - EDM - Improve performance of survey/definitive survey reading
[RSYNC-29] - Petrel - EDM - Verify we don't get into any problems referencing Petrel objects that change over time
[RSYNC-30] - Petrel - EDM - Virtual tree columns aren't getting data types assigned to them.
[RSYNC-32] - General - Improve Rest client

The new functionality included in the 201x.16.15 release of RoQC Tools for Petrel was: -

Bug Fix
[PET-582] - Audit Report - Settings aren't shared across Petrel versions
[PET-584] - Audit Report - Audit subcategory totals may be wrong.
[PET-586] - Audit Report - Crash on empty seismic file paths
[PET-589] - Audit Report - well tops invalid depths -Z Datum issue
[PET-591] - Audit Report - statistics showing 100% when no audits included
[PET-592] - Audit Report - Stratigraphy stastistic showing wrong values
[PET-603] - Installer - certificate error
[PET-606] - Seismic Data Manager - filtering error
[PET-608] - General - Fixed trees with bad minwidth saved in configuration
[PET-610] - Well Log Manager - Crash on deleted object
[PET-423] - NPD Web - check CRS transforms
[PET-517] - NPD Sync - NPD Sync UTM Zone
New Feature
[PET-588] - Seismic Data Manager - Add bulk rename

[PET-593] - Audit Report - Audits need a separate list of failed objects vs. the list of objects shown in the result
Improvement
[PET-555] - Checkshot Manager - add tooltip to TDR selection
[PET-590] - Audit Report - improve Wells with surf coords CRS mismatch
[PET-595] - Audit History - Add Last Modified Date to table
[PET-607] - Fix Well Headers - Enable Apply UWI button with blank UWI Text
[PET-601] - GENERAL - escape reserved regular expression characters in the input tree
[PET-523] - NPD Sync - add release date and Public status flag
[PET-616] - General - Change datetime display format to MMM dd yyyy
[PET-617] - NPD Sync - Add Entry Date (Spud Date)
[PET-618] - NPD Sync - Migrate settings from .NET to json
[PET-619] - NPD Sync - Create a standards class for formats and styles

The new functionality included in the 201x.16.14 release of RoQC Tools for Petrel was: -

Bug Fix
[PET-498] - Audit History - Studio repositories not showing audit score
[PET-537] - Well Top Manager - fix obs no when the date is the same
[PET-547] - Audit Report - missing welltop collection name in Illegal Surface Names
[PET-548] - Audit Report - arent finding these broken trajectories
[PET-549] - Trajectory Manager- arent finding these broken trajectories
[PET-550] - GENERAL - improve filtering in trees
[PET-559] - Audit History - Correctly identify statistics vs audits
[PET-560] - Audit Report - *not run* audits not being reported correctly in Audit History
[PET-570] - Audit History - seismic spider chart missing 1 axis
[PET-575] - Audit Report - logs below TD missing values in spreadsheet
[PET-579] - Audit History - Standardization of audit and statistic names
[PET-579] - Audit History - Standardization of audit and statistic names
Improvement
[PET-541] - Indexer - Improve efficiency
[PET-543] - Audit Report - exclude NULL values as duplicates (Wells with Duplicate UWI's)
[PET-545] - Seismic Data Mgr - Add more info on Dupicate Seismic Files (Global) progress screen
[PET-546] - Seismic Data Manager - Progress bar with checksum file path
[PET-577] - Audit Report - Was only displaying values in SI units
[PET-567] - Indexer - Analyze what looks like bad indexing performance
[PET-568] - Indexer - Improve failed object lookup time performance
[PET-581] - Audit Report - Include user settings in audit titles

The new functionality included in the 201x.16.13 release of RoQC Tools for Petrel was: -

Bug Fix
[PET-489] - Well Log Manager - logs below TD crash
[PET-493] - Interpretation mgr - duplicates error
[PET-495] - Audit History duplicates in settings lists
[PET-497] - Audit History - Fix default well audit order
[PET-501] - GENERAL - react to the well identifier setting
[PET-510] - Audit Report - reports (printing) (honor the column layout, etc)

