

Research Lab Sheet

Lab Name	Geophysics
Academic Year	2021-2022

Basic Information	
Department	Geology
Location	Eastern corner, Building 3
Total area (m²)	50 m²
Head of the lab	Prof. Dr. Abdelbaset Mohamed Abudeif Ibraheem
Establishment date	

Lab Members				
No. of Prof.	No. of Ass. Prof.	No. of Lect.	No. of Ass. Lect. & Demonstr.	No. of technicians
3	1	1	3	0

Staff members

#	Name	Scientific degree	e-mail	Specializations	C.V
1	Abdelbaset Mohamed Abudeif	Prof.	a_abudeif@yahoo.com a.abudeif@science.sohag.edu.eg	Applied Geophysics	http://staffsites.sohag-univ.edu.eg/cv/472?p=cv
2	Mohsen Mohamed Attia	Prof.	Mohsen.attia@science.sohag.edu.eg	Applied Geophysics	http://staffsites.sohag-univ.edu.eg/cv/270?p=cv
3	Farouk Abdel Rahman Mahmoud	Prof.	mahmoudf20@yahoo.com mahmoudf20@gmail.com mahmoudf20@science.sohag.edu.eg	Applied Geophysics	http://staffsites.sohag-univ.edu.eg/cv/40?p=cv
4	Mohammed Atef ElSayed	Ass. Prof.	mohammedhassoup@yahoo.com mohammedhassoup@science.sohag.edu.eg	Applied Geophysics	http://staffsites.sohag-univ.edu.eg/cv/1212?p=cv
5	Marwa Mohamed Ali Masoud	Lecturer	mmasoud30@yahoo.com	Petrophysics	http://staffsites.sohag-univ.edu.eg/cv/1672?p=cv

Ass. Lecturers & Demonstrators

#	Name	Scientific degree	e-mail	Specializations	
1	Hossameldeen Adel Gaber Elsayed	Demonstrator	hossameldeen_adel@yahoo.com hosam.gaber@science.sohag.edu.eg	Applied Geophysics	http://staffsites.sohag-univ.edu.eg/cv/1774?p=cv
2	Asmaa Naser Mahmoud	Demonstrator	Asmaa.Nasser@science.sohag.edu.eg	Applied Geophysics	http://staffsites.sohag-univ.edu.eg/cv/15092046?p=cv
3	Mennatulla Ahmed Mohamed shalkamy	Demonstrator	mennatullah_ahmed@yahoo.com	Applied Geophysics	

Theses produced by the Lab		
M Sc. Thesis		
#	Title	Approval date
1	Integrated geomagnetism, GIS and remote sensing for evaluation of Kolit Fahdi, Eastern Desert, Egypt	2022
2	Selection and evaluation of suitable ground motion prediction equations (GMPE) in Northern Egypt	2019
3	Geophysical studies on the proposed site of new Akhmim city Sohag Egypt	2017
4	Environmental and hydrological evaluation of groundwater at Rosetta area, Nile Delta, Egypt using geoelectrical method	2015
5	Crust and Upper Mantle Seismic Velocity Structures and Estimation of the Geotechnical parameters for Tal El-Amarna area, El-Minya, Middle Egypt	2013
6	Reservoir evaluation of Nubian sandstone formation in Rudeis-Sidri area, Gulf of Suez, Egypt, utilizing well log interpretation	2010
7	A geophysical study on the area lies between Wadi Abu Had and Wadi Abu Marwa on the southwestern part of Gulf of Suez	2004
Ph.D. Thesis		
1	Petrophysical assessment for the Jurassic clastics in Gebel EL-Maghara, North Sinai, Egypt	2021
2	Study on the petrophysical evaluation, formation pressure and formation damage at central and southern parts of Gulf of Suez, Egypt	2018
3	Engineering and environmental applications of geophysical methods for studying the nuclear power plant site, North Western Coast, Egypt	2015
4	Characteristics of the Nile delta basic structure and its implication on seismic effects, Egypt	2010
5	Integrated seismic-gravity interpretation for delineating the subsurface structure of El-Sallum area , Northern Western Desert, Egypt	2008
6	The Contribution of Shallow Seismic Refraction Survey in Defining the Engineeringm, Characteristics of the Foundation Materials of Sohag El-Gedida City, Nile Valley	2004

