

We are happy to announce that our next release is ready -- meet RadExPro 2017.2 !

Here is the list of what is new or improved:

• One of the main novels is the brand-new **Geometry Spreadsheet** – a beta version. You can call it through the context menu of a dataset in the *Database Navigator* -- select *Geometry spreadsheet (NEW)* command.

Name		Location	Trace count	Sorted by	Cr
≑ line 1 - raw		Line 1 < M	23954		2007-0
🚔 line 1 - preproc	Delete		Del		2007-0
🗧 line 1 - stack	Rename				2007-1
	Empty				
	History				
	Geometry sprea	dsheet			
	Geometry sprea	idsheet (NEW)			
	Quick view (2-D))			
	Quick view (2-E) options			
	Export				
	Common a	tions			
	Import dataset.				
	Text font				
	Text color				
	Column title fo	nt			
	Column title co	lor			
	Reset fonts and	colors			



	Tools		ometry Spreadshee				
	Close	Find			 · + ,	Assigned	d fields o
	ciose					NUMSMP	
	(CDP	CDP_X	CDP_Y	^	OFFSET	
1	97		1218.717407	not assigned		PATH	
2	97		1220.717407	not assigned		PICK1	
3	97		1219.712524	not assigned		PICK2	
5				-		PREAMP	
4	97		1219.692505	not assigned		R_LINE	
5	97		1220.187500	not assigned		REC_CRL	
5	97		1219.687500	not assigned		REC_DATUM	
	97		1219.682495	-		REC_ELEV	
7				not assigned		REC_H2OD	
8	97		1219.677490	not assigned		REC_INL	
9	97		1222.177490	not assigned		REC_RESID REC_SLOC	
10	97		1220.672729	not assigned		REC_STAT	
11	97		1220.652832	not assigned		REC_STAT1	
						REC_STAT2	
12	97		1219.152832	not assigned		REC_STAT3	
13	97		1218.147949	not assigned		REC_UPHOLE	
14	97		1219.642578	not assigned		REC_X	
15	97		1220.142578	not assigned		REC_Y	
				_		RECNO	
16	97		1219.642578	not assigned	~ I	S_LINE	

The **Geometry Spreadsheet (NEW)** operates much faster with big datasets, plus it offers some nice new features. You can add headers to the spreadsheet from the list on the right by drag-and-drop or double click, change positions of a column by drag and drop, there is a convenient *Find* option (Ctrl+F) that would search for a specified value with the accuracy of the significand. This allow approximate search, as shown on the figure below:

左 lir	ne 1 - preproc - Ge	ometry Spreadsheet			
Edit	Tools				
	Close Find 1	218.36			Go
	CDP	REC_INL	CDP_X	CDP_Y	^
1	97	not assigned	1217.356567	not assigned	
2	97	not assigned	1217.856567	not assigned	
3	97	not assigned	1218.147949	not assigned	
4	97	not assigned	1218.361450	not assigned	
5	97	not assigned	1218.637817	not assigned	

We encourage you to use the **Geometry Spreadsheet (NEW)** instead of the old one and report us any bugs and issues. The plan is that in the next release, the **Geometry Spreadsheet (NEW)** will completely substitute the old one.



We have changed the syntax of Trace Header Math formulas and got rid of the annoying [] decorating header names. You don't need them anymore! (The old syntax still works for backward compatibility). We have also added 2 new functions: *frame_min(HEADER_NAME)* and *frame_max(HEADER_NAME)*. They return the minimum and the maximum values of a specified header within the current frame.

Trace Header Math	×
<pre>pick1 = fbpick*2 - 5 pick2 = frame_max(offset)/1.5</pre>	
Line 2 Pos 30	Use # for comments Headers colored blue Errors colored red
OK Cancel Check syntax	Load template Save template

• Brand-new Linear Moveout Correction module can apply and remove LMO-corrections with a constant velocity.

左 Linear Moveout	Correction	Х
Velocity:	1500.0	m/s
Zero offset shift:	0.0	ms
Direction:	 forward inverse 	
Number of threa	ds: 4 Set maxim	num
OK	Cancel	

• Brand-new **2D Flex Binning** module helps to achieve regular offset distribution in case of originally not very regular 2D operations, such as multichannel marine HRS/UHRS possibly with some missed shots.



