

OIL ANALYSIS FILE (OAN)

| ~ FILE VERIFICATION | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|--------------------------------------|------------------------------------------------|
| # (Information in this section is Assigned by the AER, and Appended to the PAS file upon Acceptance / Validation via WTC-Submit procedure) | | | | |
| WTCNUM | [CHAR 13] | AER WTC Tracking ID | Will not be Blank, system will input | AER-WTC Unique Certification number: |
| WTCDAT | [YYYY MM DD HHHH] | Submission/Acceptance Date | Will not be Blank, system will input | Date of WTC Verification & Acceptance |
| WTCSUB | [CHAR 60] | Submitter | Will not be Blank, system will input | Company whom Submitted Specific Well Test Data |
| COMP. | [CHAR 60] | Licensee Name | Will not be Blank, system will input | Based on Licensee |

~ VERSION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-----------------------------|--------------------------|----------------------------------------------------|
| PASTYPE. | [CHAR 7] | DIGITAL DATA - OIL ANALYSIS | PAS-OAN | Oil Analysis test, format |
| UNIT. | [CHAR 1] | UNITS FLAG | (M)etric | Metric Units for AER submission |
| VERS. | [NUMB 5,2] | AER DIGITAL WELL TEST DATA | 4.00 | Current AER version for ASCII test data submission |

~ WELL INFORMATION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| UWI . | [CHAR 20] | UNIQUE WELL ID | UWI must be valid and exist on AER database. | Unique Well Identifier - Bottomhole location. |
| DRILLEG. | [NUMB 2] | DRILLING LEG | Must be 01, 02, 03...09 (Cannot be 0 or NULL) | Drilling Leg (Event or Occurrence). Together with the UWI, this is to help define the bottom of the specific drill hole. |
| WLIC. | [CHAR 9] | AER WELL LICENSE NUMBER | Well License Number must match AER License Number for UWI | AER Well License Number |
| FORM. | [CHAR 20] | FORMATION NAME | | Name of the geological formation/zone |
| WSFL. | [NUMB 2] | WELL FLUID TYPE AT TEST DATE | Mandatory, must have a valid AER fluid code = (01) Oil, (02) Gas, (06) Water, or (17) Crude Bitumen | Type of Dominant Fluid Production/Pay (i.e. oil, gas, water) |

OIL ANALYSIS FILE (OAN)

~ TEST DATA

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|--------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| LABCO. | [CHAR 60] | LABORATORY NAME | | Company name conducting analysis |
| LFNUM. | [CHAR 25] | LABORATORY FILE NUMBER | | Identification number |
| TTOPL.M | [NUMB 6,2] | TEST/PROD. INTERVAL TOP M KB (LOG) | [TTOPL] (Interval Top - Log) must be > 0.0 and < [TBASL] (Interval Base - Log) | Top of tested or producing interval - in log depth, measured mKB |
| TBASL.M | [NUMB 6,2] | TEST/PROD. INTERVAL BASE M KB (LOG) | [TBASL] (Interval Base - Log) must be > 0.0 and => [TTOPL] (Interval Top - Log) and cannot be greater than Total Well Depth. | Base of tested or producing interval - in log depth, measured mKB |
| SDAT.DAY | [YYYY MM DD] | DATE SAMPLED | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date sample gathered |
| IDENT. | [CHAR 12] | CONTAINER IDENTITY | | Identification code of container |
| SPNT. | [NUMB 2] | SAMPLE POINT CODE | Mandatory, must be Valid AER Sample Point Code (See Footnote). | Sample gathering point |
| SPNTN. | [CHAR 100] | SAMPLE POINT NAME | | Laboratories Unique Text Description of Sample Gathering Point |
| ADAT.DAY | [YYYY MM DD] | DATE ANALYZED | Must be >= [SDAT] (Sample Date) and <= Submission Date | Date Sample Analysis |
| SPRES.KPAA | [NUMB 8,2] | SAMPLE PRESSURE | Optional, can not be zero | Pressure as Sampled (in field) - kPaa |
| STEMP.DEGC | [NUMB 5,2] | SAMPLE TEMPERATURE | Optional, can be zero | Temperature as Sampled (in field) - DegC |
| RPRES.KPAA | [NUMB 8,2] | RECEIVED PRESSURE | Optional, can not be zero | Pressure as Received (in Lab) -kPaa |
| RTEMP.DEGC | [NUMB 5,2] | RECEIVED TEMPERATURE | Optional, can be zero | Temperature as Received (in Lab) - DegC |
| DSTLOC. | [CHAR 1] | DST SAMPLE LOCATION | If [SPNT] (Sample Point Code) = (50) then [DSTLOC] (DST Sample Location) must be (T)op, (M)iddle, or (B)ottom. Else must be Null. | |
| OANC. | [CHAR 240] | COMMENT ON SAMPLE | Optional | General Free form Comment (regarding Sample or Analytical Procedures). |

OIL ANALYSIS FILE (OAN)

~ OIL SAMPLE PROPERTIES

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| CNAM. | [CHAR 40] | COLOUR OF CLEAN OIL | Optional | Colour of clean oil, by name |
| CNUM. | [CHAR 20] | COLOUR NUMBER | Optional | Colour number, by ASTM D-1500 |
| BSWW.FRAC | [NUMB 4,3] | FRACTION OF WATER | Optional, can be null or zero | Basic sand and water volume fraction, of water |
| BSWS.FRAC | [NUMB 4,3] | FRACTION OF SEDIMENT | Optional, can be null or zero | Basic sand and water volume fraction, of sediment |
| BSW.FRAC | [NUMB 4,3] | FRACTION OF TOTAL BS&W | Optional, can be null or zero | Basic sand and water volume fraction, total |
| RDNRX. | [NUMB 4,3] | RELATIVE DENSITY AS RECEIVED | Optional, can be null or zero | Relative density as received |
| RDNCL. | [NUMB 4,3] | RELATIVE DENSITY AFTER CLEANING | Optional, can be null or zero | Relative density after cleaning |
| ADNRX.KG/M3 | [NUMB 6,1] | ABSOLUTE DENSITY AS RECEIVED | Optional, can be null or zero | Absolute density as received, kg/m ³ |
| ADNCL.KG/M3 | [NUMB 6,1] | ABSOLUTE DENSITY AFTER CLEANING | Mandatory, can not be zero | Absolute density after cleaning, kg/m ³ |
| API. | [NUMB 6,2] | API GRAVITY @ 15 DEGC | Optional, can be null or zero | API gravity @ 15 (Degrees Celsius) |
| TSUL.FRAC | [NUMB 7,5] | TOTAL SULPHUR MASS FRACTION | If [TSUL.GM/KG] (Total Sulphur) is Null then [TSUL.FRAC] (Total Sulphur Mass Fraction) is mandatory (either must be present). Can be zero. | Mass fraction of total sulphur |
| TSUL.GM/KG | [NUMB 7,2] | TOTAL SULPHUR | If TSUL.FRAC is null then [TSUL.FRAC] (Total Sulphur Mass Fraction) is mandatory (either must be present). Can be zero | Ratio of total sulphur, gm/kg |
| TSALT.KG/M3 | [NUMB 7,5] | TOTAL SALT | Optional, can be null or zero | Salt kg/m ³ |
| RVP.KPAA | [NUMB 8,2] | REID VAPOUR PRESSURE | Optional, can be null or zero | Reid Vapour Pressure, kPaa |
| CONRD.FRAC | [NUMB 8,2] | CARBON RISIDUE CONRADSON FRACTION | Optional, can be null or zero | Carbon Residue, mass fraction - Conradson |
| RAMBT.FRAC | [NUMB 8,2] | CARBON RISIDUE RAMSBOTTOM FRACTION | Optional, can be null or zero | Carbon Residue, mass fraction - Ramsbottom |
| PPTUSBM.DEGC | [NUMB 5,2] | POUR POINT U.S.B.M. STANDARD DEGC | Optional, can be null, negative or zero | Pour Point U.S.B.M. standard - (Degrees Celsius) |
| PPTASTM.DEGC | [NUMB 5,2] | POUR POINT A.S.T.M. STANDARD DEGC | Optional, can be null, negative or zero | Pour Point A.S.T.M. standard - (Degrees Celsius) |

OIL ANALYSIS FILE (OAN)

~ OIL VISCOSITY

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|---------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------|
| UT1.DEGC | [NUMB 2] | VISCOSITY TEMPERATURE POINT 1 | Must be > 0 | Viscosity temperature point 1, (Degrees Celsius) |
| UAB1.MPA'S | [NUMB 11,3] | ABSOLUTE/DYNAMIC VISCOSITY AT POINT 1 | Must be > 0.00 | Absolute/Dynamic viscosity at point 1, mPa's |
| UKIN1.MM2/S | [NUMB 11,3] | KINEMATIC VISCOSITY AT POINT 1 | Must be > 0.00 | Kinematic viscosity at point 1, mm ² /s |
| UT2.DEGC | [NUMB 2] | VISCOSITY TEMPERATURE POINT 2 | Optional. If present, must be > 0. Must be reported if established | Viscosity temperature point 2, (Degrees Celsius) |
| UAB2.MPA'S | [NUMB 11,3] | ABSOLUTE/DYNAMIC VISCOSITY AT POINT 2 | Optional. If present, must be > 0.00. Must be reported if established | Absolute/Dynamic viscosity at point 2, mPa's |
| UKIN2.MM2/S | [NUMB 11,3] | KINEMATIC VISCOSITY AT POINT 2 | Optional. If present, must be > 0.00. Must be reported if established | Kinematic viscosity at point 2, mm ² /s |
| UT3.DEGC | [NUMB 2] | VISCOSITY TEMPERATURE POINT 3 | Optional. If present, must be > 0. Must be reported if established | Viscosity temperature point 3, (Degrees Celsius) |
| UAB3.MPA'S | [NUMB 11,3] | ABSOLUTE/DYNAMIC VISCOSITY AT POINT 3 | Optional. If present, must be > 0.00. Must be reported if established | Absolute/Dynamic viscosity at point 3, mPa's |
| UKIN3.MM2/S | [NUMB 11,3] | KINEMATIC VISCOSITY AT POINT 3 | Optional. If present, must be > 0.00. Must be reported if established | Kinematic viscosity at point 3, mm ² /s |
| UT4.DEGC | [NUMB 2] | VISCOSITY TEMPERATURE POINT 4 | Optional. If present, must be > 0. Must be reported if established | Viscosity temperature point 4, (Degrees Celsius) |
| UAB4.MPA'S | [NUMB 11,3] | ABSOLUTE/DYNAMIC VISCOSITY AT POINT 4 | Optional. If present, must be > 0.00. Must be reported if established | Absolute/Dynamic viscosity at point 4, mPa's |
| UKIN4.MM2/S | [NUMB 11,3] | KINEMATIC VISCOSITY AT POINT 4 | Optional. If present, must be > 0.00. Must be reported if established | Kinematic viscosity at point 4, mm ² /s |
| UT5.DEGC | [NUMB 2] | VISCOSITY TEMPERATURE POINT 5 | Optional. If present, must be > 0. Must be reported if established | Viscosity temperature point 5, (Degrees Celsius) |
| UAB5.MPA'S | [NUMB 11,3] | ABSOLUTE/DYNAMIC VISCOSITY AT POINT 5 | Optional. If present, must be > 0.00. Must be reported if established | Absolute/Dynamic viscosity at point 5, mPa's |
| UKIN5.MM2/S | [NUMB 11,3] | KINEMATIC VISCOSITY AT POINT 5 | Optional. If present, must be > 0.00. Must be reported if established | Kinematic viscosity at point 5, mm ² /s |
| UT6.DEGC | [NUMB 2] | VISCOSITY TEMPERATURE POINT 6 | Optional. If present, must be > 0. Must be reported if established | Viscosity temperature at point 6, (Degrees Celsius) |
| UAB6.MPA'S | [NUMB 11,3] | ABSOLUTE/DYNAMIC VISCOSITY AT POINT 6 | Optional. If present, must be > 0.00. Must be reported if established | Absolute/Dynamic viscosity at point 6, mPa's |
| UKIN6.MM2/S | [NUMB 11,3] | KINEMATIC VISCOSITY AT POINT 6 | Optional. If present, must be > 0.00. Must be reported if established | Kinematic viscosity at point 6, mm ² /s |

OIL ANALYSIS FILE (OAN)

~ OIL DISTILLATION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-----------------------------------|-------------------------------------------|-------------------------------------------------------|
| IBP.DEGC | [NUMB 5,2] | INITIAL BOILING POINT TEMPERATURE | Optional, must be reported if established | Initial boiling point temperature, (Degrees Celsius) |
| DVL1.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 1 | Optional, must be reported if established | Distillation volume fraction 1 |
| DTP1.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 1 | Optional, must be reported if established | Distillation volume temperature 1, (Degrees Celsius) |
| DVL2.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 2 | Optional, must be reported if established | Distillation volume fraction 2 |
| DTP2.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 2 | Optional, must be reported if established | Distillation volume temperature 2, (Degrees Celsius) |
| DVL3.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 3 | Optional, must be reported if established | Distillation volume fraction 3 |
| DTP3.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 3 | Optional, must be reported if established | Distillation volume temperature 3, (Degrees Celsius) |
| DVL4.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 4 | Optional, must be reported if established | Distillation volume fraction 4 |
| DTP4.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 4 | Optional, must be reported if established | Distillation volume temperature 4, (Degrees Celsius) |
| DVL5.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 5 | Optional, must be reported if established | Distillation volume fraction 5 |
| DTP5.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 5 | Optional, must be reported if established | Distillation volume temperature 5, (Degrees Celsius) |
| DVL6.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 6 | Optional, must be reported if established | Distillation volume fraction 6 |
| DTP6.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 6 | Optional, must be reported if established | Distillation volume temperature 6, (Degrees Celsius) |
| DVL7.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 7 | Optional, must be reported if established | Distillation volume fraction 7 |
| DTP7.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 7 | Optional, must be reported if established | Distillation volume temperature 7, (Degrees Celsius) |
| DVL8.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 8 | Optional, must be reported if established | Distillation volume fraction 8 |
| DTP8.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 8 | Optional, must be reported if established | Distillation volume temperature 8, (Degrees Celsius) |
| DVL9.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 9 | Optional, must be reported if established | Distillation volume fraction 9 |
| DTP9.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 9 | Optional, must be reported if established | Distillation volume temperature 9, (Degrees Celsius) |
| DVL10.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 10 | Optional, must be reported if established | Distillation volume fraction 10 |
| DTP10.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 10 | Optional, must be reported if established | Distillation volume temperature 10, (Degrees Celsius) |
| DVL11.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 11 | Optional, must be reported if established | Distillation volume fraction 11 |
| DTP11.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 11 | Optional, must be reported if established | Distillation volume temperature 11, (Degrees Celsius) |
| DVL12.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 12 | Optional, must be reported if established | Distillation volume fraction 12 |
| DTP12.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 12 | Optional, must be reported if established | Distillation volume temperature 12, (Degrees Celsius) |
| DVL13.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 13 | Optional, must be reported if established | Distillation volume fraction 13 |
| DTP13.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 13 | Optional, must be reported if established | Distillation volume temperature 13, (Degrees Celsius) |
| DVL14.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 14 | Optional, must be reported if established | Distillation volume fraction 14 |
| DTP14.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 14 | Optional, must be reported if established | Distillation volume temperature 14, (Degrees Celsius) |
| DVL15.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 15 | Optional, must be reported if established | Distillation volume fraction 15 |
| DTP15.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 15 | Optional, must be reported if established | Distillation volume temperature 15, (Degrees Celsius) |
| DVL16.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 16 | Optional, must be reported if established | Distillation volume fraction 16 |
| DTP16.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 16 | Optional, must be reported if established | Distillation volume temperature 16, (Degrees Celsius) |
| DVL17.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 17 | Optional, must be reported if established | Distillation volume fraction 17 |
| DTP17.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 17 | Optional, must be reported if established | Distillation volume temperature 17, (Degrees Celsius) |
| DVL18.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 18 | Optional, must be reported if established | Distillation volume fraction 18 |
| DTP18.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 18 | Optional, must be reported if established | Distillation volume temperature 18, (Degrees Celsius) |

OIL ANALYSIS FILE (OAN)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-----------------------------------|-------------------------------------------|-------------------------------------------------------|
| DVL19.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 19 | Optional, must be reported if established | Distillation volume fraction 19 |
| DTP19.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 19 | Optional, must be reported if established | Distillation volume temperature 19, (Degrees Celsius) |
| DVL20.FRAC | [NUMB 4,2] | VOLUME FRACTION POINT 20 | Optional, must be reported if established | Distillation volume fraction 20 |
| DTP20.DEGC | [NUMB 5,2] | VOLUME TEMPERATURE POINT 20 | Optional, must be reported if established | Distillation volume temperature 20, (Degrees Celsius) |
| FBP.DEGC | [NUMB 5,2] | FINAL BOILING POINT TEMPERATURE | Optional, must be reported if established | Final boiling point temperature, (Degrees Celsius) |
| CRKBP.DEGC | [NUMB 5,2] | CRACKED BOILING POINT TEMPERATURE | Optional, must be reported if established | Cracked boiling point temperature, (Degrees Celsius) |

~ METHODS AND SUMMARIES

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|---------------------------------------|---------------------------------------------------------|-----------------------------------------|
| METHD. | [CHAR 20] | DISTILLATION METHOD | Optional, can be null | Method used in distillation |
| PBARA.KPAA | [NUMB 4,1] | ABSOLUTE BAROMETRIC PRESSURE | Optional, can be null | Absolute barometric pressure, kPaa |
| TROOM.DEGC | [NUMB 5,2] | ROOM TEMPERATURE | Optional, can be null. If present, must be > 0 and < 45 | Lab room temperature, (Degrees Celsius) |
| DVLNP.FRAC | [NUMB 4,2] | NAPHTHA SUMMARY VOLUME FRACTION | Optional, can be zero or null | Naphtha fraction |
| DVLKR.FRAC | [NUMB 4,2] | KEROSENE SUMMARY VOLUME FRACTION | Optional, can be zero or null | Kerosene fraction |
| DVLGO.FRAC | [NUMB 4,2] | LIGHT GAS/OIL SUMMARY VOLUME FRACTION | Optional, can be zero or null | Light gas/oil fraction |
| DVLRG.FRAC | [NUMB 4,2] | RECOVERED SUMMARY VOLUME FRACTION | Optional, can be zero or null | Recovered fraction |
| DVLRG.FRAC | [NUMB 4,2] | RESIDUE SUMMARY VOLUME FRACTION | Optional, can be zero or null | Residue fraction |
| DVLLS.FRAC | [NUMB 4,2] | LOSS SUMMARY VOLUME FRACTION | Optional, can be zero or null | Distillation loss fraction |
| CFACT. | [NUMB 5,1] | CHARACTERIZATION FACTOR | Optional, can be zero or null | |
| GCOM. | [CHAR 240] | GENERAL COMMENT | Optional, can be null | Free form general comment |

OIL ANALYSIS FILE (OAN)

Sample Point Codes (SPNT)

- 20 First Stage Separator
- 25 Second Stage Separator
- 30 Wellhead
- 35 Meter Run
- 40 Pressure Tank
- 45 Downhole Samplers - Post Drilling (*i.e. RFT's, MDT's etc.*)
- 50 DST
- 60 Tubing
- 70 Other (Miscellaneous)

GENERAL EDITS

ALL Mnemonic Values are Mandatory, unless otherwise noted.

"Conditional" Values will be noted as, (i.e. Mandatory, if TTYP = 08 or 18)

Zero's are NOT acceptable unless otherwise noted.

WHERE SECTION RULES EXIST (Noted by the # Sign) THEY ARE SUPERSEDED BY INDIVIDUAL BUSINESS RULES AND EDITS

ALL DEPTHS (for OAN) are measured or calculated and reported in reference to (KB) Kelly Bushing Elevation

ALL DATES must be >= Spud Date and <= Abandoned Date and <= Submission Date

All Depths must be less than 7,000.00 M

All Pressures must be less than 150,000.00 kPa

All Temperatures (**unless otherwise noted**) must be between -100 and 1,000°C

All Times must be less than 100,000.0 Hours

All gas production rates must be less than 100,000.00 E3M3/day

All oil and water rates must be less than 100,000.00 M3/day

Image Attachment required if Extended Component Analysis performed

WATER ANALYSIS FILE (WAN)

| - FILE VERIFICATION | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|--------------------------------------|------------------------------------------------|
| # (Information in this section is Assigned by the AER, and Appended to the PAS file upon Acceptance / Validation via WTC-Submit procedure) | | | | |
| WTCNUM | [CHAR 13] | AER WTC Tracking ID | Will not be Blank, system will input | AER-WTC Unique Certification number. |
| WTCDAT | [YYYY MM DD HHHH] | Submission/Acceptance Date | Will not be Blank, system will input | Date of WTC Verification & Acceptance |
| WTCSUB | [CHAR 60] | Submitter | Will not be Blank, system will input | Company whom Submitted Specific Well Test Data |
| COMP. | [CHAR 60] | Licensee Name | Will not be Blank, system will input | Based on Licensee |

- VERSION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-------------------------------|--------------------------|----------------------------------------------------|
| PASTYPE. | [CHAR 7] | DIGITAL DATA - WATER ANALYSIS | PAS-WAN | Water Analysis test, format |
| UNIT. | [CHAR 1] | UNITS FLAG | (M)etric | Metric Units for AER submission |
| VERS. | [NUMB 5,2] | AER DIGITAL WELL TEST DATA | 4.00 | Current AER version for ASCII test data submission |

- WELL INFORMATION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| UWI. | [CHAR 20] | UNIQUE WELL ID | UWI must be valid and exist on AER database. | Unique Well Identifier - Bottomhole location. |
| DRILLEG. | [NUMB 2] | DRILLING LEG | Must be 01, 02, 03...09 (Cannot be 0 or NULL) | Drilling Leg (Event or Occurrence). Together with the UWI, this is to help define the bottom of the specific drill hole. |
| WLIC. | [CHAR 9] | AER WELL LICENSE NUMBER | Well License Number must match AER License Number for UWI | AER Well License Number |
| FORM. | [CHAR 20] | FORMATION NAME | | Name of the geological formation/zone |
| WSFL. | [NUMB 2] | WELL FLUID TYPE AT TEST DATE | Mandatory, must have a valid AER fluid code = (01) Oil, (02) Gas, (06) Water, or (17) Crude Bitumen | Type of Dominant Fluid Production/Pay (i.e. oil, gas, water) |

- TEST DATA

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|--------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| LABCO. | [CHAR 60] | LABORATORY NAME | | Company name conducting analysis |
| LFNUM. | [CHAR 25] | LABORATORY FILE NUMBER | | Identification number |
| TTOPL.M | [NUMB 6,2] | TEST/PROD. INTERVAL TOP M KB (LOG) | [TTOPL] (Interval Top - Log) must be > 0.0 and < [TBASL] (Interval Base - Log) | Top of tested or producing interval - in log depth, measured mKB |
| TBASL.M | [NUMB 6,2] | TEST/PROD. INTERVAL BASE M KB (LOG) | [TBASL] (Interval Base - Log) must be > 0.0 and => [TTOPL] (Interval Top - Log) and cannot be greater than Total Well Depth. | Base of tested or producing interval - in log depth, measured mKB |
| SDAT.DAY | [YYYY MM DD] | DATE SAMPLED | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date sample gathered |
| IDENT. | [CHAR 12] | CONTAINER IDENTITY | | Identification code of container |

