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
COMPCOM	[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
LIQVOL.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.}

COMPCOM	MOLG	MOLAGF	LIQVOI
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_{5+} 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_2S MEASUREMENT	Mandatory, must indicate location of measurement (F)ield, (L)ab or (B)oth.	Location of H2S measurement. 1 PPM = (0.000001 MOL FRAC) or (0.0001 MOL %)
H2SMT.	[CHAR 1]	METHOD OF FIELD ANALYSIS	Mandatory, if [H2SLC] (Location of H2S 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_2S 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

COMPCOM	MOLC	MASS	VOL	
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

LIQCOMP	MOLL	MASS	VOL
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***

RDLIQ	RELMM
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.	$10^3m^3/d$
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.	$10^3m^3/d$
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%
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%

TRACE COMPONENTS (*How To Report*):
For Tables ~DTFSGAS, ~DTCL, 2nd Stage Separator *and/or* Recombined Gas Composition components
report all "Trace" values (*with the exception of "H2S - Hydrogen Sulphide"*)
as 0.0001.FRAC, and use a comment line starting with "#" to qualify the situation(s).

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	Optional, can be null or zero	Carbon Risidue, mass fraction - Conradson
RAMBT.FRAC	[NUMB 8,2]	CARBON RISIDUE RAMSBOTTOM FRACTION	Optional, can be null or zero	Carbon Risidue, 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	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
DVLRC.FRAC	[NUMB 4,2]	RECOVERED SUMMARY VOLUME FRACTION	Optional, can be zero or null	Recovered fraction
DVLRS.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) WAN PAS - Revised May 31, 2023				
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, (07) Brine or (17) Crude Bitumen	Type of Dominant Fluid Production/Pay (i.e. oil, gas, water, brine)

~ 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 9,3]	BARIUM CATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Barium mg/L
BA.MEQ/L	[NUMB 9,3]	BARIUM CATION CONCENTRATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Barium milli-equivalent
SR.MG/L	[NUMB 9,3]	STRONTIUM CATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Strontium mg/L
SR.MEQ/L	[NUMB 9,3]	STRONTIUM CATION CONCENTRATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, 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 9,3]	MANGANESE CATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Manganese mg/L
MN.MEQ/L	[NUMB 9,3]	MANGANESE CATION CONCENTRATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Manganese milli-equivalent
B.MG/L	[NUMB 9,3]	BORON CATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Boron mg/L
B.MEQ/L	[NUMB 9,3]	BORON CATION CONCENTRATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Boron milli-equivalent
AL.MG/L	[NUMB 9,3]	ALUMINUM CATION	Optional, can be zero	Aluminum mg/L

WATER ANALYSIS FILE
(WAN)

