KINGDOM OF MOROCCO
MINISTRY OF PUBLIC WORKS
GENERAL DIRECTORATE OF
HYDRAULICS

JAPAN INTERNATIONAL
COOPERATION AGENCY
(JICA)

THE STUDY ON RURAL WATER SUPPLY IN THE PRE-RIF REGION IN MOROCCO

FINAL REPORT

VOLUME IV DRAWINGS

AUGUST 1996

NIPPON KOEI CO., LTD.

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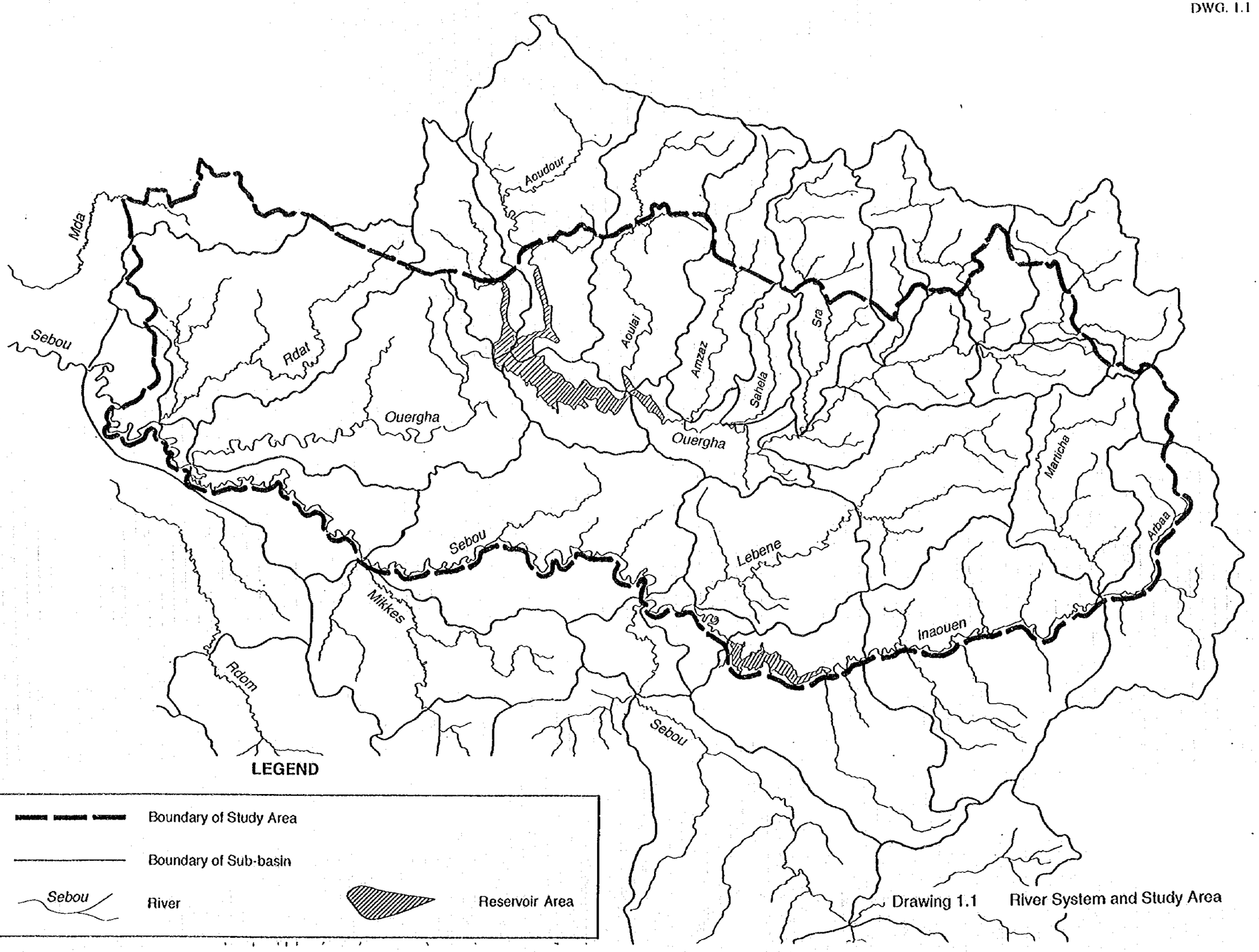
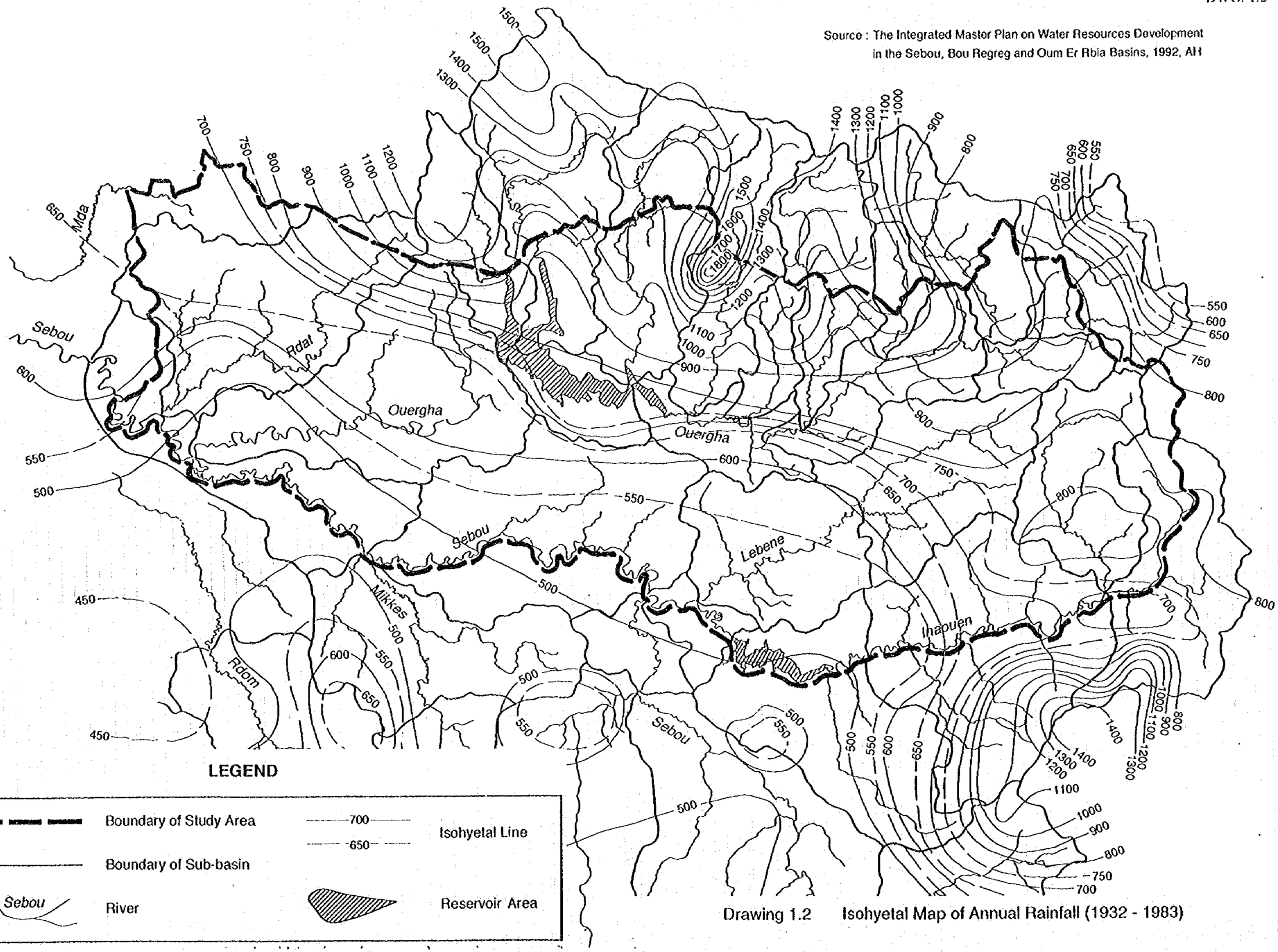
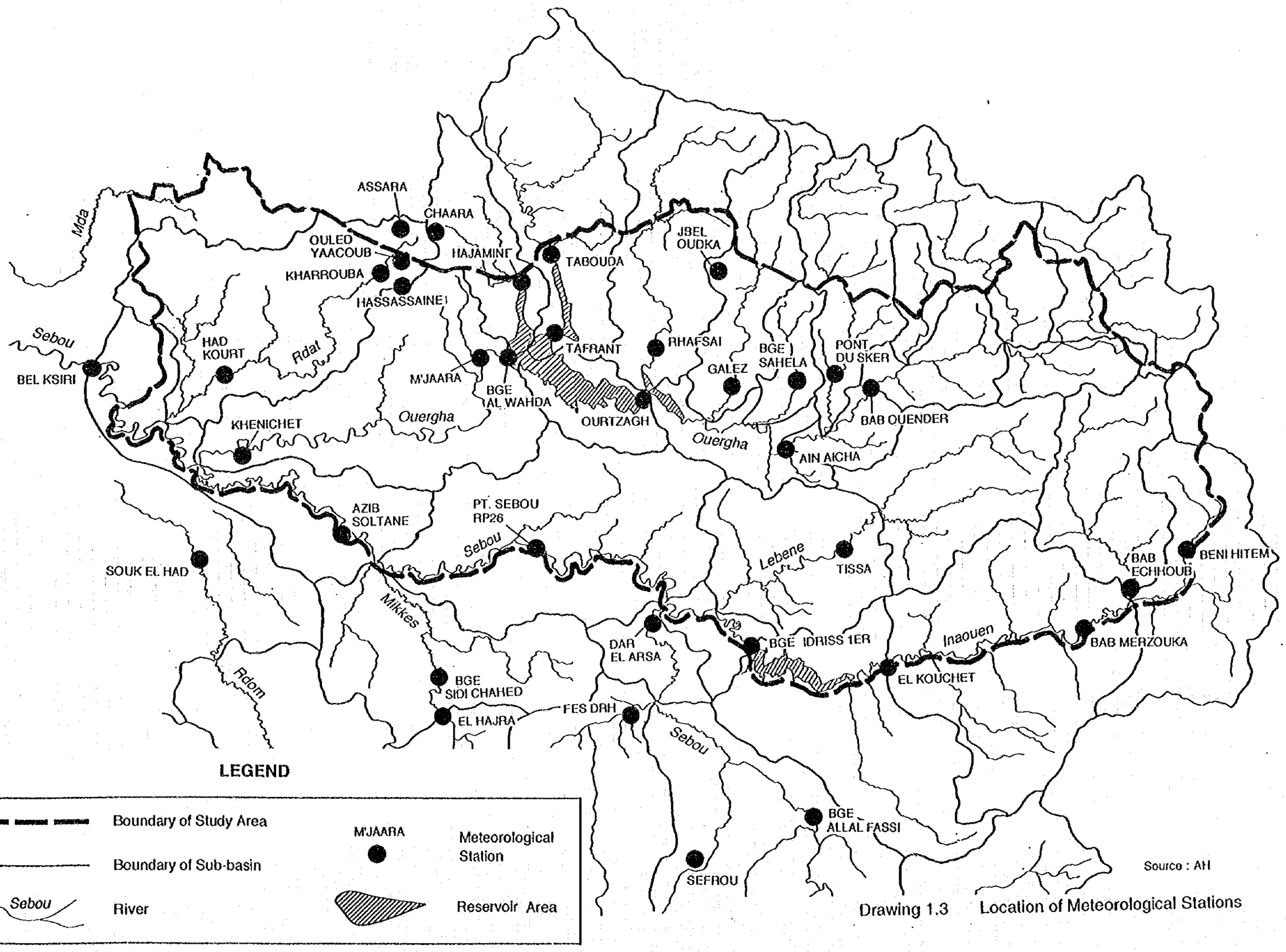


Drawing 1.1 River System and Study Area

Source : The Integrated Master Plan on Water Resources Development in the Sebou, Bou Regreg and Oum Er Rbia Basins, 1992, AH