WATER ANALYSIS FILE (WAN)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|--------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| SPNT. | [NUMB 2] | SAMPLE POINT CODE | Mandatory, must be Valid AER Sample Point Code (See Footnote). | Sample gathering point |
| SPNTN. | [CHAR 50] | SAMPLE POINT NAME | | Laboratories Unique Text Description of Sample Gathering Point |
| ADAT.DAY | [YYYY MM DD] | DATE ANALYZED | Must be >= [SDAT] (Sample Date) and <= Submission Date | Date Sample Analysis |
| SPRES.KPAA | [NUMB 8,2] | SAMPLE PRESSURE | Optional, if present can not be zero | Pressure as Sampled (in field) - kPaa |
| STEMP.DEGC | [NUMB 5,2] | SAMPLE TEMPERATURE | Optional, if present can not be zero | Temperature as Sampled (in field) - DegC |
| RPRES.KPAA | [NUMB 8,2] | RECEIVED PRESSURE | Optional, if present can not be zero | Pressure as Received (in Lab) -kPaa |
| RTEMP.DEGC | [NUMB 5,2] | RECEIVED TEMPERATURE | Optional, if present can not be zero | Temperature as Received (in Lab) - DegC |
| DSTLOC. | [CHAR 1] | DST SAMPLE LOCATION | If [SPNT] (Sample Point Code) = (50) then [DSTLOC] (DST Sample Location) must be (T)op, (M)iddle, or (B)ottom. Else must be Null. | |
| WANC. | [CHAR 240] | COMMENT ON SAMPLE | Optional | General Free form Comment (regarding Sample or Analytical Procedures). |

~ WATER CATIONS

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|--------------------------------|--------------------------|-----------------------------------------|
| NA.MG/L | [NUMB 9,2] | SODIUM CATION | Mandatory, can be zero | Sodium mg/L |
| NA.MEQ/L | [NUMB 9,2] | SODIUM CATION CONCENTRATION | Mandatory, can be zero | Sodium milli-equivalent |
| K.MG/L | [NUMB 9,2] | POTASSIUM CATION | Mandatory, can be zero | Potassium mg/L |
| K.MEQ/L | [NUMB 9,2] | POTASSIUM CATION CONCENTRATION | Mandatory, can be zero | Potassium milli-equivalent |
| CA.MG/L | [NUMB 9,2] | CALCIUM CATION | Mandatory, can be zero | Calcium mg/L |
| CA.MEQ/L | [NUMB 9,2] | CALCIUM CATION CONCENTRATION | Mandatory, can be zero | Calcium milli-equivalent |
| MG.MG/L | [NUMB 9,2] | MAGNESIUM CATION | Mandatory, can be zero | Magnesium mg/L |
| MG.MEQ/L | [NUMB 9,2] | MAGNESIUM CATION CONCENTRATION | Mandatory, can be zero | Magnesium milli-equivalent |
| BA.MG/L | [NUMB 9,2] | BARIUM CATION | Optional, can be zero | Barium mg/L |
| BA.MEQ/L | [NUMB 9,2] | BARIUM CATION CONCENTRATION | Optional, can be zero | Barium milli-equivalent |
| SR.MG/L | [NUMB 9,2] | STRONTIUM CATION | Optional, can be zero | Strontium mg/L |
| SR.MEQ/L | [NUMB 9,2] | STRONTIUM CATION CONCENTRATION | Optional, can be zero | Strontium milli-equivalent |
| FE.MG/L | [NUMB 9,2] | IRON CATION | Optional, can be zero | Iron mg/L |
| FE.MEQ/L | [NUMB 9,2] | IRON CATION CONCENTRATION | Optional, can be zero | Iron milli-equivalent |
| MN.MG/L | [NUMB 9,2] | MANGANESE CATION | Optional, can be zero | Manganese mg/L |
| MN.MEQ/L | [NUMB 9,2] | MANGANESE CATION CONCENTRATION | Optional, can be zero | Manganese milli-equivalent |
| B.MG/L | [NUMB 9,2] | BORON CATION | Optional, can be zero | Boron mg/L |
| B.MEQ/L | [NUMB 9,2] | BORON CATION CONCENTRATION | Optional, can be zero | Boron milli-equivalent |

WATER ANALYSIS FILE (WAN)

~ WATER ANIONS

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|---------------------------------|--------------------------|-----------------------------------------|
| CL.MG/L | [NUMB 9,2] | CHLORIDE ANION | Mandatory, can be zero | Chloride mg/L |
| CL.MEQ/L | [NUMB 9,2] | CHLORIDE ANION CONCENTRATION | Mandatory, can be zero | Chloride milli-equivalent |
| BR.MG/L | [NUMB 9,2] | BROMIDE ANION | Optional, can be zero | Bromide mg/L |
| BR.MEQ/L | [NUMB 9,2] | BROMIDE ANION CONCENTRATION | Optional, can be zero | Bromide milli-equivalent |
| I.MG/L | [NUMB 9,2] | IODIDE ANION | Optional, can be zero | Iodide mg/L |
| I.MEQ/L | [NUMB 9,2] | IODIDE ANION CONCENTRATION | Optional, can be zero | Iodide milli-equivalent |
| HCO3.MG/L | [NUMB 9,2] | BICARBONATE ANION | Mandatory, can be zero | Bicarbonate mg/L |
| HCO3.MEQ/L | [NUMB 9,2] | BICARBONATE ANION CONCENTRATION | Mandatory, can be zero | Bicarbonate milli-equivalent |
| SO4.MG/L | [NUMB 9,2] | SULPHATE ANION | Mandatory, can be zero | Sulphate mg/L |
| SO4.MEQ/L | [NUMB 9,2] | SULPHATE ANION CONCENTRATION | Mandatory, can be zero | Sulphate milli-equivalent |
| CO3.MG/L | [NUMB 9,2] | CARBONATE ANION | Mandatory, can be zero | Carbonate mg/L |
| CO3.MEQ/L | [NUMB 9,2] | CARBONATE ANION CONCENTRATION | Mandatory, can be zero | Carbonate milli-equivalent |
| OH.MG/L | [NUMB 9,2] | HYDROXIDE ANION | Mandatory, can be zero | Hydroxide mg/L |
| OH.MEQ/L | [NUMB 9,2] | HYDROXIDE ANION CONCENTRATION | Mandatory, can be zero | Hydroxide milli-equivalent |

~ WATER SOLIDS AND OTHER MEASUREMENTS

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|----------------------------------------------|--------------------------|----------------------------------------------------------------|
| DS110.MG/L | [NUMB 9,2] | TOTAL DISSOLVED SOLIDS EVAPORATED @ 110 DEGC | Optional, can be zero | mg/L |
| DS180.MG/L | [NUMB 9,2] | TOTAL DISSOLVED SOLIDS EVAPORATED @ 180 DEGC | Optional, can be zero | mg/L |
| H2S.MG/L | [NUMB 9,2] | HYDROGEN SULPHIDE | Mandatory, can be zero | H2S mg/L |
| DSING.MG/L | [NUMB 9,2] | TOTAL DISSOLVED SOLIDS AT IGNITION | Optional, can be zero | mg/L |
| DSCAL.MG/L | [NUMB 9,2] | TOTAL DISSOLVED SOLIDS CALCULATED | Must be > 0.0 | mg/L |
| RDWTR. | [NUMB 4,3] | RELATIVE DENSITY | Optional, can be zero | |
| RDTMP.DEGC | [NUMB 5,2] | RELATIVE DENSITY TEMPERATURE | Optional, can be zero | Temperature whereby relative density measured, Degrees Celsius |
| RFIDX. | [NUMB 5,2] | REFRACTIVE INDEX | Optional, can be zero | Refractive index |
| RFTMP.DEGC | [NUMB 5,2] | REFRACTIVE INDEX TEMPERATURE | Optional, can be zero | Temperature whereby refractive index measured, Degrees Celsius |
| PHOBS. | [NUMB 4,1] | OBSERVED PH | Must be > 0.0 | Observed pH |
| PHTMP.DEGC | [NUMB 5,2] | OBSERVED PH TEMPERATURE | Must be > 0.0 | Temperature whereby pH observed, Degrees Celsius |
| PEOHM. | [NUMB 7,2] | RESISTIVITY | Optional, can be zero | Resistivity, Ohm-Meters |
| PETMP.DEGC | [NUMB 5,2] | RESISTIVITY TEMPERATURE | Optional, can be zero | Temperature whereby Resistivity measured, Degrees Celsius |
| SALT.PCT | [NUMB 5,2] | SALINITY TOTAL PERCENTAGE | Optional, can be zero | |
| GCOM. | [CHAR 240] | GENERAL COMMENT | Optional, can be zero | Free form general comment |

WATER ANALYSIS FILE (WAN)

Sample Point Codes (SPNT)

- 20 First Stage Separator
- 25 Second Stage Separator
- 30 Wellhead
- 35 Meter Run
- 40 Pressure Tank
- 45 Downhole Samplers - Post Drilling (*i.e. RFT's, MDT's etc.*)
- 50 DST
- 60 Tubing
- 70 Other (Miscellaneous)

GENERAL EDITS

ALL Mnemonic Values are Mandatory, unless otherwise noted.

"Conditional" Values will be noted as, (i.e. Mandatory, if TTYP = 08 or 18)

Zero's are NOT acceptable unless otherwise noted.

WHERE SECTION RULES EXIST (Noted by the # Sign) THEY ARE SUPERSEDED BY INDIVIDUAL BUSINESS RULES AND EDITS

ALL DEPTHS (for WAN) are measured or calculated and reported in reference to (KB) Kelly Bushing Elevation

ALL DATES must be >= Spud Date and <= Abandoned Date and <= Submission Date

All Depths must be less than 7,000.00 M

All Pressures must be less than 150,000.00 kPa

All Temperatures (**unless otherwise noted**) must be between -100 and 1,000°C

(sum of all MEQ/L Cation Concentrations) / (sum of all MEQ/L Anion Concentration) **should** = 1.00 (plus or minus 0.1)

DRILL STEM TEST FILE (DST)

| ~ FILE VERIFICATION | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|--------------------------------------|------------------------------------------------|
| # (Information in this section is Assigned by the AER, and Appended to the PAS file upon Acceptance / Validation via WTC-Submit procedure) | | | | |
| WTCNUM | [CHAR 13] | AER WTC Tracking ID | Will not be Blank, system will input | AER-WTC Unique Certification number: |
| WTCDAT | [YYYY MM DD HHHH] | Submission/Acceptance Date | Will not be Blank, system will input | Date of WTC Verification & Acceptance |
| WTCSUB | [CHAR 60] | Submitter | Will not be Blank, system will input | Company whom Submitted Specific Well Test Data |
| COMP. | [CHAR 60] | Licensee Name | Will not be Blank, system will input | Based on Licensee |

~ VERSION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|------------------------------|--------------------------|----------------------------------------------------|
| PASTYPE. | [CHAR 7] | DIGITAL DATA - DST TEST DATA | PAS-DST | Drill Stem Test, format |
| UNIT. | [CHAR 1] | UNITS FLAG | (M)etric | Metric Units for AER submission |
| VERS. | [NUMB 5,2] | AER DIGITAL WELL TEST DATA | 4.00 | Current AER version for ASCII test data submission |

~ WELL INFORMATION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|--------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| UWI . | [CHAR 20] | UNIQUE WELL ID | UWI must be valid and exist on AER database. | Unique Well Identifier - Bottomhole location. |
| DRILLEG. | [NUMB 2] | DRILLING LEG | Must be 01, 02, 03...09 (Cannot be 0 or NULL) | Drilling Leg (Event or Occurrence). Together with the UWI, this is to help define the bottom of the specific drill hole. |
| WLIC. | [CHAR 9] | AER WELL LICENSE NUMBER | Well License Number must match AER License Number for UWI | AER Well License Number |
| POOL. | [CHAR 1] | AER DESIGNATED POOL | Must be either (Y)es or (N)o. | Within AER Defined Pool / G-Order at time of Drilling? Gas and Fluid Sampling Regulatory Requirements in accordance with AER Guide 40. |
| FORM. | [CHAR 20] | FORMATION NAME | | Name of the geological formation/zone |
| FLEXP. | [NUMB 2] | FLUID TYPE EXPECTED | Must have a valid AER fluid code = (01) Oil, (02) Gas, (06) Water, or (17) Crude Bitumen | Type of Dominant Fluid Production/Pay (i.e. oil well, gas well, water well) Predominant fluid type needed to define as oil or gas test |
| WTYP. | [CHAR 1] | WELL TYPE INDICATOR | Mandatory, if [PRPS] (Purpose Indicator) = (I)nitial. Must be (V)ertical, (D)eviated or (H)orizontal | Flag indicating (V)ertical, (D)eviated, or (H)orizontal Wellbore |
| DPID.MM | [NUMB 4,1] | DRILL PIPE ID | Must be < 200 | Inside diameter of drilling pipe (mm) |

DRILL STEM TEST FILE (DST)

~ TEST DATA

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRPS. | [CHAR 1] | TEST PURPOSE | Mandatory, must be (I)initial pressure or (O)ther. | (I)initial designates test for the fulfillment of AER Guide 40, Initial Pressure Testing Regulatory Requirements. (O)ther indicates to comply exclusively with Oil & Gas Conservation Regulation 11.100, whereby all DST's must be submitted within 30 days of the Finished Drilling date. |
| SERCO. | [CHAR 5] | SERVICE COMPANY CODE | | Company conducting test (see AER Website) |
| CCCO. | [CHAR 20] | CLOSED CHAMBER COMPANY | Mandatory, if [TTYP] (DST Test Type Code) = (08) or (18). | Name of Company Conducting Closed Chamber Test |
| TTYP. | [CHAR 2] | DST TEST TYPE CODE | Must be Valid AER PAS-DST Test Code (See Footnote). | |
| RUNUM. | [NUMB 2] | RUN NUMBER | | Run Number / Trip Number into Hole - for Testing |
| TNUM. | [NUMB 4] | DST NUMBER | | DST Number (i.e. DST no.3) |
| H2SIND. | [CHAR 1] | H2S INDICATOR | Must be (Y)es or (N)one. | Flag indicating presence of H2S |
| TTOPL.M | [NUMB 6,2] | TEST/PROD INTERVAL TOP M KB (LOG) | [TTOPL] (Interval Top - Log) must be > 0.0 and < [TBASL] (Interval Base - Log) | Top of tested or producing interval - in log depth, measured mKB |
| TBASL.M | [NUMB 6,2] | TEST/PROD INTERVAL BASE M KB (LOG) | [TBASL] (Interval Base - Log) must be > 0.0 and => [TTOPL] (Interval Top - Log) and cannot be greater than Total Well Depth. | Base of tested or producing interval - in log depth, measured mKB |
| TTOPT.M | [NUMB 6,2] | TEST/PROD INTERVAL TOP M KB (TVD) | If [PRPS] (Purpose Indicator) = (I)initial. If [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal, then [TTOPT] (Interval Top - TVD) must be < [TTOPL] (Interval Base - Log), else if [WTYP] = (V)ertical, then [TTOPT] must = [TTOPL] | Top of tested or producing interval - in true vertical depth, calculated mKB |
| TBAST.M | [NUMB 6,2] | TEST/PROD INTERVAL BASE M KB (TVD) | If [PRPS] (Purpose Indicator) = (I)initial. If [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal, then [TBAST] (Interval Base - TVD) must be < [TBASL] (Interval Base - Log), else if [WTYP] = (V)ertical, then [TBAST] must = [TBASL] | Base of tested or producing interval - in true vertical depth, calculated mKB |
| FTDT.DAY/HR | [YYYY MM DD HHHH] | TEST FINAL DATE/TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date/Time test ended |
| MSRN. | [CHAR 1] | TEST MISRUN INDICATOR | Must be (Y)es or (N)o. If [MSRN] = (Y)es then [PRPS] (Test Purpose) must = (O)ther | Flag indicating Misrun of Test |

DRILL STEM TEST FILE (DST)

~ TEST SUMMARY DATA

{TEST SUMMARY DATA - Must be completed unless [MSRN] (Test Misrun Indicator) = (Y)es}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| GSERU. | [CHAR 20] | GAUGE SERIAL NUMBER USED IN SUMMARY | Mandatory | Serial number of Gauge/Recorder used for representative reservoir pressure |
| SDGAL.M | [NUMB 10,5] | REPRESENTATIVE GAUGE DEPTH M (LOG) | Must be <= [TBASL] (Interval Base - Log) | (LOG) Depth of Gauge/Recorder, representative of reservoir |
| SDGAT.M | [NUMB 10,5] | REPRESENTATIVE GAUGE DEPTH M (TVD) | Mandatory, if [PRPS] (Test Purpose Indicator) = (I)nitial, else Optional. If present and [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal; [SDGAT] (Representative Gauge Depth - TVD) must be <= [SDGAL] (Representative Gauge Depth - Log), else [SDGAT] must = [SDGAL] | (TVD) Depth of Gauge/Recorder, representative of reservoir |
| PRGA.KPAA | [NUMB 8,2] | PRESSURE AT GAUGE DEPTH KPAA | Mandatory, if [MSRN] (Test Misrun Indicator) = (N)o, otherwise can be Null | Most representative shut-in pressure recorded at Gauge/Recorder Depth |
| PEXTR.KPAA | [NUMB 8,2] | REPRESENTATIVE EXTRAP/ FALSE PRESSURE | Mandatory, if [PRPS] (Test Purpose) = (I)nitial Pressure; Must match one entry of [PEXTR] from [DTFG (n)] Table. Must be => than [PRGA] (Gauge Pressure at End of Stage) but cannot exceed [PRGA] by > 6%. | |
| PRFFG.KPAA | [NUMB 8,2] | FINAL FLOWING PRESSURE AT GAUGE DEPTH KPAA | Mandatory, if [MSRN] (Test Misrun Indicator) = (N)o | Final Measured Representative Flowing Gauge/Recorder Pressure kPaa |
| STGR.KPAA/M | [NUMB 5,3] | REPRESENTATIVE PRESSURE GRADIENT | Mandatory, if [PRPS] (Test Purpose Indicator) = (I)nitial. Can not be zero. IF [MSRN] (Test Misrun Indicator) = (Y)es, can be null. | |

DRILL STEM TEST FILE (DST)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|--------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| TRES.DEGC | [NUMB 5,2] | RESERVOIR TEMPERATURE | Optional. If present, must be > zero | |
| QGMX.E3M3/D | [NUMB 13,4] | MAXIMUM GAS FLOW RATE | Mandatory, if [QGFF] (Final Gas Flow Rate) > 0.00. Can be zero. | Maximum Flowing Gas Rate during test, (103m3/d) |
| QOMX.M3/D | [NUMB 13,4] | MAXIMUM OIL FLOW RATE | Mandatory, if [QOFF] (Final Oil Flow Rate) > 0.00. Can be zero. | Maximum Flowing Oil Rate during test, (m3/d) |
| QWMX.M3/D | [NUMB 13,4] | MAXIMUM WATER FLOW RATE | Mandatory, if [QWFF] (Final Water Flow Rate) > 0.00. Can be zero. | Maximum Flowing Water Rate during test, (m3/d) |
| TFGS.MIN | [NUMB 10,5] | TIME FOR FINAL GAS FLOW TO SURFACE | Mandatory, if [QGMX] (Maximum Gas Flow Rate) > 0.0, else must be Null. Can be zero. | Length of time for gas to reach surface (minutes). Note: "Immediate" Flow to Surface = 0 (zero) minutes. |
| TFOS.MIN | [NUMB 10,5] | TIME FOR FINAL OIL FLOW TO SURFACE | Mandatory, if [QOMX] (Maximum Oil Flow Rate) > 0.0, else must be Null. Can be zero. | Length of time for oil to reach surface (minutes). Note: "Immediate" Flow to Surface = 0 (zero) minutes. |
| TFWS.MIN | [NUMB 10,5] | TIME FOR FINAL WATER FLOW TO SURFACE | Mandatory, if [QWMX] (Maximum Water Flow Rate) > 0.0, else must be Null. Can be zero. | Length of time for water to reach surface (minutes). Note: "Immediate" Flow to Surface = 0 (zero) minutes. |
| GENC. | [CHAR 240] | COMMENT - GENERAL | Optional | Free form comment. Note: IF PRPS = (), GENC copied to AER Pressure Summary database. |

~ MUD AND CUSHION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|--------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------|
| MUTP. | [CHAR 12] | MUD/DRILLING FLUID TYPE | | Identify fluid used to drill well |
| MUWT.KG/M3 | [NUMB 9,4] | MUD WEIGHT | Must be > 300 and < 3000 | The measurement of the drilling mud mass/volume |
| CUTP. | [NUMB 1] | CUSHION TYPE CODE | Must = (0) None, (1) Water, (2) Oil, (3) Nitrogen, (4) Diesel, or (5) Inhibitor & Water | Cushion Fluid used during test. |
| CUGP.KPAA | [NUMB 8,2] | CUSHION GAS PRESSURE | If CUTP (Cushion Type Code) = (3) then CUGP (Cushion Gas Pressure) must be present. | Surface Pressure Pumped In (kPaa) |
| CUIL.M | [NUMB 10,5] | INITIAL CUSHION LENGTH | If CUTP (Cushion Type Code) <> (0) or (3) then CUIL (Initial Cushion Length) must be present. | The length of cushion present during test (m) |
| LCGR.KPA/M | [NUMB 5,3] | LIQUID CUSHION GRADIENT | If CUTP (Cushion Type Code) <> (0) or (3), then LCGR (Liquid Cushion Gradient) must be present. | Gradient of liquid portion of cushion (kPa/m) |

DRILL STEM TEST FILE (DST)

~ RECOVERIES - DST

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| MTST. | [CHAR 1] | MULTIPLE TEST RECOVERY INDICATOR | Must be either (Y)es or (N)o. If [MTST] (Multiple Test Recovery Indicator) = (Y)es, then >1 [RXXA] (Recovery Amount) must be reported. | Flag indicating recovery from multiple tests |
| RPXX. | [CHAR 1] | RECOVERY VOLUME TYPE INDICATOR | Must be (V)olume, (H)eight in Metres, or (N)one. If [MTST] (Multiple Test Recovery Indicator) = (Y)es, then [RPXX] (recovery Volume Type Indicator) can not = (N)one. | Flag indicating unit of measure for Recovered amounts |

~ DATA TABLE - RECOVERIES

{DTREC - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTREC TABLE}

{TABLE DTREC CAN BE OMITTED IF [RPXX] (Recovery Volume Type Indicator) = (N)one}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RXXA.M or M3 | [NUMB 13,4] | RECOVERY AMOUNT - (M or M3) | [RXXA] must be reported in "m" Meters if [RPXX] (Recovery Volume Indicator) = (H)eight; [RXXA] must be reported in "m3" Cubic Metres if [RPXX] (Recovery Volume Indicator) = (V)olume. If [RPXX] = (H)eight, then the total of the first 6 recoveries (amount in meters) can not be > [TTOPL] (Interval Top -Log) by more than 10 meters. | Amount of recovery in volume <u>or</u> height as indicated above (see RPXX). Specific Unit must be noted depending of type of Recovery Amount (i.e. if "meters" are to be reported, then Mnemonic must equal [RXXA.M]. However if "cubic meters" are to be reported, then Mnemonic must = [RXXA.M3]. |
| RXXC. | [NUMB 3] | RECOVERY TYPE CODE | [RXXC] (Recovery Fluid Type Code) must be valid AER Code (see footnote) | Recovery Type Code |
| RXXD. | [CHAR 30] | RECOVERIES DESCRIPTION | Description must be provided if [RPXX] (Recovery Volume Indicator) = (V)olume or (H)eight | Description of Recoveries |

