FORM T-1: TRAINING COURSE SUMMARY SHEET	V1 NORPLAN

HARDDISK:Users:sveinstoveland:Dropbox:Hydrogeology Afghanistan (1):Trainig_capacitybuilding:New Folder:Sumary sheet 1.1 Ground water investigation-sample.docx

Course title: ***Hydrogeology I*** *Groundwater Investigation*			*Course no* *1.1* / *Date prepared:*
Training purpose	Enhancing of capacity building for monitoring of groundwater resources, find out productive water bearing zones with suitable quality, proper well selection site, and finally obtaining of suitable qualitative and quantitative groundwater resources.		
Target group	Education level: Graduates in hydrogeology, technicians	Experts/national planners/provincial/district National expert, Provincial and District areas	
Course details:	Course language(s) Persian or Pashtu		
	Duration(days): 2 in class, 5 in field	No. participants per course: 15	Theoretical /practical/training? 2 in class, 5 in field
	Planned course location(s):	Responsible presenter National and International experts	Handouts to be prepared by: Trainers
Summary syllabus	**Groundwater Investigation**: for selection of drilling sites; decide which type of drilling rigs. **Environmental Impact Assessment (EIA)** **Geophysical survey** (VES, IP, well logging) and using total station data collection. **Drilling supervision and analyzing lithology**: drilling penetration rate, rig action, lithological logging well design, gravel packing **Well design**: Based on drilling lithological log, time log, drilling action log and geophysical logger for the hydrogeologist to analyze and select pips and filter interval, using of software for well design. **Well completion**: Well assembly, lowering of assembly, gravel packing. **Well Hydraulics**: Compressor development, compressor test, multiple step drawdown test, aquifer performance test collection data, and interpretation of test data with different software. **Interpretation of hydrochemical and microbiological data**. Hydro meteorological data collection data: (precipitation, temperature, Evapotranspiration, River flow, springs flow and Karezes flow. Preparing of thematic maps, using software (prepared by responsible officer)		
Training equipment required	Listing of equipment to be made available for course Overhead projector, beamer, white board, for presentation. Car for rapid survey ,GPS, Water level indicator, Field kit for Physicochemical groundwater parameters, V-notch plate, water sampler, small diameter submersible water pumps with generator.		
Training material	Can exist material be used? If so what/ from where? To be used: Topographical and Geological maps. Stationary ,hand out teaching material Existing Hydrogeological and Hydrochemical data and interpretation of data with different soft ware To be developed: none		
Field/practical training.	Preparations needed, responsible officer(s) Training materials , Field selection the site, drilling operation, collection of lithological log, lowering of well assembly, placement of gravel packing, compressor development, compressor development test and pumping test		
Prepared by	Prepared by:		