

## Appendix 5

### **INTRODUCTION**

This appendix contains a glossary of the data fields in many reports generated by the MAP System, including the Detailed Task Report, the Specific Device Report, the CPAMS Configuration Report and the Device Histories Report. Examples of reports are provided at the back of this Appendix.

#### *A*

For Lancier devices, the one-character assignment designation is entered in this field.

#### *Access #*

The Access Number field appears only if "User Defined Devices" are turned on. This field holds the actual access number as defined by the monitoring unit.

289H:	the relay card and pin number where the device is connected, and the address number and channel designator (if the device is an addressable transducer)
uM260:	same as device number; identifies type of device: 1-1 to 1-4 binary, 2-1 to 2-16 resistive or loop current transducer, special application contact alarm
E2A:	the LARP pin identification number to which a device is wired
Chatlos:	the pin numbers
Sparton:	the device number (the first three numbers in the location field)
TMACS:	the Index Number
Lancier:	the specific card type, slot number (for the Lancier 1005), two digit channel number, and unit number (for addressable transducers)
Nicotra:	the cable number and transducer number (for transducers), or contact number (for contact alarms)
TELSEC:	the universal input numbers

#### *Address*

The device location (utility hole #, street address, central office panel location, etc.).

#### *Addr #:*

This field is displayed only for addressable transducers. The represented value indicates the device's physical address on the addressable monitoring pair.

#### *Aerial std, Buried std, Undgnd std*

These three fields determine the cable pressurization standards used by the office. PressureMAP automatically defaults to these minimum pressure standards:

- Aerial cable—2 PSI or 10.0 KPA
- Buried cable—3 PSI or 30.0 KPA
- Underground cable—5 PSI or 30.0 KPA

If your minimum cable pressure standards differ from the ones listed above, then you will need to enter the pressure standards appropriate to your area into these data fields.

#### *Alarm Condition*

For TELSEC systems, this field contains the Alarm Condition setting for a digital device. Legal values are: CR (critical alarm), MJ (major alarm), and MN (minor alarm). PressureMAP does not use this field; it is for record keeping purposes only.

#### *Alarm Type*

For TELSEC systems, a digital device's alarm type is entered into this field. Legal values are: ENV (environmental alarm), EQPTSA (service affecting equipment alarm), and EQPTNSA (non-service affecting equipment alarm). PressureMAP does not alarm on the input from this field; it is for record keeping purposes only.

#### *Alarm Priority*

This field is used to identify one of three Sparton alarm classifications: "N" for none, "M" for minor, and "J" for major. This information is used for the automatic programming of Sparton 5300B and 5318 monitors.

#### *Alert Sensitivity*

This field of the Office Information Screen holds the 289H alert sensitivity level, which is a number between 1 and 5. The number 1 is the least sensitive alert detection setting and 5 is the most sensitive. Since the higher sensitivity settings will cause the 289H monitor to send out a greater number of alert calls, it is recommended that 3 be used until you have a feel for which level will work best with your pressure system.

#### *Alt*

This data field is used with Sparton CPAMS to represent an altitude offset for long-haul pressure transducers installed at different elevations. Depending on how the units of measure are set up during office data entry, the field information could pertain to either feet or kilofeet.

#### *Averages*

The Averages section of the Device History Report has four columns that represent weekly averages for the past four weeks of readings.

#### *Baudrate*

The speed at which the monitoring unit communicates with another device, such as PressureMAP.

#### *Cable*

The "read" cable which contains the transducer conductor pairs.

#### *Cable Readings*

The cable readings screen is only accessible if the device has defined at least one sheath in the Sheath field of the primary device screen. When full, it can contain six sets of manually input

cable readings, with each set of readings containing a date stamp and a manual flow reading for each sheath. The sheaths match the sheaths entered on the primary device screen and the single manually input Manifold/PSI reading applies to all of the cable readings.

#### *Calculated*

The "Calculated" row of data contains the device readings for the current day as well as the past 6 days. **Tdy** represents the reading taken during the daily poll of devices; "-1" lists yesterday's reading, "-2" the reading taken the day before, and so on through "-6." In addition, the last four columns of this section represent weekly averages for the past four weeks of readings.

#### *Chg*

This field appears only for single feed pressure device types GP, HP, and JP, along with the **THR** field. The **CHG** field is the amount of change that can be tolerated before the device goes into alarm. The default value for this field is 1 PSI (6.9 KPA).

#### *Chng*

This field is used in conjunction with the \$F, \$V,\$P and \$T devices, as well as the **STD** and **SAU** fields. The **CHNG**, or change, field is the amount of change (in pressure, flow or temperature, depending on the type of high priority device) that can be tolerated before the device goes into alarm. For pressure devices, the CHNG value is how many PSI can drop from the value indicated in the **STD** field before an alarm condition is acknowledged. For flow devices, the CHNG value indicates how many SCFH the device increases before an alarm is given. For temperature devices, the CHNG value is how many degrees the temperature can increase or decrease before an alarm is produced.

For a pressure monitoring device, this field will default to a value of 1.5 PSI, while a flow monitoring device will give a default value of 2.0 SCFH. The default value for a \$T device is one third of the **STD** value (25.0).