AL.MEQ/L		ALUMINUM CATION CONCENTRATION	Optional, can be zero	Aluminum milli-equivalent
SB.MG/L	[NUMB 9,3]	ANTIMONY CATION	Optional, can be zero	Antimony mg/L
SB.MEQ/L		ANTIMONY CATION CONCENTRATION	Optional, can be zero	Antimony milli-equivalent
AS.MG/L	[NUMB 9,3]	ARSENIC CATION	Optional, can be zero	Arsenic mg/L
AS.MEQ/L		ARSENIC CATION CONCENTRATION	Optional, can be zero	Arsenic milli-equivalent
BR.MG/L	[NUMB 9,3]	BROMINE CATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Bromine mg/L
BR.MEQ/L	[NUMB 9,3]	BROMINE CATION CONCENTRATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Bromine milli-equivalent
I.MG/L	[NUMB 9,3]	IODINE CATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Iodine mg/L
I.MEQ/L	[NUMB 9,3]	IODINE CATION CONCENTRATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Iodine milli-equivalent
PB.MG/L	[NUMB 9,3]	LEAD CATION	Optional, can be zero	Lead mg/L
PB.MEQ/L		LEAD CATION CONCENTRATION	Optional, can be zero	Lead milli-equivalent
LI.MG/L	[NUMB 9,3]	LITHIUM CATION	Mandatory if Fluid type is (07) Brine, can be zero	Lithium mg/L
LI.MEQ/L		LITHIUM CATION CONCENTRATION	Mandatory if Fluid type is (07) Brine, can be zero	Lithium milli-equivalent
MO.MG/L	[NUMB 9,3]	MOLYBDENUM CATION	Optional, can be zero	Molybdenum mg/L
MO.MEQ/L		MOLYBDENUM CATION	Optional, can be zero	Molybdenum milli-equivalent
NI.MG/L	[NUMB 9,3]	NICKEL CATION	Optional, can be zero	Nickel mg/L
NI.MEQ/L		NICKEL CATION CONCENTRATION	Optional, can be zero	Nickel milli-equivalent
P.MG/L	[NUMB 9,3]	PHOSPHOROUS CATION	Optional, can be zero	Phosphorous mg/L
P.MEQ/L		PHOSPHOROUS CATION CONCENTRATIO	Optional, can be zero	Phosphorous milli-equivalent
SI.MG/L	[NUMB 9,3]	SILICON CATION	Mandatory if Fluid type is (07) Brine, can be zero	Silicon mg/L
SI.MEQ/L		SILICON CATION CONCENTRATION	Mandatory if Fluid type is (07) Brine, can be zero	Silicon milli-equivalent
S.MG/L	[NUMB 9,3]	SULFUR CATION	Optional, can be zero	Sulfur mg/L
S.MEQ/L		SULFUR CATION CONCENTRATION	Optional, can be zero	Sulfur milli-equivalent
TI.MG/L	[NUMB 9,3]	TITANIUM CATION	Mandatory if Fluid type is (07) Brine, can be zero	Titanium mg/L
TI.MEQ/L		TITANIUM CATION CONCENTRATION	Mandatory if Fluid type is (07) Brine, can be zero	Titanium milli-equivalent
U.MG/L	[NUMB 9,3]	URANIUM CATION	Mandatory if Fluid type is (07) Brine, can be zero	Uranium mg/L
U.MEQ/L		URANIUM CATION CONCENTRATION	Mandatory if Fluid type is (07) Brine, can be zero	Uranium milli-equivalent
V.MG/L	[NUMB 9,3]	VANADIUM CATION	Mandatory if Fluid type is (07) Brine, can be zero	Vanadium mg/L
V.MEQ/L		VANADIUM CATION CONCENTRATION	Mandatory if Fluid type is (07) Brine, can be zero	Vanadium milli-equivalent
ZN.MG/L	[NUMB 9,3]	ZINC CATION	Mandatory if Fluid type is (07) Brine, can be zero	Zinc mg/L
ZN.MEQ/L	[NUMB 9,3]	ZINC CATION CONCENTRATION	Mandatory if Fluid type is (07) Brine, can be zero	Zinc 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 9,3]	BROMIDE ANION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Bromide mg/L
BR.MEQ/L	[NUMB 9,3]	BROMIDE ANION CONCENTRATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Bromide milli-equivalent
I.MG/L	[NUMB 9,3]	IODIDE ANION	Optional, can be zero Mandatory if Fluid type is (07) Brine, can be zero	Iodide mg/L
I.MEQ/L	[NUMB 9,3]	IODIDE ANION CONCENTRATION	Optional, can be zero Mandatory if Fluid type is (07) Brine, 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 DEGC	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)nitial pressure or (O)ther.	(I)nitial 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)nitial. 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)nitial. 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.KPA/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 = (I), 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 or 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

RXXA	RXXC	RXXD
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 INDICTOR	[GPOS] (Gauge Position Indicator) must be (I)nside, (O)utside, (R)ecovery, (B)elow Straddle, I(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, I(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}

TIME	STGE	FSTGC	PRGA	TSTD
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

...DTFG (n) - ***TABLE CONTINUED***

PEXTR	QGFF	QOFF	QWFF

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)

TIME	PRGA	TGA	GCOM
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 ([TTYP] (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 [TTYP] (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 [TTYP] (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 [TTYP] (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 [TTYP] (Test Type Indicator) = (08) or (18), and Can be zero	m3/d
QCCGAS.E3M3/D	[NUMB 13,4]	CALC GAS RATE	Mandatory, if [TTYP] (Test Type Indicator) = (08) or (18), and Can be zero	103m3/d

~ DTCC

TIME	SDPT	PSUR	RDPT	PRCV
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*

QCCLIQ	QCCGAS
999999999.9999	999999999.9999
999999999.9999	999999999.9999
999999999.9999	999999999.9999

DRILL STEM TEST FILE
(DST)

Recovery Type Codes (RXXC):...