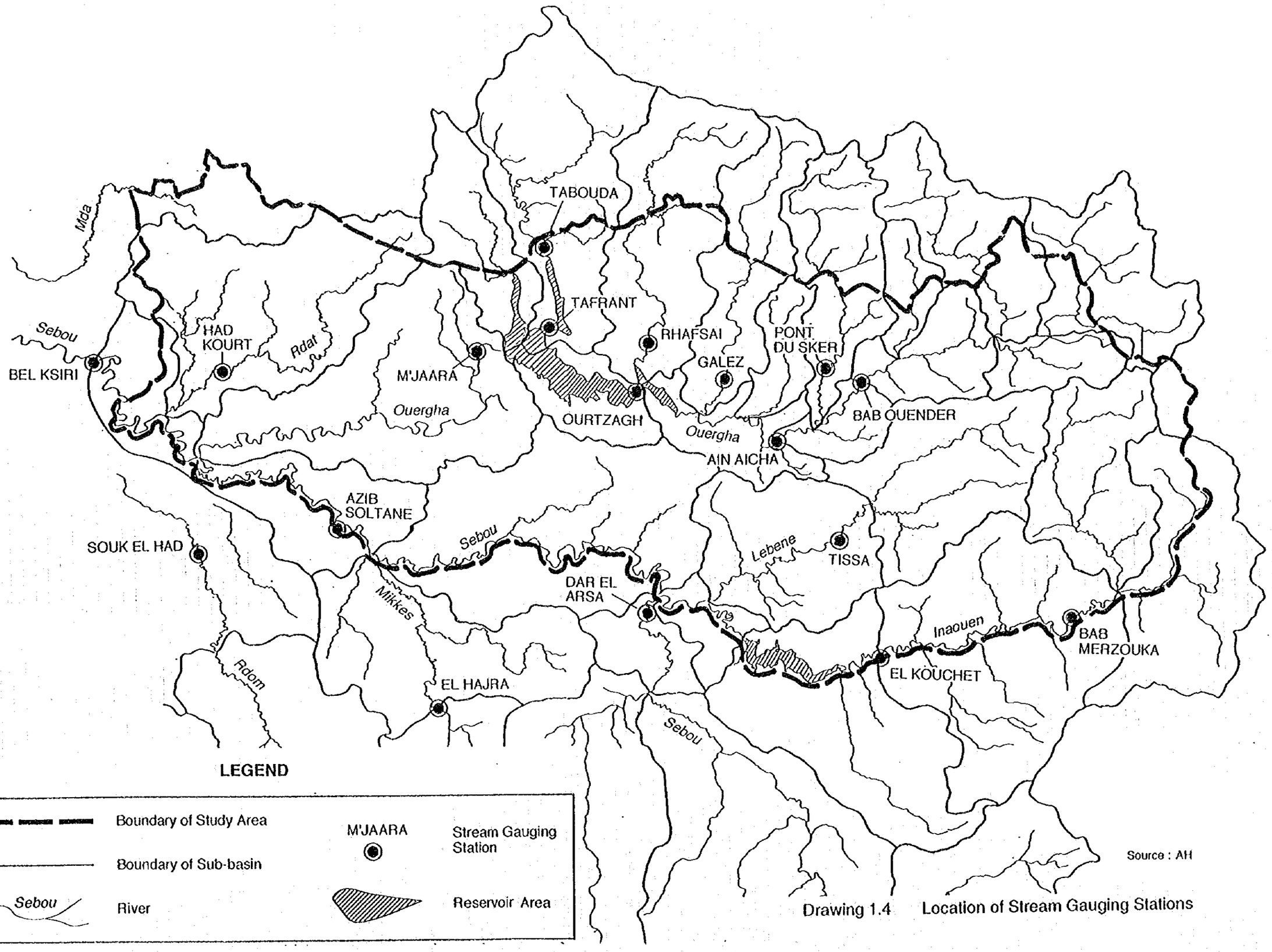


Drawing 1.2 Isohyetal Map of Annual Rainfall (1932 - 1983)

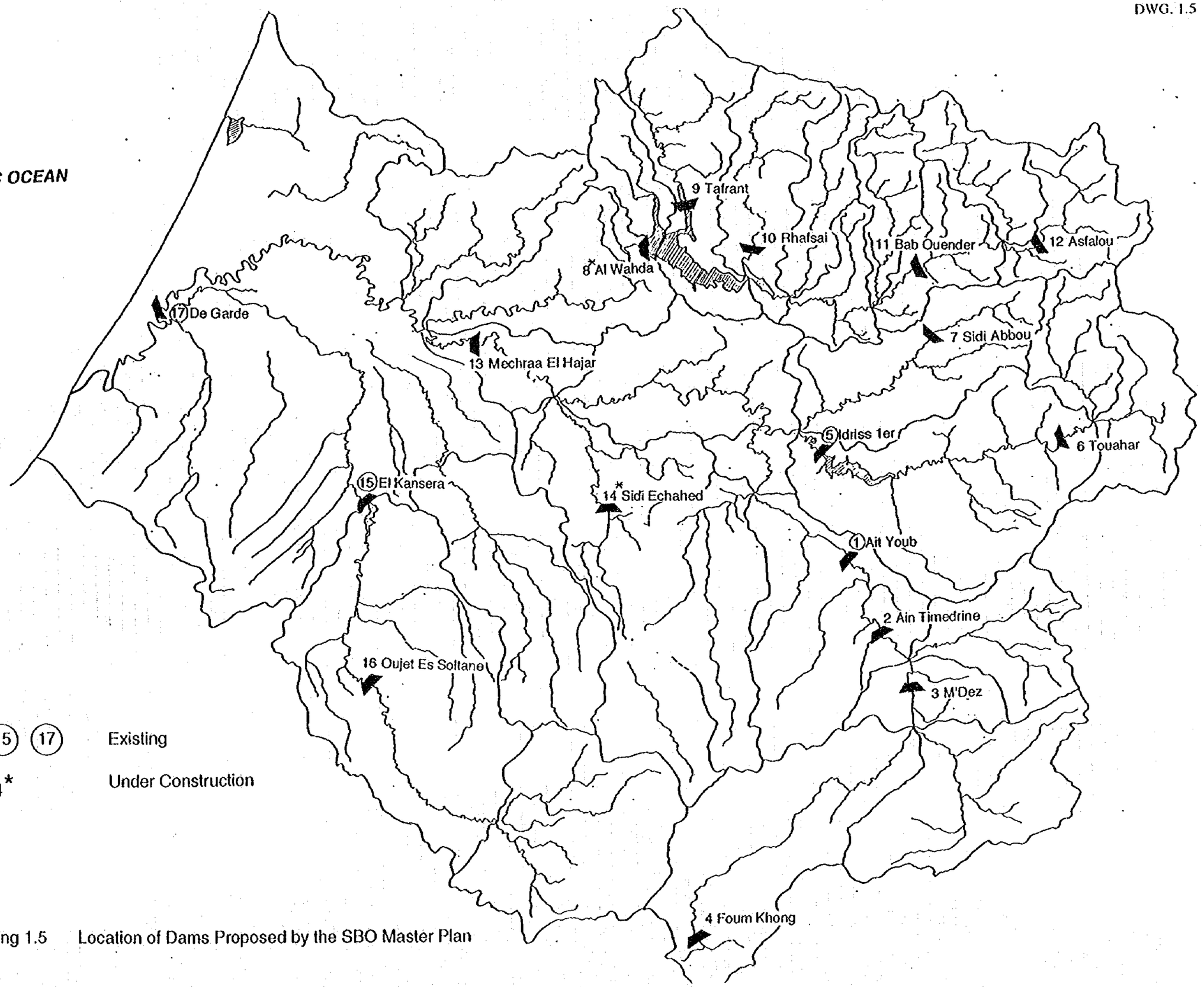


Source : AH

Drawing 1.3 Location of Meteorological Stations



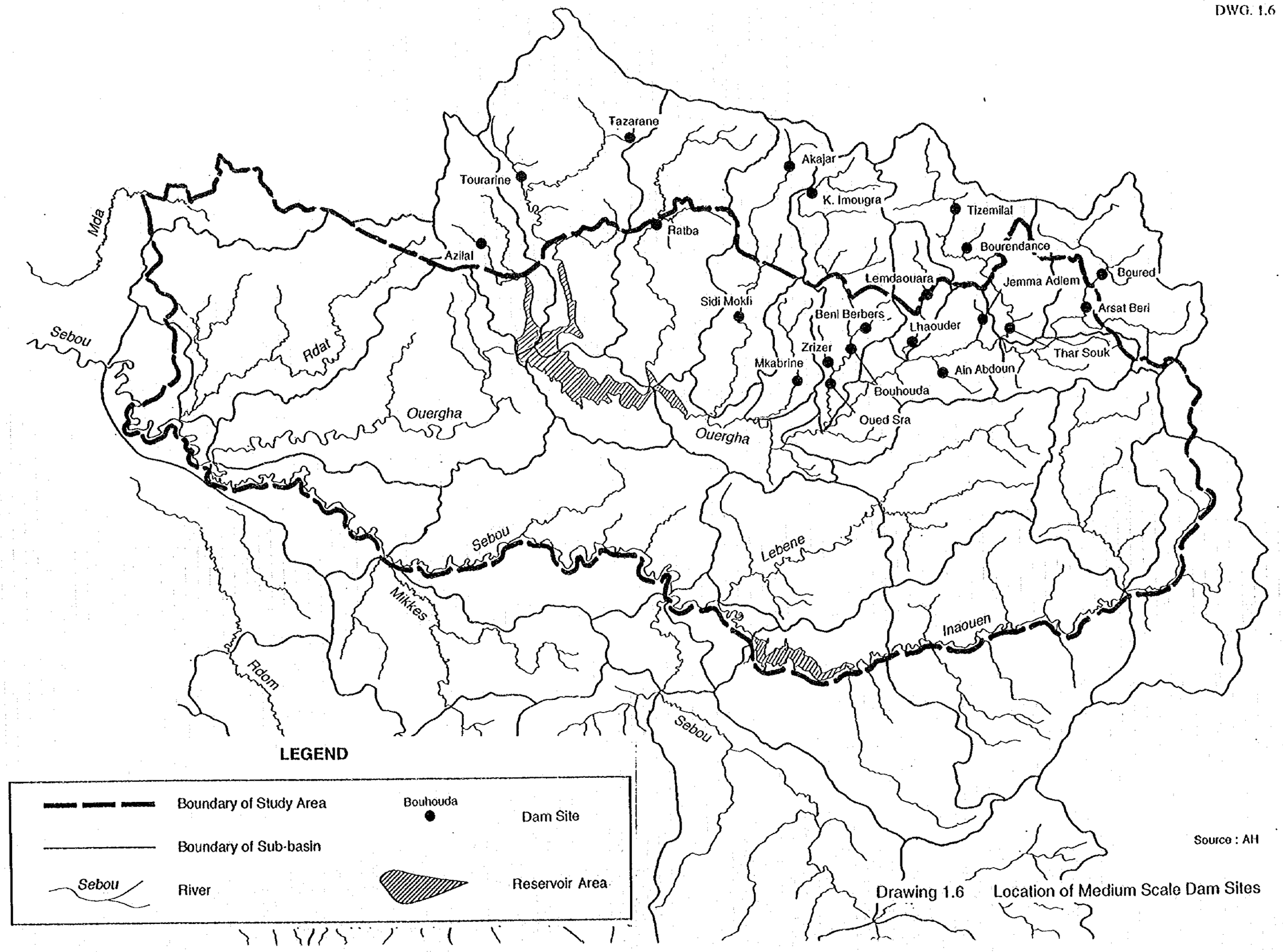
Drawing 1.4 Location of Stream Gauging Stations



