




# COMPANY PROFILE



## GEOENGINEERS

Geotechnical/Geological Investigation,  
Drilling, Coring, Grouting, Anchors, Pilling, Tubewell  
and Topographic Survey.

 Geohouse, Sohan, Islamabad Expressway. Islamabad.  
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 [geohouse2006@gmail.com](mailto:geohouse2006@gmail.com)



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Anchors  
Grouting  
Shotcrete

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Water and Hydro Power  
Solar and Thermal  
Roads, Bridges and Tunnels  
Mining  
Buildings  
Tube wells

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# ABOUT US



## GEOENGINEERS

We are the provider of geotechnical services, it's our business to explore below the surface. Any successful project starts with the ground upon which it's built.

Our geotechnical solutions include new innovations, which help our clients in gaining knowledge of the area they want to work on. Our wide range of geotechnical services also includes geophysical investigation, instrumentation, and construction services like drilling and grouting and anchoring and shotcrete. While construction methods and timelines may be changing, the need for accurate geotechnical data and responsive, adaptive consulting is ongoing. We're thrilled to partner with you to contribute to your successful project!



## PROJECTS

We have been engaged in the successful execution of major projects of national importance in the fields of roads, highways, motorways, expressways, bridges, culverts, grouting, foundation design, water supply, geological mapping, engineering properties of rocks and soils and geophysical surveys such as seismic refraction and electric resistivity survey. We have successfully carried out the geotechnical investigation of more than

- **50+ HYDROPOWER**
- **100+ ROADS & BRIDGES**
- **420+ BUILDINGS**
- **6+ GROUTING**
- **2 RESERVE ESTIMATION**



*We at GEOENGINEERS always strive for achieving higher excellence in our professional expertise. Our endeavor has always been braving daunting challenges in difficult conditions. We are highly motivated and extremely committed to our professional obligations. We know the knack for achieving our goal timely in extremely diverse conditions. Quality is our attribute.*

In addition to permanent staff, our organization has employed a large number of highly qualified and experienced Engineers on its panel and their services are available as and when required. We have four important sections in our organizational set up which specialize in the topographic survey, geotechnical investigation, drilling studies and laboratory testing respectively. Each section is run by seasoned and competent professionals. Our laboratory is equipped with sophisticated gadgets and the procedures adopted for testing are in conformity with international standards and codes like ASTM and AASHTO.

Our excellence is recognized by our valued clients who have acknowledged our professional honesty and vigor with zeal and appreciated our hard work in words and cash prizes. The order portfolio of Geoenigneers contains many short terms and fast-track projects which reflect the short time decision-making process of our clients and business environment all over Pakistan. We take pride in the dynamism and professional sincerity of our personnel.



**GEOENGINEERS**



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***www.geoengineers.pk***

NTN: 2624856-5

Registered: Pakistan Engineering Council (PEC)

PEC License No: 13060 (C6)



# LIST OF EQUIPMENT

## DTH DRILLING RIGS

Capable of drilling on all angles with auger, DTH. Best for curtain grouting and deep angled anchors. Fast drilling operations at shallow depths.

- **Domine Alto DCH 90** – Max. Depth: 1000m, Max Dia: 457mm
- **Ingersoll-Rand CM150A Crawler DTH** – Max Depth: 30m, Dia: 80 – 140 mm
- **FY 180 DTH** – Max Depth: 180m, Dia: 120 – 254 mm

## ROTARY DRILLING RIGS

Rigs capable of drilling shallow and deep boreholes.

- **XY-4 (Chinese)** – Max. Depth: 1000m, Max Dia: 48 – 122mm
- **XY-2** – Max Depth: 400m, Dia: 48 – 122mm
- **Shahzore** – Max Depth: 300m, Dia: 120 – 254 mm
- **KK – 3** – Max Depth: 100m, Dia: 48 – 96 mm
- **XY – I** – Max Depth: 150m, Dia: 48 – 122 mm

## GROUTING MIXERS

High quality, lump free grouting and agitators.

- **DP500 – Diesel Powered Mixer** – Volume: 500 L, Mixing Speed: 1400 rpm
- **EC400 - Electrical Colloidal Mixer** – Volume: 400 L, Mixing Speed: 1480 rpm
- **EA-1100 – Electrical Agitator** – Agitator Volume: 1100 L, Agitating Speed: 40-50 rpm, Mixer Volume: 800 L
- **EP-800/800** – Mixing Speed: 1400 rpm, Agitator Volume: 800 L, Agitating Speed: 40-50 rpm

## GROUTING PUMPS & PACKERS

High pressure variable, triplex piston grout pumps and inflating packers.

- **BW250 Diesel** – Flow rate 30 – 250 lpm, Max Press: 0-9 MPa
- **BW 160 Diesel** – Volume: 400 L, Mixing Speed: 1480 rpm
- **Ram50/Ro55/HCH** – Volume: 1100 L, Agitating Speed: 40-50 rpm
- **Pneumatic & Mechanical Packers**



# Services in Related Sectors

## Water & Hydro Power



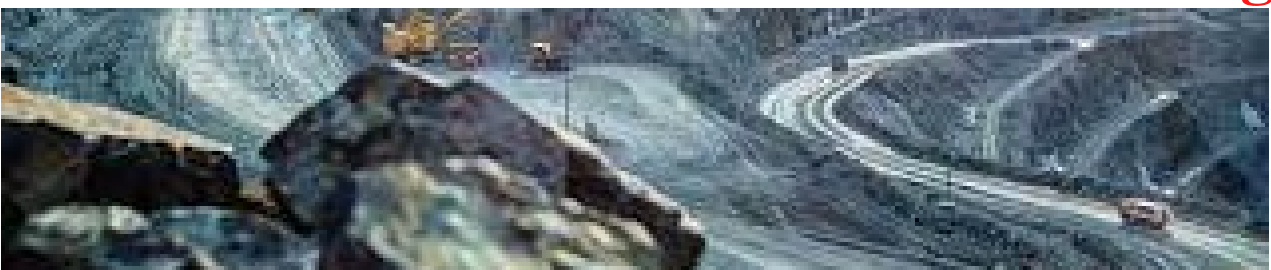
## Solar & Thermal Power



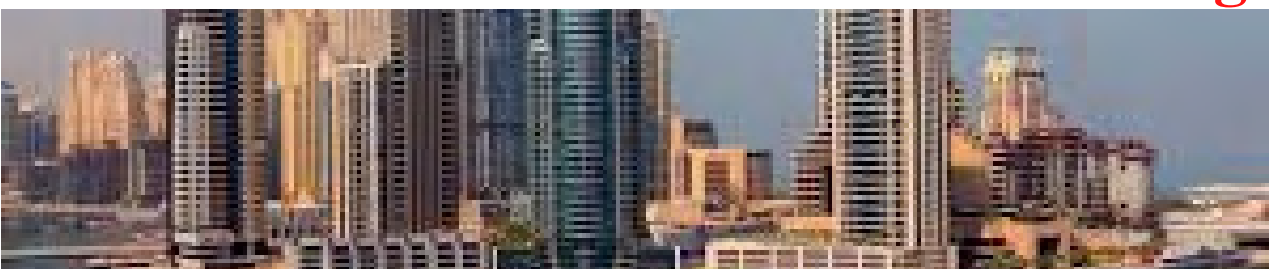
## Road, Bridges & Tunnels

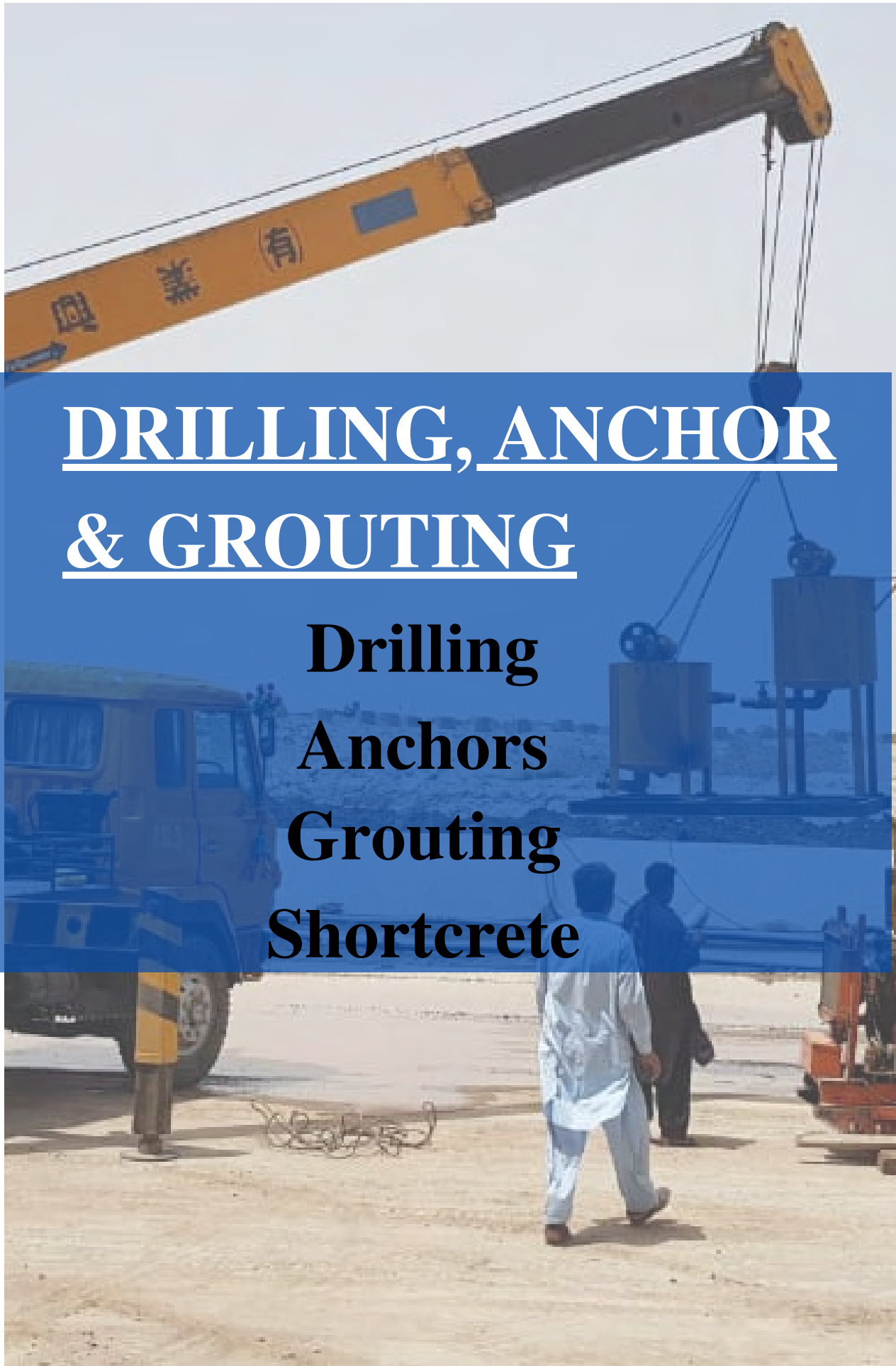


## Mining



## Buildings





# DRILLING, ANCHOR & GROUTING

**Drilling  
Anchors  
Grouting  
Shortcrete**



# DRILLING, ANCHOR & GROUTING

## Anchor Hole with dia 6'' with material at plot # 28, 29, G-10/4, Mauve Area, Islamabad

**COMPLETION**

2010

**CLIENT**

Grandeur Developments (Pvt.) Ltd.

### SCOPE OF WORK

Anchor & Drilling (6" dia)

8190 m

Tendon Installation & Grouting





# DRILLING, ANCHOR & GROUTING 243 MW WARSAK HYDROPOWER PLANT 2ND REHABILITATION, KPK

## COMPLETION

2021-In Progress

## CLIENT

WAPDA

## CONSULTANTS

-Dolsar Engineering  
-COBA  
-DMC  
-BAK

## SCOPE OF WORK

Deep Anchor Drilling (96mm dia)	1536 m
Deep Anchor Drilling (150mm dia)	1536 m
Water Pressure Test	60 Nos
Tendon Installation & Grouting	1370 m

## Description

Warsak Dam is a mass concrete gravity dam located on the Kabul River in the Valley of Peshawar, approximately 20 km northwest of the city of Peshawar in the Khyber Pakhtunkhwa, Pakistan



# DRILLING, ANCHOR & GROUTING BASOL DAM, ORMARA, BALOCHISTAN

**COMPLETION**

2022-In Progress

**CLIENT**

ZKB

## SCOPE OF WORK

Drilling & Grouting (75mm to 100mm dia)  
Performance of Pressure Testing

4000 m  
50 Nos





# DRILLING, ANCHOR & GROUTING KARAKORAM HIGHWAY SECTION NEAR SOST

**COMPLETION**

2017

**CLIENT**

National Highway Authority (NHA)

## SCOPE OF WORK

Drilling & Grouting (356 Nos of holes) (HQ dia)

1705 m

Pressure 1.2-1.5 MPA





# DRILLING, ANCHOR & GROUTING REHABILITATION & UPGRADING OF PUNJNAND BARRAGE

**COMPLETION**

2019

**CONSULTANT**

NESPAK

**CLIENT**

National Highway Authority (NHA)

## SCOPE OF WORK

Drilling & Grouting  
Water Pressure Test  
Permeability Test

200m



# GEOTECHNICAL/ GEOLOGICAL INVESTIGATION & TOPOGRAPHIC SURVEY

WATER & HYDRO POWER

**50 HYDROPOWER**  
**100 ROAD & BRIDGES**  
**400 + BUILDING**

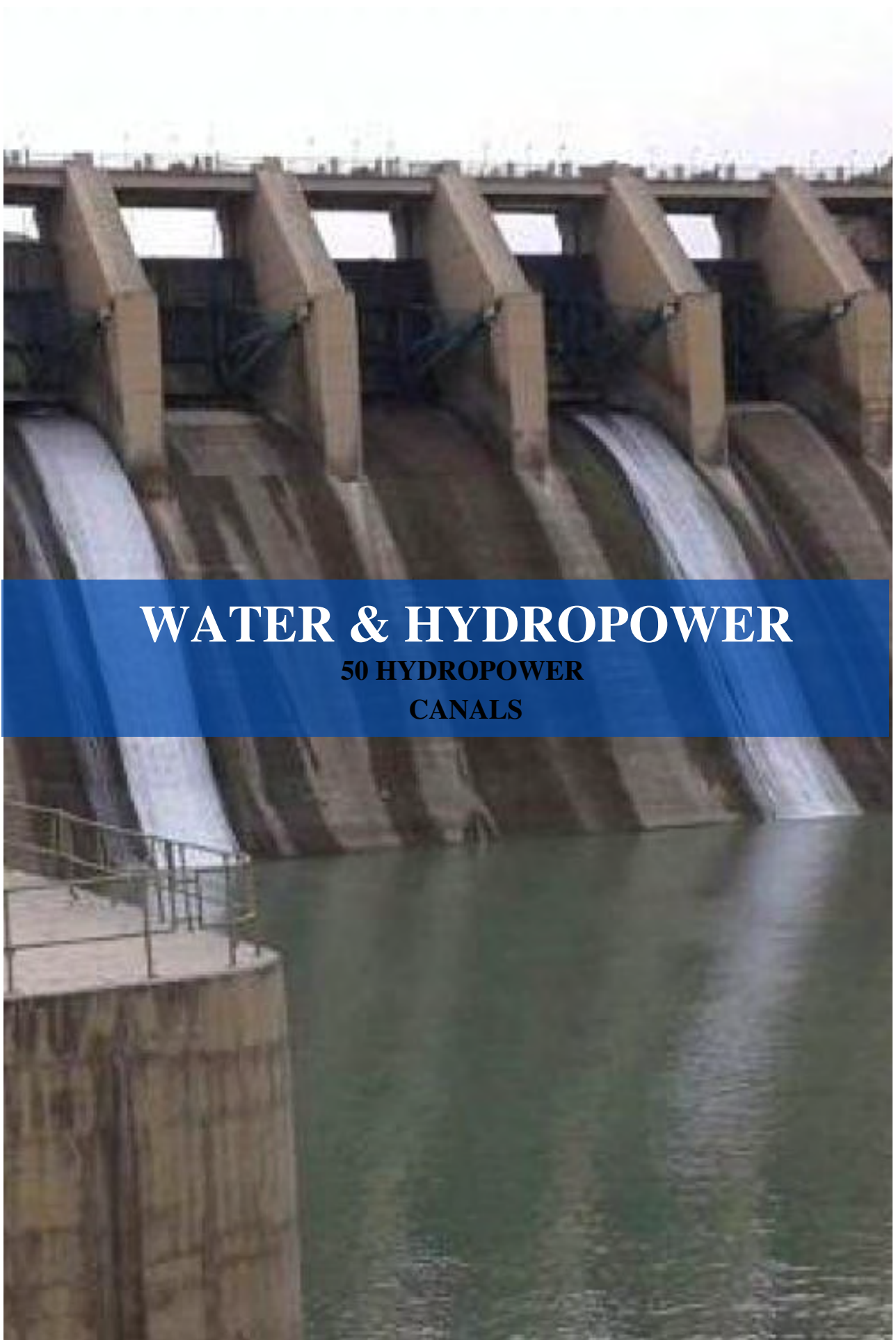
SOLAR & THERMAL POWER

ROAD , BRIDGES & TUNNELS

MINING ( DRILLING & RESERVE  
ESTIMATION)