~ DTREC

| <u>RXXA</u> | <u>RXXC</u> | <u>RXXD</u> |
|----------------|-------------|-------------|
| 999999999.9999 | 999 | X(30) |
| 999999999.9999 | 999 | X(30) |
| 999999999.9999 | 999 | X(30) |

DRILL STEM TEST FILE (DST)

~ HEADER DATA – GAUGE (n)

{[GSERU] (Gauge Serial Number Used in Summary) must match one of the reported [GSER] (Gauge Serial Number) (i.e. Representative Gauges)}

{WHILE THOUGH, even if [MSRN] (Test Misrun Indicator) = (Y)es, this section is mandatory}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|--------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| MSRNG. | [CHAR 1] | GAUGE MISRUN INDICATOR | Must be (Y)es or (N)o. Match: [GSERU] (Gauge Serial Number used in Summary) = [GSER] (Gauge Serial Number) and if [MSRN] (Test Misrun Indicator) = (N)o, then [MSRNG] must = '(N)o | Flag indicating Gauge/Recorder Misrun (not entire test) |
| GSER. | [CHAR 20] | GAUGE SERIAL NUMBER | One Gauge must match [GSERU] (Gauge Serial Number used in Summary) | Serial or Reference number of Gauge/Recorder. Note: Number required for the ability to audit gauge data. |
| GTYP. | [CHAR 30] | GAUGE TYPE | | Type of gauge used (mechanical or electronic, model) |
| GMAN. | [CHAR 60] | GAUGE MANUFACTURER | | Name of manufacturer of Gauge/Recorder |
| GRNG.KPAA | [NUMB 8,2] | MAXIMUM RECORDER RANGE | | Full scale pressure range of Gauge/Recorder (kPaa) |
| GCAL.DAY | [YYYY MM DD] | DATE OF LAST CALIBRATION | Must be < = [FTDT] (Final Test Date/Time) | Date source Gauge/Recorder last calibrated |
| GRES. | [NUMB 6,5] | RESOLUTION % OF FULL-SCALE | | Published Resolution of Gauge/Recorder (Percentage) |
| GACC. | [NUMB 6,5] | ACCURACY % OF FULL-SCALE | | Published accuracy of Gauge/Recorder (Percentage) |
| SDGL.M | [NUMB 10,5] | GAUGE RUN DEPTH M KB (LOG) | | Gauge/Recorder depth (Measured Depth/LOG) in mKB |
| SDGT.M | [NUMB 10,5] | GAUGE RUN DEPTH M KB (TVD) | Mandatory, if [WTYP] (Well Type) = (D)eviated or (H)orizontal | Gauge/Recorder depth (Calculated Depth/TVD) in mKB |
| GPOS. | [CHAR 1] | GAUGE POSITION INDICATOR | [GPOS] (Gauge Position Indicator) must be (I)nside, (O)utside, (R)ecovery, (B)elow Straddle, (N)flate, or (U)nknown/Other. IF [GSERU] = [GSER] [GPOS] can not be = (U)nknown/Other | Flag indicating position of Gauge/Recorder - (I)nside, (O)utside, Fluid/(R)ecovery, (B)elow Straddle, (N)flate, of (U)nknown/Other |

DRILL STEM TEST FILE (DST)

~ DATA TABLE - FLOWING SUMMARY - GAUGE (n)

(DTFG (n) - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTFG (n) TABLES)

If [PRPS] (Test Purpose Indicator) = (I)nitiaL, THEN

Only recorder where [GSER] (Gauge Serial Number) matching [GSERU] Gauge Serial Number Used in Summary) requires at least one occurrence of [PEXTR] (Representative Extrap/False Pressure).

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | If [MSRN] (Test Misrun Indicator) = (Y)es can be null; If present must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour Clock. |
| STGE. | [CHAR 2] | STAGE NUMBER | If [MSRN] (Test Misrun Indicator) = (Y)es, can be null | Test stage number |
| FSTGC. | [CHAR 22] | STAGE DESCRIPTION | If [MSRN] (Test Misrun Indicator) = (Y)es, can be null | (i.e. Initial Hydrostatic, Start of 1st Flow) |
| PRGA.KPAA | [NUMB 8,2] | GAUGE PRESSURE AT END OF STAGE | Mandatory, if [MSRN] (Test Misrun Indicator) = (N)o, else can be null | Primary Gauge/Recorder pressure |

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| TSTD.MIN | [NUMB 10,5] | STAGE DURATION MINUTES | If [MSRN] (Test Misrun Indicator) = (Y)es, can be null. One occurrence per table must be > 0.0 | Duration of stage |
| PEXTR.KPAA | [NUMB 8,2] | REPRESENTATIVE EXTRAP/ FALSE PRESSURE | Mandatory, if [PRPS] (Test Purpose) = (I)nitiaL, at least one occurrence of [PEXTR] must be present in table. Must be >= [PRGA] (Gauge Pressure at End of Same Stage) but cannot exceed [PRGA] by > 6%. | |
| QGFF.E3M3/D | [NUMB 13,4] | FINAL GAS FLOW RATE | Mandatory if [MSRN] (Test Misrun Indicator) = (N)o, and at least one occurrence per table, can be zero. Else can be Null. | Flow Rate of Gas, at end of stage (103m3/d). |
| QOFF.M3/D | [NUMB 13,4] | FINAL OIL FLOW RATE | Mandatory if [MSRN] (Test Misrun Indicator) = (N)o, and at least one occurrence per table, can be zero. Else can be Null. | Flow Rate of Oil, at end of stage (m3/d). |
| QWFF.M3/D | [NUMB 13,4] | FINAL WATER FLOW RATE | Mandatory if [MSRN] (Test Misrun Indicator) = (N)o, and at least one occurrence per table, can be zero. Else can be Null. | Flow Rate of Water, at end of stage (m3/d). |

~ DTFG (n)

{IF [MSRN] = (N)o and [PRPS] (Purpose Indicator) = (O)ther, then there must be a minimum of 5 lines of data in the [DTFG (n)] table}

{IF [MSRN] = (N)o and [PRPS] (Purpose Indicator) = (I)nitiaL, then there must be a minimum of 8 lines of data in the [DTFG (n)] table; and a minimum 1 occurrence of [PEXTR] must exist}

| <u>TIME</u> | <u>STGE</u> | <u>FSTGC</u> | <u>PRGA</u> | <u>TSTD</u> |
|--------------------|-------------|--------------|-------------|-------------|
| YYYY MM DD HHHH:SS | XX | X(22) | 999999.99 | 99999.99999 |
| YYYY MM DD HHHH:SS | XX | X(22) | 999999.99 | 99999.99999 |
| YYYY MM DD HHHH:SS | XX | X(22) | 999999.99 | 99999.99999 |

DRILL STEM TEST FILE (DST)

...DTFG (n) - TABLE CONTINUED

| <u>PEXTR</u> | <u>QGFE</u> | <u>QOFF</u> | <u>QWFE</u> |
|--------------|----------------|----------------|----------------|
| 999999.99 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 999999.99 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 999999.99 | 999999999.9999 | 999999999.9999 | 999999999.9999 |

DRILL STEM TEST FILE (DST)

~ DATA TABLE - GAUGE (n)

(DTG (n), DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTG (n) TABLES)

{TABLE DTG (n) CAN BE OMITTED IF SUBSEQUENT/SECONDARY GAUGES MISRUN}

{If [MSRN] (Test Misrun Indicator) = (N)o, then 1 TABLE (at least 1 line of data) MUST BE PRESENT}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|--------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | If [MSRN] (Test Misrun Indicator) = (N)o, then must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour Clock |
| PRGA.KPAA | [NUMB 8,2] | GAUGE PRESSURE KPAA | | Pressure measured at that interval in time via source Gauge/Recorder |
| TGA.DEGC | [NUMB 5,2] | GAUGE TEMPERATURE | | Temperature measured at that interval in time via source Gauge/Recorder (DegC) |
| GCOM. | [CHAR 240] | GENERAL COMMENT | Optional | Free form comment |

~ DTG (n)

| <u>TIME</u> | <u>PRGA</u> | <u>TGA</u> | <u>GCOM</u> |
|--------------------|-------------|------------|-------------|
| YYYY MM DD HHHH:SS | 99999.99 | 999.99 | X(240) |
| YYYY MM DD HHHH:SS | 99999.99 | 999.99 | X(240) |
| YYYY MM DD HHHH:SS | 99999.99 | 999.99 | X(240) |

DRILL STEM TEST FILE (DST)

~ DATA TABLE - CLOSED CHAMBER

(DTCC - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTCC TABLE)

{TABLE DTCC CAN BE OMITTED IF CLOSED CHAMBER ([TTY] (Test Type Indicator) <> (08) or (18))

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | If [TTY] (Test Type Indicator) = (08) or (18), then must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour clock |
| SDPT.KPAA/MIN | [NUMB 8,2] | SURFACE DP/DT KPAA/MIN | Mandatory, if [TTY] (Test Type Indicator) = (08) or (18). Can be zero and can be negative. | Change in Surface pressure/time |
| PSUR.KPAA | [NUMB 8,2] | SURFACE PRESSURE | Mandatory, if [TTY] (Test Type Indicator) = (08) or (18). Can not be zero | Surface pressure (kPaa) |
| RDPT.KPAA/MIN | [NUMB 8,2] | RECOVERY DP/DT KPAA/MIN | Optional, if provided can be zero. | Change in recovery pressure/time |
| PRCV.KPAA | [NUMB 8,2] | RECOVERY PRESSURE | Optional, if provided can not be zero. | Recovery pressure (kPaa) |
| QCCLIQ.M3/D | [NUMB 13,4] | CALC LIQUID RATE | Mandatory, if [TTY] (Test Type Indicator) = (08) or (18), and Can be zero | m3/d |
| QCCGAS.E3M3/D | [NUMB 13,4] | CALC GAS RATE | Mandatory, if [TTY] (Test Type Indicator) = (08) or (18), and Can be zero | 103m3/d |

~ DTCC

| <u>TIME</u> | <u>SDPT</u> | <u>PSUR</u> | <u>RDPT</u> | <u>PRCV</u> |
|----------------|-------------|-------------|-------------|-------------|
| YYYYMMDDHHHHSS | 999999.99 | 999999.99 | 999999.99 | 999999.99 |
| YYYYMMDDHHHHSS | 999999.99 | 999999.99 | 999999.99 | 999999.99 |
| YYYYMMDDHHHHSS | 999999.99 | 999999.99 | 999999.99 | 999999.99 |

#... DTCC - TABLE CONTINUED

| <u>QCCLIQ</u> | <u>QCCGAS</u> |
|----------------|----------------|
| 999999999.9999 | 999999999.9999 |
| 999999999.9999 | 999999999.9999 |
| 999999999.9999 | 999999999.9999 |

DRILL STEM TEST FILE (DST)

Recovery Type Codes (RXXC):...

| | | |
|-------------------------------------------------|-------------------------------------------------|-----------------------------------------------|
| 01 Gas | 50 Oil | 100 Mud |
| 11 Condensate | 51 Gas cut Oil | 101 Gas/Condensate cut Mud |
| 12 Mud cut Condensate | 52 Mud cut Oil, or | 102 Oil cut Mud |
| 13 Water cut Condensate | 52 Mud & Gas cut Oil | 103 Gas & Oil cut Mud |
| 14 Salt Water cut Condensate | 53 Water cut Oil | 104 Water cut Mud |
| 15 Brackish Water cut Condensate | 54 Salt Water cut Oil | 105 Fresh Water cut Mud |
| 16 Sulphurous Brackish Water cut Condensate | 55 Brackish Water cut Oil | 106 Brackish Water cut Mud |
| 17 Sulphurous Salt Water cut Condensate | 56 Sulphurous Brackish Water cut Oil | 107 Salt Water cut Mud |
| 18 Mud & Water cut Condensate | 57 Sulphurous Salt Water cut Oil | 108 Sulphurous Brackish Water cut Mud |
| 19 Mud & Salt Water cut Condensate | 58 Mud & H2O cut Oil | 109 Sulphurous Salt Water cut Mud |
| 20 Mud & Brackish Water cut Condensate | 59 Mud & Salt H2O cut Oil | 110 Gas & Oil & Water cut Mud |
| 21 Mud & Sulphurous Salt Water cut Condensate | 60 Mud & Brackish H2O cut Oil | 111 Gas & Water cut Mud |
| 22 Mud & Sulphurous Brackish H2O cut Condensate | 61 Mud & Sulphurous Brackish H2O cut Oil | 112 Oil & Water cut Mud |
| | 62 Mud & Sulphurous Salt H2O cut Oil | |
| 150 Water | 152 Brackish Water | 153 Salt Water |
| 151 Fresh Water | 201 Gas cut Brackish Water | 202 Gas cut Salt Water |
| 157 Cloudy Water | 251 Oil cut Brackish Water | 252 Oil cut Salt Water |
| 200 Gas cut Water | 301 Oil & Gas cut Brackish Water | 302 Oil & Gas cut Salt Water |
| 250 Oil cut Water | 352 Mud cut Brackish Water | 353 Mud cut Salt Water |
| 300 Oil & Gas cut Water | 401 Mud & Gas cut Brackish Water | 402 Mud & Gas cut Salt Water |
| 350 Mud cut Water | 451 Mud & Oil cut Brackish Water | 452 Mud & Oil cut Salt Water |
| 351 Mud cut Fresh Water | 501 Mud & Oil & Gas cut Brackish Water | 502 Mud & Oil & Gas cut Salt Water |
| 400 Mud & Gas cut Water | | |
| 450 Mud & Oil / Water | | |
| 500 Mud & Oil & Gas / Water | | |
| 154 Sulphurous Water | 155 Sulphurous Brackish Water | 156 Sulphurous Salt Water |
| 203 Gas cut Sulphurous Water | 204 Gas cut Sulphurous Brackish H2O | 205 Gas cut Sulphurous Salt Water |
| 253 Oil cut Sulphurous Water | 254 Oil cut Sulphurous Brackish H2O | 255 Oil cut Sulphurous Salt Water |
| 303 Oil & Gas cut Sulphurous Water | 304 Oil & Gas cut Sulphurous Brackish H2O | 305 Oil & Gas cut Sulphurous Salt Water |
| 354 Mud cut Sulphurous Water | 355 Mud cut Sulphurous Brackish H2O | 356 Mud cut Sulphurous Salt Water |
| 403 Mud & Gas cut Sulphurous Water | 404 Mud & Gas cut Sulphurous Brackish H2O | 405 Mud & Gas cut Sulphurous Salt Water |
| 453 Mud & Oil cut Sulphurous Water | 454 Mud & Oil cut Sulphurous Brackish H2O | 455 Mud & Oil cut Sulphurous Salt Water |
| 503 Mud & Oil & Gas cut Sulphurous Water | 504 Mud & Oil & Gas cut Sulphurous Brackish H2O | 505 Mud & Oil & Gas cut Sulphurous Salt Water |
| | 995 Dry Pipe | 998 Load/Drilling Fluid (only) |
| | 996 Cushion | 999 Not Known |
| | 997 Sand | |

DRILL STEM TEST FILE (DST)

DST Test Type Codes (TTYTP)

| | | | |
|----|----------------------------------------|--------|------------|
| 07 | DST - Bottomhole | | |
| 08 | DST- Bottomhole & Closed Chamber | | |
| 17 | DST- Straddle | | |
| 18 | DST - Straddle & Closed Chamber | | |
| 46 | <i>RFT (Repeat Formation Tester)</i> | <----- | Currently |
| 47 | <i>MDT (Modular Dynamic Tester)</i> | <----- | Omitting |
| 48 | <i>WFT (Wireline Formation Tester)</i> | <----- | these |
| 49 | <i>FRT (Flow Rate Tester)</i> | <----- | Test Types |

GENERAL EDITS

ALL Mnemonic Values are Mandatory, unless otherwise noted.

"Conditional" Values will be noted as, (i.e. Mandatory, if TTYTP = 08 or 18)

Zero's are NOT acceptable unless otherwise noted.

WHERE SECTION RULES EXIST (Noted by the # Sign) THEY ARE SUPERSEDED BY INDIVIDUAL BUSINESS RULES AND EDITS

ALL DEPTHS (for DST) are measured or calculated and reported in reference to (KB) Kelly Bushing Elevation

ALL DATES must be >= Spud Date and <= Abandoned Date and <= Submission Date

All Depths must be less than 7,000.00 M

All Pressures must be less than 150,000.00 kPa

All Temperatures (**unless otherwise noted**) must be between -100 and 1,000°C

All Times must be less than 100,000.0 Hours

All gas production rates must be less than 100,000.00 E3M3/day

All oil and water rates must be less than 100,000.00 M3/day

IF [FLEXP] = (01) Oil, then [STGR] should be > 1.500 and <= 9.974 kPa/m

IF [FLEXP] = (02) Gas, then [STGR] should be > 0.001 <= 5.999 kPa/m

IF [FLEXP] = (06) Water or (17) Crude Bitumen, then [STGR] should be >= 9.975 and < 16.000 kPa/m

PRODUCTION (FIELD NOTES) TEST FILE (PRD)

| ~ FILE VERIFICATION | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|--------------------------------------|------------------------------------------------|
| # (Information in this section is Assigned by the AER, and Appended to the PAS file upon Acceptance / Validation via WTC-Submit procedure) | | | | |
| WTCNUM | [CHAR 13] | AER WTC Tracking ID | Will not be Blank, system will input | AER-WTC Unique Certification number: |
| WTCDAT | [YYYY MM DD HHHH] | Submission/Acceptance Date | Will not be Blank, system will input | Date of WTC Verification & Acceptance |
| WTCSUB | [CHAR 60] | Submitter | Will not be Blank, system will input | Company whom Submitted Specific Well Test Data |
| COMP. | [CHAR 60] | Licensee Name | Will not be Blank, system will input | Based on Licensee |

~ VERSION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-------------------------------------|--------------------------|----------------------------------------------------|
| PASTYPE. | [CHAR 7] | DIGITAL DATA - PRODUCTION TEST DATA | PAS-PRD | Field Production Notes - test information, format |
| UNIT. | [CHAR 1] | UNITS FLAG | (M)etric | Metric Units for AER submission |
| VERS. | [NUMB 5,2] | AER DIGITAL WELL TEST DATA | 4.00 | Current AER version for ASCII test data submission |

~ WELL INFORMATION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| UWI. | [CHAR 20] | UNIQUE WELL ID | UWI must be valid and exist on AER database. | Unique Well Identifier - Bottomhole location. |
| DRILLEG. | [NUMB 2] | DRILLING LEG | Must be 01, 02, 03...09 (Cannot be 0 or NULL) | Drilling Leg (Event or Occurrence). Together with the UWI, this is to help define the bottom of the specific drill hole. |
| WLIC. | [CHAR 9] | AER WELL LICENSE NUMBER | Well License Number must match AER License Number for UWI | AER Well License Number |
| FORM. | [CHAR 20] | FORMATION NAME | | Name of the geological formation/zone |
| WSFL. | [NUMB 2] | WELL FLUID TYPE AT TEST DATE | Must have a valid AER fluid code = (01) Oil, (02) Gas, (06) Water, or (17) Crude Bitumen | Type of Dominant Fluid Production/Pay (i.e. oil, gas, water) |

~ TEST DATA

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| SERCO. | [CHAR 5] | SERVICE COMPANY CODE | | Company conducting test (see AER Website) |
| RRUN. | [CHAR 1] | RECORDERS RUN | must be (Y)es or (N)o | Flag indicating Pressure Gauges ran during operations |
| TTOPL.M | [NUMB 6,2] | TEST/PROD. INTERVAL TOP M KB (LOG) | [TTOPL] (Interval Top - Log) must be > 0.0 and < [TBASL] (Interval Base - Log) | Top of tested or producing interval - in log depth, measured mKB |
| TBASL.M | [NUMB 6,2] | TEST/PROD. INTERVAL BASE M KB (LOG) | [TBASL] (Interval Base - Log) must be > 0.0 and => [TTOPL] (Interval Top - Log) and cannot be greater than Total Well Depth. | Base of tested or producing interval - in log depth, measured mKB |
| FTDT.DAY/HR | [YYYY MM DD HHHH] | TEST FINAL DATE/TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date/time of last measured flowrate |
| FLGAS.E3M3 | [NUMB 13,4] | GAS FLARED E3M3 | Mandatory, must be >= 0.0 | (10 ³ m ³) Over duration of reported production in DTSUM Table |
| INGAS.E3M3 | [NUMB 13,4] | GAS INCINERATED E3M3 | Mandatory, must be >= 0.0 | (10 ³ m ³) Over duration of reported production in DTSUM Table |
| PLGAS.E3M3 | [NUMB 13,4] | GAS PRODUCED TO PIPELINE E3M3 | Mandatory, must be >= 0.0 | (10 ³ m ³) Over duration of reported production in DTSUM Table |
| VNGAS.E2M3 | [NUMB 13,4] | GAS VENTED E3M3 | Mandatory, must be >= 0.0 | (10 ³ m ³) Over duration of reported production in DTSUM Table |

PRODUCTION (FIELD NOTES) TEST FILE (PRD)

~ METER GAS (n)

{METER GAS SECTION and TABLE DTGAS (n) CAN BE OMITTED IF NO GAS PRODUCED (VTGAS = "0.0")

