COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

July 10, 2017

Mr. J.C. York
J&T Consulting, Inc.
305 Denver Avenue, Suite D
Fort Lupton, CO 80621

Re: Northern Colorado Constructors, Inc.; Bennett Pit; File No. M-2016-085; 112c Permit Application Second Adequacy Review

Mr. York:

The Division of Reclamation, Mining and Safety (Division/DRMS) reviewed the content of the Northern Colorado Constructors, Inc. (NCCI) 112c permit application adequacy response dated May 15, 2017 for the Bennett Pit, File No. M-2016-085 and submits the following comments. The Division is required to make an approval or denial decision no later than July 28, 2017 therefore; a response to the following adequacy review concerns should be submitted to the Division as soon as possible.

The review consisted of comparing the adequacy response content with specific requirements of Rules 1, 3, 6.1, 6.2, 6.3 and 6.5 of the Minerals Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials. Any inadequacies are identified under the respective exhibit heading along with suggested actions to correct them.

1.6 Public Notice

1. Item #1 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

2. Items #2a, 2b and 2c from the Division adequacy letter dated April 5, 2017 were answered satisfactorily by the Applicant.

3. Item #3 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

4. The Division received the Applicant's response to the letters of objection from Veronica Cantrell (2), William M. Lewis, Bradley T Windell Trust and Heidi G Hynes Windell Trust, and Nicole Cantrell and Marcelo Ferreira.

6.4 Specific Exhibit Requirements - Regular 112 Operations

The following items must be addressed by the Applicant in order to satisfy the requirements of C.R.S. 34-32.5-101 et seq. and the Mineral Rules and Regulations of the Mined Land Reclamation Board:

6.4.1 Exhibit A - Legal Description

5. Item #5 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

6.4.3 Exhibit C - Pre-mining and Mining Plan Maps of Affected Lands

6. Item #6 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

7. Item #7 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

8. In response to Item #8, the Applicant submitted an updated Exhibit C map dated May 15, 2017. The revised map did not include the owner's name for the utilities along County Road 22.5 and County Road 23 and the owner of the oil and gas facilities located between the North and South Cells. Please update the map to show the owner's name, type of structures, and location of all significant, valuable, and permanent man-made structures contained on the area of affected land and within two hundred (200) feet of the affected land pursuant to Rule 6.4.3(g).

6.4.4 Exhibit D - Mining Plan

9. Item #9 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

10. In response to Item #10, the Applicant committed to a minimum 200 foot offset from the existing oil/gas facilities until the surface use agreement is finalized with Kerr-McGee Anadarko, which will change the offset to 150 feet from the oil/gas facilities. Please commit to providing the Division with a copy of the agreement with Kerr-McGee Anadarko when available.

11. In response to Item #11, the Applicant submitted a revised application page indicating incidental gold for Item 5.1 on Page 1 of the Application Form. Please explain how the Applicant intends to recover gold as part of the mining activities and update the Mining Plan as needed.

12. In response to Item #12, the Applicant stated the proposed discharge points had been updated and shown on Exhibit C- Mining Plan Map. The copy of the revised Exhibit C map received by the Division did not indicate the discharge points on the South Platte River. Please submit a revised copy of Exhibit C - Mining Plan Map indicating the discharge points.

13. In response to Item #13, the Applicant stated the design details were included for how the flocculent would be used to settle the materials from the wash plant in the sedimentation pond. The revised Exhibit D – Mining Plan did not include the design details for the use of the flocculent. Please update Exhibit D to include the design details for the use of the flocculent. Additionally, pursuant to Rule 6.4.4(c), please provide design details for the sedimentation pond construction and operation.

14. Item #14 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

15. Item #15 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

16. Item #16 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

17. Item #17 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

6.4.5 Exhibit E - Reclamation Plan

18. Item #18 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

19. Item #19 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

20. Item #20 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

21. Item #21 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

22. In response to Item #22, the Applicant submitted a floodplain study prepared by J&T Consulting, Inc. dated May 2017. The floodplain study is under review by the Division's engineering staff. The Division's comments will be sent under separate cover if needed.

23. Item #23 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

6.4.7 Exhibit G - Water Information

24. Item #24 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

25. In response to Item #25, the Applicant stated the proposed discharge points had been updated and shown on Exhibit C- Mining Plan Map. As stated in Item #12 above, the revised Exhibit C map received by the Division did not indicate the discharge points on the South Platte River. Please submit a revised copy of Exhibit C - Mining Plan Map indicating the discharge points.

26. Item #26 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

27. Item #27 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

28. Item #28 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

29. In response to Item #29, the Applicant stated the monitor well location map was provided in the attachments. The Division did not receive a copy of the monitoring well location map. Please submit a map indicating the locations of the monitoring wells.

30. Item #30 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

31. Item #31 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

32. Item #32 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

33. Item #33 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

34. In response to Item #34, the Applicant submitted a Slurry Wall Assessment prepared by McGrane Water Engineering, LLC dated May 10, 2017. The Slurry Wall Assessment is under review by the Division's engineering staff. The Division's comments will be sent under separate cover if needed.

6.4.8 Exhibit H - Wildlife Information

35. Item #35 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

6.4.10 Exhibit J - Vegetation Information

36. Item #36 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

6.4.12 Exhibit L - Reclamation Costs

37. In response to Item #37, the Applicant stated the reclamation costs had been updated to reflect 20% for the cost of the slurry wall since the slurry wall construction drawings and specifications were included in the submittal. The Mined Land Reclamation Board (Board) policy allowing an Operator providing the design specifications for slurry walls to reduce the amount of financial warranty required to be held by the Division for the construction of a slurry wall was recently rescinded by the Board.

    The Division will set the required financial warranty at $1,005,627.00 for Phase 1 upon approval of the permit application. The total required financial warranty amount for the site will be set at $1,988,744.00 upon approval. An additional financial warranty in the amount of $993,116.00 for Phase 2 will be required to be provided to the Division prior to disturbing the second phase.

6.4.18 Exhibit R - Proof of Filing with County Clerk and Recorder

38. Please provided an affidavit or receipt indicating the date on which the revised application information required to address this adequacy letter was placed with the Weld County Clerk and Recorder for public review, pursuant to Subparagraph 1.6.2(1)(c).

6.4.19 Exhibit S - Permanent Man-made Structures

39. Item #39 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

6.5 Geotechnical Stability Exhibit

40. Item #40 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

41. Item #41 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

42. Item #42 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

43. Item #43 from the Division adequacy letter dated April 5, 2017 was answered satisfactorily by the Applicant.

44. In response to Item #44, the Applicant submitted a revised Slope Stability Report prepared by J&T Consulting, Inc. dated May 2017. The Division duplicated the Applicant's revised slope stability analysis using Clover Technologies Galena Slope Stability Analysis System, Version 6.10. The Division's Galena stability analysis results were consistent with the Applicant's models. The Division will accept the May 2017 slope stability analysis. Copies of the Division's Galena stability analysis results are attached.

    If groundwater is intercepted shallower than expected and/or the soils differ from the expected profile, the Applicant must contact the Division immediately and reevaluate the stability analysis based on the corrected information. The Applicant must understand any transgression of the offset and/or sloping criteria will be considered a serious violation of the permit if approved and issued.

Please be advised the Bennett Pit application may be deemed inadequate, and the application may be denied on July 28, 2017, unless the above mentioned adequacy review items are addressed to the satisfaction of the Division. If more time is needed to complete the reply, the Division can grant an extension to the decision date. This will be done upon receipt of a written waiver of the Applicant's right to a decision by July 28, 2017 and request for additional time. This must be received no later than the deadline date.

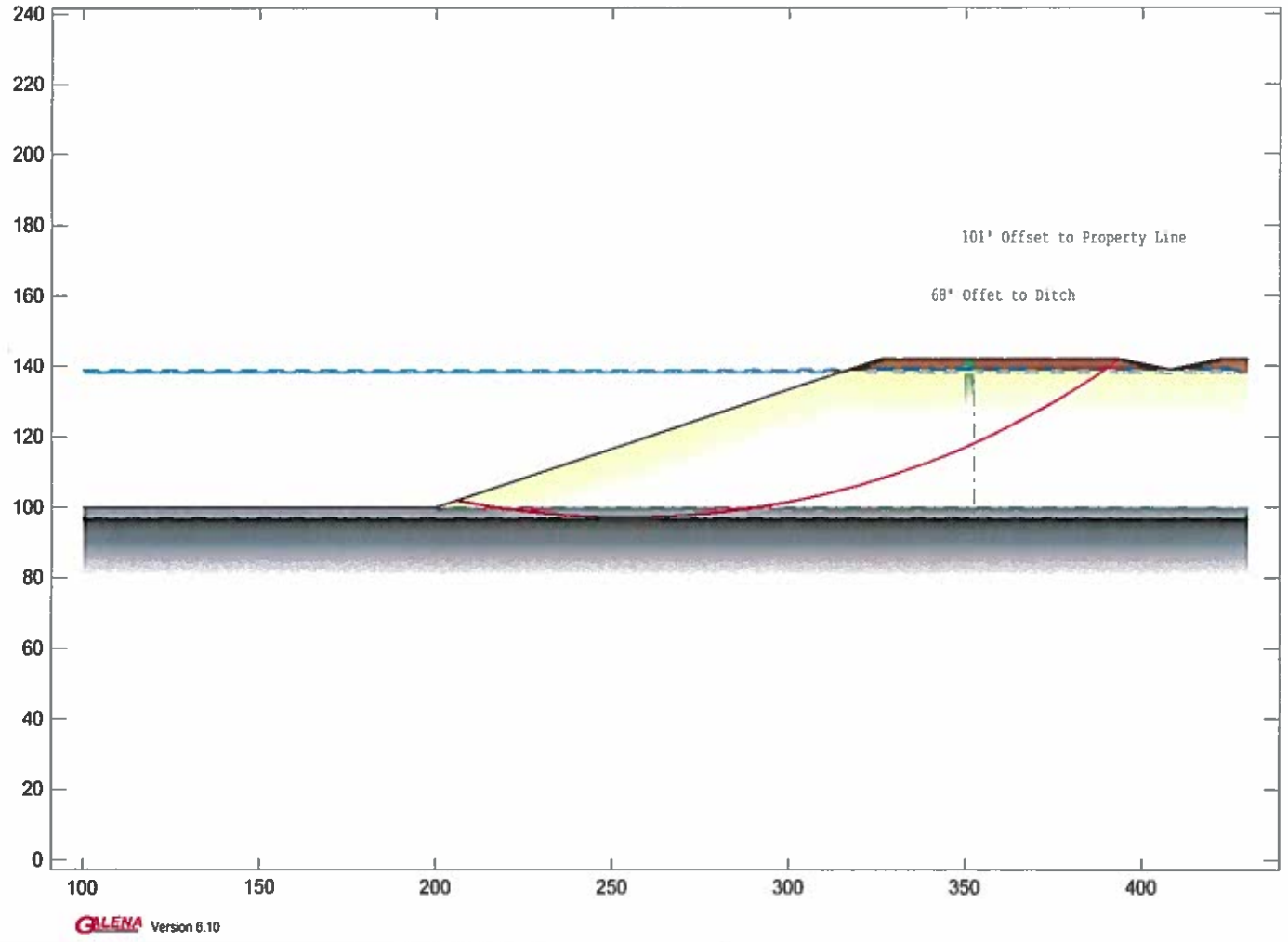
If you have any questions, please contact me at peter.hays@state.co.us or (303) 866-3567 Ext. 8124.