01 Gas
11 Condensate
12 Mud cut Condensate
13 Water cut Condensate
14 Salt Water cut Condensate
15 Brackish Water cut Condensate
16 Sulphurous Brackish Water cut Condensate
17 Sulphurous Salt Water cut Condensate
18 Mud & Water cut Condensate
19 Mud & Salt Water cut Condensate
20 Mud & Brackish Water cut Condensate
21 Mud & Sulphurous Salt Water cut Condensate
22 Mud & Sulphurous Brackish H2O cut Condensate

50 Oil
51 Gas cut Oil
52 Mud cut Oil, or
52 Mud & Gas cut Oil
53 Water cut Oil
54 Salt Water cut Oil
55 Brackish Water cut Oil
56 Sulphurous Brackish Water cut Oil
57 Sulphurous Salt Water cut Oil
58 Mud & H2O cut Oil
59 Mud & Salt H2O cut Oil
60 Mud & Brackish H2O cut Oil
61 Mud & Sulphurous Brackish H2O cut Oil
62 Mud & Sulphurous Salt H2O cut Oil

100 Mud
101 Gas/Condensate cut Mud
102 Oil cut Mud
103 Gas & Oil cut Mud
104 Water cut Mud
105 Fresh Water cut Mud
106 Brackish Water cut Mud
107 Salt Water cut Mud
108 Sulphurous Brackish Water cut Mud
109 Sulphurous Salt Water cut Mud
110 Gas & Oil & Water cut Mud
111 Gas & Water cut Mud
112 Oil & Water cut Mud

150 Water
151 Fresh Water
157 Cloudy Water
200 Gas cut Water
250 Oil cut Water
300 Oil & Gas cut Water
350 Mud cut Water
351 Mud cut Fresh Water
400 Mud & Gas cut Water
450 Mud & Oil / Water
500 Mud & Oil & Gas / Water

152 Brackish Water
201 Gas cut Brackish Water
251 Oil cut Brackish Water
301 Oil & Gas cut Brackish Water
352 Mud cut Brackish Water
401 Mud & Gas cut Brackish Water
451 Mud & Oil cut Brackish Water
501 Mud & Oil & Gas cut Brackish Water

153 Salt Water
202 Gas cut Salt Water
252 Oil cut Salt Water
302 Oil & Gas cut Salt Water
353 Mud cut Salt Water
402 Mud & Gas cut Salt Water
452 Mud & Oil cut Salt Water
502 Mud & Oil & Gas cut Salt Water

154 Sulphurous Water
203 Gas cut Sulphurous Water
253 Oil cut Sulphurous Water
303 Oil & Gas cut Sulphurous Water
354 Mud cut Sulphurous Water
403 Mud & Gas cut Sulphurous Water
453 Mud & Oil cut Sulphurous Water
503 Mud & Oil & Gas cut Sulphurous Water

155 Sulphurous Brackish Water
204 Gas cut Sulphurous Brackish H2O
254 Oil cut Sulphurous Brackish H2O
304 Oil & Gas cut Sulphurous Brackish H2O
355 Mud cut Sulphurous Brackish H2O
404 Mud & Gas cut Sulphurous Brackish H2O
454 Mud & Oil cut Sulphurous Brackish H2O
504 Mud & Oil & Gas cut Sulphurous Brackish H2O

156 Sulphurous Salt Water
205 Gas cut Sulphurous Salt Water
255 Oil cut Sulphurous Salt Water
305 Oil & Gas cut Sulphurous Salt Water
356 Mud cut Sulphurous Salt Water
405 Mud & Gas cut Sulphurous Salt Water
455 Mud & Oil cut Sulphurous Salt Water
505 Mud & Oil & Gas cut Sulphurous Salt Water

