

## **Ahmed Ghalib for Soil Investigation and Engineering Survey**

Ahmed Ghalib Company for Engineering Consultants, Constructions Testing Dep. was established by. Engr Ahmed ghalib at (1998).

Our company Ready to present all the Studies, Consultants, Designs and can make most of Constructions testing for different Civil Engineering Projects,our company joint venture with Al-Ahmaed Bureau for construction testing.

### ***List of Tests:***

#### ***1-Soils:***

- A-** Physical tests include sieve analysis, Atterberg limits, specific gravity, and Compaction test.
- B-** Chemical tests include Ph. value, sulphate, carbonate, gypsum, total soluble salts and organic matter.
- C-** Shear strength characteristics : (Unconfined compression test, Triaxial test and Direct shear test).
- D-** Consolidation and swelling tests.
- E-** Field density.
- F-** Permeability tests.

#### ***2-Rocks:***

- A-** Petrological and Mineralogical of Rock.
- B-** Specific gravity.
- C-** Density and Absorption.
- D-** Abrasion test.
- E-** Point Load Test.
- F-** Unconfined Test.
- G-** Triaxial Test.
- H-** Direct Shear Test.
- I-** Pulse Velocity of The Waves.

#### ***3-Cement&Concrete:***

##### ***3-1 Fresh Concrete:***

- A-** Setting Time.
- B-** Fineness of Cement.
- C-** Consistency of Cement.
- D-** Slump Test for Fresh Concrete.
- E-** Air-Entraining for Concrete.
- F-** Compaction Factor for Concrete.
- G-** Design of Mixing Jobs.

### ***3-2 Hardened Concrete:***

#### ***3-2-a Destructive Tests***

- 1- Compressive Strength.
- 2- Core of Hardened Concrete

#### ***3-2-b Non-Destructive Tests:***

- 1- Ultrasonic Pulse Velocity Apparatus.
- 2- Schmidt Hammer.

### ***4-Base and Sub-Base :***

- A- Standard and Modified Proctor.
- B- Gradation of base and sub-base.
- C- CBR Test.
- D- SO<sub>3</sub>&Gypsum Content.

### ***5-Asphalt Tests:***

- A- Penetration Test for Asphalt.
- B- Percent of air voids.
- C- Marshall Test.
- D- Extraction Test.
- E- Core Test of Asphalt.

The *above mentioned tests* are done according to the *Standard Specifications of BS and ASTM Standards*.

### ***Staff of the company:***

- 1- **Saheb Ahmed Khidher Al-Lahaiby:** Manager of the Bureau, Consultant Engineer of Different Projects and institutes, Ph.D. in Civil Engineering/Materials Engineering.
- 2- **Majed Jaafer Abdul Jabbar:** Assistant Manager of the bureau.
- 3- **Ahmed Abdul Wahid Salman:** Consultant in surveying works, assistant technical engineer in testing different tests, Expert in evaluating of damaged buildings using non-destructive tests by means of Ultrasonic Pulse Velocity Core cutter and Schmidt Hammer.
- 4- **Abbas Jawad Al-Taie:** Consultant in geotechnical Engineering, professional of several tests, Supervision of soil testing programs and checking of the results.
- 5- **Muhammad Abdul-Jabbar Khan:** Consultant in geotechnical Engineering, Supervision of soil testing programs and checking of the results, Assistant engineer in evaluating of damaged buildings using non-destructive tests by means of Ultrasonic Pulse Velocity Core cutter and Schmidt Hammer.
- 6- **Nadhem Musleh:** Technician in testing field density and other tests.
- 7- **Ali Abdul Kareem:** Technician.
- 8- **Sami Suham:** Technical engineer in electrical engineering.

*Concerning Projects, Also, the bureau since its establishments till now, a lot of works were done; some of these works are listed below:*

