

## Completed features/changes beyond v5.11; not discussed in Sep-2015 User Manual

### SES v5.44 Release Notes (2017-06-19)

1. (5.44) PT2: enhance advanced cursor tracking mode with ~dozen RSD window size options for RSD-to-MDs graphical inversion (right-click shortcut menu)
2. (5.44) PT2: add feature to copy XSec, LWD track, left RSD track, or right RSD track to clipboard (toolbar button)
3. (5.44) PT2: bug fix Centerline edits not saving to disk if Centerline Description unchanged (v5.43)
4. (5.44) Multiple: improve messaging when imported data file content is not compliant with industry LAS file format specifications
5. (5.44) Multiple: various improvements and minor bug fixes

### SES v5.43 Release Notes (2017-05-31)

1. (5.43) PT2: add ParamTuner Startup Defaults Manager to set ~25 default session startup viewing options as stored user settings, including ~15 that selectively by option can be tracked & restored by individual well (top level toolbar button)
2. (5.43) PT2: add Marker Bed Save-As feature (top level toolbar button)
3. (5.43) PT2: add Marker Bed Switch feature (top level toolbar button)
4. (5.43) PT2: add Marker Bed Delete feature (top level toolbar button)
5. (5.43) PT2: add Marker Bed description at screen upper left and allow direct editing
6. (5.43) PT2: enhance large type log / LWD / survey datasets loading speed
7. (5.43) PT2: add Stack display option to LWD Other curves below cross section (right-click shortcut menu)
8. (5.43) PT2: add adaptive LWD track height options when LWD Other curves are displayed (right-click shortcut menu)
9. (5.43) PT2: add capability to change RSD domain curve and LWD Other curves from outer/left RSD and LWD tracks' shortcut menus
10. (5.43) PT2: enhance RSD Zoom options on outer/left RSD track (right-click shortcut menu)
11. (5.43) PT2: add survey inclination & azimuth at MD to cursor text over cross section while ACT enabled (advanced cursor tracking)
12. (5.43) PT2: change toolbar close button to mimic back button, whereby Geosteer screen displayed records are auto refreshed
13. (5.43) PT2: bug fix layer shading not instantly updating after manually keypunch changing Active 3DSB thickness
14. (5.43) PT2: bug fix survey station detail viewing option on occasion displaying/not-displaying as intended
15. (5.43) XSec: enhance LWD curve plotting in VS mode with MD sorting and optional MD range filtering
16. (5.43) UTIL: add optional auto check-for-updates feature and corresponding Main Menu small picture notification
17. (5.43) Multiple: bug fix 3D Grid data interpolation not displaying when such data are fully 2D & parallel to either GridX or GridY axes, and restore Grid data extrapolation capabilities (v5.40)
18. (5.43) Multiple: various improvements and minor bug fixes

### SES v5.42 Release Notes (2017-04-24)

1. (5.42) PT2: add capability to TVD bulk-shift GRID data with click-and-drag on cross section (click inside bulk-shift textbox to enable)

2. (5.42) PT2: enhance annotation dodging and restore moveable 3DSB control point annotations by default (right-click shortcut menu)
3. (5.42) PT2: improve life-sign when CTRL+drag to pan or ATL+drag to expand/contract TVD scale limits is in progress on cross section
4. (5.42) LWD: add feature to copy/paste-special LWD properties from other LWDs (toolbar command button)
5. (5.42) XSec: add feature to copy/paste-special Cross Section display settings from other Cross Sections (toolbar command button)
6. (5.42) Multiple: enhance LAS file import 'Thin' option for >32k records
7. (5.42) Multiple: add length unit to graph axis labels where applicable
8. (5.42) Multiple: enhance dialog box command buttons
9. (5.42) Multiple: various improvements and minor bug fixes

### SES v5.41 Release Notes (2017-04-01)

1. (5.41) PT2: bug fix error msg being displayed under certain conditions (v5.40)