995 Dry Pipe
996 Cushion
997 Sand

998 Load/Drilling Fluid (only)
999 Not Known

DRILL STEM TEST FILE
(DST)

DST Test Type Codes (TTYP)

07 DST - Bottomhole
08 DST- Bottomhole & Closed Chamber
17 DST- Straddle
18 DST - Straddle & Closed Chamber

46	*RFT (Repeat Formation Tester)*	<----------	**Currently**
47	*MDT (Modular Dynamic Tester)*	<----------	**Omitting**
48	*WFT (Wireline Formation Tester)*	<----------	**these**
49	*FRT (Flow Rate Tester)*	<----------	**Test Types**

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 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	(10^3m^3) Over duration of reported production in DTSUM Table
INGAS.E3M3	[NUMB 13,4]	GAS INCINERATED E3M3	Mandatory, must be >= 0.0	(10^3m^3) Over duration of reported production in DTSUM Table
PLGAS.E3M3	[NUMB 13,4]	GAS PRODUCED TO PIPELINE E3M3	Mandatory, must be >= 0.0	(10^3m^3) Over duration of reported production in DTSUM Table
VNGAS.E2M3	[NUMB 13,4]	GAS VENTED E3M3	Mandatory, must be >= 0.0	(10^3m^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)

TIME	QGAS	H2S	PLATE	STAG
YYYY MM DD HHHH:SS	999999999.9999	9.9999	99999.999	999999.99
YYYY MM DD HHHH:SS	999999999.9999	9.9999	99999.999	999999.99
YYYY MM DD HHHH:SS	999999999.9999	9.9999	99999.999	999999.99

 # DTGAS (n) ... - TABLE CONTINUED

DIFG	TMPG	TRBG	N2	C02
999999.99	999.99	99999999999.999	9.9999	9.9999
999999.99	999.99	99999999999.999	9.9999	9.9999
999999.99	999.99	99999999999.999	9.9999	9.9999

 # DTGAS (n) ... - TABLE CONTINUED

RCOMP
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)}

# MNEMONIC NAME	FIELD SIZE	DATA ELEMENT DESCRIPTION	BUSINESS RULES AND EDITS	CLARIFICATION / EXPLANATION OF MNEMONIC
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)

TIME	GNLF	GNVF	TRBF	API
YYYY MM DD HHHH:SS	99999.999	100000	99999999999.999	99.99
YYYY MM DD HHHH:SS	99999.999	100000	99999999999.999	99.99
YYYY MM DD HHHH:SS	99999.999	100000	99999999999.999	99.99

#...DTLIQ (n) - TABLE CONTINUED

BSW	SALT	PH	OILRATE	CONRATE
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

WTRRATE	QLIQ
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

TIME	TWH	TTUB	TUPS	CSPS
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* ...

TCAS	QTGAS	QTOIL	QTCON	QTWTR
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*

VTGAS	VTOIL	VTCON	VTWTR	COMM
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

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)nitial Test, (A)nnual Pressure, or (O)ther	(I)nitial 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)nitial.	
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/FO

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)
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.KPA/M	[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.KPA/M	[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)}

SDGAL	SDGAT	PRGA	GRSDL.	GRSDT
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*

TGA
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)

TIME	TCUM	DGAL	PRGA	TGA
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

GCOM
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

TIME	LLVL.M	PSUR
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.KPA/M (Gas Gradient) must be > 0.0001 and < 5.999
GROIL.KPA/M (Oil Gradient) must be > 1.5 and < 9.795
GRWTR.KPA/M (Water Gradient) must be > 9.500 and < 15.999
GRSDL KPA/M (Calculated Gradient LOG) and GRSDT KPA/M (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)

TRG PAS - Revised July 11, 2025

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 Injection/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)nitial Test, (A)nnual Pressure, or (O)ther	(I)nitial 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. If Test Purpose (I) Initial and PRSTY = 50 or 51, then INTRP must be (Y) yes.	Flag indicating whether or not Transient Analysis or Test Interpretation was performed. Recommended plots for all tests are log-log plot with pressure derivative for flow regime identification and specialized plots for validation purposes.
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

