Wet Body Geometry Shells

Is a collection of geometry shells that work as a second skin over your favorite texture to give it a wet look. It includes full body effects like skin droplets or rolling water for a drenched look.
It also gives you the ability to customize your wet look to your particular scene using a collection of drop presets. So with this set you have several double click solutions, preset pose effects and the ability to detail your particular effect controlling water placement through the use of multiple geometry shells down to the drop level.

Place drops on the forehead of your character to create a nervous character or underneath the eyes to create a crying one. Give character to your wet render by having a drop of water come down from the nose bridge to the lip or have water coming out of the mouth. Make it sexy by having drops slide down from Victoria's back, neck or navel, Michael's chest, biceps or abs. You control your water scene by having the ability to place your water where you want it.

Geometry Shells give you two advantage from previous Wet Body sets, the most important is the effects are visible in the viewport, no need to do a spot render or full render to visualize your effect. And placement of drops from the Wet Map Creator can be done directly on viewport and have interactive feedback as you slide the drops through your model using the Horizontal and Vertical Offset sliders of each shell.without the need of the Layered Image Editor.

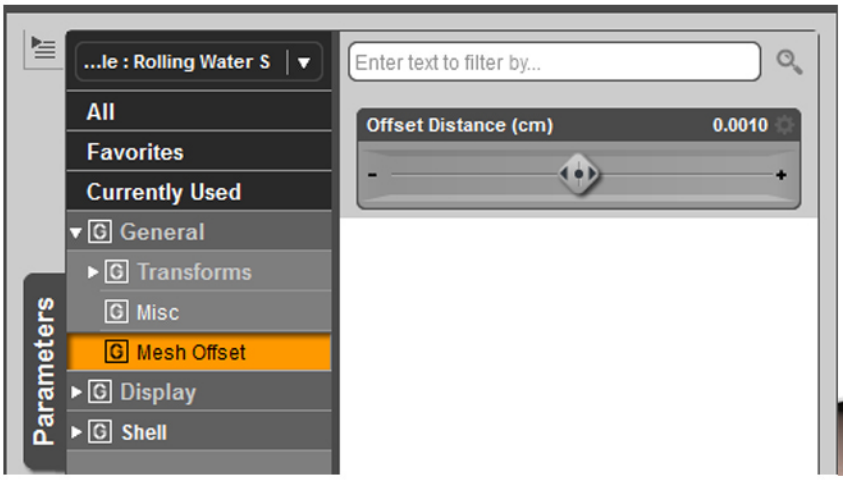


Figure 1: The Offset Distance Slider

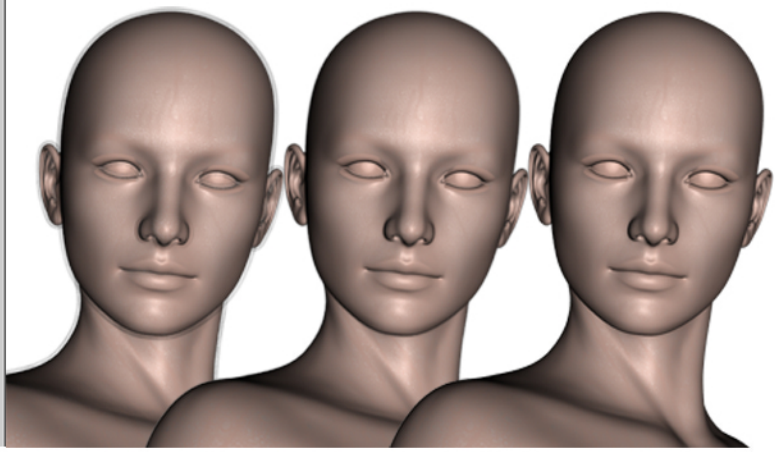


Figure 2: Geometry Shells at 0.3 Offset, 0.1 and 0.001

The Geometry Shell is a second skin that is layered on top of your mesh real skin. This allows you to make any changes like loading different textures with different UVs in your character and the Geometry Shell will remain unchanged.
The Geometry shell exists at a distance above the character skin. This distance is controlled by the Mesh Offset parameter using its slider “Offset Distance” (Figure 1).

Figure 3: Full Body Presets

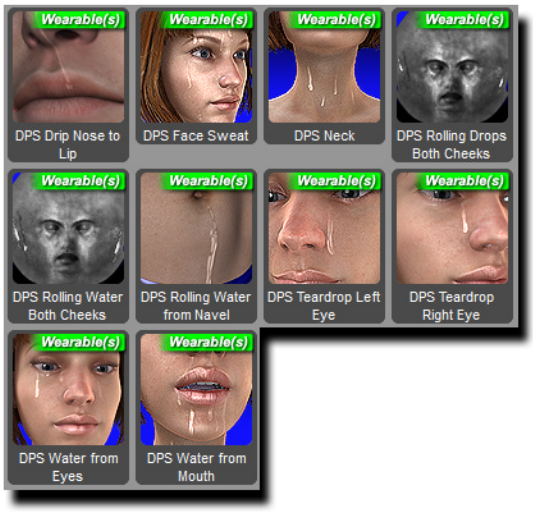


Figure 4: Geometry Shell Pre-made Water Effects

The **Geometry Shell Wet Map Creator** presets consisting of 12 drop styles. Not every drop style is available for every surface area.

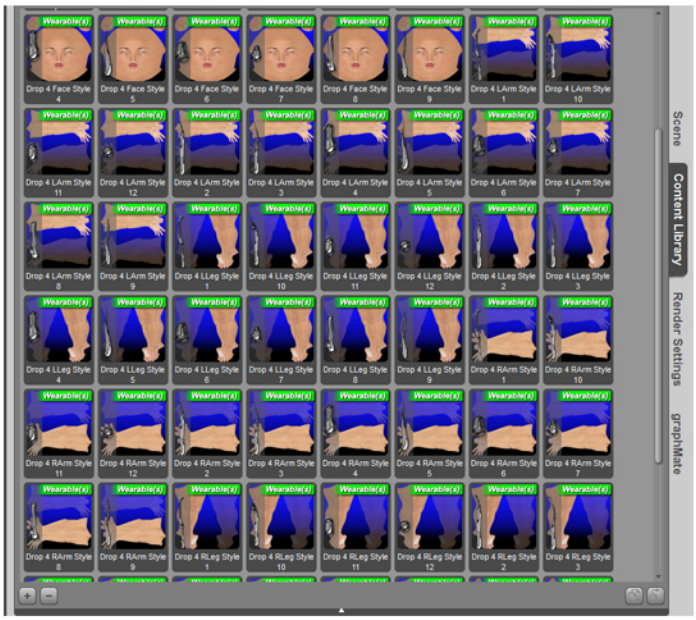
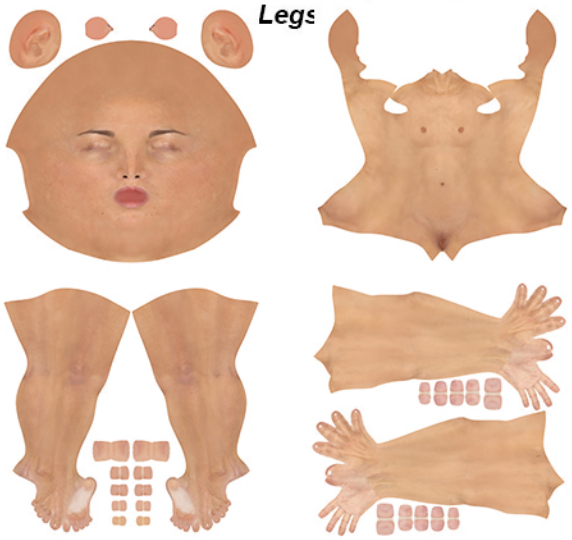


Figure 5: The Geometry Shell Drop Styles / Wearable Presets Icons - This group makes The Wet Map Creator: with these drops you can design your own effects.

