### WITS\_WITSML Record 14 Lagged Continuous Mud Properties Variable Mapping

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| **WITS Record ID:** 14 | **Logical Record Type:** 164 | **Auto/Manual:** Automatic |
| **Trigger:** [TIME], [DEPTH] or [TIME/DEPTH] Transmit at the specified time interval (secs), depth interval (feet or meters) based on the returns depth, or a combination of these. | | |
| **Data Source:** Data acquired in real-time and computed over the interval. Record transmitted and computations reset when the triggering interval occurs. If a depth interval is specified, it is active until bottoms-up occurs. Time intervals, if specified, are reset following the transmission of the record by either depth or time trigger. 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 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1401 | Well Identifier | WELLID | WELLID | A | 16 | Ref | ---- | ---- | Unique Well ID |
| 1402 | Sidetrack/Hole Sect No. | STKNUM | STKNUM | S | 2 | Ref | ---- | ---- | Unique Wellbore ID |
| 1403 | Record Identifier | RECID | RECID | S | 2 | Ref | ---- | ---- | Identification |
| 1404 | Sequence Identifier | SEQID | SEQID | L | 4 | Ref | ---- | ---- | Identification |
| 1405 | Date | DATE | DATE | L | 4 | Dts | ---- | ---- | Date |
| 1406 | Time | TIME | TIME | L | 4 | Dts | ---- | ---- | Time |
| 1407 | Activity Code | ACTCOD | ACTCOD | S | 2 | Cod | ---- | ---- | Activity |
| 1408 | Depth Returns (meas) | DEPTRETM | DEPTRETM | F | 4 | Obs | F | M | Depth |
| 1409 | Depth Returns (vert) | DEPTRETV | DEPTRETV | F | 4 | Cal | F | M | Depth |
| 1410 | Mud Density In (lagd) | MDIL | MDIL | F | 4 |  | PPG | KGM3 | Gas |
| 1411 | Mud Density Out (avg) | MDOA | MDOA | F | 4 |  | PPG | KGM3 | Gas |
| 1412 | Mud Temperature In (lagd) | MTIL | MTIL | F | 4 |  | DEGF | DEGC | Gas |
| 1413 | Mud Temperature Out (avg) | MTOA | MTOA | F | 4 |  | DEGF | DEGC | Gas |
| 1414 | Mud Conductivity In (lagd) | MCIL | MCIL | F | 4 |  | MMHO | MMHO | Gas |
| 1415 | Mud Conductivity Out (avg) | MCOA | MCOA | F | 4 |  | MMHO | MMHO | Gas |
| 1416 | Hyd.Sulfide Haz.Pot. (avg) | HSHPA | HSHPA | F | 4 |  | PPM | PPM | Gas |
| 1417 | Hyd.Sulfide pH (avg) | HSPHA | HSPHA | F | 4 |  | ---- | ---- | Gas |
| 1418 | Hyd.Sulfide pHS (avg) | HSPHSA | HSPHSA | F | 4 |  | % | % | Gas |
| 1419 | Gas In (lagd) | GASIL | GASIL | F | 4 |  | % | % | Gas |
| 1420 | Gas (avg) | GASA | GASA | F | 4 |  | % | % | Gas |
| 1421 | Gas (max) | GASX | GASX | F | 4 |  | % | % | Gas |
| 1422 | Carbon Dioxide (avg) | CO2A | CO2A | L | 4 |  | PPM | PPM | Gas |
| 1423 | Hydrogen Sulfide (avg) | HSA | HSA | L | 4 |  | PPM | PPM | Gas |
| 1424 | Hydrogen Sulfide (max) | HSX | HSX | L | 4 |  | PPM | PPM | Gas |
| 1425 | < SPARE 1 > | SPARE1 | SPARE1 | F | 4 |  | ---- | ---- | Gas |
| 1426 | < SPARE 2 > | SPARE2 | SPARE2 | F | 4 |  | ---- | ---- | Gas |
| 1427 | < SPARE 3 > | SPARE3 | SPARE3 | F | 4 |  | ---- | ---- | Gas |
| 1428 | < SPARE 4 > | SPARE4 | SPARE4 | F | 4 |  | ---- | ---- | Gas |
| 1429 | < SPARE 5 > | SPARE5 | SPARE5 | F | 4 |  | ---- | --- | Gas |