whitson

whitson+ API Change Logs v.3.8.0

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WHITSON AS

Change Logs v3.8.0

Breaking Changes

- **GET /wells/auto_forecasts/{auto_forecast_id}**
  - Added ”decline_rate” enum value to response property from status 200:
    - auto_forecast_bounds/items/anyOf[#/components/schemas/AutoForecastBounds]/transition_type
- **GET /old_wells_paginated**
  - Added “in_progress” enum value to response properties from status 200:
    - /items/quality_checks/arta
    - /items/quality_checks/bhp
    - /items/quality_checks/dca
    - /items/quality_checks/fmb
    - /items/quality_checks/ipr_vlp
    - /items/quality_checks/nrta
    - /items/quality_checks/numerical_model
    - /items/quality_checks/pnr_dca
    - /items/quality_checks/pvt
- **GET /projects/{project_id}/well_groups**
  - Depricated required response property from status 200:
    - /items/owner
      - *The property is still supported for backward compatibility but will be removed in a future version.*
- **POST /projects/{project_id}/well_groups**
  - Added required request property:
    - owners
  - Depricated request property:
    - owner
      - *The property is still supported for backward compatibility but will be removed in a future version.*
- **PUT /projects/{project_id}/well_groups**
  - Depricated request property:
    - owner
      - *The property is still supported for backward compatibility but will be removed in a future version.*
- **PATCH /type_wells/saved_cases**
  - Updated property from status 200:
    - /items/date_updated changed from string/date to string/date-time
- **GET /wells**
  - Added “in_progress” enum value to response properties from status 200:
    - /items/quality_checks/arta
    - /items/quality_checks/bhp
    - /items/quality_checks/dca
    - /items/quality_checks/fmb
    - /items/quality_checks/ipr_vlp
    - /items/quality_checks/nrta

        - /items/quality_checks/numerical_model
        - /items/quality_checks/pnr_dca
        - /items/quality_checks/pvt
- **PATCH /wells/bhp_input/well_data**
    - Added enum values to response property from status 200:
        - /items/esp_data/anyOf[#/components/schemas/WellDataESPExternal]/parameters_all_esps/items/esp_configuration
            - extract:400xps3550hd
            - extract:400xps4300hd
- **PATCH /wells/bhp_inputs**
    - Depricated optional response properties from status 200 (*The property is still supported for backward compatibility*):
        - /items/compute_injection_bhp
    - Added enum values to response property from status 200:
        - /items/well_data/items/esp_data/anyOf[#/components/schemas/WellDataESPExternal]/parameters_all_esps/items/esp_configuration
            - extract:400xps3550hd
            - extract:400xps4300hd
- **PUT /wells/bhp_inputs**
    - Depricated request property:
        - /items/compute_injection_bhp
            - *The property won't break the current workflow.*
- **PATCH /wells/bhp_inputs_no_deviation_survey**
    - Depricated optional response properties from status 200 (*The property is still supported for backward compatibility*)
        - /items/compute_injection_bhp
    - Added enum values to response property from status 200:
        - /items/well_data/items/esp_data/anyOf[#/components/schemas/WellDataESPExternal]/parameters_all_esps/items/esp_configuration
            - extract:400xps3550hd
            - extract:400xps4300hd
- **GET /wells/bulk_gas_lift_optimizer_results**
    - Added enum values to response property from status 200:
        - wells/additionalProperties/ipr_input/ipr_type
            - gas
            - undefined
            - vogel
- **PATCH /wells/bulk_gas_lift_optimizer_results**
    - Added enum values to response property from status 200:
        - wells/additionalProperties/ipr_input/ipr_type
            - gas
            - undefined
            - vogel
- **PATCH /wells/dca**
    - Updated property from status 200:
        - /items/date_updated changed from string/date to string/date-time
- **PATCH /wells/dca_saved_cases**
    - Updated property from status 200:

        - /items/date_updated changed from string/date to string/date-time
- **PATCH /wells/gas_lift_optimizer_cases**
    - Added enum values to response property from status 200:
        - /items/gas_lift_optimizer_calc/allOf[#/components/schemas/GasLiftOptimizerCalc]/correlation
            - beggs_and_brill
            - gray
            - hagedorn_and_brown
            - undefined
            - woldesemayat_and_ghajar
- **GET /wells/gas_lift_optimizer_cases_paginated**
    - Added enum values to response property from status 200:
        - /items/gas_lift_optimizer_calc/allOf[#/components/schemas/GasLiftOptimizerCalc]/correlation
            - beggs_and_brill
            - gray
            - hagedorn_and_brown
            - undefined
            - woldesemayat_and_ghajar
- **PATCH /wells/gradient_cases**
    - Added enum values to response property from status 200:
        - /items/gradient_calc/anyOf[#/components/schemas/GradientCalc]/correlation
            - beggs_and_brill
            - gray
            - hagedorn_and_brown
            - undefined
            - woldesemayat_and_ghajar
- **PUT /wells/gradient_cases**
    - Restricted request property to enum values:
        - /items/correlation
- **PUT /wells/gradient_cases/{gradient_case_id}**
    - Restricted request property to enum values:
        - gradient_calc/anyOf[#/components/schemas/GradientCalc]/correlation
- **POST /wells/latest_date_gradient_cases**
    - Restricted request property to enum values:
        - /items/cases/items/gradient_calc/anyOf[#/components/schemas/GradientCalc]/correlation
- **PATCH /wells/mass_export_custom_results**
    - Depricated optional response properties from status 200 (*The property is still supported for backward compatibility*):
        - data/items/allOf[#/components/schemas/WellCustomGenerated]/Completion Metrics/Spacing(ft)
        - data/items/allOf[#/components/schemas/WellCustomGenerated]/Completion Metrics/TVD(ft)
        - data/items/allOf[#/components/schemas/WellCustomGenerated]/Completion Metrics/Fluid(STB)
        - data/items/allOf[#/components/schemas/WellCustomGenerated]/Completion Metrics/LW(ft)