AOF / TRANSIENT WELL TEST FILE
(TRG)

# MNEMONIC NAME	FIELD SIZE	DATA ELEMENT DESCRIPTION	BUSINESS RULES AND EDITS	CLARIFICATION / EXPLANATION OF MNEMONIC
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
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/INJECTION WELLHEAD PRESSURE	Optional.	Measured Final Flowing / injection 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	Optional, if [AOFTY] (AOF Type) < > 02 or 32 and ([AOFEXT] (Extended Sandface AOF) or [AOFSF] (Stabilized Sanface AOF) > = 300.	Authorization Number indicating AER Approval to conduct a Single-Point AOF with potential expected to exceed 300 103m3/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.	($10^3m^3/d$). 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 ($10^3m^3/d$)

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 [AOFTY] (AOF Type) = 31 then [NSF] (Inverse Slope at Sandface) must be null; If LIT = (Y)es can be null and If [AOFTY] (AOF Type) = 02 or 32 then [NSF] must be => 0.5 and <= 1.0 or if [AOFTY] = 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 [AOFTY] (AOF Type) <> 31, else must be null.	Extended Transient Sandface AOF potential ($10^3m^3/d$)
AOFSF.E3M3/D	[NUMB 13,4]	STABILIZED SANDFACE AOF	Mandatory, if [AOFTY] (AOF Type) <> (31), else Null.	Stabilized Sandface AOF Potential (103m3/d)
NWH.	[NUMB 3,2]	INVERSE SLOPE AT WELLHEAD	Mandatory, if [AOFTY] (AOF Type) = (31); If [LIT] (LIT Analysis Indicator Flag) = (Y)es can be null. If [AOFTY] (AOF Type) = 02 or 32 then [NSF] must be => 0.5 and <= 1.0 or if [AOFTY] = 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 [AOFTY] (AOF Type) = 31. If [AOFTY] <> 31 then can be null.	Extended Transient Wellhead AOF potential ($10^3m^3/d$)
AOFWH.E3M3/D	[NUMB 13,4]	STABILIZED WELLHEAD AOF	Mandatory, if [AOFTY] (AOF Type) = 31. If [AOFTY] <> 31 then can be null.	Stabilized Wellhead AOF potential ($10^3m^3/d$)
QOLM.M3/D	[NUMB 13,4]	LAST MEASURED OIL RATE	Mandatory, if [AOFTY] (AOF Type) = 41 then field must be present.	($10^3m^3/d$)
QOST.M3/D	[NUMB 13,4]	STABILIZED OIL RATE	Mandatory, if [AOFTY] (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 [AOFTY] (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 [AOFTY] (AOF Type) = 41	Maximum inflow performance rate for oil well
PFSF.KPAA	[NUMB 8,2]	STABILIZED FLOWING SANDFACE PRESSURE	Mandatory, if [AOFTY] (AOF Type) is present, else if [AOFTY] = 31 then it can be null. Ffield must be present	(kPaa)
LMPFSF.KPAA	[NUMB 8,2]	LAST MEASURED FLOWING SANDFACE PRESSURE	If [AOFTY] (AOF Type) = 31 then it can be null else mandatory	(kPaa)
PFWH.KPAA	[NUMB 8,2]	STABILIZED FLOWING WELLHEAD PRESSURE	Mandatory, if [AOFTY] (AOF Type) = 31, Must be > 0.00. If [AOFTY] <> 31, can be null.	(kPaa)
WPRE.KPAA	[NUMB 8,2]	STATIC WELLHEAD PRESSURE	Mandatory, if [AOFTY] (AOF Type) = 31, Must be > 0.00. If [AOFTY] <> 31, can be null.	(kPaa)
LMPFWH.KPAA	[NUMB 8,2]	LAST MEASURED FLOWING WELLHEAD PRESSURE	Mandatory, if [AOFTY] (AOF Type) = 31, Must be > 0.00. If [AOFTY] <> 31, can be null.	(kPaa)
PAVG.KPAA	[NUMB 8,2]	AVERAGE RESERVOIR PRESSURE AT MPP	Mandatory, if [AOFTY] (AOF Type) is present, else if [AOFTY] = 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.