BUILDINGS





**WATER & HYDROPOWER**  
**50 HYDROPOWER**  
**CANALS**



# GEOTECHNICAL INVESTIGATION (Feasibility & Design Stage) 300 MW BALAKOT HYDROPOWER, KPK

## COMPLETION

2018

## CLIENT

PEDO

## CONSULTANTS

- AQUALOGUS -Engenharia
- Team Consultant.
- Zeeruk International

## SCOPE OF WORK

Drilling (11 No of holes, HQ dia)	555 m
Seismic Refraction Survey	1560 m
Electrical Resistivity Tomography	1200 m
Water Pressure & Permeability Test	69 Nos

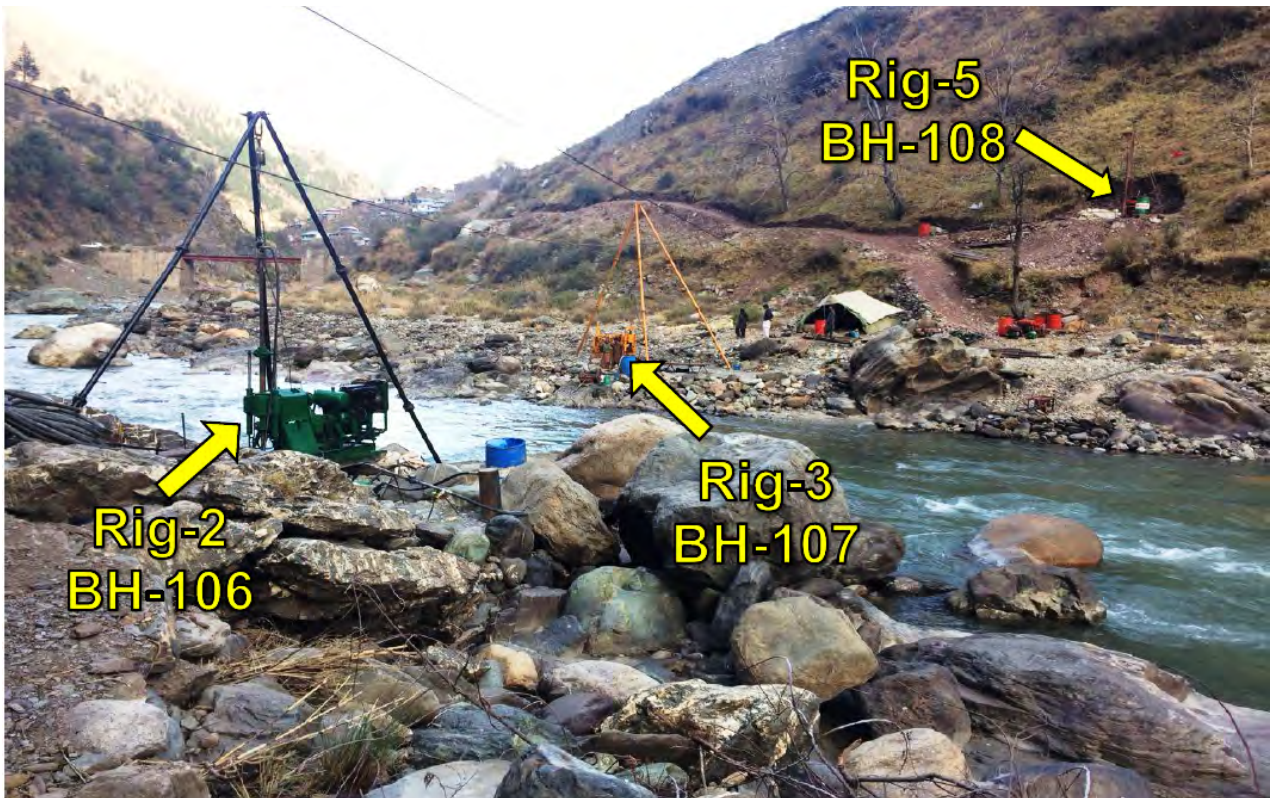
## PHASE 1

### Description

Balakot is a run-of-river project. The hydro reservoir capacity is planned to be 3.6 million cubic meter. The gross head of the project will be 240.1m. The project is expected to generate 1,056 GWh of electricity. The project cost is expected to be around \$755.3m.









# GEOTECHNICAL INVESTIGATION (Feasibility & Design Stage) 300 MW BALAKOT HYDROPOWER, KPK

## COMPLETION

2018

## CLIENT

PEDO

## CONSULTANTS

- AQUALOGUS -Engenharia
- Team Consultant.
- Zeeruk International

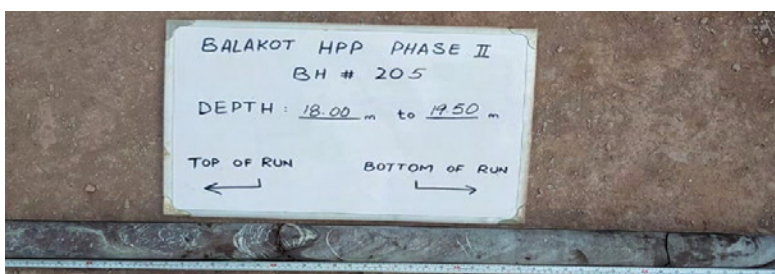
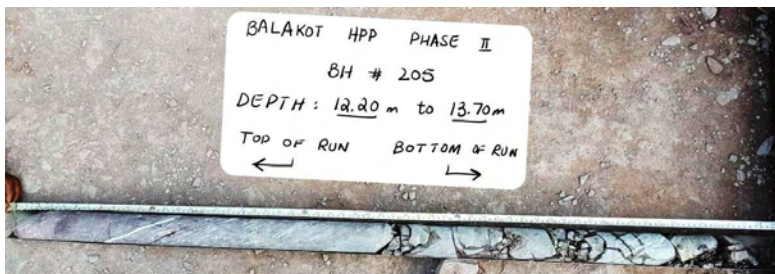
## SCOPE OF WORK

Drilling (8 No of holes, HQ dia) 592 m  
Water Pressure & Permeability Test 84 Nos

## PHASE 2

### Description

Balakot is a run-of-river project. The hydro reservoir capacity is planned to be 3.6 million cubic meter. The gross head of the project will be 240.1m. The project is expected to generate 1,056 GWh of electricity. The project cost is expected to be around \$755.3m.





# GEOTECHNICAL INVESTIGATION (Feasibility & Design Stage) 300 MW BALAKOT HYDROPOWER, KPK

## COMPLETION

2019

## CLIENT

PEDO

## CONSULTANTS

- AQUALOGUS -Engenharia
- Team Consultant.
- Zeeruk International

## SCOPE OF WORK

Drilling (3 No of holes, HQ dia)

## PHASE 3

336 m

### Description

*the tube*

Balakot is a run-of-river project. The hydro reservoir capacity is planned to be 3.6 million cubic meter. The gross head of the project will be 240.1m. The project is expected to generate 1,056 GWh of electricity. The project cost is expected to be around \$755.3m.









# GEOTECHNICAL INVESTIGATION (Construction Stage) 300 MW BALAKOT HYDROPOWER, KPK

## COMPLETION

2022

## CLIENT

PEDO

## CONTRACTOR

CHINA GEZHOUBA GROUP  
COMPANY

## SCOPE OF WORK

Drilling (24 No of holes, HQ dia)	1031 m
Water Pressure Test	99 Nos

### Description

Balakot is a run-of-river project. The hydro reservoir capacity is planned to be 3.6 million cubic meter. The gross head of the project will be 240.1m. The project is expected to generate 1,056 GWh of electricity. The project cost is expected to be around \$755.3m.









# GEOTECHNICAL INVESTIGATION (Feasibility Stage) SUKI KINARI HYDROPOWER (873 MW)

## COMPLETION

2007- Feasibility Stage  
2012- Detail Feasibility Stage

## CLIENT

SK HYDRO  
(PVT) LIMITED

## CONSULTANT

2007- Mott MacDonald  
2012- NESPAK

## SCOPE OF WORK

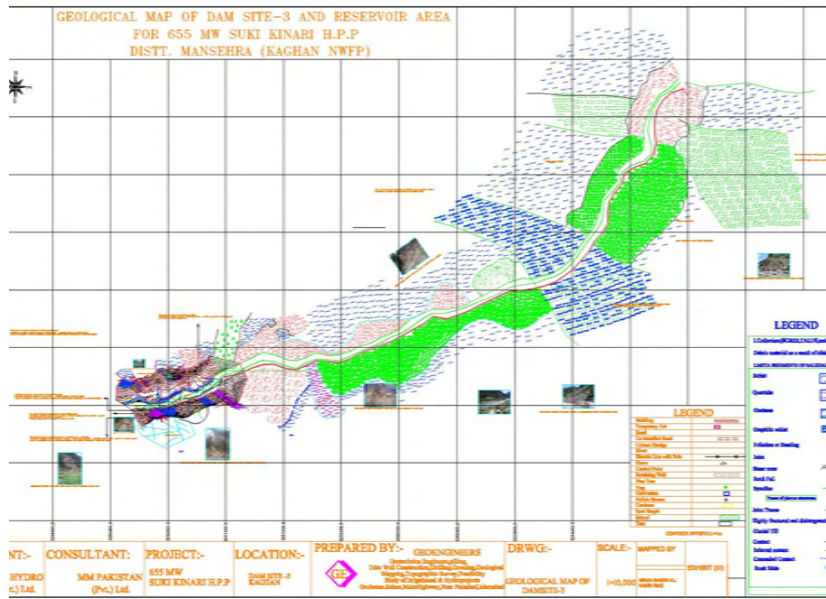
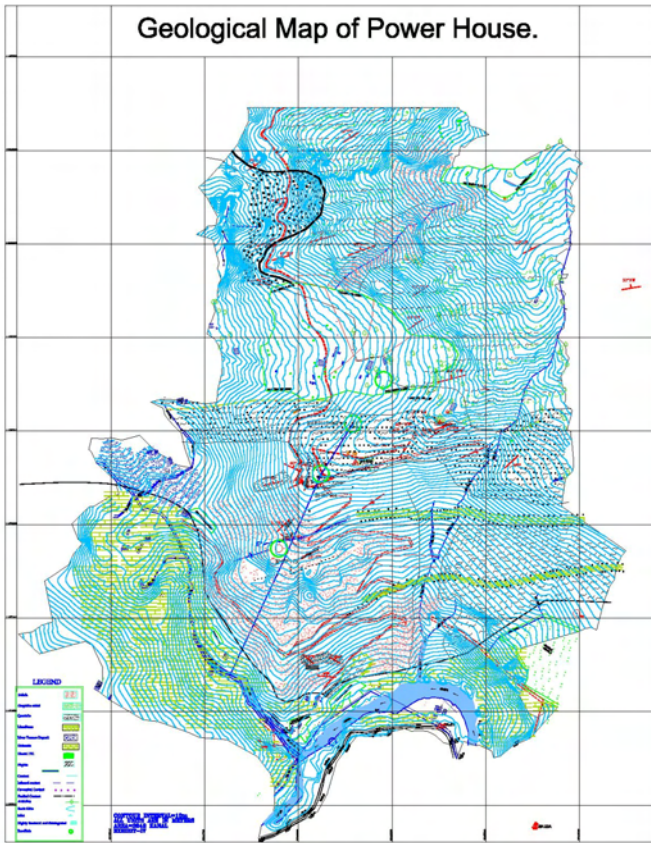
Drilling (45No of holes)	1461 m
Seismic Refraction Survey	2880 m
Water Pressure & Permeability Test	84 Nos
Geological Mapping	Power House,
Borrow Area Study	Dam Site &
Topographic Survey	Reservoir Area

## Description

Suki Kinari hydropower project (SK project) locates above Kunhar River District Manshera, KPK province of Pakistan. The total gross installed capacity of SK Project is 873 MW . The dam will be constructed as a 54.5 meter high and 336 meter wide concrete gravity dam with 2 gated spillways.







DEPTH FROM	57	TO	62	m
BOX #	116	OF	111	
<b>SKHP - MMP - GEOENGINEERS</b>				
RUN #	01	DEPTH	27	C.R = 72% ROD = 35%
RUN #	02	DEPTH	28	C.R = 78% ROD = 43%
RUN #	29			C.R = 71% ROD = 26%
RUN #	30			C.R = 82% ROD = 16%



# GEOTECHNICAL INVESTIGATION (Feasibility Stage) KAROT HYDROPOWER (720MW)

## COMPLETION

2009

## CLIENT

ASSOCIATED  
TECHNOLOGIES  
(PVT) LTD.

## CONSULTANT

EGC  
SMEC  
MAES

## SCOPE OF WORK

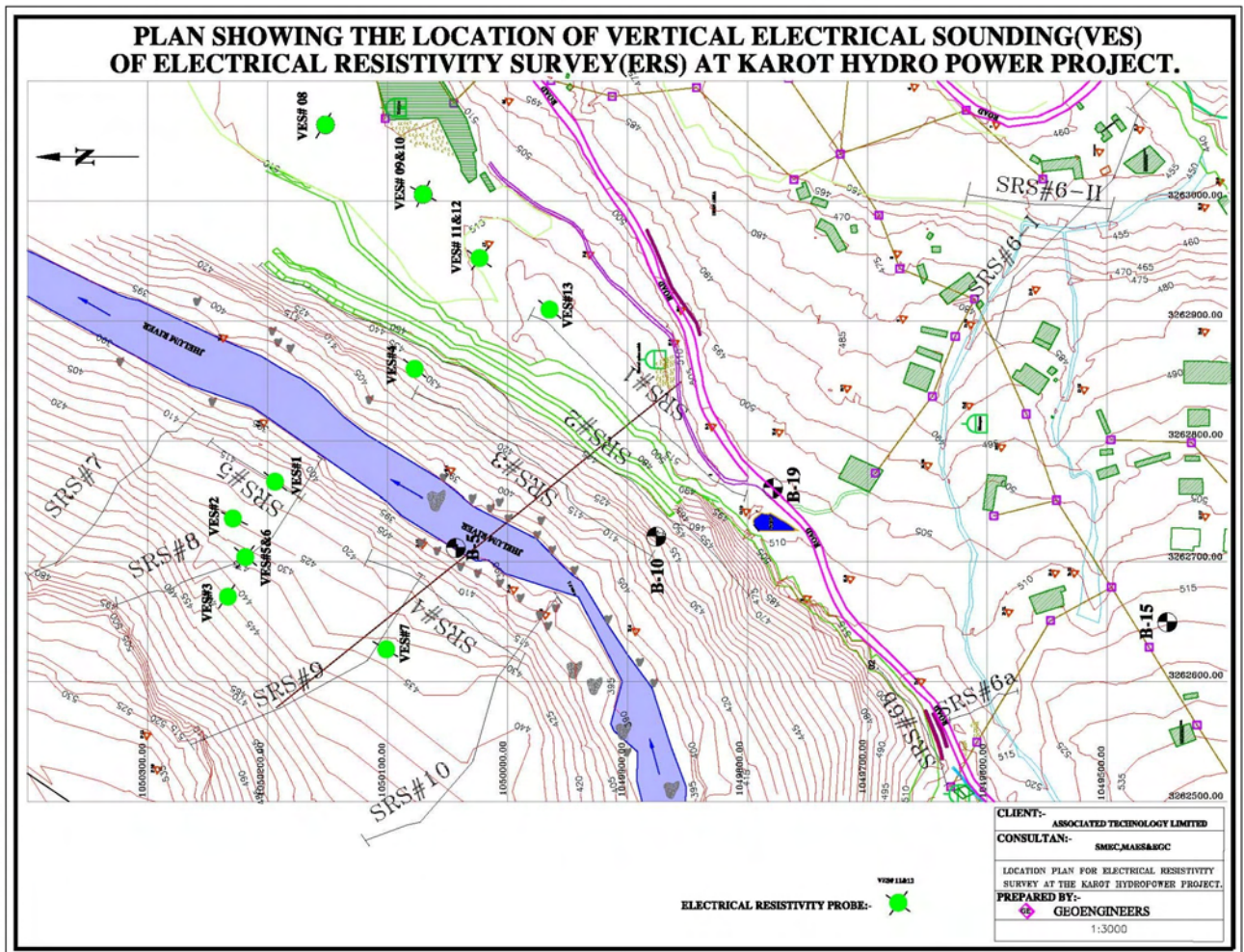
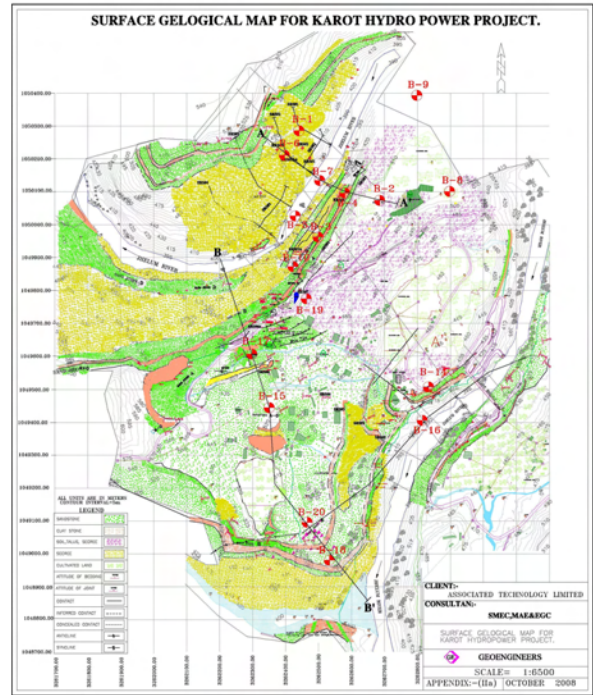
Drilling (17 No of holes)	1812 m
Seismic Refraction Survey & ERS	60646 m
Water Pressure & Permeability Test	270 Nos
Geological Mapping	Power House,
Borrow Area Study	Dam Site &
Topographic Survey	Reservoir Area

## Description

The Karot hydropower project is a 720MW run-of-river project being built on the Jhelum River, Rawalpindi district, Pakistan. It is being developed by Karot Power Company (KPCL), a special purpose vehicle in which China Three Gorges South Asia Investment (CSAIL) holds a majority share.









