

QGIS Application - Bug report #21477

Shift layer from ArcGIS, SRS 5514

2019-03-05 10:38 AM - Vladimír Hans

Status:	Feedback	
Priority:	Normal	
Assignee:		
Category:	Projection Support	
Affected QGIS version:	3.7(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 #: 29294
Description		
<p>If I create layer in ArcGIS in SRS 5514 and I load this in QGIS, there is shift about 9 m. SRS of project in QGIS is set 5514. If I set SRS of layer as 5514, this layer shift on correct position. Source layer and screenshots are in attachment.</p>		

History

#1 - 2019-03-05 04:18 PM - Giovanni Manghi

- Operating System deleted (Windows 7)
- Status changed from Open to Feedback

Your shapefile loads with a custom CRS that has this definition

```
+proj=krovak +lat_0=49.5 +lon_0=24.833333333333333 +alpha=30.28813975277778 +k=0.9999 +x_0=0 +y_0=0 +ellps=bessel  
+towgs84=589,76,480,0,0,0,0 +units=m +no_defs
```

while the real 5514 is

```
+proj=krovak +lat_0=49.5 +lon_0=24.833333333333333 +alpha=30.288139722222222 +k=0.9999 +x_0=0 +y_0=0 +ellps=bessel  
+towgs84=542.5,89.2,456.9,5.517,2.275,5.516,6.96 +pm=greenwich +units=m +no_defs
```

that has 7 correction parameters, so is more precise.

#2 - 2019-03-06 03:05 PM - Vladimír Hans

- File vrbr-2.prj added
- File vrbr-3.prj added
- File vrbr-1.prj added

There is more complicated. In attachment are various prj file.

vbr-1.prj Polygon is in correct position, ["Azimuth",30.288139722222222]. QGIS didn't recognize srs, set custom srs.

vbr-2.prj Polygon is in correct position, ["Azimuth",30.28813975277778]. QGIS recognize SRS as 102067.

vbr-3.prj Polygon isn't in correct position, ["Azimuth",30.288139722222222], DATUM["D_S_JTSK"

I think that problem is in value "D_S_JTSK". If I change this value, polygon move in correct position.

#3 - 2019-03-06 03:08 PM - Giovanni Manghi

Vladimír Hans wrote:

There is more complicated. In attachment are various prj file.

vbr-1.prj Polygon is in correct position, ["Azimuth",30.28813972222222]. QGIS didn't recognize srs, set custom srs.

vbr-2.prj Polygon is in correct position, ["Azimuth",30.28813975277778]. QGIS recognize SRS as 102067.

vbr-3.prj Polygon isn't in correct position, ["Azimuth",30.28813972222222], DATUM["D_S_JTSK"

I think that problem is in value "D_S_JTSK". If I change this value, polzgon move in correct position.

maybe, but EPSG 5514 as QGIS knows/uses is

```
+proj=krovak +lat_0=49.5 +lon_0=24.83333333333333 +alpha=30.28813972222222 +k=0.9999 +x_0=0 +y_0=0 +ellps=bessel
+towgs84=542.5,89.2,456.9,5.517,2.275,5.516,6.96 +pm=greenwich +units=m +no_defs
```

#4 - 2019-03-25 10:28 AM - Vladimír Hans

- File MaloplZCHU.prj added

I tried to load shp with vbr-3.prj in QGIS 3.6.1 and layer wasn't shifting. It's great. But QGIS didn't recognize correct prj for SRS 102067. Probably there was misunderstanding because vbr-3.prj was malformed by me. In attchment is prj file from ArcGIS for SRS 102067.

#5 - 2019-03-26 03:45 PM - Giovanni Manghi

Vladimír Hans wrote:

I tried to load shp with vbr-3.prj in QGIS 3.6.1 and layer wasn't shifting. It's great. But QGIS didn't recognize correct prj for SRS 102067. Probably there was misunderstanding because vbr-3.prj was malformed by me. In attchment is prj file from ArcGIS for SRS 102067.

102067 as QGIS knows is

```
+proj=krovak +lat_0=49.5 +lon_0=24.83333333333333 +alpha=30.28813972222222 +k=0.9999 +x_0=0 +y_0=0 +ellps=bessel
+towgs84=542.5,89.2,456.9,5.517,2.275,5.516,6.96 +pm=greenwich +units=m +no_defs
```

and not for example as

<http://spatialreference.org/ref/esri/102067/proj4/>

the former is more precise. If you have a layer with a CRS defined as with the latter then is also OK, but reprojecting it will not as precise as if it would use the former (also will not recognized as exactly 102067 by QGIS).

Files			
vrbr.zip	14 KB	2019-03-05	Vladimír Hans
vrbr.jpg	509 KB	2019-03-05	Vladimír Hans
vrbr-1.prj	542 Bytes	2019-03-06	Vladimír Hans
vrbr-2.prj	542 Bytes	2019-03-06	Vladimír Hans
vrbr-3.prj	547 Bytes	2019-03-06	Vladimír Hans
MaloplZCHU.prj	573 Bytes	2019-03-25	Vladimír Hans