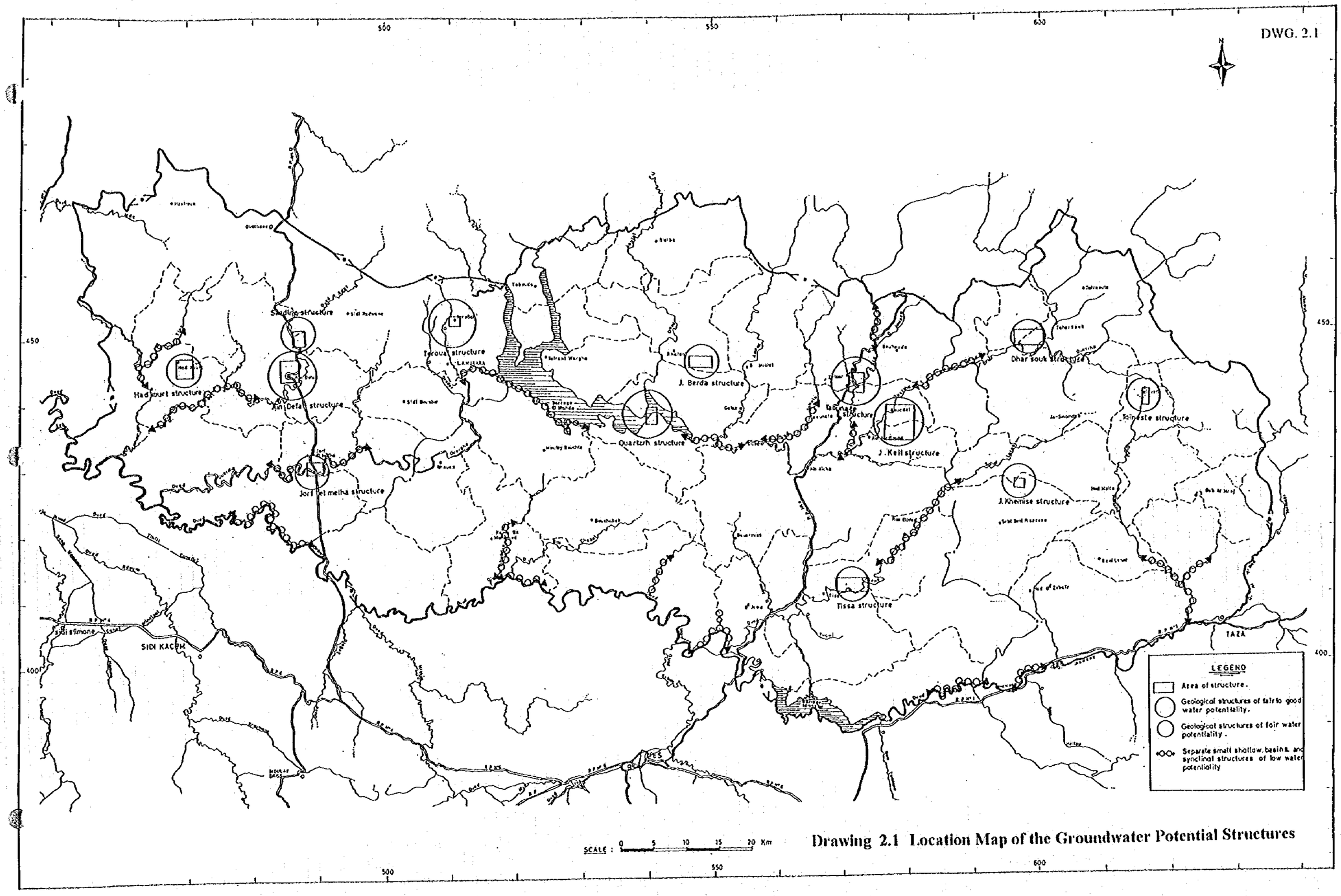
Note :

1 5 15 17	Existing
8* 14*	Under Construction

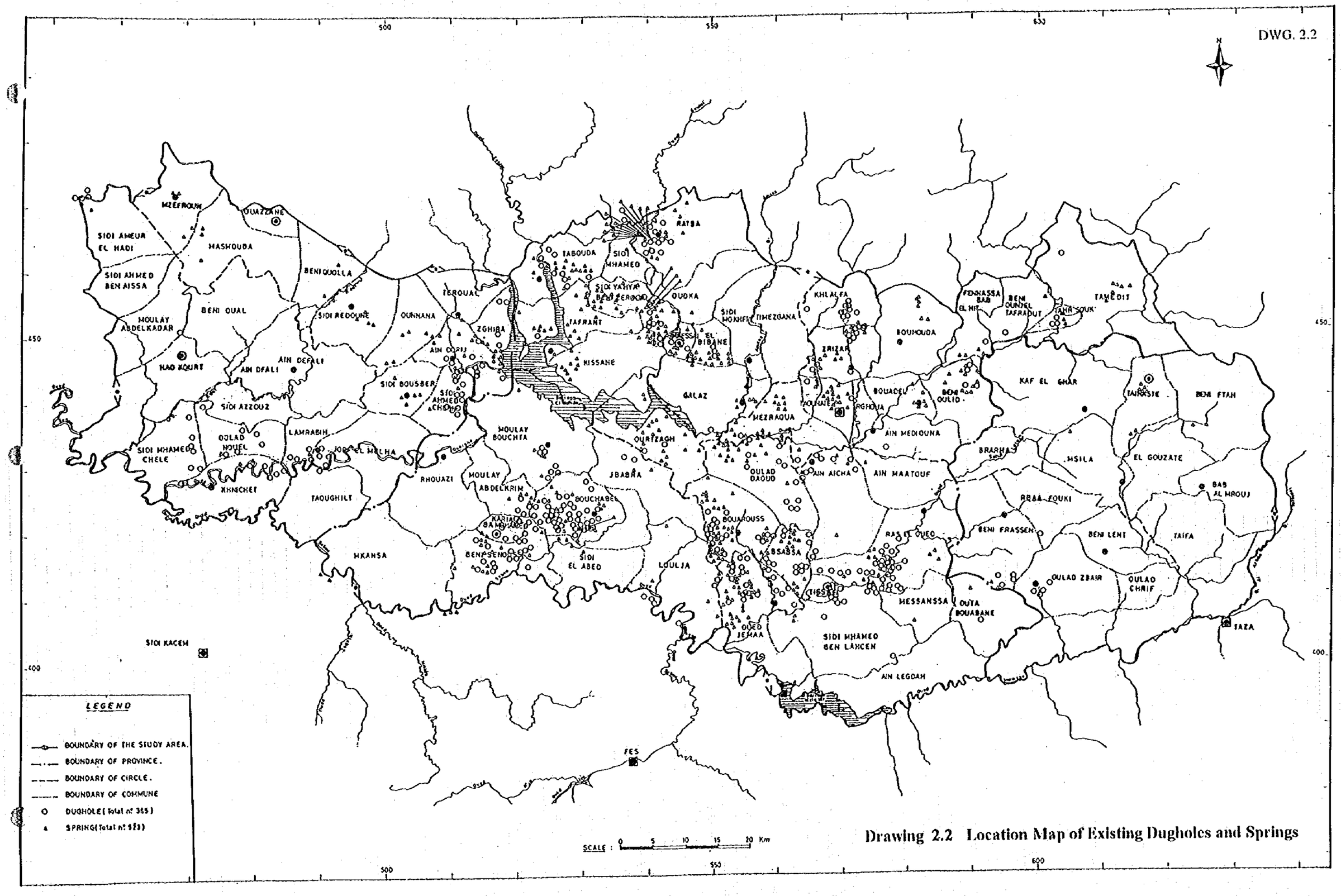
Drawing 1.5 Location of Dams Proposed by the SBO Master Plan