        - data/items/allOf[#/components/schemas/WellCustomGenerated]/Completion Metrics/Proppant(lbs)
        - data/items/allOf[#/components/schemas/WellCustomGenerated]/Completion Metrics/Rock compr.(1/psi)
- **PATCH /wells/nodal_ipr_input**
    - Added enum values to response property from status 200:
        - /items/ipr_type
            - ➢ gas
            - ➢ undefined
            - ➢ vogel
- **GET /wells/{well_id}**
    - Response status: 200
    - Updated properties:
        - gas_lift_optimizer_input/n_gas_ipr is now nullable
    - Removed optional response properties:
        - gradient_input/show_rates
        - history_matching_input/zero_weighted_dates
        - nodal_analysis_input/named_well_data/items/compute_injection_bhp
        - nodal_analysis_input/named_well_data/items/well_data_named/anyOf[#/components/schemas/WellData]/gradient_case_id
        - rta_input/zero_weighted_dates
        - tubing_table_input/well_data_forecast/items/anyOf[#/components/schemas/WellData]/gradient_case_id
        - vfp_export_input/well_data/items/gradient_case_id
    - Added “1.00” enum values to refrac_input/nf_multiplier:
    - Added enum values:
        - api14e
        - none
        - svedeman

      to erosional_rate_type:
        - gas_lift_optimizer_input/erosional_rate_type
        - gradient_input/erosional_rate_type
        - nodal_analysis_input/erosional_rate_type
    - Added enum values:
        - belfroid
        - coleman
        - nagoo
        - turner

      to critical_correlation:
        - gas_lift_optimizer_input/critical_correlation
        - gradient_input/critical_correlation
        - nodal_analysis_input/critical_correlation
    - Added “extract” enum values to ESP manufacturer:
        - nodal_analysis_input/named_well_data/items/well_data_named/anyOf[#/components/schemas/WellData]/esp_data/anyOf[#/components/schemas/WellDataESP]/parameters_all_esps/items/esp_manufacturer

        - tubing_table_input/well_data_forecast/items/anyOf[#/components/schemas/WellData]/esp_data/anyOf[#/components/schemas/WellDataESP]/parameters_all_esps/items/esp_manufacturer
        - vfp_export_input/well_data/items/esp_data/anyOf[#/components/schemas/WellDataESP]/parameters_all_esps/items/esp_manufacturer
    - Added enum values:
        - gas
        - undefined
        - vogel

      to ipr_type:
        - gas_lift_optimizer_input/ipr_type
        - nodal_analysis_input/ipr_type

    - Added enum values:
        - gas
        - history_matching
        - multiphase_fmb

      to reservoir_pressure_source:
        - gas_lift_optimizer_input/reservoir_pressure_source
        - nodal_analysis_input/reservoir_pressure_source
    - Added “in_progress” enum value to quality_checks:
        - /items/quality_checks/arta
        - /items/quality_checks/bhp
        - /items/quality_checks/dca
        - /items/quality_checks/fmb
        - /items/quality_checks/ipr_vlp
        - /items/quality_checks/nrta
        - /items/quality_checks/numerical_model
        - /items/quality_checks/pnr_dca
        - /items/quality_checks/pvt
- **GET /wells/{well_id}/bhp_input**
    - Response status: 200
    - Depricated optional response properties:
        - compute_injection_bhp
            - *The property won't break the current workflow.*
    - Added enum values to esp_configuration:
        - well_data/items/esp_data/anyOf[#/components/schemas/WellDataESPExternal]/parameters_all_esps/items/esp_configuration
            - extract:400xps3550hd
            - extract:400xps4300hd
- **PUT /wells/{well_id}/bhp_input**
    - Depricated request property:
        - compute_injection_bhp
- **GET /wells/{well_id}/bhp_input/well_data**
    - Response status: 200
    - Added enum values to esp_configuration:
        - /items/esp_data/anyOf[#/components/schemas/WellDataESPExternal]/parameters_all_esps/items/esp_configuration

            - extract:400xps3550hd
            - extract:400xps4300hd
- **GET /wells/{well_id}/fetch_from_ipr**
    - Response status: 200
    - Updated properties:
        - n_gas_ipr is now nullable
    - Added enum values to erosional_rate_type:
        - erosional_rate_type
            - api14e
            - none
            - svedeman
    - Added enum values to critical_correlation:
        - critical_correlation
            - belfroid
            - coleman
            - nagoo
            - turner
    - Added enum values to ipr_type:
        - ipr_type
            - gas
            - undefined
            - vogel
    - Added enum values to reservoir_pressure_source:
        - reservoir_pressure_source
            - gas
            - history_matching
            - multiphase_fmb
- **GET /wells/{well_id}/gas_lift_optimizer_cases**
    - Response status: 200
    - Added enum values to correlation:
        - /items/gas_lift_optimizer_calc/allOf[#/components/schemas/GasLiftOptimizerCalc]/correlation
            - beggs_and_brill
            - gray
            - hagedorn_and_brown
            - undefined
            - woldesemayat_and_ghajar
- **GET /wells/{well_id}/gradient_cases**
    - Response status: 200
    - Added enum values to correlation:
        - /items/gradient_calc/anyOf[#/components/schemas/GradientCalc]/correlation
            - beggs_and_brill
            - gray
            - hagedorn_and_brown
            - undefined
            - woldesemayat_and_ghajar
- **POST /wells/{well_id}/gradient_cases**
    - Restricted request property to enum values:

