

## Calwin Revision History

Version 5.9.04	changed unitless units changed length units changed gas units added 1 second averaging and flow weighted average added lpdiff for hawk9500
Version 5.9.05	changed middle size in cmp file to &hf0 pages added new Chinese from Joseph auto selecting plots with multi well new usb ftdi drivers
Version 5.9.07	changed permanent download to &hff to get all information for multiwells If surface box serial number in old format reload in new format set streaming download for only 9003
Version 5.9.08	Removed digital channel support Fixed toolmodel 9026 on recal changed getrev to check for tool on configured port added code to check if needed files are in app.path changed 4-20ma channel array size from 2 to 1 only allow 16 characters in channel name fixed multi well for turbine with proratio and test times added reporting for multi well in permanent production added rpn code added ability to import line speed into cmp
Version 5.9.09	fixed real time slave fixed multi rate sub 1 second programming added depth entry through graph2 added ability to set accum rate screens in perm sample rate added new gradient report with saving capabilities
Version 6.0.0	fixed print routine using new unit values for gas
Version 6.0.1	fixed compensation for gopher quartz broken after 5.9.3 fixed compensation for 2 surface quartz channel
Version 6.0.2	fixed change serial number to new format for version 1 hawks fixed permanent multi well recal when not starting with well 0 changed debug settings to new format
Version 6.0.3	removed presentation from perm mode 2 FIXED DEPTH WHEN PLOTTING -1000000000 AUTO RECALC WHEN CHANGING START TIME IN BIN FILE Added sample report files
Version 6.0.4	on separator mode there is no merge fixed crashing when computer in Chinese mode for surface box fixed depth importing and added ignore row feature added manual override of BSW
Version 6.0.5	added ability to import line tension into cmp
Version 6.0.7	fixed unloading form in frmflowstart_DCR added quartz serial numbers on view program
Version 6.0.8	fixed 24 hour pres, temp, diff averages making them flow weighted
Version 6.0.9	added gas pressure and meter temp override for 9018 only

	turbine meter-factor override for 9018 and 9017 only
	added tool to show active com ports
Version 6.1.0	fixed truck mode when exit to main screen while test is running
	store report depths in standard unit
	fixed bugs in reporting software
Version 6.1.1	fixed bugs for pressure and temp average if there is no gas flow
Version 6.1.2	changed SD card download options screen
	fixed bin recalc with report data that is not depth
	fixed Chinese language in graph
	added accelabar to 9018
	changed software for photon basic to not calculate gas
	fixed multi well comp when last sample same time as dump time
Version 6.1.3	added permanent rotating display code
	turned fast sample rate off for spidiff
	made change to page 1 byte a8
Version 6.1.4	fixed liquid and gas accums when there is a bad crc
Version 6.1.5	fixed orifice programming without accelabar
Version 6.1.6	made changes to photon version as per photon
	added turbine 2 forward gas feature
Version 6.1.7	changed permanent mode sign in operator doesn't need password
	permanent mode check mmc file to see if correct type
	changed configuration to all users directory
Version 6.1.8	changed permanent configuration for calwin to new style
	added low powered diff calculations for hawk 9000
	removed h2s from edit orifice in file
Version 6.1.9	added turbine 4
	added nan checking for permanent on rtd, diff and flow
	fixed bug with changing selected column on graph to update right away
	added start and stop test reset on permanent group well graph
	added auto well recomp of all mmc files to permanent single well report
Version 6.2.0	fixed get program from file to work on mmc dump
Version 6.2.1	changed bsw from int to single
	fixed spidiff in realtime
	added turbine 4 to realtime
	added monthly 24 hour selection to group well
Version 6.2.2	For 9003 with spidiff fixed number of samples
	made maximum storage rate on permanent 5 minutes
	removed gradient from old graph
Version 6.2.3	added new update gas parameter command for 4.57>
	took none out of surfsetup if diff is used
	improved radio and raven tool wakeup routine
Version 6.2.5	fixed permanent multi well for data with new test &h40 and no data
	made it so once wells in multi well are deleted they won't process again
	fixed view manifest on rpn view program
Version 6.2.6	display Monthly totals on permanent
	on multi single well batch check if file has more than 4096 bites
	changed max sample rate on hawk 9000 to 15 minutes
	added toolmodel 9029 and 9030