Drawing 1.6 Location of Medium Scale Dam Sites

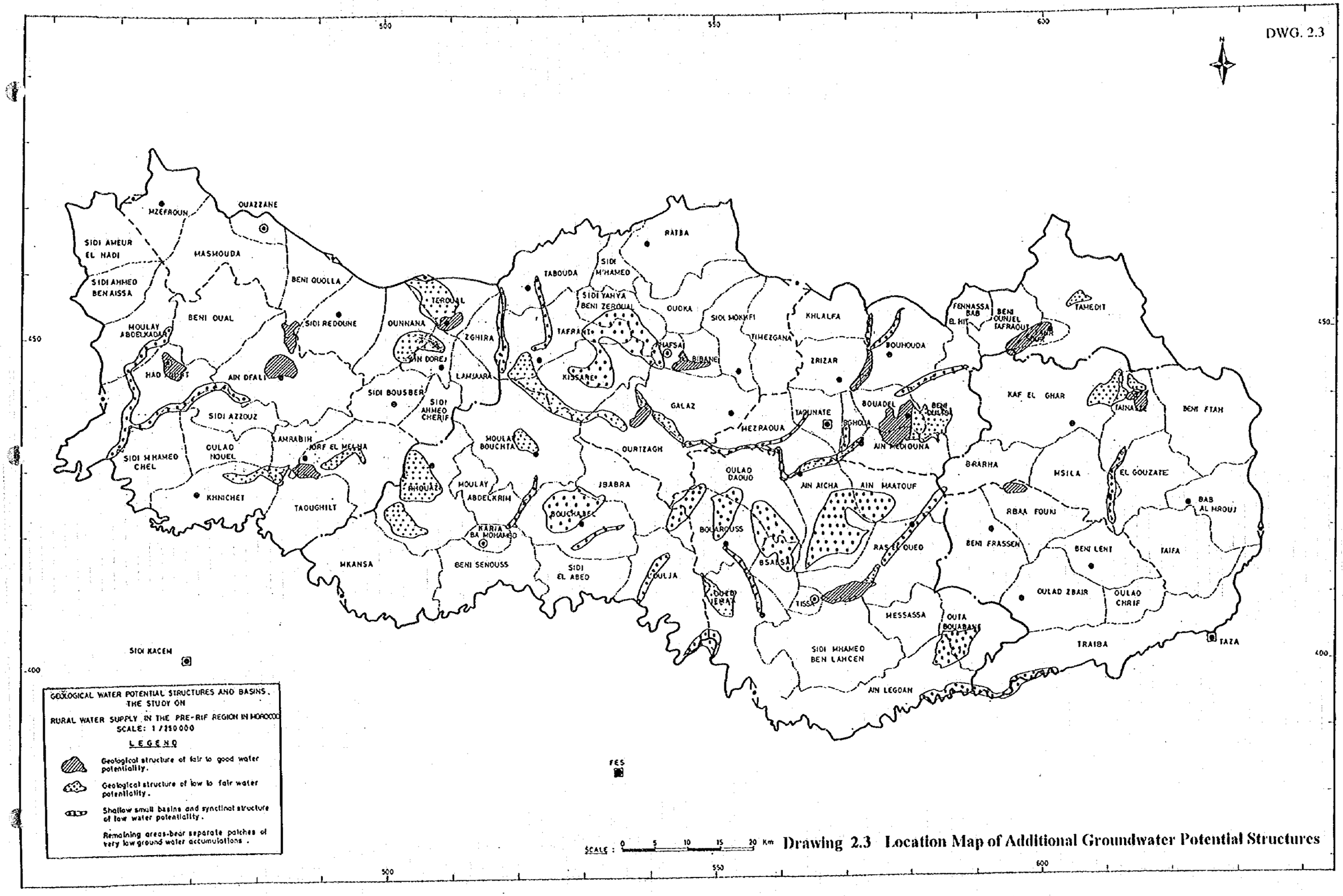


Drawing 2.1 Location Map of the Groundwater Potential Structures

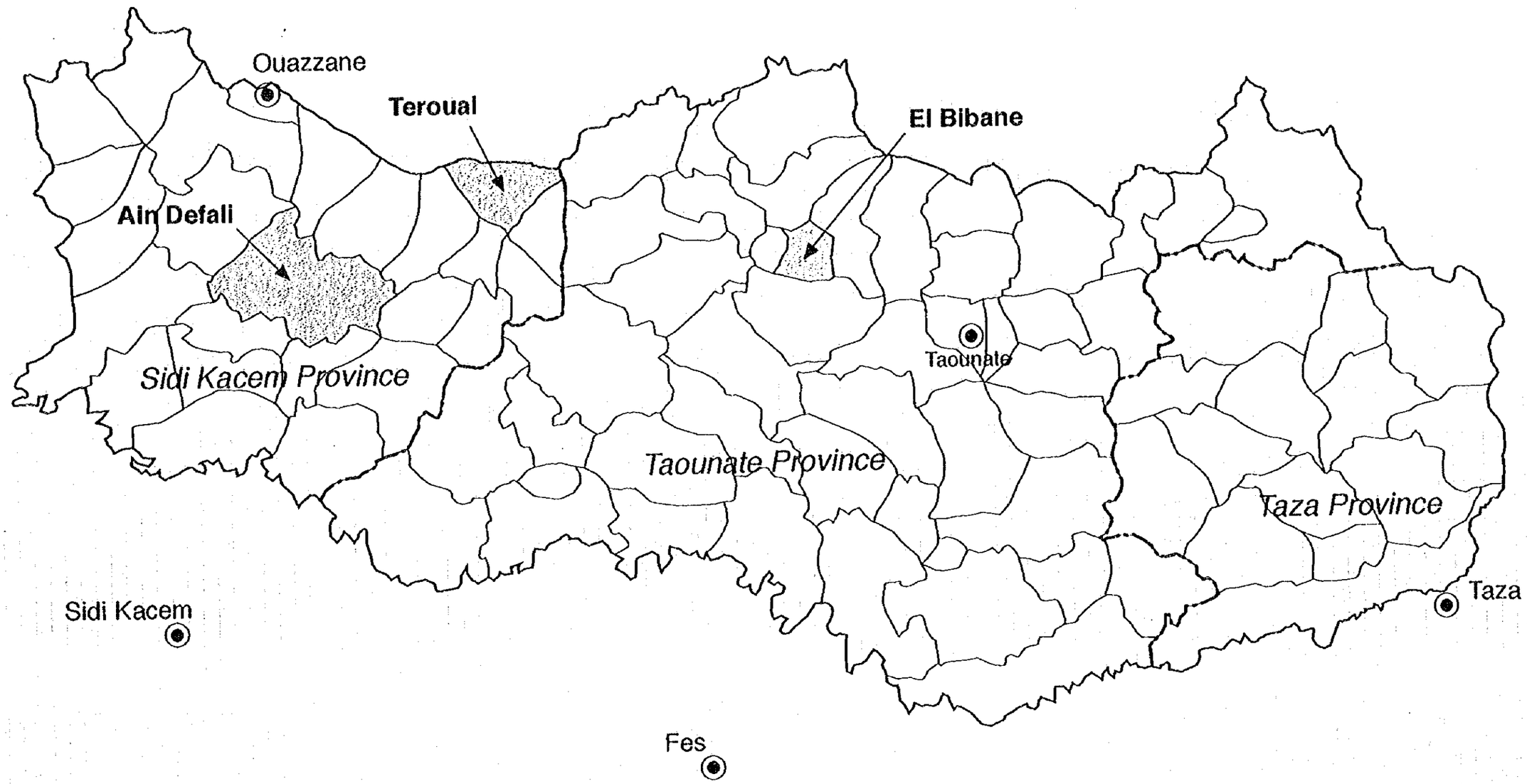


Drawing 2.2 Location Map of Existing Dugholes and Springs

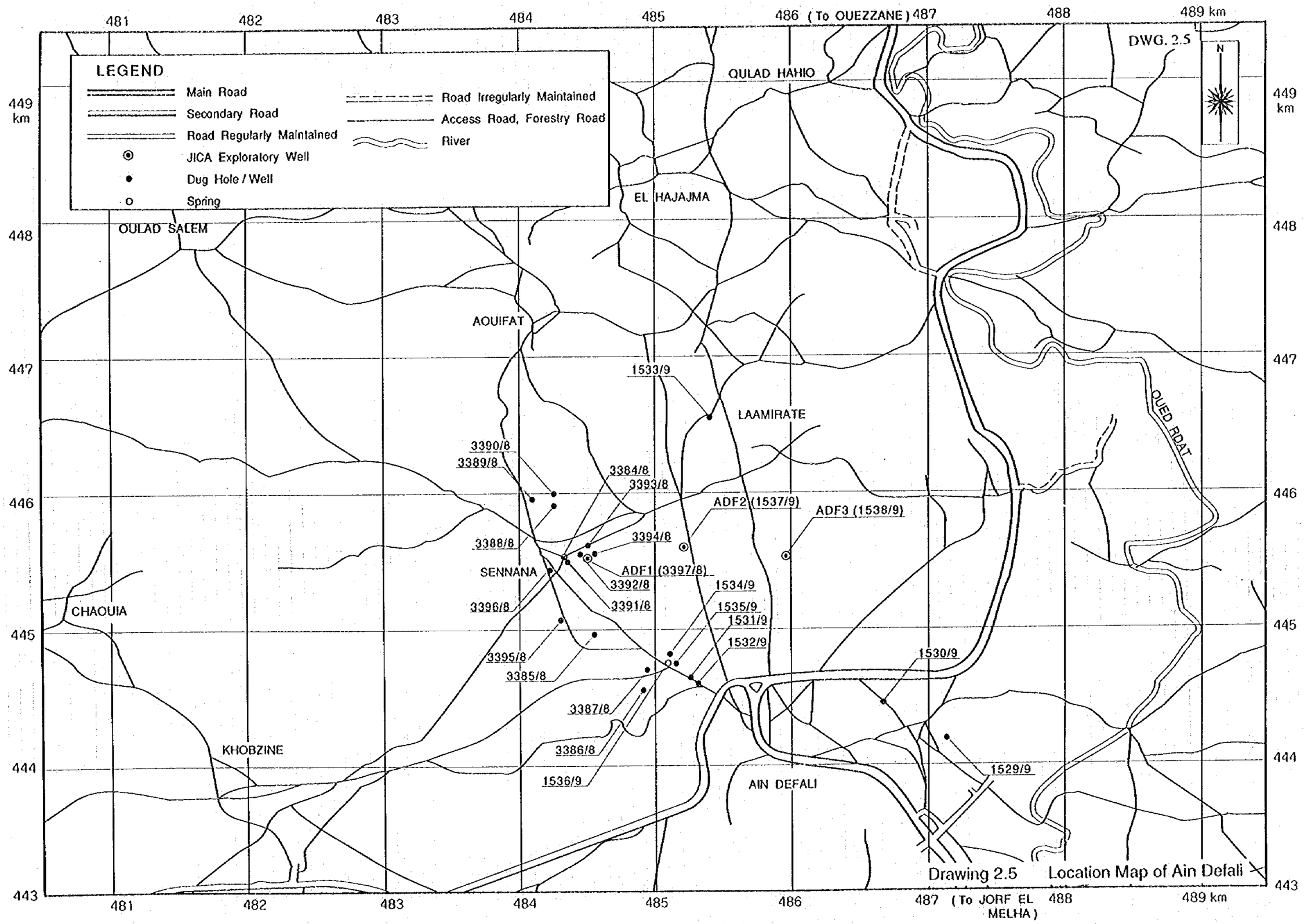
DWG. 2.3



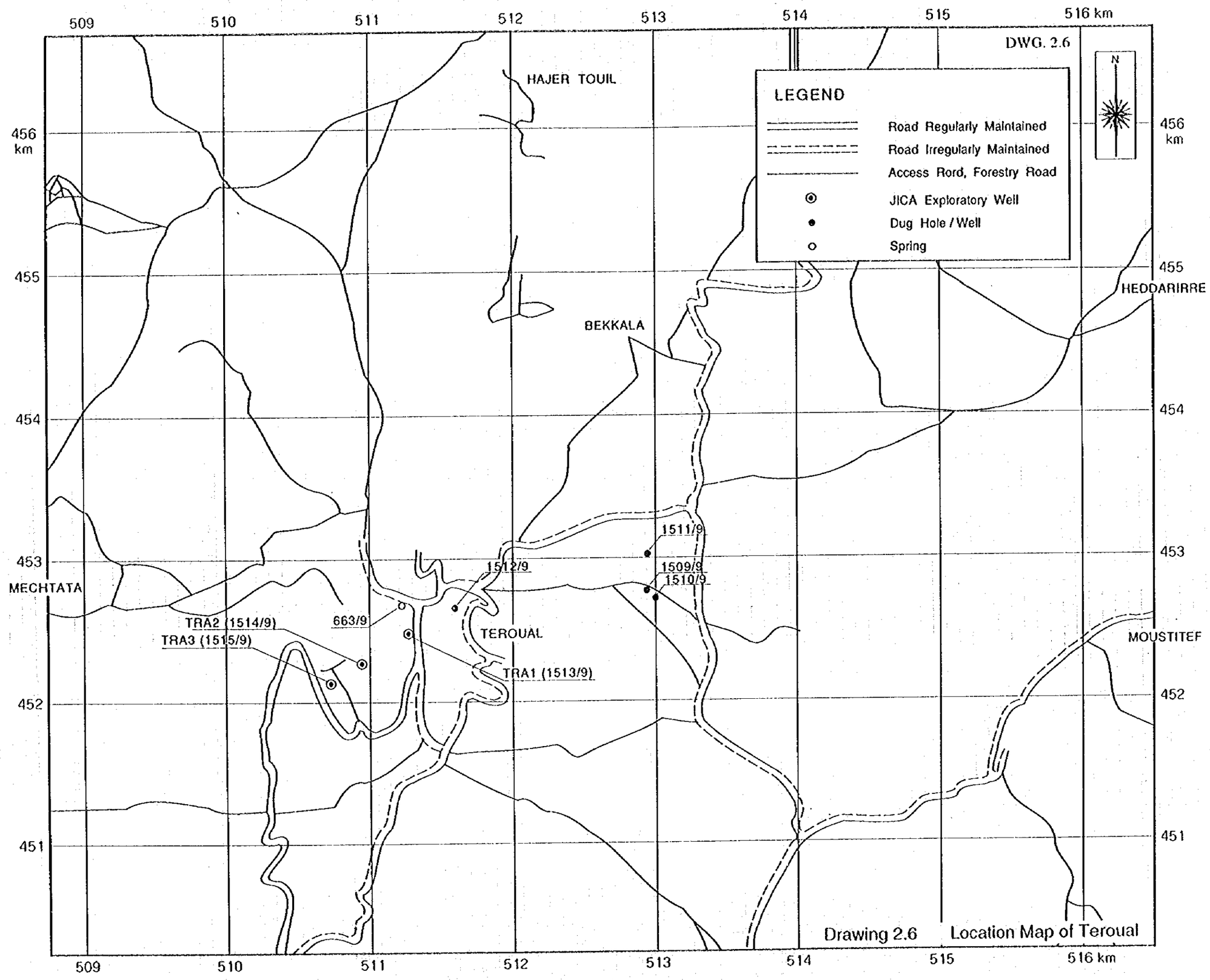
Drawing 2.3 Location Map of Additional Groundwater Potential Structures