Articles produced by Lab members	
#	Title
1	Radwan, A.E., Wood, D.A., Abudeif, A.M. et al. Reservoir Formation Damage; Reasons and Mitigation: A Case Study of the Cambrian–Ordovician Nubian ‘C’ Sandstone Gas and Oil Reservoir from the Gulf of Suez Rift Basin. Arabian Journal for Science and Engineering (2021). https://doi.org/10.1007/s13369-021-06005-8
2	Abdelbaset M. Abudeif, Gamal Z. AbdelAal, Mohammed A. Mohammed, Hossam A. Gaber, Safaa K. Abbas. 2021. Application of electrical resistivity tomography (ERT) for engineering characterization of the area surrounding the Osirion at Abydos archeological site, Sohag, Upper Egypt. The Fifth International Conference on New Horizons in Basic and Applied Sciences. Organized by Faculty of Science (Assiut) Al-Azhar University. 26-29 September 2021, Hurghada, Egypt.
3	Mohammed A. Mohammed, Abdelbaset M. Abudeif, Gamal Z. AbdelAal, Hossam A. Gaber. 2021. Archaeogeophysical study on the Abydos Temple site using Ground Penetrating Radar Technique, Sohag Governorate, Egypt. The Fifth International Conference on New Horizons in Basic and Applied Sciences. Organized by Faculty of Science (Assiut) Al-Azhar University. 26-29 September 2021, Hurghada, Egypt.
4	Gaber, H.A., Abudeif, A.M., Mohammed, M.A., AbdelAal, G.Z. and Mansour, K.K. 2021. Archaeological Investigation on the site of Osirion- Abydos using Ground Penetrating Radar tool, Sohag Governorate, Egypt. The Sixth Scientific Conference for Young Researchers, Sohag University, Egypt. 10 March, 2021.

5	Masoud, M. M. A. Abudeif, A.M. Nabawy, B.S. 2021. Petrophysical studies and microfacies analysis of the lower Jurassic sequence in Gebel El-Maghara area, north Sinai, Egypt" accepted by publishing committee of Egyptian Society of Applied petrophysics (ESAP) in 07/02/2021 to be published in the Egyptian Journal. of Applied Geophysics, ESAP (ISSN 1687-1251) in the 20th volume no. 1 March 2021.
6	Mohammed, M.A. and Abudeif, A.M., 2020. Use of the geophysical approaches for studying the environmental impact assessment of the human burying techniques to the soil and groundwater: A case study of Geheina cemeteries, Sohag, Egypt. Journal of African Earth Sciences, 172, p.104010.
7	Radwan A.E., Abudeif A.M., Attia M.M., Mohammed M.A. 2020. Pore, Fracture Pressure Modeling: Core Method for Wells' Planning, Execution. Paper Review, Egypt Oil and Gas Group. Cairo, Egypt. http://egyptoil-gas.com/features/pore-fracture-pressure-modeling-core-method-for-wells-planning-execution/
8	Radwan, A. E., Abudeif, A.M., Attia, M.M. (2020). Investigative petrophysical fingerprint technique using conventional and synthetic logs in siliciclastic reservoirs: A case study, Gulf of Suez basin, Egypt. Journal of African Earth Sciences, Volume 167, July 2020, 103868 https://doi.org/10.1016/j.jafrearsci.2020.103868