Sincerely,

Peter S. Hays
Environmental Protection Specialist

Enclosures – Galena stability analysis results

Ec: Wally Erickson; Division of Reclamation, Mining & Safety
Chris Zadel; Northern Colorado Constructors, Inc.



Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 2.68

Edited: 6 Jul 2017 *Processed:* 6 Jul 2017

Project Bennett Pit
Case 1 - Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 1 Full Final.gmf

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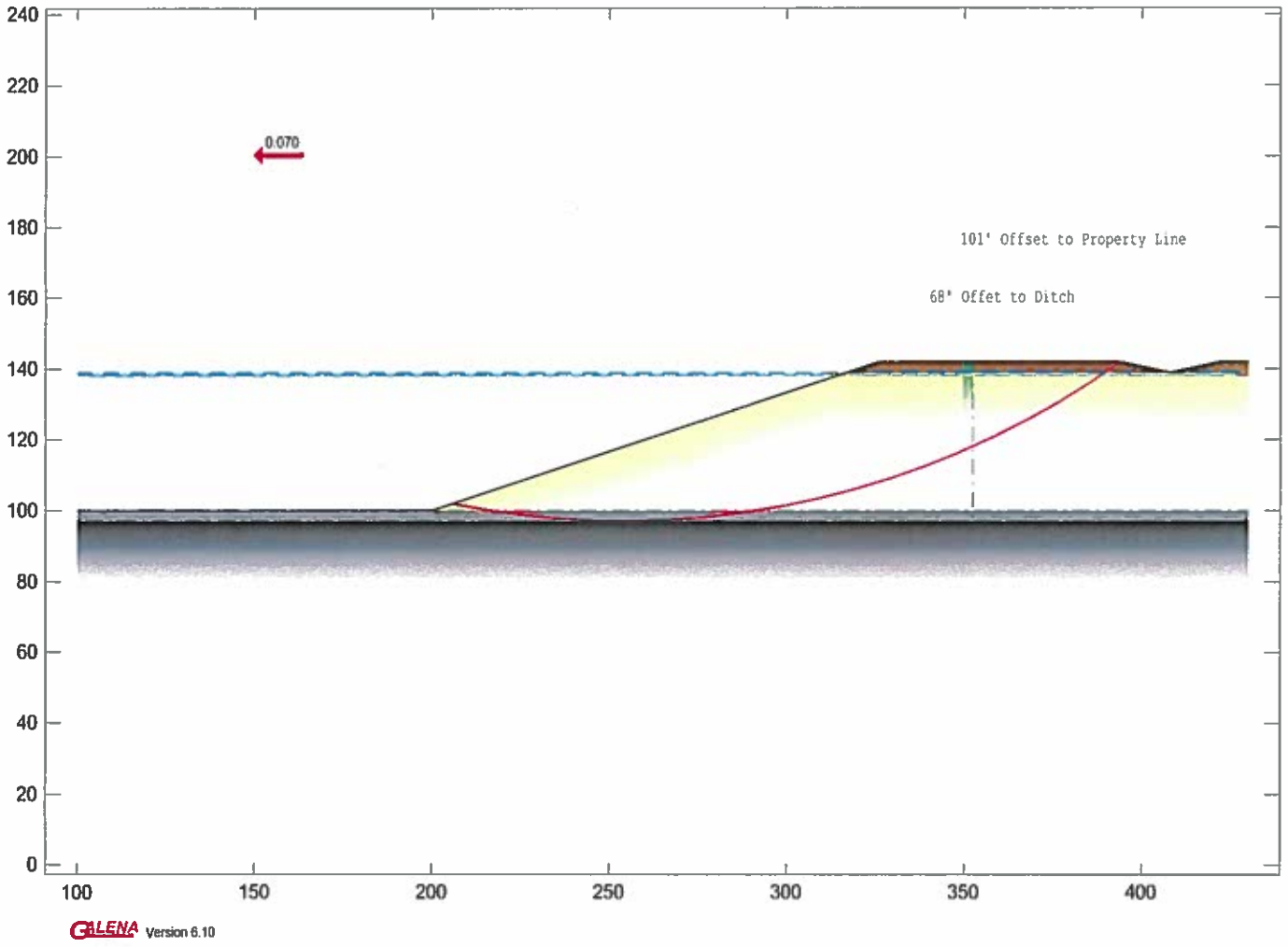

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.67

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Project Bennett Pit
Case 1 - Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 1 Full EQ Final.gmf

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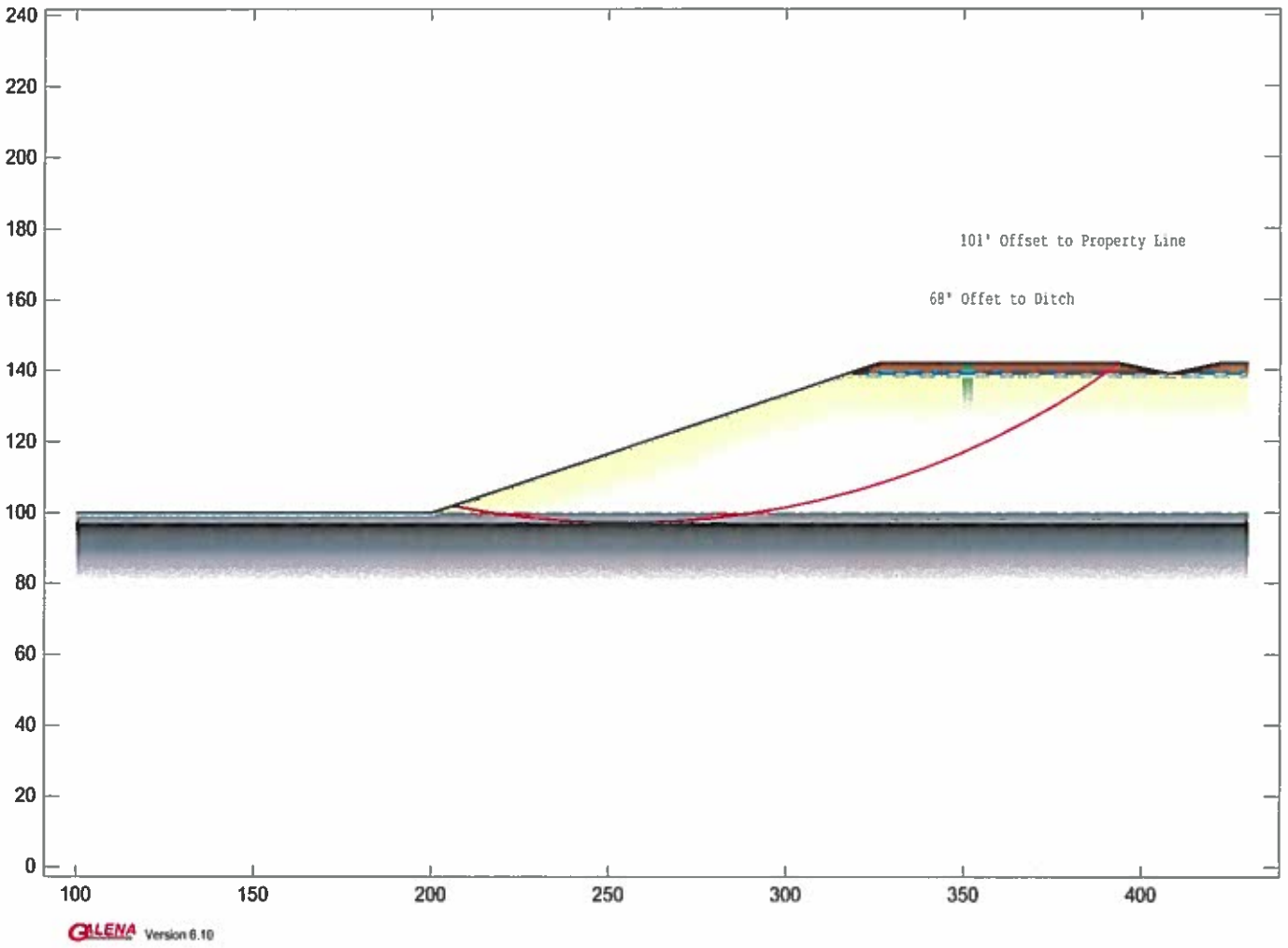

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.42

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Project Bennett Pit
Case 1 - Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 1 Rapid Drawdown Final.gmf

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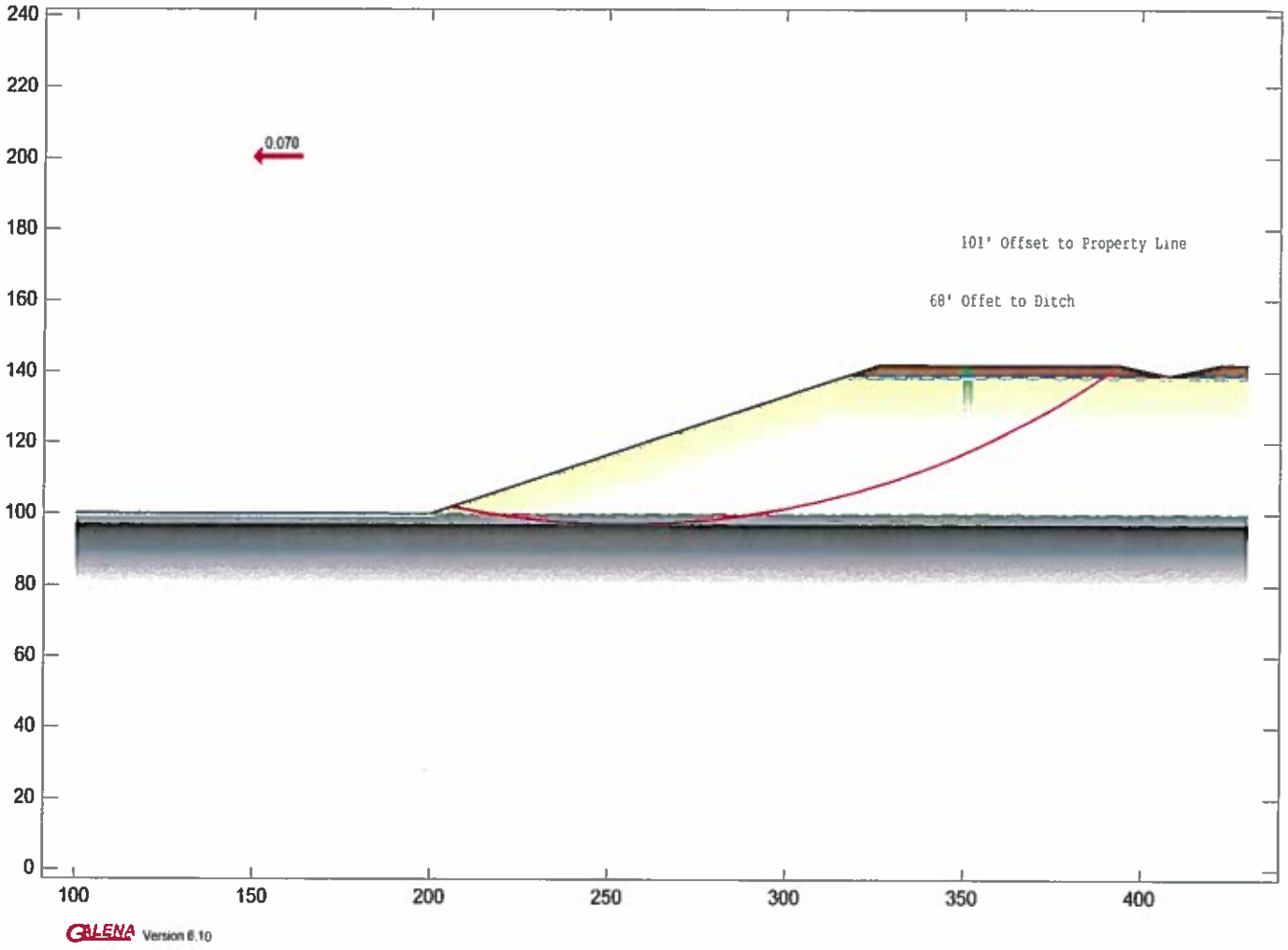

