

QGIS Application - Bug report #20753

WKT output is wrong for EMPTY geometries

2018-12-07 01:50 PM - Johannes Kroeger

Status:	Open	
Priority:	Normal	
Assignee:		
Category:	Geometry	
Affected QGIS version:	3.5(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 #: 28573
Description		
<p>QGIS geometries' asWkt() method returns "GeometryType ()" or simple an empty string " instead of "GeometryType EMPTY" for empty geometries.</p> <p>http://www.opengeospatial.org/standards/sfa defines for example for a POINT:</p> <pre><empty set> ::= EMPTY</pre> <pre><point text> ::= <empty set> <left paren> <point> <right paren></pre> <p>From my understanding this means that an empty Point would be represented as "POINT EMPTY". QGIS however represents it as empty string ".</p> <pre>>>> p = QgsGeometry.fromWkt('POINT EMPTY') >>> p.isEmpty() True >>> p.asWkt() "</pre>		

History

#1 - 2018-12-07 02:07 PM - Johannes Kroeger

Actually, it looks like something weird is being created for empty geometries. They all have geometry type 3?

```
>>> for type in "POINT", "LINESTRING", "POLYGON", "GEOMETRYCOLLECTION", "MULTIPOINT":
>>> type = type + " EMPTY"
>>> g = QgsGeometry.fromWkt(type)
>>> print(type)
>>> print(g.type())
>>> print(g)
>>> print(g.asWkt())
POINT EMPTY
3
<QgsGeometry: >

LINESTRING EMPTY
```

3

<QgsGeometry: >

POLYGON EMPTY

3

<QgsGeometry: >

GEOMETRYCOLLECTION EMPTY

3

<QgsGeometry: >

MULTIPOINT EMPTY

3

<QgsGeometry: >

#2 - 2019-01-28 11:23 AM - Loïc BARTOLETTI

I think there are several issues raised in the ticket.

First of all I think your reasoning is right, there is missing information on empty geometries. For example, postgis returns "POINT EMPTY" when creating such a geometry.

There is indeed an isEmpty method that could be used for geometries except when there are points since the method always returns false. By creating a point by QgsPoint(), it should be able to return " POINT EMPTY " and not QgsPoint(0, 0) as it is today.

For me it's interesting to have an empty point, but I wonder if it's a bug to fix or if it's bigger (aka for QGIS 4)?

#3 - 2019-01-29 09:31 AM - Loïc BARTOLETTI

related issues #19190 and #20754