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| MDTYPE. | [CHAR 1] | METERING DEVICE TYPE INDICATOR | Must = (P)rover, (O)rifice, (T)urbine, P(i)tiot Tube, (C)hoke, (V)-Cone, or Ot(H)er | Flag - (P)rover, (O)rifice, (T)urbine, P(i)tiot Tube, (C)hoke, (V)-Cone or Ot(H)er |
| RDGAS. | [NUMB 4,3] | GAS RELATIVE DENSITY | | |
| N2.FRAC | [NUMB 5,4] | NITROGEN | Can be zero. Can not be Null | Mole fraction, air free as received |
| CO2.FRAC | [NUMB 5,4] | CARBON DIOXIDE | Can be zero. Can not be Null | Mole fraction, air free as received |
| H2S.FRAC | [NUMB 7,6] | HYDROGEN SULPHIDE for METERING DEVICE CALC | Can be zero. Can not be Null | Mole fraction, air free as received |
| PATM.KPA | [NUMB 8,2] | ATMOSPHERIC PRESSURE | Must be > 85 and < 105 | |
| TAP. | [CHAR 1] | TAP TYPE INDICATOR | If [MDTYPE] (Metering Device Type Indicator) = (O)rifice, then must indicate (F)langed or (P)ipe. | Flag indicating taps (F)langed or (P)ipe |
| TAPL. | [CHAR 1] | TAP LOCATION INDICATOR | If [MDTYPE] (Metering Device Type Indicator) = (O)rifice, then must indicate (U)p Stream or (D)own Stream. | Flag indicating location of taps (U)p Stream or (D)own stream |
| RSIZ.MM | [NUMB 8,3] | METER RUN / PROVER SIZE | Mandatory, must be => 0.0 if [MDTYPE] (Metering Device Type Indicator) = (P)rover, (O)rifice, P(i)tiot, or (V)-Cone | Inside diameter of Meter Run / Prover |
| TCON.PULSES/M3 | [NUMB 10,5] | TURBINE DEVICE CONSTANT | Mandatory, if [MDTYPE] (Metering Device Type Indicator) = (T)urbine. | |
| ICON. | [NUMB 10,5] | PITIOT TUBE DEVICE CONSTANT | Mandatory, if [MDTYPE] (Metering Device Type Indicator) = P(i)tiot | |
| BETA. | [NUMB 10,7] | V-CONE BETA RATIO | Mandatory, if [MDTYPE] (Metering Device Type Indicator) = (V), else can be Null. Can be zero. | V-Cone beta ratio |
| MCOF. | [NUMB 10,7] | V-CONE METER COEFFICIENT | Mandatory, if [MDTYPE] (Metering Device Type Indicator) = (V), else can be Null. Can be zero. | V-Cone Meter coefficient |
| MCOMG. | [CHAR 240] | COMMENT - GAS METER | | Provides additional information about the meter being used |

PRODUCTION (FIELD NOTES) TEST FILE (PRD)

~ DATA TABLE GAS (n)

(DTGAS (n) - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTGAS TABLES)

{TABLE DTGAS (n) CAN BE OMITTED IF NO GAS PRODUCED ([VTGAS] (Cumulative Total Gas Volume All meters) = "0.0")}

{Each attribute is mandatory, and except for [TIME] must occur at least once in the table.}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour clock. Must correspond to [FTDT] (Test Final Date/Time) |
| QGAS.E3M3/D | [NUMB 13,4] | GAS RATE | At least one value > = 0.00 must appear in table. | Gas rate reading |
| H2S.FRAC | [NUMB 7,6] | HYDROGEN SULPHIDE MOLE FRACTION | Optional | |
| PLATE.MM | [NUMB 8,3] | ORIFICE /CHOKE PLATE SIZE | Mandatory, if [MDTYPE] (Metering Device Type Indicator) = (C)hoke or (O)rifice, else null. Can be zero | |
| STAG.KPAA | [NUMB 8,2] | METER PRESSURE (GAS) | | Pressure used for Super Compressibility Calculation |
| DIFG.KPA | [NUMB 8,2] | PRESSURE DIFFERENTIAL (GAS) | Mandatory, if [MDTYPE] (Metering Device Type Indicator) = (C)hoke, (O)rifice, P(i)tiot, or (V)-Cone, else can be zero or NULL | (kPa) |
| TMPG.DEGC | [NUMB 5,2] | METER TEMPERATURE | | Temperature used for Super Compressibility Calculation |
| TRBG.PULSE | [NUMB 8,3 14,3] | TURBINE METER READING | Mandatory, if [MDTYPE] (Metering Device Type Indicator) = (T)urbine, else must be Null. | |
| N2.FRAC | [NUMB 5,4] | NITROGEN MOLE FRACTION | Optional | |
| CO2.FRAC | [NUMB 5,4] | CARBON DIOXIDE MOLE FRACTION | Optional | |
| RCOMP. | [CHAR 240] | GAS COMPOSITION COMMENT | Optional | Gas composition as measured throughout the test |

**PRODUCTION (FIELD NOTES) TEST FILE
(PRD)**

~ DTGAS (n)

| <u>TIME</u> | <u>OGAS</u> | <u>H2S</u> | <u>PLATE</u> | <u>STAG</u> |
|--------------------|---------------|------------|--------------|-------------|
| YYYY MM DD HHHH:SS | 99999999.9999 | 9.9999 | 99999.999 | 999999.99 |
| YYYY MM DD HHHH:SS | 99999999.9999 | 9.9999 | 99999.999 | 999999.99 |
| YYYY MM DD HHHH:SS | 99999999.9999 | 9.9999 | 99999.999 | 999999.99 |

DTGAS (n) ... - TABLE CONTINUED

| <u>DIFG</u> | <u>TMPG</u> | <u>TRBG</u> | <u>N2</u> | <u>C02</u> |
|-------------|-------------|----------------|-----------|------------|
| 999999.99 | 999.99 | 9999999999.999 | 9.9999 | 9.9999 |
| 999999.99 | 999.99 | 9999999999.999 | 9.9999 | 9.9999 |
| 999999.99 | 999.99 | 9999999999.999 | 9.9999 | 9.9999 |

DTGAS (n) ... - TABLE CONTINUED

| <u>RCOMP</u> |
|--------------|
| X(240) |
| X(240) |
| X(240) |

~ METER LIQUID (n)

{Must Repeat Table for second fluid measured}

{METER LIQUID SECTION and TABLE DTLIQ (n), MUST BE NULL or CAN BE OMITTED IF NO FLUID PRODUCED: (If All Values for VTOIL and VTCON and VTWTR = 0.00)}

| <u>MNEMONIC NAME</u> | <u>FIELD SIZE</u> | <u>DATA ELEMENT DESCRIPTION</u> | <u>BUSINESS RULES AND EDITS</u> | <u>CLARIFICATION / EXPLANATION OF MNEMONIC</u> |
|----------------------|-------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| LIQT. | [CHAR 1] | LIQUID TYPE INDICATOR | Must be (O)il or (C)ondensate or (W)ater | Flag indicating (O)il, (W)ater, (C)ondensate |
| LQMTYP. | [CHAR 1] | METERING DEVICE TYPE INDICATOR | Must be (T)urbine, (L)evel, (V)olume, (O)ther | Flag - (T)urbine, (L)evel, (V)olume, (O)ther |
| TCON.PULSE/M3 | [NUMB 10,5] | TURBINE DEVICE K-FACTOR | Mandatory, if [LQMTYP] (Metering Device Type Indicator) = (T)urbine, then must provide K-Factor | Manufacturer specific K-Factor |
| TMEA. | [CHAR 1] | TANK MEASUREMENT INDICATOR | Mandatory, if [LQMTYP] (Metering Device Type Indicator) = (L)evel or (V)olume, then must indicate if measurement is (I)ncremental or (C)umulative else can be Null | Flag indicating (I)ncremental or (C)umulative measurement |
| TEQU. | [CHAR 240] | TANK EQUATION | Mandatory, if [LQMTYP] (Metering Device Type Indicator) = (L)evel, must provide tank measurement and volume equation. | Equation illustration |
| MCOML. | [CHAR 240] | COMMENT - LIQUID METER | | Provides additional information about the meter being used |

PRODUCTION (FIELD NOTES) TEST FILE (PRD)

~ DATA TABLE LIQUID (n)

(DTLIQ (n) - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTLIQ TABLES)

{TABLE DTLIQ (n) MUST BE NULL or OMITTED IF NO FLUID PRODUCED: (If All Values for [VTOIL] and [VTCON] and [VTWTR] = 0.00)}

{Each attribute is mandatory, and except for [TIME] must occur at least once in the table.}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour clock. Must correspond to [FTDT] (Test Final Date/Time) |
| GNLF.MM | [NUMB 8,3] | TANK GAIN LEVEL | Mandatory, if [LQMTYP] (Metering Device Type Indicator) = (L)evel, and at least one value > = 0.00 must appear in table. | |
| GNVF.M3 | [NUMB 8,3] | TANK GAIN VOLUME | Mandatory, if [LQMTYP] (Metering Device Type Indicator) = (L)evel or (V)olume, and at least one value > = 0.00 must appear in table. | |
| TRBF.PULSE | [NUMB 14,3] | TURBINE METER READING | Mandatory, if [LQMTYP] (Metering Device Type Indicator) = (T)urbine | |
| API. | [NUMB 4,2] | API GRAVITY @ 15 DegC | Optional. If present, can not be zero. | Measured Gravity of Produced Oil, Degrees API |
| BSW.FRAC | [NUMB 4,3] | FRACTION OF TOTAL BS&W | Mandatory, if [LIQT] (Liquid Type Indicator) = (O)il, and at least one value > = 0.00 must appear in table. | Basic sand and water volume fraction, total |
| SALT.PPM | [NUMB 8,0] | SALINITY PPM | Optional. If present, can be zero. | Salinity of produced fluid (PPM) |
| PH. | [NUMB 3,1] | PH | Optional. If present must be >0 and < 14. | pH concentration of produced fluid |
| OILRATE.M3/D | [NUMB 13,4] | OIL RATE | Mandatory, if Meter Liquid (n) [LIQT] (Liquid Type Indicator) = (O)il and at least one value >0.00 must appear in table. | Produced oil only, not load or frac oil |
| CONRATE.M3/D | [NUMB 13,4] | CONDENSATE RATE | Mandatory, if, Meter Liquid (n) [LIQT] (Liquid Type Indicator) = (C)ondensate and at least one value >0.00 must appear in table. | |
| WTRRATE.M3/D | [NUMB 13,4] | WATER RATE | Mandatory, if, Meter Liquid (n) [LIQT] (Liquid Type Indicator) = (W)ater and at least one value >0.00 must appear in table. | |
| QLIQ.M3/D | [NUMB 13,4] | MEASURED TOTAL LIQUID RATE | Must = [OILRATE] (Oil Rate) + [CONRATE] (Condensate Rate) + [WTRRATE] (Water Rate) | Total Combined Liquid Rate |

**PRODUCTION (FIELD NOTES) TEST FILE
(PRD)**

~ DTLIQ (n)

| <u>TIME</u> | <u>GNLF</u> | <u>GNVF</u> | <u>TRBF</u> | <u>API</u> |
|--------------------|-------------|-------------|----------------|------------|
| YYYY MM DD HHHH:SS | 99999.999 | 100000 | 9999999999.999 | 99.99 |
| YYYY MM DD HHHH:SS | 99999.999 | 100000 | 9999999999.999 | 99.99 |
| YYYY MM DD HHHH:SS | 99999.999 | 100000 | 9999999999.999 | 99.99 |

#...DTLIQ (n) - TABLE CONTINUED

| <u>BSW</u> | <u>SALT</u> | <u>PH</u> | <u>OILRATE</u> | <u>CONRATE</u> |
|------------|-------------|-----------|----------------|----------------|
| 9.999 | 99999999 | 99.9 | 999999999.9999 | 999999999.9999 |
| 9.999 | 99999999 | 99.9 | 999999999.9999 | 999999999.9999 |
| 9.999 | 99999999 | 99.9 | 999999999.9999 | 999999999.9999 |

#...DTLIQ (n) - TABLE CONTINUED

| <u>WTRRATE</u> | <u>QLIQ</u> |
|----------------|----------------|
| 999999999.9999 | 999999999.9999 |
| 999999999.9999 | 999999999.9999 |
| 999999999.9999 | 999999999.9999 |

PRODUCTION (FIELD NOTES) TEST FILE (PRD)

~ DATA TABLE SUMMARY

(DTSUM - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTSUM TABLE)

{Unless otherwise noted - each attribute is mandatory and is to occur at least one row within the table.}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour clock. Must correspond to [FTDT] (Test Final Date/Time) |
| TWH.DEGC | [NUMB 5,2] | WELLHEAD TEMPERATURE | Optional, can be zero | Temperature measured at wellhead (DegC) |
| TUPS.KPAA | [NUMB 8,2] | TUBING PRESSURE | Mandatory, if [CSPS] (Casing Pressure) is null. Can be zero. | (kPaa) |
| TTUB.DEGC | [NUMB 5,2] | TUBING TEMPERATURE | Optional, can be zero | (DegC) |
| CSPS.KPAA | [NUMB 8,2] | CASING PRESSURE | Mandatory, if [TUPS] (Tubing Pressure) is null. Can be zero. | (kPaa) |
| TCAS.DEGC | [NUMB 5,2] | CASING TEMPERATURE | Optional, can be zero | (DegC) |
| QTGAS.E3M3/D | [NUMB 13,4] | TOTAL GAS RATE ALL METERS | Mandatory, if [VTGAS] = (Total Gas Volume Produced) >0.00 | |
| QTOIL.M3/D | [NUMB 13,4] | TOTAL OIL RATE ALL METERS | Mandatory, if [VTOIL] = (Total Oil Volume Produced) >0.00 | Produced oil only, not load or frac oil |
| QTCON.M3/D | [NUMB 13,4] | TOTAL CONDENSATE RATE ALL METERS | Mandatory, if [VTCON] = (Total Condensate Volume Produced) >0.00 | |
| QTWTR.M3/D | [NUMB 13,4] | TOTAL WATER RATE ALL METERS | Mandatory, if [VTWTR] = (Total Water Volume Produced) >0.00 | |
| VTGAS.E3M3 | [NUMB 13,4] | CUMULATIVE TOTAL GAS VOLUME ALL METERS | [VTGAS] (last line DTSUM) must equal Total of [FLGAS] + [INGAS] + [PLGAS] + [VNGAS]. Can be zero. | Cumulative volume produced during test. All Methods, Flared, Incinerated, Vented or Inline/(Pipelined) |
| VTOIL.M3 | [NUMB 13,4] | CUMULATIVE TOTAL OIL VOLUME ALL METERS | Can be zero. | Cumulative volume produced during test. Produced oil only, not load or frac oil |
| VTCON.M3 | [NUMB 13,4] | CUMULATIVE TOTAL CONDENSATE VOLUME ALL METERS | Can be zero. | Cumulative volume produced during test |
| VTWTR.M3 | [NUMB 13,4] | CUMULATIVE TOTAL WATER VOLUME ALL METERS | Can be zero. | Cumulative volume produced during test |
| COMM. | [CHAR 240] | COMMENT | | General Test Comments (i.e. Text Descriptions regarding specific operations) |

PRODUCTION (FIELD NOTES) TEST FILE (PRD)

~ DTSUM

| <u>TIME</u> | <u>TWH</u> | <u>TTUB</u> | <u>TUPS</u> | <u>CSPS</u> |
|--------------------|------------|-------------|-------------|-------------|
| YYYY MM DD HHHH:SS | 999.99 | 999.99 | 999999.99 | 999999.99 |
| YYYY MM DD HHHH:SS | 999.99 | 999.99 | 999999.99 | 999999.99 |
| YYYY MM DD HHHH:SS | 999.99 | 999.99 | 999999.99 | 999999.99 |

#... DTSUM - TABLE CONTINUED ...

| <u>TCAS</u> | <u>QTGAS</u> | <u>QTOIL</u> | <u>QTCON</u> | <u>QTWTR</u> |
|-------------|----------------|----------------|----------------|----------------|
| 999.99 | 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 999.99 | 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 999.99 | 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |

#... DTSUM - TABLE CONTINUED

| <u>VTGAS</u> | <u>VTOIL</u> | <u>VTCON</u> | <u>VTWTR</u> | <u>COMM</u> |
|----------------|----------------|----------------|----------------|-------------|
| 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 | X (240) |
| 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 | X (240) |
| 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 | X (240) |

GENERAL EDITS

ALL Mnemonic Values are Mandatory, unless otherwise noted.

"Conditional" Values will be noted as, (i.e. Mandatory, if TTYP = 08 or 18)

Zero's are NOT acceptable unless otherwise noted.

WHERE SECTION RULES EXIST (Noted by the # Sign) THEY ARE SUPERSEDED BY INDIVIDUAL BUSINESS RULES AND EDITS

ALL DEPTHS (for PRD) are measured or calculated and reported in reference to (KB) Kelly Bushing Elevation

ALL DATES must be >= Spud Date and <= Abandoned Date and <= Submission Date

All Depths must be less than 7,000.00 M

All Pressures must be less than 150,000.00 kPa

All Temperatures (unless otherwise noted) must be between -100 and 1,000°C

All Times must be less than 100,000.0 Hours

All gas production rates must be less than 100,000.00 E3M3/day

All oil and water rates must be less than 100,000.00 M3/day

GAS ANALYSIS FILE (GAN)

| - FILE VERIFICATION | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|--------------------------------------|------------------------------------------------|
| # (Information in this section is Assigned by the AER, and Appended to the PAS file upon Acceptance / Validation via WTC-Submit procedure) | | | | |
| WTCNUM | [CHAR 13] | AER WTC Tracking ID | Will not be Blank, system will input | AER-WTC Unique Certification number: |
| WTCDAT | [YYYY MM DD HHHH] | Submission/Acceptance Date | Will not be Blank, system will input | Date of WTC Verification & Acceptance |
| WTCSUB | [CHAR 60] | Submitter | Will not be Blank, system will input | Company whom Submitted Specific Well Test Data |
| COMP. | [CHAR 60] | Licensee Name | Will not be Blank, system will input | Based on Licensee |

- VERSION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-----------------------------------------|--------------------------|----------------------------------------------------|
| PASTYPE. | [CHAR 7] | DIGITAL DATA - GAS/GAS LIQUIDS ANALYSIS | PAS-GAN | Gas Analysis test, format |
| UNIT. | [CHAR 1] | UNITS FLAG | (M)etric | Metric Units for AER submission |
| VERS. | [NUMB 5,2] | AER DIGITAL WELL TEST DATA | 4.00 | Current AER version for ASCII test data submission |

- WELL INFORMATION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| UWI . | [CHAR 20] | UNIQUE WELL ID | UWI must be valid and exist on AER database. | Unique Well Identifier - Bottomhole location. |
| DRILLEG. | [NUMB 2] | DRILLING LEG | Must be 01, 02, 03...09 (Cannot be 0 or NULL) | Drilling Leg (Event or Occurrence). Together with the UWI, this is to help define the bottom of the specific drill hole. |
| WLIC. | [CHAR 9] | AER WELL LICENSE NUMBER | Well License Number must match AER License Number for UWI | AER Well License Number |
| FORM. | [CHAR 20] | FORMATION NAME | | Name of the geological formation/zone |
| WSFL. | [NUMB 2] | WELL FLUID TYPE AT TEST DATE | Must have a valid AER fluid code = (01) Oil, (02) Gas, (06) Water, or (17) Crude Bitumen | Type of Dominant Fluid Production/Pay (i.e. oil, gas, water) |

- TEST DATA

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| LABCO. | [CHAR 60] | LABORATORY NAME | | Company name conducting analysis |
| TTOPL.M | [NUMB 6,2] | TEST/PROD. INTERVAL TOP M KB (LOG) | [TTOPL] (Interval Top - Log) must be > 0.0 and < [TBASL] (Interval Base - Log) | Top of tested or producing interval - in log depth, measured mKB |
| TBASL.M | [NUMB 6,2] | TEST/PROD. INTERVAL BASE M KB (LOG) | [TBASL] (Interval Base - Log) must be > 0.0 and => [TTOPL] (Interval Top - Log) and cannot be greater than Total Well Depth. | Base of tested or producing interval - in log depth, measured mKB |
| HYDLP. | [CHAR 1] | HYDROCARBON LIQUIDS PRODUCTION | Must be = (Y)es or (N)o. If [HYDLP] (Hydrocarbon Liquid Production) = (Y)es, then [DTCL] (Data Table - Condensate / Liquid Analysis) can not be null. | Flag indicating measurable liquid production (Y)es or (N)o |

GAS ANALYSIS FILE (GAN)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| STYP. | [CHAR 1] | SAMPLE TYPE | Must be a (G)as, (C)ondensate, (B)oth, or (R)ecombination | Type of Sample reported. |
| GLR.M3/M3 | [NUMB 7,0] | GAS LIQUID RATIO | Mandatory, if [STYP] (Sample Type) = (R)ecombination | Calculated ratio, of separator gas and separator liquid at the time of sampling. |
| DSTLOC. | [CHAR 1] | DST SAMPLE LOCATION | If [FS-SPNT] (First Stage - Sample Gathering Point Code) = (50) then [DSTLOC] DST Sample Location must be (T)op, (M)iddle, or (B)ottom | |
| GANC. | [CHAR 240] | COMMENT ON SAMPLE | Optional | General Free form Comment (regarding Sample or Analytical Procedures). |

FIRST STAGE SEPARATOR - GAS ANALYSIS

~ HEADER DATA - FIRST STAGE SEPARATOR GAS ANALYSIS

If [STYP] (SAMPLE TYPE) = (C)ondensate, then First Stage Separator must be blank.

| | | | | |
|---------------|--------------|-----------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| FS-SDAT.DAY | [YYYY MM DD] | DATE SAMPLED | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date First Stage Separator sample was gathered |
| FS-SPNT. | [NUMB 2] | SAMPLE GATHERING POINT CODE | Must be Valid AER Sample Point Code (See Footnote). | Location as to where First Stage Separator Hydrocarbon Sample was gathered |
| FS-SPNTN. | [CHAR 50] | DESCRIPTION OF SAMPLE POINT | Can not be null | Laboratories unique name describing location of First Stage Separator Sample Gathering Point |
| FS-SPRES.KPAA | [NUMB 8,2] | SAMPLE PRESSURE | Mandatory, if [FS-SDAT] (Date Sampled) > 2004 09 30. Can not be zero | First Stage Separator Pressure as sampled (in field) - kPaa |
| FS-STEMP.DEGC | [NUMB 5,2] | SAMPLE TEMPERATURE | Mandatory, if [FS-SDAT] (Date Sampled) > 2004 09 30. Can be zero | First Stage Separator Temperature as sampled (in field) - DegC |
| FS-RPRES.KPAA | [NUMB 8,2] | RECEIVED PRESSURE | Can not be zero | First Stage Separator Pressure as received (in Lab) -kPaa |
| FS-RTEMP.DEGC | [NUMB 5,2] | RECEIVED TEMPERATURE | Can be zero | First Stage Separator Temperature as received (in Lab) - DegC |
| FS-ADAT.DAY | [YYYY MM DD] | DATE ANALYZED | Must be >= [SDAT] (Date Sampled) and <= Submission Date | Date in which First Stage Separator sample was analyzed |

GAS ANALYSIS FILE (GAN)

~ DATA TABLE - FIRST STAGE SEPARATOR GAS ANALYSIS

(DTFSGAS - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTFSGAS TABLES)

If [STYP] (SAMPLE TYPE) = (C)ondensate, then -DTFSGAS Table must be blank.