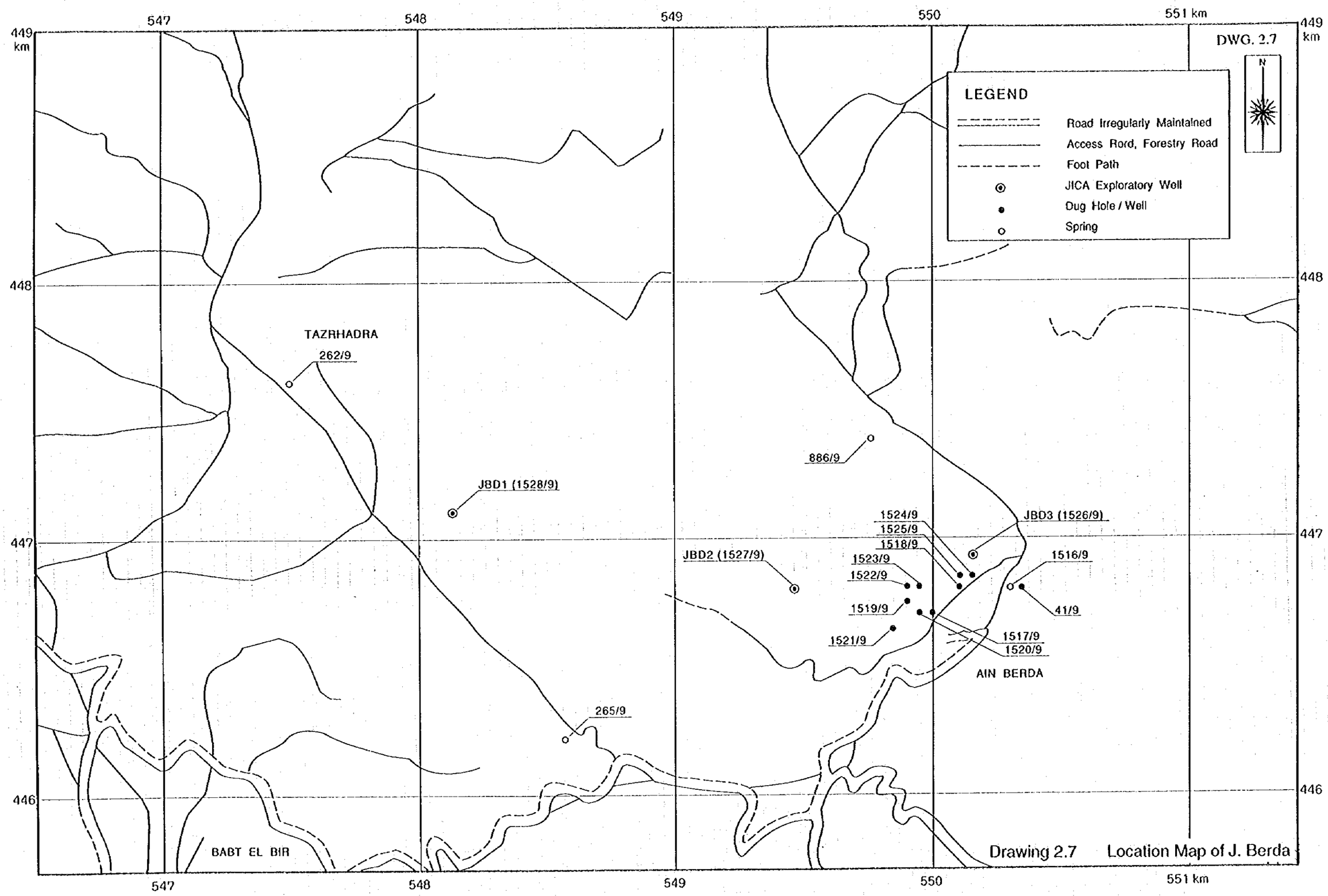
Drawing 2.4 Location of Model Areas



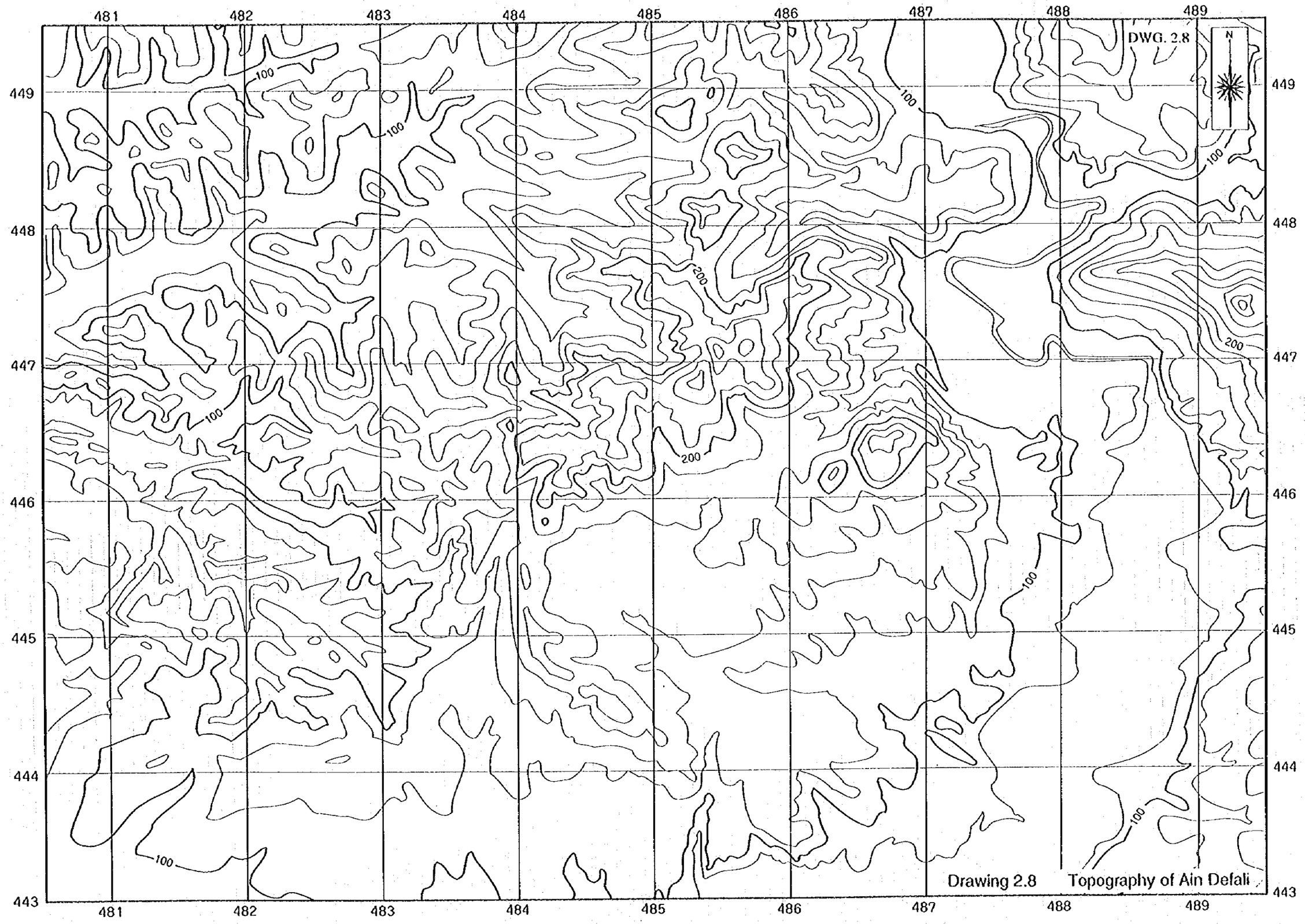
Drawing 2.5 Location Map of Ain Defali



Drawing 2.6 Location Map of Teroual

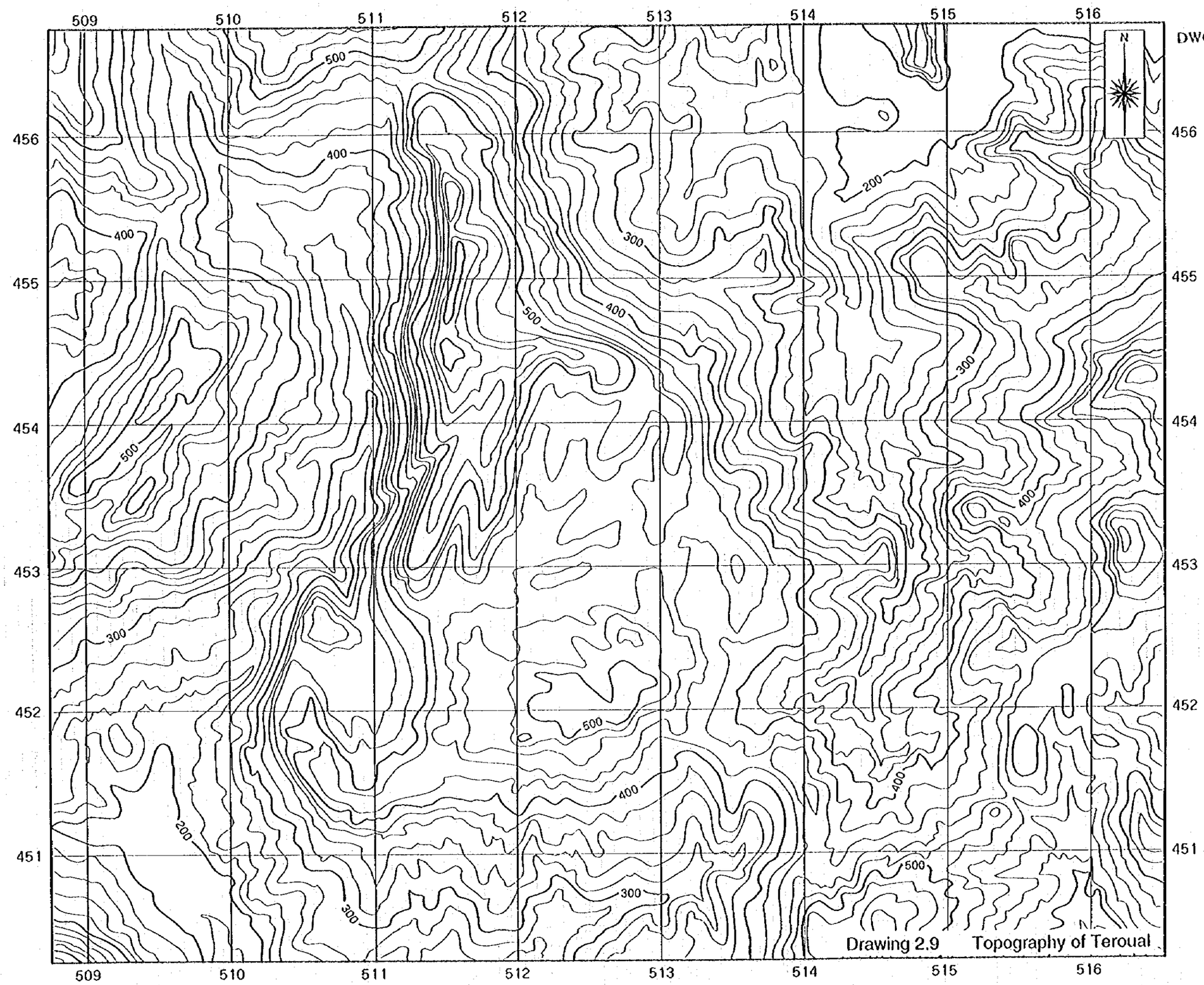


Drawing 2.7 Location Map of J. Berda

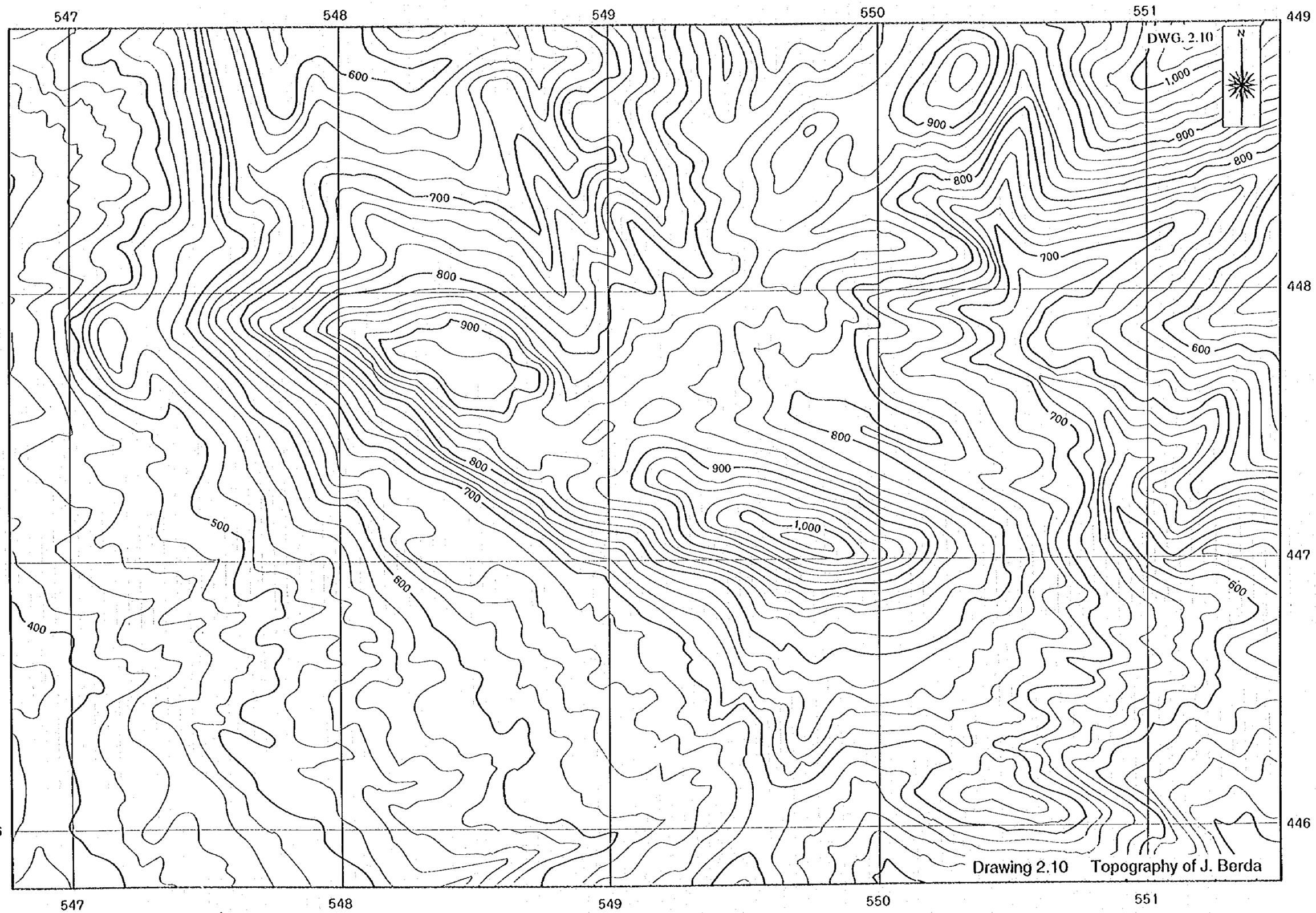


Drawing 2.8 Topography of Ain Defali