Figure 6: DAZ Genesis 3 textures are grouped into 4 UV Maps and divided into Face, Torso, Arms and Legs



Genesis 3 Male and Female divide the body in 4 parts, these are textures that are grouped in sections and that correspond to areas in yout figure's 3D human body. For example all the face surface including lips and ears are assigned to a group named Face, the Leg surfaces are grouped into a Leg group, the arms to an Arms group, and the torso including the back of the head are assigned to a group named Toso, these are the figure's UV Maps or surfaces (Figure 6).

The **Surfaces Tab** in DAZ Studio shows the UV surface groups. In the G3 Wet Map Creator, the icons correspond exactly to the 4 texture groupings in the UV Maps. (See Figure 7)

Each of these surfaces areas has a set of parameters. You will use the **Horizontal Offset** and **Vertical Offset** Sliders to slide drops across each surface. Remember that each surface has its limits as each wearable preset icon shows. Drops will be visible only inside each of these 4 UV limits they belong to.

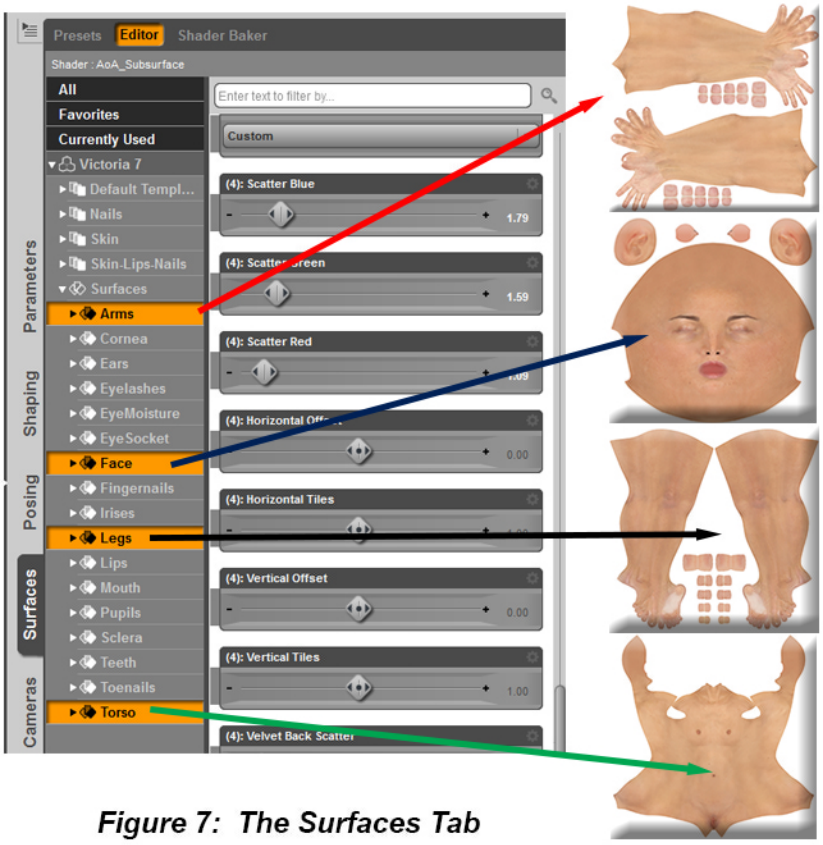


Figure 7: The Surfaces Tab

Figure 8: The Face surface area Horizontal & Vertical Offset sliders

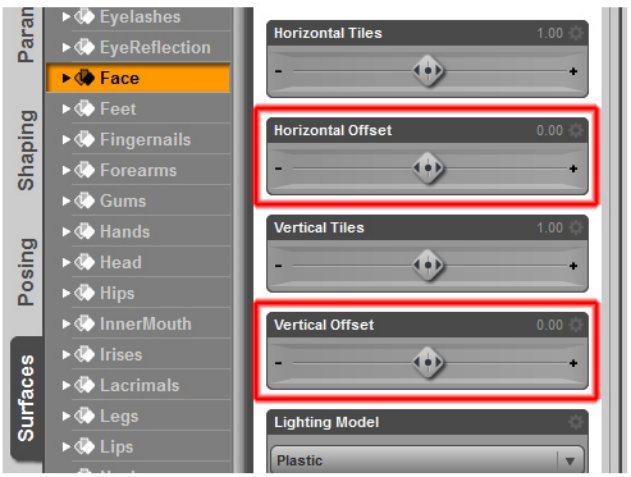


Figure 8A: The Surfaces Tab is used to select the different parts of your Geometry Shell when you want to position or slide a specific drop across the skin surface.

Each of the 4 surface areas (Face, Torso, Arms and Legs) will have a corresponding set of Geometry Shell Wearable Presets. Each Wearable Preset icon shows the drop style and then behind the surface area or limits in the character where the water drop that resides on it will be visible

When you use the Surface Selection Tool  and select your surface area in the Surfaces tab you can see a yellow line that marks the same surface area in your character that is is shown behind the drop in your Wet Map Creator wearable presets icons.

Figure 9: Set of Geometry Shell Wearable Presets available for the Torso surface. Each Wearable Preset icon shows the surface area or limits in the character where the water drop that resides on it will be visible