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.05

Project Bennett Pit
Case 1 - Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 1 Rapid Drawdown EQ Final.gmf

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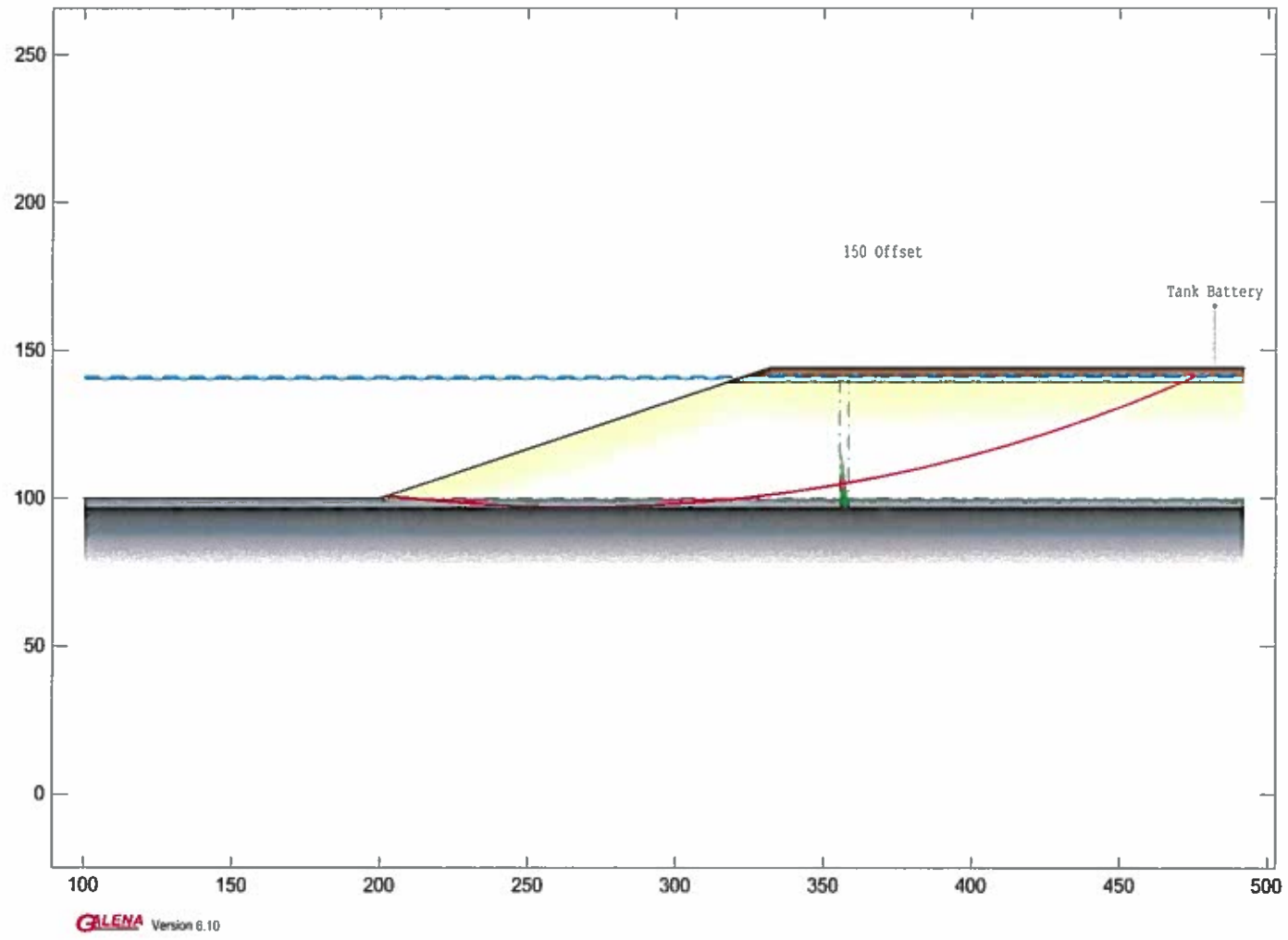

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 3.84

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Project Bennett Pit
Case 2 Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 2 Full Final.gmf

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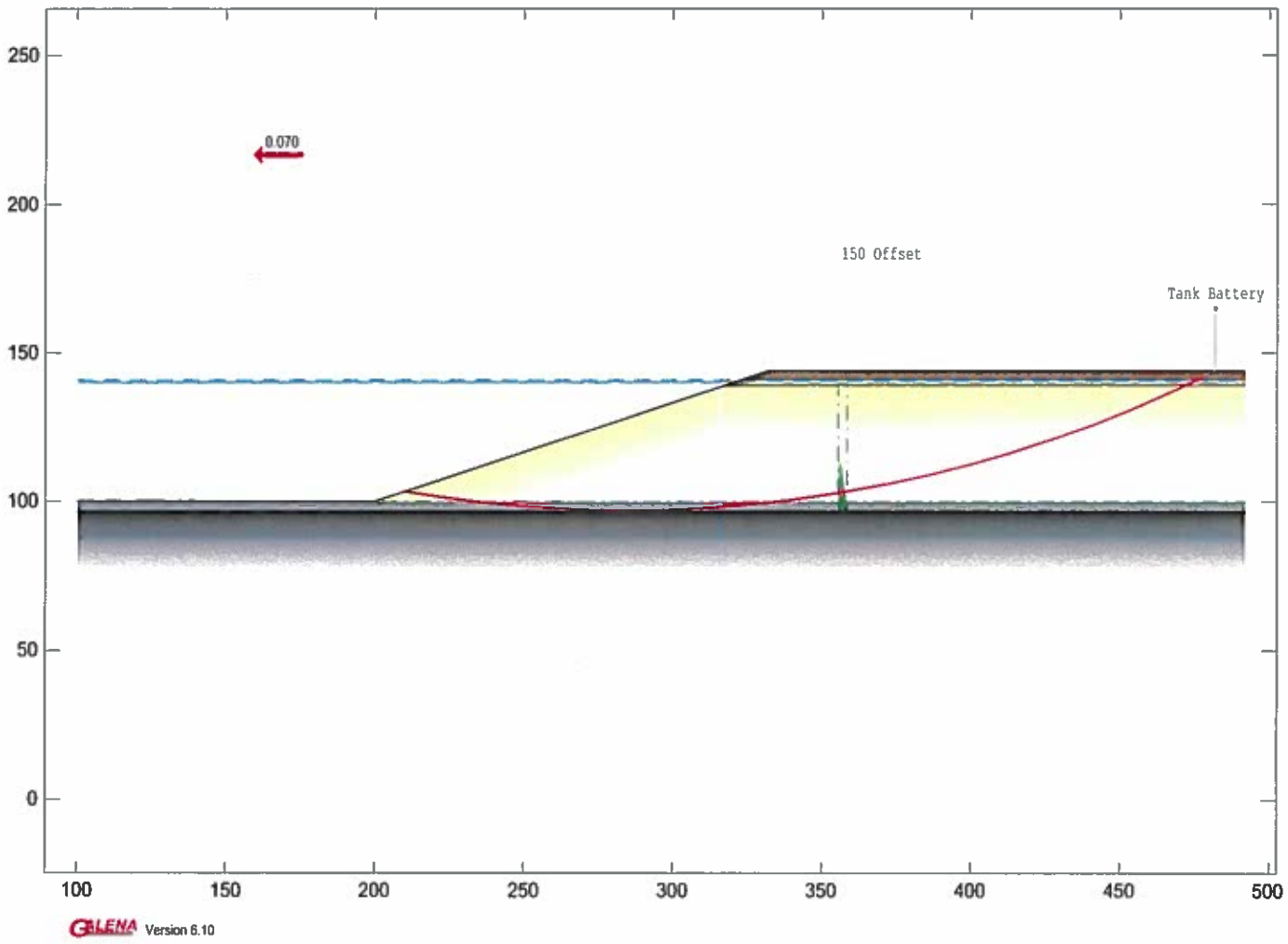

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 2.06

Project Bennett Pit
Case 2 Full

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File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 2 Full EQ Final.gmf