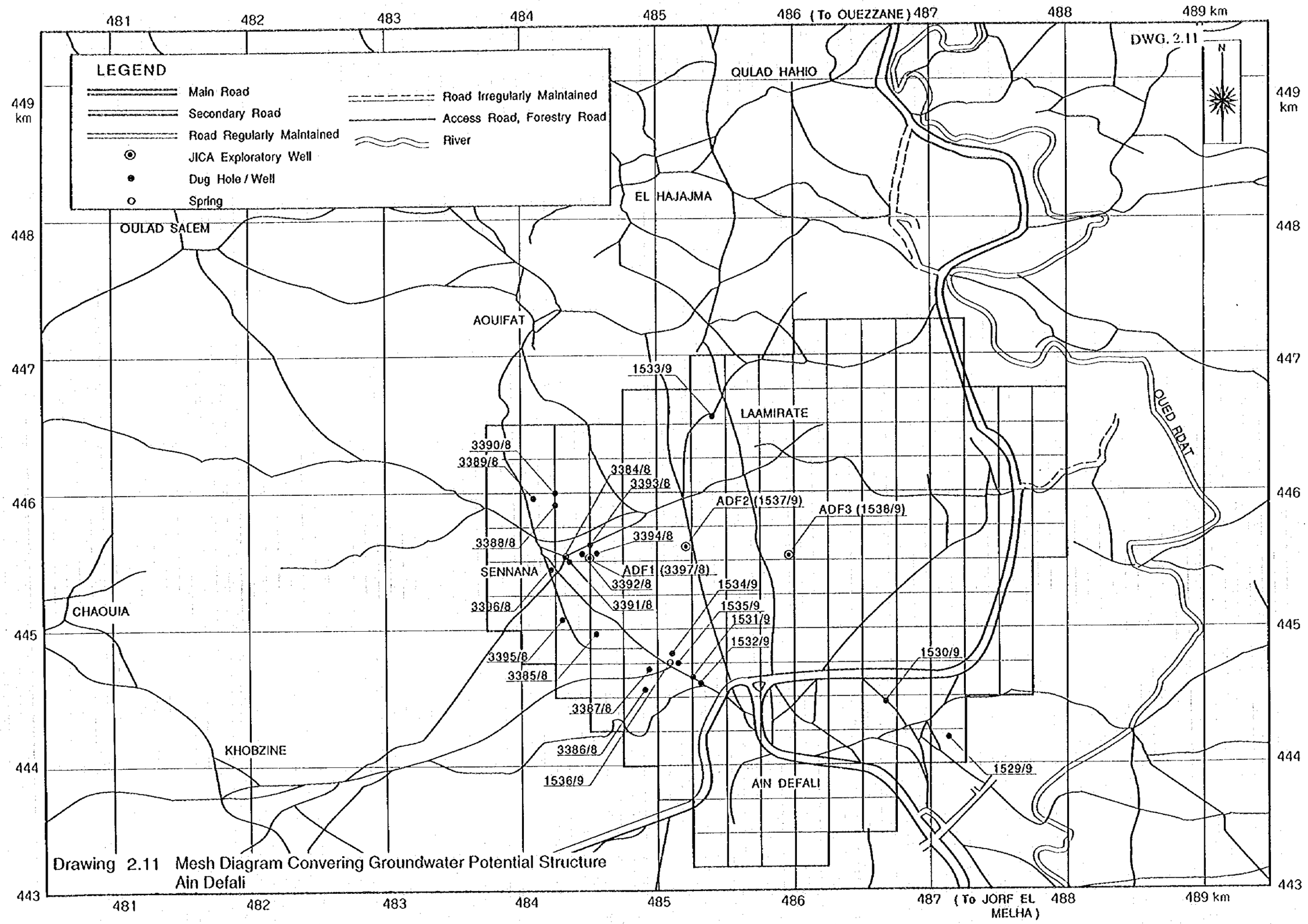
DWG. 2.9



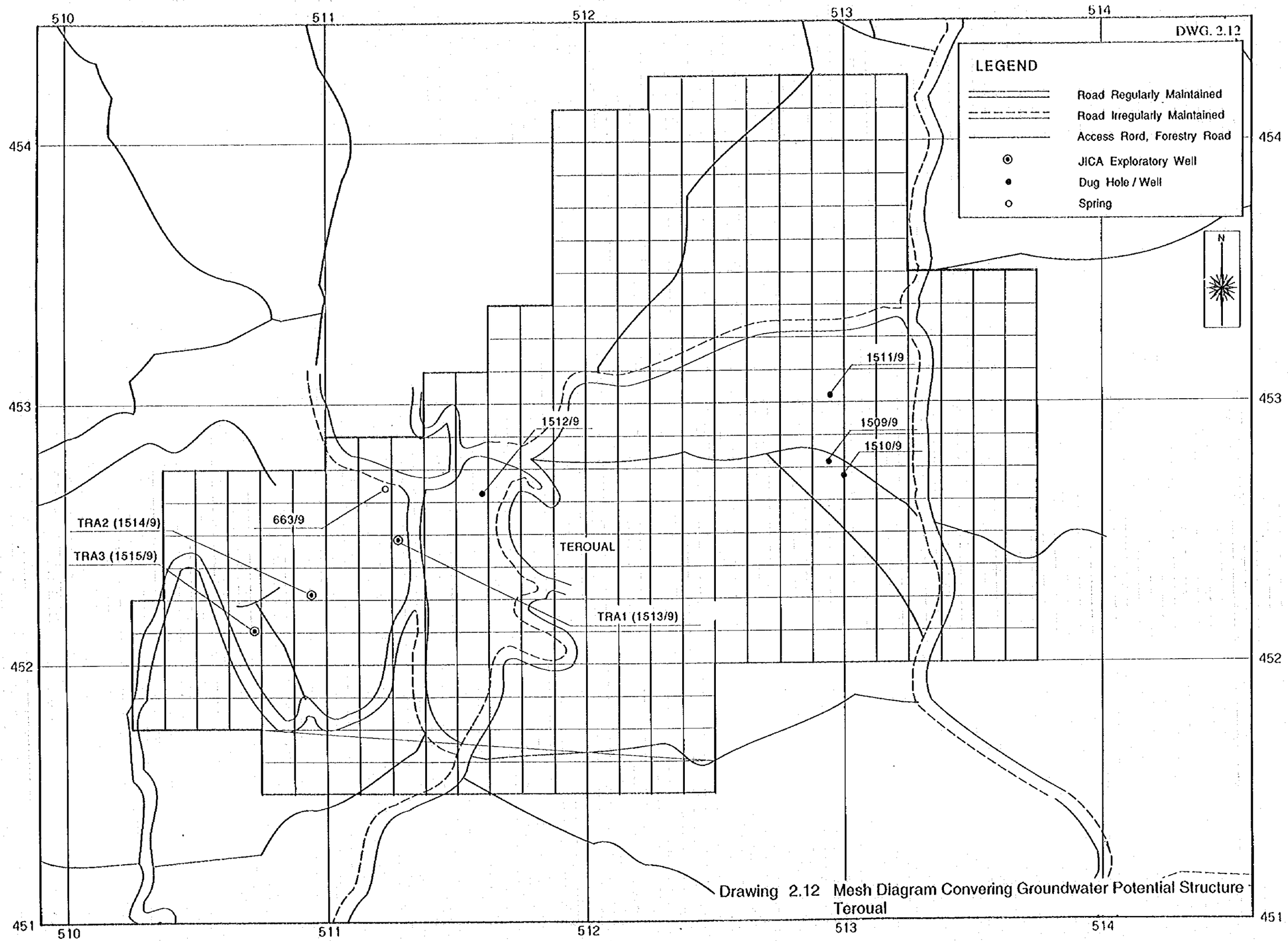
Drawing 2.9 Topography of Teroual



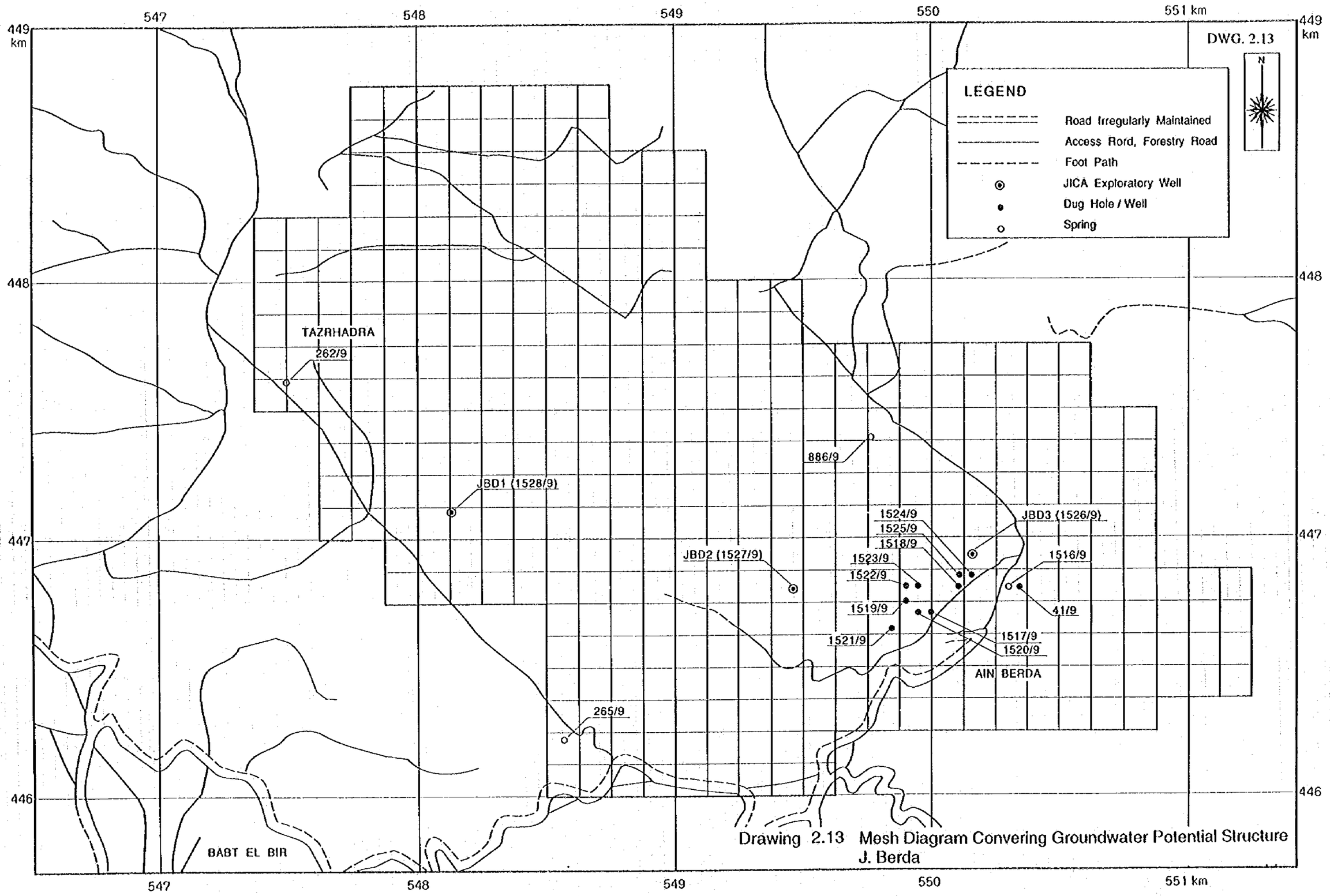
Drawing 2.10 Topography of J. Berda



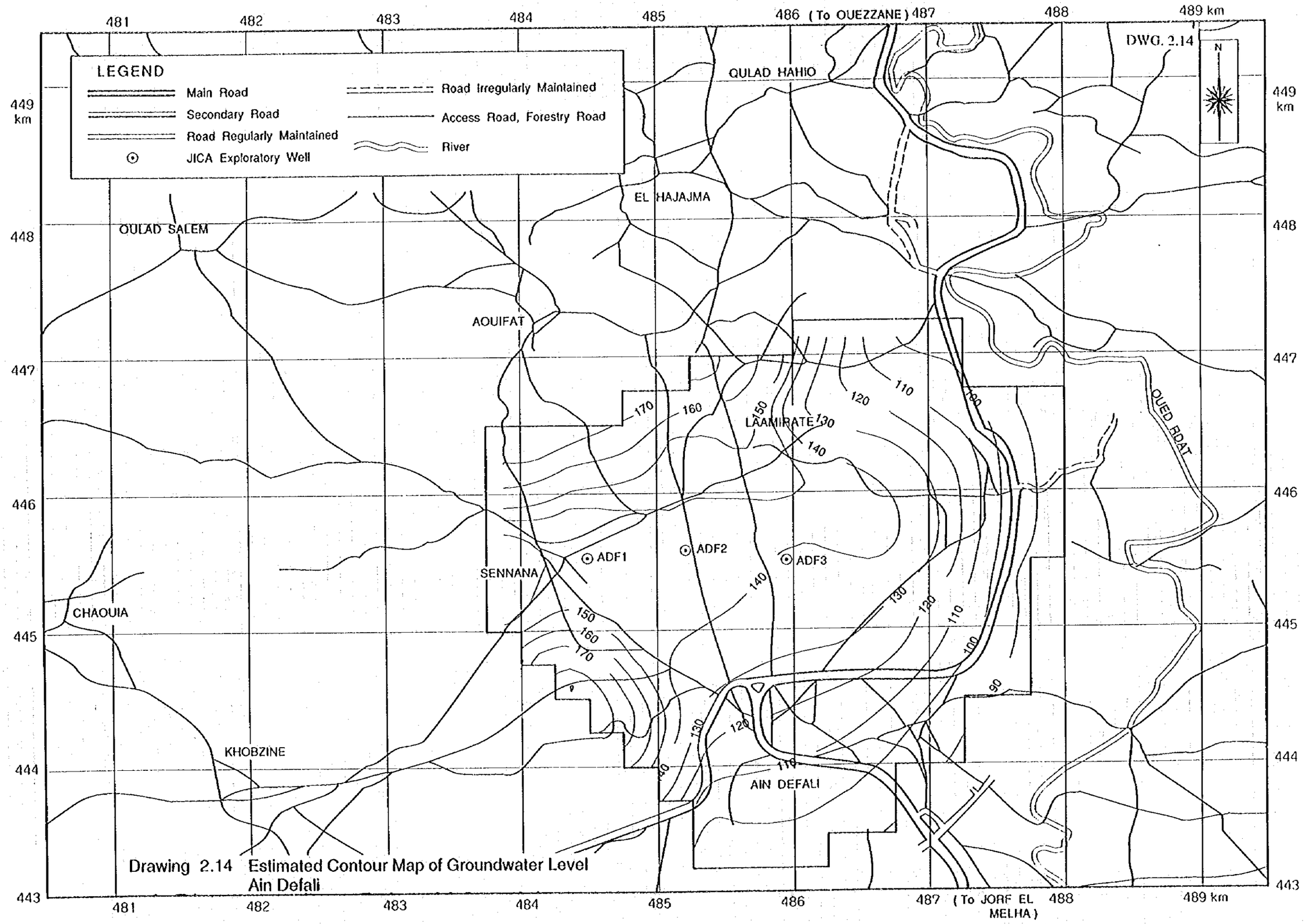
Drawing 2.11 Mesh Diagram Convering Groundwater Potential Structure
Ain Defali