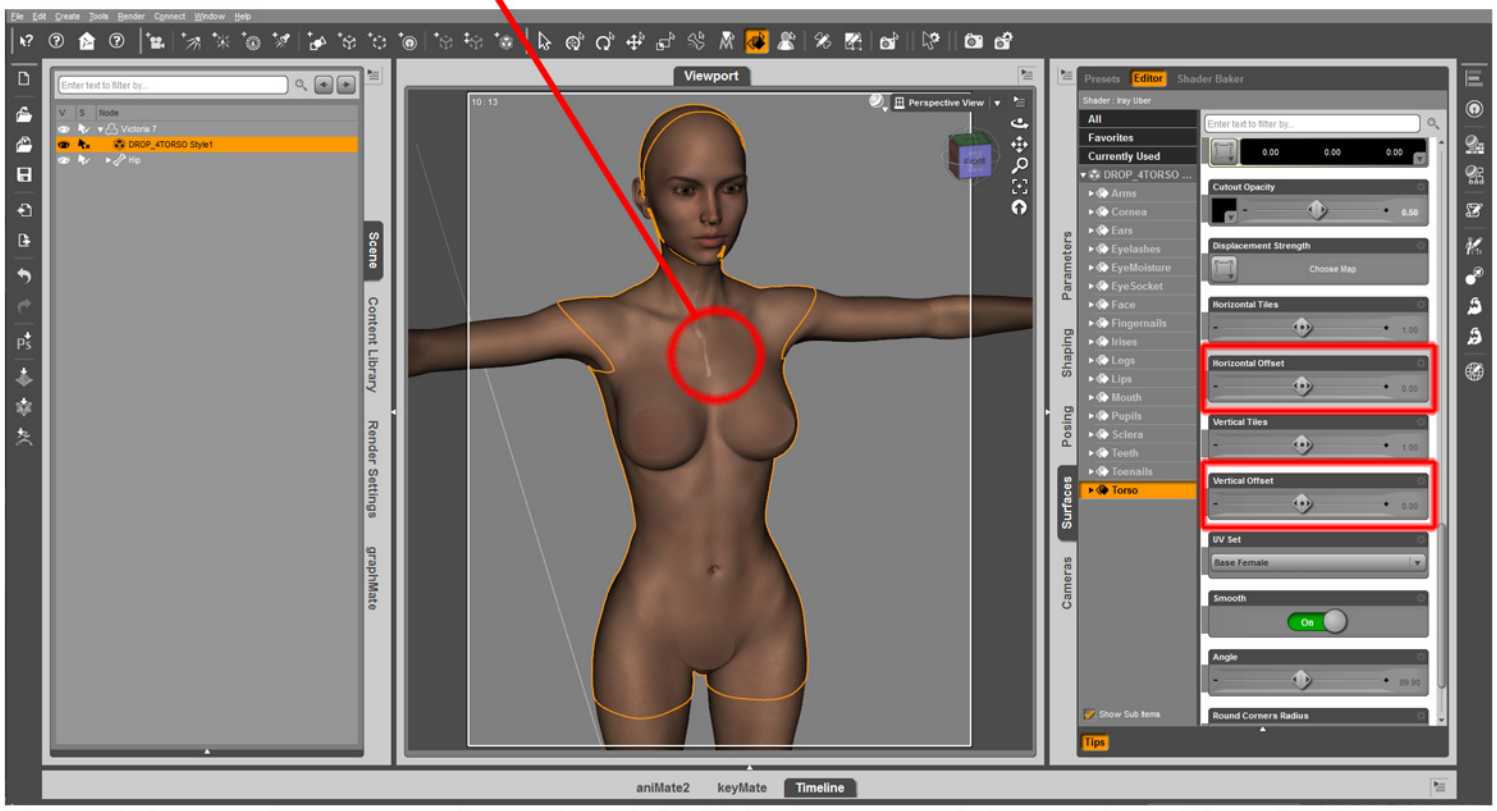


Figure 10: Torso surface area and Horizontal & Vertical Offset parameters being used to position a drop from the Wet Map Creator

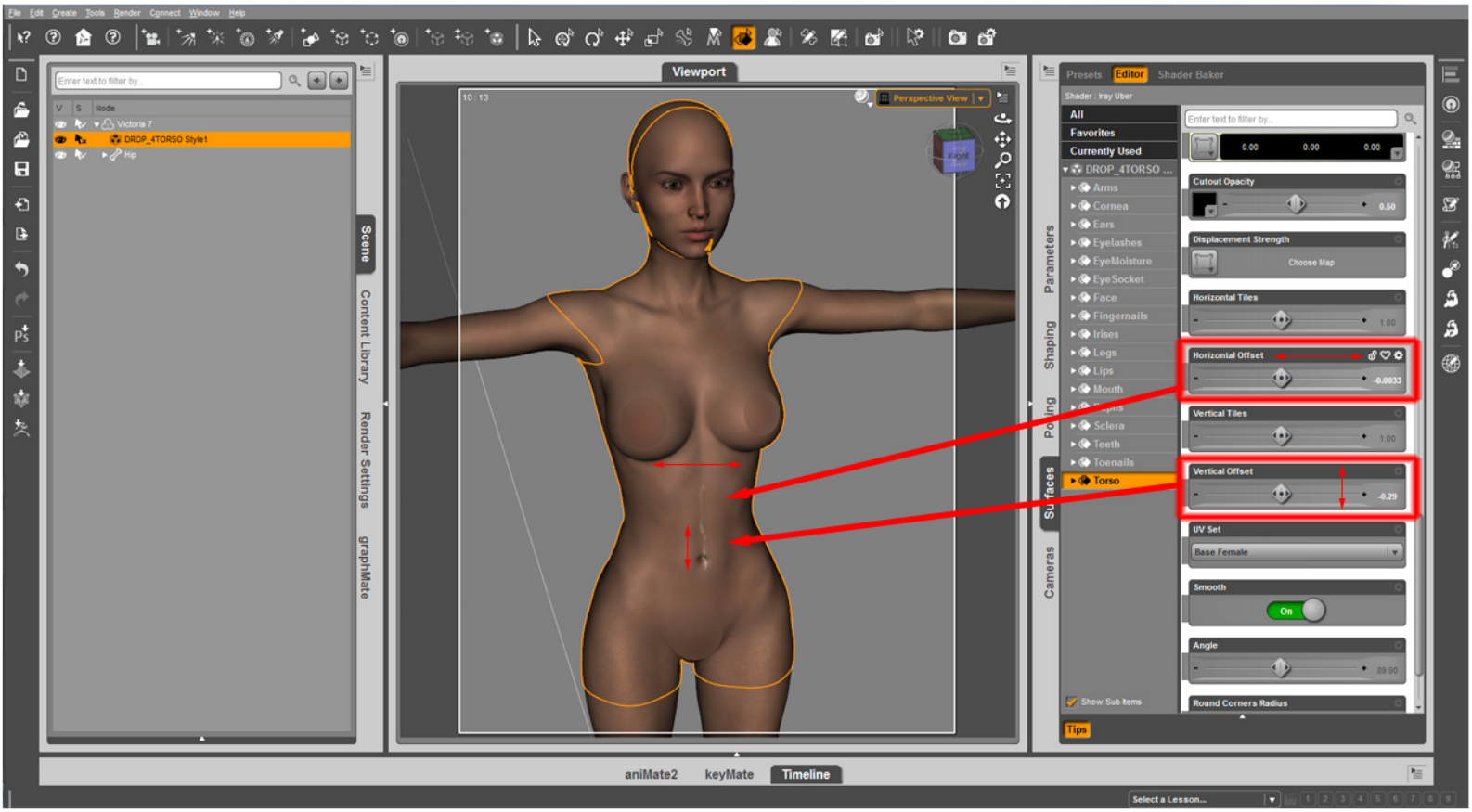


Figure 11: Torso surface area and Horizontal & Vertical Offset parameters being used to position a drop from the Wet Map Creator

You position your drops wherever you want it in your Torso surface area by using the Horizontal Offset and Vertical Offset sliders. Same with every other surface throughout the body.

