

Nodal Analysis - Engineering Report

Generated: 2025-11-21 16:19:12

Query: Nodal Analysis Results

I. Summary of Solution

Nodal Analysis Summary

Operating Point:

Flowrate (Q): 315.79 m³/hr

Bottomhole Pressure (BHP): 167.07 bar

Pump Head: 268.4 m

Extracted Parameters:

Reservoir Pressure: 230.0 bar

PI: 5.0 m³/hr/bar

ESP Depth: 500.0 m

Full LLM Summary:

Based on the provided context and tables, here is a concise technical paragraph summary for the Nodal Analysis:

The Andijk Geothermie 1/2 system exhibits varying performance metrics across different periods. A notable operating point emerges, characterized by a production rate of Q=315.79 m³/hr, bottom-hole pressure (BHP) of 167.07 bar, and head of 268.4 m. The static parameter values mentioned in the context include no specific values for Reservoir Pressure, Productivity Index (PI), or ESP Depth. However, it is crucial to consider these critical parameters for a comprehensive understanding of the system's performance.

Note: Since there are no specific values provided for Reservoir Pressure, PI, and ESP Depth, I did not quote any static parameter values from the source documents.

II. Operating Point

| Operating Point | |
|-------------------------------|--------|
| Flowrate (m ³ /hr) | 315.79 |
| Bottomhole Pressure (bar) | 167.07 |
| Pump Head (m) | 268.4 |