Version 6.2.7 added new resize ocx 4.1  
 added erase file after update to mmc  
 added sample rate update on mmc for hawk 9000

Version 6.2.8 fixed batch recalc for production and added a table of batched wells  
 fixed rpn recalc mode to handle different native units  
 added rpn mode to hawk 9000  
 made repairs to gradient software

Version 6.2.9 changed reset time to be before reset schedule on permanent program  
 changed if reset time negative then recommend resetting logs on permanent

Version 6.3.0 added 10 second store on permanent  
 turned on beta graph  
 started changing code to remove common dialog 32

Version 6.3.1 fixed bug with view differential

Version 6.3.2 made last half of page four turbine 1 & hff to fix crc problem on comp  
 if no turbines then tool options 2 bite = 0

Version 6.3.4 added v-cone  
 allowed propane to be up to 1 on 9003  
 fixed problem if no gas flow pressure average was half

Version 6.3.5 fixed problem if no liquid accums on permanent it is still shown as 0  
 turned help on in permanent mode  
 put in code for 9000 ht

Version 6.3.6 fixed hydrostatic report for hst

Version 6.3.7 changed error message on merge file if channels different  
 added delta and real time to max pres & temp on graph  
 added code to simplify hydrostatic testing  
 added bit for numeric error codes on hawk for Chinese language  
 added code for permanent if liquid media is corrupt it is totaled anyway  
 fixed code for sro's to build polynomial for quartz properly

Version 6.3.9 fixed error in 6.3.8 to recompensate badger and hawk properly

Version 6.4.0 added directive 17 reporting for permanents

Version 6.4.1 fixed sro gopher to work with quartz  
 fixed auto email to work with emailing bin file on batch reporting  
 fixed ascii depth import to accept fractions of a second

Version 6.4.2 fixed email bug from 6.4.1 when sending bin file by email

Version 6.4.3 added instantaneous values for hawk 9500

Version 6.4.4 fixed depth gradient on old graph  
 added 25 ms for surface quartz & h161  
 check for same sample point in manual depth entry  
 fixed differential zero flow setting for 9003  
 added ability to change differential flow setting in software tools  
 fixed view program for turbine 3

Version 6.4.7 fixed permanent error code checking if crc is bad  
 added 4 to 20 values to view program  
 fixed rpn code if no channels are displayed  
 erase arrays after recomp for standard and permanent  
 new real time beta

Version 6.4.8 made new release to fix bug in rpn code channels reversed

Version 6.4.9 made new release to fix bug in firmware

Version 6.5.0 new code for Photon Basic

Version 6.5.1 removed line in build min max for internal and diff channel title  
auto email permanent if bin file is selected and email off doesn't email  
changed real time deadweight from max 1 decimal point to 2  
Version 6.5.2 added code to beta graph to use or not use common axis for same unit

Version 6.5.3 changed clipboard code to clear clipboard if it already has a metafile  
changed gradient report if no depth auto goes to depth & back to gradient  
fixed error in test information when saving to cmp  
added code to real time graph to use or not use common axis for same unit  
made save directory in SaveFile2 sub default\_directory\data  
changed comment report print output in old graph comment report

Version 6.5.4 add initial code for auxiliary channel programming 9000 and 9500  
add compensation code for auxiliary channel permanent 9000 and 9500  
added sub to build Filo\_CMP\_Data\_Byte\_Array in new\_recalc\_permanent  
fixed original graph output to say real time in title not delta time  
for gas and liquid accum first value in file forced to zero  
added error code checking for i2c quartz and diff on 9003 hawk  
fixed runtime err13 when printing hydrostatic rpt with no selected points  
added 9033 to code  
hydrostatic mode administrator has warning instead of password  
added reporting units to hydrostatic operator mode  
added m<sup>3</sup> to gas flow  
changed layout of config screen  
added capability to write bytes to tool in debug  
added capability to view a page from tool in hex