### SES v5.40 Release Notes (2017-03-31)

1. (5.40) Multiple: enhance large dataset graphing speed
2. (5.40) Multiple: enhance GRID data interpolation speed from Surveys/Planner/PT2/Cross-Sections screens
3. (5.40) Multiple: enhance initial screen loading and unloading times
4. (5.40) Multiple: enhance toolbar 'A to Z' dataset sorting speed performed from any SES screen
5. (5.40) PT2: add cross section option to display GRID data surfaces in color/black including over wellbore interpolated and/or extrapolated locations; such extrapolation along plan, azimuth-at-TD line, or vertical section azimuth line (right-click shortcut menu)
6. (5.40) PT2: add GRID data TVD bulk-shift capability
7. (5.40) PT2: add 3DSB attribute...type log(s) displayed during its calibration
8. (5.40) PT2: add 3DSB/RSD-track toggle option to auto-restore type log(s) displayed when its calibration was performed
9. (5.40) PT2: add RSD tracks option to display only RSD signal from 3DSBs calibrated with same type log(s) as the active 3DSB
10. (5.40) PT2: add 3DSB toggle to hide/exclude its RSD signal in other 3DSBs' views and evolving type log calculation
11. (5.40) PT2: add cross section payzone and offset bed layer fill capabilities, with six opacity options (right-click shortcut menu)
12. (5.40) PT2: add zoom window to cross section for another way to adjust MD range, with five height options (right-click shortcut menu)
13. (5.40) PT2: add cross section option to hide all annotations (right-click shortcut menu)
14. (5.40) PT2: add cross section option to hide 3DSB control point annotations (right-click shortcut menu)
15. (5.40) PT2: add cross section option to show general Survey annotations along MD axis (right-click shortcut menu)
16. (5.40) PT2: add cross section options to control multiple gridline settings (right-click shortcut menu)
17. (5.40) PT2: add keyboard+mouse shortcut SHIFT+DbiClick on cross section to toggle MD lock (recall, DbiClick toggles TVD lock)
18. (5.40) PT2: change 3DSB control point annotations to fixed from moveable for enhanced performance and easier hotspot dbl-click
19. (5.40) PT2: change 3DSB control point dip/dip\_azi labeling to include dip\_azi only when dip\_azi changes from prior 3DSB
20. (5.40) Surv: add zoom window to VS view for VS range adjustments when zoomed and enhance initial zoomed view
21. (5.40) Surv/Plan: change 'Plot GRID' toggle to perform immediate GRID data interpolation and graph refresh

22. (5.40) Surv/Plan: add shortcut DbClick on GRID dropdown box to force requery of its listing content
23. (5.40) LWD: add zoom window to LWD graph for MD|VS range adjustments when zoomed
24. (5.40) Multiple: add rendering option to generate interactive graphs via Direct2D (smoother/transparency-enabling) or GDI (faster/legacy) as stored user setting
25. (5.40) Multiple: various improvements and minor bug fixes

### SES v5.33 Release Notes (2017-02-22)

1. (5.33) PT2: add cross section option to display Cross-Sections screen Centerlines (right-click shortcut menu); options include along survey (interp) and/or along VS line at MD beyond current survey TD (extrap)
2. (5.33) PT2: add screen to edit Centerline parameters including 3D-Dip and TVD slider bars, with screen updating while sliding
3. (5.33) PT2: implement Centerline display switching and parameter copy/paste capabilities
4. (5.33) PT2: add toggle button to display Centerline and command button to load Centerline parameter-editing screen
5. (5.33) PT2: enhance Normalize Mode parameter-editing screen command button and move it to RSD tracks toolbar
6. (5.33) PT2: enhance default RSD track views when initially calibrating 3DSB #0 of a new Marker Bed
7. (5.33) XSec: change inset RSD track target depth arrow color from light gray to be inherited from target line color
8. (5.33) XSec: change inset RSD track current survey TD arrow color from black to be inherited from survey line color
9. (5.33) XSec: implement a fix to a Microsoft Access bug that under certain data conditions causes peculiar "connecting lines" or failed print jobs when printing directly from a cross section preview via right-click or Print toolbar button
10. (5.33) XSec: enhance bed label placement when generating an interval-depth-range cross section
11. (5.33) XSec: bug fix display issues when generating an interval-depth-range cross section in VS mode with manually set VS depth range
12. (5.33) TL: enhance sending offset bed thicknesses to a Marker Bed when payzone thickness is indeterminate
13. (5.33) Multiple: enhance data validation and messaging related to proprietary command/toggle buttons introduced in v5.28
14. (5.33) Multiple: various improvements and minor bug fixes

### SES v5.32 Release Notes (2017-01-18)

1. (5.32) PT2: enhance default divisor/adder slider bar extent values when calibrating Normalize Mode parameters
2. (5.32) XSec: add sixth "Coordinates, Properties, & Summaries" data export file format option (MDB) to export into respective Microsoft Access tables in the new SESout.mdb, which is automatically created or appended; make last MDB export path a stored user setting; allow for SESout.mdb to be populated simultaneously from multiple SES users and from multiple independent SES databases
3. (5.32) XSec: enhance auto TVDmax on main cross section when TVDmax has not been set
4. (5.32) Bug fix error message being displayed when File|Exit menu used from SES screen (v5.28-5.31)
5. (5.32) Multiple: various improvements and minor bug fixes