9	Radwan, A. E., Abudeif, A.M., Attia, M.M. (2020). Geopressure evaluation Using integrated basin modeling, Well-Logging and reservoir data analysis in Gulf of Suez, Egypt. 13th inter, Geol. Conf. Jeddah, KSA, 3-5 March
10	Mohammed M.A., Ali M.H., Abudeif A.M., Abdel Aal G.Z. 2020. Geochemical and electrical resistivity characters of the sediments irrigated with sewage water at Sohag Governorate, Upper Egypt. 13th International Geological Conference. 03-05 March. SSG 2020.Jeddah. Kingdom of Saudi Arabia.
11	Radwan, A. E., Abudeif, A.M., Attia, M.M. (2020). Formation Damage Diagnosis, Application on Hammam Faraun Reservoir: A Case Study, Gulf of Suez, Egypt. 13th inter, Geol. Conf. Jeddah, KSA, 3-5 March
12	Radwan, A. E., Abudeif, A.M., Attia, M.M., Mohamed A.Elkhawaga, Wael K.Abdelghany, Ahmed A.Kasem (2020). Geopressure Evaluation Using Integrated Basin Modelling, Well-Logging and Reservoir Data Analysis in the northern part of the Badri oil field, Gulf of Suez, Egypt. Journal of African Earth Sciences, Volume 162, February 2020, 103743 https://doi.org/10.1016/j.jafrearsci.2019.103743
13	Abdel Aal G.Z., Abudeif A.M., Safaa K.A., Mohammed M.A.2020. High resolution magnetic Gradiometer survey of the area surrounding the Osirion at Abydos archaeological site, Sohag, Egypt. 13th International Geological Conference. 03-05 March. SSG 2020.Jeddah. Kingdom of Saudi Arabia.

14	Abudeif A.M., M.A. Mohammed, Fat-Helbary R.E., El-Khashab H.M., Masoud M.M. 2020. Integration of 2D geoelectrical resistivity imaging and boreholes as rapid tools for geotechnical characterization of construction sites: A case study of New Akhmim city, Sohag, Egypt. Journal of African Earth Sciences. V. 163, 103734. https://doi.org/10.1016/j.jafrearsci.103734 .
15	Mohammed M.A., Abudeif A.M., Abd el-aal A.K. 2020. Engineering geotechnical evaluation of soil for foundation purposes using shallow seismic refraction and MASW in 15th Mayo, Egypt. Journal of African Earth Sciences. V. 162, 103721. doi.org/10.1016/j.jafrearsci.103721 .
16	Abudeif A.M., Mohammed M.A., Abd el-aal A.K., Omar, A.K. 2019. Single and multi-channel passive source methods for calculating the shallow S-wave velocity structure and site effect parameters at 15th May City, Egypt. Journal of African Earth Sciences. V. 159, 103579. DOI: 10.1016/j.jafrearsci.2019.103579
17	Radwan, A.E., Abudeif, A.M., Attia, M.M., Mahmoud, M., (2019). Development of formation damage diagnosis workflow, application on Hammam Faraun reservoir: A case study, Gulf of Suez, Egypt, Journal of African Earth Sciences, 153, 42-53. doi: https://doi.org/10.1016/j.jafrearsci.2019.02.012
18	Radwan, A.E., Abudeif, A.M., Attia, M., Mahmoud, M. (2019) Development of formation damage diagnosis workflow, application on hammam faraun reservoir: A case study, Gulf of Suez, Egypt. Offshore Mediterranean Conference and Exhibition

