

**COMPREHENSIVE SEMESTRAL REPORT AT PANGASINAN IRRIGATION  
MANAGEMENT OFFICE OF NATIONAL IRRIGATION  
ADMINISTRATION REGION I**

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An Undergraduate Field Practice Manuscript Submitted to the Faculty of the Department  
of Agricultural and Biosystems Engineering, College of Engineering, Central Luzon  
State University, Science City of Muñoz, Nueva Ecija, Philippines  
in Partial Fulfillment of the Requirements  
for the Degree of

**BACHELOR OF SCIENCE IN AGRICULTURAL ENGINEERING  
(Soil and Water Conservation Engineering)**


**JUNE 2019**

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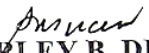
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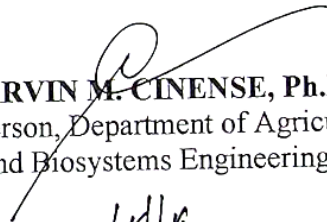
  
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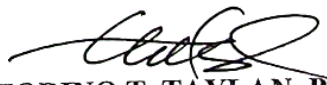
  
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## **BIOGRAPHICAL SKETCH**

Rochelle Ann S. Milar was born on October 27, 1997 at Laoac, Pangasinan. She is the youngest among the four (4) children of Mr. Reynaldo C. Milar and Mrs. Myra S. Milar. She has one (1) sister namely Krizza S. Milar-Morondo, and two (2) brothers namely Glenn S. Milar and Raymark S. Milar.

She completed her elementary at Lyceum Northern Luzon (LNL), Inc. at Urdaneta City, Pangasinan on the year 2009 and continued her secondary education at the same institution on the year 2013. On those years, she learned to focus on some important matter like her studies, she learned to participate in some curricular activities that help her boost her confidence and help her built her character. She pursued her Bachelor's Degree in Central Luzon State University and took up Bachelor of Science in Agricultural Engineering.

Her college life was well spent and full of challenging lessons that molded her to become an educated person. They were well spent years in building a strong friendship to every the individuals who became her inspiration and who supports her during ups and downs. Her college life was one of her best stepping stones for making her dreams possible.

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## ABSTRACT

**MILAR, ROCHELLE ANN S.**, Department of Agricultural and Biosystems Engineering, Central Luzon State University, Science City of Muñoz, Nueva Ecija, **June 2019, COMPREHENSIVE SEMESTRAL REPORT AT PANGASINAN IRRIGATION MANAGEMENT OFFICE OF NATIONAL IRRIGATION ADMINISTRATION REGION I**

Adviser: MARLON T. DELOS SANTOS, M. Sc.

Field practice is the work that has been done to gain knowledge and to have practical experiences through direct observation. The field practice programs provide an opportunity to apply previous knowledge, view real examples set in a worldly framework, and opportunity to be involved, physically, with real situations in the field. All of this promotes a deeper understanding of the subject being studied and an improved ability to recall the information and experiences, later, as needed.

The activity that was performed was Detailed Engineering Design for the Irrigation Project. The preparation of detailed engineering design of check structure includes the validation of the proposed site for the irrigation project, topographic surveying and generating a topographic map, preparation of detailed engineering design and preparation of the program of works (POW) or cost estimates for the proposed check structure.

The activity was performed using a total station and a leveling staff to gather the elevations and coordinates that are needed for the generation of the topographic map. Data gathered was saved and imported in the CAD software to generate the topographic map. List of materials and works was then prepared for the program of works (POW).

The site validated was Barangay Bolo, San Jacinto, Pangasinan. It has an irrigable area of 20 hectares and a catchment area of 90 hectares. The selected design flood discharge,  $Q$ , was 45 cubic meters per second ( $\text{m}^3/\text{s}$ ). Upstream apron elevation was 37.0 m. Downstream apron elevation was 36.5 m. Length of crest was 3.0 m. The total direct cost estimated for the construction of the check structure in Barangay Bolo, San Jacinto, Pangasinan is Php 15,300,000.00 and meets the Php 200,000.00 development cost per hectare set by BSWM for the improvement construction of check structure.

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