        - /items/gradient_calc/anyOf[#/components/schemas/GradientCalc]/correlation
- **GET /wells/{well_id}/run_ipr_with_date**
    - Response status: 200
    - Removed optional response properties:
        - named_well_data/items/compute_injection_bhp
        - named_well_data/items/well_data_named/anyOf[#/components/schemas/WellData]/gradient_case_id
    - Added enum values to erosional_rate_type:
        - erosional_rate_type
            - api14e
            - none
            - svedeman
    - Added enum values to critical_correlation:
        - critical_correlation
            - belfroid
            - coleman
            - nagoo
            - turner
    - Added enum value to ESP manufacturer:
        - named_well_data/items/well_data_named/anyOf[#/components/schemas/WellData]/esp_data/anyOf[#/components/schemas/WellDataESP]/parameters_all_esps/items/esp_manufacturer
            - extract
    - Added enum values to ipr_type:
        - ipr_type
            - gas
            - undefined
            - vogel
    - Added enum values to reservoir_pressure_source:
        - reservoir_pressure_source
            - gas
            - history_matching
            - multiphase_fmb
- • **GET /wells/{well_id}/well_dca/saved_cases**
    - Response status: 200
    - Updated property:
        - /items/date_updated changed from string/date to string/date-time
- **GET /wells_paginated**
    - Response status: 200
    - Added “in_progress” enum value to quality_checks:
        - /items/quality_checks/arta
        - /items/quality_checks/bhp
        - /items/quality_checks/dca
        - /items/quality_checks/fmb
        - /items/quality_checks/ipr_vlp
        - /items/quality_checks/nrta
        - /items/quality_checks/numerical_model
        - /items/quality_checks/pnr_dca

        - /items/quality_checks/pvt

New Endpoints (17)

- DELETE /api-external/v1/auto_forecast_areas/{auto_forecast_area_id}
- DELETE /api-external/v1/auto_forecasts
- POST /api-external/v1/auto_forecasts
- PUT /api-external/v1/auto_forecasts
- PUT /api-external/v1/auto_forecasts/{auto_forecast_id}
- GET /api-external/v1/projects/{project_id}/auto_forecast_areas
- POST /api-external/v1/projects/{project_id}/auto_forecast_areas
- POST /api-external/v1/projects/{project_id}/dca_forecast_aries
- GET /api-external/v1/wells/bhp_calculation_complete
- PATCH /api-external/v1/wells/gas_lift_optimizer_calculation_status
- PATCH /api-external/v1/wells/gradient_calculation_status
- PATCH /api-external/v1/wells/multiphase_fmb_calculation_status
- PATCH /api-external/v1/wells/ngl_calculation_status
- PATCH /api-external/v1/wells/sales_products_calculation_status
- PATCH /api-external/v1/wells/sales_products_input
- POST /api-external/v1/wells/sampling_data
- PUT /api-external/v1/wells/update_complete_nodal
- PATCH /api-external/v1/wells/vlp_calculation_status
- PATCH /api-external/v1/wells/well_monitoring_calculation_status
- DELETE /api-external/v1/wells/{main_well_id}/delete_all_scenario
- DELETE /api-external/v1/wells/{main_well_id}/delete_scenario_by_name
- POST /api-external/v1/wells/{well_id}/generate_vlp_sensitivity
- GET /api-external/v1/wells/{well_id}/rta_calculated_type_curves
- DELETE /api-external/v1/wells/{well_id}/vlp_cases

Modified Endpoints (56)

Base Data

- **GET /api-external/v1/fields**
    - projects updates:
        - Added properties:
            - result_vlp_select_case
            - result_vlp_select_columns
            - result_vlp_select_from_case
            - result_vlp_select_scenario
        - custom_attributes.formula updates:
            - Added property: well_pvt_input_attribute
- **GET /api-external/v1/fields/{field_id}/projects**
    - Added properties:
        - result_vlp_select_case
        - result_vlp_select_columns
        - result_vlp_select_from_case
        - result_vlp_select_scenario
    - custom_attributes.formula updates:
        - Added property:

            - well_pvt_input_attribute
- **POST /api-external/v1/fields/{field_id}/projects**
    - Request body → added properties:
        - result_vlp_select_case
        - result_vlp_select_columns
        - result_vlp_select_from_case
        - result_vlp_select_scenario
    - custom_attributes.formula updates:
        - Added property:
            - well_pvt_input_attribute
- **GET /api-external/v1/old_wells_paginated**
    - Added properties:
        - main_well_id
        - well_type
    - quality_checks updates:
        - Added enum value in_progress to:
            - arta
            - bhp
            - dca
            - fmb
            - ipr_vlp
            - nrta
            - numerical_model
            - pnr_dca
            - pvt
- **GET /api-external/v1/projects/{project_id}/well_groups**
    - Required properties updates:
        - Added required property:
            - owners
        - Depricated required response property from status 200:
            - owner
    - Properties updates:
        - Added property:
            - owners
        - Depricated required response property from status 200:
            - owner
- **POST /api-external/v1/projects/{project_id}/well_groups**
    - Required properties updates:
        - Added required property:
            - owners
        - Depricated required property:
            - owner
    - Properties updates:
        - Added property:
            - owners
        - Depricated property:
            - owner
- **PUT /api-external/v1/projects/{project_id}/well_groups**