	27-29 March, OMC 2019, Ravenna, Italy, , Ravenna, Italy, Document ID:OMC-2019-1120
19	Mohammed M.A., Sensoy, M.M., Abudeif A.M. 2019. Derivation of empirical relationships between geotechnical parameters and resistivity using electrical resistivity tomography (ERT) and borehole data at Sohag University site, Upper Egypt. Journal of African Earth Sciences. V. 158, 103563. DOI: 10.1016/j.jafrearsci.2019.103563
20	Mohammed M.A. and Abudeif A.M. 2019. Geoelectrical Characterization of the Al-Kawamil New Settlement, Sohag, Egypt. Journal of Environmental and Engineering Geophysics (JEEG). V. 24(2), 327–332. DOI: #10.2113/JEEG24.2.327.
21	Abudeif A.M., Fat-Helbary R.E., Mohammed M.A., El-Khashab H.M., Masoud M.M. 2019. Geotechnical engineering evaluation of soil utilizing 2D multichannel analysis of surface waves (MASW) technique in New Akhmim city, Sohag, Upper Egypt. Journal of African Earth Sciences. V 157, 103512. https://doi.org/10.1016/j.jafrearsci.2019.05.020 .
22	Radwan A.E., Abudeif A.M., Attia M.M., Mohammed M.A. 2019. Pore and fracture pressure modeling using direct and indirect methods in Badri Field, Gulf of Suez, Egypt. Journal of African Earth Sciences. V 156, 133–143. https://doi.org/10.1016/j.jafrearsci.2019.04.015 .
23	Abudeif A.M., Fat-Helbary R.E., Mohammed M.A., El-Khashab H.M. Masoud M.M. 2019. Estimation of the site effect using microtremor technique at New Akhmim city,

	Akhmim, Sohag, Egypt. Russian Geology and Geophysic. Siberian Branch of the Russian Academy of Sciences. Vol. 60, No. 2. 231–239 Doi:10.15372/RGG2019036.
24	Mohammed M.A and Abudeif A.M. 2019. Electrical resistivity tomography applications for the construction an Educational building in New Sohag University at Al Kawamil area, Sohag, Upper Egypt. Problems of geology and subsurface development. School of Earth Science and Engineering. XXIII International Symposium in honor of Academician M.A Usova. Russian, Tomsk. National Research Tomsk Polytechnic University. Vo 1. 8-12 April. pp. 408-409.
25	Samar Ghareeb, Rami Ibrahim, Toshiakai Yokoi, Badawy A, Abdelbaset M.Abudeif, Mohsen Attia, and M. El-Hadidy, 2019. Selection and evaluation of suitable of Ground Motion Prediction Equations (GMPE) in northern Egypt. First Scientific Congress of Junior Geoscientists in Egypt (SCJGE-1) 3-5 January, Geology Department, Faculty of Science, Sohag University, Egypt
26	Safaa K. Abbas, Gamal Z. AbdelAal, AbdelbasetAbudeif, Mohammed Hassoup. 2019. High resolution magnetic survey of the area surrounding the Osirion at Abydos archaeological site, Sohag, Egypt. First Scientific Congress of Junior Geoscientists in Egypt (SCJGE-1). 3-5 February, Geology Department, Faculty of Science, Sohag University, Egypt.
27	Abudeif A.M., Fat-Helbary R.E., El-Khashab H.M., Mohammed M.A., Masoud M.M. 2019. Geotechnical engineering evaluation of soil utilizing 2D multichannel analysis of

	surface waves (MASW) technique in New Akhmim city, Sohag, Upper Egypt. First Scientific Congress of Junior Geoscientists in Egypt (SCJGE-1). 3-4 February, Geology Department, Faculty of Science, Sohag University, Egypt.
28	Gamal Z. AbdelAal, Assem E. El-Haddad, Mona S. Badri and Mohammed A. Mohammed. 2019. Inferring depth to basement using airborne magnetic data at Wadi El Nakhil area, Eastern Desert, Egypt. Assiut University, journal of Geology. 48(1), pp 1-11.
29	Mohammed M.A., Abudeif A.M., Omar K.A., Attia M.M. 2018. Estimation of site effect using microtremor technique at 15th May City, Helwan, Egypt. Arabian Journal of Geosciences. 11:16 doi:10.1007/s12517-017-3348-7
30	Atef M., Omar K., Abudeif A., Attia M. 2018. Estimation of Site Effect Using Microtremor Technique at 15th May City, Helwan, Egypt. In: Kallel A., Ksibi M., Ben Dhia H., Khélifi N. (eds) Recent Advances in Environmental Science from the Euro-Mediterranean and Surrounding Regions. EMCEI 2017. Advances in Science, Technology & Innovation (IEREK Interdisciplinary Series for Sustainable Development). Springer, Cham.
31	Mohammed Atef, Khalid Omar, Abdelbasit Abudeif, Mohsen Attia. 2017. Estimation of Site Effect Using Microtremor Technique at 15th May City, Helwan, Egypt. The 1st Euro-Mediterranean Conference for Environmental Integration (EMCEI) 22-25 November, Sousse, Tunisia.