### SES v5.31 Release Notes (2016-12-12)

1. (5.31) Bug fix THD calc when Marker Bed used for planned TVD/Inc (inadvertently created in v5.30 when calc speed was improved)
2. (5.31) Multiple: various improvements and minor bug fixes

### SES v5.30 Release Notes (2016-11-23)

1. (5.30) SES: add One-Click Update feature to auto-repeat multiple data refresh processes and related calculations by well, including datasets Survey (LAS|WITSML), LWD (LAS|WITSML), LWD2 (LAS|WITSML), and THD.
2. (5.30) Multiple: various improvements and minor bug fixes

### SES v5.29 Release Notes (2016-10-26)

1. (5.29) Surv: add keyboard+mouse shortcut CTRL+click on import-from-LAS toolbar button to auto-repeat last import
2. (5.29) Surv: add keyboard+mouse shortcut CTRL+click on import-from-WITSML toolbar button to auto-repeat last import
3. (5.29) LWD: add keyboard+mouse shortcut CTRL+click on import-from-LAS toolbar button to auto-repeat last import
4. (5.29) LWD: add keyboard+mouse shortcut CTRL+click on import-from-WITSML toolbar button to auto-repeat last import
5. (5.29) Multiple: various improvements and minor bug fixes

### SES v5.28 Release Notes (2016-10-11)

**SPECIAL NOTICE:** Command and toggle buttons were replaced with a proprietary object to enable improved, originally-intended appearance when run on all versions of 32-bit Microsoft Access.

1. (5.28) Multiple: enhance command button appearance and response to mouse hover/click events
2. (5.28) Multiple: enhance select text-based command buttons with the addition of graphics
3. (5.28) Multiple: enhance toolbar and screen layouts to increase graph and data table size
4. (5.28) Multiple: enhance main form loading and unloading transitions
5. (5.28) Multiple: implement correction to a Microsoft Access 2010/2013/2016/365 bug that shifts/misaligns textbox labels
6. (5.28) Multiple: change color picker popup dialog to display adjacent to its respective palette button
7. (5.28) Multiple: enhance default copying to clipboard of 2D/3D graphs (WYSIWYG)
8. (5.28) Multiple: integrate updated interactive graph component (v6-2006 to v8-2016) for visual and functional improvements
9. (5.28) Installer: enhance uninstaller to remove all SES system files (eliminates former rare need of manual uninstall actions)
10. (5.28) Surv/Plan: add keyboard+mouse shortcut CTRL+click on toolbar copy-graph button to copy vertical section view
11. (5.28) PT2: replace text-based viewing option checkboxes with graphic toggle buttons
12. (5.28) PT2: implement select toolbar button placement based on user RSD tracks' width settings
13. (5.28) XSec: add keyboard shortcut F6 to preview cross section on screen
14. (5.28) Grids: add 'Quick Plot 3D' tab to 3D view a Grid dataset's top surface, including mouse drag rotation and animated rotation
15. (5.28) Multiple: various improvements and minor bug fixes

### SES v5.27 Release Notes (2016-04-29)

1. (5.27) Surv/Plan: resolve calculation table and graphs not always appearing updated in some Microsoft Office versions immediately after converting a survey dataset into a plan dataset
2. (5.27) Surv: add Dbl-click on Survey number as another way to refresh directional views
3. (5.27) Plan: add Dbl-click on Plan number as another way to refresh directional views
4. (5.27) LWD: add Dbl-click on LWD number as another way to refresh log track
5. (5.27) Multiple: various improvements and minor bug fixes