#### *CIRC*

For Lancier systems, the circuit (cable designation) identity of the device is entered in this field. This cable designation **must** be entered for each device in both the Lancier monitor and PressureMAP to enable PressureMAP to obtain "realtime" readings.

#### *CKT #*

For Chatlos/Hercules and TMACS systems, the circuit number of the device is displayed in this position.

#### *Contact Type*

This field appears only for Nicotra contact alarms. It designates either the value NC (normally closed) or NO (normally open).

#### *Debounce*

For Nicotra systems, this field specifies the "debounce" time for contact alarms, entered in seconds using a decimal point. When the contact alarm relays are activated, there may be a momentary "chatter" (on/off). The debounce time is the period of time to wait while the relay settles to a final value. The default value for this field is 8.0 (seconds).

*Delay*

For Sparton systems, this field works in conjunction with the **TRIGGER** field, and needs to be completed only if the device in question is a Contact Alarm. DELAY represents the delay time, in seconds, after which the Sparton CPAMS repeats its scan to confirm or deny the alarm condition reported by the device.

For TELSEC systems, this field contains the alarm delay for a digital device. It specifies the amount of time (0-600 seconds) the TELSEC system will wait before generating an alarm. PressureMAP does not use this field; it is for record keeping purposes only.

*Delivery std*

This field contains the source delivery pressure standard for the office. For an air pipe system, this value should be the desired delivery pressure at the end of the air pipe. However, this field is also used for the distribution panel delivery pressure standard for a single feed office (typically 10 PSI in this application). PressureMAP uses a default value of 7.5 Pounds per Square Inch (PSI). If you do change the default setting, the delivery pressure standard must be entered in tenths of a PSI, and the value must be between 0.0 and 10.0.

*Device #*

This field lists the Device Number, indicating the actual monitoring device being represented in the report. For detailed information on the letter-coding method used on Chatlos/Hercules and Sparton systems, please consult Table 1-11, titled "CPAMS Letter Coding" in the Preface.

*Device Comments*

This screen gives field craftsmen the ability to input device related remarks. These remarks, which can be entered from the PressureMAP Specific Device Information menu selection as well as from data entry, are date/time stamped when entered and can contain up to two lines of text, which equals 124 characters.

*Distance 1*

The distance in kilofeet (thousands of feet) between the reporting device and Office 1 Location.

*Distance 2*

The distance in kilofeet (thousands of feet) between the reporting device and Office 2 Location.

*Enabled*

This Nicotra contact alarm field may be set to Y or N.

*Escalation*

This Chatlos/Hercules field indicates the number of times that the device has gone in and out of alarm before the monitor issues an escalation alarm. PressureMAP uses the entry, which is a number between 1 and 99, for its automatic Chatlos/Hercules programming utility.

*Field 1 Loc (FLD)*

The PressureMAP Location Number for the first device to the field side of the reporting device.

*Field 2 Loc*

The PressureMAP Location Number for the second device to the field side of the reporting device.

*Flow std*

This field holds the office air flow standard, measured in Standard Cubic Feet per Hour (SCFH). The program default setting is 1.25 SCFH. This standard is based on the OAU figure per sheath mile of cable. If the air flow standard used in your office differs from the default value, then the Flow standard is entered in units of hundredths of SCFH, and can be between 0.50 and 9.99 SCFH.

*Input # (Inp #)*

The designation number used in Sparton systems that designates the Frame Interconnect Block pin where the device pair terminates. Effective with Version 24, when PressureMAP calls a Sparton 5300B, 5318 or 5301A monitor, the **Input #** information in PressureMAP device data is automatically updated to match the Sparton device record.

*Input Type*

For TELSEC systems, this field contains the device's input type. Legal values are: TEMPF (Fahrenheit temperature), TEMPC (Centigrade temperature), RH (relative humidity), FC (foot candle), MV (milli-volt), PSI (0-100 PSI), HPSI (0-500 PSI), DIGITAL (digital input point for normally open points), INVDIG (digital input point for normally closed points), and SCALE (manually scaled). PressureMAP does not use this field; it is for record keeping purposes only.

*Last backed up*

Date of last successful manual or automatic CPAMS backup procedure.

*Last restored*

Date of the last successful manual or automatic CPAMS restoration procedure.

*Latitude*

This text field has the following format: ldd+mm.mmm, with l designating which hemisphere the latitude applies to (one of the single letters: N or S); dd is an integer between 00 and 90 that indicates the degrees of latitude; and mm.mmm is an integer between 0.0 and 59.999 that designates the minutes of latitude.

When adding new devices, the **Latitude** field is carried over to the new device, so the default value for this field will be derived from the last device added.

*Level*

This field holds the alarm level from the Chatlos or Hercules printout. For flow measuring devices, this value is the flow rate at which the device will go into alarm. For pressure measuring devices, the level value represents the minimum pressure level of the device. PressureMAP does not alarm on the input from this field. This field is used for record keeping purposes and for the automatic programming of the Chatlos L3 and Hercules 940 monitors.

*Level 1, Level 2*

These two fields hold the alarm levels from the Lancier printout's LVL1 and LVL2 columns. For flow measuring devices, these values are the flow rate at which the device will go into alarm. For pressure measuring devices, the level values represent the minimum pressure levels of the device. PressureMAP does not alarm on these input from these two fields; they are for record keeping purposes only.