32	Khaled Omar, Abd el-aziz Khairy Abd el-aal, M Atef, A. Abudief. 2017. Imaging engineering problems and shallow geological characterization using passive seismic techniques. Ninth International Conference on the Geology of Africa (ICGA). 7-9 November, Assiut, Egypt.
33	Abudeif A.M., Raef A.E., Abdel Moneim A.A. Mohamed M.A., Farrag, A.F. 2017. Dynamic geotechnical properties evaluation of a candidate nuclear power plant site (NPP): P- and S-waves seismic refraction technique, North Western Coast, Egypt. Soil Dynamics and Earthquake Engineering. V. 99, 124-136.
34	AbdelAal G.Z., Mohammed M.A., Abudeif A.M. 2017. Geophysical investigation of the possible source of groundwater level rise at Abydos (the Osirion) archeological site, Sohag, Egypt. Submission to 2017 International Conference on Engineering Geophysics. Submission ID: 17984946.
35	Abudeif, A. M., Attia, M. M., El-Khashab, H.M & Radwan, A.E, (2018). Hydrocarbon type detection using the synthetic logs: A case study, Baba member, Gulf of Suez, Egypt, Journal of African Earth Sciences, 144, 176-182. https://doi.org/10.1016/j.jafrearsci.2018.04.017
36	Abudeif, A.M., Attia, M.M., Badawy, A, El-Hadidy, M. and Ghareeb, S. A, 2018. Developing input model for selecting and evaluating GMPEs for north Egypt. Egyptian Journal of Applied. Geophysics.
37	Abudeif, A.M., Fat-Helbary, R. E., El-khashab, H. M., Masoud, M. M. (2018). Engineering Applications of 2D Electrical Resistivity Tomography (TRT) For the

	proposed New Akhmim City, Sohag, Egypt. 12th International Geological Conference in Jeddah (Feb 4-8, 2018), organized by the Saudi Geological Survey and the Saudi Society for Geosciences.
38	Abudeif, A.M, Alkhashab, M.H, Saad. S.E (2018). Detection of basaltic intrusion using geomagnetic survey on Kolit Fahdi, Eastern Desert, Egypt). 12th International Geological Conference in Jeddah (Feb 4-8, 2018), organized by the Saudi Geological Survey and the Saudi Society for Geosciences.
39	Abudeif, A. M., Abdel Moneim, A. A. Farrag, A. F, (2017). GIS-based multi-criteria earthquake hazards evaluation using analytic hierarchy process for a nuclear power plant site, west Alexandria, Egypt. Environmental Earth Sciences 76:796, DOI: 10.1007/s12665
40	Abudeif, A.M., Raef. A. Abdel Moneim A.A, and Farrag, A.F. (2017). Dynamic geotechnical properties evaluation of a candidate nuclear power plant site (NPP): P- and S-waves seismic refraction technique, North Western Coast, Egypt. Soil Dynamics and Earthquake Engineering, 99, 124-136. DOI: 10.1016/j.soildyn.2017.05.006
41	Abdelmoneam Raef, Abdelbaset Abudief, Sabreen Gad, Stacey Kulesza, 2016. Integration of Ultrasonic Vp and Vs into MASW inversion: Is it viable and beneficial? 29th Annual Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP At: Denver, Colorado USA
42	Abdel Moneim AA, Farrag AF, Abudeif AM, Seleem EM (2016) Environmental Hydrogeological Conditions of a Nuclear Power Plant Site in Egypt. Journal of Nuclear Energy Science & Power Generation Technology 5:1. doi:10.4172/2325-9809.1000145