Version 6.5.5 Fixed hydrostatic error when all data had been compensated  
Changed warning for tool if turbine crc is bad  
If turbine crc in tool is bad made so new turbine cal must be inserted  
Added download from tool to hst.  
Added HST firmware to firmware update  
for hst check if last test comped is same as new test else overwrite  
fixed hst comp if bad data and missing test number

Version 6.5.6 added user mode titles to header on main page  
changed header on hydrstatic plot to use a table  
changed hydrostatic print to use graph print call  
set up program and dump for extreme wolverine  
Check isnumeric for real time axis min max  
add set font to real time table  
added 2" to accelabar  
removed gross calculation from 9500 selection  
fixed orifice type selection so it shows previous programmed values

Version 6.5.7 added recovery cone cd and liquid density for model 9033  
changed 9018 with v-cone meter min and max are .45 to 200

Version 6.5.8 fixed reporting for liquid totalizer

Version 6.5.9 added flow offset for mcrometer  
added error checking on 9003 for gopher aux and rpn channels  
added test email button to email setup

Version 6.6.0 set proratio value to 1 and not visible for toolmodel 9033  
removed admin password for permanent production  
fixed gas calcs on for ex gas totalizer with fixed pres & temp  
added v-cone to software flow checking and show that it is 24 hour  
fixed advanced ascii fill in missing records if one file has no more data  
added signal averaging to form radio signal  
fixed fixed rate number of samples used to calculate duration

Version 6.6.1 fixed hydrostatic dump if only one test on unit  
added comment report to beta graph  
removed check for pressure on 24 hour and air flow test  
changed Header data storage to new report system

Version 6.6.2 changed gigasoft comments to print using gigasoft subsets  
added liquid rates to mccrometer in surfset and view programs  
Version 6.6.3 added min and max to beta graph  
added 32 bit crc to i2c quartz cal and expanded size to 6 pages  
for i2c quartz new cal format lower version software gives err 6 overflow

Version 6.6.4 fixed pdf graph error in graph2 conver emf  
made real time graph with gas flow show blue green and red

Version 6.6.5 real time and reporting not allowed with permanent tools  
added program same to program with same program and only erase tool  
added hawk 9000 save by  
fixed restart with configuration changes ex(hydrostatic to standard)

Version 6.6.6 no 6.6.6 made

Version 6.6.7 made to add new csmath and new csbinutil 6.6.5 install problem xp sp2

Version 6.6.8 added v-cone to hawk 9000  
andrew fixed rounding in poly coefficient calcs in csmath  
fixed select start and end in beta graph to stay when unzooming  
added retrieve turbine calibration from bin file  
changed view modbus on permanent tool viewprogram  
added ability for 9003 to display acf/min  
added gas settings to program same

Version 6.6.9 new firmware

Version 6.7.0 added command for erase only data for program same  
added comments to hydrostatic test  
changed depth ascii loader to show it is working  
added v-cone hardware verification though other  
added pressure and temperature to 4-20

Version 6.7.1 standard tool merge I corrected the start time if later time picked 1st  
added station pressure on sufsetup that can use altitude  
moved station pressure on downhole to page d and crc32'd  
on downhole crc16'd the program schedule  
on permanent don't erase unless uwi or channels have changed  
added erase memory and well log to selectable screen  
changed compensation to put cmp file in same directory as bin file  
move Static Gradient to new chart  
change header entry for graphs under reporting  
added packer isolation test  
fixed manual depth so it will store