    - Request body → added property:
        - owners
    - Request body → Depricated property:
        - owner
- **GET /api-external/v1/wells**
    - Added properties:
        - main_well_id
        - well_type
    - quality_checks updates:
        - Added enum value “in_progress” to:
            - arta
            - bhp
            - dca
            - fmb
            - ipr_vlp
            - nrta
            - numerical_model
            - pnr_dca
            - pvt
- **PATCH /api-external/v1/wells**
    - Request body → quality_checks updates:
        - Added enum value “in_progress” to:
            - arta
            - bhp
            - dca
            - fmb
            - ipr_vlp
            - nrta
            - numerical_model
            - pnr_dca
            - pvt
- **POST /api-external/v1/wells**
    - Request body → added properties:
        - main_well_id
        - well_type
    - Request body → quality_checks updates:
        - Added enum value “in_progress” to:
            - arta
            - bhp
            - dca
            - fmb
            - ipr_vlp
            - nrta
            - numerical_model
            - pnr_dca
            - pvt
- **POST /api-external/v1/wells/bulk**
    - Request body → added properties:

        - main_well_id
        - well_type
    - Request body → quality_checks updates:
        - Added enum value “in_progress” to:
            - arta
            - bhp
            - dca
            - fmb
            - ipr_vlp
            - nrta
            - numerical_model
            - pnr_dca
            - pvt
- **POST /api-external/v1/wells/copy_wells**
    - Request body → added property:
        - linked_production_data_comments
- **POST /api-external/v1/wells/data_fields**
    - Request body → data_fields updates:
        - Added enum values:
            - ngl_calculation_input
            - ngl_calculation_calc
            - nodal_forecast_input
            - gas_lift_design_input
            - tuned_pvt_calc
- **GET /api-external/v1/wells/light**
    - return_params query parameter updates:
        - Added enum values:
            - main_well_id
            - well_type
    - Response → added properties:
        - main_well_id
        - well_type
- **PATCH /api-external/v1/wells/mass_export_custom_results**
    - data updates:
        - Added properties:
            - MMP
            - Production Comments
    - Completion Metrics updates:
        - Added properties:
            - Fluid (STB)
            - Lateral Length, Lw (ft)
            - Proppant (lbs)
            - Rock compr. (1/psi)
            - Spacing (ft)
            - TVD (ft)
        - Depricated response property (still can be used):
            - Fluid(STB)
            - LW(ft)

            - Proppant(lbs)
            - Rock compr.(1/psi)
            - Spacing(ft)
            - TVD(ft)
    - Numerical Model updates:
        - Added properties:
            - Fcd
            - Swi (%)
    - Numerical RTA updates:
        - Added properties:
            - Fcd
            - Swi (%)
    - PNR DCA updates:
        - Added properties:
            - FRTA b Gas
            - FRTA b Oil
            - FRTA b Water
- **GET /api-external/v1/wells/{well_id}**
    - Response 200 changed
        - Properties
            - Added gas_lift_design_input
            - Added ngl_calculation_calc
            - Added ngl_calculation_input
            - Added nodal_forecast_input
            - Added tuned_pvt_calc
            - gas_lift_optimizer_input
                - Added fetch_forecast_from_numerical_model
                - Added show_liquid_rate
                - critical_correlation
                    - Added enum values turner, coleman, nagoo, belfroid
                - erosional_rate_type
                    - Added enum values none, api14e, svedeman
                - ipr_type
                    - Added enum values vogel gas, <nil>
                - n_gas_ipr
                    - Nullable changed from false to true
                - reservoir_pressure_source
                    - Added enum values multiphase_fmb, gas, history_matching
                - show_addition_graph_points
                    - Nullable changed from true to false
                - show_bhp
                    - Nullable changed from true to false
                - show_d_tubing_inner
                    - Nullable changed from true to false
                - show_gas_lift_valve_depth
                    - Nullable changed from true to false
            - gradient_input
                - Added rate_and_velocity

- Added show_gas_injection_rate
- Added show_gradient_parallel_flowpath
- Added show_water_injection_rate
- Deleted show_rates
- critical_correlation
  - Added enum values turner, coleman, nagoo, belfroid
- erosional_rate_type
  - Added enum values none, api14e, svedeman
- show_d_tubing_inner
  - Nullable changed from true to false
- show_gas_lift_valve_depth
  - Nullable changed from true to false

➢ history_matching_input
- Deleted zero_weighted_dates

➢ nodal_analysis_input
- Added fetch_forecast_from_numerical_model
- critical_correlation
  - Added enum values turner, coleman, nagoo, belfroid
- erosional_rate_type
  - Added enum values none, api14e, svedeman
- ipr_type
  - Added enum values vogel gas, <nil>
- named_well_data
  - Added is_gas_lift_design
  - Deleted compute_injection_bhp
  - well_data_named
    - WellData
      - Added rod_pump_data
      - Deleted gradient_case_id
      - esp_data/WellDataESP
        - Added wear_factor
        - parameters_all_esps/esp_manufacturer -> Added enum value extract
  - reservoir_pressure_source
    - Added enum values multiphase_fmb, gas, history_matching