43	Abudeif, A. M., Attia, M. M., & Radwan, A. E. (2016). Petrophysical and petrographic evaluation of Sidri Member of Belayim Formation, Badri field, Gulf of Suez, Egypt. <i>Journal of African Earth Sciences</i> , 115, 108-120. https://doi.org/10.1016/j.jafrearsci.2015.11.028
44	Abudeif, A. M., Attia, M. M., & Radwan, A. E. (2016). New simulation technique to estimate the hydrocarbon type for the two untested members of Belayim Formation in the absence of pressure data, Badri Field, Gulf of Suez, Egypt. <i>Arabian Journal of Geosciences</i> , 9(3), 1-21. https://doi.org/10.1007/s12517-015-2082-2
45	Abudeif, A. M. (2015). Integrated electrical tomography and hydro-chemical analysis for environmental assessment of El-Dair waste disposal site, west of Sohag city, Egypt. <i>Environmental Earth Sciences</i> , 74(7), 5859-5874. https://doi.org/10.1007/s12665-015-4610-5
46	Abudeif, A. M. (2015). Seismotectonic analysis of Hamada oil pool, Libya, using Landsat and seismic data. <i>Arabian Journal of Geosciences</i> , 8(9), 6811-6834. https://doi.org/10.1007/s12517-014-1700-8
47	Abudeif, A. M, Attia, M. M., Radwan, A. E. and Alkhashab H.M.A. (2015). New simulation technique to estimate the hydrocarbon type for the two untested members of Belayim Formation in the absence of pressure data, Badri Field, Gulf of Suez, Egypt, International Conference on Natural Science and Environment (ICNSE) held in Zurich, Switzerland on 26th September 2015, Paper Id: II-NSESZLD-27095-1589
48	Abudeif, A. M., Moneim, A. A., & Farrag, A. F. (2015). Multicriteria decision analysis based on analytic hierarchy process in GIS environment for siting nuclear power plant in

	Egypt. Annals of nuclear energy, 75, 682-692. DOI: http://dx.doi.org/10.1016/j.anucene.2014.09.024
49	Abudeif, A. M., Raef, A., Moneim, A. A., & Farrag, A. F, (2015). Microgravity and engineering approach for siting nuclear a nuclear power plant, North Western Coast, Egypt. International Conference. of Pure &Appl, Sci., Luxor, 28-30 March, 2015
50	Abudeif, A. M., Attia, M. M., & Radwan, A. E., (2015). New systematic correlation method to estimate formation fluid type by using well logging crossplots of Belayim Formation, Badri field, Gulf of Suez, Egypt. International Conference. of Pure &Appl, Sci., Luxor, 28-30 March, 2015
51	Abudeif, A.M., Abdel Moneim, A.A, and Farrag, A.F. (2015). Hydrogeological conditions of El Dabaa area, North Western Desert, Egypt. Ann. of Geol. Surv. Egypt.
52	Abudeif A.M., Attia M. (2014). Integrated seismic data with potential fields for Seismotectonic evaluation of great Cairo and its vicinities, Egypt. Standard Scientific Research and Essays, 2 (9), 451-463
53	Attia M. A. and Abudeif A.M., (2013). Seismicity and Energy Release Evaluation for Future Engineering Constructions at The Northern Part of Egypt. Annals Geol. Surv. of Egypt, 32, 297-304.
54	Abudeif A. M., (2010). Geophysical investigation and geostatistical analysis for hydrocarbon detection and evaluation in Sarir Oil Field, Libya, Journal of Balkan Geophysical Society.
55	Abudeif, A. M. and Ali E.A. (2008). Contribution of remote sensing and seismic data for interpretation of surface and subsurface structures of Hamada field, Libya. J. Appl. Geophys., Vol. 7, No.(1), March.