SIMON WM

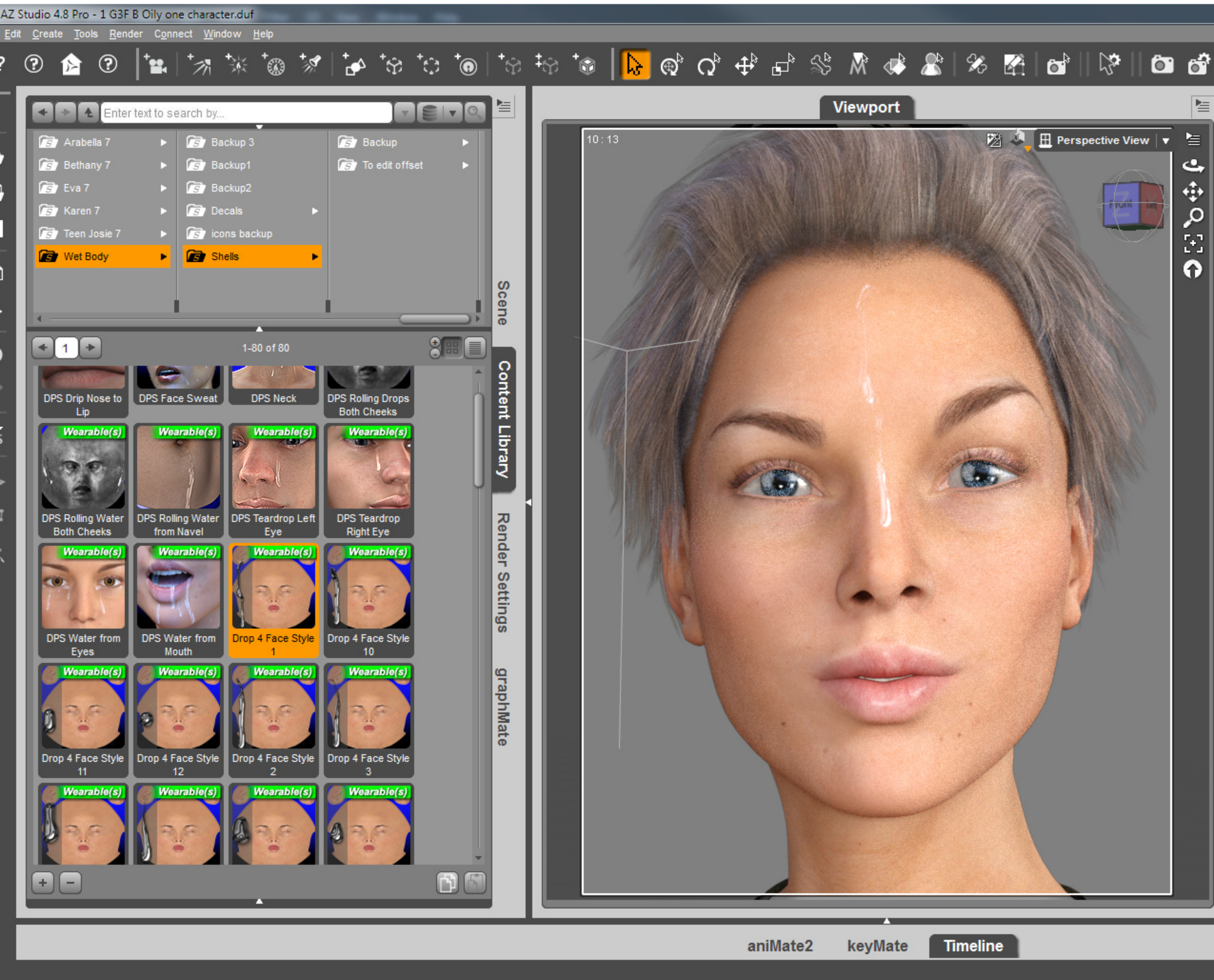
Wet Body and Nvidia IRAY

Geometry Shells were created to work with **3Delight,** the original default render engine of DAZ Studio. They were the perfect solution to allow second skin effects like water, wounds and tattoos over DAZ characters independently of their skin UV textures. Now that DAZ has switched to Iray as their default engine Geometry Shells are still the best solution to place skin effects over DAZ characters independently of their UV textures but there is a limitation we need to know how to work with.

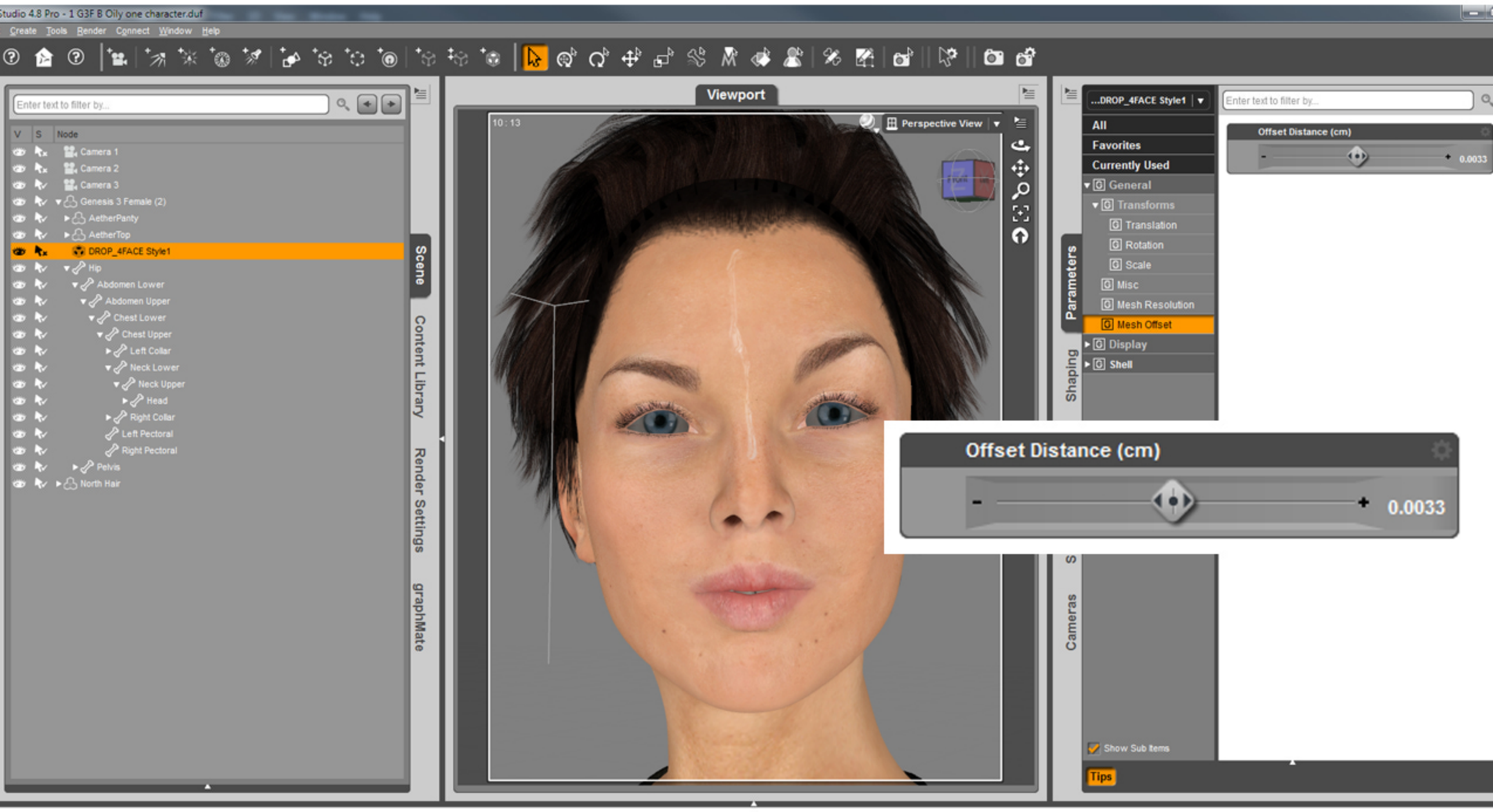
We understand that when we load one of our geometry shells for example “Drop 4 Face Style 1” over Victoria 7 , the geometry shell is using the face surface map of Victoria 7 in a second skin effect layered on top of its face texture.