[PET-536] - Audit History - cant create setup

New Feature

[PET-160] - Audit Report - Add TOC and speedometers to Report

[PET-181] - Audit_report - scan for unlikely min-max amplitude in seismic cubes

Improvement

[PET-200] - Audit Report - Add Seismic CRS audit

[PET-205] - Audit Report - add seismic faults with no points audit

[PET-456] - Audit Report - upgrade to MVVM

[PET-465] - CLONE - GENERAL - Performance profiling new MVVM apps

[PET-478] - Strat Cleanup - Improve workflow when event/horizon not equal zone name

[PET-486] - Audit Report - if vital audits are dropped dont write to audit history DB

[PET-488] - Audit Report - new audit for duplicate UWIs /duplicate wellbore names

[PET-500] - Audit Report - new audit - well top orphans

[PET-504] - Audit results view - link audits to plugins

[PET-505] - include exclude wellbores to be audited

[PET-512] - update indexer to handle new audit layout

[PET-513] - SQL interface to audit history (redo)

[PET-515] - Connect 'Show Results' menu filtering to GUI

[PET-518] - Progress Bar

[PET-514] - Audit Report - Statistic and criticality are configurable for audits

[PET-519] - Scaling across multiple resolutions and scale factors

[PET-522] - Audit Report - new audits for duplicate attributes

[PET-528] - Audit Report - Add 'exclude wells' to all well audits

[PET-535] - Audit Report - Well tops invalid depths - read the Z datum from the project

[PET-524] - Checkshot Manager – improve SRD corrections for onshore wells

[PET-538] - Audit Report - Checkshot audits- read the Z datum from the project

The new functionality included in the 201x.16.12 release of RoQC Tools for Petrel was: -

Bug Fix

[PET-411] - GENERAL - continue updating the Print/Report function

[PET-441] - NPD Sync - New Petrelproject, error message in NPD Sync

[PET-444] - Well Top Manager - Update to current standards. (binding lists)

[PET-445] - Fix Well Headers - Update to MVVM

[PET-446] - Checkshot Manager - New binding list base class

[PET-447] - NPD Sync - Active status of buttons not in sync with data selection

[PET-448] - Trajectory Manager - the count is incorrect

[PET-449] - Big delays when adding new nodes to a slave bindinglist that is bound to view

[PET-453] - General - Prevent multiple instances of the same plugin from launching

[PET-467] - General - Tie setting states for ribbon comboboxes to combobox value, not repositoryeditor

[PET-468] - Trajectory Manager - Name list not being updated when project data loaded

[PET-470] - Strat Cleanup - Improve performance of Strat Chart events

[PET-471] - NPD Sync - Compare dialog on a 4k screen with scaling

[PET-472] - General - Plugin form position saving/restoring between sessions

[PET-473] - NPD Sync - Compare errors on data reloading

Improvement
[PET-392] - Well Top Manager - add display of user attributes
[PET-429] - Well Top Manager - store orig_interpreter when moving to OFFIC
[PET-430] - Well Top Manager - Change update OBS_no to match SIS match rules
[PET-452] - General - Improve caption setting and custom filtering efficiency
[PET-461] - GENERAL - upgrade to DevExpress 18.
[PET-462] - GENERAL - Performance profiling new MVVM apps
[PET-463] - Trajectory Manager - Improve Well filter
[PET-466] - Strat Cleanup - Add cascade deletes
[PET-469] - Trajectory Manager - Improve the upgrade and renaming workflow
[PET-476] - Strat Cleanup - Rename surface dialog filtering enhancement
[PET-477] - Strat Cleanup - Set parent for marker dialog

The new functionality included in the 201x.16.11 release of RoQC Tools for Petrel was:-