➢ production_data_comments
- Added date_updated
- Added updated_by
- quality_checks
  - Added enum value “in_progress” to:
    - arta
    - bhp
    - dca
    - fmb
    - ipr_vlp
    - nrta

                - numerical_model
                - pnr_dca
                - pvt
        - refrac_input
            - nf_multiplier
                - Added enum value 1
        - rta_input
            - Deleted zero_weighted_dates
        - sales_products_input
            - Added deduct_c5p_from_ngl
        - tubing_table_input
            - ➢
            - well_data_forecast
                - WellData
                    - Added rod_pump_data
                    - Deleted gradient_case_id
                    - esp_data/WellDataESP
                        - Added wear_factor
                        - parameters_all_esps/esp_manufacturer -> Added enum value extract
        - vfp_export_input
            - well_data
                - Added rod_pump_data
                - Deleted gradient_case_id
                - esp_data/WellDataESP
                    - Added wear_factor
                    - parameters_all_esps/esp_manufacturer -> Added enum value extract

- **PATCH /api-external/v1/wells/{well_id}**
    - Request body changed
        - quality_checks
            - ➢ Added enum value “in_progress” to:
                - arta
                - bhp
                - dca
                - fmb
                - ipr_vlp
                - nrta
                - numerical_model
                - pnr_dca
                - pvt
- **PUT /api-external/v1/wells/{well_id}**
    - Request body changed
        - quality_checks
            - ➢ Added enum value “in_progress” to:
                - arta
                - bhp

- dca
- fmb
- ipr_vlp
- nrta
- numerical_model
- pnr_dca
- pvt

- **GET /api-external/v1/wells/{well_id}/available_custom_attributes**
  - Response 200 changed
    - custom_attributes
      - formula
      - Added well_pvt_input_attribute
- **GET /api-external/v1/wells_paginated**
  - Response 200 changed
    - Added main_well_id
    - Added well_type
    - quality_checks
      - Added enum value “in_progress” to:
        - arta
        - bhp
        - dca
        - fmb
        - ipr_vlp
        - nrta
        - numerical_model
        - pnr_dca
        - pvt

Production Data

- **GET /api-external/v1/wells/active_production_data**
  - Added query param:
    - cursor
  - Response → added properties:
    - date_updated
    - next_cursor
    - qg_inj_sc
    - qw_inj_sc
    - water_salinity
- **GET /api-external/v1/wells/monthly_production_data**
  - Added query param:
    - cursor
  - Response → added properties:
    - date_updated
    - next_cursor
- **POST /api-external/v1/wells/monthly_production_data**
  - Request body → added properties:
    - date_updated
    - next_cursor
- **GET /api-external/v1/wells/production_data**

    - Added query param:
        - cursor
    - Response → added properties:
        - date_updated
        - next_cursor
        - qg_inj_sc
        - qw_inj_sc
        - water_salinity
- **POST /api-external/v1/wells/production_data**
    - Added query param:
        - update_rate_type_setting
    - Request body → production_data updates:
        - Added properties:
            - date_updated
            - next_cursor
            - qg_inj_sc
            - qw_inj_sc
            - water_salinity
- **PUT /api-external/v1/wells/production_data**
    - Request body → production_data updates:
        - Added properties:
            - date_updated
            - next_cursor
            - qg_inj_sc
            - qw_inj_sc
            - water_salinity
- **GET /api-external/v1/wells/{well_id}/active_production_data**
    - Response 200 changed
        - Added date_updated
        - Added next_cursor
        - Added qg_inj_sc
        - Added qw_inj_sc
        - Added water_salinity
- **GET /api-external/v1/wells/{well_id}/production_data**
    - Response 200 changed
        - Added date_updated
        - Added next_cursor
        - Added qg_inj_sc
        - Added qw_inj_sc
        - Added water_salinity
- **POST /api-external/v1/wells/{well_id}/production_data**
    - Query parameters
        - Added update_rate_type_setting
    - Request body changed
        - production_data
            - Added date_updated
            - Added next_cursor
            - Added qg_inj_sc

                - Added qw_inj_sc
                - Added water_salinity
- **PUT /api-external/v1/wells/{well_id}/production_data**
    - Request body changed
        - production_data
            - Added date_updated
            - Added next_cursor
            - Added qg_inj_sc
            - Added qw_inj_sc
            - Added water_salinity

Sales Products

- **PUT /api-external/v1/wells/sales_products_input**
    - Request body changed
        - Required properties
            - Deleted ngl_efficiency
        - Properties
            - Added add_c5p
            - Added first_c5p
- **GET /api-external/v1/wells/sales_products_rates**
    - Response 200 changed
        - Properties
            - Added sales_oil
            - Added sales_oil_common
            - ngl
                - Added c5_plus_rate
            - ngl_common
                - Added c5_plus_rate_common

BHP

- **GET /api-external/v1/wells/bhp_calculation**
    - Added query param:
        - cursor
    - Response → added property:
        - next_cursor
- **GET /api-external/v1/wells/bhp_calculation_with_gauge_data**
    - Added query param:
        - cursor
    - Response → added property:
        - next_cursor
- **PATCH /api-external/v1/wells/bhp_input/well_data**
    - Response → added properties:
        - requested_well_id
        - rod_pump_data
    - esp_data updates:
        - Added property:
            - wear_factor
        - parameters_all_esps.esp_configuration updates:

        - Added enum values: extract:400xps4300hd, extract:400xps3550hd
- **POST /api-external/v1/wells/bhp_input/well_data/bulk**
    - Request body → well_data updates:
        - Added properties:
            - requested_well_id
            - rod_pump_data
        - esp_data updates:
            - Added property: wear_factor
            - parameters_all_esps.esp_configuration → added enum values: extract:400xps4300hd, extract:400xps3550hd
- **PUT /api-external/v1/wells/bhp_input/well_data/{well_data_id}**
    - Request body → added properties:
        - requested_well_id
        - rod_pump_data
    - esp_data updates:
        - Added property: wear_factor
        - parameters_all_esps.esp_configuration → added enum values: extract:400xps4300hd, extract:400xps3550hd
- **PATCH /api-external/v1/wells/bhp_inputs**
    - Description changed to:
        - Get BHP input for multiple wells.
    - Response → description changed to:
        - A list of bhp input entries.
    - Response → added properties:
        - gradient_parallel_flowpath
        - requested_well_id
    - Response → Depricated response property:
        - compute_injection_bhp
    - bottom_perforation_tvd updates:
        - ReadOnly changed from false to true
    - top_perforation_tvd updates:
        - ReadOnly changed from false to true
    - well_data updates:
        - Added properties:
            - requested_well_id
            - rod_pump_data
                - esp_data updates:
                    - Added property: wear_factor
                    - parameters_all_esps.esp_configuration → added enum values: extract:400xps4300hd, extract:400xps3550hd
- **PUT /api-external/v1/wells/bhp_inputs**
    - Request body → added properties:
        - gradient_parallel_flowpath
        - requested_well_id
    - Request body → Depricated request property:
        - compute_injection_bhp
    - bottom_perforation_tvd updates:

        - ReadOnly changed from false to true
    - top_perforation_tvd updates:
        - ReadOnly changed from false to true
    - well_data updates:
        - Added properties:
            - requested_well_id
            - rod_pump_data
                - esp_data updates:
                    - Added property: wear_factor
                        - parameters_all_esps.esp_configuration → added enum values: extract:400xps4300hd, extract:400xps3550hd
- **PATCH /api-external/v1/wells/bhp_inputs_no_deviation_survey**
    - Response → added properties:
        - gradient_parallel_flowpath
        - requested_well_id
    - Response → Depricated response property:
        - compute_injection_bhp
    - bottom_perforation_tvd updates:
        - ReadOnly changed from false to true
    - top_perforation_tvd updates:
        - ReadOnly changed from false to true
    - well_data updates:
        - Added properties:
            - requested_well_id
            - rod_pump_data
                - esp_data updates:
                    - Added property: wear_factor
                        - parameters_all_esps.esp_configuration → added enum values: extract:400xps4300hd, extract:400xps3550hd
- **GET /api-external/v1/wells/{well_id}/bhp_input**
    - Response 200 changed
        - Added gradient_parallel_flowpath
        - Added requested_well_id
        - Depricated compute_injection_bhp
        - bottom_perforation_tvd
            - ReadOnly changed from false to true
        - top_perforation_tvd
            - ReadOnly changed from false to true
        - well_data
            - Added requested_well_id
            - Added rod_pump_data
            - esp_data
                - WellDataESPExternal
                    - Added wear_factor
                    - parameters_all_esps
                        - esp_configuration

                - Added enum values extract:400xps4300hd, extract:400xps3550hd

- **PUT /api-external/v1/wells/{well_id}/bhp_input**
    - Response 200 changed
        - Added gradient_parallel_flowpath
        - Added requested_well_id
        - Depricated compute_injection_bhp
        - bottom_perforation_tvd
            - ReadOnly changed from false to true
        - top_perforation_tvd
            - ReadOnly changed from false to true
        - well_data
            - Added requested_well_id
            - Added rod_pump_data
            - esp_data
                - WellDataESPExternal
                - Added wear_factor
                - parameters_all_esps
                - esp_configuration
                - Added enum values extract:400xps4300hd, extract:400xps3550hd
- **GET /api-external/v1/wells/{well_id}/bhp_input/well_data**
    - Response 200 changed
        - Added requested_well_id
        - Added rod_pump_data
        - esp_data
            - WellDataESPExternal
                - Added wear_factor
                - parameters_all_esps
                - esp_configuration
                - Added enum values extract:400xps4300hd, extract:400xps3550hd
- **POST /api-external/v1/wells/{well_id}/bhp_input/well_data**
    - Response 200 changed
        - Added requested_well_id
        - Added rod_pump_data
        - esp_data
            - WellDataESPExternal
                - Added wear_factor
                - parameters_all_esps
                - esp_configuration
                - Added enum values extract:400xps4300hd, extract:400xps3550hd

DCA

- **PATCH /api-external/v1/wells/dca**

    - Response → date_updated format changed:
        - From: date
        - To: date-time
- **POST /api-external/v1/wells/dca_saved_case**
    - Request body → **date_updated** format changed:
        - From: date
        - To: date-time
- **PATCH /api-external/v1/wells/dca_saved_case**
    - Request body → **date_updated** format changed:
        - From: date
        - To: date-time
- **GET /api-external/v1/wells/{well_id}/well_dca/dca_export**
    - Query parameters
        - Added case_name
        - Added dmin_as_secant
- **GET /api-external/v1/wells/{well_id}/well_dca/saved_cases**
    - Response 200 changed
        - date_updated
            - Format changed from date to date-time