That geometry shell does not occupy the same 3D space as the model underneath. There is a **very small space between layered skins** that separates the shell from the model or first skin from second skin. This space has a value which you find in the **Parameters** tab under the General category named ***MESH OFFSET***.

In 3Delight you can have as many geometry shells layered on top of the first skin and it doesn’t matter. 3Delight will see all the geometry shells just fine. You can have 20 or more drop geometry shells on the face **all with the same mesh offset value** and 3Delight sees them all and renders them correctly.

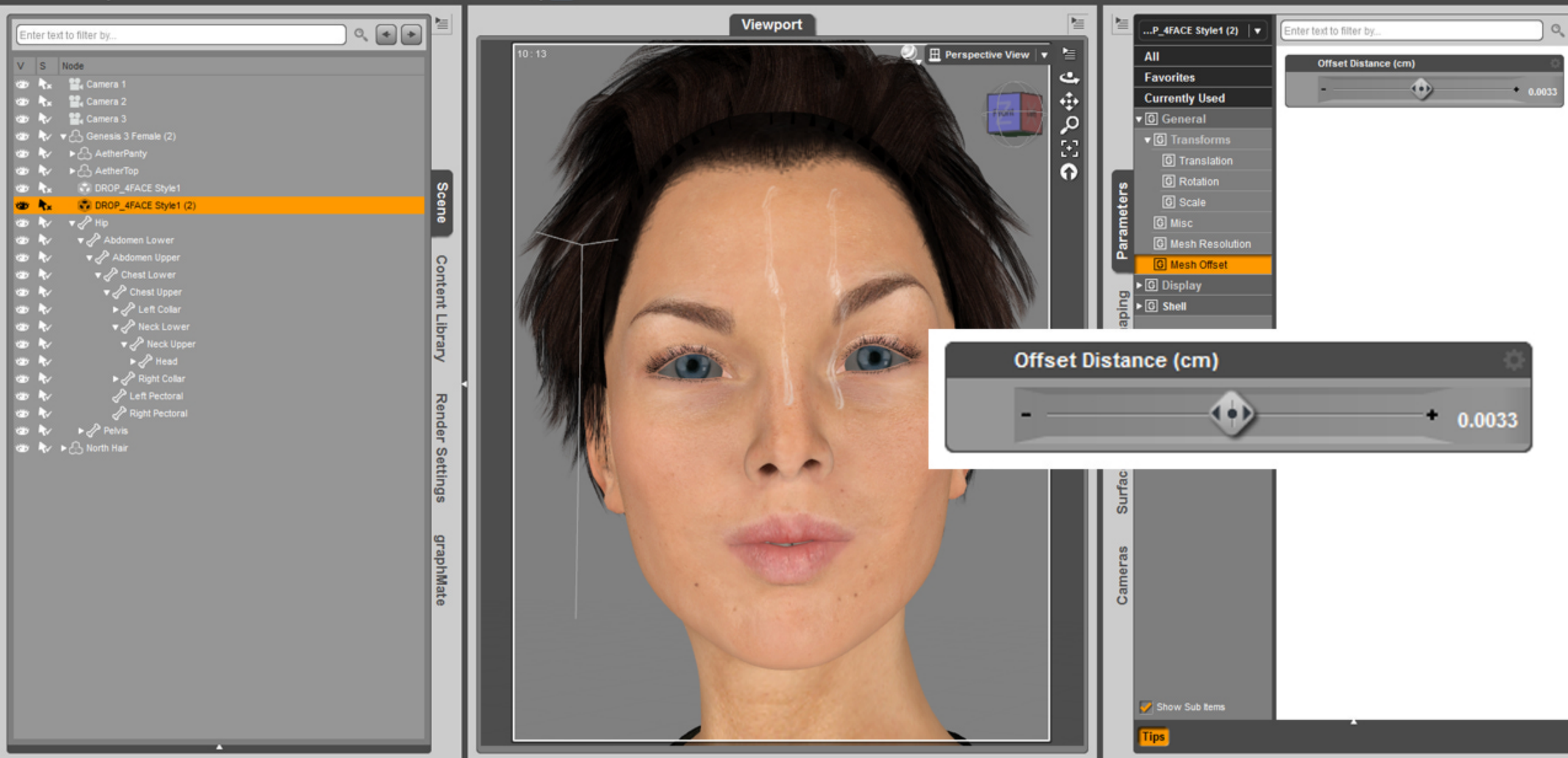


Wet Body and Nvidia IRAY



In Iray as we saw in the first figure in page one, the first drop on the face surface with a Mesh Offset Distance of 0.0033 renders perfectly well.

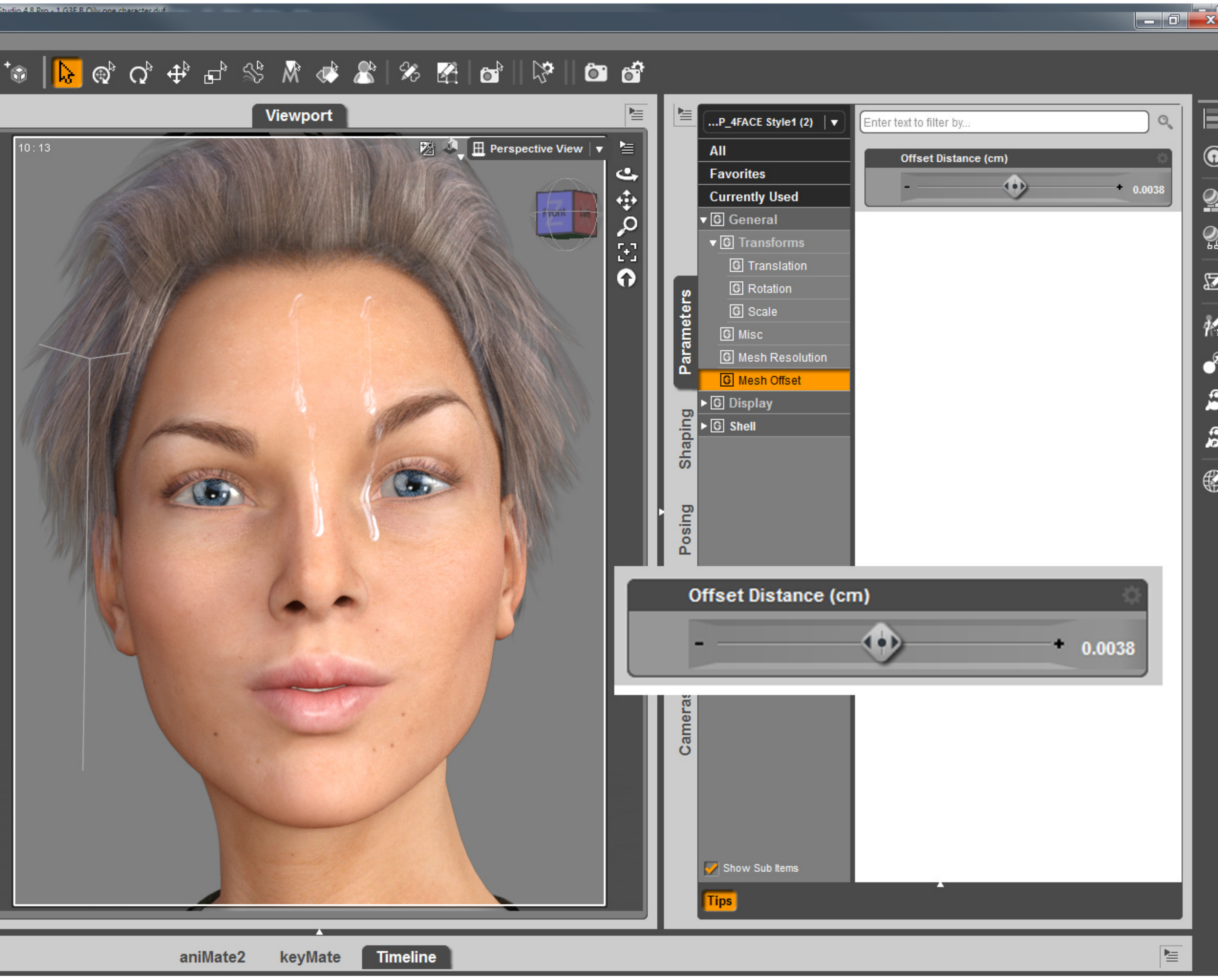
But what if I load in scene a second copy of geometry shell “Drop 4 Face Style 1”? Being the same library item, it shares the Mesh Offset Distance value of 0.0033 over the first face skin surface of Victoria 7.