~ DATA TABLE - PRODUCTION SUMMARY

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

 # {Production Summary Table must be present if [AOFTY] (AOF Type) = (01), (02), (31), (32) or IPR (41), or [PRSTY] (Pressure Test Type) = (06) (11) (12) (14) (24) (50) (51) 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

AOF / TRANSIENT WELL TEST FILE
(TRG)

QOIL.M3/D	[NUMB 13,4]	OIL PRODUCTION OR INJECTION RATE	Mandatory, if [WSFL] (Well Fluid Type) = (01), can be zero. If [WSFL] <> (01), can be blank. If PRSTY = 50 or 51 AND INJFL = 01 (oil), then cannot be zero and must enter at least 2 DTSUM lines	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 PRSTY = 50 or 51 AND INJFL = 02 (gas), then cannot be zero and must enter at least 2 DTSUM lines	Gas rate during each Rate (RTNUM) Period ($10^3m^3/d$).
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	($m^3/10^{-3}m^3$)
GEQV.E3M3/D	[NUMB 13,4]	GAS EQUIVALENT OF CONDENSATE	Mandatory, if [QCON] (Condensate Production Rate) > 0.0	($10^3m^3/d$)
QRGAS.E3M3/D	[NUMB 13,4]	RECOMBINED GAS PRODUCTION RATE	Mandatory, if [QCON] (Condensate Production Rate) > 0.0	($10^3m^3/d$)
QWTR.M3/D	[NUMB 13,4]	WATER PRODUCTION OR INJECTION RATE	Mandatory, can be zero; If PRSTY = 50 and INJFL = 06 (water), then cannot be zero and must enter at least 2 DTSUM lines; If PRSTY = 51 and INJFL = 06 (water), can be zero and must enter more than 2 DTSUM lines; If PRSTY = 06 and INJFL = 06 (water), then cannot be zero and must enter at least 2 DTSUM lines;	Water rate during each Rate (RTNUM) Period (m^3/d).
QWTRFBACK.M3/D	[NUMB 13,4]	WATER FLOWBACK RATE	Mandatory, can be zero; If PRSTY = 51 and INJFL = 06 (water)	Water flowback rate during each Rate (RTNUM) Period (m^3/d).

AOF / TRANSIENT WELL TEST FILE
(TRG)

~ DTSUM

 # {TABLE occurs only one time. If AOFTY = 02 or 32 THEN THERE MUST BE AT LEAST 2 ROWS OF DATA IN THE TABLE} **Also 2 rows if PRSTY = 06 Bottom Hole - Fall-Off, 50 (DFIT) OR 51 (DFIT FLOWBACK)**

RTNUM	FDUR	QOIL	QGAS	QCON
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***

CONGR	GEQV	QRGAS	QWTR	QWTRFBACK
9.9999	999999999.9999	999999999.9999	999999999.9999	999999999.9999
9.9999	999999999.9999	999999999.9999	999999999.9999	999999999.9999
9.9999	999999999.9999	999999999.9999	999999999.9999	999999999.9999
9.9999	999999999.9999	999999999.9999	999999999.9999	999999999.9999

AOF / TRANSIENT WELL TEST FILE
(TRG)