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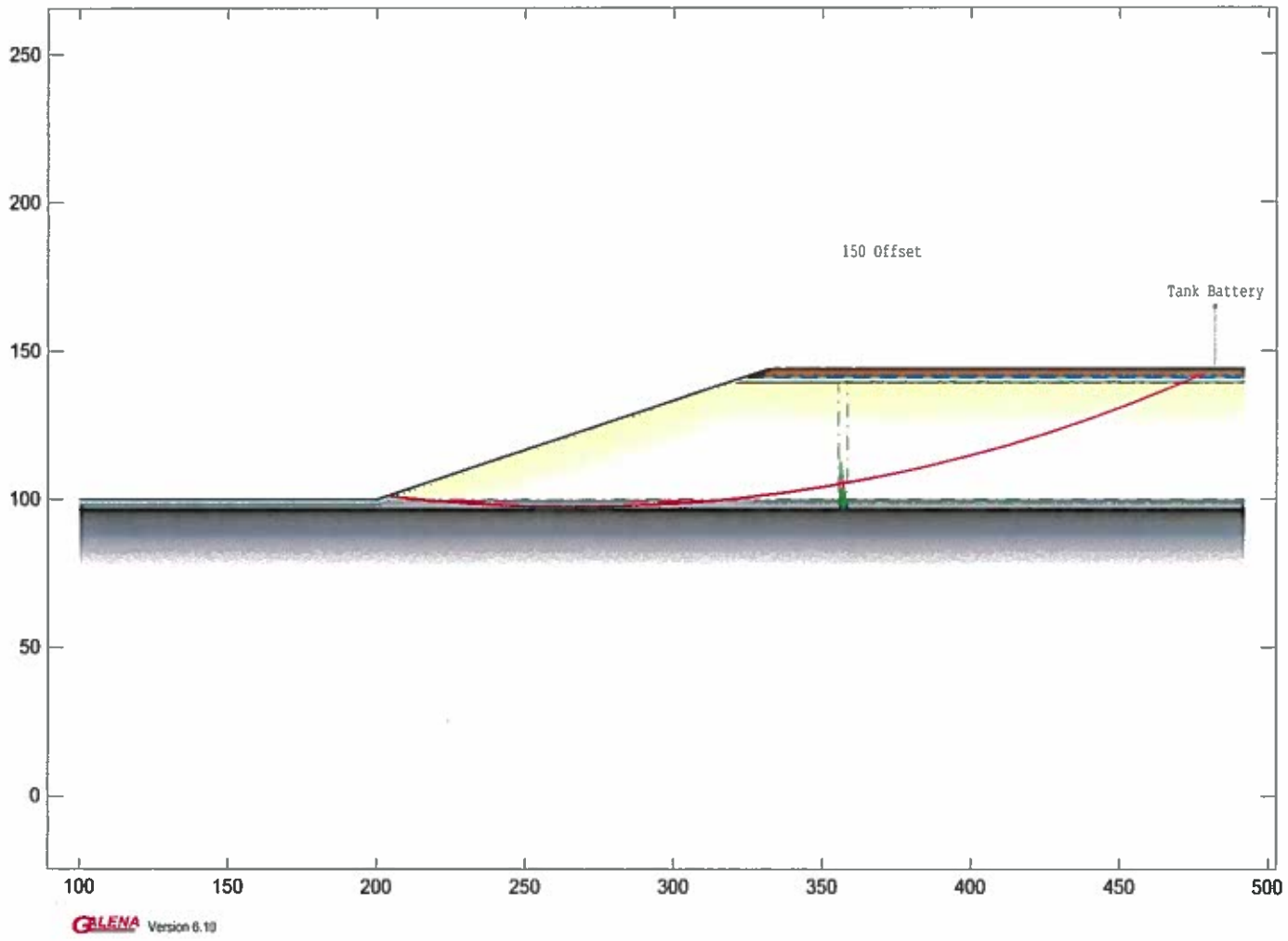

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 2.15

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Project Bennett Pit
Case 2 Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 2 Rapid Drawdown Final.gmf

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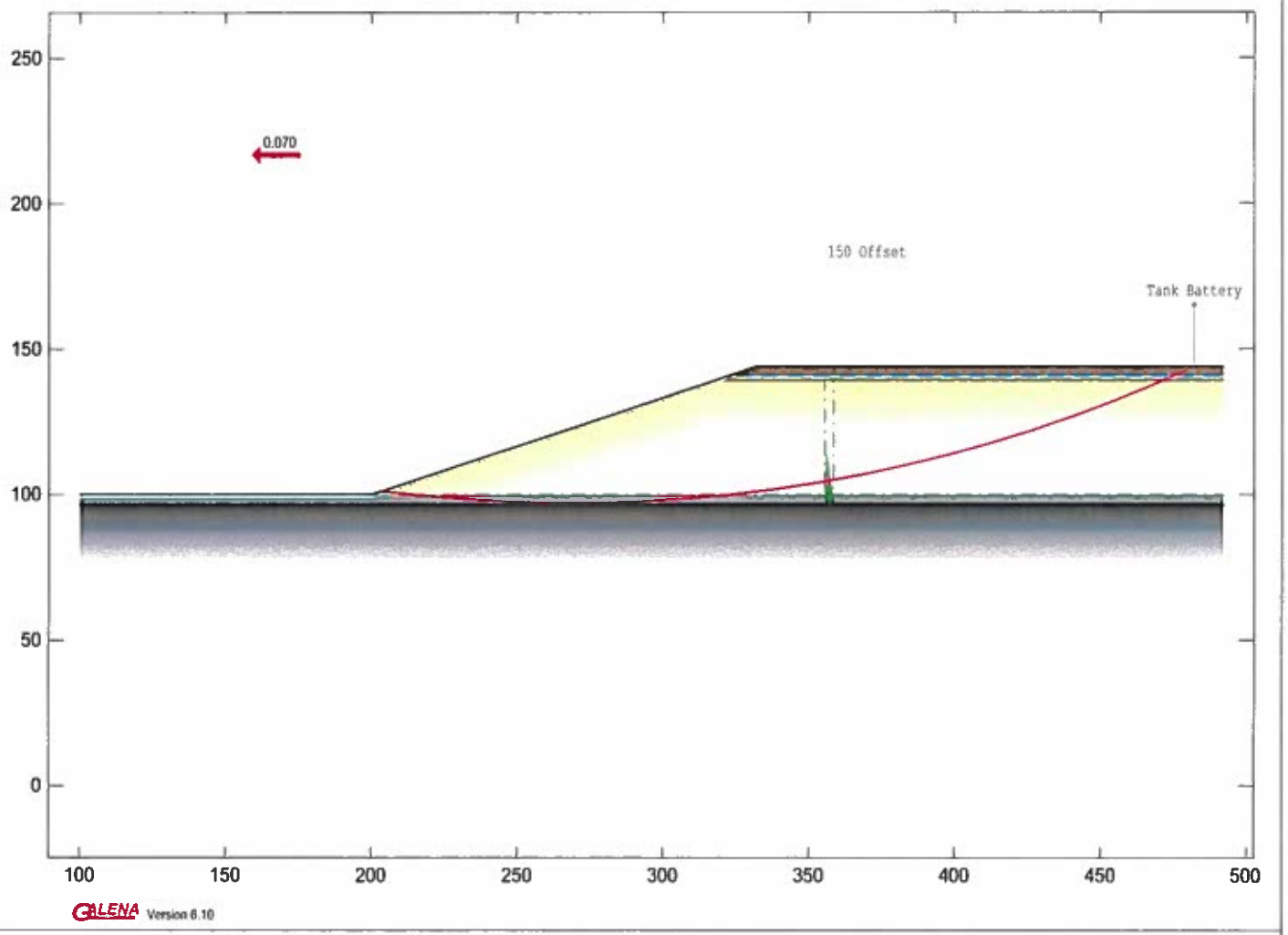

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.41

Project Bennett Pit
Case 2 Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 2 Rapid Drawdown EQ Final.gmf

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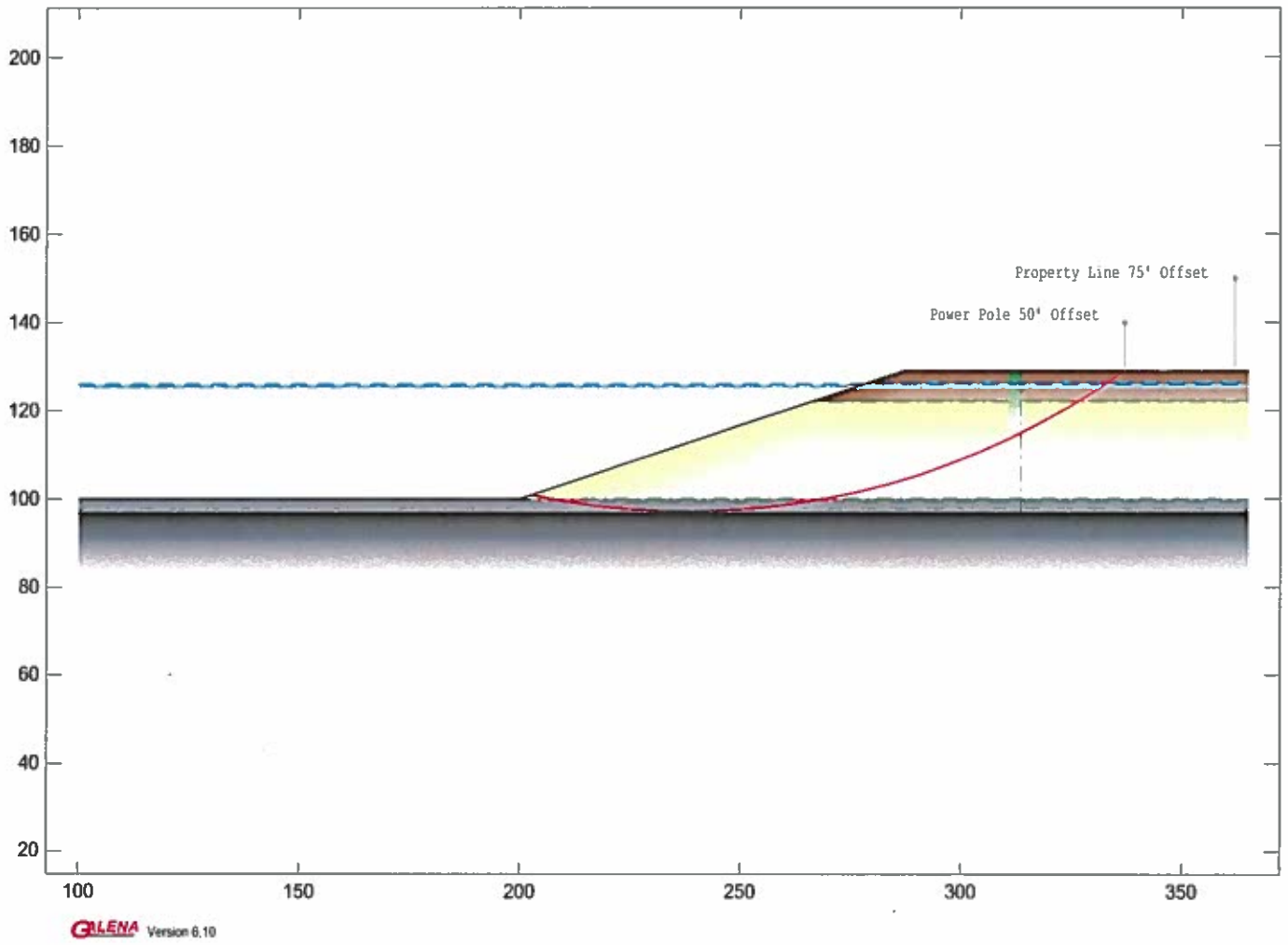

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 2.68

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Project Bennett Pit
Case 3 Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 3 Full Final.gmf