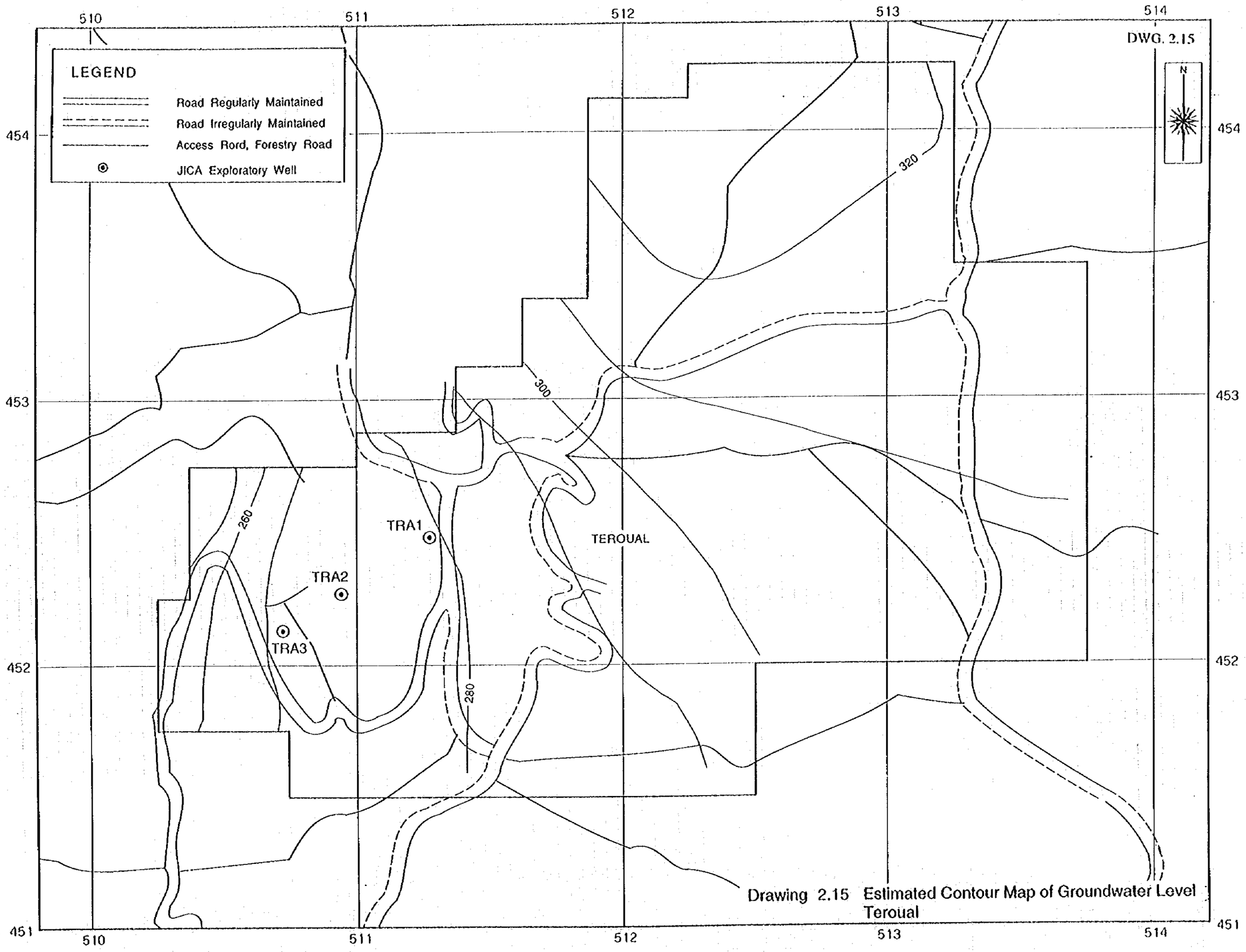
Drawing 2.12 Mesh Diagram Convering Groundwater Potential Structure Teroual



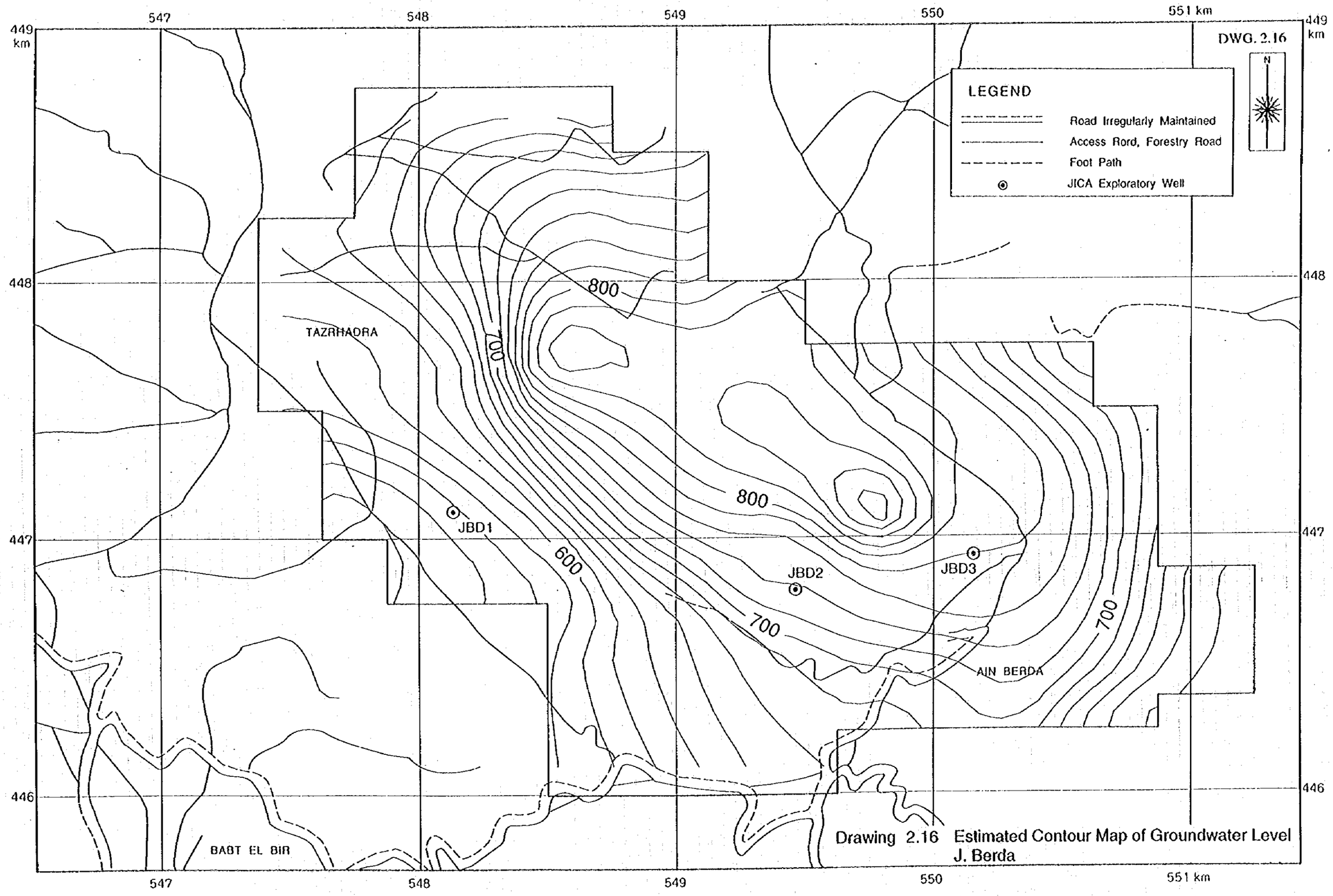
Drawing 2.13 Mesh Diagram Convering Groundwater Potential Structure
J. Berda



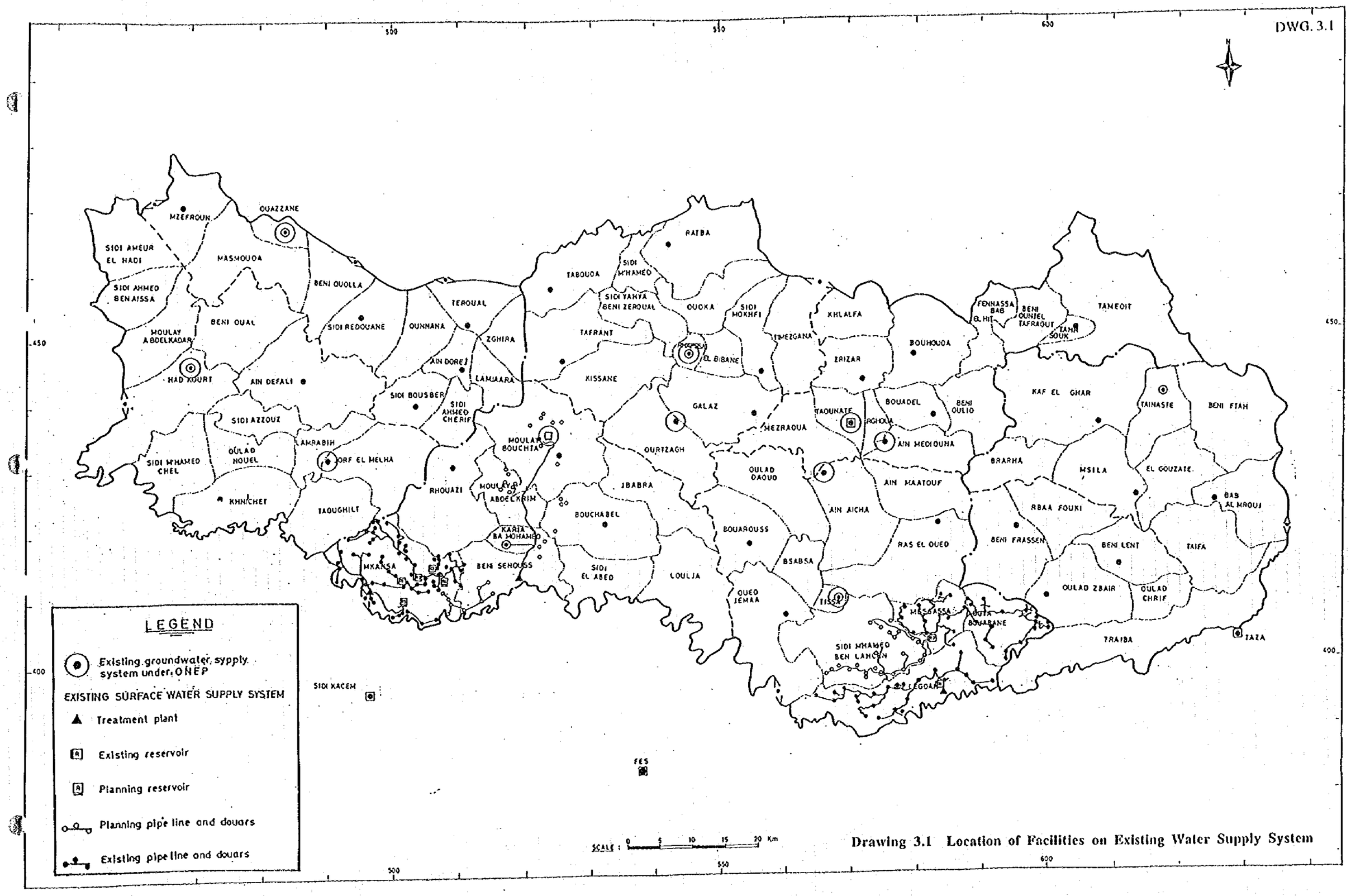
Drawing 2.14 Estimated Contour Map of Groundwater Level
Ain Defali



