

## Review Form 1.7

Journal Name:	Asian Journal of Geological Research
Manuscript Number:	Ms_AJGER_110798
Title of the Manuscript:	Compressibility Analysis and Geomechanical Characterization for CO2 Sequestration and Storage for Advancement of Health and Environment Protection. A Case of 'Jxt' Field, Niger Delta, Nigeria.
Type of the Article	Original Research Article

### PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments  <b>1. Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)  <b>2. Is the title of the article suitable?</b> (If not please suggest an alternative title)  <b>3. Is the abstract of the article comprehensive?</b>  <b>4. Are subsections and structure of the manuscript appropriate?</b>  <b>5. Do you think the manuscript is scientifically correct?</b>  <b>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b>  <u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u>	<ol style="list-style-type: none"> <li>Yes, this study is important for scientific community. It combines global environmental concerns with localized applications, a multidisciplinary approach, significant findings, and practical implications.</li> <li>Yes, the title of the article is suitable.</li> <li>Yes, the abstract is comprehensive. It effectively outlines the key components of the study, including the background, objectives, methods, and findings.</li> <li>The structure of the manuscript is appropriate. However, there is "2.2.2. Geomechanics" subsection on Page 5, and it is the only subsection expressed by number. Please standardize the representation of sections and subsections.</li> <li>Yes, the manuscript is scientifically correct.</li> <li>In the introduction section, there is no reference to the harmful effects of CO<sub>2</sub> and the importance of CO<sub>2</sub> storage. It is recommended to include recent references on CCUS (Carbon Capture, Utilization, and Storage) in this section to enhance the academic support of the content. Suggested references: Yao et al. A Review of Recent Progress of Carbon Capture, Utilization, and Storage (CCUS) in China. 2023, <a href="https://doi.org/10.3390/app13021169">https://doi.org/10.3390/app13021169</a>. Chen et al. A critical review on deployment planning and risk analysis of carbon capture, utilization, and storage (CCUS) toward carbon neutrality. 2022, <a href="https://doi.org/10.1016/j.rser.2022.112537">https://doi.org/10.1016/j.rser.2022.112537</a>.</li> <li>Figure 1 is missing, please add it to the manuscript.</li> <li>Please verify the accuracy of the letter forms in the expression of the formula.</li> <li>Please pay attention to formatting issues.</li> </ol>	Agreed  Agreed Agreed  Noted for correction  Agreed  Accepted with thanks   Noted and added Done Done
<b>Minor</b> REVISION comments  <b>1. Is language/English quality of the article suitable for scholarly communications?</b>	The English expression needs improvement.	Noted and checked already with Grammarly.
<b>Optional/General</b> comments		

### PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	