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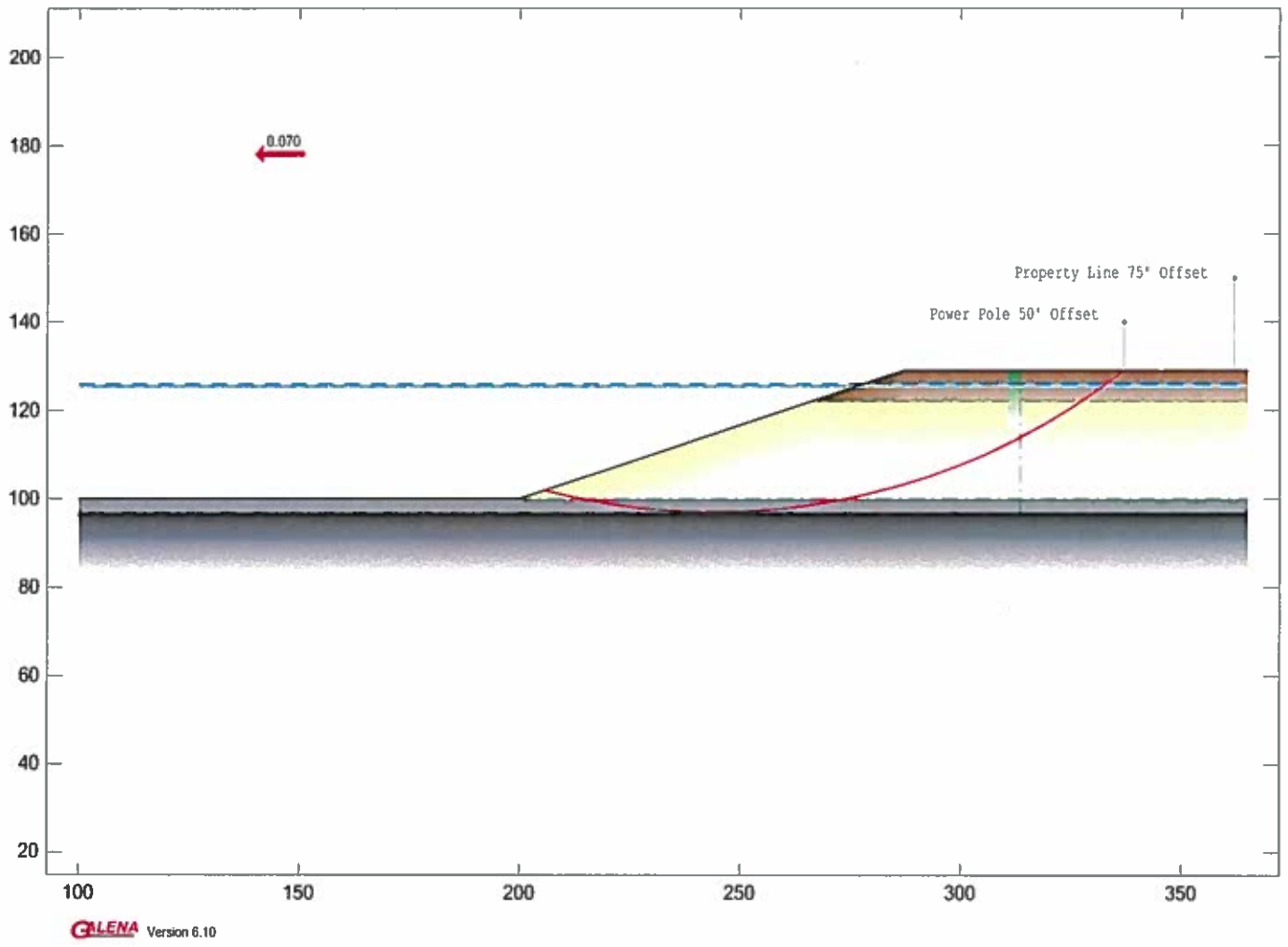

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.68

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Project Bennett Pit
Case 3 Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 3 Full EQ Final.gmf

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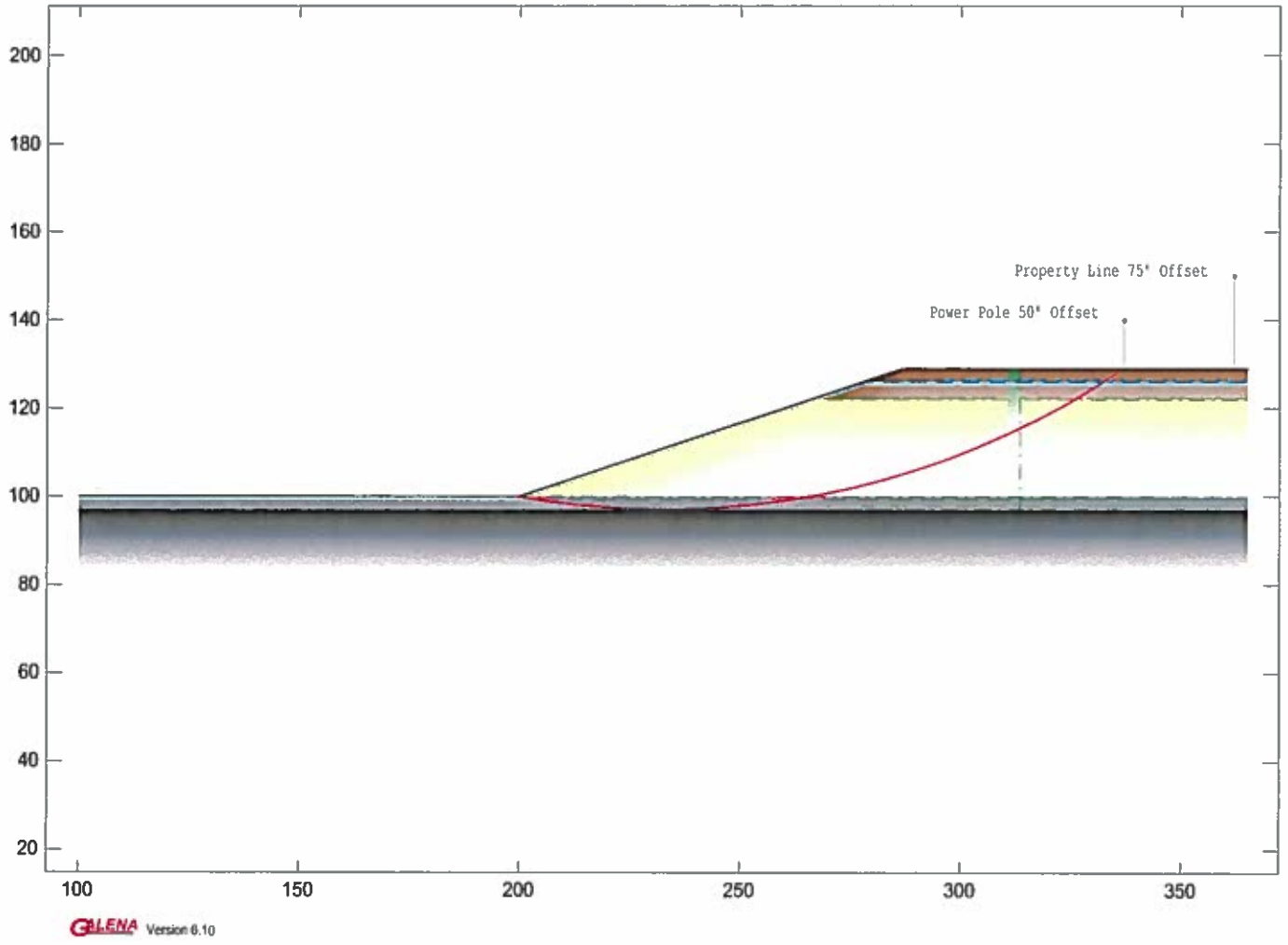

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.49

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Project Bennett Pit
Case 3 Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 3 Rapid Drawdown Final.gmf

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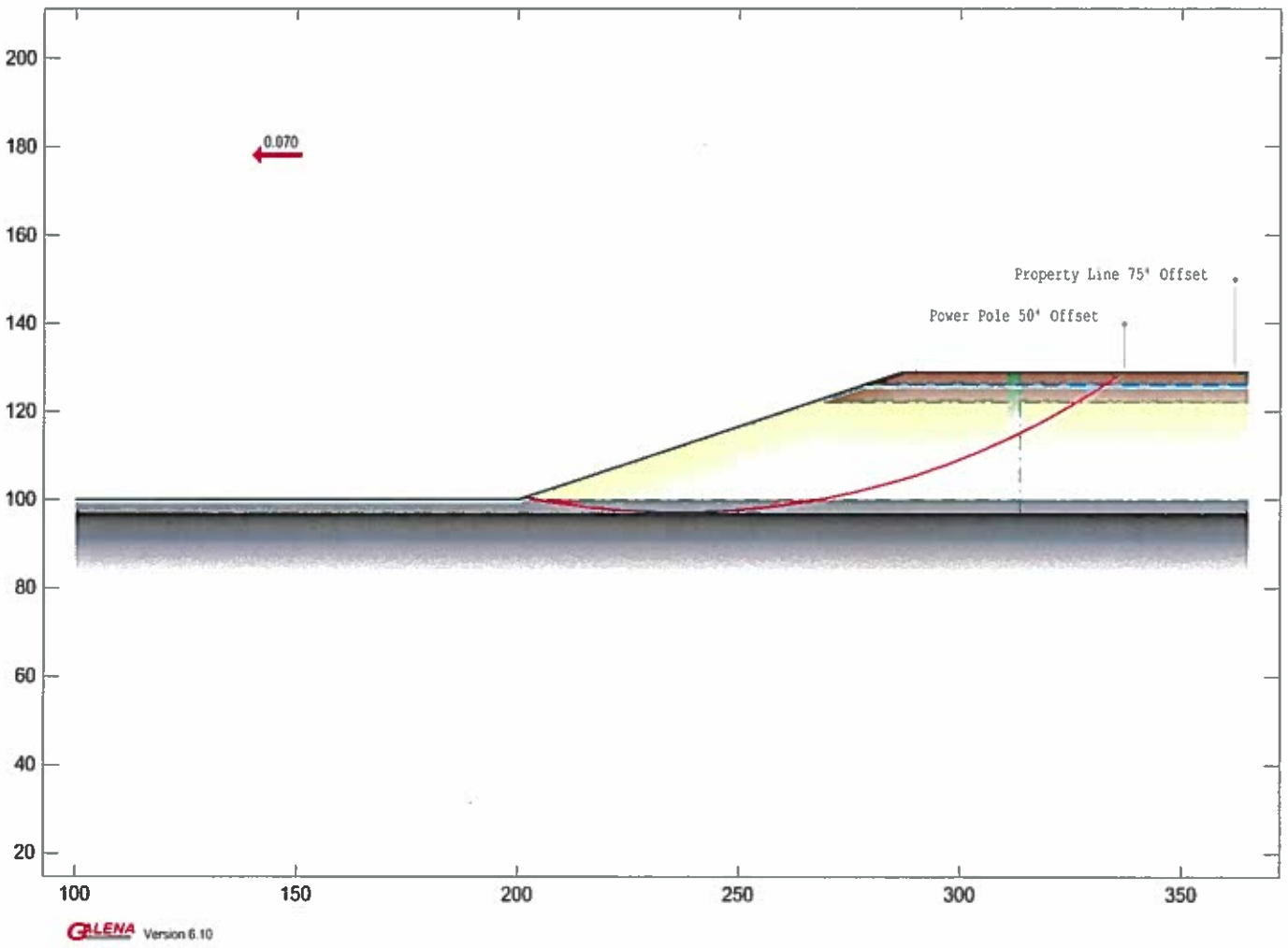