~ PRESSURE RESULTS - SUMMARY

 # {if [PRSTY] (Pressure Test Type) = 04, 06, 11, 12, 14, 50 & 51 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 [AOFTY] (AOF Type) not null. If [PRSTY] (Pressure Test Type) = 06, 11 or 12 then [PRPS] (Test Purpose Indicator) must = (A)nnual or (O)ther.	NOTE: New Pressure Test Type (PRSTY) for DFIT = 50 or DFIT FLOWBACK = 51
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
REPMPP.KPAA	[NUMB 8,2]	REPRESENTATIVE PRESSURE AT MPP	IF [INTRP] (Test Interpretation Present) = (Y)es and ([PEXTR] (Representative Extrap/False Pressure) = [REPMPP] (Representative Pressure at MPP)) or ([PAVG] (Representative Avg Reservoir Pressure) = [REPMPP]), 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)nitial 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. This rule does not apply to DFIT or DFIT FLOWBACK [PRSTY = 50 or 51]. 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, respresentative of Reservoir (i.e. closest to mpp), OR Last measured Surface Pressure for Acoustic Well Sounders. If DFIT is used to fulfill initial (I) pressure requirements, the data must still be analyzed even if pressure at end of test is 2 kPa/hr for last 6 hours.
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), (12), (50) or (51) then [PEXTR] must be <= [REPMPP].	Commonly known as P* (kPaa) at MPP
GRPEXTR.KPA/M	[NUMB 5,3]	REPRESENTATIVE EXTRAP/FALSE PRESSURE GRADIENT (TVD)	Mandatory, if [PRSTY] = 50 or 51 AND [INTRP] (Test Interpretation Present) = (Y)es; must be > zero	Reservoir pressure gradient (kPa/m).
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), if [PRSTY] = (06), (12) , (50) or (51) then [PAVG] must be <= [REPMPP]	Best estimate of reservoir pressure kPaa at MPP

AOF / TRANSIENT WELL TEST FILE
(TRG)

# MNEMONIC NAME	FIELD SIZE	DATA ELEMENT DESCRIPTION	BUSINESS RULES AND EDITS	CLARIFICATION / EXPLANATION OF MNEMONIC
PWF.KPAA	[NUMB 8,2]	SANDFACE FLOWING / INJECTION PRESSURE AT SHUT-IN OR FLOWBACK	Mandatory, if [INTRP] (Test Interpretation Present) = (Y)es and [PRSTY] (Pressure Test Type) = 11 or 14 [PWF] (Sandface Flowing Pressure at Shut-In) must be < [REPMPP] (Representative pressure at MPP). If [PRSTY] = 06, 12, 50 or 51 [PWF] (Sandface Injection Pressure at Shut-In) must be > [REPMPP]	Flowing / injection sandface pressure @ shut-in, (kPaa)
QRATE.M3/D or E3M3/D	[NUMB 13,4]	FINAL RATE PRIOR TO SHUT-IN OR FLOWBACK	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, 12, 50 or 51), 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 E3M3/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 13,7]	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
PRISIP.KPAA	[NUMB 8,2]	DFIT INSTANTANEOUS SHUT-IN PRESSURE, BOTTOM HOLE	Mandatory, if [PRSTY] = (50) OR (51)AND [INTRP] (Test Interpretation Present) = (Y)es; must be > zero	For DFIT and DFIT FLOWBACK only
GRISIP.KPA/M	[NUMB 5,3]	ISIP GRADIENT (TVD)	Mandatory, if [PRSTY] = (50) OR (51)AND [INTRP] (Test Interpretation Present) = (Y)es; must be > zero	For DFIT and DFIT FLOWBACK only
PRCL.KPAA	[NUMB 8,2]	CLOSURE PRESSURE, BOTTOM HOLE	Mandatory, if [PRSTY] = (50) OR (51)AND [INTRP] (Test Interpretation Present) = (Y)es; must be > zero	For DFIT and DFIT FLOWBACK only
GRCL.KPA/M	[NUMB 5,3]	CLOSURE GRADIENT (TVD)	Mandatory, if [PRSTY] = (50) OR (51)AND [INTRP] (Test Interpretation Present) = (Y)es; must be > zero	For DFIT and DFIT FLOWBACK only
INJFL	[NUMB 2]	INJECTED FLUID	Mandatory, if [PRSTY] = (50) or (51) AND [INTRP] (Test Interpretation Present) = (Y)es; Must have a valid AER fluid code = (01) Oil, (02) Gas, (06) Water; must be > zero	For DFIT and DFIT FLOWBACK only
QDFIT.M3/MINUTE	[NUMB 6,4]	FINAL INJECTION RATE (DFIT and DFIT FLOWBACK only)	Mandatory, if [PRSTY] = (50) or (51) AND [INTRP] (Test Interpretation Present) = (Y)es; cannot be zero	For DFIT and DFIT FLOWBACK only
VTDFIT.M3	[NUMB 7,4]	TOTAL VOLUME INJECTED FOR DFIT OR VOLUME FLOWBACK FOR DFIT FLOWBACK	Mandatory, if [PRSTY] = (50) or (51) AND [INTRP] (Test Interpretation Present) = (Y)es; cannot be zero	For DFIT and DFIT FLOWBACK only