Auto-Forecast

- **GET /api-external/v1/auto_forecasts/{auto_forecast_id}**
    - auto_forecast_bounds updates:
        - Added properties:
            - a_transition
            - d_sec_transition
            - d_tan_transition
            - match_eur_custom_attribute_id
            - match_eur_source
        - transition_type updates:
            - Added enum value: decline_rate
    - auto_forecast_settings updates:
        - Added property:
            - use_type_well_area

Well Monitoring

- **GET /api-external/v1/well_monitoring/{well_id}/common_process_conversion**
    - Description updated:
        - Added descriptions for:
            - qo_common_sep
            - qg_common_sep
            - date_updated
    - Response → added properties:
        - qo_common_sep
        - qg_common_sep
        - date_updated
- **GET /api-external/v1/well_monitoring/{well_id}/composition_tracking**
    - Description updated:
        - Added description for:

                - date_updated
        - Response → added property:
            - date_updated
- **GET /api-external/v1/well_monitoring/{well_id}/separator_oil_shrinkage**
    - Description updated:
        - Added description for:
            - date_updated
    - Response → added property:
        - date_updated

Numerical Model

- **GET /api-external/v1/wells/history_matching**
    - Response → added properties:
        - belfroid
        - coleman
        - nagoo
        - turner
- **GET /api-external/v1/wells/{well_id}/history_matching**
    - Response 200 changed
        - Added belfroid
        - Added coleman
        - Added nagoo
        - Added turner

Nodal Analysis VLP

- **PATCH /api-external/v1/wells/nodal_ipr_input**
    - Response → ipr_type updates:
        - Added enum values:
            - vogel gas
            - <nil>
- **PUT /api-external/v1/wells/update_surface_pressure_vlp**
    - Query parameters
        - Added run_all_cases
- **POST /api-external/v1/wells/vlp_cases**
    - Request body changed
        - cases
            - Added water_salinity
- **PUT /api-external/v1/wells/vlp_cases**
    - Request body changed
        - cases
            - Added water_salinity
- **GET /api-external/v1/wells/{well_id}/ipr**
    - Query parameters
        - Added ipr_type
    - Responses
        - Added response 422
        - Response 200 changed
            - Added bottomhole_pressure_gas
            - Added bottomhole_pressure_vogel

- **GET /api-external/v1/wells/{well_id}/run_ipr_with_date**
    - Response 200 changed
        - Added fetch_forecast_from_numerical_model
        - critical_correlation
            - Added enum values turner, coleman, nagoo, belfroid
        - erosional_rate_type
            - Added enum values none, api14e, svedeman
        - ipr_type
            - Added enum values vogel gas, <nil>
        - named_well_data
            - Added is_gas_lift_design
            - Deleted compute_injection_bhp
                - well_data_named
                    - Added rod_pump_data
                    - Deleted gradient_case_id
                    - esp_data
                        - Added wear_factor
                        - parameters_all_esps
                            - esp_manufacturer
                            - Added enum value extract
                                - reservoir_pressure_source -> Added enum values multiphase_fmb, gas, history_matching
- **PUT /api-external/v1/wells/{well_id}/vlp_case/{vlp_case_id}**
    - Request body changed
        - Added water_salinity
    - Response 200 changed
        - Added water_salinity
- **GET /api-external/v1/wells/{well_id}/vlp_cases**
    - Response 200 changed
        - Added water_salinity
        - nodal_analysis_calc
            - Added is_forecast
            - Added is_forecast_future
- **POST /api-external/v1/wells/{well_id}/vlp_cases**
    - Request body changed
        - Added water_salinity
    - Response 200 changed
        - Added water_salinity

Nodal Analysis Gradient

- **PATCH /api-external/v1/wells/gradient_cases**
    - Added properties:
        - gradient_parallel_flowpath
        - qg_inj_sc
        - qw_inj_sc
        - water_salinity

    - gradient_calc.correlation updates:
        - Added enum values:
            - hagedorn_and_brown
            - beggs_and_brill
            - gray
            - woldesemayat_and_ghajar
            - <nil>
- **PUT /api-external/v1/wells/gradient_cases**
    - Request body → added properties:
        - gradient_parallel_flowpath
        - qg_inj_sc
        - qw_inj_sc
        - water_salinity
    - correlation updates:
        - Added enum values:
            - hagedorn_and_brown
            - beggs_and_brill
            - gray
            - woldesemayat_and_ghajar
            - <nil>
        - Nullable changed from false to true
- **PUT /api-external/v1/wells/gradient_cases/{gradient_case_id}**
    - Request body → added properties:
        - gradient_parallel_flowpath
        - qg_inj_sc
        - qw_inj_sc
        - water_salinity
    - gradient_calc.correlation updates:
        - Added enum values:
            - hagedorn_and_brown
            - beggs_and_brill
            - gray
            - woldesemayat_and_ghajar
            - <nil>
- **POST /api-external/v1/wells/latest_date_gradient_cases**
    - Request body → cases updates:
        - Added properties:
            - gradient_parallel_flowpath
            - water_salinity
        - gradient_calc.correlation updates:
            - Added enum values: hagedorn_and_brown, beggs_and_brill, gray, woldesemayat_and_ghajar, <nil>
- **GET /api-external/v1/wells/{well_id}/gradient_cases**
    - Response 200 changed
        - Added gradient_parallel_flowpath
        - Added qg_inj_sc
        - Added qw_inj_sc
        - Added water_salinity