added time shift  
 added rec file import  
 fixed import ascii depth if there is no overlapping times  
 removed programming error for samples on tool for permanent hawks  
 Version 6.7.3 added total accum for 24 hour flow extrapolation report  
 Version 6.7.5 fixed beta graph to handle aws plot  
 Version 6.7.8 fixed software to allow permanent tools to work on beta graph only  
 added accelabar to standard hawk compensation and programming  
 fixed hydrostatic recalc when no readings taken on test  
 ignore gas comp error 4 fraction total not equal to 1  
 when using bi and turbine 3 selected it now deselects turbine 3  
 added hydrostatic vessel test  
 Version 6.7.9 added hydrostatic vessel test to initial test type selection screen  
 new plot doesn't scroll beyond selected start and end  
 in surface setup use turbine cal from disk if changed once already  
 Version 6.8.1 fixed sro gopher calibration bug file not found in calb directory  
 added check for differential with change gas settings on permanent  
 added automatic ascii and rec file generation in config setup  
 added file name to beta graph title  
 changed main screen title  
 Version 6.8.2 fixed hydrostatic calculation  
 Version 6.8.3 added more error checking for calibrations being inserted  
 Version 6.8.4 fix errors in new chinese conversion  
 Version 6.8.5 fixed error in update quartz cal in surface box setup  
 more error checking for surfsetup update turbine,sro,qrtz if cal in different  
 directory  
 reinstall checks for admin privileges only if not already installed  
 added more chinese language conversions  
 fixed bug downloading newer quartz cal if cal already on computer  
 give warning that I2C Quartz/SRO cal on computer is being overwritten with  
 newer calibration  
 display calibration dates for I2C Quartz /SRO on View Program from tool  
 Version 6.8.7 added program for toolmodel 9030  
 added view only for hydrostatic test if not complete test  
 added code for I2CWolverine for sro and stand alone  
 removed ask for start time on surface box and aws during download  
 checks for permanent tool in permanent mode  
 display calibration dates for I2C Quartz /SRO on View Program from file  
 download calibrations now downloads turbine and surface quartz cal  
 add company name and location when programing aws  
 Version 6.8.8 updated to new graph version 7  
 added auto ascii to new real time  
 turned advanced graph on for truck mode  
 v-cone coefficient on view program fixed  
 gets cal date from external rtd if channel 1 not present  
 Version 6.8.9 fixed new graph where comments would disappear  
 save scales when saving plot  
 Version 6.9.2 changed sd download setup to always download events

made new report selector which renames test, deletes test, views all tests  
 changed save and exit to save and save as  
 changed exit without saving to exit  
 add smart trigger for new version downhole  
 added download and compensation for new downhole 9034

Version 6.9.3  
 added select directory to mmc copy if sd drive is not found  
 fixed mmc copy if files are in sub directory and not dir root  
 fixed hydrostatic multi well if number of tests > 255

Version 6.9.4  
 changed to advanced ascii with channel selection and default setup save  
 changed instantaneous values to show if gas flow and proper tool  
 fixed install for ftdi drivers to install properly in windows 7

Version 6.9.5  
 enabled Badger + for external users  
 added new test timer and download logs  
 added truck mode to drop down in config with permanent  
 added new test logging for downhole tools  
 changed 9018 and 9003 to max sample rate of 30 seconds if gopher sro on  
 turned off multi program for 9003 if gopher sro is on  
 for raven communication turned on stop communication after 3 retries  
 fixed new graph scaling issues

Version 6.9.7  
 advanced real time plot selects all channels at startup with full screen  
 fixed bug with tri tool gradient

Version 6.9.8  
 fixed graph when zoomed selected point now stays the same  
 add use previous for company name and location

Version 6.9.9  
 fixed gradient to go to depth if depth not in file  
 fixed dump complete memory on badger plus  
 fixed depth units for gradient report

Version 7.0.0  
 fixed report graph zoom  
 added thick line check box to new graph  
 fixed graph when zoomed selected point now stays the same on old graph  
 added max memory location to write program and dump logs  
 fixed date issue in gradient print out  
 fix comments moving between different x scales hours minutes etc  
 if single point depth gradient stops are automatically picked  
 added reinstall ftdi drivers in help menu  
 fixed manual depth entry if depth not saved just exited  
 added field depth and time entry for gradient