AOF / TRANSIENT WELL TEST FILE
(TRG)

# MNEMONIC NAME	FIELD SIZE	DATA ELEMENT DESCRIPTION	BUSINESS RULES AND EDITS	CLARIFICATION / EXPLANATION OF
LLDFIT.M	[NUMB 10,5]	LIQUID LEVEL DFIT M CF (TVD)	Mandatory, if [PRSTY] = (50) or (51) AND [INTRP] (Test Interpretation Present) = (Y)es; cannot be zero	For DFIT and DFIT FLOWBACK only
EFF.FRAC	[NUMB 4,3]	FLUID EFFICIENCY	Optional, if [PRSTY] = (50) or (51)	For DFIT and DFIT FLOWBACK only
TFLC.M/MIN1/2	[NUMB 9,8]	TOTAL FLUID LOSS COEFFICIENT	Optional, if [PRSTY] = (50) or (51)	For DFIT and DFIT FLOWBACK only
RFLC.M/MIN1/2	[NUMB 9,8]	RESERVOIR FLUID LOSS COEFFICIENT	Optional, if [PRSTY] = (50) or (51)	For DFIT and DFIT FLOWBACK only
Loc.m (MD)	[NUMB 7,2]	DEPTH OF TEST INTERVAL (m-MD)	Mandatory, if [PRSTY] = (50) or (51); must be > zero	For DFIT or DFIT FLOWBACK only; measured depth of the stage where the DFIT was conducted.
Clusters	[NUMB 3]	Number of Clusters for DFIT	Optional	For DFIT and DFIT FLOWBACK only
Compl	[CHAR 250]	Type of Completion	Optional	Freeform comment for Type of Completion
PVT	[CHAR 1]	PVT Study	Optional, Must be either (Y)es or (N)o.	If Yes, then attach a PDF of PVT Study to the TRG Pas file.
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.

AOF / TRANSIENT WELL TEST FILE
(TRG)

~ 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)
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
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.

AOF / TRANSIENT WELL TEST FILE
(TRG)

~ 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 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), (12) 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. If PRSTY = 50 or 51, SURBTM can be (S) surface or (B) bottomhole and will still meet initial (I) pressure requirements	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.
GTYPMM.	[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

AOF / TRANSIENT WELL TEST FILE
(TRG)

~ DATA TABLE - GAUGE (n)

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

#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)

TIME	TCUM	PRGA	TGA	GCOM
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
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)inital, 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	Mandatory, must be > 90 kPa	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 or injection 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	Calculated using above parameters at corresponding point in time

~DTAC

TIME	ETIME	LLVL	LLVT	PSUR
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*

GRGAS	GROIL	GRWTR	PMPPT
99.999	99.999	99.999	999999.99
99.999	99.999	99.999	999999.99
99.999	99.999	99.999	999999.99

AOF / TRANSIENT WELL TEST FILE
(TRG)

~ 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 [AOFTY] (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

PRGA	ITIME	QGAS	QOIL	QWTR
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***

GENC
X (240)
X (240)
X (240)

AOF / TRANSIENT WELL TEST FILE
(TRG)

Test Type Codes:

PRSTY	
04	Bottom Hole - Build-Up (BU Only)
05	Bottom Hole - Segregation
06	Bottom Hole - Fall-Off
11	AWS - Build-Up (Transient)
12	AWS - Fall-Off (Transient)
14	Flow and Build-Up
15	Bottom Hole - Interference
24	Drawdown (only)
34	Sentry (Permanent Downhole Recorder/Pziometer)
50	DFIT (Diagnostic Fracture Injection Test)
51	DFIT Flowback (Diagnostic Fracture Injection Test Flowback)

AOFTY	
01	Single-Point (AOF)
02	Multi-Point (AOF)
31	AOF - Wellhead Only (not calculated to Bottomhole conditions)
32	AOF - Theoretical Multi-Point
41	IPR - (Oil Well Only)

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)