Bug Fix
[PET-412] - Checkshot Manager - incorrect counts
[PET-417] - GENERAL Change to vector control images skin
[PET-433] - CLONE - GENERAL - continue updating the Print/Report function
New Feature
[PET-424] - General - Document MVVM pattern
Improvement
[PET-299] - KPI - WEB interface to project KPIs
[PET-326] - Interpretation Manager - add re-parenting of horizon to new survey - NOT DONE - cant keep GUID
[PET-418] - Checkshot Manager - update to MVVM
[PET-419] - Interpretation Manager - Update to MVVM
[PET-422] - GENERAL - add tool-tips to menu functions
[PET-425] - GENERAL - improve the highlight colours
[PET-432] - Strat Cleanup - update to MVVM
[PET-434] - Checkshot Manager - Get Bindinglist model objects from ribbon repositoryitemeditors rather than a string
[PET-436] - GENERAL - Simple generic (in the C# sense) popup list and manager for double click (eg logs)

The new functionality included in the 201x.16.10 release of RoQC Tools for Petrel was:-

Bug Fix
[PET-397] - GENERAL - Ensure compliance with the new standards (new apps)
[PET-398] - Well Top Manager - Encorporate Fix obs no and fix missing interp.
[PET-410] - Audit report - Object reference not set
New Feature
[PET-360] - Trajectory Manager - new tool
[PET-400] - NPD Sync - Option to identify UWI NPD field
[PET-401] - NPD Sync - Filter after rename
[PET-402] - Project Tag Manager - Update TLS protocol to 1.2
[PET-403] - NPD Sync - Create trajectory

[PET-404] - NPD Sync - Flag CRS name mismatches
[PET-409] - Upgrade DevExpress to 17.2.7
Improvement
[PET-380] - NPD Sync - Selective sync
[PET-381] - NPD Sync - Set coordinate tolerence
[PET-389] - Trajectory Manager - improvements
[PET-393] - Trajectory Manager - pop-up message when nothing to do
[PET-394] - GENERAL - Review application data model
[PET-395] - GENERAL - Review application modelview
[PET-396] - GENERAL - Review application view standards
[PET-399] - GENERAL - Binding list custom attributes
[PET-405] - NPD Sync - Respond to all borehole creation, deletion, updating events.
[PET-407] - GENERAL - Petrel Unit Testing Project

The new functionality included in the 201x.16.9 release of RoQC Tools for Petrel was:-

Bug Fix
[PET-359] - GENERAL - improve the report formats
[PET-373] - General - Rewrote the Statistics reading class
[PET-375] - Audit Report - Settings dialog label overlap
[PET-376] - General - Get Petrel version from assembly
[PET-377] - General - Create shared plugin base classes
[PET-382] - Audit Report - add tolerance to well tops duplicate depths audit
[PET-384] - Tag Manager - Strange Newtonsoft error
[PET-387] - Project Tag Manager - some users cannot see tagged projects
New Feature
[PET-361] - NPD Web - new application
[PET-372] - Well Top Manager - new app to manage data_sources
[PET-379] - General - Make installers Petrel version specific
Improvement
[PET-322] - MVVM - Data Model
[PET-323] - MVVM ViewModel base class
[PET-324] - MVVM - View bindings and feedback from mvvm context.
[PET-370] - Tag Manager - Saving web connection user/password is awkward

The new functionality included in the 201x.16.8 release of RoQC Tools for Petrel was:-

Bug Fix
[PET-363] - GENERAL - installer version number bug
[PET-364] - Seismic Manager - 'flatten' Excel output
[PET-365] - Audit Report - Tidy-up settings dialogue
[PET-368] - Studio Deletion Manager - show interface in demo mode
[PET-371] - GENERAL - Export & Print not appearing on screen
Improvement
[PET-362] - Interp Manager - add horizon size
[PET-366] - GENERAL - User reorder columns and save setup
[PET-369] - GENERAL - more informative error messages

The new functionality included in the 201x.16.7 release of RoQC Tools for Petrel was:-