{Rows and Columns are fixed}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|----------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------|
| COMP COM | [CHAR 11] | Composition Components | | |
| MOLG.FRAC | [NUMB 5,4] | Molal Fraction Air Free | Mandatory Must Total 1.0000, plus or minus 0.001 for rounding. Can = zero | Representative Mole Fractions - Air Free as Received |
| MOLAGF.FRAC | [NUMB 5,4] | Molal Fraction Acid Gas/Air Free | Mandatory Must Total 1.0000, plus or minus 0.001 for rounding. Can = zero | Representative Mole Fractions - Air Free/Acid Gas Free |
| LIOVOL.ML/M3 | [NUMB 5,1] | Liquid Volume ml/m3 | | Liquid Volumes ml/m3 - Air Free |

~ DTFSGAS

{Total for FIRST STAGE SEPARATOR GAS ANALYSIS [all mole fractions] MUST TOTAL 1.000 plus or minus 0.001 for rounding.}

| <u>COMP COM</u> | <u>MOLG</u> | <u>MOLAGF</u> | <u>LIOVOL</u> |
|-----------------|-------------|---------------|---------------|
| FS-H2S.FRAC | 9.9999 | ----- | ----- |
| FS-CO2.FRAC | 9.9999 | ----- | ----- |
| FS-N2.FRAC | 9.9999 | 9.9999 | ----- |
| FS-H2.FRAC | 9.9999 | 9.9999 | ----- |
| FS-HE.FRAC | 9.9999 | 9.9999 | ----- |
| FS-C1.FRAC | 9.9999 | 9.9999 | ----- |
| FS-C2.FRAC | 9.9999 | 9.9999 | 999.9 |
| FS-C3.FRAC | 9.9999 | 9.9999 | 999.9 |
| FS-IC4.FRAC | 9.9999 | 9.9999 | 999.9 |
| FS-NC4.FRAC | 9.9999 | 9.9999 | 999.9 |
| FS-IC5.FRAC | 9.9999 | 9.9999 | 999.9 |
| FS-NC5.FRAC | 9.9999 | 9.9999 | 999.9 |
| FS-C6.FRAC | 9.9999 | 9.9999 | 999.9 |
| FS-C7+.FRAC | 9.9999 | 9.9999 | 999.9 |

GAS ANALYSIS FILE (GAN)

~ GAS ANALYSIS - DATA PROPERTIES

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| LFNUM. | [CHAR 25] | LABORATORY FILE NUMBER | Can not be zero | Identification number |
| IDENT. | [CHAR 12] | CONTAINER IDENTITY | Can not be zero | Identification code of container |
| RELDEN. | [NUMB 4,3] | GAS RELATIVE DENSITY | Can not be zero | Relative Density of First Stage Gas |
| TSMW. | [NUMB 3,1] | CALC MOLE WEIGHT OF TOTAL SAMPLE | Can not be zero | |
| GHV.MJ/M3 | [NUMB 4,2] | CALC GROSS HEAT VALUE MOISTURE FREE | Can not be zero | |
| GHVAGF.MJ/M3 | [NUMB 4,2] | CALC GROSS HEAT VALUE MOISTURE & ACID GAS FREE | Can not be zero | |
| PPVP.KPAA | [NUMB 8,2] | CALC C _{s+} VAPOUR PRESSURE (KPAA) | Optional | |
| FS-PPC.KPAA | [NUMB 8,2] | CALC PSEUDO CRITICAL PRESSURE AS SAMPLED | Can not be zero | First Stage Separator - PPC (kPaa) |
| FS-PTC.DEGK | [NUMB 5,2] | CALC PSEUDO CRITICAL TEMPERATURE AS SAMPLED (DegK) | Can not be zero | First Stage Separator - PTC (Degrees Kelvin) |
| FS-PPCAGF.KPAA | [NUMB 8,2] | CALC PSEUDO CRITICAL PRESSURE ACID GAS FREE | Can not be zero | First Stage Separator - PPC - Acid Gas Free (kPaa) |
| FS-PTCAGF.DEGK | [NUMB 5,2] | CALC PSEUDO CRITICAL TEMPERATURE ACID GAS FREE (DegK) | Can not be zero | First Stage Separator - PTC - Acid Gas Free (Degrees Kelvin) |
| H2SLC. | [CHAR 1] | LOCATION OF H ₂ S MEASUREMENT | Mandatory, must indicate location of measurement (F)ield, (L)ab or (B)oth. | Location of H ₂ S measurement. 1 PPM = (0.000001 MOL FRAC) or (0.0001 MOL %) |
| H2SMT. | [CHAR 1] | METHOD OF FIELD ANALYSIS | Mandatory, if [H2SLC] (Location of H ₂ S Measurement) = (F)ield or (B)oth. [H2SMT] must = (T)utwieler, (L)itmus, (C)hromatograph, (O)ther, (S)tain Tube or (N)ot Measured. Must be null if [H2SLC] = (L)ab. | Method of H ₂ S detection. |

GAS ANALYSIS FILE (GAN)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| FLDH2S.PPM | [NUMB 7,1] | FIELD GAS H2S (PPM) | Mandatory, if [H2SLC] (Location of H2S Measurement) = (F)ield or (B)oth and [H2SMT] (Method of Field Analysis) is not Null, can be zero. If [H2SMT] = (N), [FLDH2S] must be zero. Must be null if [H2SLC] = (L)ab. | H2S concentration measured in the field in parts per million. |
| LABH2S.FRAC | [NUMB 5,4] | LABORATORY H2S ANALYSIS | Mandatory, if [H2SLC] (Location of H2S Measurement) = (L)ab or (B)oth. Can be zero. | H2S fraction measured in the lab. |
| C7+DN. | [NUMB 4,1] | DENSITY OF C ₇₊ FRACTION | Mandatory, if [FS-C7+.FRAC] (Heptane Plus) >0.0000, else must be Null Optional | |
| C7+MW. | [NUMB 3,1] | MOLE WEIGHT C ₇₊ FRACTION | Mandatory, if [FS-C7+.FRAC] (Heptane Plus) >0.0000, else must be Null Optional | |

SECOND STAGE SEPARATOR - GAS ANALYSIS

~ HEADER DATA - SECOND STAGE SEPARATOR - GAS ANALYSIS

{Can not submit a Second Stage Separator Sample, if First Stage Separator Sample is missing.}

{SECOND STAGE SEPARATOR (SS) is Mandatory if [SEPCOND] (Separator Conditions) = (B)oth}

| | | | | |
|---------------|--------------|-----------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| SS-SDAT.DAY | [YYYY MM DD] | DATE SAMPLED | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date Second Stage Separator sample was gathered |
| SS-SPNT. | [NUMB 2] | SAMPLE GATHERING POINT CODE | Must be Valid AER Sample Point Code (See Footnote). | Location as to where Second Stage Separator Hydrocarbon Sample was gathered |
| SS-SPNTN. | [CHAR 50] | DESCRIPTION OF SAMPLE POINT | Can not be null | Laboratories unique name describing location of Second Stage Separator Sample Gathering Point |
| SS-SPRES.KPAA | [NUMB 8,2] | SAMPLE PRESSURE | Mandatory, if [SS-SDAT] (Date Sampled) > 2004 09 30. Can not be zero | Second Stage Separator Pressure as sampled (in field) - kPaa |
| SS-STEMP.DEGC | [NUMB 5,2] | SAMPLE TEMPERATURE | Mandatory, if [SS-SDAT] (Date Sampled) > 2004 09 30. Can be zero | Second Stage Separator Temperature as sampled (in field) - DegC |
| SS-RPRES.KPAA | [NUMB 8,2] | RECEIVED PRESSURE | Can not be zero | Second Stage Separator Pressure as received (in Lab) - kPaa |
| SS-RTEMP.DEGC | [NUMB 5,2] | RECEIVED TEMPERATURE | Can be zero | Second Stage Separator Temperature as received (in Lab) - DegC |
| SS-ADAT.DAY | [YYYY MM DD] | DATE ANALYZED | Must be >= [SS-SDAT] (Date Sampled) and <= Submission Date | Date in which Second Stage Separator sample was analyzed |

GAS ANALYSIS FILE (GAN)

~ SECOND STAGE SEPARATOR - GAS ANALYSIS

{If [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then SECOND STAGE SEPARATOR - GAS ANALYSIS cannot be blank}

{Total for SECOND STAGE SEPARATOR GAS ANALYSIS [all mole fractions] MUST TOTAL 1.000 plus or minus 0.001 for rounding.}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| SS-H2S.FRAC | [NUMB 5,4] | HYDROGEN SULPHIDE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-CO2.FRAC | [NUMB 5,4] | CARBON DIOXIDE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-N2.FRAC | [NUMB 5,4] | NITROGEN | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-H2.FRAC | [NUMB 5,4] | HYDROGEN | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-HE.FRAC | [NUMB 5,4] | HELIUM | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-C1.FRAC | [NUMB 5,4] | METHANE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-C2.FRAC | [NUMB 5,4] | ETHANE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-C3.FRAC | [NUMB 5,4] | PROPANE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-IC4.FRAC | [NUMB 5,4] | ISO-BUTANE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-NC4.FRAC | [NUMB 5,4] | N-BUTANE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |

GAS ANALYSIS FILE (GAN)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| SS-IC5.FRAC | [NUMB 5,4] | ISO-PENTANE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-NC5.FRAC | [NUMB 5,4] | N-PENTANE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-C6.FRAC | [NUMB 5,4] | HEXANE | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| SS-C7+.FRAC | [NUMB 5,4] | HEPTANE PLUS | Mandatory, if [SEPCOND] (Separator Conditions) = (B)oth and [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |

CONDENSATE / LIQUID ANALYSIS

~ HEADER DATA - CONDENSATE / LIQUID ANALYSIS

{if [HYDLP] (Hydrogen Liquid Production) = (Y)es, then (HEADER DATA - CONDENSATE LIQUID ANALYSIS) can not be null.} If [HYDLP] = (N)o, then Must be Null

| | | | | |
|---------------|--------------|-----------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| CL-SDAT.DAY | [YYYY MM DD] | DATE SAMPLED | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date in which Condensate / Liquid sample was gathered |
| CL-SPNT. | [NUMB 2] | SAMPLE GATHERING POINT CODE | Must be Valid AER Sample Point Code (See Footnote). | Location as to where Condensate / Liquid Sample was gathered |
| CL-SPNTN. | [CHAR 50] | DESCRIPTION OF SAMPLE POINT | Can not be null | Laboratories unique name describing location of Condensate / Liquid Sample Gathering Point |
| CL-SPRES.KPAA | [NUMB 8,2] | SAMPLE PRESSURE | Mandatory, if [SS-SDAT] (Date Sampled) > 2004 09 30. Can not be zero | Condensate / Liquid Pressure as sampled (in field) - kPaa |
| CL-STEMP.DEGC | [NUMB 5,2] | SAMPLE TEMPERATURE | Mandatory, if [SS-SDAT] (Date Sampled) > 2004 09 30. Can be zero | Condensate / Liquid Temperature as sampled (in field) - DegC |
| CL-RPRES.KPAA | [NUMB 8,2] | RECEIVED PRESSURE | Optional, if present can not be zero | Condensate / Liquid Pressure as received (in Lab) - kPaa |
| CL-RTEMP.DEGC | [NUMB 5,2] | RECEIVED TEMPERATURE | Optional, can be zero. | Condensate / Liquid Temperature as received (in Lab) - DegC |
| CL-ADAT.DAY | [YYYY MM DD] | DATE ANALYZED | Must be >= SDAT (Sample Date) and <= Submission Date | Date in which Condensate / Liquid sample was analyzed |

GAS ANALYSIS FILE (GAN)

~ DATA TABLE - CONDENSATE / LIQUID ANALYSIS

(DTCL - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTCL TABLE)

{Rows and Columns are fixed}

{If [HYDLP] (Hydrogen Liquid Production) = (Y)es, then Total for CONDENSATE / LIQUID ANALYSIS [all mole fractions] MUST TOTAL 1.000 plus or minus 0.001 for rounding}

{If [HYDLP] (Hydrogen Liquid Production) = (N)o, then -DTCL Table must be Null

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|--------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------|
| COMPCOM. | [CHAR 11] | Composition Components | | |
| MOLC.FRAC | [NUMB 5,4] | Molal Fraction | Mandatory Must Total 1.0000, plus or minus 0.001 for rounding. Can = zero, can be null | Representative Mole Fractions - Air Free as Received |
| MASS.FRAC | [NUMB 5,4] | Mass Fraction | Mandatory Must Total 1.0000, plus or minus 0.001 for rounding. Can = zero, can be null | Representative Mass Fractions - Air Free as Received |
| VOL.FRAC | [NUMB 5,4] | Volume Fraction | Mandatory Must Total 1.0000, plus or minus 0.001 for rounding. Can = zero, can be null | Representative Volume Fractions - Air Free as Received |

~ DTCL

| <u>COMPCOM</u> | <u>MOLC</u> | <u>MASS</u> | <u>VOL</u> | |
|----------------|-------------|-------------|------------|--------------|
| CL-H2S.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-CO2.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-N2.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-H2.FRAC | 9.9999 | 9.9999 | 9.9999 | <<< Optional |
| CL-HE.FRAC | 9.9999 | 9.9999 | 9.9999 | <<< Optional |
| CL-C1.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-C2.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-C3.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-IC4.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-NC4.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-IC5.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-NC5.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-C6.FRAC | 9.9999 | 9.9999 | 9.9999 | |
| CL-C7+.FRAC | 9.9999 | 9.9999 | 9.9999 | |

GAS ANALYSIS FILE (GAN)

~ CONDENSATE / LIQUID ANALYSIS - DATA PROPERTIES

{If [HYDLP] (Hydrogen Liquid Production) = (N)o, then ~Condensate / Liquid Analysis - Data Properties section must be Null

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LFNUM. | [CHAR 25] | LABORATORY FILE NUMBER | | Identification number |
| IDENT. | [CHAR 12] | CONTAINER IDENTITY | | Identification code of container |
| H2SLP. | [CHAR 1] | HYDROGEN SULPHIDE INDICATOR - CONDENSATE/LIQUID | Mandatory, must be (N)one, (T)race or (M)easured. If [H2SLP] (Hydrogen Sulphide Indicator) = (N)one or (T)race, then [CL-H2S] (Condensate / Liquid Analysis - Hydrogen Sulphide) must = 0.000, else must be > 0.00 | Measured H2S component = >100 PPM (0.0001 MOL FRAC) or (0.01 MOL %). |
| LH2S.PPM | [NUMB 3,1] | LIQUID H2S PPM | Can be zero. Can be null. | H2S in Parts per Million (<= 99.9, or 0.0000999 MOL FRAC). Note: Any Indication of Trace Liquid H2S, if not sampled, should be recorded in ~Test Data [GANC] (Comment on Sample). |
| LIQRDN. | [NUMB 4, 3] | CALC REL DENSITY OF TOTAL SAMPLE @ 15 DegC | Must be < 1 | Calculated Relative Density of Condensate / Liquid Sample |
| LIQRMW. | [NUMB 4,1] | CALC REL MOLE MASS OF TOTAL SAMPLE @ 15 DegC | | Calculated Relative Molar Mass of Condensate / Liquid Sample |

~ DATA TABLE - CONDENSATE / LIQUID FRACTION DISTILLATION

(DTCLFD - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTCLFD TABLE)

{If [HYDLP] (Hydrogen Liquid Production) = (N)o, then ~DTCLFD Table must be Null

{must be reported if performed}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|---------------------------------------|---------------------------------------------------|-----------------------------------------|
| LIQCOMP. | [CHAR 11] | Liquid Components | | |
| MOLL.FRAC | [NUMB 5,4] | Molal Fraction | Optional, if reported must be <1, can be zero | |
| MASS.FRAC | [NUMB 5,4] | Mass Fraction | Optional, if reported must be <1, can be zero | |
| VOL.FRAC | [NUMB 5,4] | Volume Fraction | Optional, if reported must be <1, can be zero | |
| RDLIQ. | [NUMB 4,3] | Relative Density of Liquid Components | Optional, if reported must be <1, can not be zero | |
| RELMM. | [NUMB 3] | Relative Molecular Mass | Optional, if reported valid range = 80 to 250 | |

GAS ANALYSIS FILE (GAN)

~ DTCLFD

| <u>LIQCOMP</u> | <u>MOLL</u> | <u>MASS</u> | <u>VOL</u> |
|----------------|-------------|-------------|------------|
| C5+L.FRAC | 9.9999 | 9.9999 | 9.9999 |
| C6+L.FRAC | 9.9999 | 9.9999 | 9.9999 |
| C7+L.FRAC | 9.9999 | 9.9999 | 9.9999 |
| C12+L.FRAC | 9.9999 | 9.9999 | 9.9999 |

#... DTCLFD - TABLE CONTINUED

| <u>RDLIQ</u> | <u>RELMM</u> |
|--------------|--------------|
| 9.999 | 999 |
| 9.999 | 999 |
| 9.999 | 999 |
| 9.999 | 999 |

RECOMBINED GAS ANALYSIS

~ RECOMBINED GAS ANALYSIS - DATA PROPERTIES

(PROPERTIES USED IN RECOMBINATION)

{IF [STYP] (Sample Type) <> = (R)ecombination, THIS SECTION MUST BE null}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| SEPCOND. | [CHAR 1] | SEPARATOR CONDITIONS | If [STYP] (Sample Type) = (R)ecombination, then must be (F)irst Stage Separator, or (B)oth, else NULL | (B)oth = First & Second Stage Separator Samples reported |
| FS-GAS.E3M3/D | [NUMB 13,4] | FIRST STAGE GAS RATE | If [STYP] (Sample Type) = (R)ecombination and [SEPCOND] (Separator Conditions) = (F)irst or (B)oth, then cannot be null. | 10 ³ m ³ /d |
| SS-GAS.E3M3/D | [NUMB 13,4] | SECOND STAGE GAS RATE | If [STYP] (Sample Type) = (R)ecombination and [SEPCOND] (Separator Conditions) = (B)oth, then cannot be null. | 10 ³ m ³ /d |
| LIQRAT.M3/D | [NUMB 13,4] | LIQUID RATE | Mandatory, if STYP= 'R' | The separator liquid rate used for the recombination. |
| LIQGPT. | [CHAR 1] | LIQUID GATHERING POINT | If [STYP] (Sample Type) = (R)ecombination, then [LIQGPT] Must be (F)irst Stage Separator, (S)econd Stage Separator or Stock (T)ank. | |
| LIQMM. | [NUMB 4,1] | LIQUID MOLECULAR MASS g/mol | Mandatory, if [STYP] (Sample Type) = (R)ecombination | |
| LIQRDN. | [NUMB 4, 3] | DENSITY OF LIQUID kg/m ³ | Mandatory, if [STYP] (Sample Type) = (R)ecombination | DENSITY OF LIQUID kg/m ³ AT MEASURED CONDITIONS |

GAS ANALYSIS FILE (GAN)

~ RECOMBINED GAS COMPOSITION

{If [STYP] (SAMPLE TYPE) = (R)ecombination, then RECOMBINED GAS PROPERTIES cannot be blank}

{Total for RECOMBINED GAS PROPERTIES [all mole fractions] MUST TOTAL 1.000 plus or minus 0.001 for rounding}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-----------------------------|-----------------------------------------------------------------|-----------------------------------------|
| R-H2S.FRAC | [NUMB 5,4] | CALC HYDROGEN SULPHIDE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-CO2.FRAC | [NUMB 5,4] | CALC CARBON DIOXIDE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-N2.FRAC | [NUMB 5,4] | CALC NITROGEN | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-H2.FRAC | [NUMB 5,4] | CALC HYDROGEN | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-HE.FRAC | [NUMB 5,4] | CALC HELIUM | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-C1.FRAC | [NUMB 5,4] | CALC METHANE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-C2.FRAC | [NUMB 5,4] | CALC ETHANE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-C3.FRAC | [NUMB 5,4] | CALC PROPANE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-IC4.FRAC | [NUMB 5,4] | CALC ISO-BUTANE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-NC4.FRAC | [NUMB 5,4] | CALC N-BUTANE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-IC5.FRAC | [NUMB 5,4] | CALC ISO-PENTANE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-NC5.FRAC | [NUMB 5,4] | CALC N-PENTANE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-C6.FRAC | [NUMB 5,4] | CALC HEXANE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-C7+.FRAC | [NUMB 5,4] | CALC SUM OF GREATER THAN C6 | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |

GAS ANALYSIS FILE (GAN)

- RECOMBINED GAS PROPERTIES

{IF [STYP] (Sample Type) <> = (R)ecombination, THIS SECTION MUST BE null}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------|
| RGHV.MJ/M3 | [NUMB 4,2] | CALC GROSS HEAT VALUE MOISTURE FREE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| RGHVA.MJ/M3 | [NUMB 4,2] | CALC GROSS HEAT VALUE MOISTURE & ACID GAS FREE | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| RECOFLO.E3M3/D | [NUMB 13,4] | RECOMBINED FLOWRATE 103M3/D | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| RDGAS. | [NUMB 5,4] | RELATIVE DENSITY | If [STYP] (Sample Type) = (R)ecombination, then cannot be null. | |
| R-PPC.KPAA | [NUMB 8,2] | PSEUDO CRITICAL PRESSURE | Optional. | PPC of Recombined Sample - (kPaa) |
| R-PTC.DGEK | [NUMB 5,2] | PSEUDO CRITICAL TEMPERATURE | Optional. | PTC of Recombined Sample - (Degree's Kelvin) |

GAS ANALYSIS FILE (GAN)

Sample Point Codes (SPNT)

- 20 First Stage Separator
- 25 Second Stage Separator
- 30 Wellhead
- 35 Meter Run
- 40 Pressure Tank
- 45 Downhole Samplers - Post Drilling (*i.e. RFT's, MDT's etc.*)
- 50 DST
- 60 Tubing
- 70 Other (Miscellaneous)

GENERAL EDITS

ALL Mnemonic Values are Mandatory, unless otherwise noted.
 "Conditional" Values will be noted as, (i.e. Mandatory, if_TTYP = 08 or 18)
 Zero's are NOT acceptable unless otherwise noted.
 # WHERE SECTION RULES EXIST (Noted by the # Sign) THEY ARE SUPERSEDED BY INDIVIDUAL BUSINESS RULES AND EDITS
 ALL DEPTHS (for GAN) are measured or calculated and reported in reference to (KB) Kelly Bushing Elevation
 ALL DATES must be >= Spud Date and <= Abandoned Date and <= Submission Date
 All Depths must be less than 7,000.00 M
 All Pressures must be less than 150,000.00 kPa
 All Temperatures (**unless otherwise noted**) must be between -100 and 1,000°C
 All Times must be less than 100,000.0 Hours
 All gas production rates must be less than 100,000.00 E3M3/day
 All oil and water rates must be less than 100,000.00 M3/day
 All mole fractions must total 1.0000 plus or minus .001 for rounding
 Image Attachment required if Extended Component Analysis performed

| | Estimated Non-Critical Ranges | |
|--------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CO2 CARBON DIOXIDE | < = 5% | |
| N2 NITROGEN | < = 10% | TRACE COMPONENTS (<i>How To Report</i>): For Tables <u>-DTFSGAS</u> , <u>-DTCL</u> , <u>2nd Stage Separator</u> and/or <u>Recombined Gas Composition</u> components report all "Trace" values (<i>with the exception of "H2S - Hydrogen Sulphide"</i>) as 0.0001.FRAC, and use a comment line starting with "#" to qualify the situation(s). |
| H2 HYDROGEN | < = 0.1% | |
| HE HELIUM | < = 0.1% | |
| C1 METHANE | < = 50% | |
| C2 ETHANE | < = 15% | |
| C3 PROPANE | < = 5% | |
| IC4 ISO-BUTANE | < = 1% | |
| NC4 N-BUTANE | < = 2% | |
| IC5 ISO-PENTANE | < = 1% | |
| NC5 N-PENTANE | < = 1% | |
| C6 HEXANE | < = 1% | |
| C7+ HEPTANE PLUS | < = 1% | |