*Line # (Lin No.)*

This device data form entry field indicates the line position on the Sparton printout where the device appears.

*Loc (Location)*

The unique PressureMAP location number for all devices at a particular location in the pressurization system. This number is designated during data entry and shall not be duplicated within an office.

*Longitude*

This text field has the following format: hfff+mm.mmm, with h designating which hemisphere the longitude applies to (one of the following single letters: E or W); fff is an integer between 000 and 180 that indicates the degrees of longitude; and mm.mmm is an integer between 0.0 and 59.999 that designates the minutes of longitude.

When adding new devices, the **Longitude** field is carried over to the new device, so the default value for this field will be derived from the last device added.

*Loop*

This field must be filled in for all contactors, to specify the loop resistance value for an alarm reading. This value is the total loop resistance in kilohms from the central office to an operated contactor (a contactor in an alarm state) and back to the office.

*Manifold/PSI*

This field in the Cable Readings Screen contains the single, manually input Manifold/PSI reading. This reading applies to all of the cable readings.

*MAP Alert #*

This field of the Office Information Screen is only used for 289H and 289H-M monitors. The phone number or IP address that the 289H will use to send out alerts to PressureMAP is recorded here.

*MAP Alert Baudrate*

This field of the Office Information Screen is only used for 289H and 289H-M monitors. This field designates the baudrate of the PressureMAP modem that receives 289H LSS alert information.

*Modem Site*

This field is only for offices using the Digi PortServer II serial port concentrator. The field must be filled out to select which PortServer the office will use for outgoing and incoming calls. The name must be eight characters or less.

*Module*

The designated module type to which the device is wired. Valid module types are as follows:

Chatlos/Hercules Monitors:

Chatlos L1: DT (dedicated), ST (subscriber), SS (status alarm), VF (volume counter), RC (contactor)

Chatlos L2:	DT (dedicated), ST (subscriber), MA (status alarm), MF (volume counter), MC (contactor), TT (addressable)
Chatlos MPUZ:	DT (dedicated), ST (subscriber), MA (status alarm), MF (volume counter), MC (contactor)
Chatlos L3:	DT (dedicated), ST (subscriber), MA (status alarm), MF (volume counter), MC (contactor), TT (addressable)
Chatlos 600:	DT (dedicated), ST (subscriber), MA (status alarm), MF (volume counter), MC (contactor), TT (addressable), SA (high priority status alarm)
Hercules 740, 940:	DT (dedicated), ST (subscriber), MA (status alarm), MF (volume counter), MC (contactor), TT (addressable), SA (high priority status alarm)

Sparton Monitors:

Sparton (all):	DED (dedicated), SUB (subscriber), BIN (status alarm/volume counter), ADD (addressable), D (long haul)
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Effective with Version 24, when PressureMAP calls a Sparton 5300B or 5318 monitor, the **Module** information in PressureMAP device data is automatically updated to match the Sparton device record.

*Monitor Type*

The make (or type) of CPAMS monitoring system in use.

*Nicotra Type*

This field contains the Nicotra identifier for the pressure transducer hardware. It may be a number from 0-128. The field is initialized to 8 (for a standard device type); it may also be 12 (long distance device type).

*Norm*

This field needs to be completed for all contactors and contact alarms. The value entered should reflect what the device reads in its normal, non-alarm state.

*Number of Devices*

The number of devices entered in the CPAMS database.

*OFF*

Office. The location code of the neighboring device location on the office side of a device. Also listed is the number of kilofeet (KF) between the two locations.

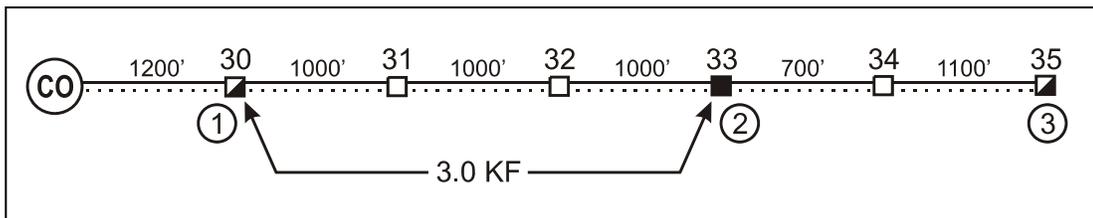


FIGURE A5-1: DEVICE LOCATIONS

In the preceding illustration Location 1 would be the Office 1 location compared to Location 2, and Location 3 would be the Field 1 location when compared to Location 2.

*Office 1 Loc (OFF)*

The PressureMAP Location Number for the first device to the office side of the reporting device. Also listed is the number of kilofeet (KF) between the two locations (Device Log Report only).

*Office 2 Loc*

The PressureMAP Location Number for the second device to the office side of the reporting device.

*Offset*

This field contains the adjustment factor that the TELSEC applies to analog readings. The value entered must be a whole number in the range of -127 to 127. PressureMAP does not use this field; it is for record keeping purposes only.