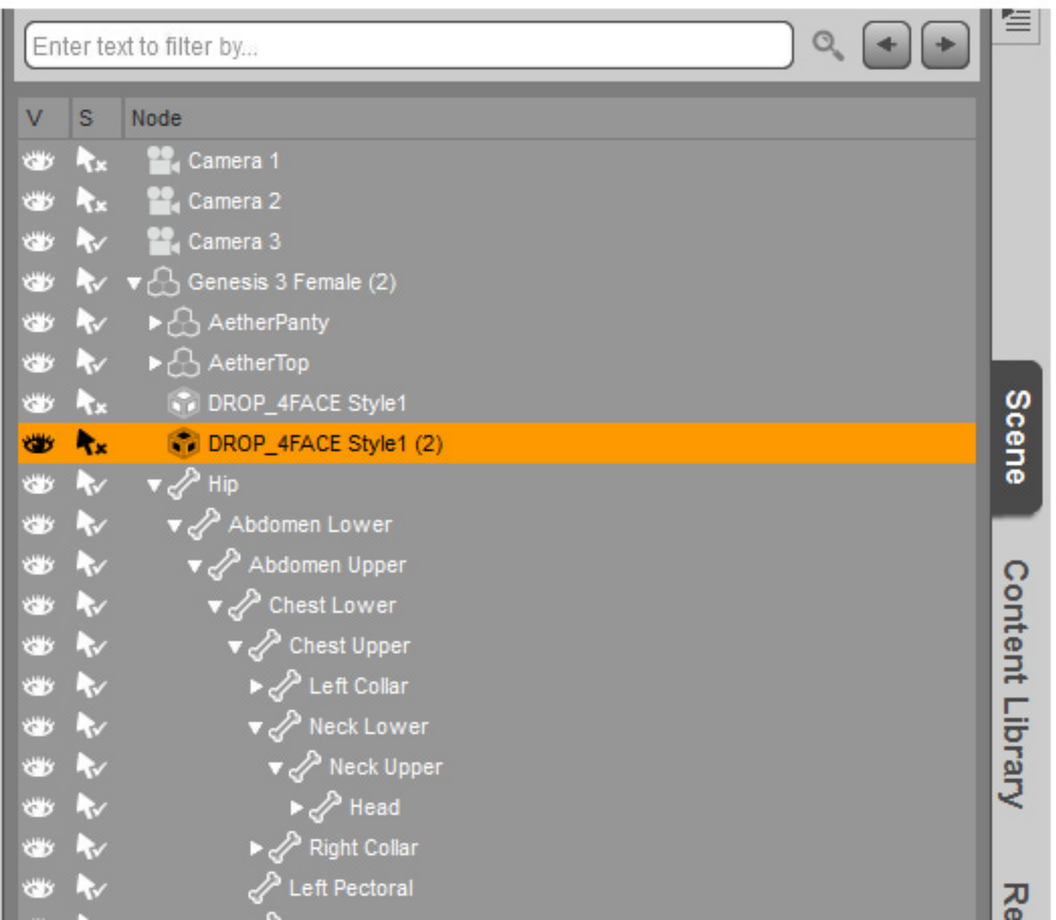
Wet Body and Nvidia IRAY

When we render we find out Iray doesn't reads both effects correctly. And the reason is that unlike 3Delight it doesn't likes that both geometry shells are sharing the same Offset Distance value of 0.0033 cm from Victoria's skin in 3D space.

Wet Body and Nvidia IRAY



So the solution is easy. We change that Offset Distance of the second identical drop to a different value. In this case we changed it from 0.0033 to 0.0038.



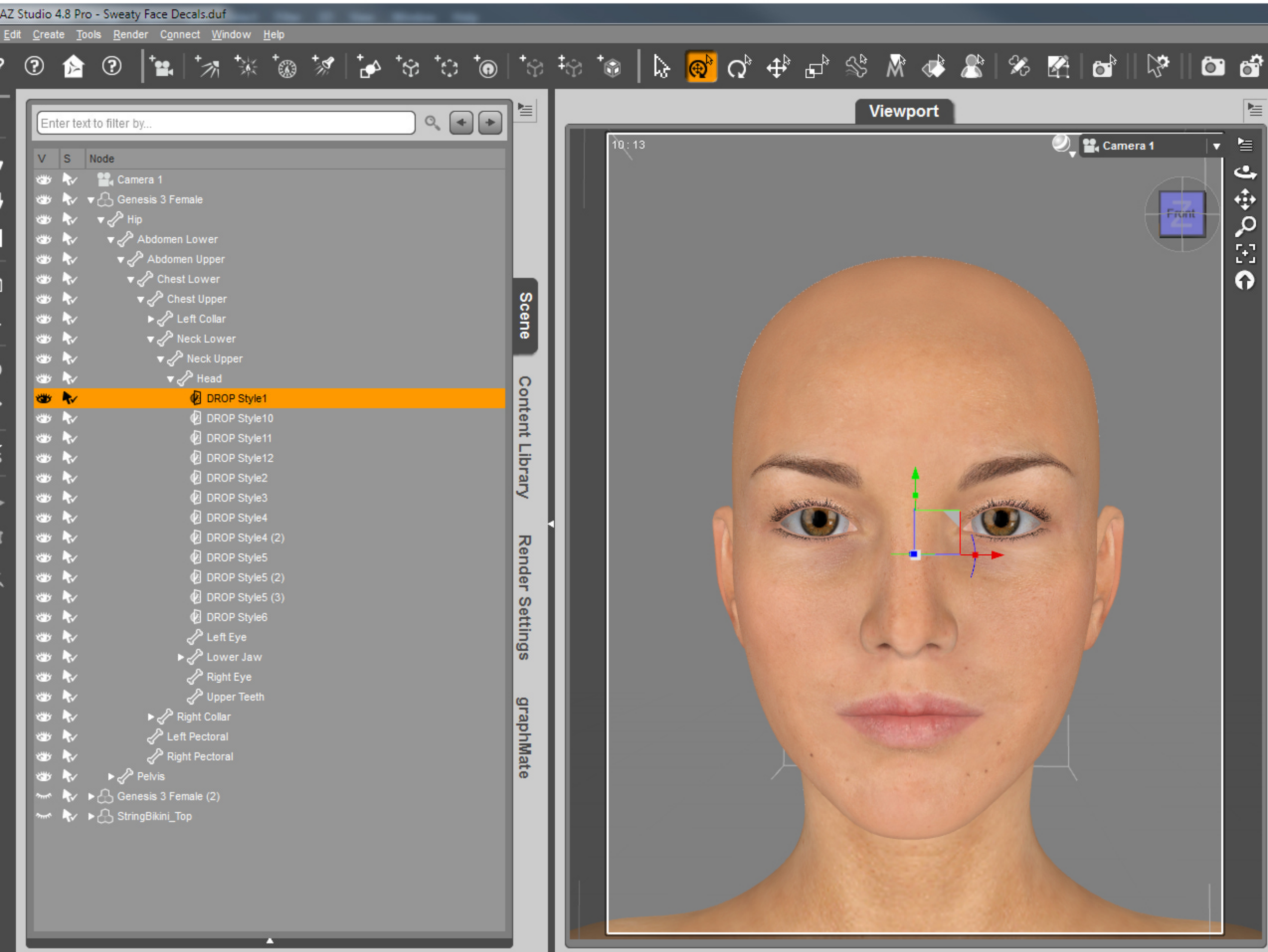
Now we have in scene our first copy of Drop 4 Face Style 1 with its original mesh offset value of 0.0033 and a second copy of Drop 4 Face Style 1 with an edited mesh offset value of 0.0038 and both are rendering fine in Iray.