GRADIENT WELL TEST FILE (GRD)

| - FILE VERIFICATION | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|--------------------------------------|------------------------------------------------|
| # (Information in this section is Assigned by the AER, and Appended to the PAS file upon Acceptance / Validation via WTC-Submit procedure) | | | | |
| WTCNUM | [CHAR 13] | AER WTC Tracking ID | Will not be Blank, system will input | AER-WTC Unique Certification number: |
| WTCDAT | [YYYY MM DD HHHH] | Submission/Acceptance Date | Will not be Blank, system will input | Date of WTC Verification & Acceptance |
| WTCSUB | [CHAR 60] | Submitter | Will not be Blank, system will input | Company whom Submitted Specific Well Test Data |
| COMP. | [CHAR 60] | Licensee Name | Will not be Blank, system will input | Based on Licensee |

- VERSION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|-----------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PASTYPE. | [CHAR 7] | DIGITAL DATA - GRADIENT TEST DATA | PAS-GRD | Static Pressure Test, format. This file is for the reporting of both "Static" Pressure measurements (Gradients, Acoustic Well Sounders, or Deadweight Tester) and "Flowing" Gradient well test data. |
| UNIT. | [CHAR 1] | UNITS FLAG | (M)etric | Metric Units for AER submission |
| VERS. | [NUMB 5,2] | AER DIGITAL WELL TEST DATA | 4.00 | Current AER version for ASCII test data submission |

- WELL INFORMATION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|---------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| UWI . | [CHAR 20] | UNIQUE WELL ID | UWI must be valid and exist on AER database. | Unique Well Identifier - Bottomhole location. |
| DRILLEG. | [NUMB 2] | DRILLING LEG | Must be 01, 02, 03...09 (Cannot be 0 or NULL) | Drilling Leg (Event or Occurrence). Together with the UWI, this is to help define the bottom of the specific drill hole. |
| WLIC. | [CHAR 9] | AER WELL LICENSE NUMBER | Well License Number must match AER License Number for UWI | AER Well License Number |
| FORM. | [CHAR 20] | FORMATION NAME | | Name of the geological formation/zone |
| WSFL. | [NUMB 2] | WELL FLUID TYPE AT TEST DATE | Must have a valid AER fluid code = (01) Oil, (02) Gas, (06) Water, or (17) Crude Bitumen | Type of Dominant Fluid Production/Pay (i.e. oil, gas, water) |
| WTYP. | [CHAR 1] | WELL TYPE INDICATOR | Must be (V)ertical, (D)eviated or (H)orizontal | Flag indicating (V)ertical, (D)eviated, or (H)orizontal Wellbore |
| PACKER. | [CHAR 1] | PACKER INDICATOR FLAG | Must = (Y)es or (N)o. | Flag indicating presence of packer (Y)es, (N)o |
| TULD. | [CHAR 1] | TUBING IN WELL | Must = (Y)es or (N)o. | Flag indicating Tubing in well (Y) or (N) |
| AFLO. | [CHAR 1] | FLOW PATH | Must = (A)nnular, (C)asing, (T)ubing, or (B)oth casing and tubing. | Flag indicating flow path (A)nnular, (C)asing, (T)ubing, or (B)oth casing and tubing |
| TUBS.MM | [NUMB 4,1] | INSIDE DIAMETER OF PRODUCTION TUBING | Optional, if present must be > 0.00 | inside diameter of production tubing (IF TULD=Y) |
| PCID.MM | [NUMB 4,1] | INSIDE DIAMETER OF PRODUCTION CASING | Optional, if present must be > 0.00 and must be > [TUBS] and [PTOD] | Inside diameter of production casing |
| PTOD.MM | [NUMB 4,1] | OUTSIDE DIAMETER OF PRODUCTION TUBING | Optional, if present must be > 0.00 and must be > [TUBS] | Outside diameter of production tubing |

GRADIENT WELL TEST FILE (GRD)

~ TEST DATA

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRPS. | [CHAR 1] | TEST PURPOSE | Must be (I)ntial Test, (A)nnual Pressure, or (O)ther | (I)ntial or (A)nnual for fulfillment of Guide 40, Regulatory Testing Requirements. (O)ther indicates test conducted strictly for Licensee's own purpose, and which may not comply with a number of testing restrictions Please Note: Subsequent tests captured for Licensees own needs, but considered representative of the reservoirs (i.e. Stable and/or Interpreted), should be submitted as (A)nnual. |
| SERCO. | [CHAR 5] | SERVICE COMPANY CODE | | Company conducting test (see AER Website) |
| TTYP. | [CHAR 2] | TEST TYPE CODE | Must be Valid AER PAS-GRD Well Pressure Test Code (See Footnote). If [TTYP] (Test Type Indicator) = 13, 23, or 33 then [PRPS] (Test Purpose Indicator) must = (O)ther; If [TTYP] = 10, [PRPS] cannot = (I)ntial. | |
| H2SIND. | [CHAR 1] | H2S INDICATOR | Must = (Y)es or (N)one. | Flag indicating presence of H2S |
| AWSVAL. | [CHAR 1] | AWS VALIDATION | Mandatory. If [TTYP] (Test Type Indicator) = 10 and [PRPS] (Test Purpose Indicator) = (A)nnual, then [AWSVAL] must = (Y)es. If [TTYP] = 10 and [PRPS] = (O)ther, then [AWSVAL] can be (Y)es, (N)o, or Null. If [TTYP] <> 10, [AWSVAL] must be Null. | Flag indicating whether Verification of Acoustic Method was undertaken and submitted (in this or previous test/image file - for this well), in accordance with AER Guide 40. |
| TTOPL.M | [NUMB 6,2] | TEST/PROD. INTERVAL TOP M KB (LOG) | [TTOPL] (Interval Top - Log) must be > 0.0 and < [TBASL] (Interval Base - Log) | Top of tested or producing interval - in log depth, measured mKB. |
| TBASL.M | [NUMB 6,2] | TEST/PROD. INTERVAL BASE M KB (LOG) | [TBASL] (Interval Base - Log) must be > 0.0 and => [TTOPL] (Interval Top - Log) and cannot be greater than Total Well Depth. | Base of tested or producing interval - in log depth, measured mKB |
| TTOPT.M | [NUMB 6,2] | TEST/PROD. INTERVAL TOP M KB (TVD) | If [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal, then [TTOPT] (Interval Top - TVD) must be < [TTOPL] (Interval Top - Log), else if [WTYP] = (V)ertical, then [TTOPT] must = [TTOPL] | Top of tested or producing interval - in true vertical depth, calculated mKB |
| TBAST.M | [NUMB 6,2] | TEST/PROD. INTERVAL BASE M KB (TVD) | If [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal, then [TBAST] (Interval Base - TVD) must be < [TBASL] (Interval Base - Log), else if [WTYP] = (V)ertical, then [TBAST] must = [TBASL] | Base of tested or producing interval in true vertical depth, calculated mKB |
| TISI.DAY/HR | [YYYY MM DD HHHH] | TIME/DATE WELL SHUT-IN | Must be >= Spud Date but < [FTDT] (Final Test Date and Time) and the Submission Date | Date/time well shut-in for final BU/F0 |

GRADIENT WELL TEST FILE (GRD)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| FTDT.DAY/HR | [YYYY MM DD HHHH] | FINAL TEST DATE/TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date/time test ended |
| TUPS.KPAA | [NUMB 8,2] | INITIAL TUBING PRESSURE | Mandatory if [AFLO] (Flow Path) = (T)ubing or (B)oth, and [TTYP] (Test Type Indicator) = (03) or (13), else can be null. | Tubing pressure at start of test (kPaa) |
| CSPS.KPAA | [NUMB 8,2] | INITIAL CASING PRESSURE | Mandatory if [AFLO] (Flow Path) = (A)nnular, (C)asing or (B)oth, and [TTYP] (Test Type Indicator) = (03) or (13), else can be null | Casing pressure at start of test (kPaa) |
| FTUPS.KPAA | [NUMB 8,2] | FINAL TUBING PRESSURE | Mandatory if [AFLO] (Flow Path) = (T)ubing or (B)oth, and [TTYP] (Test Type Indicator) = (03) or (13), else can be null. | Tubing pressure at end of test (kPaa) |
| FCSPS.KPAA | [NUMB 8,2] | FINAL CASING PRESSURE | Mandatory if [AFLO] (Flow Path) = (A)nnular, (C)asing or (B)oth, and [TTYP] (Test Type Indicator) = (03) or (13), else can be null | Casing pressure at end of test (kPaa) |
| TSUR.DEGC | [NUMB 5,2] | SURFACE TEMPERATURE | Mandatory, if [TTYP] (Test Type Indicator) = (10), (23) or (33) | Temperature measured at wellhead during operations (DegC) |
| QGAS.E3M3/D | [NUMB 13,4] | GAS PRODUCTION RATE PRIOR TO TEST | Mandatory, if [TTYP] (Test Type Indicator) = (10). Can be zero. Can be negative, if an injection well. | |
| QOIL.M3/D | [NUMB 13,4] | OIL PRODUCTION RATE PRIOR TO TEST | Mandatory, if [TTYP] (Test Type Indicator) = (10). Can be zero. Can be negative, if an injection well. | |
| QWTR.M3/D | [NUMB 13,4] | WATER PRODUCTION RATE PRIOR TO TEST | Mandatory, if [TTYP] (Test Type Indicator) = (10). Can be zero. Can be negative, if an injection well. | |

GRADIENT WELL TEST FILE (GRD)

~ PRESSURE RESULTS - SUMMARY

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| GSERU. | [CHAR 20] | GAUGE SERIAL NUMBER USED IN SUMMARY | Mandatory, Must be found in 1 raw data table | Serial number of gauge used to represent reservoir |
| SDGAL.M | [NUMB 10,5] | REPRESENTATIVE STOP DEPTH M CF (LOG) | Mandatory, if [TTYP] (Test Type Indicator) = 03 | Closest Stop/Run Depth to MPP (Representative of Reservoir), (mCF Log) |
| SDGAT.M | [NUMB 10,5] | REPRESENTATIVE STOP DEPTH M CF (TVD) | Mandatory, if [TTYP] (Test Type Indicator) = 03 and [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal, else must be Null. | Gauge/Recorder depth (Calculated/Adjusted Depth) (in mCF TVD) |
| PRGA.KPAA | [NUMB 8,2] | PRESSURE AT STOP DEPTH KPAA | Mandatory, if [TTYP] (Test Type Indicator) = 03 | Representative Pressure at SDGAL |
| PRCOR.KPA | [NUMB 8,2] | PRESSURE CORRECTION | Mandatory, if [TTYP] (Test Type Indicator) = 03. Can be zero. If [SDGAL] is < [TBASL] or > [TTOPL], then [PRCOR] can not be zero. | Pressure Differential from run depth to MPP used; negative values if run below MPP (kPa) |
| PRGC. | [CHAR 240] | COMMENT ON PRESSURE | Optional | Freeform comment of Pressure - (i.e. comparison to trend, offsets, shut-in time etc.) Data updates AER Pressure Summary Database. |
| PLIND. | [CHAR 1] | PRIMARY LIQUID TYPE INDICATOR | Mandatory, if [WSFL] (Well Fluid Type at Test Date) = (01), (06) or (17). Must = (O)il, (W)ater, (C)rude Bitumen, (E)mulsion or o(T)her. If present [PLIND] (Primary Liquid Type Indicator) <> [SLIND] (Secondary Liquid Type Indicator). | Provide type of liquid encountered |
| SLIND. | [CHAR 1] | SECONDARY LIQUID TYPE INDICATOR | Mandatory, if [SLGR] (Secondary Liquid Gradient) > 0.00, otherwise it is Optional. If present, must = (O)il, (W)ater, (C)rude Bitumen, (E)mulsion, o(T)her, else must be NULL. If present, [PLIND] (Primary Liquid Type Indicator) <> [SLIND] (Secondary Liquid Type Indicator). | Must provide secondary type of liquid if encountered |

GRADIENT WELL TEST FILE (GRD)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRGAS.KPA/M | [NUMB 5,3] | GAS GRADIENT USED TO CORRECT TO LIQUID LEVEL OR LOG MPP | Mandatory, if [PRPS] (Test Purpose Indicator) not = (O)ther; If [LLVL] (Liquid Level - Log) = 0, then [GRGAS] (Gas Gradient) can be zero otherwise it must be > 0.0001 and < 5.999 | Estimated gradient of gas in wellbore (kPa/m) |
| GRLIQ.KPA/M | [NUMB 5,3] | LIQUID GRADIENT USED TO CORRECT TO LOG MPP | Mandatory, if [PRPS] (Test Purpose Indicator) not = (O)ther; If [PLIND] (Primary Liquid Type Indicator) present [GRLIQ] (Liquid Gradient used to correct to MPP) is mandatory; if [PLIND] = (O)il or (E)mulsion then [GRLIQ] must be > 1.5 and < 15.999; if [PLIND] = (W)ater then [GRLIQ] must be > 9.500 and < 15.999 | (kPa/m). |
| PLGR.KPA/M | [NUMB 5,3] | PRIMARY LIQUID GRADIENT (LOG) | If [PLIND] (Primary Liquid Type Indicator) present, [PLGR] (Primary Liquid Gradient) is mandatory | |
| SLGR.KPA/M | [NUMB 5,3] | SECONDARY LIQUID GRADIENT (LOG) | If [SLIND] (Secondary Liquid Type Indicator) present, [SLGR] (Secondary Liquid Gradient) is mandatory | |
| PSUR.KPAA | [NUMB 8,2] | SURFACE PRESSURE | Mandatory, if [TTYP] (Test Type Indicator) = 10, 23 or 33 | Corresponding casing/surface pressure at that time (kPaa) |
| METHC. | [CHAR 240] | METHOD OF ACOUSTIC/DEAD WEIGHT TESTER EXTRAPOLATION COMMENT | Mandatory, if [TTYP] (Test Type Indicator) = 10 or 33 | Description for method of Acoustic / DWT calculation, in accordance with AER Guide 3 and Guide 5. |
| LLVL.M | [NUMB 10,5] | LIQUID LEVEL M CF (LOG) | Mandatory, if [PLIND] (Primary Liquid Type Indicator) present, can be zero. Must be Null, IF both [PLIND] AND [SLIND] (Secondary Liquid Type Indicator) are Null. | Calculated Length of Gas Column, as determined by wireline or interpreted by an Acoustic Shot - in LOG/measured depth (mCF). Note: For dry gas wells, Liquid Level (or Length of Gas Column) is to be reported equal to MPP or Null. A depth of zero will be interpreted as "Liquid to Surface". |
| LLVT.M | [NUMB 10,5] | LIQUID LEVEL M CF (TVD) | Mandatory, if [PLIND] (Primary Liquid Type Indicator) present and if [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal. Can be zero. Must be Null, IF both [PLIND] AND [SLIND] (Secondary Liquid Type Indicator) are Null. | Calculated Length of Gas Column (or liquid level) for each shot (TVD). As determined by wireline or interpreted by an Acoustic - in TVD depth, calculated mCF. Note: See [LLVL] |
| PMPP.KPAA | [NUMB 8,2] | CALCULATED PRESSURE CORRECTED TO MPP (LOG) | Mandatory. Can not = 0 | Calculated pressure to mid-point of tested or producing interval - in log depth, measured mKB |
| TRES.DEGC | [NUMB 5,2] | RESERVOIR TEMPERATURE | | Reservoir temperature (DegC) |

GRADIENT WELL TEST FILE (GRD)

| | | | | |
|-------|----------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DPTS. | [CHAR 1] | ANNULAR DEPRESSION TEST INDICATOR | Mandatory, if [TTYP] (Test Type Indicator) = 10 and [PRPS] (Test Purpose Indicator) = (A)nnual. Must be either (Y)es or (N)o otherwise Null. | Flag indicating whether or not an Annular Fluid/Foam Depression test was performed, in accordance with AER Guide 40. If DPTS = (Y). Data/information must be included within Image Attachment. |
|-------|----------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

GRADIENT WELL TEST FILE (GRD)

~ DATA TABLE - GRADIENT

(DTSUM - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTSUM TABLE)

{DTSUM - Can be omitted if [TTYP] (Test Type Indicator) <> (03) or (13)}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| SDGAL.M | [NUMB 10,5] | STOP DEPTH M CF (LOG) | Mandatory, if [TTYP] (Test Type Indicator) = (03) or (13). At least 1 row in Table must report a value not = zero | Gauge/Recorder depth (Measured Depth/LOG) in mCF |
| SDGAT.M | [NUMB 10,5] | STOP DEPTH M CF (TVD) | Mandatory, if [TTYP] (Test Type Indicator) = (03) or (13) Mandatory and if [WTYP] (well Type Indicator) = (D)eviated or (H)orizontal , else must be Null. | Gauge/Recorder depth (Calculated Depth/TVD) in mCF |
| PRGA.KPAA | [NUMB 8,2] | STOP PRESSURE KPAA | Mandatory, if [TTYP] (Test Type Indicator) = (03) or (13) | Pressure measured at stop depth |
| GRSDL.KPAM | [NUMB 5,3] | CALCULATED GRADIENT (LOG) | Mandatory, if [TTYP] (Test Type Indicator) = (03) or (13). At least 1 row in Table must report a value not = zero | Gradient calculated at stop depth |
| GRSDT.KPAM | [NUMB 5,3] | CALCULATED GRADIENT (TVD) | Mandatory, if [TTYP] (Test Type Indicator) = (03) or (13) Mandatory and if [WTYP] (well Type Indicator) = (D)eviated or (H)orizontal , else must be Null. | |
| TGA.DEGC | [NUMB 5,2] | STOP TEMPERATURE | Mandatory, if [TTYP] (Test Type Indicator) = (03) or (13). At least 1 row in Table must report a value not = zero | Gauge temperature at each stop depth |

~ DTSUM

{DTSUM - Can be omitted if [TTYP] (Test Type Indicator) <> (03) or (13)}

| <u>SDGAL</u> | <u>SDGAT</u> | <u>PRGA</u> | <u>GRSDL</u> | <u>GRSDT</u> |
|--------------|--------------|-------------|--------------|--------------|
| 99999.99999 | 99999.99999 | 999999.99 | 99.999 | 99.999 |
| 99999.99999 | 99999.99999 | 999999.99 | 99.999 | 99.999 |
| 99999.99999 | 99999.99999 | 999999.99 | 99.999 | 99.999 |

#... DTSUM - TABLE CONTINUED

| <u>TGA</u> |
|------------|
| 999.99 |
| 999.99 |
| 999.99 |

GRADIENT WELL TEST FILE (GRD)

~ HEADER DATA - GAUGE (n)

(Gauge (n) indicates that for each subsequent Gauge (Surface and/or Bottomhole), the Header Information must be numbered accordingly.)

(GSERU (Pressure Results Summary) must match one of the reported (Representative Gauges) GSER.)

(GSERU will recognize matching Gauge Number from [DTG (n)], therefore gauge "order" is not compulsory)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| GSER. | [CHAR 20] | GAUGE SERIAL NUMBER | One Gauge must match [GSERU] (Gauge Serial Number Used in Summary) | Serial or Reference number of Gauge/Recorder. Note: Number required for the ability to audit gauge data. |
| GTYPMM. | [CHAR 90] | GAUGE TYPE / MANUFACTURER / MODEL | Gauge Type, Manufacturer and Model must be separated with slashes. | Type of gauge used (mechanical, electronic, model), name of manufacturer and model |
| GRNG.KPAA | [NUMB 8,2] | MAXIMUM RECORDER RANGE KPAA | | Full scale pressure range |
| GCAL.DAY | [YYYY MM DD] | DATE OF LAST CALIBRATION | Must be < = [FTDT] (Final Test Date/Time) | Date gauge last calibrated |
| GRES. | [NUMB 6,5] | RESOLUTION % OF FULL-SCALE | | |
| GACC. | [NUMB 6,5] | ACCURACY % OF FULL-SCALE | | |
| GONB.DAY/HR/SS | [YYYY MM DD HHHH:SS] | DATE/TIME GAUGE ON BOTTOM | Mandatory, if [TTYP] (Test Type Indicator) = (03) or (13). Must be > Spud Date and < then [GOFB] (Gauge Off Bottom) | Date/time gauge on bottom |
| GOFB.DAY/HR/SS | [YYYY MM DD HHHH:SS] | DATE/TIME GAUGE OFF BOTTOM | Mandatory, if [TTYP] (Test Type Indicator) = (03) or (13). Must be > [GONB] (Gauge On Bottom) and <= [FTDT] (Final Test Date/Time) | Date/time gauge off bottom |

GRADIENT WELL TEST FILE (GRD)

~ DATA TABLE - GAUGE (n)

(DTG (n), DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTG (n) TABLES)

{at least 1 DTG table must exist if [TTYP] (Test Type Indicator) <> 10}.

{HEADER DATA AND TABLE DTG (n) CAN BE OMITTED IF SUBSEQUENT GAUGES MALFUNCTIONED}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour clock |
| TCUM.HR | [NUMB 10,5] | GAUGE CUMULATIVE TIME | Mandatory, If [TTYP] (Test Type Indicator) <> (10). Can be zero. | Cumulative Time (hours) |
| DGAL.M | [NUMB 10,5] | DEPTH OF RECORDER M CF | Optional. If present, must be <= Total Depth of Well | Continuous/Running or Stopped Depth of Gauge, (Measured Depth/LOG) in mCF |
| PRGA.KPAA | [NUMB 8,2] | GAUGE PRESSURE KPAA | Mandatory, if [TTYP] (Test Type Indicator) = 03. If ([FTDT] - [TISI]) >= 14 days, no edit no error. If < 14 days), then find {-Pressure Results Summary [PRGA] (Pressure at Stop Depth)}, that matches last occurrence of (DTG (n) [PRGA] (Pressure at Stop Depth)). Once found, use corresponding [TIME] (Real Time), go back a minimum of 2 hours and use corresponding [PRGA] (Pressure at Stop Depth), subtract earliest pressure from latest and divide by number of hours, if value <= 2.5 kPa/hr, OK, else error. | Pressure measured at that interval in time |
| TGA.DEGC | [NUMB 5,2] | GAUGE TEMPERATURE DEGC | | Temperature measured at that interval in time |
| GCOM. | [CHAR 240] | GENERAL COMMENT | Optional | Comment on Gauge/Events (i.e. shut-in, open-to-flow, etc.) |

~ DTG (n)

| <u>TIME</u> | <u>TCUM</u> | <u>DGAL</u> | <u>PRGA</u> | <u>TGA</u> |
|--------------------|-------------|-------------|-------------|------------|
| YYYY MM DD HHHH:SS | 99999.99999 | 99999.99999 | 999999.99 | 999.99 |
| YYYY MM DD HHHH:SS | 99999.99999 | 99999.99999 | 999999.99 | 999.99 |
| YYYY MM DD HHHH:SS | 99999.99999 | 99999.99999 | 999999.99 | 999.99 |

#... DTG (n) - TABLE CONTINUED

| |
|-------------|
| <u>GCOM</u> |
| X(240) |
| X(240) |
| X(240) |

GRADIENT WELL TEST FILE (GRD)

~ DATA TABLE - ACOUSTIC

(DTAWS - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTAWS TABLE)

{DTAWS and entries must exist if [TTYP] (Test Type Indicator) = 10, else can be blank

MNEMONIC NAME

FIELD SIZE

DATA ELEMENT DESCRIPTION

BUSINESS RULES AND EDITS

CLARIFICATION / EXPLANATION OF MNEMONIC

| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | Mandatory, if [TTYP] (Test Type Indicator) = 10, must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour Clock |
|----------------|----------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LLVL.M | [NUMB 10,5] | LIQUID LEVEL M CF (LOG) | Mandatory if [TTYP] (Pressure Test Type) = 10, can be zero. At least 1 occurrence of [LLVL] must exist in table. (note: zero = Fluid to Surface) | Calculated Length of Gas Column, as determined by wireline or interpreted by an Acoustic Shot - in LOG/measured depth (mCF). Note: For dry gas wells, Liquid Level (or Length of Gas Column) is to be reported equal to MPP or Null. A depth of zero will be interpreted as "Liquid to Surface". |
| PSUR.KPAA | [NUMB 8,2] | SURFACE PRESSURE KPAA | Mandatory, if ([TTYP] (Test Type Indicator) = 10. If ([FTDT] (Final Test Date/Time) - [TISI] (Date/Time Well Shut-In)) < 14 days) then [PSUR] (Surface Pressure) at the last real time in the table go back 2 hours and subtract the [PSUR] at that time) if value is <= 2.5 kPa/hr, OK, else error. | |

~ DTAWS

| <u>TIME</u> | <u>LLVL.M</u> | <u>PSUR</u> |
|--------------------|---------------|-------------|
| YYYY MM DD HHHH:SS | 99999.99999 | 999999.99 |
| YYYY MM DD HHHH:SS | 99999.99999 | 999999.99 |
| YYYY MM DD HHHH:SS | 99999.99999 | 999999.99 |

GRADIENT WELL TEST FILE (GRD)

Test Type Codes: (TTYP)

- 03 Bottom Hole - Static Gradient
- 10 AWS - Single-Shot (Static)
- 13 Flowing Gradient
- 23 DWT (Surface Pressure Reading - Only)
- 33 DWT w/ Extrapolation (Dry Gas only)
- 43 Static Pressure - No Gradient (Shut-In > 14 days)

GENERAL EDITS

ALL Mnemonic Values are Mandatory, unless otherwise noted.

