### WITS\_WITSML Record 12 Chromatograph Gases Cycle-Based Variable Mapping

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| **WITS Record ID:** 12 | **Logical Record Type:** 162 | **Auto/Manual:** Automatic |
| **Trigger:** Transmit at the completion of a valid chromatograph cycle while circulating. | | |
| **Data Source:** Data acquired in real-time from each valid chromatograph cycle. Not sent if no circulation is taking place | | |
| **Data Typology:** Reference (Ref), Date\_Time\_Stamp(Dts), Real-time-Measure (Rtm), Real-time-Signal (Rts), Limit (Lim), Set-Point (Spt), Calculation (Cal), Distribution (Dis), Command (Com), Parameter (Par), Synthetic Value (Syn), Alarm (Alm), Interpreted (Int), Modeled (Mod), Observed (Obs), Code (Cod), Count (Cnt), Cumulative (Cml), Status (Sta), Expected (Exp), Estimated (Est) | | |
| **Data Field Types:** A = Alphanumeric String, L = 32 bit 2's complement signed integer, S = 16 bit 2's complement signed integer, F = 32 bit IEEE single precision floating point, E = Engineering, B = Boolean (1 if True and 0 if False), D = Date, T = Time, V = Variant, IL = Integer List, FL = Float List, EL = Engineering List, TL = Text List. | | |
| **Reserved Characters:** Comma (,) - Separates Fields, Semi Colon (;) - Separates Items in a Standard Record, Colon (:) - Separates items in Date and Time Fields, Ampersand (&) - Separates items in a List | | |
| **Data Mnemonic Abbreviations:** Raw (Raw), Average (Avg), Max (Max), Min (Min), Mean (Men), Root-Mean-Square (Rms), Percent (Pct), Error (Err), Correlation (Cor), Probability (Prob), Variance (Var), Spread (Spd), Mean-Absolute-Deviation (Mad), Ratio (Rat), Standard Deviation (Std), Mode (Mod), Weighted Mean (Wtm), Dispersion (Dis), Product (Pro), Sum (Sum), Cumulative Sum (Csm), Corrected (Cor), Adjusted (Adj), Instantaneous (Ins), State (Sta), Observed (Obs), Expected (Exp), Observed-Cumulative (ObC), Expected-Cumulative (ExC), Total (Tot), Reported (Rep), Interpolated (Itp), Period (Per), Currency (Cur) | | |

| WITS  Record / Item | Description | STD WITS Long Mnemonic | Operator Mnemonic for WITSML & OSIsoft PI & ODA | Field Type | Length | Typology | Transmit Units (FPS) | Transmit Units (Metric) | Data System Type |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1201 | Well Identifier | WELLID | WID | A | 16 | Ref | ---- | ---- | Unique Well ID |
| 1202 | Sidetrack/Hole Sect No. | STKNUM | SKNO | S | 2 | Ref | ---- | ---- | Unique Wellbore ID |
| 1203 | Record Identifier | RECID | RID | S | 2 | Ref | ---- | ---- | Identification |
| 1204 | Sequence Identifier | SEQID | SQID | L | 4 | Ref | ---- | ---- | Identification |
| 1205 | Date | DATE | DATE | L | 4 | Dts | ---- | ---- | Date |
| 1206 | Time | TIME | TIME | L | 4 | Dts | ---- | ---- | Time |
| 1207 | Activity Code | ACTCOD | ACTC | S | 2 | Cod | ---- | ---- | Activity |
| 1208 | Depth Returns (meas) | DEPTRETM | DRTM | F | 4 | Obs | F | M | Depth |
| 1209 | Depth Returns (vert) | DEPTRETV | DRTV | F | 4 | Cal | F | M | Depth |
| 1210 | Mud Density In (lagd) | MDIL | MDI\_Lag | F | 4 | Rpt | PPG | KGM3 | Density |
| 1211 | Mud Density Out (avg) | MDOA | MDO\_Avg | F | 4 | Rpt | PPG | KGM3 | Density |
| 1212 | Mud Temperature In (lagd) | MTIL | MTIL\_Lag | F | 4 | Rtm | DEGF | DEGC | Temperature |
| 1213 | Mud Temperature Out (avg) | MTOA | MTO\_Avg | F | 4 | Rtm | DEGF | DEGC | Volume |
| 1214 | Mud Conductivity In (lagd) | MCIL | MCI\_Lag | F | 4 | Rpt | MMHO | MMHO | Conductivity |
| 1215 | Mud Conductivity Out (avg) | MCOA | MCO\_Avg | F | 4 | Rpt | MMHO | MMHO | Conductivity |
| 1216 | Hyd.Sulfide Haz.Pot. (avg) | HSHPA | HHP\_Avg | F | 4 | Rtm | PPM | PPM | Gas |
| 1217 | Hyd.Sulfide pH (avg) | HSPHA | HPH\_Avg | F | 4 | Rtm | ---- | ---- | Gas |
| 1218 | Hyd.Sulfide pHS (avg) | HSPHSA | HPS\_Avg | F | 4 | Rtm | % | % | Gas |
| 1219 | Gas In (lagd) | GASIL | GSI\_Lag | F | 4 | Rtm | % | % | Gas |
| 1220 | Gas (avg) | GASA | GAS\_Avg | F | 4 | Rtm | % | % | Gas |
| 1221 | Gas (max) | GASX | GAS\_Max | F | 4 | Rtm | % | % | Gas |
| 1222 | Carbon Dioxide (avg) | CO2A | CO2\_Avg | L | 4 | Rtm | PPM | PPM | Gas |
| 1223 | Hydrogen Sulfide (avg) | HSA | HS\_Avg | L | 4 | Rtm | PPM | PPM | Gas |
| 1224 | Hydrogen Sulfide (max) | HSX | HS\_Max | L | 4 | Rtm | PPM | PPM | Gas |
| 1225 | < SPARE 1 > | SPARE1 | SPR1 |  |  |  | ---- | ---- | Spare |
| 1226 | < SPARE 2 > | SPARE2 | SPR2 |  |  |  | ---- | ---- | Spare |
| 1227 | < SPARE 3 > | SPARE3 | SPR3 |  |  |  | ---- | ---- | Spare |
| 1228 | < SPARE 4 > | SPARE4 | SPR4 |  |  |  | ---- | ---- | Spare |
| 1229 | < SPARE 5 > | SPARE5 | SPR5 |  |  |  | ---- | --- | Spare |