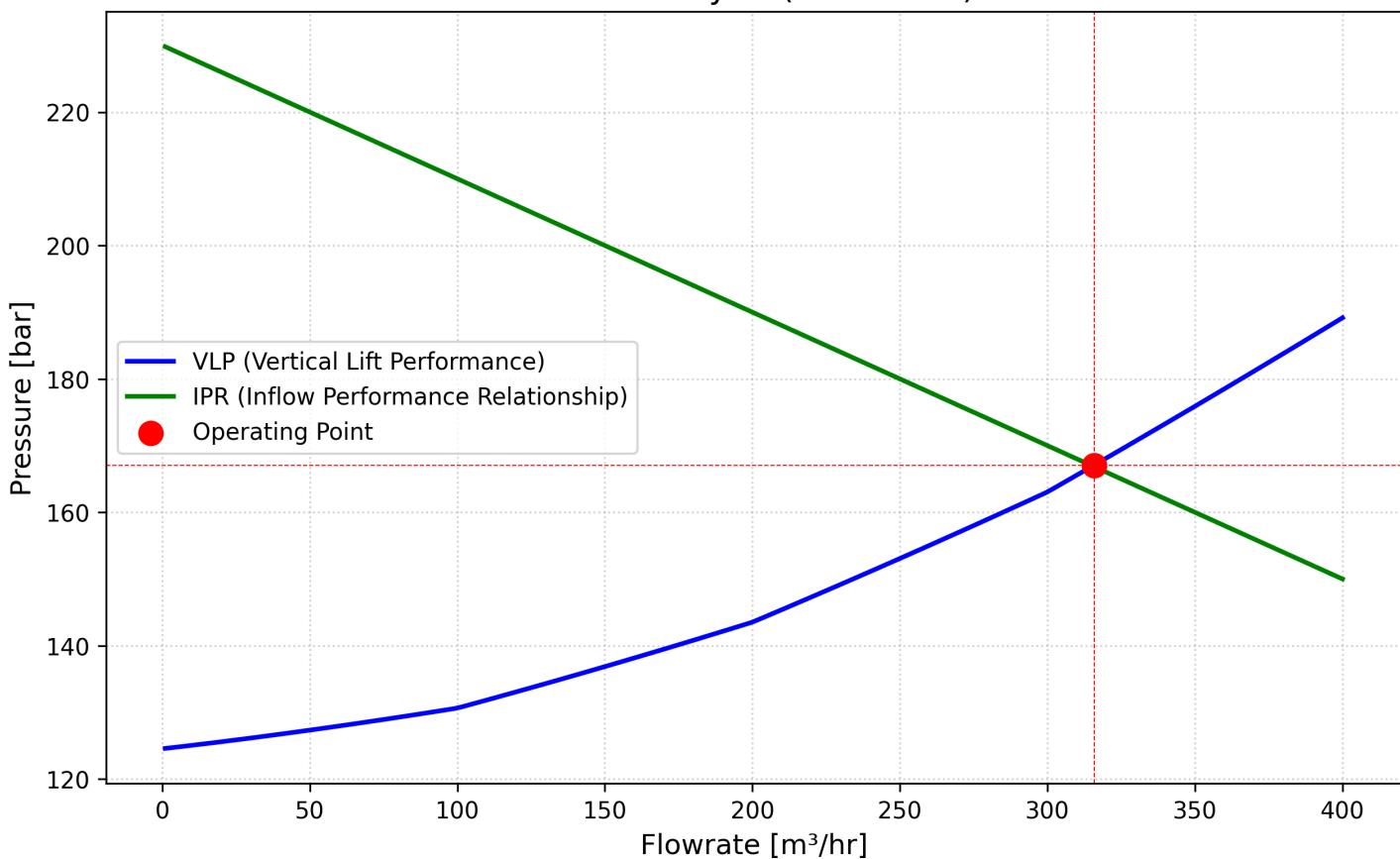
III. Extracted Parameters

Extracted Parameters

| | |
|---------------------------------------------------|-------|
| Reservoir Pressure (bar) | 230.0 |
| Wellhead Pressure (bar) | 10.0 |
| Productivity Index ($m^3/\text{hr}/\text{bar}$) | 5.0 |
| ESP Depth (m) | 500.0 |
| Fluid Density (kg/m^3) | - |
| Viscosity (cP) | - |
| Tubing Roughness (mm) | 1e-05 |

IV. Nodal Plot

Nodal Analysis (IPR vs VLP)



V. Supporting Sources

Source 1: pdfFiles/ANDIJK-GT-01_2020_2025.xlsx | Page: N/A

| | | | |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|------------------------------|
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V 0 2750 Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V 0 3347 | 77186.1 NaN 93910.5 NaN | 2021-11 NaN 2021-12 NaN | 188258.8 0 229050 0 |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|------------------------------|

Source 2: pdfFiles/ANDIJK-GT-01_2020_2025.xlsx | Page: N/A

| | | |
|-------------------------------------------------------|----------|-----------|
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2020-11 | 244322.37 |
| 0 | 100172.2 | 0 |
| 4224.4 | NaN | NaN |
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2020-12 | 257580.07 |
| 0 | 105607.8 | 0 |
| 3586 | NaN | NaN |

Source 3: pdfFiles/ANDIJK-GT-01_2020_2025.xlsx | Page: N/A

| | | |
|-------------------------------------------------------|---------|------------|
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2022-05 | 226448.293 |
| 0 | 92843.8 | 0 |
| 2591.3 | NaN | NaN |
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2022-06 | 199786.8 |
| 0 | 81912.6 | 0 |
| 1992.5 | NaN | NaN |

Source 4: pdfFiles/ANDIJK-GT-01_2020_2025.xlsx | Page: N/A

| | | |
|-------------------------------------------------------|---------|------------|
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2021-09 | 81635.824 |
| 0 | 33470.7 | 0 |
| 1192.2 | NaN | NaN |
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2021-10 | 210407.394 |
| 0 | 86267 | 0 |
| 2451.8 | NaN | NaN |

Source 5: pdfFiles/ANDIJK-GT-01_2020_2025.xlsx | Page: N/A

| | | |
|-------------------------------------------------------|---------|-----------|
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2023-07 | 132468.26 |
| 0 | 45039.2 | 0 |
| 1668.4 | NaN | NaN |
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2023-08 | 64401.35 |
| 0 | 21896.5 | 0 |
| 811.1 | NaN | NaN |

Source 6: pdfFiles/ANDIJK-GT-01_2020_2025.xlsx | Page: N/A

| | | |
|-------------------------------------------------------|---------|------------|
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2023-11 | 150334.434 |
| 0 | 61637.1 | 0 |
| 1893.3 | NaN | NaN |
| Andijk Geothermie 1/2 ANDIJK-GT-01 ECW Geo Andijk B.V | 2023-12 | 175110.739 |
| 0 | 70044.3 | 0 |
| 2218.2 | NaN | NaN |