# GEOTECHNICAL INVESTIGATION (Feasibility Stage) AZAD PATTAN HYDROPOWER (640 MW)

## COMPLETION

2011

## CLIENT

ALAMGIR POWER  
(PVT) LTD

## CONSULTANT

SCOTT WILSON LTD  
FHC CONSULTING ENGINEER

## SCOPE OF WORK

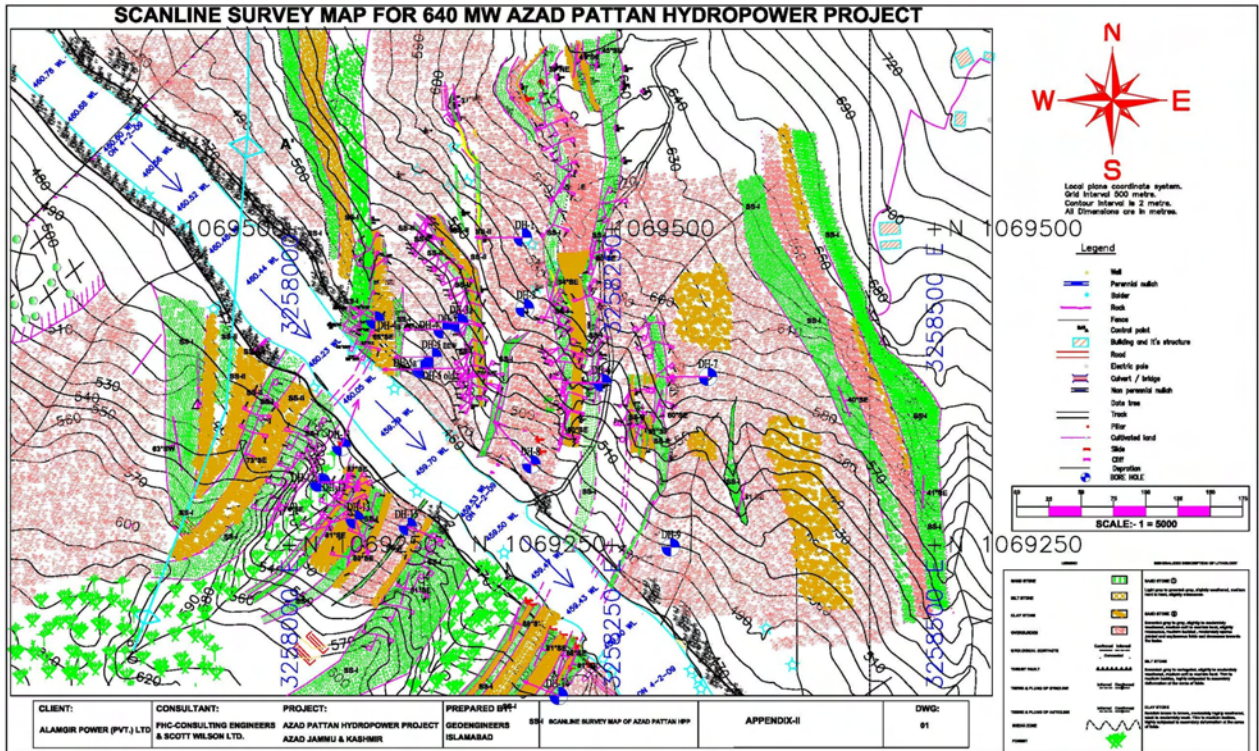
Drilling (18 No of holes)	1705 m
Seismic Refraction Survey & ERS	3120 m
Water Pressure & Permeability Test	282 Nos
Geological Mapping	Power House, Dam Site & Reservoir Area
Borrow Area Study	Dam Tunnel, Tail Race Tunnel and Diversion Tunnel

## Description

The Azad Pattan Hydropower Project is a 700 MW hydroelectric power station on the Jhelum River roughly 7 km upstream of Azad Pattan Bridge in the Sudhanoti District, Azad Jammu and Kashmir, Pakistan and 90 km from Islamabad, the capital city of Pakistan.









# GEOTECHNICAL INVESTIGATION (Feasibility Stage) MUJIGRAM SHOGORE HYDROPOWER (51MW)

## COMPLETION

2014

## CLIENT

PEDO

## CONSULTANT

ELAN  
EXP SERVICES INC

## SCOPE OF WORK

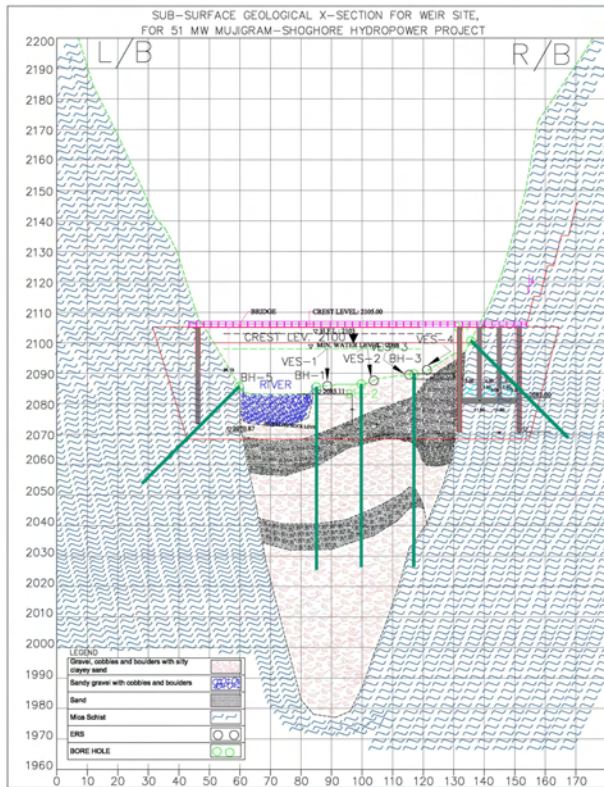
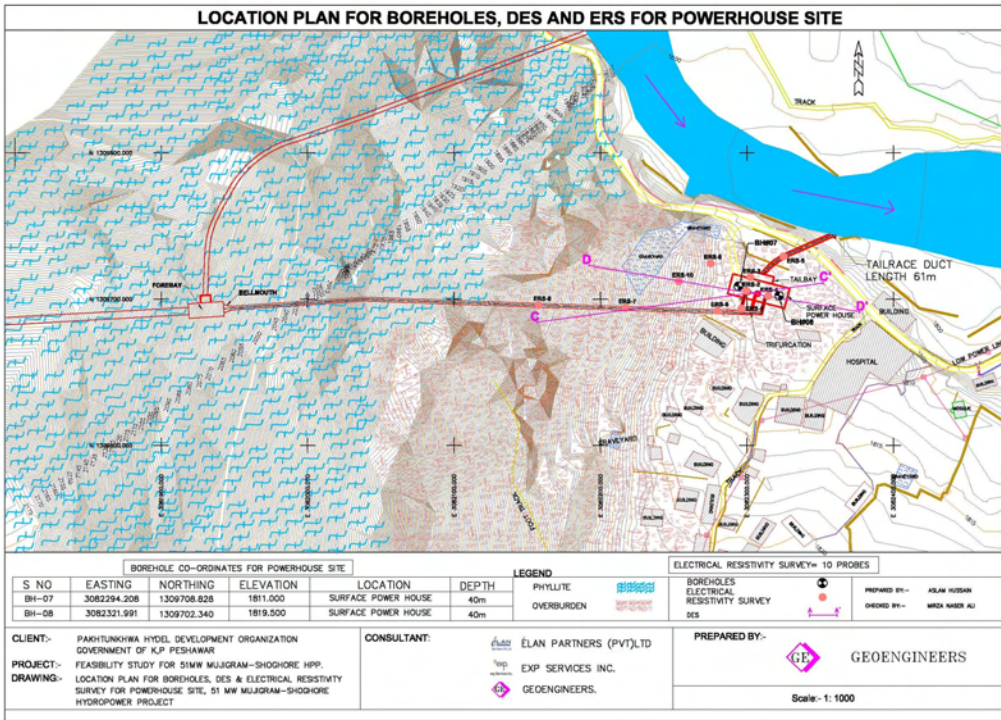
Drilling (8 No of holes)	400 m
Seismic Refraction Survey & ERS	3120 m
Water Pressure & Permeability Test	74 Nos
Geological Mapping	Power House, Dam Site & Reservoir Area & Tunnel Route
Borrow Area Study	

## Description

The Project Mujigram-Shoghore HPP is located on right bank of Lutkho River, a tributary of Chitral River. Weir site is situated near Mujigram village approximately 3 km downstream of Garam Chashma whereas, the powerhouse is sited at Shoghore opposite to Ojhar Gol at a distance of 26 km from Chitral Town.









# GEOTECHNICAL INVESTIGATION (Feasibility Stage) LASPUR MUJIGRAM HYDROPOWER (230MW)

## COMPLETION

2014

## CLIENT

PEDO

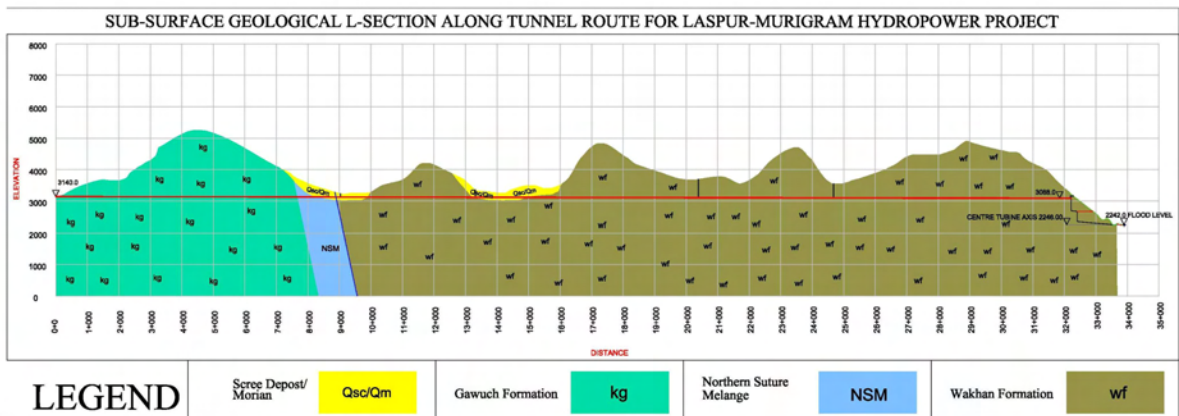
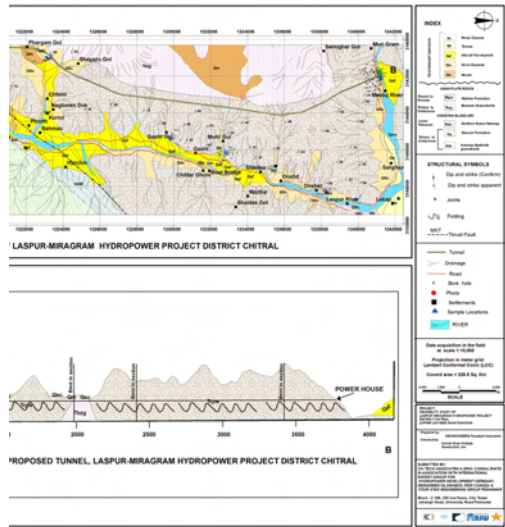
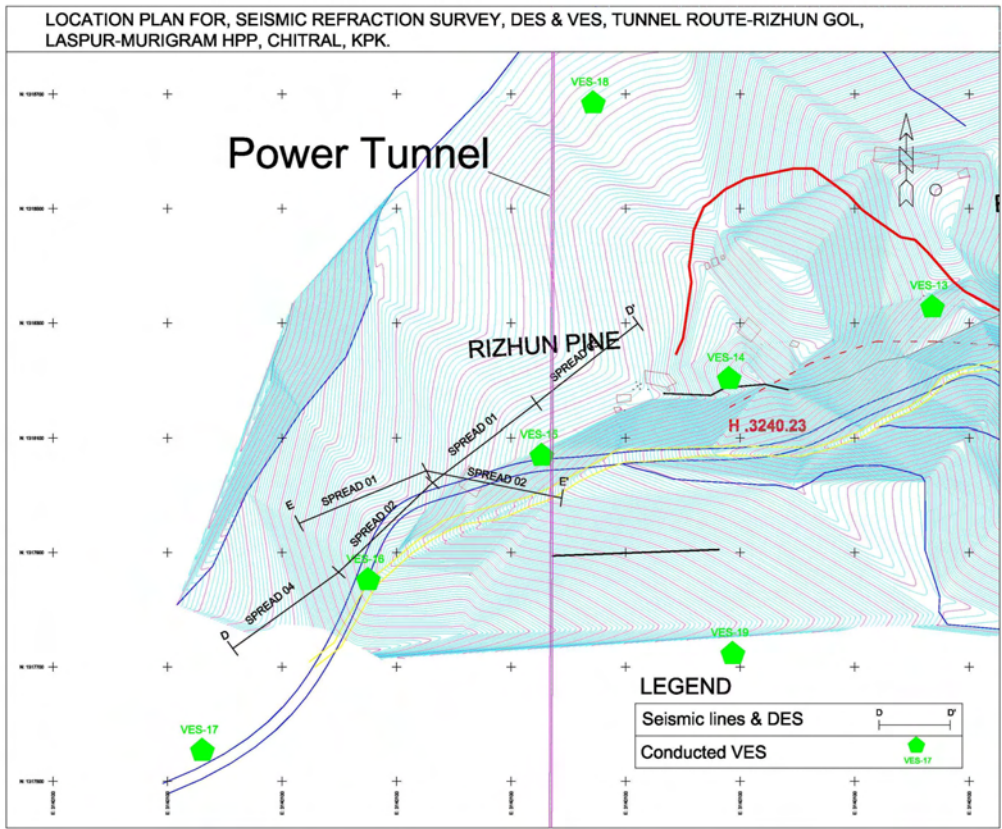
## CONSULTANT

-CIVETEC ASSOCIATE  
-EPAC CONSULTANT  
-RSW  
-DESIGNMEN CONSULTING  
ENGINEERS

## SCOPE OF WORK

Drilling (12 No of holes)	539 m
Seismic Refraction Survey & ERS	6600 m
Water Pressure & Permeability Test	76 Nos
Geological Mapping	Power House, Dam Site & Tunnel Route
Borrow Area Study	







# GEOTECHNICAL INVESTIGATION KACHI CANAL PROJECT (Phase-II) RD 1193+000 to 1252+000

## COMPLETION

2022

## CLIENT

WAPDA

## CONTRACTOR

Ghulam Rasool & Company (Pvt.)  
Ltd (GRC).

## SCOPE OF WORK

Drilling (13 No of holes)  
Permeability Test

335 m  
28 Nos

### Description

The Kachhi Canal Project is a 499-km long canal project situated in the Balochistan and Punjab Provinces of Pakistan. It starts from Taunsa Barrage at Indus River and terminates in Balochistan.



# GEOTECHNICAL INVESTIGATION KACHI CANAL PROJECT (Phase-II) RD 1193+000 to 1252+000

## COMPLETION

2022

## CLIENT

WAPDA

## CONTRACTOR

RSL-SWEG (JV).