*Optimum Air Usage (OAU, OAU/Shth)*

1.25 SCFH (or 30 SCFD) per sheath mile of cable. Based on sheath mileage, the OAU figure represents the calculated air consumption a pressurized cable network should use under standard operating conditions. (OAU is also known as the "allowable leak rate.") This information is reported only for device types ending with the letters "F" or "V."

*Password 1*

This password allows a user access to the CPAMS monitor.

*Phone #*

The subscriber telephone number assigned to the pair on which the monitoring device is wired. If the device is connected to a dedicated or addressable module, no value will appear in this field.

*Phone Number*

The telephone number used by PressureMAP to access information from the CPAMS computer. For 289H/H-M monitors using a network connection to PressureMAP, this field contains the IP address for the 289H.

*Pipe*

The air pipe, central office sector, or remote dryer with which the device is associated. For sorting purposes, all PressureMAP devices must have a pipe designation.

*Plat #*

Plat number. The reference number for the telco-generated record of pressure/flow transducer placement.

*Prim Cable*

The primary "read" cable which contains the transducer conductor pairs.

*Prim Pair*

The designation of the primary conductor pair to which the device is connected.

### *Priority (PR)*

Chatlos systems use this data field to provide one of eight possible priority numbers.

### *Program Flag*

Beginning with Version 24, it is possible for PressureMAP to program certain device data field information directly into Chatlos L3, Hercules 940, Sparton 5300B and 5318 monitors. When a device's **Program Flag** is set to "Y" during the PressureMAP data entry process for these types of CPAMS monitors, PressureMAP is authorized to program the office monitor with data from the device record. A "N" setting indicates that no auto programming of the device record is desired. Options for initiating the programming function are available from the CPAMS Information Menu.

### *PSI*

For contactors (all device types ending with a "C" in the device type code), this field displays the minimum air pressure standard for which the contactor is set. For a pressure device, this is an offset field that shifts the device reading by the value entered in the field. Note that in Dial-a-Ducer applications this field's value does not affect the pressure readings in PressureMAP.

### *Range (Ran)*

Flow transducers display a number that signifies the maximum reading capacity of the device. For example, a common flow range for a type "SF" ("source flow") transducer is 0-50 SCFH. The value that appears in the **Range** data field is "50.0."

### *Reading*

The two columns **Curr** and **Last** contain the current and last pressure or flow readings. If you are not using AlarmMAP (which acquires data every two hours), the **Last** column will remain blank and the **Curr** and **Tdy** readings will be the same.

### *Reading Times*

Dates and times of the current, last, and today readings PressureMAP has gathered from the CPAMS unit.

### *Recognition*

This field represents the number of seconds (between 1 and 999) that an alarm condition in a Chatlos or Hercules monitor must persist before it is recognized as an alarm by the monitor. PressureMAP does not use this information to process or generate alarms. The entry in the field is used only during the automatic programming of Chatlos L3 and Hercules 940 monitors.

### *Reference (Ref)*

The calibrated air pressure of a flow transducer in a Positive Air Flow (PAF) system.

### *Relay*

For Nicotra devices, this field designates the alarm relay number (0-3).

### *Remarks*

In the Specific Device Information screen, this field consists of a two-line display (70 characters per line). It usually contains a message pertinent to the device, and can be edited using the data entry editor. If there is information in the second line, but the first line has been blanked, then

the second line will not be displayed. The information in the second line will once again be displayed if data is entered into the first line.

In the Office Information screen the **Remarks** field provides one line (70 characters) for comments, which are input using the data entry editor.

#### *SAU*

The Standard Air Usage of high priority flow devices (\$F and \$V). The value in this field should be the normal, stable flow of the device.

#### *Scan Option*

One of five possible values that identifies the number of retries, the scan interval and average number of readings expected by a Sparton when polling for device readings. Information in this field is used for PressureMAP's automatic programming of Sparton 5300B and 5318 monitors.

#### *Sec Pair*

A pre-assigned backup pair of conductors available for use if the primary pair becomes defective.

#### *Settled Readings*

The Settled Readings section of the Device History Report has seven columns of data: one for each day of the week. **Tdy** represents the reading taken during the normal early morning calling cycle. The other six columns (labeled from -1 to -6) list the readings obtained over the past six days.

#### *Sharp Sign Ratings*

A sharp sign (#) displayed in the level column on a dispatch report indicates that more than one device at the same location is in alarm. When more than one dispatch condition is found at a specific location, all dispatches will be grouped into one dispatch listing, and will be given a Sharp Sign Rating.

#### *Sheath(s)*

For a pressure device, the value(s) given identifies the cable being monitored. For a flow device, the number(s) indicates the cables being fed by the monitored air pipe manifold, Flow Finder Manifold or distribution panel.

#### *S-M*

The Sheath Mile (S-M) field only applies to devices that monitor air flow. If the device in question is a flow monitoring device, the calculated Sheath Miles are entered into this field.

The Sheath Miles for a Source FTD is equal to the sum of the manifold Sheath Miles. (This includes the distribution panel Sheath Miles if it is fed by the pipe panel.)

Although Sheath Miles for each flow device should be recorded on the respective stickmaps, this information is sometimes not present. Be sure to enter all calculated Sheath Miles on stickmaps which lack this information.