        - gradient_calc
            - correlation
                - Added enum values hagedorn_and_brown, beggs_and_brill, gray, woldesemayat_and_ghajar, <nil>
- **POST /api-external/v1/wells/{well_id}/gradient_cases**
    - Response 200 changed
        - Added gradient_parallel_flowpath
        - Added qg_inj_sc
        - Added qw_inj_sc
        - Added water_salinity
        - gradient_calc
            - correlation
                - Added enum values hagedorn_and_brown, beggs_and_brill, gray, woldesemayat_and_ghajar, <nil>

Nodal Analysis Gas Lift Optimizer

- **GET /api-external/v1/wells/bulk_gas_lift_optimizer_results**
    - wells.ipr_input.ipr_type updates:
        - Added enum values:
            - vogel gas
            - <nil>
- **PATCH /api-external/v1/wells/bulk_gas_lift_optimizer_results**
    - wells.ipr_input.ipr_type updates:
        - Added enum values:
            - vogel gas
            - <nil>
- **PATCH /api-external/v1/wells/gas_lift_optimizer_cases**
    - Added property:
        - water_salinity
    - gas_lift_optimizer_calc.correlation updates:
        - Added enum values:
            - hagedorn_and_brown
            - beggs_and_brill
            - gray
            - woldesemayat_and_ghajar
            - <nil>
- **GET /api-external/v1/wells/gas_lift_optimizer_cases_paginated**
    - Added property:
        - water_salinity
    - **gas_lift_optimizer_calc.correlation** updates:
        - Added enum values:
            - hagedorn_and_brown
            - beggs_and_brill
            - gray
            - woldesemayat_and_ghajar
            - <nil>
- **GET /api-external/v1/wells/{well_id}/fetch_from_ipr**
    - Response 200 changed

        - Added fetch_forecast_from_numerical_model
        - Added show_liquid_rate
        - critical_correlation
            - Added enum values turner, coleman, nagoo, belfroid
        - erosional_rate_type
            - Added enum values none, api14e, svedeman
        - ipr_type
            - Added enum values vogel gas, <nil>
        - n_gas_ipr
            - Nullable changed from false to true
        - reservoir_pressure_source
            - Added enum values multiphase_fmb, gas, history_matching
        - show_addition_graph_points
            - Nullable changed from true to false
        - show_bhp
            - Nullable changed from true to false
        - show_d_tubing_inner
            - Nullable changed from true to false
        - show_gas_lift_valve_depth
            - Nullable changed from true to false
- **GET /api-external/v1/wells/{well_id}/gas_lift_optimizer_cases**
    - Response 200 changed
        - Added water_salinity
        - gas_lift_optimizer_calc
            - correlation
                - Added enum values hagedorn_and_brown, beggs_and_brill, gray, woldesemayat_and_ghajar, <nil>
- **POST /api-external/v1/wells/{well_id}/gas_lift_optimizer_cases**
    - Request body changed
        - Added water_salinity
    - Response 200 changed
        - Added water_salinity
- **PUT /api-external/v1/wells/{well_id}/gas_lift_optimizer_cases/{gas_lift_case_id}**
    - Request body changed
        - Added water_salinity
    - Response 200 changed
        - Added water_salinity

Multi Well Gas Lift Optimizer

- **PUT /api-external/v1/multi_well_gas_lift_opt/{multi_well_gas_lift_id}/change_injection_rate**
    - Response → added properties:
        - fetch_forecast_from_numerical_model
        - flowing_wellhead_pressure
        - flowing_wellhead_pressure_input_values
        - injection_wellhead_pressure
        - injection_wellhead_pressure_input_values
- **GET /api-external/v1/multi_well_gas_lift_opt/{multi_well_gas_lift_id}/settings**
    - Response → added properties:
        - fetch_forecast_from_numerical_model

        - flowing_wellhead_pressure
        - flowing_wellhead_pressure_input_values
        - injection_wellhead_pressure
        - injection_wellhead_pressure_input_values
- **PUT /api-external/v1/multi_well_gas_lift_opt/{multi_well_gas_lift_id}/settings**
    - Request body → added properties:
        - fetch_forecast_from_numerical_model
        - flowing_wellhead_pressure
        - flowing_wellhead_pressure_input_values
        - injection_wellhead_pressure
        - injection_wellhead_pressure_input_values
    - Response → added properties:
        - fetch_forecast_from_numerical_model
        - flowing_wellhead_pressure
        - flowing_wellhead_pressure_input_values
        - injection_wellhead_pressure
        - injection_wellhead_pressure_input_values

Type Well

- **DELETE /api-external/v1/type_wells/saved_cases**
    - Request body → added property:
        - is_pnr
- **PATCH /api-external/v1/type_wells/saved_cases**
    - Response → date_updated format changed:
        - From: date
        - To: date-time

NGL Calculation

- **GET /api-external/v1/wells/{well_id}/ngl_calculation_result**
    - Response 200 changed
        - Added c2_sales
        - Added c2_sales_ngl_yield
        - Added c3_sales
        - Added c3_sales_ngl_yield
        - Added c4_sales
        - Added c4_sales_ngl_yield
        - Added c5_plus_sales
        - Added c5_plus_sales_ngl_yield
        - Added n_c2_sales_common
        - Added n_c3_sales_common
        - Added n_c4_sales_common
        - Added n_c5_plus_sales_common