"Conditional" Values will be noted as, (i.e. Mandatory, if TTYP = 08 or 18)

Zero's are NOT acceptable unless otherwise noted.

WHERE SECTION RULES EXIST (Noted by the # Sign) THEY ARE SUPERSEDED BY INDIVIDUAL BUSINESS RULES AND EDITS

ALL INTERVAL DEPTHS (for GRD) are measured or calculated and reported in reference to (KB) Kelly Bushing Elevation

ALL GAUGE DEPTHS and/or LIQUID LEVEL Depths (for GRD) are measured or calculated and reported in reference to (CF/GRD) Casing Flange/Ground Elevation

ALL DATES must be >= Spud Date and <= Abandoned Date and <= Submission Date

KB and Ground Elevation must exist in AER records before acceptance of test

All Depths must be less than 7,000.00 M

All Pressures must be less than 150,000.00 kPa

All Temperatures (**unless otherwise noted**) must be between -100 and 1,000°C

All Times must be less than 100,000.0 Hours

All gas production rates must be less than 100,000.00 E3M3/day

All oil and water rates must be less than 100,000.00 M3/day

GRGAS.KPAM (Gas Gradient) must be > 0.0001 and < 5.999

GROIL.KPAM (Oil Gradient) must be > 1.5 and < 9.795

GRWTR.KPAM (Water Gradient) must be > 9.500 and < 15.999

GRSDL KPAM (Calculated Gradient LOG) and GRSDT KPAM (Calculated Gradient TVD) must be < 16.000

If Mandatory, attribute CAN NOT = ZERO unless otherwise specified.

If PRPS = (O)ther most edits on Test Data (after Well Information section) may not be edited. Exceptions (i.e Dates)

AOF / TRANSIENT WELL TEST FILE (TRG)

| ~ FILE VERIFICATION | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|--------------------------------------|------------------------------------------------|
| # (Information in this section is Assigned by the AER, and Appended to the PAS file upon Acceptance / Validation via WTC-Submit procedure) | | | | |
| WTCNUM | [CHAR 13] | AER WTC Tracking ID | Will not be Blank, system will input | AER-WTC Unique Certification number: |
| WTCDAT | [YYYY MM DD HHHH] | Submission/Acceptance Date | Will not be Blank, system will input | Date of WTC Verification & Acceptance |
| WTCSUB | [CHAR 60] | Submitter | Will not be Blank, system will input | Company whom Submitted Specific Well Test Data |
| COMP. | [CHAR 60] | Licensee Name | Will not be Blank, system will input | Based on Licensee |

~ VERSION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|----------------------------------------|--------------------------|----------------------------------------------------|
| PASTYPE. | [CHAR 7] | DIGITAL DATA - AOF/TRANSIENT TEST DATA | PAS-TRG | Transient Pressure and Deliverability Test, Format |
| UNIT. | [CHAR 1] | UNITS FLAG | (M)etric | Metric Units for AER submission |
| VERS. | [NUMB 5,2] | AER DIGITAL WELL TEST DATA | 4.00 | Current AER version for ASCII test data submission |

~ WELL INFORMATION

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| UWI . | [CHAR 20] | UNIQUE WELL ID | UWI must be valid and exist on AER database. | Unique Well Identifier - Bottomhole location. |
| DRILLEG. | [NUMB 2] | DRILLING LEG | Must be 01, 02, 03...09 (Cannot be 0 or NULL) | Drilling Leg (Event or Occurrence). Together with the UWI, this is to help define the bottom of the specific drill hole. |
| WLIC. | [CHAR 9] | AER WELL LICENSE NUMBER | Well License Number must match AER License Number for UWI | AER Well License Number |
| FORM. | [CHAR 20] | FORMATION NAME | | Name of the geological formation/zone |
| WSFL. | [NUMB 2] | WELL FLUID TYPE AT TEST DATE | Must have a valid AER fluid code = (01) Oil, (02) Gas, (06) Water, or (17) Crude Bitumen | Type of Dominant Fluid Production/Pay (i.e. oil, gas, water) |
| WTYP. | [CHAR 1] | WELL TYPE INDICATOR | Must be (V)ertical, (D)eviated or (H)orizontal | Flag indicating (V)ertical, (D)eviated, or (H)orizontal Wellbore |
| PACKER. | [CHAR 1] | PACKER INDICATOR FLAG | Must be either (Y)es or (N)o. | Flag indicating presence of packer (Y)es, (N)o |
| TULD. | [CHAR 1] | TUBING IN WELL | Must be either (Y)es or (N)o. | Flag indicating Tubing in well (Y) or (N) |
| AFLO. | [CHAR 1] | FLOW PATH | Must be either (A)nnular, (C)asing, (T)ubing, or (B)oth - casing and tubing. | Flag indicating flow path (A)nnular, (C)asing, (T)ubing, or (B)oth casing and tubing |
| TUBS.MM | [NUMB 4,1] | INSIDE DIAMETER OF PRODUCTION TUBING | Mandatory, if [TULD] (Tubing in Well) = (Y)es and [AFLO] (Flow Path) = (T)ubing or (B)oth. If present must be < [PTOD] (Outside Diameter of Production Tubing) | Inside diameter of production tubing |
| PCID.MM | [NUMB 4,1] | INSIDE DIAMETER OF PRODUCTION CASING | Mandatory, if [AFLO] (Flow Path) = (A)nnular, (C)asing or (B)oth. If present must be > 0.00 and < 350 | Inside diameter of production casing |
| PTOD.MM | [NUMB 4,1] | OUTSIDE DIAMETER PRODUCTION TUBING | Mandatory, if [TULD] (Tubing in Well) = (Y)es and [AFLO] (Flow Path) = (A)nnular or (B)oth/casing and tubing. If present must be < [PCID] (Inside Diameter of Production Casing) | Outside diameter of production tubing |

AOF / TRANSIENT WELL TEST FILE (TRG)

~ TEST DATA

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRPS. | [CHAR 1] | TEST PURPOSE | Test purpose flag must be (I)ntial Test, (A)nnual Pressure, or (O)ther | (I)ntial or (A)nnual for fulfillment of Guide 40, Regulatory Testing Requirements. (O)ther indicates test conducted strictly for Licensee's own purpose, and which may not comply with a number of testing restrictions Please Note: Subsequent tests captured for Licensees own needs, but considered representative of the reservoirs (i.e. Stable and/or Interpreted), should be submitted as (A)nnual. |
| SERCO. | [CHAR 5] | SERVICE COMPANY CODE | | Service or Wireline Company conducting test |
| H2SIND. | [CHAR 1] | H2S INDICATOR | Must be (Y)es or (N)o. | Flag indicating presence of Hydrogen Sulphide (H2S) gas |
| INTRP. | [CHAR 1] | TEST INTERPRETATION PRESENT | Must be (Y)es or (N)o. | Flag indicating whether or not Transient Analysis or Test Interpretation was performed. |
| TTOPL.M | [NUMB 6,2] | TEST/PROD INTERVAL TOP M KB (LOG) | [TTOPL] (Interval Top - Log) must be > 0.0 and < [TBASL] (Interval Base - Log) | Top of tested or producing interval - in log depth, measured mKB |
| TBASL.M | [NUMB 6,2] | TEST/PROD INTERVAL BASE M KB (LOG) | [TBASL] (Interval Base - Log) must be > 0.0 and => [TTOPL] (Interval Top - Log) and cannot be greater than Total Well Depth. | Base of tested or producing interval - in log depth, measured mKB |
| TTOPT.M | [NUMB 6,2] | TEST/PROD INTERVAL TOP M KB (TVD) | If [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal, then [TTOPT] (Interval Top - TVD) must be < [TTOPL] (Interval Top - Log), else if [WTYP] = (V)ertical, then [TTOPT] must = [TTOPL] | Top of tested or producing interval - in true vertical depth, calculated mKB |
| TBAST.M | [NUMB 6,2] | TEST/PROD INTERVAL BASE M KB (TVD) | If [WTYP] (Well Type Indicator) = (D)eviated or (H)orizontal, then [TBAST] (Interval Base - TVD) must be < [TBASL] (Interval Base - Log), else if [WTYP] = (V)ertical, then [TBAST] must = [TBASL] | Base of tested or producing interval - in true vertical depth, calculated mKB |
| FTDT.DAY/HR | [YYYY MM DD HHHH] | FINAL TEST DATE/TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | Date/time test ended |
| TUPS.KPAA | [NUMB 8,2] | INITIAL TUBING PRESSURE | Mandatory, if [AFLO] (Flow Path) = (T)ubing or (B)oth and [PRSTY] (Pressure Test Type) <> (34), else can be Null. | Initial Tubing Pressure (kPaa): For Build-Ups tests, the pressure at end of flow (prior to shut-in). For Drawdown tests, the static pressure prior to flow |
| CSPS.KPAA | [NUMB 8,2] | INITIAL CASING PRESSURE | Mandatory, if [AFLO] (Flow Path) = (A)nnular, (C)asing or (B)oth and [PRSTY] (Pressure Test Type) <> (34), else can Null. | Initial Casing Pressure (kPaa): For Build-Ups tests, the pressure at end of flow (prior to shut-in). For Drawdown tests, the static pressure prior to flow |
| FTUPS.KPAA | [NUMB 8,2] | FINAL TUBING PRESSURE | Mandatory, if [AFLO] (Flow Path) = (T)ubing or (B)oth and [PRSTY] (Pressure Test Type) <> (34), else can be Null. | Final Tubing Pressure (kPaa): For Build-Ups tests, the pressure at end of the shut-in period. For Drawdown tests, the final pressure at end of drawdown period |

AOF / TRANSIENT WELL TEST FILE (TRG)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FCSPS.KPAA | [NUMB 8,2] | FINAL CASING PRESSURE | Mandatory, if [AFLO] (Flow Path) = (A)nnular, (C)asing or (B)oth and [PRSTY] (Pressure Test Type) <> (34), else can Null. | Final Casing Pressure (kPaa): For Build-Ups tests, the pressure at end of the shut-in period. For Drawdown tests, the final pressure at end of drawdown period |
| PFWH.KPAA | [NUMB 8,2] | FINAL FLOWING WELLHEAD PRESSURE | Optional. | Measured Final Flowing pressure at the wellhead kPaa |
| TSUR.DEGC | [NUMB 5,2] | SURFACE TEMPERATURE DEGC | Mandatory, if ALL [SURBTM] (Gauge Location) gauges = (S)urface. | Temperature measured at wellhead during operations |

~ AOF / IPR RESULTS SUMMARY

{MUST BE PRESENT IF AOFTY = (01), (02), (31), (32) or IPR (41) IF AOFTY is null - this section must be Null or can be omitted.}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| AOFTY. | [NUMB 2] | AOF TYPE | Must be Valid AER PAS-TRG Deliverability Test Code (See Footnote). If [AOFEXT] (Extended Sandface AOF) >= 300 and [SGPTAU] (Single-Point Authorization) is Null, then [AOFTY] (AOF Type) must = 02 or 32 ; either [AOFTY] or [PRSTY] (Pressure Test Type) is mandatory (if [AOFTY] is null, then [PRSTY] is mandatory). If [AOFTY] = 31 then [AOFWH] (Stabilized Wellhead AOF) and [AOFWEX] (Extended Wellhead AOF) must be =< 21) | |
| SGPTAU. | [CHAR 7] | SINGLE-POINT AUTHORIZATION | Mandatory, if [AOFTY] (AOF Type) < > 02 or 32 and ([AOFEXT] (Extended Sandface AOF) or [AOF SF] (Stabilized Sanface AOF) > = 300. | Authorization Number indicating AER Approval to conduct a Single-Point AOF with potential expected to exceed 300 103m ³ /d. |
| AIN. | [CHAR 1] | INLINE AOF INDICATOR FLAG | Mandatory, if [AOFTY] (AOF Type) is Present. Must be (Y)es or (N)o. If AER records indicate "well on production" then [FTDT] (Final Test Date/Time) must >= On Production Date (OPD), else error. | Well must be tied into pipeline during operations. PRD.PAS required if Production Tester on site. |
| LIT. | [CHAR 1] | LIT ANALYSIS INDICATOR FLAG | Mandatory, if [AOFTY] (AOF Type) is Present. Must be (Y)es or (N)o. | Flag indicating LIT (Lamiinar-Inertial-Turbulent) Flow Analysis (Y)es or (N)o |
| QGLM.E3M3/D | [NUMB 13,4] | LAST MEASURED GAS RATE | Mandatory, if [AOFTY] (AOF Type) is Present. | (10 ³ m ³ /d). Last Measured or Extended Flowrate |
| QGST.E3M3/D | [NUMB 13,4] | STABILIZED GAS RATE | Mandatory, if [AOFTY] (AOF Type) is Present. | Calc Stabilized flow rate at Final Test conditions as per Regulatory Requirements (10 ³ m ³ /d) |

AOF / TRANSIENT WELL TEST FILE (TRG)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| NSF. | [NUMB 3,2] | INVERSE SLOPE AT SANDFACE | If [AOF TY] (AOF Type) = 31 then [NSF] (Inverse Slope at Sandface) must be null; If LIT = (Y)es can be null and If [AOF TY] (AOF Type) = 02 or 32 then [NSF] must be => 0.5 and <= 1.0 or if [AOF TY] = 01 then [NSF] must = 1.0. | Note: like the current [SGPTAU], approval from the AER would be required prior to submission of test data (an Approval Number will be assigned) |
| AOFEXT.E3M3/D | [NUMB 13,4] | EXTENDED SANDFACE AOF | Mandatory, if [AOF TY] (AOF Type) <> 31, else must be null. | Extended Transient Sandface AOF potential (10 ³ m ³ /d) |
| AOF SF.E3M3/D | [NUMB 13,4] | STABILIZED SANDFACE AOF | Mandatory, if [AOF TY] (AOF Type) <> (31), else Null. | Stabilized Sandface AOF Potential (103m ³ /d) |
| NWH. | [NUMB 3,2] | INVERSE SLOPE AT WELLHEAD | Mandatory, if [AOF TY] (AOF Type) = (31); If [LIT] (LIT Analysis Indicator Flag) = (Y)es can be null. If [AOF TY] (AOF Type) = 02 or 32 then [NSF] must be => 0.5 and <= 1.0 or if [AOF TY] = 01 then [NWH] must = 1.0. Must be submitted if Calculated. | Wellhead inverse slope - "n" (should be 0.5-1.0). |
| AOFWEX.E3M3/D | [NUMB 13,4] | EXTENDED WELLHEAD AOF | Mandatory, if [AOF TY] (AOF Type) = 31. If [AOF TY] <> 31 then can be null. | Extended Transient Wellhead AOF potential (10 ³ m ³ /d) |
| AOFWH.E3M3/D | [NUMB 13,4] | STABILIZED WELLHEAD AOF | Mandatory, if [AOF TY] (AOF Type) = 31. If [AOF TY] <> 31 then can be null. | Stabilized Wellhead AOF potential (10 ³ m ³ /d) |
| QOLM.M3/D | [NUMB 13,4] | LAST MEASURED OIL RATE | Mandatory, if [AOF TY] (AOF Type) = 41 then field must be present. | (10 ³ m ³ /d) |
| QOST.M3/D | [NUMB 13,4] | STABILIZED OIL RATE | Mandatory, if [AOF TY] (AOF Type) = 41 | Calc Stabilized flow rate @ Final Test conditions / Guide 40 (m ³ /d) |
| IPRST.M3/D | [NUMB 13,4] | STABILIZED OIL IPR | Mandatory, if [AOF TY] (AOF Type) = 41 | Stabilized inflow performance rate for oil well (m ³ /d) |
| IPRMAX.M3/D | [NUMB 13,4] | MAXIMUM OIL IPR (M3/D) | Mandatory, if [AOF TY] (AOF Type) = 41 | Maximum inflow performance rate for oil well |
| PFSF.KPAA | [NUMB 8,2] | STABILIZED FLOWING SANDFACE PRESSURE | Mandatory, if [AOF TY] (AOF Type) is present, else if [AOF TY] = 31 then it can be null. Ffield must be present | (kPaa) |
| LMPFSF.KPAA | [NUMB 8,2] | LAST MEASURED FLOWING SANDFACE PRESSURE | If [AOF TY] (AOF Type) = 31 then it can be null else mandatory | (kPaa) |
| PFWH.KPAA | [NUMB 8,2] | STABILIZED FLOWING WELLHEAD PRESSURE | Mandatory, if [AOF TY] (AOF Type) = 31, Must be > 0.00. If [AOF TY] <> 31, can be null. | (kPaa) |
| WPRE.KPAA | [NUMB 8,2] | STATIC WELLHEAD PRESSURE | Mandatory, if [AOF TY] (AOF Type) = 31, Must be > 0.00. If [AOF TY] <> 31, can be null. | (kPaa) |
| LMPFWH.KPAA | [NUMB 8,2] | LAST MEASURED FLOWING WELLHEAD PRESSURE | Mandatory, if [AOF TY] (AOF Type) = 31, Must be > 0.00. If [AOF TY] <> 31, can be null. | (kPaa) |
| PAVG.KPAA | [NUMB 8,2] | AVERAGE RESERVOIR PRESSURE AT MPP | Mandatory, if [AOF TY] (AOF Type) is present, else if [AOF TY] = 31 then it can be null. | (kPaa) |
| AOFC. | [CHAR 240] | AOF COMMENT | Optional | Freeform comment of AOF/Deliverability quality. Data updates AER Pressure Summary Database. |

AOF / TRANSIENT WELL TEST FILE (TRG)

~ DATA TABLE - PRODUCTION SUMMARY

(DTSUM - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTSUM TABLES)

{Production Summary Table must be present if [AOF TY] (AOF Type) = (01), (02), (31), (32) or IPR (41), or [PRSTY] (Pressure Test Type) = (11) else must be blank.}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| RTNUM. | [CHAR 1] | RATE NO. (1),(2)(E)XTENDED. | = <9 or 'E' | Rate Period |
| FDUR.HR | [NUMB 10,5] | FLOW DURATION HOURS | | Hours flowed during each [RTNUM] Period |
| QOIL.M3/D | [NUMB 13,4] | OIL PRODUCTION RATE | Mandatory, if [WSFL] (Well Fluid Type) = (01), can be zero. If [WSFL] <> (01), can be blank. | Oil rate during each Rate (RTNUM) Period (m ³ /d). |
| QGAS.E3M3/D | [NUMB 13,4] | GAS PRODUCTION RATE | Mandatory, if [WSFL] (Well Fluid Type) = (02) and [PRSTY] (Pressure Test Type) <=> = (11), THEN at least 1 line must be >0.00. If [WSFL] < > (02), can be zero or null | Gas rate during each Rate (RTNUM) Period (10 ³ m ³ /d). |
| QCON.M3/D | [NUMB 13,4] | CONDENSATE PRODUCTION RATE | Can be Blank or Zero | Condensate rate during each Rate (RTNUM) Period (m ³ /d). |
| CONGR.M3/E-3M3 | [NUMB 5,4] | CONDENSATE TO GAS RATIO | Mandatory, if [QCON] (Condensate Production Rate) > 0.0 | (m ³ /10 ³ m ³) |
| GEOV.E3M3/D | [NUMB 13,4] | GAS EQUIVALENT OF CONDENSATE | Mandatory, if [QCON] (Condensate Production Rate) > 0.0 | (10 ³ m ³ /d) |
| QRGAS.E3M3/D | [NUMB 13,4] | RECOMBINED GAS PRODUCTION RATE | Mandatory, if [QCON] (Condensate Production Rate) > 0.0 | (10 ³ m ³ /d) |
| QWTR.M3/D | [NUMB 13,4] | WATER PRODUCTION RATE | Mandatory, can be zero | Water rate during each Rate (RTNUM) Period (m ³ /d). |

~ DTSUM

{TABLE occurs only one time. If AOF TY = 02 or 32 THEN THERE MUST BE AT LEAST 2 ROWS OF DATA IN THE TABLE}

| <u>RTNUM</u> | <u>FDUR</u> | <u>QOIL</u> | <u>QGAS</u> | <u>QCON</u> |
|--------------|----------------|----------------|----------------|----------------|
| 1 | 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 2 | 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 3 | 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| E | 999999999.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |

#... DTSUM - TABLE CONTINUED

| <u>CONGR</u> | <u>GEOV</u> | <u>QRGAS</u> | <u>QWTR</u> |
|--------------|----------------|----------------|----------------|
| 9.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 9.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 9.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 9.9999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |

AOF / TRANSIENT WELL TEST FILE (TRG)

~ PRESSURE RESULTS - SUMMARY

{if [PRSTY] (Pressure Test Type) = 04, 11, 12 or 14 Summary Results Mandatory. If [PRSTY] = 05, 15, 24 or If Null, Summary Results Optional}