*Sort Key*

This field is for user-defined device sorting. Sort Key designations may hold a maximum of four alphanumeric characters. Option 10 of the Device Histories Menu uses this field to generate reports for all devices with the same Sort Key designation.

*STD*

For high priority pressure transducers (\$P devices), this field contains the standard, normal PSI value of the transducer.

For high priority temperature transducers (\$T), the field contains the standard temperature reading of the transducer. The default value is 75.0 degrees F.

*Stickmap*

The primary pressure record for an office. The stickmap is a graphic layout of a route showing all cables, utility holes transducers, air pipes, etc. The stickmap number is the reference number for pressure and flow transducer placement.

*Summary Information*

"Summary Information" is a one-line description of a problem. The daily dispatches describe the five worst problems for each office in a summary information section. That line includes a task number, a device number, a brief description of the nature of the problem, and the level of dispatch that PressureMAP has assigned to it. Additional information about the problem is available in Detailed Task Reports.

*Threshold (Th)*

A programmed setting in the CPAMS that determines when a device comes into alarm, (e.g., recordings that drop below the threshold generate an alarm as do flow readings above the programmed threshold). The name of a data entry field. For a Sparton device, it contains the programmed Sparton threshold for the specific monitoring device.

*THR*

This field appears only for single feed pressure device types GP, HP, and JP, along with the **CHG** field. If the pressure drops below the threshold value (THR) at any time, a four star dispatch alarm will be issued. The default value for this field is 1.5 PSI (10 KPA) for GP, and 4.4 PSI (30 KPA) for HP and JP.

*Thr 1, Thr 2*

These two fields hold the threshold values programmed into the Nicotra for pressure transducers. Each value is a number from 800-2000 (hertz). PressureMAP does not alarm on the input from these two fields; they are for record keeping purposes only.

*Trigger +/-*

This Sparton device field, for Contact Alarm device types only, describes the operational condition selected when the device is in an alarm state. Coding for this field is described in the Sparton Device Data section of the Data Entry manual.

*Trunk/Toll Tolerance*

This office information field specifies a give-or-take value (in ohms) for contactor readings. In the field, several contactors are normally wired to a single pair. Because of this, when a

contactor goes into alarm, PressureMAP must have some way to determine which contactor on the pair is in an alarm state. To facilitate the searching procedure, PressureMAP keeps a table of values, listing the loop resistance value of each contactor if it should go into alarm. If a contactor does go into alarm, PressureMAP is able to compare the current reading of the pair with the table of contactor resistance values. When PressureMAP finds a value in the table that equals the pair reading, then the contactor that is in alarm has been found.

However, the exact resistance value of an operated contactor cannot normally be predicted. Because of this, when PressureMAP reads a loop resistance value, it must allow for some give-or-take of the value read in order to match a value in the contactor table. The Trunk/Toll Tolerance data field specifies the give-or-take value that is allowed when attempting to match a loop resistance reading against the table of operated contactor values.

PressureMAP gives this data field a default value of 80 ohms. This means that a contactor is considered to be in an alarm state if the reading received by PressureMAP falls within 80 ohms, give-or-take, of the listed loop resistance value of the contactor.

#### *Tube Miles (TUBE-M)*

An alternative to calculating sheath miles when determining an air source's Optimum Air Usage (OAU). To calculate the Tube Miles for a flow device, the number of tubes that feed cables from the monitored air source need to be counted. Depending upon office type, either a value of 2 or 5 SCFH per tube mile is used in calculating OAUs. The Tube-M value (flow per tube) is entered in the Office Information Screen. PressureMAP then automatically generates an OAU based on the number of tubes entered for each monitored air source during device data entry.

#### *TY-K*

For Lancier systems, this four-character field contains the sensor type and kind, separated by a dash.

#### *Type (T)*

A two-letter device type identification denoting the type of device and its application in the pressurization system (see Table 1-3, "PressureMAP Device Types" in the Preface of the Operations Manual). Typically, the first letter pertains to the location or application of the device and the second letter represents the device type. For example, "UP" describes an underground pressure transducer.

#### *Unit # (Un, Units)*

This data entry field pertains only to Sparton monitoring systems. It represents the grouping or category of data which contains the device in question. For example, all flow transducers may be assigned the same Unit Number. Similarly, all of the devices on a specific route could be grouped together and given the same Unit Number.