## SCOPE OF WORK

Drilling (11 No of holes)  
Permeability Test

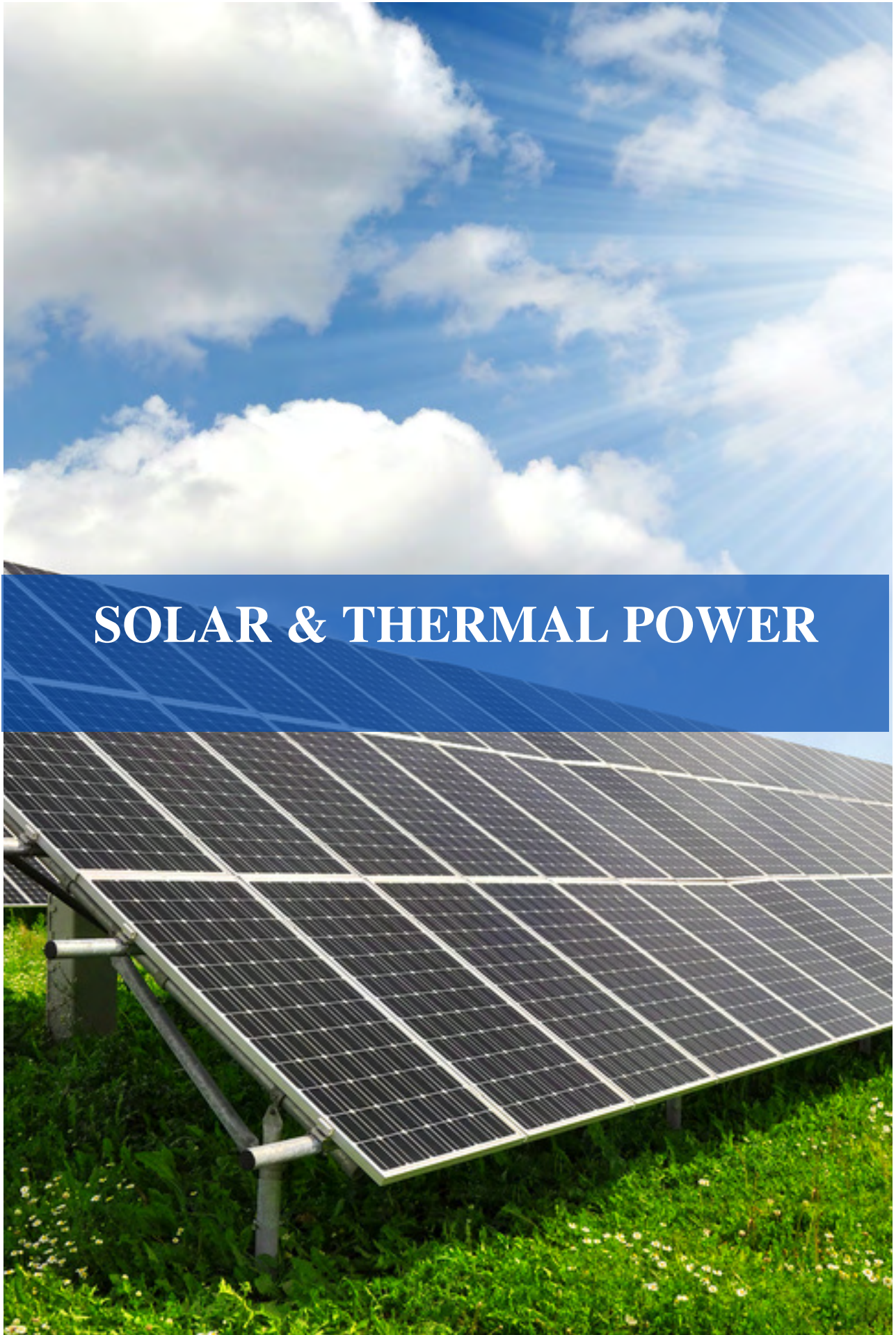
300 m  
23 Nos

## Description

The Kachhi Canal Project is a 499-km long canal project situated in the Balochistan and Punjab Provinces of Pakistan. It starts from Taunsa Barrage at Indus River and terminates in Balochistan.







# SOLAR & THERMAL POWER



# GOETECHNICAL INVESTIGATION DRILLING WORK AT 300 MEGAWATT COAL POWER PLANT DARBELA JANUB AT GWADAR, BALOCHISTAN

## COMPLETION

2021

## CONTRACTOR

China Communications  
Construction Company  
Ltd. (CCCC)

## SCOPE OF WORK

Drilling of Boreholes (32 Nos)

423 m





# GEOTECHNICAL INVESTIGATION ZHENFA 100 MW SOLAR POWER, CHAUBARA- LAYYAH, PUNJAB

## COMPLETION

2021

## CLIENT

ZHENFA

## CONTRACTOR

HYDROCHINA  
INTERNATIONAL  
ENGINEERING COMPANY  
LIMITED (HDEC)

## SCOPE OF WORK

Drilling (44 No of holes)	408 m
Test Pits	32 Nos
Permeability Test	3 Nos
Plate Load Test	3 Nos
Geophysical Survey (ERS)	90 m
Downhole Seismic Test	20m



# GEOTECHNICAL INVESTIGATION EXISTING STEAM TURBINE AT 415 MW CCPP THERMAL POWER STATION GUDDU, SINDH.

## COMPLETION

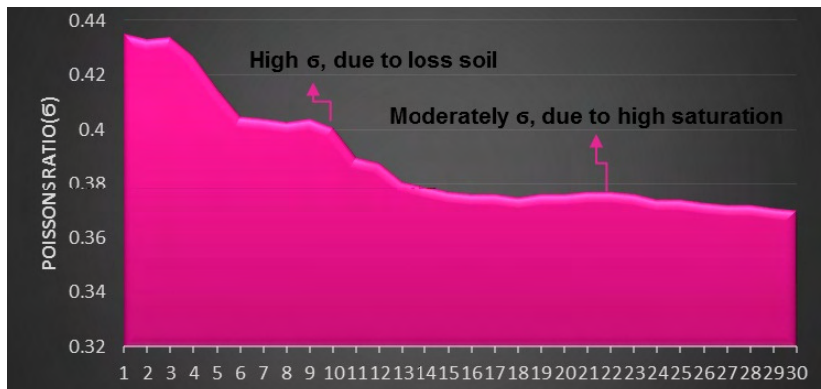
2020

## CLIENT

CENTRAL POWER GENERATION  
COMPANY LTD

## SCOPE OF WORK

Boreholes (3 Nos of holes)	105 m
Downhole Test	1Nos





# GEOTECHNICAL INVESTIGATION AND TOPOGRAPHIC SURVEY 250 MW GULF RENTAL THERMAL POWER PROJECT AT MUSSAPUR, GUJRANWALA

## COMPLETION

2009

## CLIENT

SK Hydro Private Limited  
Gulf Rental Power (Pvt) Ltd.

## SCOPE OF WORK

Boreholes (7 Nos of holes)	80 m
Test Pits and Field Density Test	7 Nos
Topographic Survey	190 Kanal
Pile Load Test	1 No



# GEOTECHNICAL INVESTIGATION AND TOPOGRAPHIC SURVEY

## THERMAL POWER PLANT AT ATTOCK OIL REFINARY MORGAH, RAWALPINDI

**COMPLETION**

2007

**CLIENT**

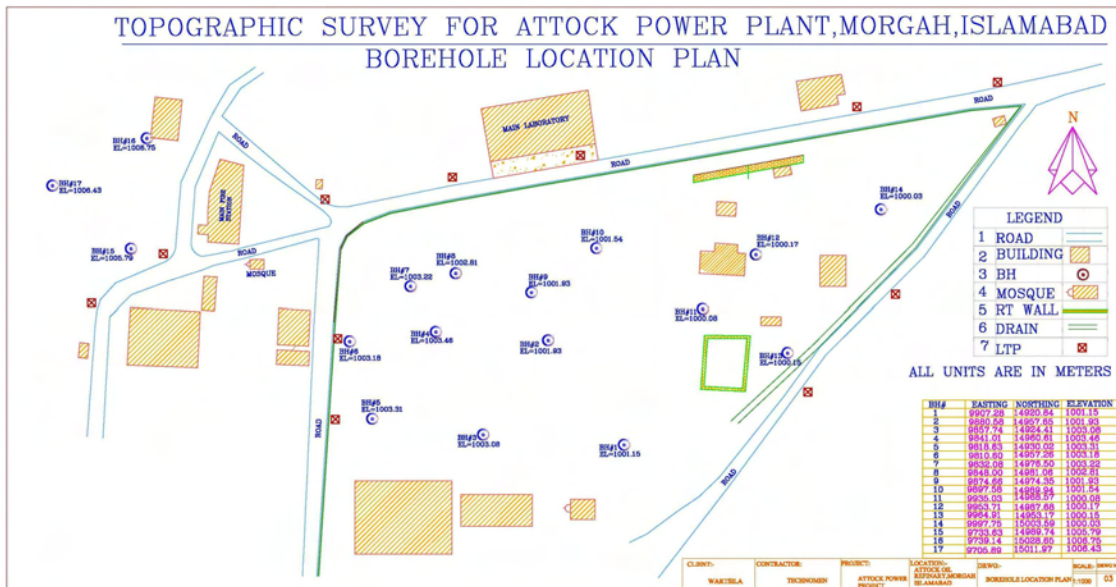
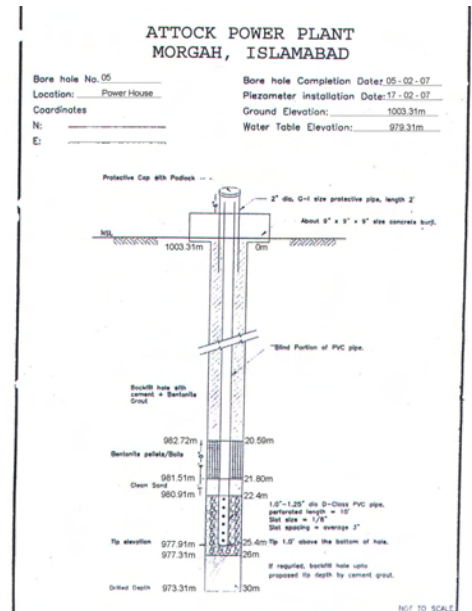
Attock Generation Ltd. (AGL)

**CONSULTANT**

Wartsila

### SCOPE OF WORK

- Boreholes (17 Nos of holes) 510 m
- Electrical Resistivity Test 6 Nos
- Topographic Survey of Project Area







# ROAD, BRIDGES & TUNNELS

100 ROAD, BRIDGES &  
TUNNELS



# GEOTECHNICAL INVESTIGATION ACCESS BRIDGE FOR DIAMER-BHASHA DAM

**COMPLETION**

2020

**CONTRACTOR**

FWO

## SCOPE OF WORK

Drilling (05 No of holes)	167 m
Water Pressure	6 Nos









# GEOLOGICAL MAPPING & GEOTECHNICAL INVESTIGATION (Feasibility Study & Detailed Design) Peshawar to D.I. Khan Motorway

## COMPLETION

2020

## CLIENT

National Highway  
Authority (NHA)

## CONSULTANTS

-Pavron, Islamabad

## SCOPE OF WORK

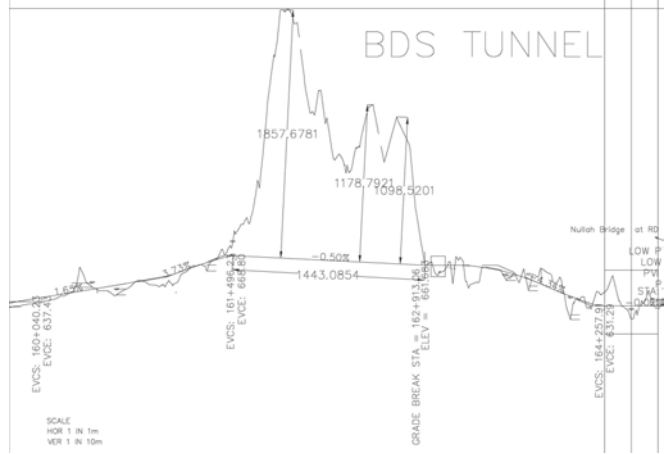
Drilling (32 No. of holes)	875 m
Test Pits	93 Nos
Electrical Resistivity Survey	72Nos
Surface Geological Mapping	
Engineering Geological Mapping	
Scan line Survey	

## Description

The Peshawar–Dera Ismail Khan motorway is a 360 km (220 mi) long proposed motorway connecting Peshawar with the southern parts of Khyber Pakhtunkhwa, Pakistan. Starting at the provincial capital Peshawar in the north, it will pass through Darra Adamkhel, Kohat, Hangu, Karak, Domel, Bannu, Lakki Marwat, and Darra Pezu, reaching Dera Ismail Khan at its southern end.









# GEOLOGICAL MAPPING & GEOTECHNICAL INVESTIGATION (Feasibility Study & Detailed Design) Rawalpindi Ring Road (RRR), Rawalpindi

## COMPLETION

2021

## CLIENT

National Highway Authority (NHA)

## CONSULTANTS

-Zeeruk International (Pvt.) Ltd.

## SCOPE OF WORK

Drilling	778 m
Test Pits	62 Nos
Barrow Area Study	72 Nos
Surface Geological Mapping	

## Description

The road bypasses Rawalpindi. Its route is from Rawat to Sangjani. Starting from GT road N-5 Rawat, crossing Chakbeli Road, Adyala Road, Chakri Road, M-2 Motorway, Islamabad Airport, DI Khan Motorway, M-1 Motorway to Gt road N-5 Sangjani.

The project will include the construction of a six-lane divided carriageway, interchanges, RCC bridges, reinforced earth abutments/walls, overhead pedestrian bridges, culverts, sub-ways, underpasses, flyovers and related works.





# GEOTECHNICAL INVESTIGATION (Feasibility Study) Mirpur-Mangla-Muzaffarabad-Mansehra (MMMM) Expressway

## COMPLETION

2015 & 2017

## CLIENT

National Highway  
Authority (NHA)

## CONSULTANTS

-Zeeruk International (Pvt.) Ltd.

## SCOPE OF WORK

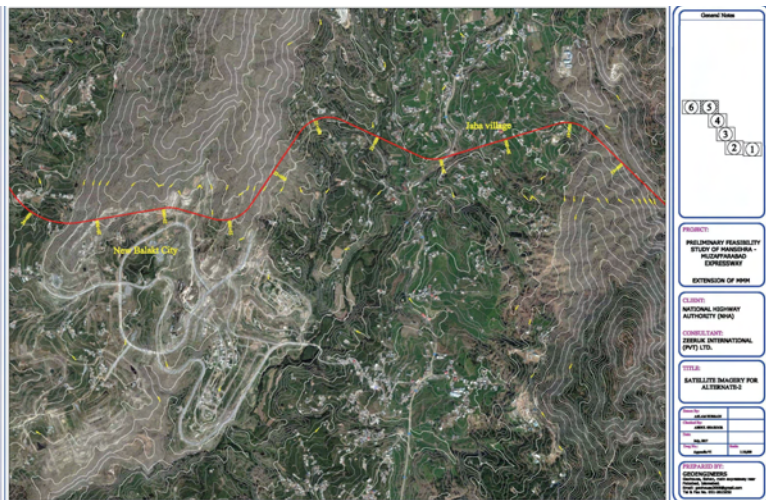
Drilling (22 No of holes, HQ dia)	1834 m
Seismic Refraction Survey	1560 m
Electrical Resistivity Tomography	1200 m
Water Pressure & Permeability Test	69 Nos

## PHASE(1-3)

### Description

The project constructing a 4-lane divided controlled access Expressway connecting Shinkhari – Muzaffarabad with GT road through Mangla, Mirpur. For Initial 35 km, the project would run parallel to the existing Kohalla-Muzaffarabad road along river Jehlum. From then onwards the expressway would continue on the left bank of the river till Mangla and after connecting Mirpur terminates at GT road near Dina.

The total length of the Expressway would be around 200 km. The project includes construction of four tunnels with total length of around 3 km. Construction of 122 bridges, 260 culverts, 6 interchanges, and 3 weigh stations is also part of the project



# GEOTECHNICAL INVESTIGATION (Bridges)

## Western Bypass, Quetta

### COMPLETION

2021

### CLIENT

National Highway  
Authority (NHA)

### CONSULTANTS

PEAS Consulting Pvt. Ltd.

## SCOPE OF WORK

Drilling (18 No. of holes)	1200 m
Electrical Resistivity Survey	15 Nos
Barrow Area Study	72 Nos
Surface Geological Mapping	





# GEOLOGICAL MAPPING, TOPOGRAPHIC SURVEY, SOIL TESTING, GEOLOGICAL AND GEOTECHNICAL INVESTIGATION MALAKAND TUNNEL CONSTRUCTION PROJECT

## COMPLETION

2016

## CLIENT

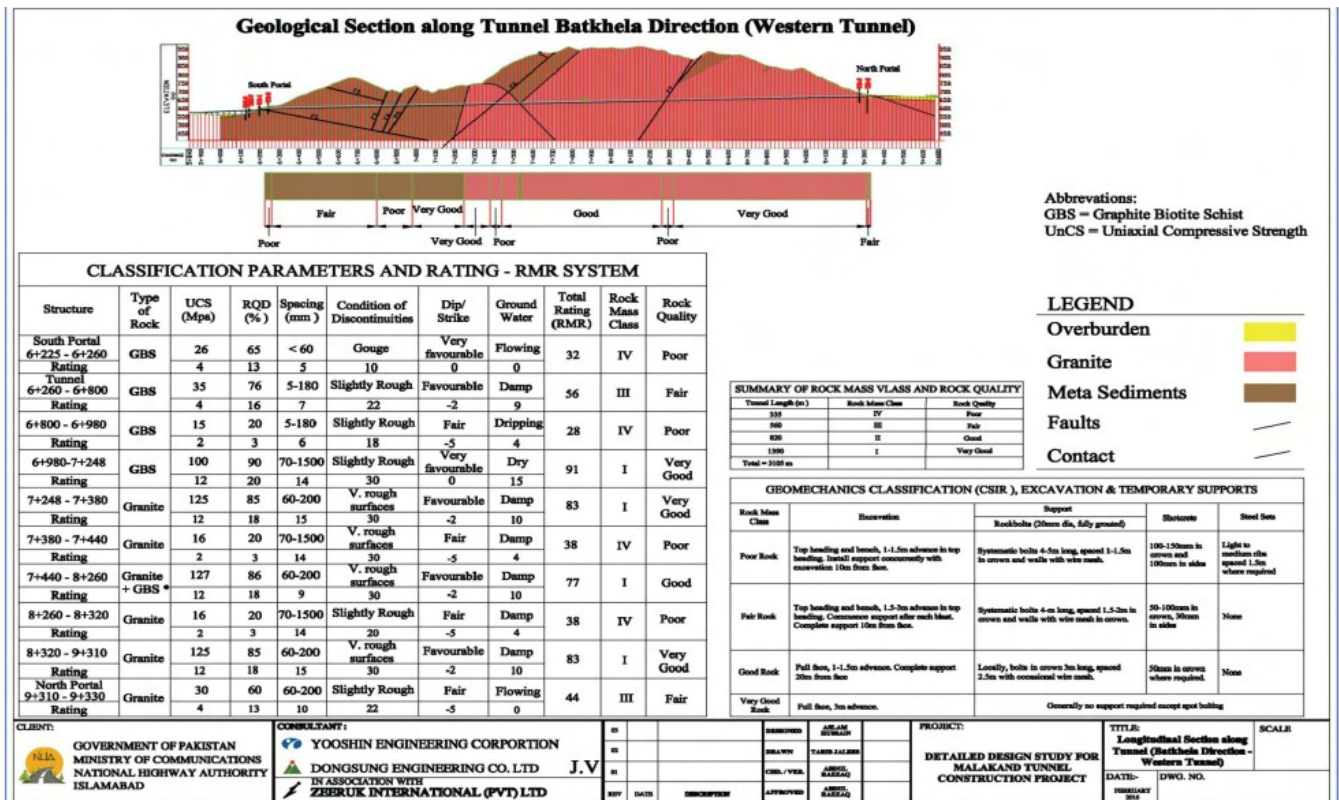
National Highway Authority (NHA)

