New features and functionalities in IPM 14

GAP

Solver/ Optimiser Enhancements

- New Optimisation Method – HDA Optimiser
- New Solver Configuration - Reduced Step Size (For systems with high error)
- Optimiser Trust Region Model
    - Constraint Diagnosis
    - Additional logs on Convergence on Optimise and Constraint variables
- Parallelisation of the optimiser
- Equality constraints can be added on equipment

Equipment Improvements (Heat Exchangers)

- Additional Heat Exchanger Models (Double pipe, Shell and Tube with different TEMA configurations)
- Heat exchangers can now have constraints

Equipment Improvements (Pumps/ Compressors)

- Additional Pump customisation
    - Can select specific BO correlations for each item
    - Can select specific emulsion models for each item
- OneSubSea Booster can now be added

Engine only (non-UI) GAP version

- Can be called from RESOLVE Workflows

Added Pressure and Temperature Equality constraint for Pumps/Compressors and Heat Exchangers

NIST PVT Integration
GIS Importer
Compositional modelling

- Pipeline matching can be carried out with an EOS
- Coning calculations can be carried out with an EOS
- Auto Merging: Pipe segments with similar diameter are Merged (no option is provided)

Ask PE

- A newly introduced feature that provides access to the Ask PE chatbot.
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RESOLVE

Data Objects

- New integrated Python data object has been added.
- New CCS Visualisation Toolkit data object has been added.
- Improvements made to GIS data object.
- New ScaleSim DataObject has been added.

Drivers

- Echelon compositional numerical simulator driver now available.

Additional Enhancements

- Ability to set schedules to deactivate specific modules.
- Enhanced reporting for previously saved runs in addition to the current run.
- New tool button for the adding of control modules (i.e. visual workflows and integrated Python objects).
- Application logging has been implemented on all features.
- "Target Link" button in shortcut bar removed.

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PetexOnline Server

Integration with DOF (Model Catalogue, IVM)

Prosper

Compositional PVT models have been implemented for the following artificial lift options:

- Continuous Gas Lift
- ESP Lift
- HSP Lift
- PCP Lift
- Coiled Tubing Gas Lift
- Diluent Lift
- Jet Pump Lift
- Multiphase Pump Lift

The Improved Approximation Temperature model has been implemented for the following artificial lift options:

- Continuous Gas Lift
- ESP Lift
- HSP Lift
- PCP Lift
- Coiled Tubing Gas Lift
- Diluent Injection
- Jet Pump Lift
- Multiphase Pump Lift

New Gas lift method: Multipoint with scaled injection

- Multipoint gas lift injection rate and valve allocation can be scaled to user-specified total injection rate

VLP Regions in System (IPR + VLP) calculation:

- Detect VLP discontinuities due to categoric change in behaviour, including:
    - Multipoint gas lift - Injection rate dropping to zero
    - Scaled Multipoint gas lift - Injection rate dropping to zero
    - Specified valve depth - Change of injection depth
    - Pumped wells - Head drops to zero
- Prevents IPR/VLP solution via interpolation across discontinuity

ESP

- Ability to use Permanent Magnet Motors (PMM)
- Enhanced gradient and VLP results for Tapered pumps

Minimum motor fluid velocity

- Flag for fluid velocity around motor breaching minimum

Reporting

- Voltage drop along cable reported in VLP results for electronically powered motors

IPR Data Input

- IPR Data Input screen
- New user interface for the IPR Data Input screen is available (selected in Preferences)

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Reveal

Model import:

- Implemented the RESQML format in REVEAL.
- Extended functionality of INTERSECT Importer: historical data can be brought in from an intersect simulation case.

VFP Tables for Complex Valves:

- VFP tables representing the performance of aggressive valves can be imported into REVEAL. This option has been implemented with collaboration of FlowPro and PELimited.

Near Well Stress calculator:

- A stress calculator was implemented to calculate the stress change resulting from the pressure change near water injectors.

Dynamic Cam clay calculator:

- The cam clay calculator for monitoring plastic deformation onset is now accessible for each grid block during the simulation.

Well clean-ups:

- A non-volumetric component of the oil phase DieselKillFluid was added into REVEAL. This option is only available with a black-oil PVT model and is useful for modelling well startup that are partially or fully filled with dead oil (diesel).

NSI- StimPlan Integration:

- The Stimplan importer allows to import a fracture geometry built in the Stimplan software (by NSI technologies). The imported fractures can then be added to the database in REVEAL.

Water chemistry:

Improvements to PHREEQC Databases were implemented in IPM 14:

- To account for more parameters in analytic expression for thermal K dependence in recent databases.
- To include pressure dependence for K values in recent databases.

CO2 injection:

- Transient wellbore modelling for CO2 injection, which can be used for modelling CO2 injector well start up, shut-in, low pressure gas reservoir with transient phenomena.
- The new CO2 injector option enables the NIST fluid properties calculation for CO2 injection mixtures and the use of a pressure enthalpy P-H in the wellbore. This especially important to capture the CO2 phase change in the wellbore.

Filter Cake for gas injectors:

The already existing filter cake model already available for water injectors was implemented for gas injectors.

Hydrate potential:

A new 3 D property the Hydrate potential was added in REVEAL to indicate the likelihood the hydrate presence in the reservoir.

Mineral exothermic reactions

For some mining operations, dissolving of minerals is an exothermic process, generating heat and temperature. The model allows the user to specify a heating rate (BTU/ Ib) for any mineral dissolving (endothermic when mineral is precipitated). Positive (exothermic dissolution or negative values can be entered). The data can be set for all rocks or by rock type.

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PVTp

- Multiple laboratory experiments of the same kind can be added in a single PVT
- When using the Path to Surface object, K-Values for each flow stream component can be entered for a certain separation stage.
- In Calculation data objects, properties which have experimental data available in the PVT Sample object are highlighted to help the user.

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MOVE

MOVE 2026 is a part of the **IPM 14** release:

- Single installer for IPM suite of tools: MOVE, GAP, GAP TRANSIENT, PROSPER,
- MBAL, PVTP, REVEAL and RESOLVE.
- Option to install MOVE together with all other IPM programs, or separately.
- API for enabling automation and connectivity (with the full IPM installation).
- MOVE integration with RESOLVE workflows (with the full IPM installation).

Continuous development of the MOVE API for both RESOLVE and OpenServer.

New Al-powered chat bot application, askPE:

- Exploring interactively all MOVE Knowledge Base and PE documentation.

Constrained model building and data analysis in MOVE 2026:

- New Property Modelling tool.
- Query tool improvements.
- Improvements in the Attribute Analysis Calculator.
- New options in the Quick Editor for well log visualization in 3D View.

Kinematic Modelling in MOVE 2026:

- New 2D Strain Capture functionality in 2D Move-on-Fault.

Stress Analysis in MOVE 2026:

- Auto-update pressure/stress profiles from well logs.

MOVE links for Petrel and GST:

- New ability to transfer Petrel interpretation windows to MOVE sections.
- MOVE sections can now be stored and retrieved from GST as Profiles Features.

Import and Export format improvements:

- Data Ranges can now be defined in the SEG-Y import. Now it is possible to previsualize the seismic image before importing it.
- Added Open Mining Format (OMF) import and export.
- Export to KML with elevation.
- Export lines and points as OBJ.