Bug Fix
[PET-353] - GENERAL - improve GridView/TreeList restore
[PET-355] - GENERAL - Add double-click' option to context menu
[PET-358] - Audit Report - crashing on missing seismic data
Improvement
[PET-264] - Audit History - Add ability to extract text from project list
[PET-325] - GENERAL - AutoFilterRow needs to filter on Display text not underlying value.
[PET-351] - GENERAL - add counts (selected and total) to trees/grids
[PET-354] - Well Log Manager - update to new gridview codebase
[PET-356] - GENERAL - Improve select all checkbox behaviour
[PET-357] - GENERAL - all objects have link to Petrel input tree

The new functionality included in the 201x.16.6 release of RoQC Tools for Petrel was:-

Bug Fix
[PET-328] - Strat Cleanup - Duplicate horizon names being incorrectly flagged
[PET-329] - General - Font scaling and overlapping text in grids and trees
[PET-338] - Audit History - project path shouldnt be case sensitive
[PET-340] - Seismic Manager - reparent 2D lines is deactivated
[PET-341] - Seismic Manager - Moveable cubes count
[PET-342] - Seismic Manager - file size filtering
[PET-343] - Seismic Manager - retain history when externalizing seismic
[PET-346] - OW Strat Converter - red highlight missing
[PET-347] - OW Strat Converter - not finding all age errors

Improvement
[PET-327] - GENERAL - grid cell contents copyable
[PET-330] - GENERAL - auto filter reflect column type
[PET-331] - GENERAL - Context sensitive images on right-click menu
[PET-334] - Fix Obs Number - add interpreter to grid
[PET-335] - fix Obs Number - add delete function
[PET-337] - Strat Cleanup - associate strat chart with well top collection(Don't)
[PET-339] - Audit History - add remove audits function
[PET-344] - Seismic Manager - display all the GUIDs
[PET-345] - Audit History - Add 'seismic' default setup
[PET-350] - Intrpretation Manager - add new fields to Duplicates display

The new functionality included in the 201x.16.5 release of RoQC Tools for Petrel was:-

Bug Fix
   [PET-301] - Audit Report - fix the 'illegal surface names' count
   [PET-319] - Seismic Manager - bug in duplicate 2D seismic
   [PET-328] - Strat Cleanup - Duplicate horizon names being incorrectly flagged
   [PET-329] - General - Font scaling and overlapping text in grids and trees

Improvement

[PET-297] - Checkshot Manager - change active checkshot
[PET-298] - Seismic Manager - Unlinked seismic files
[PET-300] - Audit Report - add exclusion from Audits
[PET-302] - Intrp Manager - add count to grids no attributes
[PET-303] - Interp Manager - filters are missing from the tabs
[PET-305] - Seismic Manager - change file size to 2 decimals
[PET-307] - Strat Cleanup - Bigger font in tables
[PET-310] - Audit History - add "select db" functionality
[PET-311] - Seismic Manager - Global index search - batch
[PET-312] - Audit History - remember screen layout
[PET-313] - Audit History - how to plot zero seismic
[PET-314] - Audit History - numerical score
[PET-315] - Audit History - Colour Lables red when Audit not run
[PET-316] - Seismic Manager - add clear extraction DB function
[PET-317] - Checkshot Manager - click top left corner of the table to select all cells
[PET-320] - Seismic Manager - New project selector in the batch app
[PET-321] - General - Create standard abstracted GridControls, GridViews, and TreeLists using our preferred configuration
[PET-327] - GENERAL - grid cell contents copyable
[PET-330] - GENERAL - auto filter reflect column type

The new functionality included in the 201x.16.4 release of RoQC Tools for Petrel was:-

Bug Fix
[PET-265] - Seismic Manager - recover from a dead petrel process
[PET-290] - Seismic Manager - not handling sub-folders
[PET-292] - Seismic Manager - cant delete volumes used in Models
[PET-296] - Seismic Manager - reload error on duplicate seismic
New Feature
[PET-291] - Petrel Batch Manager - new app
Improvement
[PET-286] - Seismic Manager - Should not attempt extract with zero projects
[PET-288] - Seismic Manager - display/filter by survey or sub-folder
[PET-289] - Seismic Manager - hide compatible cubes already 'in place'
[PET-293] - Interp Manager - grids no attributes
[PET-294] - Interp Manager - Horizons no grids
[PET-295] - Interp Manager - Horizons no attributes