### SES v5.26 Release Notes (2016-03-18)

1. (5.26) PT2: enhance mouse dragging behavior when changing RSD extents on RSD tracks
2. (5.26) THD: enhance THD algorithm to further reduce likelihood of inconsequential divergent condition arising during calculation
3. (5.26) X-sec: add capability to display well plan beyond survey TD \*\*\*in MD domain\*\*\* by using SES THD
4. (5.26) X-sec: add capability to display grid data beyond survey TD along well plan \*\*\*in MD domain\*\*\* by using SES THD
5. (5.26) X-sec: add capability to display grid data beyond survey TD along TD azimuth projection in MD domain
6. (5.26) X-sec: add capability to display grid data beyond survey TD along vertical section azimuth projection in MD domain
7. (5.26) X-sec: add capability to display center line beyond survey TD along vertical section azimuth line in MD domain
8. (5.26) X-sec: add data export option to include all available LWD ("data snap" method — not linear interpolation)
9. (5.26) X-sec: add data export option to create synthetic log curves from all type logs using calibrated RSD ("data snap" method)
10. (5.26) X-sec: add data export option to include digitized well plan by using SES THD
11. (5.26) X-sec: add data export option to include interpolated grid data
12. (5.26) Multiple: various improvements and minor bug fixes

### SES v5.25 Release Notes (2016-02-26)

1. (5.25) PT2: add Tune Assist options to inner/right RSD track shortcut menu (TVD no fault; dip copy prior/next, dip vector avg)
2. (5.25) PT2: add Tune Assist options to cross section shortcut menu (remove left gap/overlap; snap to prior; remove right gap/overlap; snap to next; connect prior/next 3DSBs)
3. (5.25) PT2: add cross section option to display offset/stacked layers in color or gray (shortcut menu)
4. (5.25) PT2: add cross section option to set MD range to a fixed preset value ranging from 100 to 5000 (shortcut menu)
5. (5.25) PT2: add RSD Zoom options to outer/left RSD track shortcut menu (undo; landing view; inner+30%; thickX2; thickX3; thickX5)
6. (5.25) PT2: move RSD Zoom options to inner/right RSD track shortcut menu from dropdown box formerly above track
7. (5.25) PT2: add capability to change stratigraphic depth offset to target directly from outer/left RSD track shortcut menu
8. (5.25) PT2: add capability to change LWD min/max override values directly from outer/left RSD track shortcut menu
9. (5.25) PT2: move "custom" graph-specific right-click features to \*\*\*top\*\*\* of respective shortcut menu (all four graphs)
10. (5.25) Multiple: various improvements and minor bug fixes

### SES v5.24 Release Notes (2016-01-26)

1. (5.24) PT2: bug fix issue related to setting Normalize Mode Divisor/Adder values
2. (5.24) X-sec: enhance inset RSD track fault detection algorithm and bug fix "Detect Faults" not being saved when unchecked
3. (5.24) Multiple: various improvements and minor bug fixes

### SES v5.23 Release Notes (2016-01-19)

1. (5.23) X-sec: restore tooltips to function independent of focus (inadvertently affected in v5.21)
2. (5.23) Multiple: improve messaging related to conditions suggesting SES\_Database Compact/Repair is needed
3. (5.23) Multiple: various improvements and minor bug fixes

### SES v5.22 Release Notes (2016-01-14)

1. (5.22) PT2: bug fix issue when 3DSB extents lie entirely within LWD missing data interval
2. (5.22) PT2: enhance parameter calibration algorithms (inner/right RSD track)
3. (5.22) PT2: make click into empty bed layer thickness cell default its value to 1 (Bed Thickness & Color tab)
4. (5.22) X-sec: further enhance general screen refresh behavior
5. (5.22) X-sec: bug fix condition when some Grid dataset layers have all null TVDss values over interpolation/extrapolation area
6. (5.22) Grids: bug fix display not updating screen color after layer color changed when first adding new Grid dataset
7. (5.22) Multiple: enhance display characteristics related to latter versions of Microsoft Access
8. (5.22) Multiple: various improvements and minor bug fixes

### SES v5.21 Release Notes (2016-01-06)

1. (5.21) PT2: bug fix inner/right RSD track minimum range extent dropdown box not working when changed manually
2. (5.21) X-sec: enhance general screen refresh behavior
3. (5.21) Multiple: various improvements and minor bug fixes

### SES v5.20 Release Notes (2015-12-31)

**SPECIAL NOTICE:** ParamTuner was re-coded nearly from scratch but retains legacy features/look/feel. ParamTuner2 ("PT2") initiates SES geosteering GENERATION 3.