### Detailed Task Report

The Detailed Task Report provides you with data concerning the device signaling a dispatch and a list of devices that have been affected by the dispatch condition. In addition to this information, a recommended leak locating procedure and graphic is given to help minimize the time spent correcting the problem.

```

Task Dispatching Info for <OFFICE, TASK#, DEVICE>          PressureMAP XX.XX.XX
07/02/2010 17:29                                          System Studies Incorporated
-----
Task #  Device #  Condition                                          Level
-----
1830011  T -069  Manifold/meter panel flow gained 5.0 scfh in 24 hr  ****

                Reading was 11.0 scfh at 14:18 on 07/02/02 VALIDATED

Task Dispatch Procedure #3

Probable Cause: Leak Close to Flow Device, Construction
                Intervention, Pair Trouble.
Procedure: Use Worksheets B or C to Determine Area of Search /
                Locate Trouble / Check the Cable Pair.

Device #: T -069                                Type: MF Range: 20.0 S-M: 15.0
Address:  MH-5, CENTER AVE                       Loc: 26 Pipe: A OAU: 18.7
Sheath(s): 01 07 13

Cable: 01 Prim Pair: 896 Sec Pair: R Sort Key:
Plat #: Stickmap: 1 Phone:
Latitude: 36.449983 Longitude: 122.250000

Office 1 Loc: 25 Distance 1 (kf): 3.0 Field 1 Loc: 27
Office 2 Loc: Distance 2 (kf): Field 2 Loc:

Remarks:
Readings  Curr Last Tdy -1 -2 -3 -4 -5 -6 Wk-1 Wk-2 Wk-3 Wk-4
-----
Calculated: 11.0 11.0 11.0 6.0 5.5 6.0 6.0 5.5 6.0 6.0 6.0 6.0 6.0
=====
=====

Device #: T -068                                Type: UP
Address:  MH-4, CENTER AVE                       Loc: 25 Pipe: A
Sheath(s): 01

Readings:  Curr Last Tdy -1 -2 -3 -4 -5 -6 Wk-1 Wk-2 Wk-3 Wk-4
-----
Calculated: 6.5 6.5 6.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0

***** PROJECTED LEAK LOCATION *****
*
*                               LOC 26
*      <- OFFICE           MH-5, CENTER AVE           FIELD ->
*                               TD T -069           TYPE MF
*      MH-4, CENTER AVE           11.0 SCFH
*
*
* < 25>-----[ LEAK ]
*               <- 3.0KF ->
*
*
*
*
*****
    
```

REPORT A5-1: DETAILED TASK REPORT

## Device History Report

The examples below show the device history in "Browser" format for PIPE AC in the APTOS2 office. Listing by device number (as shown in REPORT A5-2) is the default version of the report generated. A listing by access number is generated by using the # command function—for example, **2#**, as shown in REPORT A5-3 below.

```

Keystrokes: [Quit <Esc>] [Down 'J'] [Up 'K'] [Help 'H'] [Print 'P']
[Search Forward 'F'] [Search Back 'B'] [Search Next 'N']

-----
                        Device History of APTOS2, Pipe AC
      .READING. ....SETTLED READINGS..... .....AVERAGES.....
Device # TP  Curr Last  Tdy  -1  -2  -3  -4  -5  -6  Wk-1 Wk-2 Wk-3 Wk-4
-----
T -004  EP   8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5
T -009  SF  15.0 15.0 15.0 15.5 15.0 15.5 15.0 15.0 15.0 15.5 15.5 15.0 15.0
T -013  UP   8.0  8.0  8.0  8.5  8.5  8.5  8.5  8.5  8.5  8.4  8.3  8.5  8.5
T -014  UP   8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0
T -015  UP   7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0
T -021  AP   4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  3.7  4.0  4.3
T -054  MF   7.0  7.0  7.0  7.5  7.5  7.5  7.5  7.0  7.0  7.0  7.0  7.0  7.0
T -055  MF   8.0  8.0  8.0  7.5  7.5  7.5  7.5  7.5  7.0  7.0  7.0  7.5  7.5
--- More Below -----

```

REPORT A5-2: DEVICE HISTORY LISTINGS (BY DEVICE NUMBER)

```

Keystrokes: [Quit <Esc>] [Down 'J'] [Up 'K'] [Help 'H'] [Print 'P']
[Search Forward 'F'] [Search Back 'B'] [Search Next 'N']

-----
                        Device History of APTOS2, Pipe AC
      .READING. ....SETTLED READINGS..... .....AVERAGES.....
Access # TP  Curr Last  Tdy  -1  -2  -3  -4  -5  -6  Wk-1 Wk-2 Wk-3 Wk-4
-----
013-17  UP   8.0  8.0  8.0  8.5  8.5  8.5  8.5  8.5  8.5  8.4  8.3  8.5  8.5
013-18  UP   8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0
013-19  UP   7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.0
013-22  EP   8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5  8.5
016-36  SF  15.0 15.0 15.0 15.5 15.0 15.5 15.0 15.0 15.0 15.5 15.5 15.0 15.0
--- More Below -----

```

REPORT A5-3: DEVICE HISTORY LISTINGS (BY ACCESS NUMBER)

## Specific Device Reports

In the report examples that follow, data from different types of monitoring systems are presented. SCREENS 1 and 2 represent 289H LSS Specific Device Reports (with Screen 2 containing addressable transducer data). SCREENS 3 through 9 show Sparton, Chatlos, E2A, TMACS, Lancier, Nicotra and TELSEC Specific Device Reports. Each report outlines a device's "statistics" through the various fields in the report. For the most part, there is little difference in the data produced by these various CPAMS monitors.

```

Specific Device Information for <OFFICE>
07/02/2010 14:33
-----
                                PressureMAP XX.XX.XX
                                System Studies Incorporated
-----
Device #: APP           Access #: 001-06       Type: SF  Range: 19.0  S-M: 6.2
Address:  A PIPE                               Loc:  0  Pipe:  A    OAU: 7.8
TD Type:  CF/19.0
Sheath(s): MAW
Cable:      63  Prim Pair: 1225   Sec Pair:           Sort Key:
Plat #:      Stickmap: 1
Phone:
Latitude: 36.449983      Longitude: 122.250000

Office 1 Loc:           Distance 1 (kft):           Field 1 Loc:
Office 2 Loc:           Distance 2 (kft):           Field 2 Loc:

Remarks: SF READS 1.2 SCFH HIGHER THAN ACTUAL/TER
    
```