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.10

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Project Bennett Pit
Case 3 Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 3 Rapid Drawdown EQ Final.gmf

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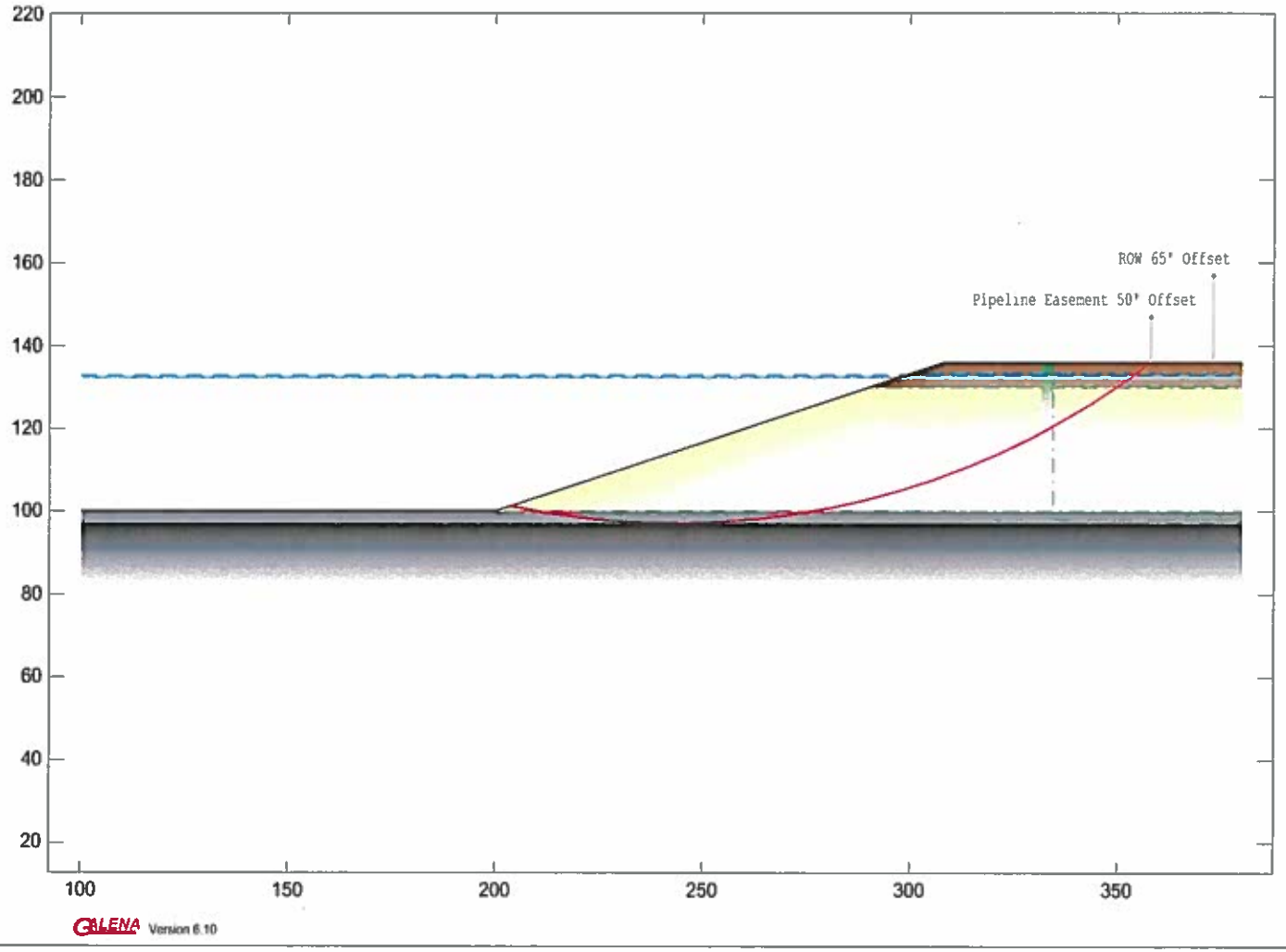

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 2.52

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Project Bennett Pit
Case 4 Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 4 Full Final.gmf

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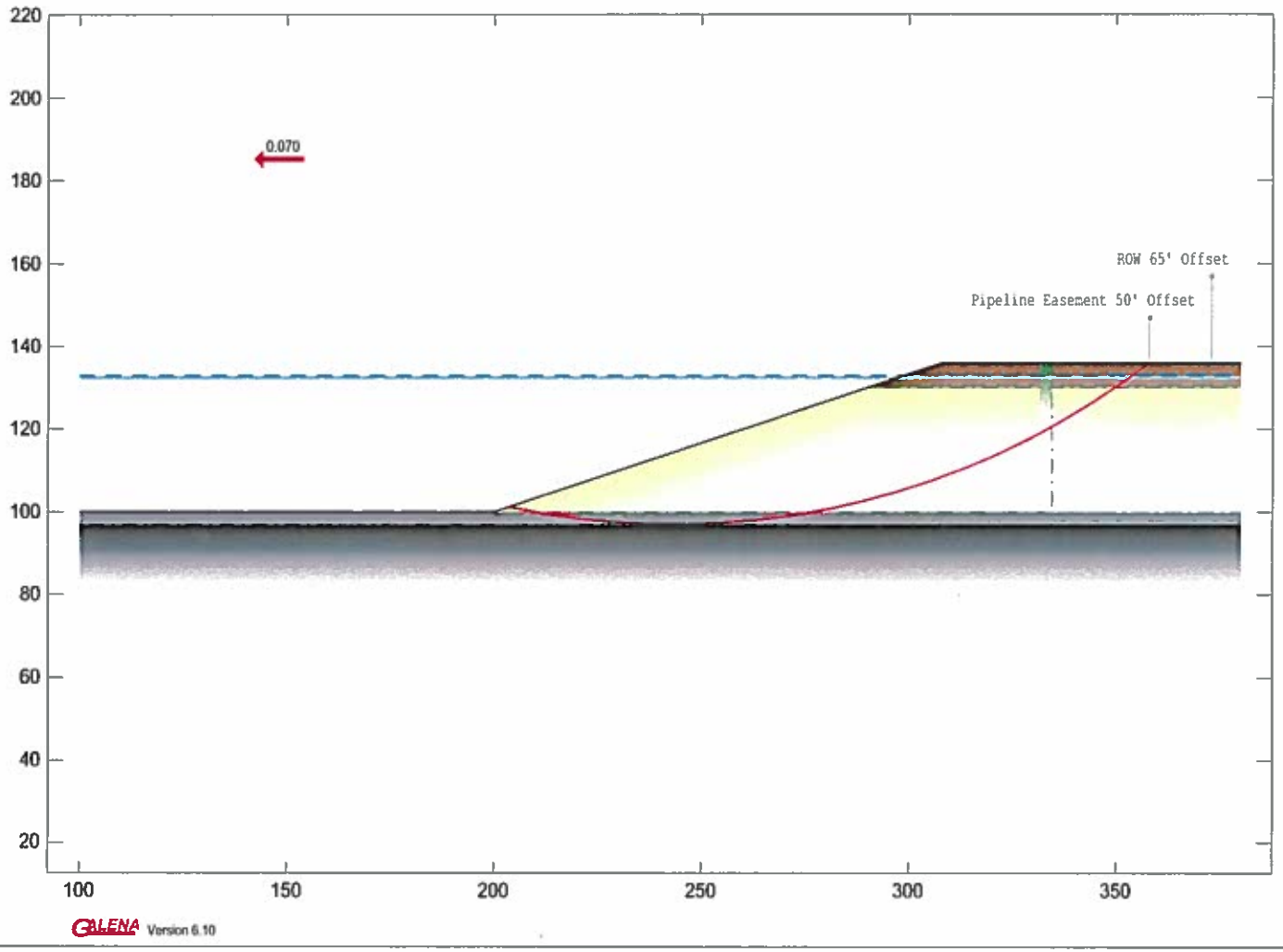

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.61

Project Bennett Pit
Case 4 Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 4 Full EQ Final.gmf

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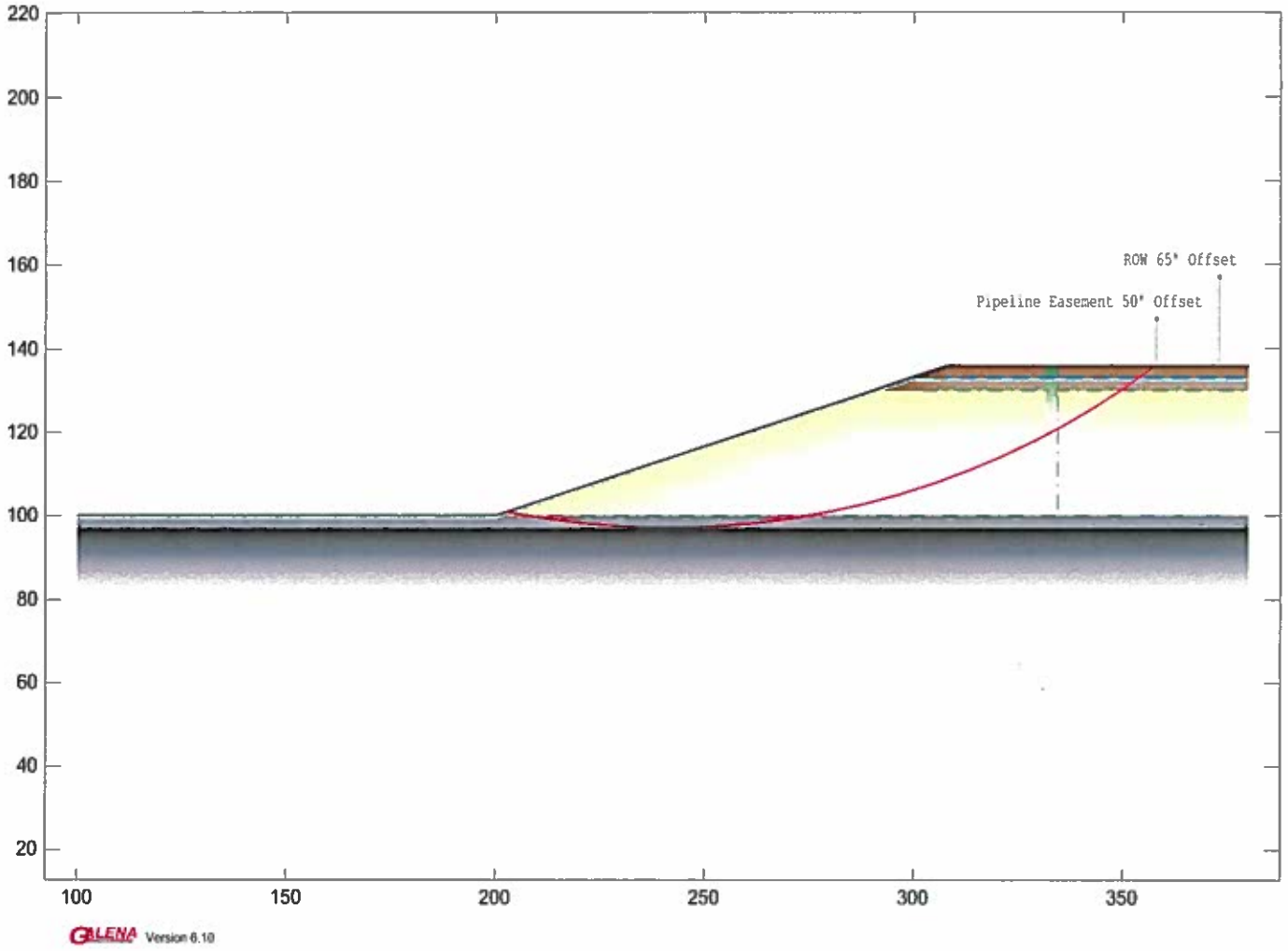