56	Abudeif, A. M., El-Khashab H, Mahmoud. F. A., and Mousa A. (2007). Potential field data processing and interpretation as a clue for the subsurface geologic structures manifestation of Wadi Abu Had and Wadi Abu Marwa area, Red Sea, Egypt. J. Appl. Geophys., Vol. 6, No. 2, September, 349-369.
57	Tarabees, E., El-Khashab, H. Abu El-Ata, A., Marzouk, I., El-Shahat, A., Abudeif, A. M. and Shokry, M. (2005). A seismic microzonation using microtremor and seismic data, A case study, Sohag, Egypt. Proceeding of the 4Th International Conference of Geology of Africa, Assiut, Egypt. November 15-16, (2005).
58	Abudeif, A. M. (2005). Gravity and Magnetic Modeling in Relation to The Structural-Tectonic Implications of Esh El-Mellaha Area, Red Sea, Egypt. Journal of Applied Geophysics, Vol. 4, pp 20 - 46 .
59	Abu El-Ata, A., El-Khashab, H. Tarabees, E., Abudeif, A. M., Shokry, M., Abdel-Rahman, K. and El-shahat, A., (2005). Geotechnical Consideration for the foundation materials of a New Industrial Area, Sohag, Egypt. Journal of Applied Geophysics, Vol. 4. pp 1-11.
60	Abudeif, A. M and Attia, M. M. (2004). Detection of The Shallow Subsurface Layers Using the Ray Synthetic Seismograms Along the Eastern Part of the Nile Delta, Egypt. Bull. Assuit Vol. No. pp.
61	Attia, M. M. and Abudeif, A. M. (2004). 2D raytracing and Seismic Velocity structure modeling within a specific area of the Nile Delta, Egypt. Journal of Balkan Geophysical Society, Vol. 7, No.3 , p. 30-40.
62	Abudeif, A. M and Mahmoud, F. A., (2001). Subsurface structural setting as inferred from gravity and magnetic data in the area southwest of Sohag, Egypt. 2nd International

	Scientific Conference (Science & Development & Environmental) Cairo, 17-20 March, pp. 593-627.
63	Mahmoud, F. A., E.A. Issawy, A.H. Radwan, A. M. Abudeif, G.S. Hassan, and K.H. Zahran, (2001). Delineating subsurface geologic structure for the area west of Sohag, Upper Egypt, using gravity and magnetic studies” Bull. (NRIAG,) pp 147-172.

Lab instruments						
#	Device	quantity	Quality			
			Good	Poor	Need maintenance	malfunction
1	Ground Penetrating Radar “GPR” GSSI System Model SIR-4000	1	✓			
2	Geometrics 24 Channel Seismograph Shallow Seismic Refraction (Geode Seismograph)	1	✓			
3	Topcon Positioning Systems (GNSS HiPer SR)	1	✓			
4	ROYAL ANALYSER Model (BR SYSTEM)	1	✓			
5	JEOTARA model (JEOTARA ‘BIONIC SYSTEM)	1	✓			
6	Electrical resistance measuring device model (ARES - Automatic Resistivity System)	1	✓			
7	Ground Resistance Gauge Model (SAS300C)	1	✓			
8	Magnetic intensity measuring device model (Magnetometer- Land G-856, Geometrics Company)	1	✓			
9	Garmin GPS 64X	2	✓			
10	Desktop Computer	2	✓			

