```
geom_series_wf  THM

⊢  ∀q,n:ℕ. Σ(q↑n⁻) ∈ ℕ
| by UnivCD THEN NatInd 2 THEN RecCaseSplit ‘geom_series‘
|
|\
| .....truecase .....
| 1. ℕ
| 2. 0 = 0
| ⊢  0 ∈ ℕ  by Auto
|
|\
| 1. q : ℕ
| 2. ¬0 = 0
| ⊢  Σ(q↑-1⁻)+(q↑-1) ∈ ℕ  by Auto
|
|\
| .....truecase .....
| 1. q : ℕ
| 2. n : ℤ
| 3. 0<n
| 4. Σ(q↑n-1⁻) ∈ ℕ
| 5. n = 0
| ⊢  0 ∈ ℕ  by Auto
|
.\
. .....falsecase .....
. 1. q : ℕ
. 2. n : ℤ
. 3. 0<n
. 4. Σ(q↑n-1⁻) ∈ ℕ
. 5. ¬n = 0
. ⊢  Σ(q↑n-1⁻)+(q↑n-1) ∈ ℕ
.   by BackThru Thm* ∀n,m:ℕ. n+m ∈ ℕ    {nat_add}
END
```