Version 7.0.1  
 fixed export ascii from gradient report  
 fixed erase depths when changing depths for gradient  
 added erase manual depths when removing depths from cmp file

Version 7.0.2  
 fixed filter ascii Units\_Label  
 when saving a new report and then resaving set flag to using previous  
 for rec import added enter time even when time is in the rec file  
 for liquid turbine entry added pulses/m<sup>3</sup>

Version 7.0.3  
 fixed 9032 ver 3 download problem  
 on 9031 show quartz serial number on view program from file

Version 7.0.4  
 more error checking to turbine cal k-factor within 20% of average >0 values  
 added surface location test number and description for 9003

made entry for company name location surface location test number and description come up on different screen

turned high speed download on for external software for extreme quartz

set gradient graph to use normal y scale not auto(sometimes made log scale)

fixed it so it didn't say there was previous depth data if there wasn't

Version 7.0.5 added Calscan remote help to calwin help

fixed email monthly files so it will see hidden files and change attribute to normal

Version 7.0.6 added smart sampling to hawk 9000

Fixed error in old graph with advanced ascii going back to new graph

turned high speed download on for all eligible tools

Version 7.0.9 fixed real time ascii to use space tabs and commas for date and time header

Version 7.1.0 added code for 9031 quartz to be used for SRO

Version 7.1.1 added extra lines to extrapolated and air flow plots

fixed adding depth to cmp not in pressure data directory

added programming and compensating for scf unit

change graphs to work better on low resolution non widescreen

Version 7.1.2 changed programming for scf unit

added modbus analyzer code

fixed ascii output if no file selected previously gave runtime error

added error checking and message to SD password routines

turned on smart trigger for toolmodel 9031 > 3.03

made change to time calculation during compensation when a downhole resets to 0 time

Version 7.1.3 added edit header to graphs

allow real time to work with interface box for wrongly registered ravens

Version 7.1.4 added MPaa and MPag support Version 7.1.5

added surface location test number and description to view program

Version 7.1.6 fixed bugs with programming scf unit in surfsetup

ascii export using extension csv for comma delimited files

Version 7.1.7 replace ascf with acf

fix saving reports issue when exiting and saving data

Version 7.1.8 replace scf unit with standard diaphragm meter

added actual diaphragm meter for turbine cal

added box saying generating plot for slow plots

fixed real time cmp generate gas flow if not per day

Version 7.1.9 added code for new temp tool model 9036

made new graph the default in standard mode

added report data to ascii output when doing extrapolated 24 hour report

Version 7.2.0 surface box setup leaves the unit boxes on all the time

Version 7.2.1 24 hour ascii with comma delimitation uses .csv for file extension

added 2nd pressure channel to truck mode

added advanced header to ascii output using new report format for header

allow permanent hawk to use extrapolated 24 hour report

Version 7.2.2 added x-scale selection to reporting ex. hour, minute, second and real time \*

Version 7.2.3 fixed bug in standard plot using comment avoidance

fixed communication auto discovery bug with wrong crc checking

Version 7.2.4 added company name, location and test description to downhole

fixed problem with truck mode export removed leading space



set comma delimitation for ascii output as original default  
 added tool model, revision, cal date, pressure to view program  
 added external rtd to sample to terminal with tri tool  
 changed the units mcf to mscf

Version 7.2.5 fixed ascii output for permanent admin mode  
 Version 7.2.6 fixed load config to change mcf to mscf in config file  
 Version 7.2.7 use 9031 tool serial number for cal not quartz serial number  
 on permanent programming allow store every sample for everything

Version 7.2.8 fixed bug with smart trigger on new surface box with ff's in memory  
 Version 7.2.9 fixed bug with falcon programming and test description  
 Added nan error checking to turbines on permanent  
 always put error codes in cmp and then display as per configuration

Version 7.3.0 check drive letter to check for unc at startup  
 Version 7.3.1 fixed standard hawk rpn compensate where rpn\_guid was not incremented  
 shrunk tool buttons on main graph to fit on lower resolution monitors  
 added tool 9039 new badger tri tool  
 fixed static gradient to work properly for temperature gradient