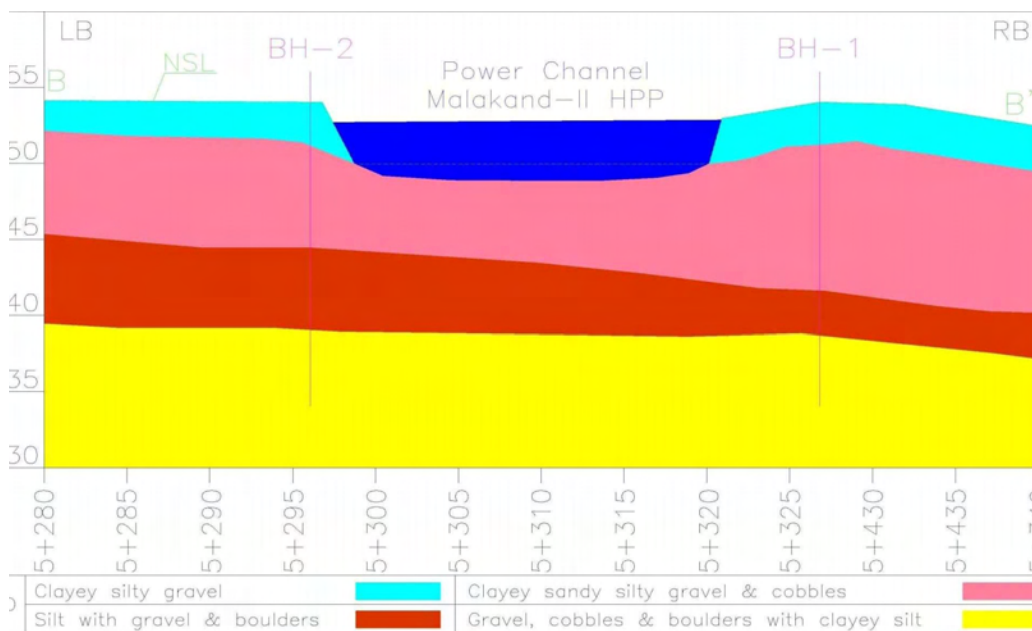
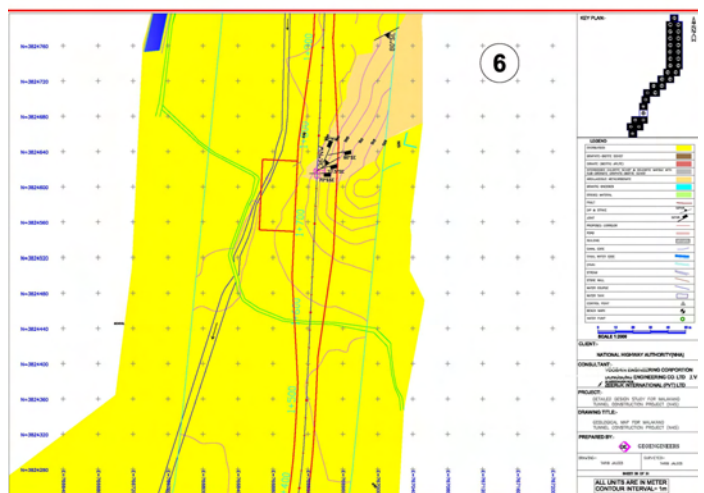
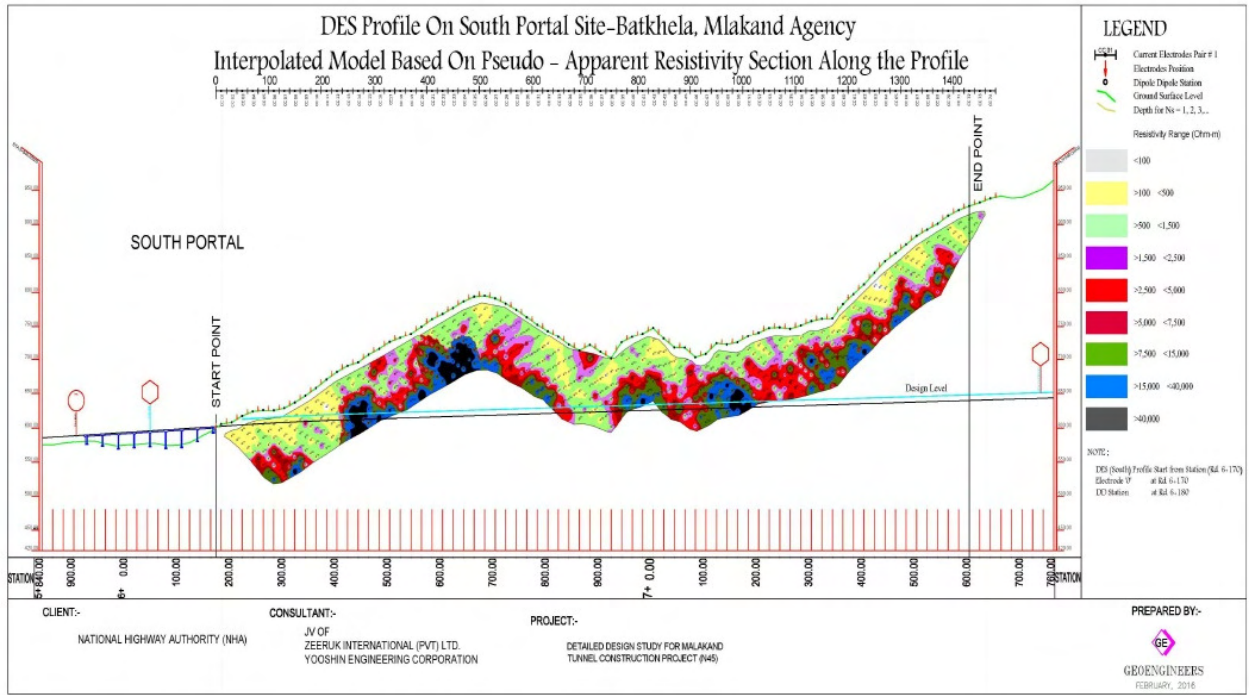
## CONSULTANTS

Dongsung Engineering Pvt Ltd  
Yooshin Engineering Corporation  
Zeeruk International Pvt Ltd

## SCOPE OF WORK

- Drilling (8 No. of holes) 238 m
- Electrical Resistivity Survey 10 Nos
- Water Pressure Test 14 Nos
- Seismic Refraction Survey 8 Profiles
- Test Pits 600 m
- Topographic Survey Along Proposed Road Corridor 26 Nos







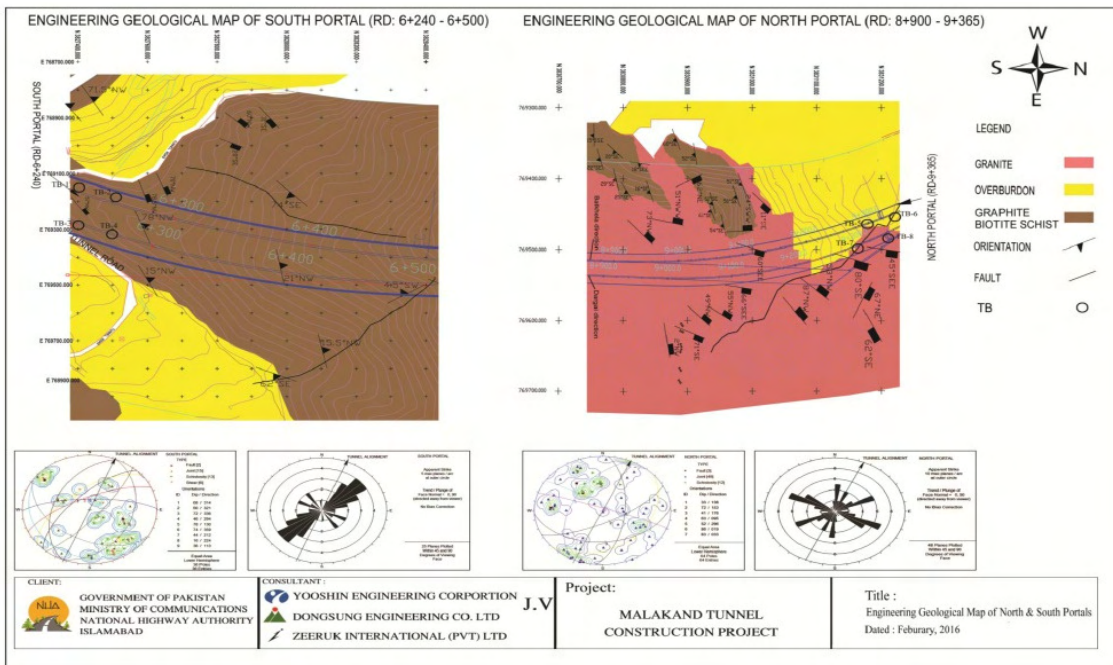
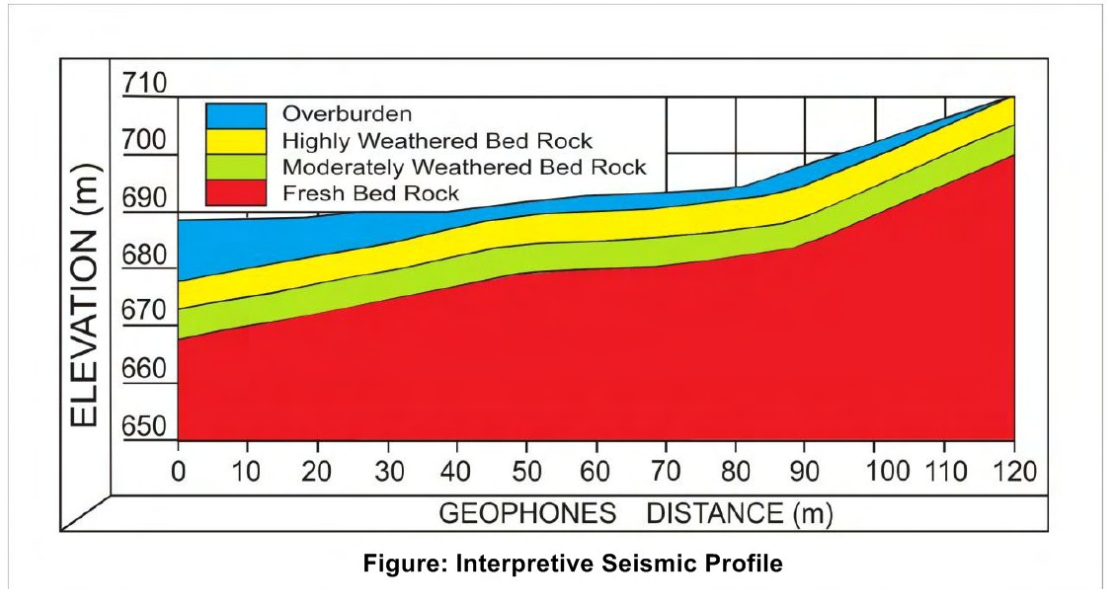
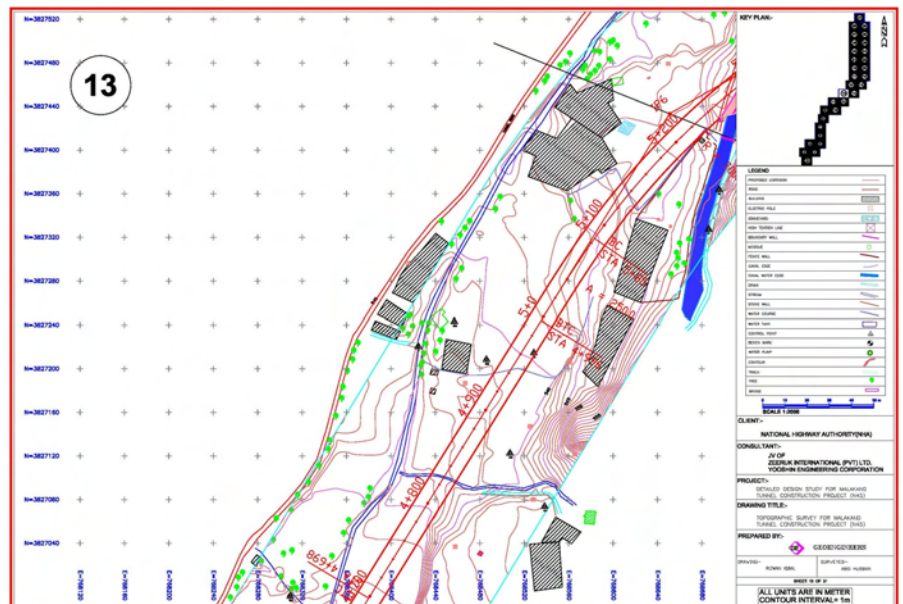


Figure: Engineering geological maps along tunnel portals







# **MINING DRILLING & RESERVE ESTIMATION**





# GEOLOGICAL INVESTIGATION RESERVE ESTIMATION IN PROPOSED LEASE AREA NEAR ZINDA PIR, DG KHAN DISTRICT

## COMPLETION

2022

## CLIENT

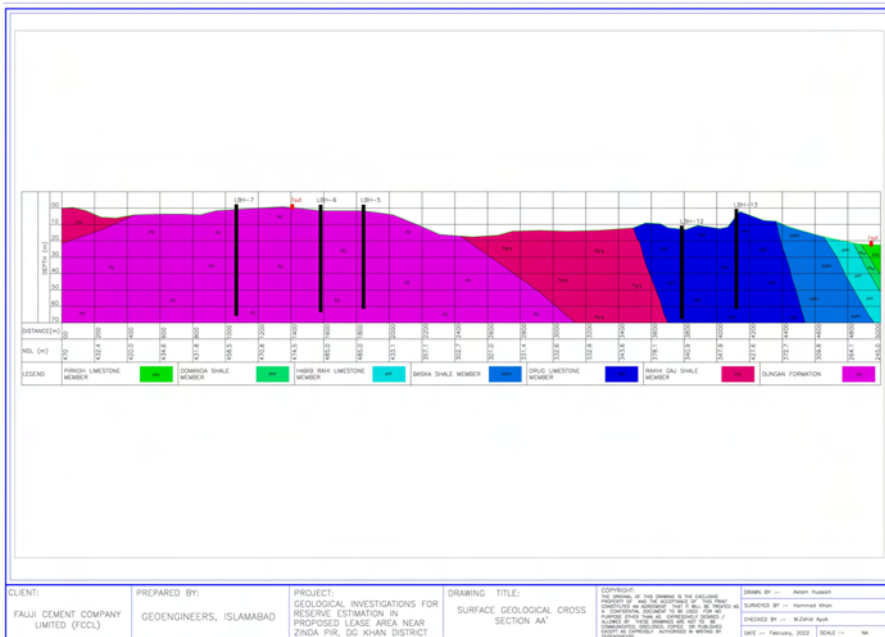
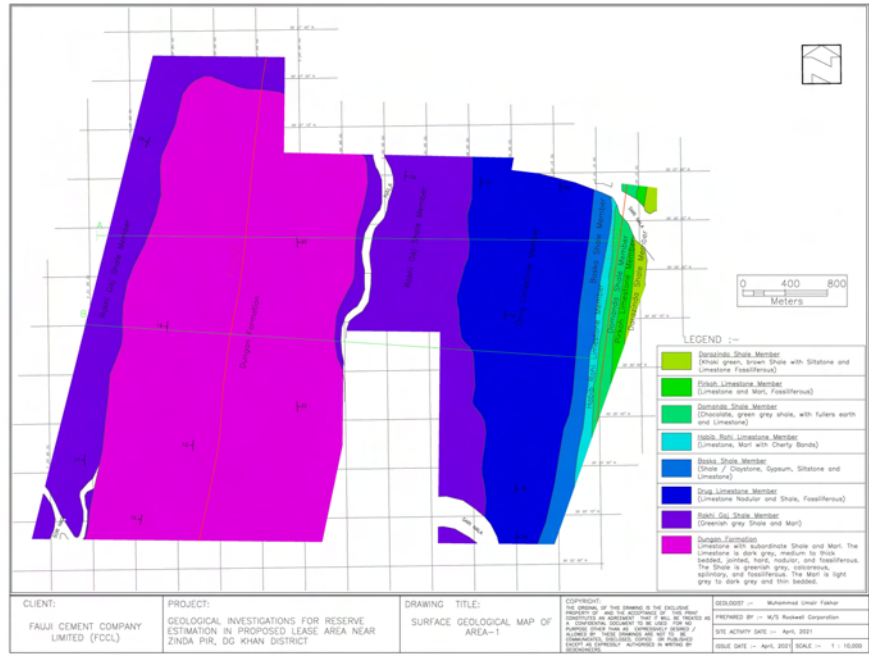
Fauji Cement Company Limited (FCCL)