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRSTY. | [NUMB 2] | PRESSURE TEST TYPE | Must be Valid AER PAS-TRG Well Pressure Test Code (See Footnote). Can be null if [AOF TY] (AOF Type) not null. If [PRSTY] (Pressure Test Type) = 06, 11 or 12 then [PRPS] (Test Purpose Indicator) must = (A)nnual or (O)ther. | |
| TISI.DAY/HR | [YYYY MM DD HHHH] | TIME/DATE WELL SHUT-IN | Must be > = spud date and < [FTDT] (Final Test Date and Time) and the Submission Date | Date/time well shut-in for final BU/FO |
| GSERU. | [CHAR 20] | GAUGE SERIAL NUMBER USED IN SUMMARY | Must be found in 1 raw data table | Serial number of gauge used to represent reservoir |
| REPMP.PKAA | [NUMB 8,2] | REPRESENTATIVE PRESSURE AT MPP | IF [INTRP] (Test Interpretation Present) = (Y)es and ([PEXTR] (Representative Extrap/False Pressure) = [REPMP] (Representative Pressure at MPP) or ([PAVG] (Representative Avg Reservoir Pressure) = [REPMP]), THEN the Transient Pressure can not build or fall by more than 2 kPa/hr (over last 6 hours of shut-in), else error. Note: Above calculations performed, IF Test Types [PRSTY] = 04, 06 or 14 by way of [LMP] vs. -DTG (n) [PRGA], OR IF Test Types [PRSTY] = 11 or 12 by way of [LMP] vs. -DTAC [PSUR]. | Representative pressure from Gauge or Run/Stop Depth OR Acoustic Calculation converted or adjusted to MPP. (Not for P* or Pr). See [PEXTR] and [PAVG]. |
| PRCOR.KPA | [NUMB 8,2] | PRESSURE CORRECTION | Mandatory, can be zero, Else If [GSERU] (Gauge Serial Number Used In Summary) matches a Representative Gauge (-DTG n) [GSER] (Gauge Serial Number), where [SURBTM] (Gauge Location) = (S)urface, then [PRCOR] must be > 0.00 | Report Pressure Differential (value) used to adjust measured pressure from Run Depth or Final Surface pressure to MPP. Negative values if gauge ran below MPP |

AOF / TRANSIENT WELL TEST FILE (TRG)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LMP.KPAA | [NUMB 8,2] | LAST MEASURED PRESSURE AT RUN DEPTH | IF ([PRPS] (Test Purpose) = (A)nnual or (I)ntial and ([PRSTY] (Pressure Test Type) = 04, 11 or 14 (for Build-up) or if ([PRPS] = (A) and [PRSTY] = 06 or 12 (for Falloff)), AND ([INTRP] (Test Interpretation Present) = (N)o), THEN the Transient Pressure can not build or fall by more than 2 kPa/hr (over last 6 hours of shut-in), else error. Note: Above calculations performed, IF Test Types [PRSTY] = 04, 06 or 14 by way of [LMP] vs. -DTG (n) [PRGA], OR IF Test Types [PRSTY] = 11 or 12 by way of [LMP] vs. -DTAC [PSUR]. | Last measured reservoir pressure kPaa at selected Run Depth, representative of Reservoir (i.e. closest to mpp), OR Last measured Surface Pressure for Acoustic Well Sounders. |
| TRES.DEGC | [NUMB 5,2] | RESERVOIR TEMPERATURE | | Representative reservoir temperature (DegC) |
| ANCO. | [CHAR 20] | COMPANY CONDUCTING ANALYSIS | Mandatory, if [INTRP] (Test Interpretation Present) = (Y)es | Name of firm that performed analysis |
| PEXTR.KPAA | [NUMB 8,2] | REPRESENTATIVE EXTRAP/ FALSE PRESSURE | Mandatory, if [INTRP] (Test Interpretation Present) = (Y)es, else must be Null. If present and [PRSTY] (Pressure Test Type) = (04), (11), or (14), then [PEXTR] must be > [REPMPP] (Representative pressure at MPP), else if [PRSTY] = (06) or (12) then [PEXTR] must be <= [REPMPP]. | Commonly known as P* (kPaa) at MPP |
| PAVG.KPAA | [NUMB 8,2] | REPRESENTATIVE AVG RESERVOIR PRESSURE AT THE WELL | Optional. If present and [PRSTY] (Pressure Test Type) = (04), (11), or (14), then [PAVG] must be >= [REPMPP] (Representative pressure at MPP), else if [PRSTY] = (06) or (12) then [PAVG] must be <= [REPMPP] | Best estimate of reservoir pressure kPaa at MPP |
| PWF.KPAA | [NUMB 8,2] | SANDFACE FLOWING PRESSURE AT SHUT-IN | Mandatory, if [INTRP] (Test Interpretation Present) = (Y)es; [PWF] (Sandface Flowing Pressure at Shut-In) must be < [REPMPP] (Representative pressure at MPP) | Flowing sandface pressure @ shut-in, (kPaa) |

AOF / TRANSIENT WELL TEST FILE (TRG)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|----------------------|-------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| QRATE.M3/D or E3M3/D | [NUMB 13,4] | FINAL RATE PRIOR TO SHUT-IN | Mandatory, if [INTRP] (Test Interpretation Present) = (Y)es, or [PRSTY] (Pressure Test Type) = (06), (14), or (24), else can be null. Can be negative if [PRSTY] = (06 or (12), If present and [WSFL] (Well Fluid Type) = (02), then [QRATE] must be reported as (E3M3/D), else (M3/D). | Production or Injection prior to build-up or falloff. If Gas, report rate as 103m3/d, else if Oil or Water, report as (m3/d.) |
| SKIN. | [NUMB 5,2] | CALCULATED SKIN FACTOR | Mandatory, if [INTRP] (Test Interpretation Present) = (Y)es; can be negative | Apparent WELLBORE Skin Factor |
| KH.MDM | [NUMB 8,2] | CALCULATED FLOW CAPACITY | Mandatory, if [INTRP] (Test Interpretation Present) = (Y)es; must be > zero | Flow capacity (e.g. use limiting KH.MD-M on composite model). millidarcy-m |
| PRGC. | [CHAR 240] | COMMENT ON PRESSURE | Optional | Freeform comment of Pressure - comparison to trend, offsets, shut-in time etc. Data updates AER Pressure Summary Database. |

~ ANALYSIS INPUT PARAMETERS

{DATA MUST BE PRESENT IF [PRSTY] (Pressure Test Type) = (11 or 12), and [PRPS] (Test Purpose Indicator) < > (O)ther, Else Optional

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF |
|-----------------|-------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| PAY.M | [NUMB 10,5] | VERTICAL HEIGHT OF FORMATION M | | Net pay or height of formation used in analysis |
| PORO.FRAC | [NUMB 4,3] | ASSUMED POROSITY FRACTION | | Porosity of reservoir used in analysis |
| SATW.FRAC | [NUMB 3,2] | ASSUMED WATER SATURATION FRACTION | can be zero, sum of [SATW] (Assumed Water Saturation) + [SATG] (Assumed Gas Saturation) + [SATO] (Assumed Oil Saturation) must = 1 | Water saturation assumed for this analysis |
| SATG.FRAC | [NUMB 3,2] | ASSUMED GAS SATURATION FRACTION | can be zero | Gas saturation assumed for this analysis |
| SATO.FRAC | [NUMB 3,2] | ASSUMED OIL SATURATION FRACTION | can be zero | Oil saturation assumed for this analysis SATO+SATG+SATW=1 |
| HZFL.M | [NUMB 10,5] | HORIZONTAL WELL LENGTH IN FORMATION | Mandatory, if [WTYP] (Well Type) = (H)orizontal). If [WTYP] = (V)ertical, must be Null, else Optional. | Must be >0, if WTYP is horizontal |
| RDOIL. | [NUMB 4,3] | OIL RELATIVE DENSITY | If [WSFL] (Well Fluid Type) = 02 may be null, else must be > 0 and <1 | Oil density relative to water (unit-less) |
| RDGAS. | [NUMB 4,3] | GAS RELATIVE DENSITY | Mandatory, if [WSFL] (Well Fluid Type) = 02, must be > 0 and < 1 | Gas density relative to air (unit-less); Recombined |
| RDWTR. | [NUMB 4,3] | WATER RELATIVE DENSITY | Must be >= 1 | Water density relative to water (unit-less) (>1.0) |
| PBP.KPAA | [NUMB 8,2] | OIL BUBBLE POINT PRESSURE | If [WSFL] (Well Fluid Type) not = 01, [PBP] (Oil Bubble Point Pressure) can be null else mandatory | Bubble point pressure of oil (kPaa) |

AOF / TRANSIENT WELL TEST FILE (TRG)

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF |
|-----------------|-------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BO.RM3/M3 | [NUMB 4,2] | OIL FORMATION VOLUME FACTOR | Oil Formation Volume Factor must be given if [WSFL] (Well Fluid Type) = (01) Oil. | Oil shrinkage factor from surface to reservoir conditions |
| RS.M3/M3 | [NUMB 7,2] | OIL SOLUTION GOR | Mandatory, if [WSFL] (Well Fluid Type) = 01 (Oil); else can be null | Solution gas oil ratio |
| PPLV.M | [NUMB 10,5] | PUMPING LIQUID LEVEL M CF (TVD) AT TIME = ZERO | Optional. If present, must be < Total Depth of well. | Liquid level (or Calculated Length of Gas Column) prior to shut-in (at time = zero). As determined by wireline or interpreted by an Acoustic - - in TVD depth, measured mCF. For dry gas wells, Liquid Level (or Length of Gas Column) is to be reported equal to MPP or Null. A depth of zero will be interpreted as "Liquid to Surface". |
| METHC. | [CHAR 240] | METHOD OF ACOUSTIC/DEAD WEIGHT TESTER EXTRAPOLATION COMMENT | Mandatory, if [PRSTY] (Pressure Test Type) = 11 or 12 | Description pertaining to the method of Acoustic / DWT calculation, in accordance with AER Guide 3 and Guide 5. |

~ HEADER DATA - GAUGE (n)

(Gauge (n) indicates that for each subsequent Gauge (Surface and/or Bottomhole), the Header Information must be numbered accordingly)

(GSERU (Pressure Results Summary) must match one of the reported (Representative Gauges) GSER) and will be recognized by matching Gauge Number from [DTG (n)], therefore gauge "order" is not compulsory)

HEADER DATA - GAUGE (n) is MANDATORY, IF [PRSTY] (Pressure Test Type) = (11) or (12) or is NULL. However -DTG is Optional

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| SURBTM. | [CHAR 1] | GAUGE LOCATION | Must be (S)urface or (B)ottomhole. | Flag indicating Position/Location of Gauge |
| GSER. | [CHAR 20] | GAUGE SERIAL NUMBER | One Gauge must match [GSERU] (Gauge Serial Number Used in Summary) | Serial or Reference number of Gauge/Recorder. Note: Number required for the ability to audit gauge data. |
| GTYPM. | [CHAR 90] | GAUGE TYPE / MANUFACTURER / MODEL | Gauge Type, Manufacturer and Model must be separated with slashes. | Type (mechanical, electronic, model), manufacturer, and model, of gauge used, for source data |
| GRNG.KPAA | [NUMB 8,2] | MAXIMUM RECORDER RANGE | | Full scale pressure range of source gauge (kPaa) |
| GCAL.DAY | [YYYY MM DD] | DATE OF LAST CALIBRATION | Must be <= [FTDT] (Final Test Date/Time) | Date source gauge last calibrated |
| GRES. | [NUMB 6,5] | RESOLUTION % OF FULL-SCALE | | Published resolution of source gauge |
| GACC. | [NUMB 6,5] | ACCURACY % OF FULL-SCALE | | Published accuracy of source gauge |
| RDGAL.M | [NUMB 10,5] | GAUGE RUN DEPTH M CF (LOG) | If [SURBTM] (Gauge Location) = (S)urface, then [RDGAL] must = 0 | Source gauge final stop depth, (Measured Depth/LOG) in mCF |
| GONB.DAY/HR/SS | [YYYY MM DD HHHH:SS] | DATE/TIME GAUGE ON BOTTOM OR SURFACE RECORDINGS BEGIN | Must be > Spud Date and < then [GOFB] (Gauge Off Bottom or Surface Recordings Cease) | Date/time source gauge on bottom |
| GOFB.DAY/HR/SS | [YYYY MM DD HHHH:SS] | DATE/TIME GAUGE OFF BOTTOM OR SURFACE RECORDINGS CEASE | Must be > [GONB] (Gauge On Bottom or Surface Recordings Begin) and <= [FTDT] (Final Test Date/Time) | Date/time source gauge off bottom |

~ DATA TABLE - GAUGE (n)

(DTG (n), DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTG (n) TABLES)

AOF / TRANSIENT WELL TEST FILE (TRG)

#DTG (n) is Optional if [PRSTY] (Pressure Test Type) = (11), (12) or NULL.

{HEADER DATA AND TABLE DTG (n) CAN BE OMITTED IF SUBSEQUENT GAUGES MALFUNCTIONED

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|--------------------------|-------------------------------------------------------------------|-------------------------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | Must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour clock |
| TCUM.HR | [NUMB 10,5] | GAUGE CUMULATIVE TIME | Can be zero. | Cumulative Time (hours) |
| PRGA.KPAA | [NUMB 8,2] | GAUGE PRESSURE | | Pressure measured at that interval in time (kPaa) |
| TGA.DEGC | [NUMB 5,2] | GAUGE TEMPERATURE | | Temperature measured at that interval in time (DegC) |
| GCOM. | [CHAR 240] | COMMENT - GENERAL | Optional | Comment on gauge/events (i.e. SI, open to flow, etc.) |

~ DTG (n)

| <u>TIME</u> | <u>TCUM</u> | <u>PRGA</u> | <u>TGA</u> | <u>GCOM</u> |
|--------------------|-------------|-------------|------------|-------------|
| YYYY MM DD HHHH:SS | 99999.99999 | 999999.99 | 999.99 | X (240) |
| YYYY MM DD HHHH:SS | 99999.99999 | 999999.99 | 999.99 | X (240) |
| YYYY MM DD HHHH:SS | 99999.99999 | 999999.99 | 999.99 | X (240) |

AOF / TRANSIENT WELL TEST FILE (TRG)

~ DATA TABLE ACOUSTIC

~ (DTAC - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTAC TABLE)

{DATA TABLE AND ENTRIES MUST EXIST IF [PRSTY] (Pressure Test Type) = 11 or 12}

MNEMONIC NAME

FIELD SIZE

DATA ELEMENT DESCRIPTION

BUSINESS RULES AND EDITS

CLARIFICATION / EXPLANATION OF MNEMONIC

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|----------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TIME.DAY/HR/SS | [YYYY MM DD HHHH:SS] | REAL TIME | If [PRSTY] (Pressure Test Type) = 11 or 12, then must be >= Spud Date and <= Abandoned Date and <= Submission Date | 24 Hour clock |
| ETIME.HR | [NUMB 10,5] | ELAPSED TIME | Can be zero | Elapsed time from start of test |
| LLVL.M | [NUMB 10,5] | LIQUID LEVEL M CF (LOG) | Mandatory if [PRSTY] (Pressure Test Type) = 11 or 12, can be zero. If [PRPS] (Test Purpose Indicator) < > (I)initial, THEN at least 1 occurrence of [LLVL] must exist in table. (note: zero = Fluid to Surface) | Calculated Length of Gas Column, as determined by wireline or interpreted by an Acoustic Shot - in LOG/measured depth (mCF). Note: For dry gas wells, Liquid Level (or Length of Gas Column) is to be reported equal to MPP or Null. A depth of zero will be interpreted as "Liquid to Surface". |
| LLVT.M | [NUMB 10,5] | LIQUID LEVEL M CF (TVD) | Mandatory, if [WTYP] (Well Type) = (D)eviated or (H)orizontal. If [WTYP] = (V)ertical, then [LLVT] can be null or = [LLVL] | Calculated Length of Gas Column (or liquid level) for each shot (TVD). As determined by wireline or interpreted by an Acoustic - in TVD depth, calculated mCF. Note: See [LLVL] |
| PSUR.KPAA | [NUMB 8,2] | SURFACE PRESSURE | | Measured casing/surface pressure at corresponding point of time (kPaa) |
| GRGAS.KPA/M | [NUMB 5,3] | GAS GRADIENT (TVD) | Mandatory, if [LLVL] (Liquid Level - Log) > 0.0 or null. Then must appear at least once per table. | Estimated gradient of gas in wellbore |
| GROIL.KPA/M | [NUMB 5,3] | OIL GRADIENT (TVD) | Mandatory, if [WSFL] (Well Fluid Type) = (01) or (17). Then must appear at least once per table | Estimated gradient of oil in wellbore |
| GRWTR.KPA/M | [NUMB 5,3] | WATER GRADIENT (TVD) | Mandatory, if [QWTR] (water Production Rate) > 0.0. Then must appear at least once per table | Estimated gradient of water in wellbore |
| PMPPT.KPAA | [NUMB 8,2] | CALCULATED PRESSURE AT MPP (TVD) | If ([FTDT] (Final Test Date/Time) - [TISI] (Date/Time Well Shut-In)) < 14 days and [PRPS] (Test Purpose Indicator) = (A)nnual or (I)initial, GET [PMPPT] at the last real time in the table THEN go back 6 hours and subtract the [PMPPT] at that time) if value is <= 2.5 kPa/hr, OK, else error. | Calculated using above parameters at corresponding point in time |

AOF / TRANSIENT WELL TEST FILE (TRG)

~DTAC

| <u>TIME</u> | <u>ETIME</u> | <u>LLVL</u> | <u>LLVT</u> | <u>PSUR</u> |
|--------------------|--------------|-------------|-------------|-------------|
| YYYY MM DD HHHH.SS | 99999.99999 | 99999.99999 | 99999.99999 | 999999.99 |
| YYYY MM DD HHHH.SS | 99999.99999 | 99999.99999 | 99999.99999 | 999999.99 |
| YYYY MM DD HHHH.SS | 99999.99999 | 99999.99999 | 99999.99999 | 999999.99 |

#... DTAC - TABLE CONTINUED

| <u>GRGAS</u> | <u>GROIL</u> | <u>GRWTR</u> | <u>PMPPT</u> |
|--------------|--------------|--------------|--------------|
| 99.999 | 99.999 | 99.999 | 999999.99 |
| 99.999 | 99.999 | 99.999 | 999999.99 |
| 99.999 | 99.999 | 99.999 | 999999.99 |

~ DATA TABLE - INLINE RATE AND PRESSURE SUMMARY

~ (DTINRPR - DEFINITIONS AND DESCRIPTIONS IN ASSOCIATION WITH DTINRPR TABLE)

If AIN (INLINE AOF INDICATOR FLAG) = (Y)es and [PRSTY] (Pressure Test Type) is Null, then last line of [ITIME] (Incremental Hours) must >= 330 and Table must have a minimum of 28 lines.

If AIN (INLINE AOF INDICATOR FLAG) = (Y)es and [PRSTY] (Pressure Test Type) is Not Null, then last line of [ITIME] (Incremental Hours) can be <= 330

If AIN (INLINE AOF INDICATOR FLAG) = (Y)es and [AOF TY] (AOF Type) = 32, then last line of [ITIME] (Incremental Hours) can be < 330

Section is Optional If AIN (INLINE AOF INDICATOR FLAG) = (N)o

| # MNEMONIC NAME | FIELD SIZE | DATA ELEMENT DESCRIPTION | BUSINESS RULES AND EDITS | CLARIFICATION / EXPLANATION OF MNEMONIC |
|-----------------|-------------|--------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------|
| PRGA.KPAA | [NUMB 8,2] | GAUGE PRESSURE | | Pressure (can be null for time before recorded data) |
| ITIME.HR | [NUMB 10,5] | INCREMENTAL HOURS | If present, [ITIME] must increment. Can be negative | Elapsed time (can be negative for rates prior to recorded pressure data) |
| QGAS.E3M3/D | [NUMB 13,4] | GAS PRODUCTION RATE | If [QOIL] (Oil Production Rate) > 0.00, can be null or zero | Gas rate used for the transient analysis (can be null between rate change) |
| QOIL.M3/D | [NUMB 13,4] | OIL PRODUCTION RATE | If [QGAS] (Gas Production Rate) > 0.00, can be null or zero | Oil rate used for the transient analysis (can be null between rate changes) |
| QWTR.M3/D | [NUMB 13,4] | WATER PRODUCTION RATE | can be null or zero | Water rate used for the transient analysis (can be null between rate changes) |
| GENC. | [CHAR 240] | GENERAL COMMENT | Optional | General free form comment? |

~ DTINRPR

| <u>PRGA</u> | <u>ITIME</u> | <u>QGAS</u> | <u>QOIL</u> | <u>QWTR</u> |
|-------------|--------------|----------------|----------------|----------------|
| 999999.99 | 99999.99999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 999999.99 | 99999.99999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |
| 999999.99 | 99999.99999 | 999999999.9999 | 999999999.9999 | 999999999.9999 |

#... DTINRPR - TABLE CONTINUED

| <u>GENC</u> |
|-------------|
| X (240) |
| X (240) |
| X (240) |

AOF / TRANSIENT WELL TEST FILE (TRG)

Test Type Codes:

| <u>PRSTY</u> | <u>AOFTY</u> |
|---------------------------------------------------|------------------------------------------------------------------|
| 04 Bottom Hole - Build-Up (BU Only) | 01 Single-Point (AOF) |
| 05 Bottom Hole - Segregation | 02 Multi-Point (AOF) |
| 06 Bottom Hole - Fall-Off | 31 AOF - Wellhead Only (not calculated to Bottomhole conditions) |
| 11 AWS - Build-Up (Transient) | 32 AOF - Theoretical Multi-Point |
| 12 AWS - Fall-Off (Transient) | 41 IPR - (Oil Well Only) |
| 14 Flow and Build-Up | |
| 15 Bottom Hole - Interference | |
| 24 Drawdown (only) | |
| 34 Sentry (Permanent Downhole Recorder/Pziometer) | |

GENERAL EDITS

ALL Mnemonic Values are Mandatory, unless otherwise noted.

"Conditional" Values will be noted as, (i.e. Mandatory, if TTYP = 08 or 18)

Zero's are NOT acceptable unless otherwise noted.

WHERE SECTION RULES EXIST (Noted by the # Sign) THEY ARE SUPERSEDED BY INDIVIDUAL BUSINESS RULES AND EDITS

ALL INTERVAL DEPTHS (for TRG) are measured or calculated and reported in reference to (KB) Kelly Bushing Elevation

ALL GAUGE DEPTHS and/or LIQUID LEVEL Depths (for TRG) are measured or calculated and reported in reference to (CF/GRD) Casing Flange/Ground Elevation

ALL DATES (unless otherwise noted) must be >= Spud Date and <= Abandoned Date and <= Submission Date

All Depths must be less than 7,000.00 M

All Pressures must be less than 150,000 kPa

All Temperatures (unless otherwise noted) must be between -100 and 1,000°C

All Times must be less than 100,000.0 Hours

All gas production rates must be less than 100,000.00 E3M3/day

All oil and water rates must be less than 100,000.00 M3/day

If GRGAS.KPA/M (Gas Gradient) must be > 0.0001 and < 5.999

If GROIL.KPA/M (Oil Gradient) must be > 1.5 and < 9.795

If GRWTR.KPA/M (Water Gradient) must be > 6.000 and < 15.999

If [PRSTY] (Pressure Test Type) < > 34 (Permanent Downhole Gauge), then an Image File (i.e. TIF/PDF) IS MANDATORY

If PRPS = (O)ther, most edits on Test Data (after Well Information section) may not be edited. Exceptions (i.e Dates)