So the current Iray limitation is that two geometry shells shall not have the same offset value while sharing a character's UV surface.

We have taken care of assigning different mesh offset values to all the different water effects so you will only need to edit your offset value when repeating an effect over the same UV surface (Face, Torso, Arms and Legs for Genesis 3).

Wet Body and Nvidia IRAY

Iray Decals in Wet Body



The Iray renderer comes with its own way of adding second skin effects to meshes in the form of DECALS. Much like DAZ Geometry Shells Iray Decals have its advantages and limitations in its current implementation.

We have included a 12 Drop Styles set of Iray Decals that load parented to Genesis head. Unlike Geometry Shells Iray Decals are not visible in the Open GL viewport, they requiere the viewport to be in Nvidia Iray mode in order for the decals to be visible.

The Decals can be moved using the Universal Tool or the Parameters tab transform sliders. It is usually easier to move the decals using the transform sliders than dragging with the Universal Tool.

I have found that more than ten decals in scene and Iray starts having problems displaying all of them. It seems like a limited number compared to geometry shells but this might be something that DAZ and Nvidia might be able to improve in the future. Per the date of this writing the implementation of Iray in DAZ Studio is fairly new.

Wet Body and Nvidia IRAY

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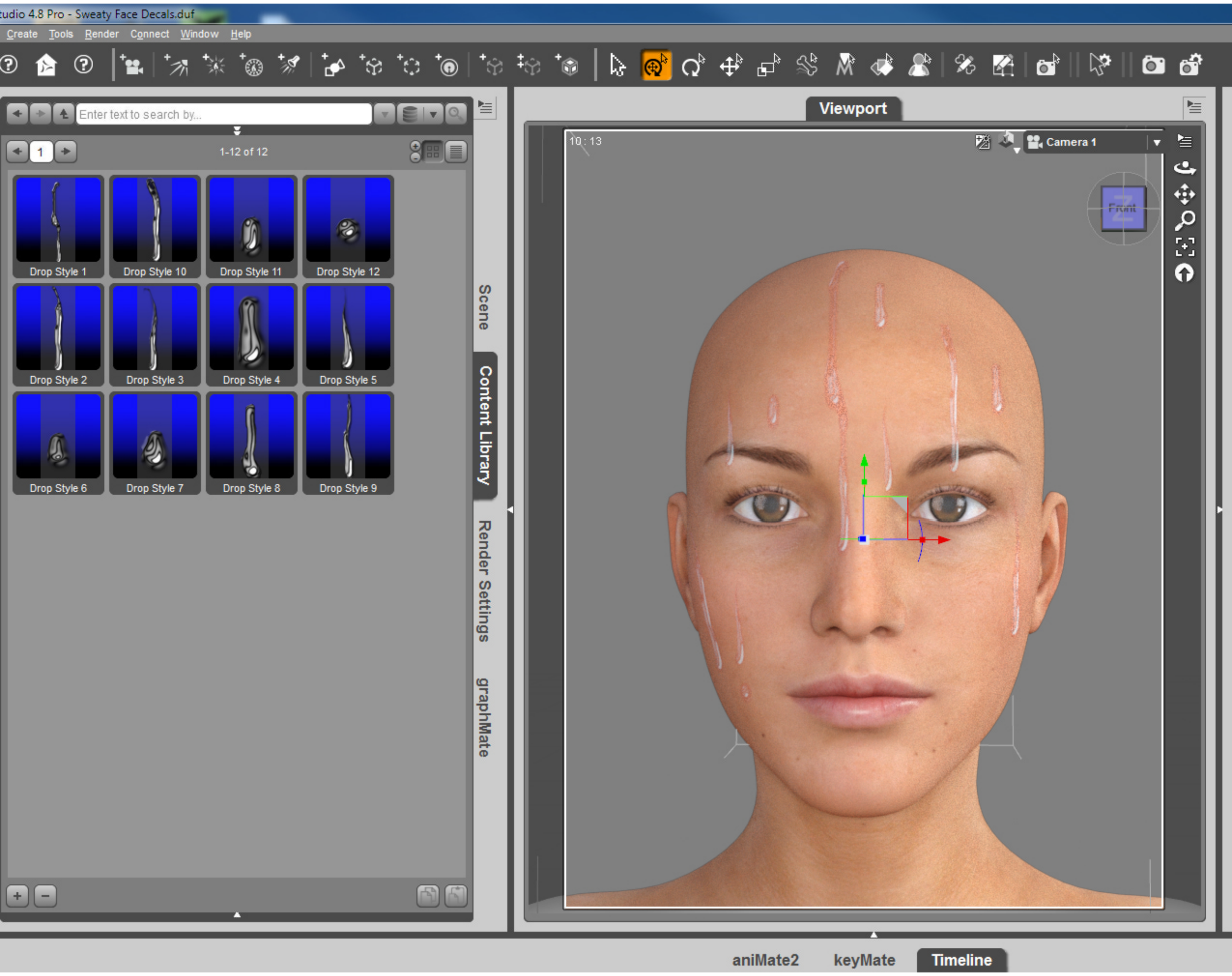