**SCREEN A5-1: SPECIFIC DEVICE INFORMATION FOR A 289H LOOP SURVEILLANCE SYSTEM**

```

Specific Device Information for <OFFICE>
03/10/2010 14:33
-----
                                PressureMAP XX.XX.XX
                                System Studies Incorporated
-----
Device #: PPB/End       Access #: 003-A6-024B   Type: EP
Address:  MH 61 at High St.      Loc: 16  Pipe:  B
TD Type:  APA/X2
Sheath(s): 17
Cable:      PP  Prim Pair: 1021   Sec Pair:           Sort Key:
Plat #:      B12  Stickmap: 1
Phone:
Latitude: 37.433333      Longitude: 122.250000

Office 1 Loc:           15  Distance 1 (kft): 2875      Field 1 Loc:
Office 2 Loc:           Distance 2 (kft):           Field 2 Loc:

Remarks: SF READS 1.2 SCFH HIGHER THAN ACTUAL/TER

Readings  Curr Last Tdy  -1  -2  -3  -4  -5  -6  Wk-1 Wk-2 Wk-3 Wk-4
-----
          7.4  7.4  7.0  7.4  7.2  6.2  6.6  7.0  6.9  7.1  7.4  6.5  6.8
    
```

**SCREEN A5-2: SPECIFIC DEVICE INFORMATION FOR A 289H LOOP SURVEILLANCE SYSTEM  
(CONTAINING 289H ADDRESSABLE TRANSDUCER DATA)**

```

Specific Device Information for <OFFICE>                                PressureMAP XX.XX.XX
07/02/2010 14:33                                                    System Studies Incorporated
-----
Device #: T -006                                           Type: EP
Address: MH-93,RIO DEL MAR                               Loc: 10  Pipe: A

Sheath(s): 05

Cable:      PP  Prim Pair: 73  Sec Pair:      R  Sort Key:  WEST
Plat #:     1A-3  Stickmap: 2
Unit #:     1  Line #: 4  Module:      DED  Input #:      6
Threshold:  2  Scan Option: 1                               Alm Priority:
M

Program Flag: N
Latitude: 37.433333      Longitude: 122.250000

Office 1 Loc: 9                Distance 1 (kft) 3.1      Field 1 Loc:
Office 2 Loc:                  Distance 2 (kft)              Field 2 Loc:

Remarks:

Readings  Curr Last Tdy  -1  -2  -3  -4  -5  -6  Wk-1 Wk-2 Wk-3 Wk-4
-----

```

SCREEN A5-3: SPECIFIC DEVICE INFORMATION FOR A SPARTON SYSTEM

```

Specific Device Information for <OFFICE>                                PressureMAP XX.XX.XX
07/02/2010 13:03                                                    System Studies Incorporated
-----
Device #: P -007                                           Type: BP
Address: MH-23 RIVER ST.                               Loc: 145  Pipe: B

Sheath(s): 04

Cable:      14  Prim Pair: 2435  Sec Pair:      Sort Key:
Plat #:     C-8  Stick Map: 40F7
Module:     ST  Phone #: 475-1278  TP:      B  CKT #:      T444
Priority:   2  Level: 7.0  Escalation:      Recognition:

Program Flag: N
Latitude: 37.433333      Longitude: 122.250000

Office 1 Loc: 144            Distance 1 (kft) 2.8      Field 1 Loc:
Office 2 Loc:                Distance 2 (kft)              Field 2 Loc:

Remarks:

Readings  Curr Last Tdy  -1  -2  -3  -4  -5  -6  Wk-1 Wk-2 Wk-3 Wk-4
-----
          7.0  7.0  7.0  7.0  7.0  6.5  6.5  6.5  6.5  7.4  8.5  8.8  8.4

```

SCREEN A5-4: SPECIFIC DEVICE INFORMATION FOR A CHATLOS SYSTEM

```

Specific Device Information for <OFFICE>
07/02/2010 14:33
-----
                                PressureMAP XX.XX.XX
                                System Studies Incorporated

Device #: T -006                Type: EP
Address:  MH-93,RIO DEL MAR      Loc: 10  Pipe:  A

Sheath(s): 05

Cable:      PP  Prim Pair: 73  Sec Pair:  R  Sort Key:  WEST
Plat #:     1A-3  Stickmap:  2
Unit #:     1    Line #:  4    Module:    DED  Input #:     6
Threshold:  2    Scan Option: 1                    Alrm Priority:
M

Program Flag: N
Latitude: 37.433333      Longitude: 122.250000

Office 1 Loc: 9          Distance 1 (kft) 3.1          Field 1 Loc:
Office 2 Loc:           Distance 2 (kft)           Field 2 Loc:

Remarks:

Readings      Curr Last Tdy  -1  -2  -3  -4  -5  -6  Wk-1 Wk-2 Wk-3 Wk-4
-----