## SCOPE OF WORK

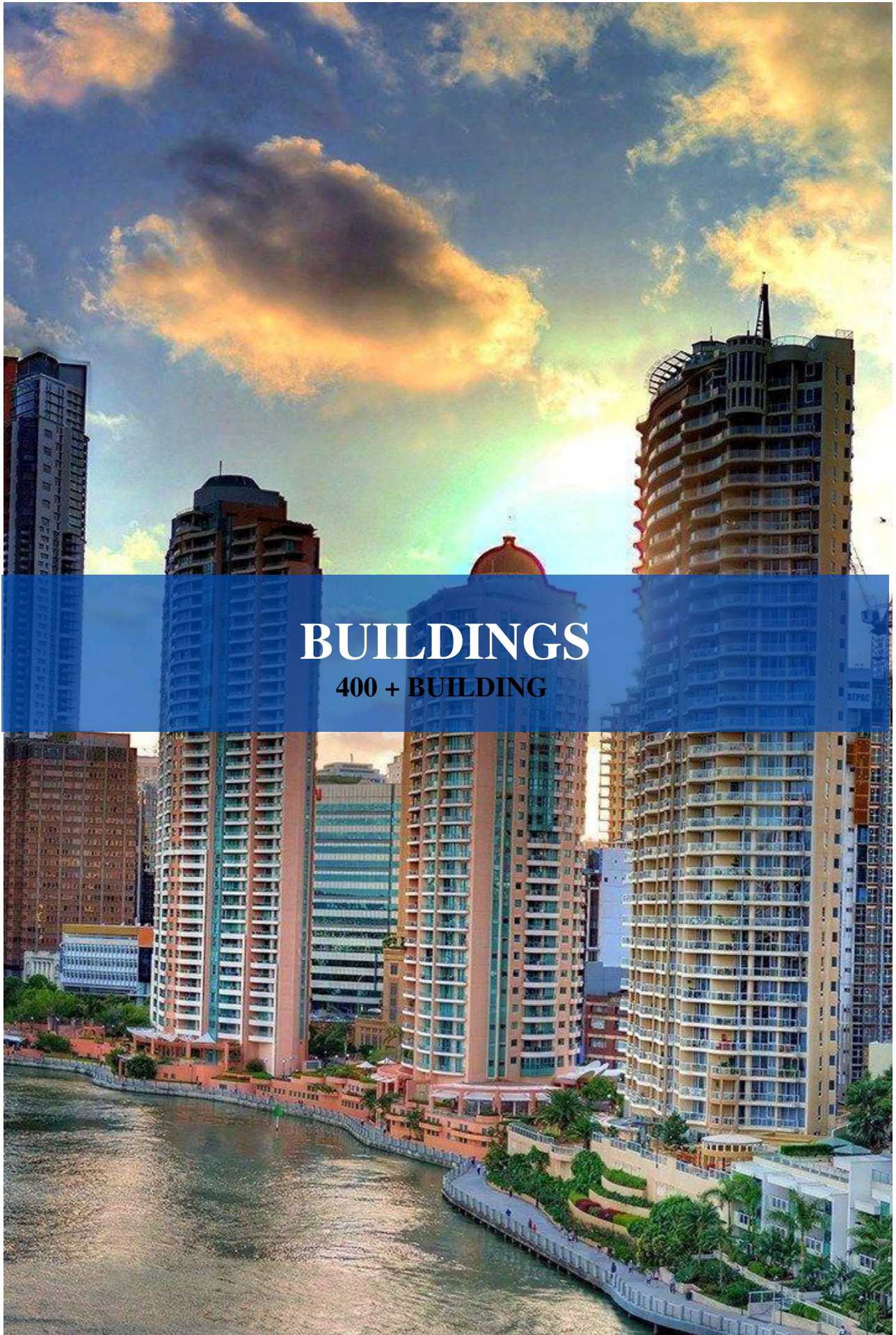
- 18 Clay Boreholes HQ (96 mm Dia) 200 m
- 14 Limestone and Gypsum  
Boreholes (96mm Dia) 864m
- Reserve Estimation Report



# Limestone, Gypsum and Clay reserve estimation









# GEOTECHNICAL INVESTIGATION GEOHAZARD STUDY OF HAMMERHEAD, GAWADAR

## COMPLETION

2021

## CONTRACTOR

China Communications Construction  
Company Ltd. (CCCC)

## SCOPE OF WORK

Drilling (03 No of holes)	200 m
Seismic Refraction Survey & ERS	9600 m









# GEOTECHNICAL INVESTIGATION GERMAN EMBASSY PLOT, DIPLOMATIC ENCLAVE, ISLAMABAD

## COMPLETION

2021-In Progress

## CLIENT

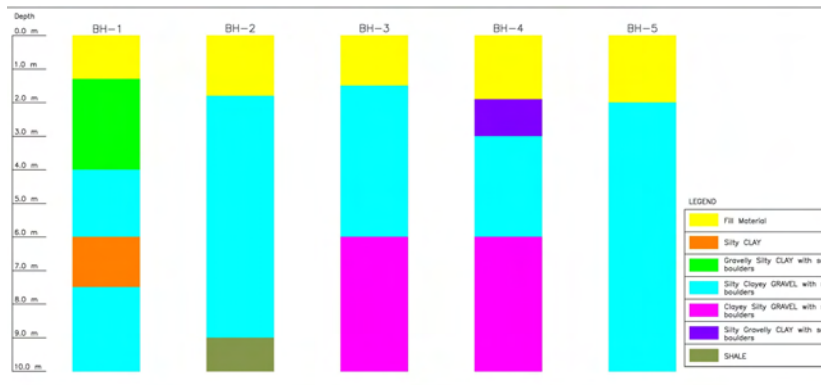
SWECO GmbH

## CONSULTANTS

-DESIGNMEN CONSULTING  
ENGINEERS PVT LTD

## SCOPE OF WORK

Boreholes 5 Nos  
Permeability Test 10 Nos





# EVALUATION OF SUB SURFACE SOIL CONDITION AT EXISTING FOUNDATION OF UNIVERSITY BUILDING AT BAHRIA GOLF CITY, ISLAMABAD

**COMPLETION**

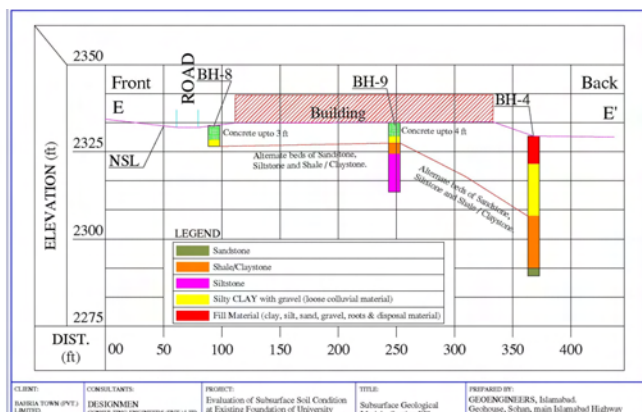
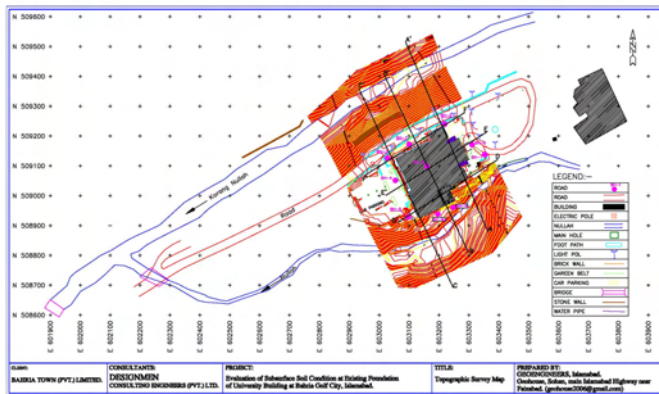
2021

**CLIENT**

BAHRIA TOWN (PVT.) LIMITED

## SCOPE OF WORK

Boreholes (9 Nos of holes)	240 FT
Permeability Test	8 Nos
schmidt Hammer Test (Non Destructiv Test)	116 Nos
Concrete Coring (Destructive Test)	22 Nos
Geological Mpping	
Topographic Survey	



# GEOTECHNICAL INVESTIGATION CONSTRUCTION OF PROPOSED FGEHA TOWERS AT G-13/4, ISLAMABAD

## COMPLETION

2019

## CLIENT

Federal Government Employees  
Housing Foundation (FGEHF)

## CONSULTANT

Designmen  
Consulting Engineers

## SCOPE OF WORK

Boreholes (10 Nos of holes)	600 m
Electrical Resistivity Test	15 Nos (1200 m)





# GEOTECHNICAL INVESTIGATION SENATE EMPLOYEE'S CO-OPERATIVE HOUSING SOCIETY, PHASE-IV, ISLAMABAD

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## COMPLETION

2022

## CLIENT

Senate Employees's  
Co-operative Housing Society

## CONSULTANT

Designmen  
Consulting Engineers

## SCOPE OF WORK

Boreholes (7 Nos of holes)

700 ft



# GEOTECHNICAL INVESTIGATION VARIOUS SITES IN (GILGIT BALTISTAN & CHITRAL)

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**COMPLETION**

2021

**CLIENT**

The Aga Khan Education Service

## SCOPE OF WORK

Boreholes (32 Nos of holes)

1737 ft

## GEOTECHNICAL INVESTIGATION LOCATIONS

### **Gilgit Baltistan Locations**

Muhammadabad

Nasirabad

Gahkuch

Damas

Chatorkhand

Gupis

Taus

Gulaghmuli

### **Chitral Locations**

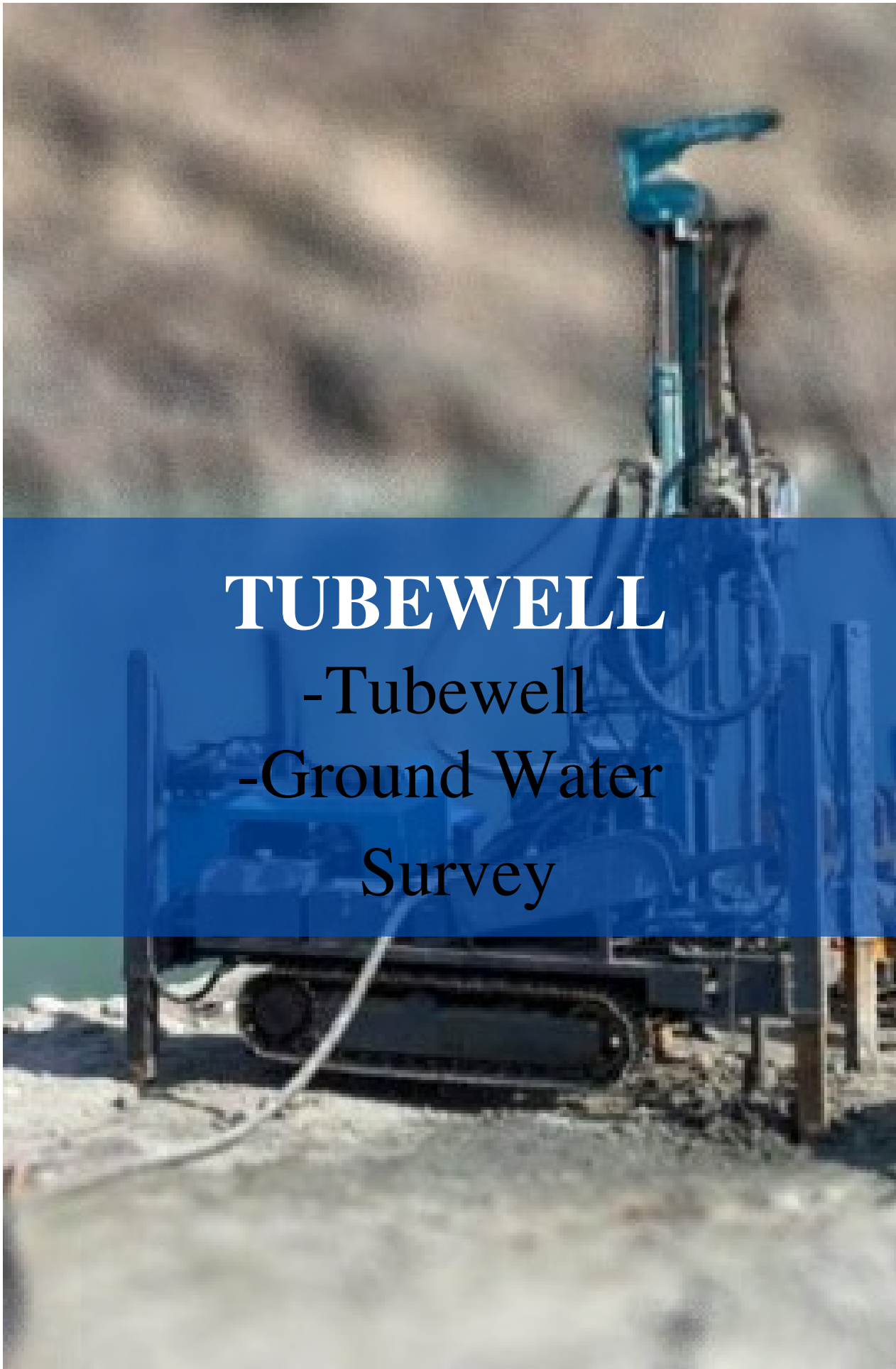
Booni

Buzund

Mastuj







# TUBEWELL

-Tubewell  
-Ground Water  
Survey

# TUBEWELL DRILLING & GROUND WATER SURVEY JAMES TOWN (MARYAM TOWN) & FARASH TOWN, ISLAMABAD AND RAWALPINDI

## COMPLETION

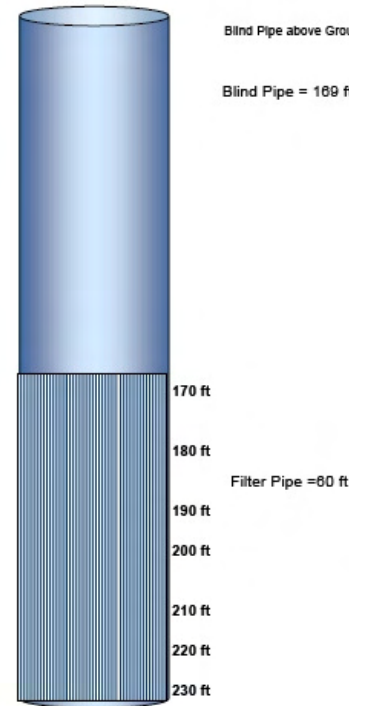
2022

## CLIENT

World Wildlife  
Fund: WWF

Water Well Design For BH 2, Farash Town, Rawalpindi

Filter Pipe Length	60 ft
Blind Pipe Length	169 ft

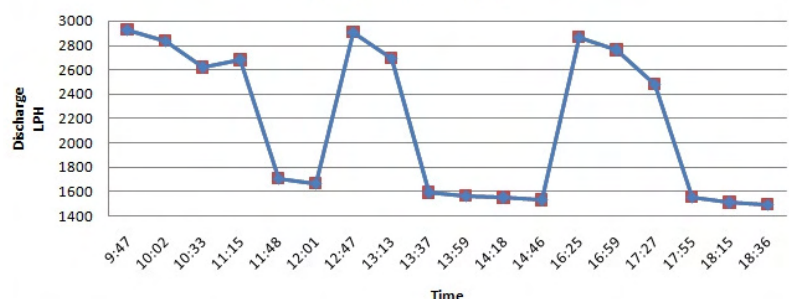


## SCOPE OF WORK

- Ground Water Survey 15 Nos
- Trial Boreholes 4 Nos
- Yield Test 3 Nos



Yield vs Time Chart





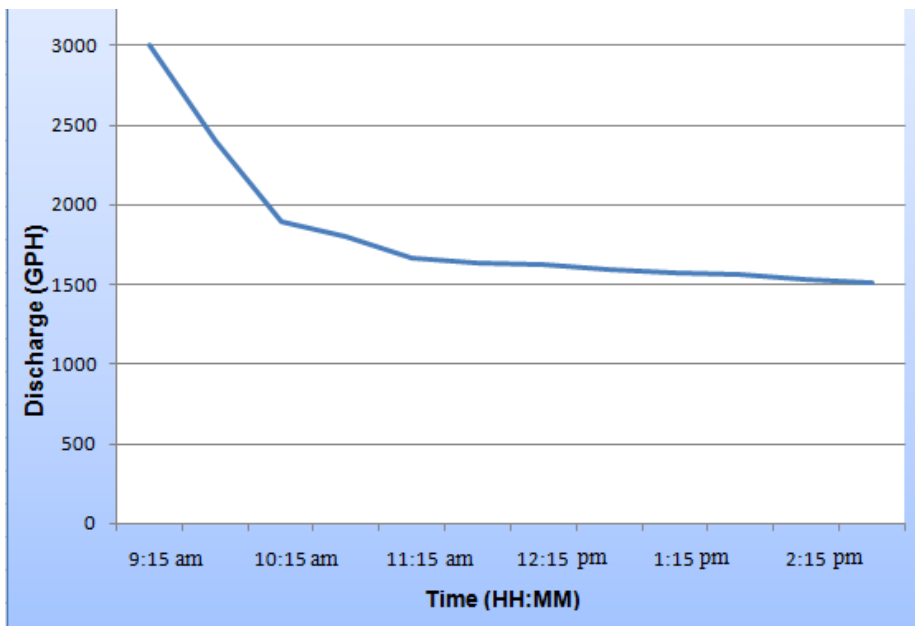
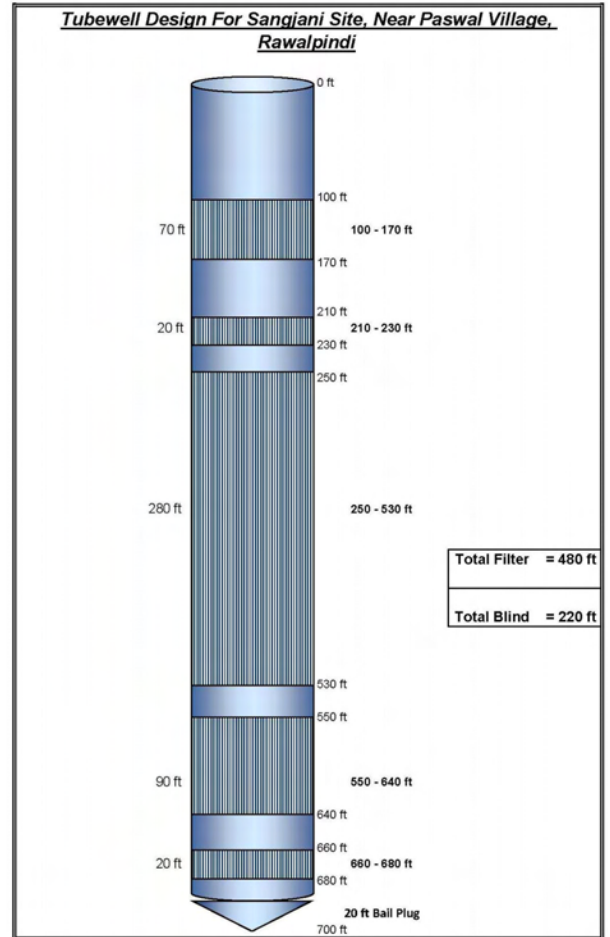
# TUBEWELL DRILLING & GROUND WATER SURVEY SANGJANI SITE, NEAR PASWAL VILLAGE, ISLAMABAD