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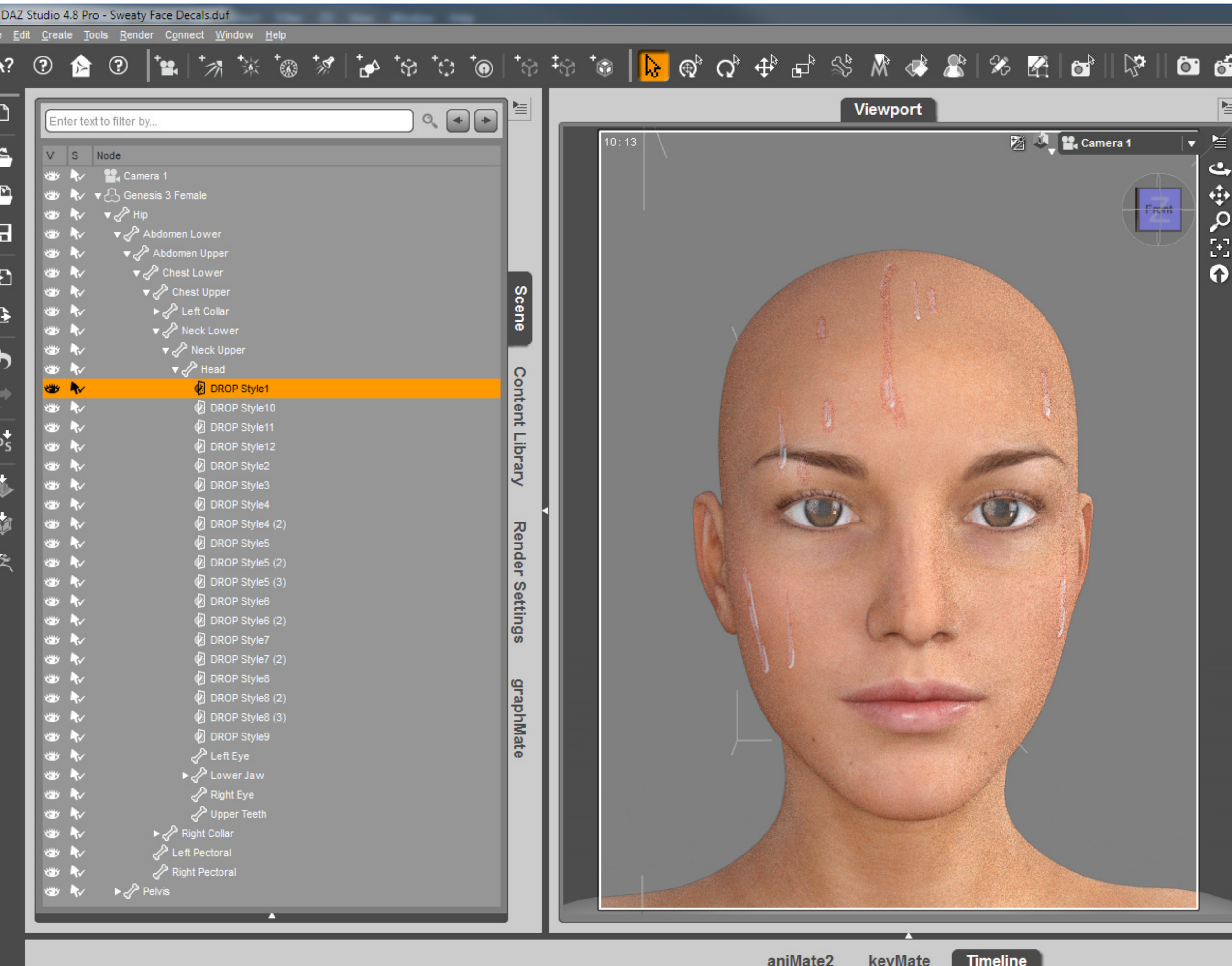

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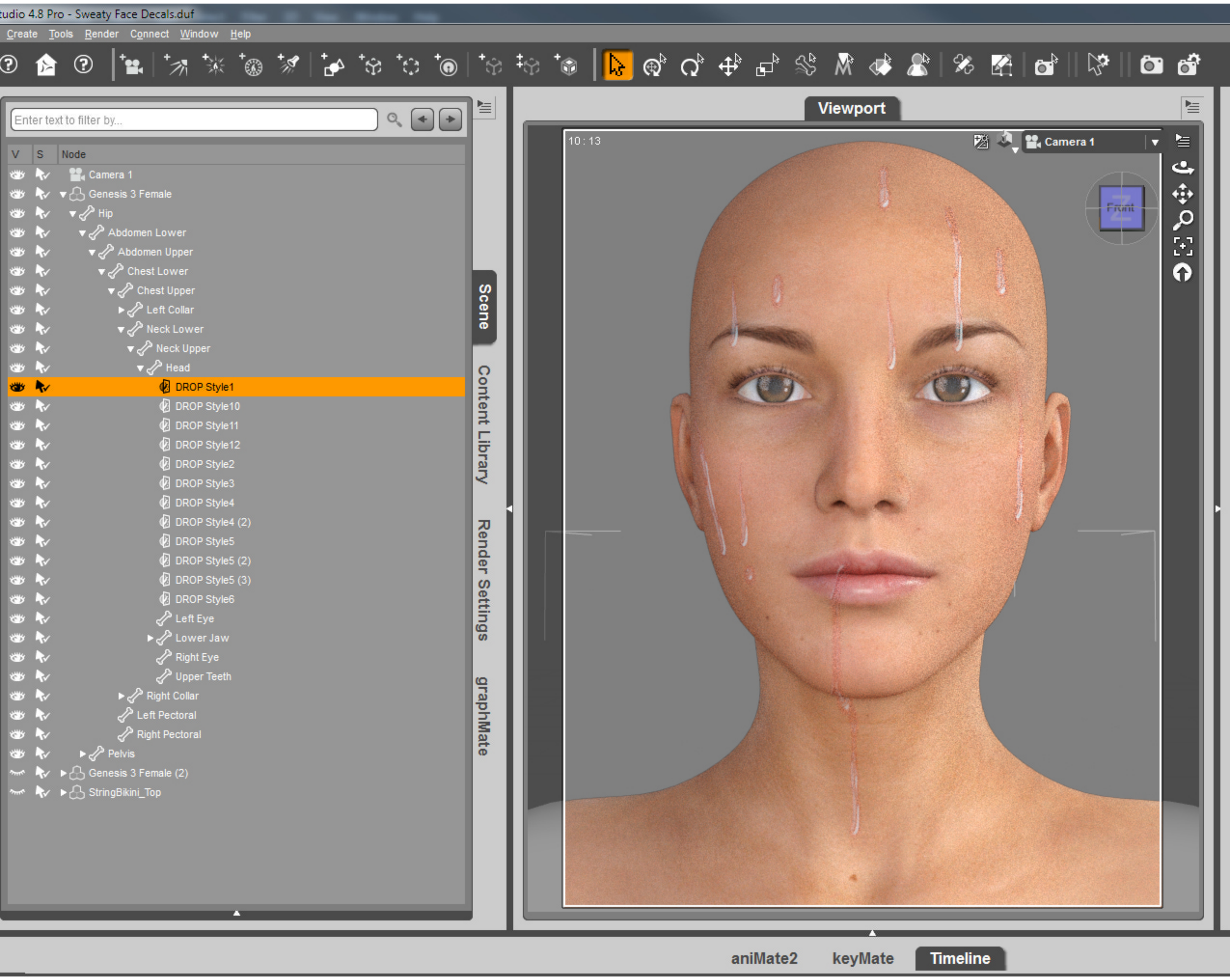
As you can see in the illustration above I have 19 drop decals loaded in scene and about only 9 drops are visible in Iray and drop number 1 its being shown halfway. I started deleting decals and it wasn't until I had 10 or less that I could see all my decals being rendered by Iray. I also tested the final Iray renderer and it had the same limitation.

Wet Body and Nvidia IRAY

Iray Decals in Wet Body



Unlike Geometry Shells Iray Decals are not limited to the mesh UV boundary's. In the illustration above you can see I moved the "Drop Style 1" decal using the Y Translate Slider outside the face UV boundary and it projected perfectly fine across seams down to the neck which is part of the Torso UV in Genesis 3.

So being able to take animation keys these drop decals with its ability to project across UV seams would be perfect for animation.

SIMON WM