Instruments Description			
	Device name	Device image	Description /use
1	Ground Penetrating Radar "GPR" GSSI System Model SIR-4000		Applications: Archaeology, Geotechnical assessment, Shallow water investigation, Fill Zones, Contamination mapping, Mines outline, Shallow Structure. Antennas: 100Mhz, 200 MHz, 270 MHz, 400MHz, 900MHz and Multi-Frequency antenna (16MHz-80MHz)
2	Geometrics 24 Channel Seismograph Shallow Seismic Refraction (Geode Seismograph)		Applications: Geotechnical assessment, Seismic zonation, Structure mapping, Tectonic, Seismic hazard, Oil exploration, Water exploration, Modulus calculations, Buildings codes, Soil amplification. Accessories: 24 Channel, P-Wave geophones, S-Wave geophones, 3-Components geophones, Batteries Software: SeisImager
3	Topcon Positioning Systems (GNSS HiPer SR)		Applications: 1. Geopositioning 2. Surveying 3. Used in the precision measurement systems and technologies.

			4. It helps the students in surveying, engineering, GIS, agriculture and construction.
4	ROYAL ANALYSER Model (BR SYSTEM)		The device is used in metal detection and therefore can be used in many areas: 1- The field of prospecting for gold and precious metals. 2- Explore the ancient pharaonic monuments and tombs. 3- Exploration of groundwater located below the surface.
5	JEOTARA model 'BIONIC (JEOTARA SYSTEM)		The device is used in metal detection and the field of prospecting for gold and precious metals. Explore the ancient pharaonic monuments and tombs.
6	Electrical resistance measuring device model (ARES - Automatic Resistivity System)		The device is used to measure electrical resistance and therefore can be used in many areas: Exploration of ground water and its distribution. Engineering exploration and knowledge of the sub-surface layers. Knowledge of subsurface geological structures.

7	Ground Resistance Gauge Model (SAS300C)		Ore deposits mapping, Shallow to deep water investigation, Soil distribution, Contamination mapping, Archaeology, Shallow Structure, Mining and quarries.
8	Magnetic intensity measuring device model (Magnetometer- Land G-856, Geometrics Company)		The device is used to measure the strength of the magnetic field, and therefore it can be used in many fields: The field of detecting metals and economic ores. Knowledge of subsurface geological structures. Applications: Structure mapping, Tectonic, Oil exploration, Archaeology, Ore deposits investigation.
9	Garmin GPS 64X		Applications: 1. Geopositioning 2. Surveying 3. Used in the precision measurement systems and technologies.
10	Desktop Computer		Through software we can: Make analysis and interpretation. Make statistical analysis. Write & read scientific articles.

Evaluate the fulfillment of lab to appropriateness of areas, building installations, facilities and human resources standards

Areas of assessment		Indicators	Yes	Somewhat	No
Floor area and capacity	1	Adequacy of the total capacity of the lab for the number of researcher (1).	✓		
Windows and doors	2	Availability of windows for adequate ventilations.	✓		
	3	Ease of use of windows.	✓		
	4	There are two exits (doors) at least (2).			✓
	5	There are signs to locate directions of emergency exits			✓
Equipment	6	Appropriate temperature during the lectures (3).	✓		
	7	Availability of good ventilation (4).	✓		
	8	The existence of adequate lighting (4).	✓		
	9	Lab is connected to the Internet	✓		
	10	The existence of directions inside the Lab showing entrances and emergency exits.			✓
Security and Safety	11	Existence of firefighting equipment near the hall (5).			✓
	12	Cleanliness of the room.	✓		

1. Minimum area: 1m² for each person.
2. Door's characteristics: Consists of one movable piece - opening to the inside.
3. The appropriate temperature is 18-25 °C in winter and 28°C in summer due to air-condition use.
4. Providing adequate lighting and good ventilation: windows area 10-15% of the floor area
5. Security and safety requirements: evacuation plan / evacuation responsible person/ fire distinguishers / bucket of sand / water source / good condition extinguish hoses / alarm system against fire).