1. (5.20) PT2: create significant performance increase when switching/appending/deleting/inserting 3DStratBlocks (3DSBs)
2. (5.20) PT2: add 3DSB number list along screen left side as third method to set Active 3DSB & navigate 3DSBs views with arrow keys
3. (5.20) PT2: allow unlimited interpretation/view changes before performing save to database; respectively enhance Undo capabilities
4. (5.20) PT2: add cross section option to display offset/stacked layers (right-click shortcut menu)

5. (5.20) PT2: add Advanced Cursor Tracking (ACT) mode to auto convert between MD|RSD domains based on mouse location over any graph; with current RSD/MD/VS/TVD/Inc/Azi/N/E/DLS/TVDss text displayed (Dbl-click to copy); with MD|VS conversion at mouse displayed on cross section; use new binoculars toolbar toggle button or right-click any graph to enable/disable ACT mode, and right-click any graph when in ACT mode to freeze all lines and move mouse freely (e.g., to copy summary text)
6. (5.20) PT2: add capability to set/change RSD domain LWD/Type Log curve (new - properties toolbar button)
7. (5.20) PT2: add capability to set/change auxiliary LWD curves displayed under cross section (properties toolbar button)
8. (5.20) PT2: add capability to set/change offset bed thickness/name/color (right-click outer/left RSD track and select "Edit Offset Beds...", or use properties toolbar button, Bed Thickness & Color tab)
9. (5.20) PT2: from Bed Thickness & Color tab click inside a thickness cell and use slider bar to set/change; graphs update while sliding
10. (5.20) PT2: add feature to display well plan beyond survey TD \*\*\*in MD domain\*\*\* by using SES THD
11. (5.20) PT2: make Dbl-click within general cross section area toggle TVD axis range lock/auto mode
12. (5.20) PT2: add cross section pan capability via CTRL + mouse drag
13. (5.20) PT2: add cross section TVD axis range zoom (in/out) capability via ALT + mouse drag (up/down)
14. (5.20) PT2: change font sizes from window-size-dependent to fixed, with persistent selectable font size options (right-click any graph)
15. (5.20) PT2: add divisor/adder slider bars when calibrating Normalize Mode parameters; RSD track graphs update while sliding
16. (5.20) PT2: add mouse pointer changes when dragging in top half or bottom half of RSD track to resize RSD extent
17. (5.20) PT2: add capability to set LWD signal smoothing window size from dropdown box when smoothing is enabled
18. (5.20) PT2: add auto-copy checkbox option to apply payzone thickness changes (via keyboard or spin buttons) to non-Active 3DSBs
19. (5.20) PT2: add new Sort toolbar button to auto renumber 3DSBs by MDStart when needed
20. (5.20) PT2: make multiple toolbar buttons' enable status need-based (e.g., Gap button enabled if a MD gap exists in interpretation)
21. (5.20) PT2: add keyboard shortcut: Undo (CTRL+Z) - revert to saved
22. (5.20) PT2: enhance viewing options quick-copy (simply uncheck 'Restore Viewing Options' and change the Active 3DSB)
23. (5.20) PT2: enhance execution of auto zoom options of inner/right RSD track and of changing any viewing option
24. (5.20) PT2: enhance plotting of auxiliary LWD curves on stacked axes including curve-specific constants on linear or log scales
25. (5.20) PT2: enhance wellbore plotting between survey stations by using many more minimum curvature interpolated points
26. (5.20) PT2: increase max dip available through mouse dragging to 60 degrees and enhance related algorithms
27. (5.20) PT2: color Dip Azi background red when parameter|wellbore conditions could create high-dip artifacts in low dip environments
28. (5.20) PT2: remove "fast load" concept entirely (obsolete)
29. (5.20) Geosteer: make general cell Dbl-click load ParamTuner2 by default; can still load/use old ParamTuner from tab view
30. (5.20) Multiple: various improvements and minor bug fixes

### SES v5.14 Release Notes (2015-10-28)

1. (5.14) X-sec: bug fix data export not fully thinning output when certain export frequencies were selected (affected metric-unit wells)
2. (5.14) Multiple: various improvements and minor bug fixes

### **SES v5.13 Release Notes (2015-10-22)**

1. (5.13) Surv: enhance default import LAS file to be Well and Survey dataset specific (including special import settings)
2. (5.13) TL: enhance default import LAS file to be Well and Type Log dataset specific
3. (5.13) LWD: enhance default import LAS file to be Well and LWD dataset specific (including special import settings)
4. (5.13) Multiple: various improvements and minor bug fixes

### **SES v5.12 Release Notes (2015-09-29)**

1. (5.12) MainMenu: create workaround to Microsoft Office 2016 bug causing button images not to display
2. (5.12) Multiple: various improvements and minor bug fixes

SES v5.11 and prior Release Notes ([http://www.makinhole.com/images/PDF/ReleaseNotes\\_Prior.pdf](http://www.makinhole.com/images/PDF/ReleaseNotes_Prior.pdf))