This release includes the following tools:-

Audit Report

Audit Report lists not only errors and potential errors, but also things which may be useful in checking the quality of the data. If "**Statistics**" is selected, Audit Report also generates two types of metrics -

one for Data Quality and the other quantifying Data Completeness. There are direct links from many of the issues highlit by Audit Report to the modules that will allow you to fix the problem.

Audit Report is used for running the indexer and it will add RoQC Data Quality attributes to the indexes – which can be seen and manipulated in the Search filter interface.

Batch Upgrade Petrel

Batch Upgrade Petrel provides an easy method of identifying and selecting Petrel projects for upgrade to the current version of Petrel.

Audit History

The Audit History tool provides a simple mechanism for displaying the data quality of many projects – for example before and after a data cleanup.
The Petrel project(s) and the "Before" and "After" dates are chosen by the user, the program then will automatically generate a spider chart for each of the selected projects.

Well Log Manager

Well Log Manager is used to manage logs – for example to consolidate duplicate GWL's into one version. You chose which version you want to keep and 'move' all of the logs attached to the other versions to the version you want to keep. The unwanted GWL framework will then be removed. With Well Log Manager you can manage any GWLs - not just duplicates.
The Manage Well Logs tab is used to identify logs which have duplicate or decreasing depths. Logs with duplicate depths can be fixed (the values at the same depth are averaged) or deleted. It is also used to find and delete duplicate logs(data).

Fix Missing Interpreters

Incorporated into Well Top Manager.

Fix Well Headers

Fix Well Headers is used to assign UWI's/Operators/spud dates to Wells that are currently missing a UWI/Operators/spud date. A missing UWI is not critical for a single Petrel project, but it is critical if the wells will be used in Studio, more than one Petrel project or in other systems (UWI is mandatory in most systems). Fix Well Headers can also be used to assign operators or spud_dates to wells. All of the input can be done either by direct input or from a *.csv file. There is complete control over whether the data already in Petrel is over-written or not.

Fix Observation Numbers

Incorporated into Well Top Manager.

OW Strat Converter

OW Strat Converter converts an OpenWorks stratigraphic column in *.sce format and loads it to Petrel as a Stratigraphic Chart. Logic checks are run on the data before loading it and bad data is flagged. The

Stratigraphic data can be edited before it is loaded. Colours defined in the *.sce format file are also imported.

Strat Cleanup

Strat Cleanup lists all of the 'Illegal' surface names in the Petrel project and lets you rename them to 'Legal' surface names. A 'legal' surface name is one that is defined in one or more of the Stratigraphic Columns that are defined in the Petrel project.

CheckShot Manager

CheckShot Manager allows you to add missing records to the checkshots – one at SRD and one at seabed. You can also find all of the checkshots that appear to be in OWT and fix these to TWT. Wells that are missing checkshots and those that have checkshots but where they are not set as active can be found and fixed.

Seismic Data Manager

Seismic Data Manager provides a very rapid way of exporting internally realized seismic and relinking it to the Petrel project – including all of the meta data (vintage,color ramp, etc).
You can also move and relink external seismic and identify missing seismic etc.
2D reparenting, unattached seismic files, duplicated seismic, projects using seismic files and indentification of orphan seismic files is also covered.

NPD DISKOS

NPD DISKOS is used to download well header information from the NPD (Norsk Petroleum Directorat) or from DISKOS, and then populate Petrel with this information.

RoQC Sync

RoQC Sync is used to download well, wellbore, trajectory, casing, etc information from Halliburton's EDM or OpenWorks and then populate Petrel with this information. NOTE: RoQC Sync needs a server that is sold and licensed separately – contact RoQC for details.