2D Flex Binning	:
Offset bin grid	
Distance to center of nearest bir	n: 0.0 m
Bin size:	0.0 m
Maximum number of traces per b	in: 1 单
Flex bin grid	
✓ fixed	
Number of ensembles on each central ensemble:	side of 1
variable	
Format: Offset::Ni, Offset; where: Offsetk - offset valu (specified by dash-se values) Nk - number of ensen central ensemble	e OR offset interval parated pair of
Write trace header fields	
☑ Offset bin index:	OFB_NO 🔻
✓ Offset bin center:	BINOFF -
Trace type: (0 - resident, 1 - borrowed)	TRC_TYPE
OK	Cancel

• Now it is possible to export your list of headers and import it to another project.





• Now in the **NMO/NMI** module you can adjust velocity function at a specified percentage before applying NMO-correction.

NMO/NMI	×
NMO Velocity	
 NMO Mute percent 30 NMI ○ Partial NMO I Modify velocity 70 % 	
Header with desired non-zero offset	
Use coordinate interpolation	
Recalculate offsets, source and receiver positions	
From coordinates Azimuth header From azimuth	
Number of threads: 0	
Save template Load template OK Отмена	

• Now you can aplly simple arithmetic operations to pick values in the **Edit pick** table. Right click of the column name and call the *Math...* dialog:

N	/y Area \ Line 1 \ to	 op_mute	A 1	×
Fiel	ds: OFFSE	T T : OF	FSET	•
Col	or:			
_	e thickness: 2 e style: solid	÷		
Poi	ints:			
	First field	Second field	Va	lue -
1	-2964.66	-2964.66	2042.96	Math
2	-12.7153	-12.7153	166.625	
3	2988.69	2988.69	2079.19	



ന

My Area \ Li	ne 1 \ to	p_mute		>
Fields:	OFFSE	г 🔻 : ОFI	FSET 🔻	
Color:				
Line thickness:	2	* *		
Line style:	solid	-		
Points:				
First fi	eld	Second field	Value	
1 -2964.66		-2964.66	2042.96	
2 -12.7153		-12.7153	166.625	
3 2988.6	Colun	nn values	×	
) add:			
C) subtra	ct:		
0) multipl	y by: 5.2		
C) <mark>d</mark> ivide	by:		
		OK Car	ncel	

• In **Time/Depth Conversion** module, in the *Single velocity function* field you can substitute any time value with a header name. This option makes it possible to define velocities referring to non-constant picked horizons.

Time/Depth Conversion	×
Time/Depth Conversion Velocity	1
 Single velocity function 	
500-1000:2.5, 1001-PICK1:2,7, 3000:2.9	
O Use file:	
	Browse,
C Database - picks	Browse,
C Database - grid	Browse
Velocity domain Velocity type Image: Time Depth Image: RMS Interval	al 🗌 Use average velocities
	OK Cancel



• In Trace Math Transforms module, we have added an option to unwrap phase spectrum

Trace Math Transforms	×
 Amplitude spectrum Phase spectrum Autocorrelation Hilbert transform Reflection strength Instantaneous phase Instantaneous frequency Phase rotation (degrees) Log() 	Unwrap phase spectrum shift zero to the center of the trace apply median filter to result apply as a samples
С ЕхрО	OK Cancel

• In **Zero-Offset Demultiple** module, now you can apply additional static corrections to compensate the multiple for swelling, before subtracting the model.

eMultiple Paramet	ers		
Mode	C From Pick		
Auto-Convolution	From Head	er	_
C Horizon from pick	-	g Horizon From Header	Tapering window lenght above horizon 0
Use additional st	atic for multiple fro	om header	_
-Subtraction parame Filter length	ters		samples
-	,		
White noise level	0.001		
White noise level	s	Use adjacent traces	3
White noise level	s	−Use adjacent traces Number of tr	
White noise level	s		aces 3
White noise level	s	Number of tr	aces 3
White noise level Processing Window Add horizon Add Tapering length	s header Delete	Number of tr	aces 3
White noise level Processing Window Add horizon Add Tapering length (samples)	s header Delete	Number of tr	aces 3 e (tr) 25
White noise level Processing Window Add horizon Add Tapering length (samples) Band transform	s header Delete	Number of tr	aces 3
White noise level Processing Window Add horizon Add Tapering length (samples) Band transform Low frequency	s header Delete 0	Number of tr	aces 3

• A number of bugs were fixed, including minor fixes in **Calculate Statics 3D** and **MaxPower Autostatics** modules, fixed axes orientation XYZ display in **3D Volume**



00

Viewer, fixed issues with decimals in *Taper window length* in **Trace Editing** and *Time Window* in **F-X Predictive Filtering**, and some others.

As usual, if you are on maintenance, please contact us at <u>support@radexpro.ru</u> and get your update for free.

