QGIS Application - Bug report #20136
Requesting a feature by its feature id not working with filtered gpkg

2018-10-17 04:16 PM - Matthias Kuhn

Status:	Closed		
Priority:	Normal		
Assignee:	Even Rouault		
Category:	Data Provider/OGR		
Affected QGIS version:	3.3(master)	**Regression?:**	No
Operating System:		**Easy fix?:**	No
Pull Request or Patch supplied:	No	**Resolution:**	
Crashes QGIS or corrupts data:	No	**Copied to github as #:**	27957

Description

In the attached dataset, T_Id is a stable primary key, recognized by OGR (ogrinfo says "FID Column = T_Id" and in some debugging of the OGR provider it popped up as fid column name as well).

As soon as there is a subset filter string set on the layer, the fid seems to be out of sync.

The following code demonstrates the issue. We request feature 1, the returned feature has the id 2:

```
>>> request = QgsFeatureRequest(1)
>>> feature = next(iface.activeLayer().getFeatures(request))
>>> feature.id()
2
>>> feature['T_Id']
2
```

Associated revisions

Revision 391ec8a5 - 2018-10-18 12:28 PM - Even Rouault

[OGR provider] Revise significantly the way we handle subset filter to avoid issues with FID (fixes #20136)

Some rationale on this change...

Previously when applying a "regular" subset string, ie. one that is only the
content of a where clause, we issued a full "SELECT * FROM layer WHERE subsetstring",
resulting in a OGR SQL layer. The caveat of that is that most OGR drivers
will have issues retaining the original FID. A hack consisting in adding a{original_fid_name} as orig_ogc_fid to the select columns was introduced in
https://github.com/qgis/QGIS/commit/4ce2cf1744b008043403b18b8def8f18c99d14f1
to try to retain the original FID, but this added a lot of complexity. And
actually, in the case of the OGR GPKG driver, it caused it to still be confused
when analyzing the column definition of the resulting layer, since it sees
2 FID columns despite the renaming (one included in the '*' wildcard, and the
one of orig_ogc_fid), which caused it to use sequential FID numbering (the
driver when seeing more than once a column that is the FID column assumes that
some cross join is done, and thus that FID are unreliable)

A simpler and more robust (crossing fingers!) approach in that case is
just to use OGR_L_SetAttributeFilter() instead of GDALDatasetExecuteSQL().
Some care must be taken to cancel the filter when removing the subset

filter, or in QgsOgrFeatureIterator when combining with the filter
expression coming from the request, but besides that, this is more
straightforward, and actually solves #20136

Revision 763fa420 - 2018-10-19 10:03 AM - Matthias Kuhn

Merge pull request #8216 from rouault/fix_20136

[OGR provider] Revise significantly the way we handle subset filter to avoid issues with FID (fixes #20136)

History

#1 - 2018-10-17 05:19 PM - Matthias Kuhn

The filter was set to a simple `1 = 1`, so it shouldn't filter out anything

#2 - 2018-10-17 07:24 PM - Even Rouault

- Assignee set to Even Rouault

#3 - 2018-10-18 01:17 AM - Even Rouault

- Status changed from Open to In Progress

https://github.com/qgis/QGIS/pull/8216

#4 - 2018-10-19 10:02 AM - Even Rouault

- % Done changed from 0 to 100

- Status changed from In Progress to Closed

Applied in changeset commit:qgis|391ec8a5dd4508f75b6538ab7be309379695add4.

Files

db_curso.gpkg	151 KB	2018-10-17	Matthias Kuhn