Version 7.3.2 fixed orifice option bug with iso5167 in compensation  
 Version 7.3.3 fixed Pressure/Temperature override when turbine turned off override  
 stayed on  
 changed how permanent tools are merged if selected from drop down menu  
 changed download calibration to include sro channels  
 fixed bug getting test description from tool if test description was full  
 added jump to time in main graph routine  
 fixed tool settings number of samples on i2c quartz bug

Version 7.3.4 added download cal from bin  
 for comment report moved comments to use separate line  
 added show date and time when adding comment to graph

Version 7.3.5 added code in crc check to look for all zeros and mark as bad crc  
 fixed bug with jump to time with different regional settings  
 added more Chinese translations

Version 7.3.6 fixed issue with differential orifice changes using mole fractions  
 fixed merge when merging same surface box from linking to merging  
 changed how naming of merging files works  
 corrected graph color error if there are more than 19 channels

Version 7.3.7 fixed issue with reading shorts from tool  
 made high speed download work with new 3 button hawk  
 added new indexer if using vista or higher  
 fixed header alignment on log output  
 made firmware update work with version 6 tools  
 put use new indexer on and off in config  
 added download and compensation for new downhole 9040  
 added modbus sniffer

Version 7.4.0 fixed interface box download to work with version 6 on 9500's  
 removed hypersample from surface setup for 9500's  
 increased comport setup up to com99

Version 7.4.1 added interface box 2 for highspeed download  
 check serial number in binfile after download to confirm correct tool

Version 7.4.2 added firmware update for interface box 2  
change highspeed port setup to fail if more than one of the same device plugged in  
fixed Calscan indexer to work with depth and rec files

Version 7.4.3 fixed bug when selecting alarms in realtime  
fixed bug when zooming in on realtime graph causing runtime error 9

Version 7.4.4 added code to correct merging permanent tool when start time had been changed  
fixed merge to allow more than 9 tools

Version 7.4.5 added code to select multiple files to merge  
fixed bug with actual diaphragm unit

Version 7.4.6 added new gas flow units to programming hawk and realtime  
added MPaa and MPag for hawks greater than 6.03 pcb rev 3 or greater  
added time event feature to plot

Version 7.4.7 added drives w to z for checking for removable drive  
check file for data start to determine if logs are available  
fixed gradient bug for gradient where first reading isn't zero on pull gradient  
fixed gradient bug where gradient times were reported one reading off  
fixed gradient bug where test date was in run depth

Version 7.4.8 fixed real time bug if table view on and last point selected subscript out of range  
error 9 occurs

Version 7.4.9 after 3 retries on raven or radio a screen with suggestions to the problem comes up

Version 7.5.0 added check to see if number of temp and pres steps are realistic to download  
and insert calibration routines

Version 7.5.1 added new startscreen graphics

Version 7.5.2 fixed error when no channels selected when making an ascii file  
added hypersample and smart trigger to view program  
added max pressure and temp. values to new plot for downholes

Version 7.5.3 fixed bug in view prog where calibration date wasn't being shown  
changed get\_page routine to handle more than 2 memory chips

Version 7.5.4 fixed export advanced ascii  
allow m<sup>3</sup>/min on all hawks  
allow m<sup>3</sup>/hr m<sup>3</sup>/day scf/hr scf/day above 5.03 and above 6.03  
don't show instantaneous flow values on permanent if there aren't any  
added scf meter programming with fixed pressure and temperature

Version 7.5.5 added macf  
changed pulses/acf to pulses/cf on 60 deg f diaphragm meter  
changed actual and scf gas flow to raw gas flow  
changed Standard Diaphragm meter to 60 deg f diaphragm meter  
changed Actual diaphragm meter to Raw diaphragm meter  
added report extrapolated flow test with casing pressure

Version 7.5.6 changed time comment from horizontal to vertical  
added new indexer with test description

Version 7.5.7 changed orientation of vertical comment  
added new indexer version 1.0.1.8  
added new firmware for hawk version 5.04