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.34

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Project Bennett Pit
Case 4 Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 4 Rapid Drawdown Final.gmf

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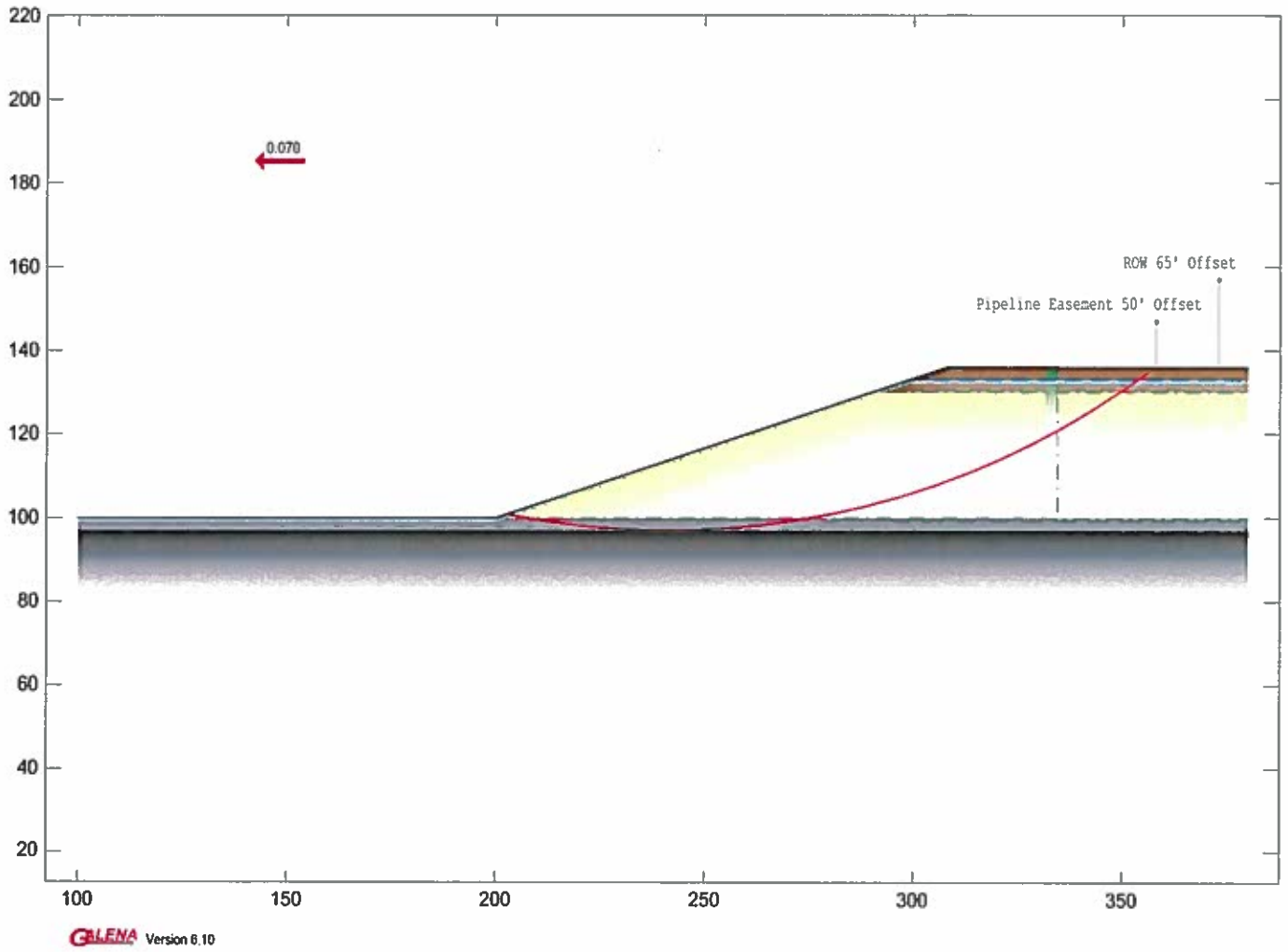

Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.01

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Project Bennett Pit
Case 4 Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 4 Rapid Drawdown EQ Final.gmf

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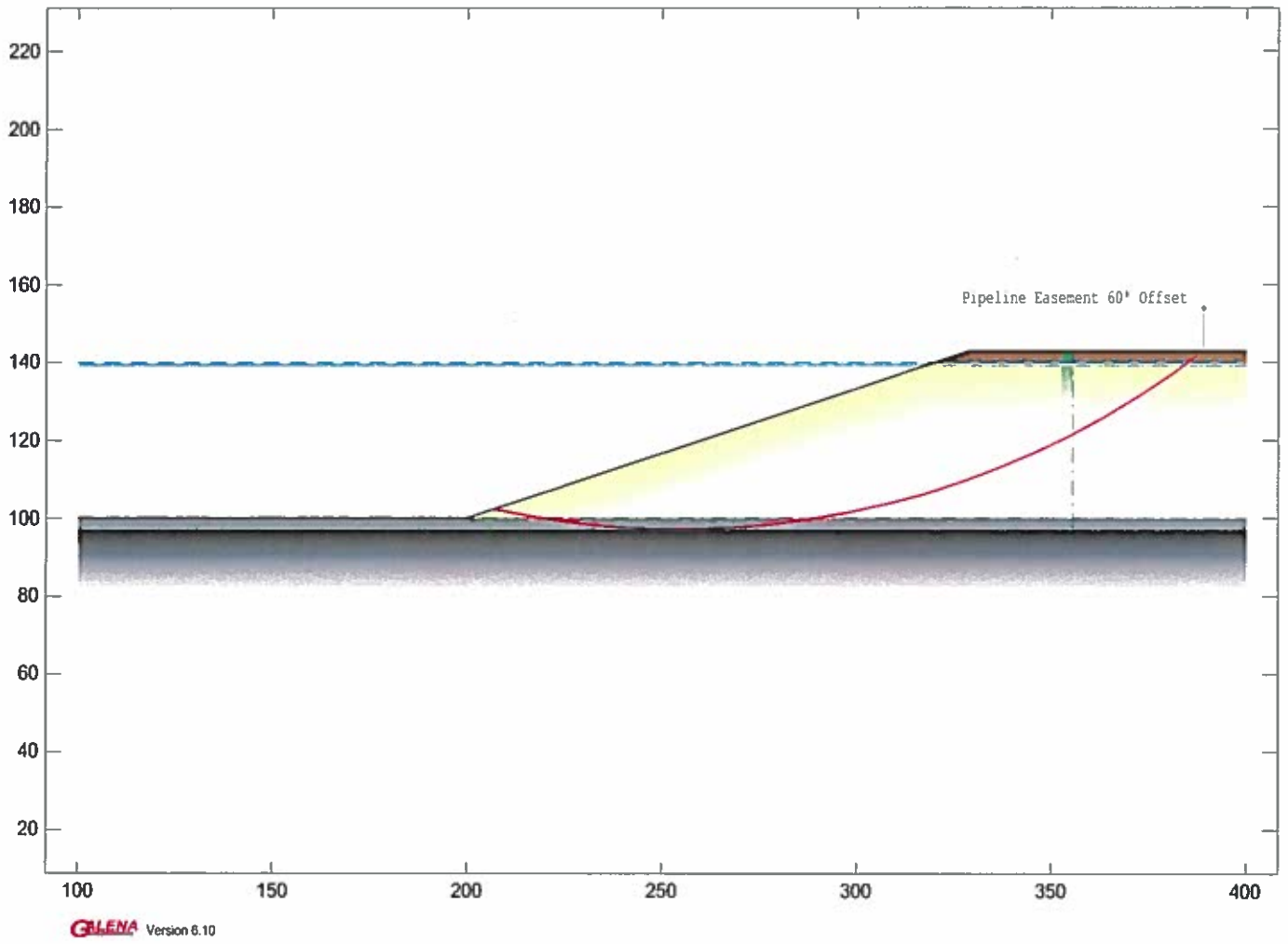


Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

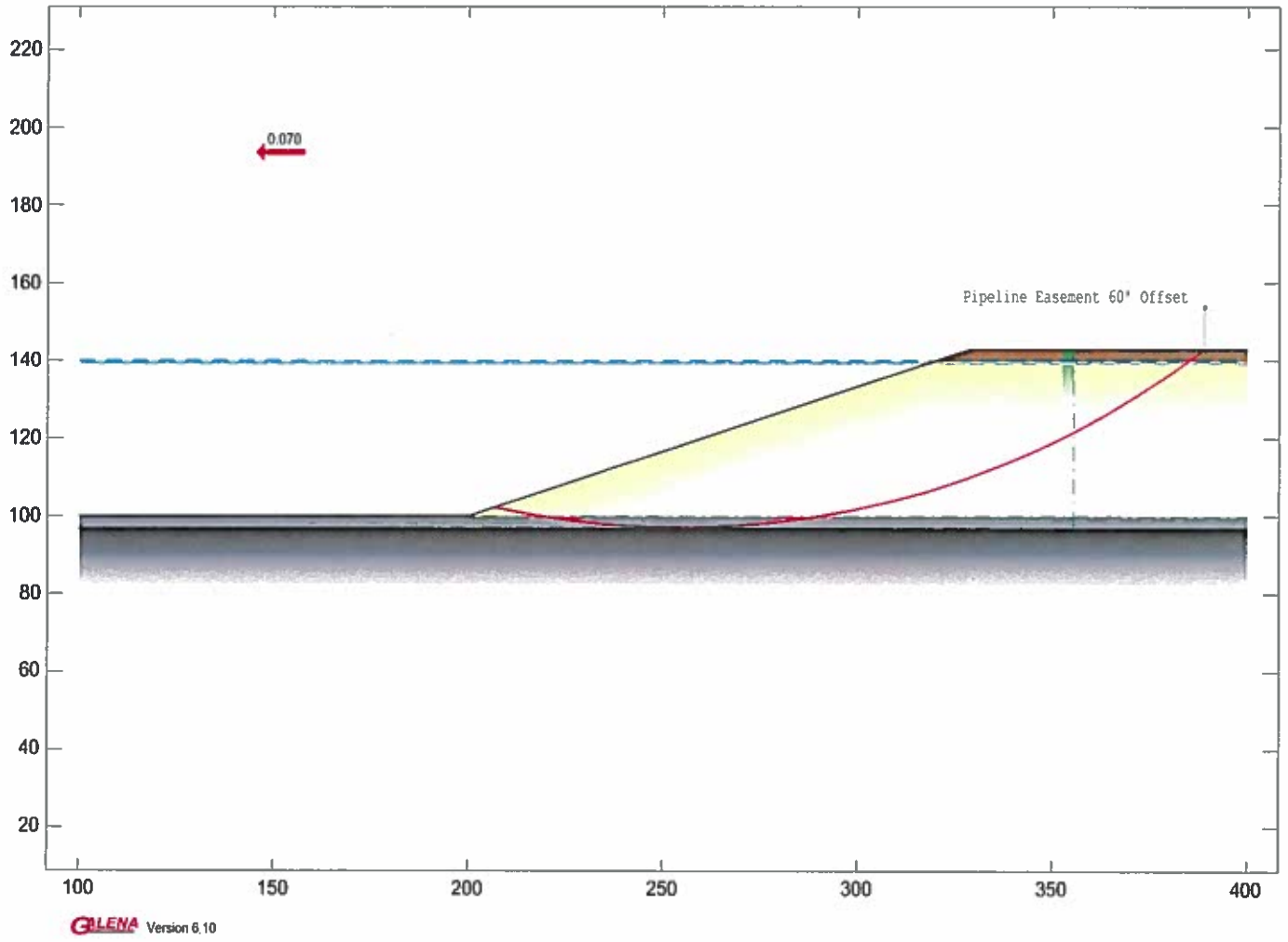
Factor of Safety: 2.56

Project Bennett Pit
Case 5 Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 5 Full Final.gmf

Edited: 6 Jul 2017 *Processed:* 6 Jul 2017

US Dept of Interior - Office of Surface Mining



Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.62

Project Bennett Pit
Case 5 Full

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 5 Full EQ Final.gmf

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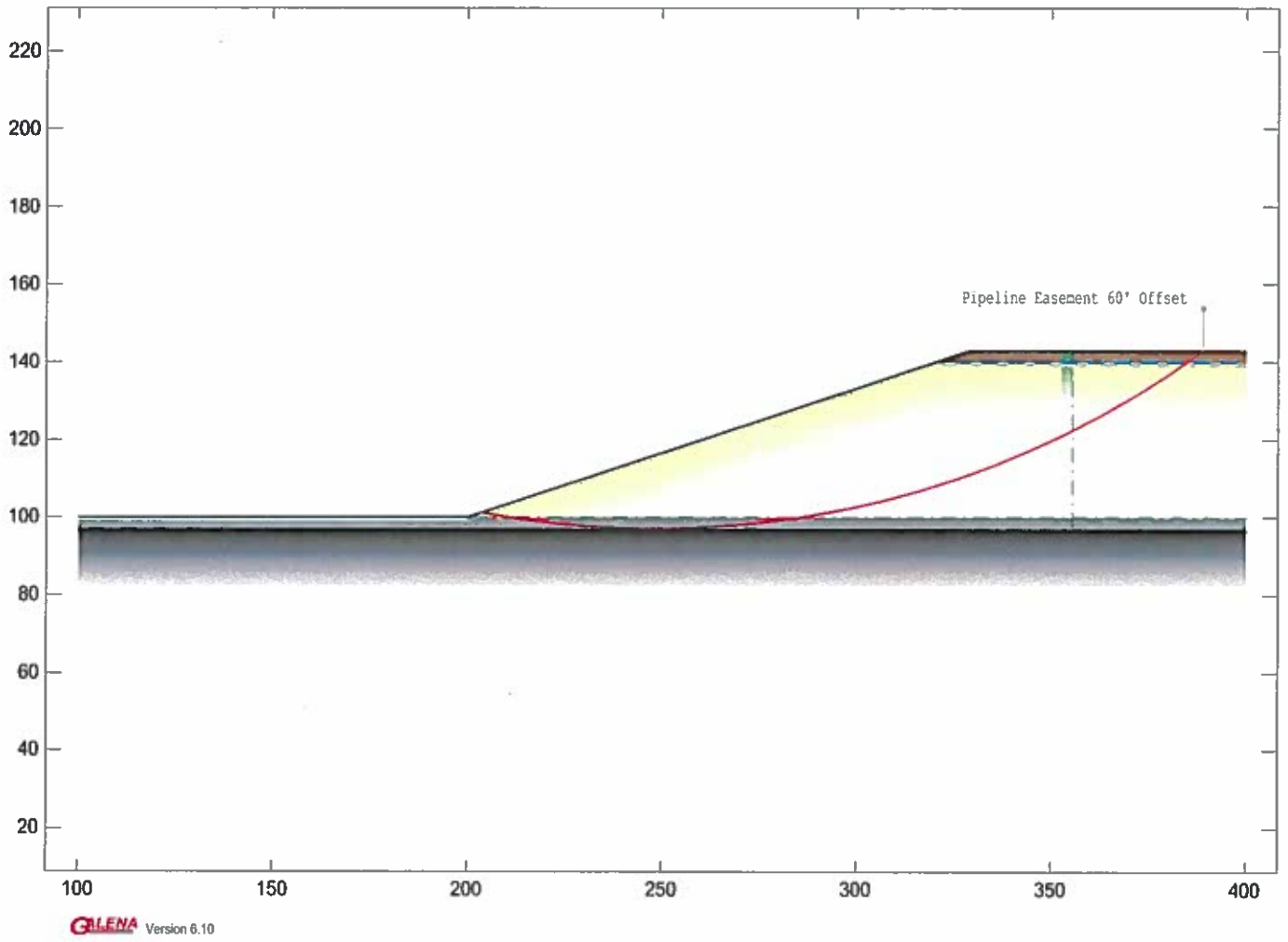
US Dept of Interior - Office of Surface Mining



Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

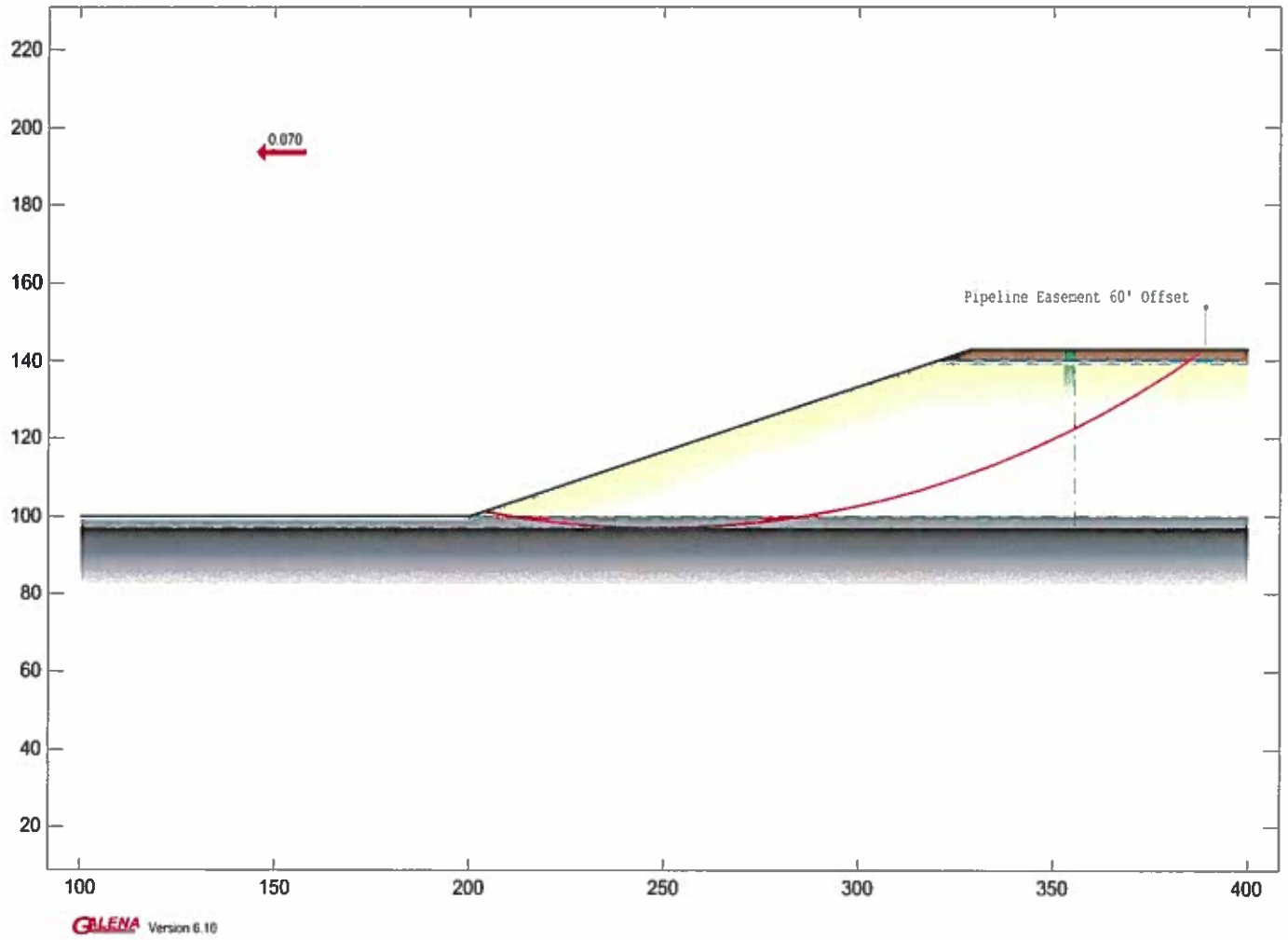
Factor of Safety: 1.33

Edited: 6 Jul 2017 *Processed*6 Jul 2017

Project Bennett Pit
Case 5 Rapid Drawdown

File: C:\Users\psh\My Projects\7 Galena - Stability Analysis Models\Bennett Pit\V2 Case 5 Rapid Drawdown Final.gmf

US Dept of Interior - Office of Surface Mining



Material Keys

- Overburden
- Sand and Gravel
- Weathered Bedrock
- Stable Bedrock
- Slurry Wall

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.00

Project Bennett Pit
Case 5 Rapid Drawdown

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Edited: 6 Jul 2017 *Processed:* 6 Jul 2017

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