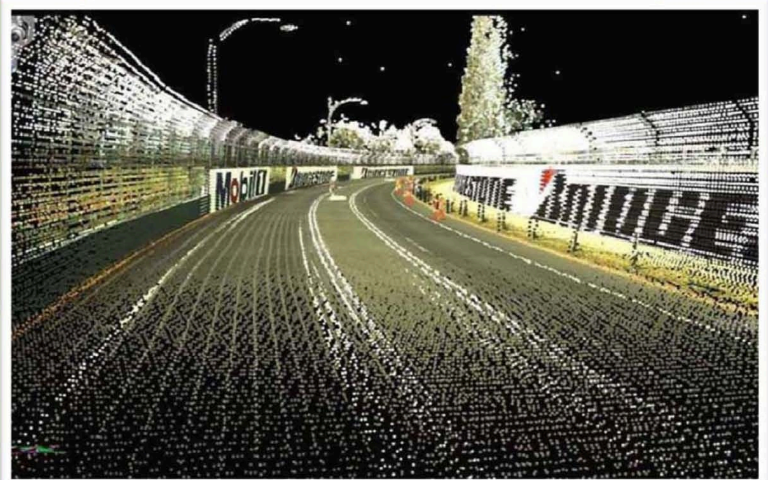
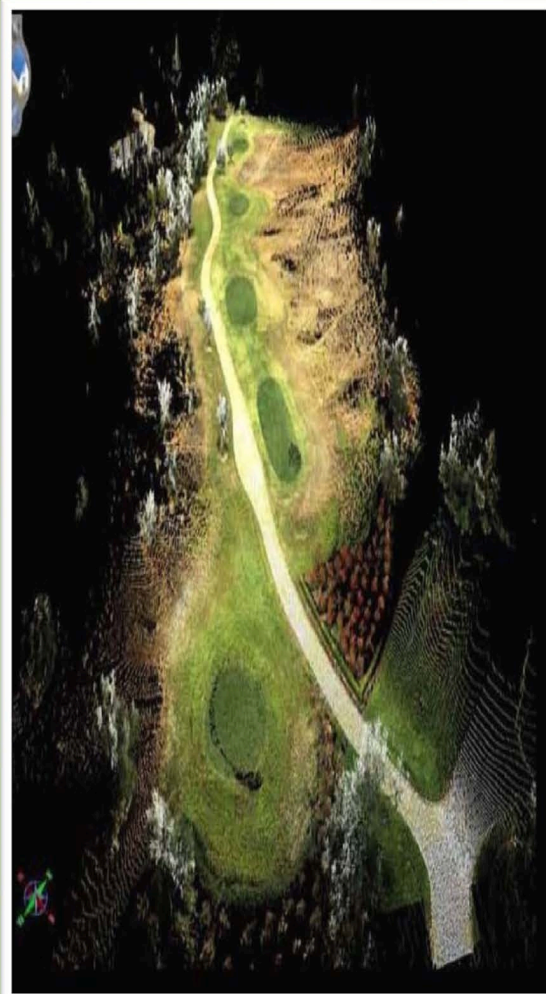
- A-** Bridge of Al-Kut Dam from 1991 until 1992.
- B-** Al-Abbasiyat Bridge 1992.
- C-** The two layers Bridge (Al-Dorah Side) 1993 until 1994.
- D-** Implementing the project of Al-Aziziya Company for Agricultural and Animal production at 1995 until 1996.
- E-** As Consultant Engineer for a number of private and public Projects as a quality control Engineer especially for field of using Chemical Admixtures for Concrete from 1996 until 1998(and as Export in this field in Hot Weather).
- F-** More than 50 consultations were submitted for a number of different Projects and reevaluating Buildings.
- G-** Designed more than 150 mixing Jobs of Concrete with and without Chemical Admixtures for Different Projects(2005).
- H-** Fulfilled more than 600 Reports in Testing of different Material for many Projects.
- I-** Fulfilled Studies and tests for big Dams Project like (TAQ-TAQ Dams, Drash Dam, and Bassara Dam)(2006-2007).
- J-** Field density tests of soil and sub base of different projects such (WWTP, F1, F2, T0-South, T0-North, Area A, St. Al-Nuaimiyia-HT, Al-Falahat Water Treatment Plant\Al-Bu Hassan, Al-Jaghaify School,...etc),2006
- K-** Expert in Non-Destructive Test by Using Ultrasonic Pulse Hammer, for Evaluating the Buildings.Velocity, and Schmidt.
- L-** Evaluation of Ministry of telecommunication using non destructive tests,2007.
- M-** Soil investigation of Al-Yasmine Garden/Kut, 2009.
- N-** Evaluation of Kadhim Mufty Building/Baghdad, 2009.
- O-** Geotechnical Report for the Subsoil Investigation for Al-Dewaniah EOD project, June, 2010.
- P-** Hamrin oil field projects(Site Investigations, Field tests and Electrical Resistivity tests,September,2010.
- Q-** Evaluation of Building No.1701in Tikrit, March, 2011.
- R-** Evaluation of Kadhim Mufty Bldg., March, 2011.
- S-** Evaluation of Al-Anbar Cancer Center, June, 2011.
- T-** SOIL INVESTIGATION OF AL-NAHRAIN UNIVERSITY -EXTENSION AND REFURBISHMENT PROJECT, June, 2011-09-11.
- U-** SOIL INVESTIGATION OF Karbala'a Gas Power Plant PROJECT, June, 2011.
- V-** CBR tests results of the Iraqi Border Road, August, 2011.



## **RSS Technologist for 3D topographic survey**

### **Rapid Survey solution**

- 1-High accuracy 30-50mm
- 2- Save in time and coast
- 3-Integration with ArcGIS
- 4-3D Coordinate Measurement
- 5-Distance, height, tilt and azimuth can be measured by clicking two points on the PC screen.



**Video Image after processing**



## **Surveying by use DGPS and Total Station**

**Install TBM on Basrah  
walkway Bridge by  
DGPS**



**Install TBM near  
Basrah –Baghdad  
street by DGPS**



**Surveying Al  
Hartha WTP in  
Basrah**



**Surveying Basrah  
water network by  
total Station**





## Surveying and detecting Underground utilities by use Pipe Locator.

- 1- Determine pipe location
- 2- Electric Cables
- 3- Communication cables
- 4- No need to excavation
- 5- Save in cost and time