## COMPLETION

2019

## SCOPE OF WORK

Ground Water Survey	5 Nos
Trial Boreholes	1 Nos
Yield Test	1 Nos



**Figure: Yield Test**

# GROUND WATER SURVEY E11 AND O-9, NPF SITES, ISLAMABAD

**COMPLETION**

2022

**CLIENT**

National Police Foundation NPF

## SCOPE OF WORK

Ground Water Survey

10 Nos





# GROUND WATER SURVEY GROUNDWATER POTENTIAL AT SECTOR I-15, ISLAMABAD

## COMPLETION

2021

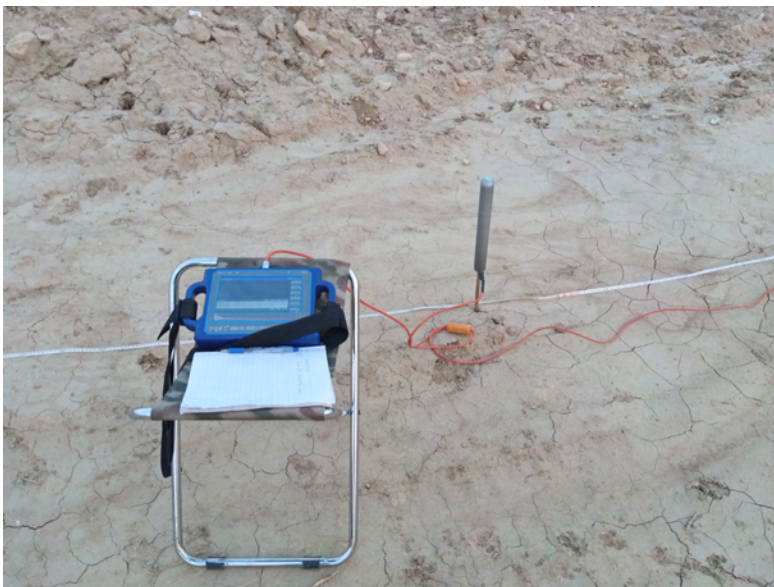
## CLIENT

Capital Development Authority  
CDA

## SCOPE OF WORK

Ground Water Survey

22 Nos





# APPENDIX - I

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## LIST OF DRILLING AND GROUTING PROJECTS





# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF DRILLING AND GROUTING PROJECTS

Sr No	Project	Drilling (m)	No. of Boreholes	Pressure	Location	Client/ Consultant
1.	Drilling & Grouting at Warsak Hydropower Plant Rehabilitation Phase 2 <i>In Progress</i>	1370	50	1.0-2.0 MPa	Peshawar	DOLSAR, COBA, DMC, BAK, WAPDA
2.	Drilling & Grouting at Basool Dam Project Ormara Gwadar <i>In Progress</i>	4000	200			<i>In Progress</i>
3.	Drilling & Grouting for the Stabilization of KKH near Sost, Gilgit-Baltistan (GB).	1705	260	1.20-1.50 MPa	Sost, Gilgit-Baltistan (GB)	National Highway Authority (NHA)
4.	Installation of Anchors including drilling, installation & stressing at International Business Centre Islamabad, G-10.	2500	120	0.43-0.50 MPa	G-10, Islamabad	Grandeur Developments (Pvt.) Ltd.
5.	Drilling and Grouting around one pier of Khairabad Bridge	200	10	0.10-0.15 MPa	Khairabad	National Highway Authority (NHA)
6.	Drilling & Grouting for Rehabilitation and Upgrading of Panjnad Barrage, Uch Sharif.	70	10	0.50-0.70 MPa	Panjnad Barrage, Uch Sharif.	NESPAK
7.	Drilling & Grouting Siphon at Upper Jhelum Canal near Jatalian.	40	6	0.05-0.07 MPa	UJC Jatalian	Jhelum Canal Division UJC Sarwar Road, Jhelum
8.	Grouting of Building at Commetti Chowk, Rawalpindi	30	5	0.03 - 0.07 MPa	Rawalpindi	Shehzad Consulting Engineers
9.	Drilling, Grouting & Shotcrete at Bara Dam		<i>In Progress</i>		Swabi	



# APPENDIX - II

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## LIST OF HYDROPOWER PROJECTS





# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

S/No	Project	Location	Client	Consultant	Scope of Work
1a	Geotechnical Investigation for <b>870 MW Suki Kinari HPP</b>	Kunhar river, Kaghan Valley, KPK	SK Hydro (Pvt.) Ltd.	Mott Macdonald, UK MM Pakistan	Geotechnical investigation, Topographic survey, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
1b	Geotechnical Investigation for <b>870 MW Detail Feasibility of Suki-Kinari HPP</b>	Kunhar river, Kaghan Valley, KPK	SK Hydro (Pvt.) Ltd.	NESPAK, ICS Tracteble Engineering S.A Coyne ET Bellir	Geotechnical investigation, Topographic survey, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
2a	Geotechnical Investigation for <b>300 MW Balakot HPP (Phase-I)</b>	Kunhar river Mansehra District Balakot, KPK	PEDO	AQUALOGUS. Team Consultant. Zeeruk International (Pvt.) Ltd	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
2b	Geotechnical Investigation for <b>300 MW Balakot HPP (Phase-II)</b>	Kunhar river Mansehra District Balakot, KPK	PEDO	AQUALOGUS. Team Consultant. Zeeruk International (Pvt.) Ltd.	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
2c	Geotechnical Investigation for <b>300 MW Balakot HPP (Phase-III)</b>	Kunhar river Mansehra District Balakot, KPK	PEDO	AQUALOGUS. Team Consultant. Zeeruk International (Pvt.) Ltd.	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
3.	Geotechnical Investigation for <b>750 MW Karot HPP</b>	Jhelum River Karot, AJK	Associated Technologies (Pvt.) Ltd.	SEMEC EGC MAES	Geotechnical investigation, coring, topographic survey, Permeability tests, WPT, lab testing, Geophysical survey, geological mapping and Feasibility study report.
4.	Geotechnical Investigation for <b>700 MW Azad Pattan HPP</b>	Jhelum River U/S of Azad Pattan bridge	Alamgir Power (Pvt.) Ltd.	Scott Wilson Ltd. & FHC Consulting Engineers	Geotechnical investigation, coring, boring, Permeability tests, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.



# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

S/ No	Project	Location	Client	Consultant	Scope of Work
5.	Geotechnical Investigation for <b>500 MW Chakothi-Hattian HPP</b>	Jhelum River Jhelum Valley, AJ&K	Suhail Jute Mills (Pvt.) Ltd.	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, coring, boring, Permeability tests, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
6.	Geotechnical Investigation for <b>132 MW Rajdhani HPP</b>	Poonch River near Kotli, AJK	Iqbal Power Limited	MWH, USA DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, Topographic survey, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study
7.	Geotechnical Investigation for <b>60 MW Gulpur HPP</b>	Poonch River near Kotli, AJK	Hydro Electric Board AJK	-	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, and Feasibility study report.
8.	Geotechnical Investigation for <b>102 MW Kotli HPP</b>	Poonch River Kotli, AJK	Mira Pakistan Ltd.	MWH, USA NDC TURKPAK	Geotechnical investigation, Topographic survey, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
9.	Geotechnical Investigation for <b>101 MW Gabral - Kalam HPP</b>	Swat River Kalam, Swat, KPK	Swat Hydropower Ltd.	Fichtner Consultants	Geotechnical investigation, Pitting, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
10.	Geotechnical Investigation for <b>197 MW Kalam - Asrit HPP</b>	Swat River Kalam, Swat, KPK	Techno Engineering Serives	RSW DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, Topographic survey, Pitting, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
11.	Geotechnical Investigation for <b>2 MW HPP on BRBD Canal at RD 0+000</b>	Chenab Canal Tehsil Daska, Distt: Sialkot	Tarakai Energy (Pvt.) Ltd.	Intigrated Consulting Services (Pvt.) Ltd.	Geotechnical investigation, Topographic survey, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.





# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

S/ No	Project	Location	Client	Consultant	Scope of Work
12.	Geotechnical Investigation for <b>Dowarian</b> (14.1 MW), HPP	Neelum river Neelum Valley, AJ&K	HEB	Scott Wilson Ltd. & FHC Consulting Engineers, ELECTRA Consultants	Geotechnical investigation, coring, boring, Permeability tests, , lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
13.	Geotechnical Investigation for <b>Shounter</b> (20 MW), HPP	Neelum river Neelum Valley, AJ&K	HEB	Scott Wilson Ltd. & FHC Consulting Engineers, ELECTRA Consultants	Geotechnical investigation, coring, boring, Permeability tests, , lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
14.	Geotechnical Investigation for <b>Janwai</b> (5 MW), HPP	Neelum river Neelum Valley, AJ&K	HEB	Scott Wilson Ltd. & FHC Consulting Engineers, ELECTRA Consultants	Geotechnical investigation, coring, boring, Permeability tests, , lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
15.	Geotechnical Investigation for <b>Luat</b> (24.1 MW), HPP	Neelum river Neelum Valley, AJ&K	HEB	Scott Wilson Ltd. & FHC Consulting Engineers, ELECTRA Consultants	Geotechnical investigation, coring, boring, Permeability tests, , lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
16.	Geotechnical Investigation for <b>Nagdar</b> (11.2 MW), HPP	Neelum river Neelum Valley, AJ&K	HEB	Scott Wilson Ltd. & FHC Consulting Engineers, ELECTRA Consultants	Geotechnical investigation, coring, boring, Permeability tests, , lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
17.	Geotechnical Investigation for <b>Taobut</b> (5 MW) HPP	Neelum river Neelum Valley, AJ&K	HEB	Scott Wilson Ltd. & FHC Consulting Engineers, ELECTRA Consultants	Geotechnical investigation, coring, boring, Permeability tests, , lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.



# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

S/No	Project	Location	Client	Consultant	Scope of Work
18.	Geotechnical Investigation for <b>4.4 MW Phulra HPP at Siran Nullah</b>	Siran river, Lason Nawab Road, Manshera	Chinar Power (Pvt.) Ltd.	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
19.	Geotechnical Investigation for <b>4.4 MW Tarappi HPP at Siran Nullah</b>	Siran river, Lason Nawab Road, Manshera	Chinar Power (Pvt.) Ltd.	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
20.	Seismic Refraction Survey at <b>Mangla Marla Canal</b>	Chenab River, Marala Canal Mirpur, AJ&K	WAPDA	BARQAB Consulting Services (Pvt.) Ltd.	Geophysical Services/ Seismic Refraction Survey
21.	Geotechnical Investigation for <b>Rehabilitation of Munda Head Works</b>	Swat river, Tang, Charsada, KPK	Technicon Enterprises	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, Topographic survey, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
22.	Geotechnical Investigation for <b>4.8 MW Riali-II HPP</b>	Ghoriwallah. Nullah Neelum Valley, AJ&K	Sachal Engineering Works (Pvt.) Ltd.	DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, Topographic survey, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
23.	Geotechnical Investigation for <b>2.6 MW Machai HPP</b>	Sawat River Machai Canal, Katlang, Mardan, KPK	SHYDO or PEDO	Al Fajar International (Pvt) Ltd & Shaheen JV	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Topographic survey, Geophysical survey, geological mapping and Feasibility study report.





# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

S/No	Project	Location	Client	Consultant	Scope of Work
24.	Geological Investigation for <b>1.2 MW Ghail HPP</b>	Jhelum river Jhelum Valley, AJ&K	Ali Power (Pvt.) Ltd.	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Topographic survey, Geophysical survey, geological mapping and Feasibility study report.
25.	Geotechnical Investigation for <b>(14 MW) Jabri Beddar HPP</b>	Haro River, Upstream of Khanpur Dam, Haripur, KPK	Karimi Energy (Pvt.) Ltd.	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, Geological mapping and Feasibility study report.
26.	Geotechnical Investigation for <b>1.6 MW Riali-I HPP</b>	Ghoriwallah. Nullah Neelum Valley, AJ&K	Shahaba Power (Pvt.) Ltd.	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, coring, boring, Permeability tests, WPT, lab testing, Borrow area study, Geological mapping and Feasibility study report.
27.	Geotechnical Investigation for <b>14 MW Kathai-II HPP</b>	Jehlum river Kathai Nullah Near Chinari, Jhelum Valley, AJ&K		BARQAB Consulting Services (Pvt.) Ltd.	Geotechnical investigation, , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Topographic survey, Geophysical survey, geological mapping and Feasibility study report.
28.	Geotechnical Investigation at Powerhouse for <b>150 MW Patrind HPP</b>	Kunhar River Lower Chattar, Muzaffarabad, AJ&K	Star Hydropower Company	Pakistan Engineering & Services (PES) EPC Contractor (Daewoo E & C)	Geotechnical investigation, coring, boring, Permeability tests, WPT, lab testing, Borrow area study, Geological mapping and Feasibility study report.
29.	Geotechnical Investigation for <b>24 MW Mahandri HPP on Mahnoor Nullah</b>	Kunhar river Mahandri, Kaghan Valley, KPK	Mahandri Power (Pvt.) Ltd.	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.



# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

S/ No	Project	Location	Client	Consultant	Scope of Work
30.	Geotechnical Investigation for 14 MW Tangar HPP on Tangar Nullah	Kunhar river Near Paras, Kaghan Valley, KPK	Tangar Power (Pvt.) Ltd.	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Topographic survey, Geophysical survey, geological mapping and Feasibility study report.
31.	Geotechnical Investigation for 1 MW HPP on Lower Jhelum Canal at RD 10+265 to 24+320.	Jhelum river Chakiyan Phularwan, distt: Sargodha	Waleed Power (Pvt.) Ltd.	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, lab testing, Geophysical survey, geological mapping and Feasibility study report.
32.	Geophysical Investigation for 665 MW Lower Palas Valley HPP	Indus River Lower Palas Valley, Dasu KPK	INTELLEGEO Corporation		Geotechnical investigation, , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Topographic survey, Geophysical survey, geological mapping and Feasibility study report.
33.	Geotechnical Investigation for 51 MW Mujigram-Shogore HPP	Lutkho River Mujigram & Shogore, Garam Chashma Road, Chitral, KPK	PEDO	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, , coring, boring, Permeability tests, WPT, lab testing, Borrow area study, Geological mapping and Feasibility study report.
34.	Geotechnical Investigation for 15 MW Siran HPP at Siran Nullah	Siran, Lason Nawab Road, Manshera	Chinar Power (Pvt.) Ltd.	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
35.	Geotechnical Investigation for 360 MW New Underground Powerhouse at Warsak Hydropower Plant	Kābul River Warsak, Peshawar, KPK	WAPDA	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.





# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

S/ No	Project	Location	Client	Consultant	Scope of Work
36.	Geotechnical Investigation at Power shaft/penstock for <b>150 MW Patrind HPP</b>	Lower Chattar, Muzaffarabad, AJ&K	Star Hydropower Company	Pakistan Engineering & Services (PES) EPC Contractor (Daewoo E & C)	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study and Feasibility study report.
37.	Geotechnical Investigaion for <b>300 MW Laspur-Murigram HPP</b>	Yarkhun River Mastuj Valley & Sor Laspur Valley, Chitral, KPK	PEDO	CIV-Tech Associates & EPAC Consultants in association with International Expert group for GTZ DESIGNMEN Consulting Engineers (Pvt.)	Geotechnical investigation, coring, boring, Permeability tests, WPT, lab testing, Borrow area study, Geological mapping and Feasibility study report.
38.	Geotechnical Investigaion for <b>Arkari HPP</b>	Lutkho River Arkari Valley, Chitral, KPK	PEDO	DESIGNMEN Consulting Engineers (Pvt.)	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological
39.	Geotecnical Investigation for <b>2 MW Beer Mogh HPP-I</b>	Golan river Golan Valley, Chitral, KPK	Sarhad Rural Support Program (SRSP)	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, Geophysical Survey, lab testing, and Feasibility study report.
42.	Geotecnical Investigation for <b>2 MW Beer Mogh HPP-II</b>	Golan river Golan Valley, Chitral, KPK	Sarhad Rural Support Program (SRSP)	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
40.	Geotechnical Investigation for <b>48.62 MW Mastuj HPP</b>	Mastuj River Mastuj Valley, Chitral, KPK	Chinar Power (Pvt.) Ltd.	Elan Partners (Pvt.) Ltd. DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, geological mapping and Feasibility study report.
41.	Geotechnical Investigation for <b>49 MW Gumat Nar HPP</b>	Kunhar River Surgan Valley, Neelum Valley, AJ&K	Bed Rock (Pvt.) Ltd.	DESIGNMEN Consulting Engineers (Pvt.) Ltd. Elan Partners	Geotechnical investigation , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study



# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

S/ No	Project	Location	Client	Consultant	Scope of Work
43.	Review of Geotechnical Investigation for <b>15 MW Jhing HPP</b>	Jhelum River Jhing Valley, Neelum Valley, AJ&K	HEB	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, lab testing, and Feasibility study report.
44.	Geotechnical Investigation for <b>4.5 MW Sialkot Hydropower Project, Daska</b>	Chenab river Tehsil Daska, Distt: Sialkot	Paidar Energy (Pvt.) Ltd.	Zeeruk International (Pvt.) Ltd.	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Geophysical survey, geological mapping and Feasibility study report.
45.	Geotechnical Investigation for <b>1.5 MW Boi HPP</b>	Boi Nullah near Boi Dalola, Ghari Habibullah	Echo Smart (Pvt.) Ltd.	DESIGNMEN Consulting Engineers (Pvt.) Ltd. Geoengineers	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, hydrology study, Geophysical survey, geological mapping and Feasibility study report.
46.	Geotechnical Investigation for <b>14 MW Saral-Dhartiyan HPP</b>	Haro River, Upstream of Khanpur Dam, Haripur, KPK	Karimi Energy (Pvt.) Ltd.	DESIGNMEN Consulting Engineers (Pvt.) Ltd. Bed Rock (Pvt.) Ltd. Geoengineers	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
47.	Geotechnical Investigation for <b>32 MW Attabad HPP</b>	Attabad Lake Hunza Valley, GB	Hunza Water & Power Division, GB	DESIGNMEN Consulting Engineers (Pvt.) Ltd.	Geotechnical investigation, coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.
48.	Geotechnical Investigation for <b>32 MW Trappi HPP</b>	Siran River Mansehra, KPK	M/S Comcept Limited	DESIGNMEN Consulting Engineers (Pvt.) Ltd. Elan Partners (Pvt.) Ltd. Geoengineers	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.





# GEOENGINEERS

Geotechnical Engineers, Piling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of Irrigational & Hydel Projects

## LIST OF HYDROPOWER PROJECTS

<b>S/ No</b>	<b>Project</b>	<b>Location</b>	<b>Client</b>	<b>Consultant</b>	<b>Scope of Work</b>
49.	Geotechnical Investigation for 60 MW Shalfalam HPP	Siran River Dir, KPK	Sadiq & Sons	DESIGNMEN Consulting Engineers (Pvt.) Ltd. Elan Partners (Pvt.) Ltd. Geoengineers	Geotechnical investigation, Topographic survey , coring, boring, Permeability tests, WPT, UDS, DS, SPT, Pitting, lab testing, Borrow area study, Geophysical survey, geological mapping and Feasibility study report.



# APPENDIX - III

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## CERTIFICATES & APPRECIATION LETTERS

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## TO WHOM IT MAY CONCERN

**AQUALOGUS – Engenharia e Ambiente, Lda.**, registered head office at Rua do Mar da China, n. ° 1 Office 2.4, Lisbon, PORTUGAL, certifies that **M/S GEOENGINEERS** has conducted the Geotechnical Investigation for the Feasibility Study of 300 MW BALAKOT HYDROPOWER PLANT covering the scope of work as under:

- i) Carrying out the drilling of boreholes at the dam alternative locations sites, tunnels alignments and Powerhouse site.
- ii) Field testing, sampling and logging for the main project features locations.
- iii) Excavation of Test Pits and Trenches.
- iv) Laboratory testing for geotechnical analysis.
- v) Submission of factual geotechnical investigation report.

Geoengineers deployed qualified and experienced geological team, survey crew and technical staff to accomplish the above-mentioned tasks.

We wish them success in their future endeavours and recommend them for any type of Geotechnical Investigation assignment keeping in view their performance and technical expertise in the above-mentioned project.

Sincerely,



**Sérgio Correia da Costa**  
Managing Director

## 10. CERTIFICATES



1st. Floor, 9-West, Rizwan Plaza,  
Jinnah Avenue, F-6, ISLAMABAD-PAKISTAN  
E-mail: najib@isb.comsats.net.pk  
Web site: <http://www.designmen.com>  
Ph: 92-51-2827203, 2828577, 2829002  
Fax: 92-51-2829891

### TO WHOM IT MAY CONCERN

It is certified that M/s GEOENGINEERS have completed the Geo-Technical jobs for the following projects.

1. Saudi Residence Compound, Islamabad.
2. PMHA, Golra Railway Station, Rawalpindi.
3. Helicopter Hanger for Agha Khan Foundation at Airport Islamabad.
4. Jamia Tafheemul Quran for Jammaite – Islami, Islamabad.
5. FMC Hospital, Abbottabad.

M/s GEOENGINEERS have a team of highly trained and experienced Geologists/Engineers and possess all types of drilling rigs, field testing instruments and laboratory set up.

In view of their performance and technical expertise we have no hesitation in recommending M/s GEOENGINEERS for any GEO-TECHNICAL jobs.

### **Designmen**

*Consulting Engineers (Pvt) Ltd.  
1st Floor, Block 9-West  
Rizwan Plaza, Jinnah Avenue  
F-6, Islamabad*

A handwritten signature in black ink, appearing to be 'Ahmad', written over a horizontal line.

DIRECTOR

DESIGNMEN CONSULTING ENGINEERS (PVT) LTD  
ISLAMABAD.





**COMSATS Institute of Information Technology  
Abbottabad**

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Date 27<sup>th</sup> November 2006

**TO WHOM IT MAY CONCERN**

This is to certify that M/S GEO ENGINEERS ISLAMABAD was our consultant for Geo Technical investigation work of following projects at COMSATS Institute of Information Technology Abbottabad.

- a. Construction of 2<sup>nd</sup> Academic Block
- b. Construction of Boys Hostel
- c. Construction of Girls Hostel

GEO Engineers deployed qualified and experienced Geologist team and carried out the soil investigation work of above-mentioned projects successfully, satisfactory and timely.

We wish them success in their future assignments.

**Engr. Muhammad Shoaib**  
Estate Officer / Project Director



A member of Association of  
Consulting Engineers of  
Pakistan affiliated with FIDIC

## AAA Engineering Consultants (Pvt) Ltd

**Head Office:** 770-A, Shadman Colony, Lahore, Pakistan  
Tel: +92-42-7522050,1,2 Fax: +92-42-7582429  
Web: [www.aaa.com.pk](http://www.aaa.com.pk) E-Mail: [info@aaa.com.pk](mailto:info@aaa.com.pk)

**Branch Office:** 504, Street No. 47, G-10/4, Islamabad, Pakistan  
Tel: +92-51-2504092 & 3 Fax: +92-51-2214067



### TO WHOM IT MAY CONCERN

It is to certify that M/s Geoengineers have completed the Geotechnical investigation and surface Geological mapping for the following projects.

- i) Realignment of proposed Motorway M-2 Kallar Kahar section.
- ii) Improvement of Motorway M-2 section at Salt Range Area in the Islamic Republic of Pakistan.

M/s Geoengineers deployed qualified & experienced Geologists team and carried out the above described job successfully and within the allotted time.

M/s Geoengineers is well organized experienced and capable organization to execute the same nature of work and we have no hesitation in recommending them.

We wish them success in their future assignments.

  
USMAN RIAZ  
Director



Dated: 12<sup>th</sup> Dec 2007





**NAQVI AND SIDDIQUIE**  
ARCHITECTS - ENGINEERS ISLAMABAD

December 4, 2006

To Whom It May Concern:

We have the pleasure to certify that M/s Geo Engineers has conducted the soil investigation work including laboratory testing of samples for the project of NADRA Provincial Headquarters Building in Sector G-10/4, Islamabad.

We are fully satisfied with their work, which was completed in time and a comprehensive report was submitted for the purpose of structural design.

For Naqvi & Siddiquie

(Khizar Hayat Asghar)  
Chief Engineer

BLOCK No. 18, FIRST FLOOR, AGHA KHAN ROAD,  
MARKAZ F-6, SUPER MARKET ISLAMABAD.  
PHONES: (051) 2876769, 2270268, FAX: (051) 2270815  
E-MAIL: nsisb@dsl.net.pk

Karachi Office:  
B - 1 & B - 2, EOBI HOUSE, (EX-AWAMI MARKAZ),  
MAIN SHAHRA-E-FAISAL, KARACHI.  
PHONES:4532324-4532349, Fax No: (021) 4532449



## Italtec Energy (Pvt) Limited

HEAD OFFICE: H. No . 276, Nazim-uddin Road, F-10/1, Islamabad, Pakistan.  
Tel : +92-51-2298795-2212793 Fax : +92-51-2298796-2105741  
E-mail : kdna@comsats.net.pk



**Dated: 12th Oct 2006**

### TO WHOM IT MAY CONCERN

This is to certify that M/S GEO ENGINEERS ISLAMABAD were our Sub-contractor for Geotechnical investigations and Topographic Survey work Of 18 MW Pehur Hydro Power Project Site at Gadoon Amazai District Swabi (NWFP).

Geo Engineers deployed proper equipment and experienced Survey Team to Carry out the Soil investigation and Topographic Survey work successfully, Satisfactory and timely.

Geo Engineers well organized experienced and capable company to execute the same nature of work and we have no hesitation in recommending them.

We wish them success in their future assignments.

For Italtec Energy (Pvt.) Limited

Raza Ahmed Cheshti  
Manager Projects





**ENGINEERING GENERAL  
CONSULTANTS EGC (PVT) LTD.**

**TO WHOM IT MAY CONCERN**

It is to certify that M/s Geoengineers conducted the sub-consultancy work for the following assignments:

- i) Surface Geological Investigations of S-2/JVR 60 km (Earthquake Roads in Azad Kashmir).
- ii) Geotechnical Investigation for S-2/JVR 60 km (Earthquake Roads in Azad Kashmir)

Geoengineers deployed experienced professionals and completed the work timely and successfully.

In view of their performance and technical expertise we have no hesitation in recommending M/s Geoengineers for Geological and Geotechnical Investigations.

We wish them success in their future assignments.

Engr. E.I. Johri  
For Engineering General Consultants EGC (Pvt) Ltd.

**HEAD OFFICE :**  
76-A, Faisal Town,  
Lahore - 54700, Pakistan.  
Tel : ( 92-42 ) 5169901 -3  
Fax : ( 92-42 ) 5169897  
E-mail : iuhaq@brain.net.pk  
Website: www.egcpvt.com

**ISLAMABAD OFFICE:**  
Suit # 102, 1st Floor, Kiran Plaza,  
F-8 Markaz, Islamabad.  
Tel. (92 - 51) 2261173 - 2261174  
Fax:(92 - 51) 2261174  
E-mail : iuhaq@brain.net.pk  
Website: www.egcpvt.com



*Pakistan Institute of Engineering and Applied Sciences*

*Nilore, Islamabad, 45650 Pakistan*

**Project Director**

Ref. PIEAS/P&D/101/07/ 255

10 July 2007

**TO WHOME IT MAY CONCERN**

This is to certify that M/s GEO ENGINEERS ISLAMABAD were our sub-contractor for Geotechnical Investigation and Topographic Survey of Academic Blocks and Residential Hostels buildings site at Nilore, Islamabad.

The firm carried out work with efficient and well equipped team in specified schedule successfully and satisfactorily.

We wish them success in future assignments.

  
**Engr. Farooq A Qaiser**





## **TO WHOM IT MAY CONCERN:**

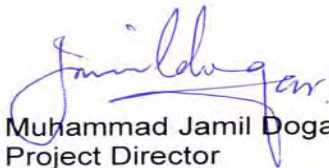
It is to certify that M/s Geoengineers has conducted the Geotechnical Investigation & Topographic survey for 655 MW Suki Kinari Hydro Power Project covering the scope of work as under:

- i) Carrying out the Drilling at four dam sties and Powerhouse site.
- ii) Seismic refraction survey for the project area.
- iii) Geotechnical mapping for the project area.
- iv) Borrow area investigations.
- v) Laboratory testing for foundation analysis and borrow area.
- vi) Submission of Geotechnical investigation report.
- vii) Topographic survey for alternative dam sites.

Geoengineers deployed qualified and experienced Geological team, Survey crew and technical staff to accomplish the above mentioned jobs.

We wish them success in their future endeavors and recommend them for any type of Geotechnical Investigation assignment keeping in view their performance and technical expertise.

Best regards,

  
Muhammad Jamil Dogar  
Project Director

**SK Hydro (Pvt.) Ltd.**

15 Peshawar Block, Fortress Stadium, Lahore, Pakistan

Tel: +(92) 42 6675595 Fax: +(92) 42 6673960

[www.skhydro.com](http://www.skhydro.com)



# Technomen Construction (Pvt) Ltd.

805, Anum Estate 8th Floor, Shahrah-e-Faisal, Karachi-75350, Pakistan.  
Tel : +92-21-4394211-14, 4313005-7 Fax : +92-21-4321538

## LETTER OF AWARD

Abdul Shakoor,  
Chief Executive  
Geo Engineers  
Islamabad

date: April 28, 2007

Subject: **Topographic Survey and Geotechnical Investigation for 200 MW Power Plant.**

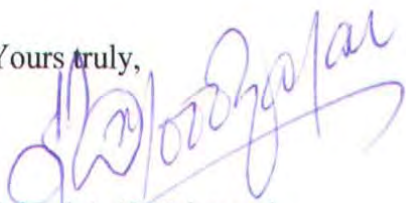
We refer to the quote sent to you by email on April 16, 2007 to carry out Topographic Survey and Geotechnical Investigation and ERS for 200 MW HSFO based diesel engines combined cycle power project to be located near Gakhar city, district Gujranwala, province of Punjab. (the "Works") as more particularly described in the documents comprising the contract referred to below:

1. Words and expressions used in this letter shall have the same meanings as are assigned to them in your proposal.
2. The proposal documents have been clarified, revised and negotiated with you and the agreed amendments have been incorporated in the final documents. we confirm that the deviations are accepted subject to the express condition that the contractor confirms that such deviations are consistent with and don not result in any reduction or compromise to the contractor's obligation to strictly comply with the guidelines spelled out by M/s WARTSILA in their specification documents for Topographic Survey, ERS Survey and Soil Investigation Survey.
3. We hereby confirm that by the quotation, you have agreed to provide technical support and to respond to any queries, objections or issues raised by M/s POYRY and M/s WARTSILA, in consideration of payment to be made by us to you of Rs.1,254,750/- (One million two hundred fifty four thousand and seven hundred fifty only), which sum or such other sum may be ascertained in accordance with the contract shall constitute the "Contract Price". Price breakup of each event is enclosed.



4. We undertake to pay you in consideration of the preparation and execution of the works, at the contract price at the times and in the manner prescribed in your offer, upon receipt of your invoice.
5. Collection of necessary data from Meteorological Department will be the responsibility of M/s GeoEngineers.
6. Topographic Survey will cover the entire site and its surroundings according to the scope provided by M/s WARTSILA.
7. Installation of PVC stand pipe piezo meters have been assumed upto five, however, payments will be made as per actual requirement.
8. Whereas, your appointment for the said works shall be directly with the M/s Technomen Construction (Pvt.) Limited for the said project in terms of payment, however, POYRY ENERGY OY, Finland and WARTSILA Lahore shall be coordinating, advising and overseeing all your data, findings, results, etc., submitted within the prescribed timeframe as intended to enable them to consolidate the overall feasibility study reports and design of foundation for the submission to M/s Technomen within the stipulated period. To this effect, three (3) hard color copies of your final report together with two (2) electronic copies (on CD) shall be submitted to M/S Technomen.
9. This letter also serves as a notice to proceed with the Works, which notice shall be deemed to be effective from. You shall forthwith commence with the execution of the Works immediately, and will complete the Works within nine weeks.
10. Please acknowledge the receipt of this letter.

Yours truly,



Saiyed Asif Mahmood  
Chief of Operations