Well Top Manager

Well Top Manager is used to manage well tops – for example to manage 'versions of the truth' in this mode you can easily build and manage an Official or Corporate set of well tops.

Trajectory Manager

Trajectory Manager is used to bulk upgrade Explicit trajectories to MD.INCL.AZIM, or to bulk rename any trajectories.

Interpretation Manager

Interpretation Manager provides a simple mechanism for finding and deleting duplicate horizon interpretations or finding/merging horizon interpretations that are split/incorrectly stored.

Studio Deletion Manager

Deletion Manager provides a mechanism for synchronizing deletions that have been made in Studio into the open Petrel project.

Windows Path Tool

Windows Path Tool provides an easy method of identifying and rectifying all petrel projects that have a path that is greater than 160 characters. It can also find and fix UNC paths that are greater than 160 characters – ie ones which will not work with Indexer.

7. **Data Manipulation**

Audit Report and Audit History are a 'query only' tools and will not make any changes to Petrel data. The other RoQC Tools are data management tools that directly change native Petrel data.
Depending on what the user chooses to do, the tools may manipulate the following domain objects:-

- Borehole
- Global Well Logs
- Well Logs
- Well Tops
- Stratigraphic Charts/Columns
- Checkshots
- Seismic 2D and 3D collections (does not change the data but moves the objects to a new location)
- Seismic 2D and 3D files
- Trajectories
- Find/Indexer

8. **Custom Domain Objects**

RoQC Tools does not create any Custom Domain Objects or custom data in the Petrel user's project. However, Audit Report does add QC attributes to IndexRow in Find/Indexing and user attributes to the Petrel project.

9. **Petrel Version**

This version of RoQC Tools is built against Petrel 2019 and supports all versions of Petrel 2019.
NOTE: There are separate versions of RoQC Tools for Petrel 2017 and 2016.

10. **Third Party Libraries**

RoQC Tools includes the following third party libraries:-

- DevExpress v19.2

11. Licensing

Both Schlumberger licenses (base license feature name is OCEAN_ROQ_PROQ-B1. The Tag feature names indicate the number of Tags purchased (OCEAN_ROQ_PROQ1-B1, OCEAN_ROQ_PROQ2-B1, OCEAN_ROQ_PROQ5-B1, OCEAN_ROQ_PRO10-B1, OCEAN_ROQ_PRO50-B1)) and the RoQC tags are required for RoQC Tools to run with all features activated.

Licenses can be obtained from Schlumberger.

The Schlumberger license is loaded just as any other Petrel plugin license (add the provided license file to the license directory that the SIS License Tool is reading from). The RoQC Tags and are automatically generated and can be assigned to Petrel projects using the RoQC Tagging Tool (see the Project Tag Manager Help to learn how to do it).

In addition, a basic Petrel Core license will be required in order to open Petrel and a data set to work on. As a minimum, a Petrel Core license is required: G-Core, RE-Core or Combined (G-Core and RE-Core).

The license covers the following modules under the RoQC Tools for Petrel plug-in:-
- Audit Report
- Audit History
- Fix Well Headers
- Well Log Manager
- Strat Cleanup
- OW Strat Converter
- Petrel Project Update
- CheckShot Manager
- Seismic Data Manager
- Interpretation Manager
- NPD DISKOS
- Well Top Manager
- Trajectory Manager
- Studio Deletion Manager
- Windows Path Tool
- FIND/INDEXER Extension (fully intergrated under Petrel Search panel)

Without a license in place, and tag on the Petrel project, RoQC Tools will run in demo mode – you can use the tools and see what they do, but you cannot save any changes to Petrel.

RoQC Sync servers do require a separate license.(available from RoQC).
For the DISKOS access RoQC Sync requires access to Kadme's WhereOil light – sold separately by Kadme.

12. List of Known Issues

None

13. Support

Information on RoQC Tools and data management workflows is available on www.roqc.com.

Support is available from support@roqc.com.