```

SCREEN A5-5: SPECIFIC DEVICE INFORMATION FOR AN E2A SYSTEM

```

Specific Device Information for <OFFICE>
07/12/2010 12:46
-----
                                PressureMAP XX.XX.XX
                                System Studies Incorporated

Device #: A-035                Type: MF  Range: 19.0 S-M: 2.2
Address:  MH 58 EAST HIGH AVE   Loc: 21  Pipe:  A   OAU: 2.8

Sheath(s): 07      13

Cable:      14  Prim Pair: 73  Sec Pair:           Sort Key: EAST
Plat #:     A-48  Stickmap:  5
Callouts:   Priority:           Ty:                 CKT #:
Input #:     Addr #:           Escalator:       Settle Tm:
Delay:       Phone #:          Low Thrsh:       High Thrsh:
Trend:       Trend Signed: N   TD Steps:        20  Monitor Leg: T-R
Latitude: 30.257616      Longitude: 130.446483

Office 1 Loc: 20          Distance 1 (kft): 2.7          Field 1 Loc: 24
Office 2 Loc:           Distance 2 (kft):           Field 2 Loc:

Remarks:

Readings      Curr Last Tdy  -1  -2  -3  -4  -5  -6  Wk-1 Wk-2 Wk-3 Wk-4
-----
                1.5  1.4  1.4  1.6  1.5  1.5  2.0  2.0  2.0  2.0  2.0  2.5  2.5

Manifold/PSI: 2.2
                07/07/94
                07    2.5
                13    1.4

```

SCREEN A5-6: SPECIFIC DEVICE INFORMATION FOR A TMACS 1000 SYSTEM  
WITH MANUALLY ENTERED CABLE READINGS

```

Specific Device Information for <OFFICE>
07/02/2010 13:03
-----
                                PressureMAP XX.XX.XX
                                System Studies Incorporated

Device #:Q=01+02+127 Access #:Q=01+02+127 Type: MF Range: 270.0 S-K: 35.0
Address: LOCATION 1                               Loc: 1 Pipe: B OAU: 1225
Sheath(s): 1234

Cable:      1234 Prim Pair:      1 Sec Pair:      1 Sort Key:      1
Plat #:    UG5677 Stick Map:    1/1
TY-K:      XXXX A:              X CIRC:          XXXX
Level 1:   XXXX Level 2:       XXXX
Latitude:                                     Longitude:

Office 1 Loc:                               Distance 1 (km)           Field 1 Loc:
Office 2 Loc:                               Distance 2 (km)           Field 2
Loc:

Remarks:

Readings  Curr Last Tdy -1 -2 -3 -4 -5 -6 Wk-1 Wk-2 Wk-3 Wk-4
-----
          219 219 219 219 219 219 219 219 219 219 219 219 219
    
```

SCREEN A5-7: SPECIFIC DEVICE INFORMATION FOR A LANCIER SYSTEM

```

Specific Device Information for <OFFICE>
07/27/2010 13:03
-----
                                PressureMAP XX.XX.XX
                                System Studies Incorporated

Device #:01-001 Access #:01-001 Type: UP
Address: PIAZZA 1                               Loc: 1 Pipe: N
Sheath(s): 135

Cable:      7911 Prim Pair:      1 Sec Pair:      1 Sort Key:      1
Plat #:    UG4439 Stick Map:    1/1
Nicotra Type: XXX Relay:        X
Thr 1:     XXXX Thr 2:         XXXX
Latitude:                                     Longitude:

Office 1 Loc:                               Distance 1 (km):         Field 1 Loc:
Office 2 Loc:                               Distance 2 (km):         Field 2 Loc:

Remarks:

Readings  Curr Last Tdy -1 -2 -3 -4 -5 -6 Wk-1 Wk-2 Wk-3 Wk-4
-----
          48.2 48.2 48.2 48.2 48.2 48.3 48.1 48.2 48.1 48.2 48.2 48.3 48.2
    
```

SCREEN A5-8: SPECIFIC DEVICE INFORMATION FOR A NICOTRA SYSTEM

```

Specific Device Information for <OFFICE>
02/05/2010 13:03
-----
                                PressureMAP XX.XX.XX
                                System Studies Incorporated
-----

Device #:U-02                                Type: ZA
Address: PIAZZA 1                            Loc: 1 Norm: OPEN
Sheath(s): 135

Cable:      4321  Prim Pair:      1  Sec Pair:      1  Sort Key:      1
Plat #:    UG4009  Stick Map:    1/1
Input Type: DIGITAL  Alarm Type:  0
Alarm Condition: MJ  Delay:      500
Latitude:                                Longitude:

Office 1 Loc:                                Distance 1 (km):      Field 1 Loc:
Office 2 Loc:                                Distance 2 (km):      Field 2 Loc:

Remarks:

Readings  Curr Last Tdy  -1  -2  -3  -4  -5  -6  Wk-1 Wk-2 Wk-3 Wk-4
-----
                OK  OK  OK  OK
    
```

SCREEN A5-9: SPECIFIC DEVICE INFORMATION FOR A TELSEC SYSTEM

