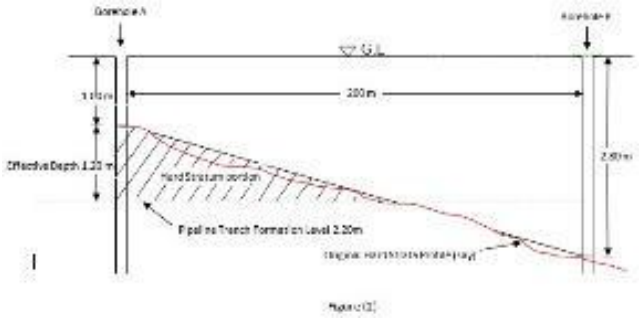

Therefore for this SPTs should be conducted further below the project pipeline trench formation level as decided based on the accuracy required and improvisation can be made by giving conditions for this.

VIII. Discussion

The site verifications were carried-out during the project execution stage with the plus (+) or minus (-) quantities on the suspected portions, agreed between the Contractor and the Company authorized representatives. The variations came below 10% of the estimated total volume and hence the accuracy of the methodology was more than 90%.

IX. Conclusion

The methodology adopted in EF1701 project is found practicable with an accuracy of about more than 90% as evident from the site verifications done while executing the trench excavations on the concerned hard starta areas along the pipeline route. Improvisations can be made as described above from the lessons learned from the project. The following merits foresight by adopting this methodology:

(1) A reliable quantity for hard strata is obtained before the actual excavation of the pipeline trench

(2) A baseline quantity or depth will be available to verify at site while the excavation of trench for the pipeline takes place.

(3) Later disputes with Contractor can be avoided.

(4) A well defined procedure can be developed which can put in to the contract documents.

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