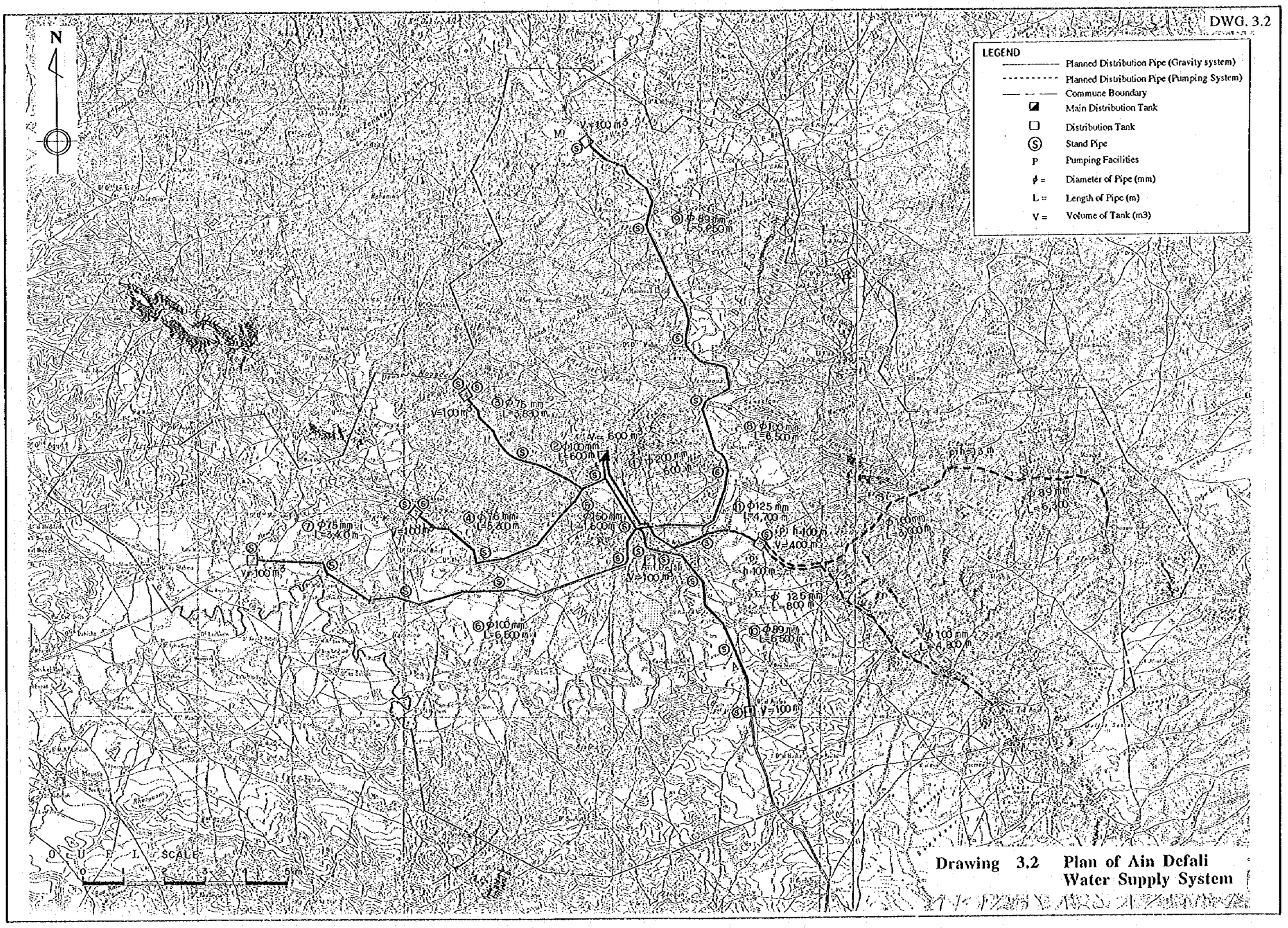
Drawing 2.15 Estimated Contour Map of Groundwater Level
Teroual



Drawing 2.16 Estimated Contour Map of Groundwater Level
J. Berda

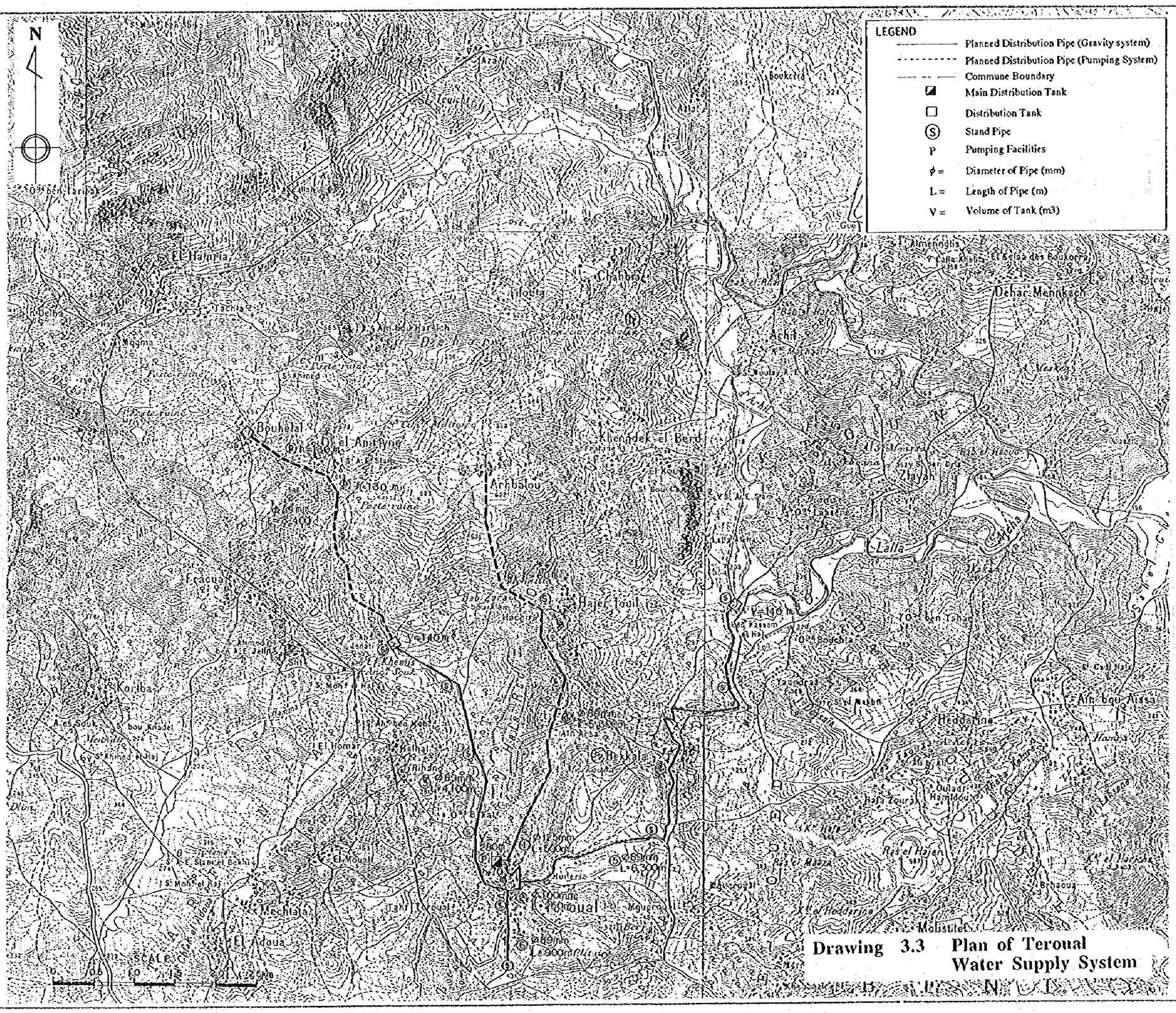


Drawing 3.1 Location of Facilities on Existing Water Supply System

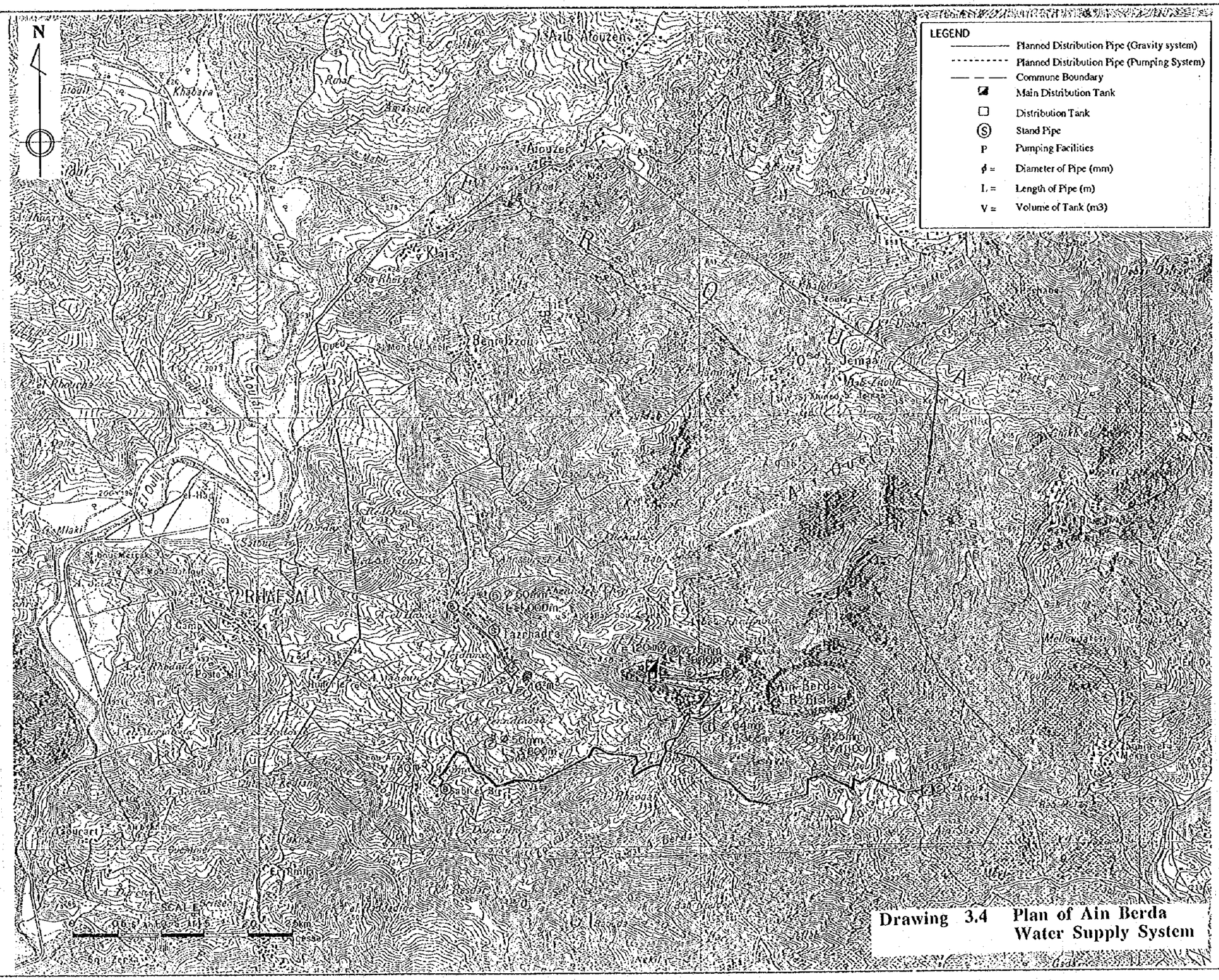


Drawing 3.2 Plan of Ain Defali Water Supply System

DWG. 3.3

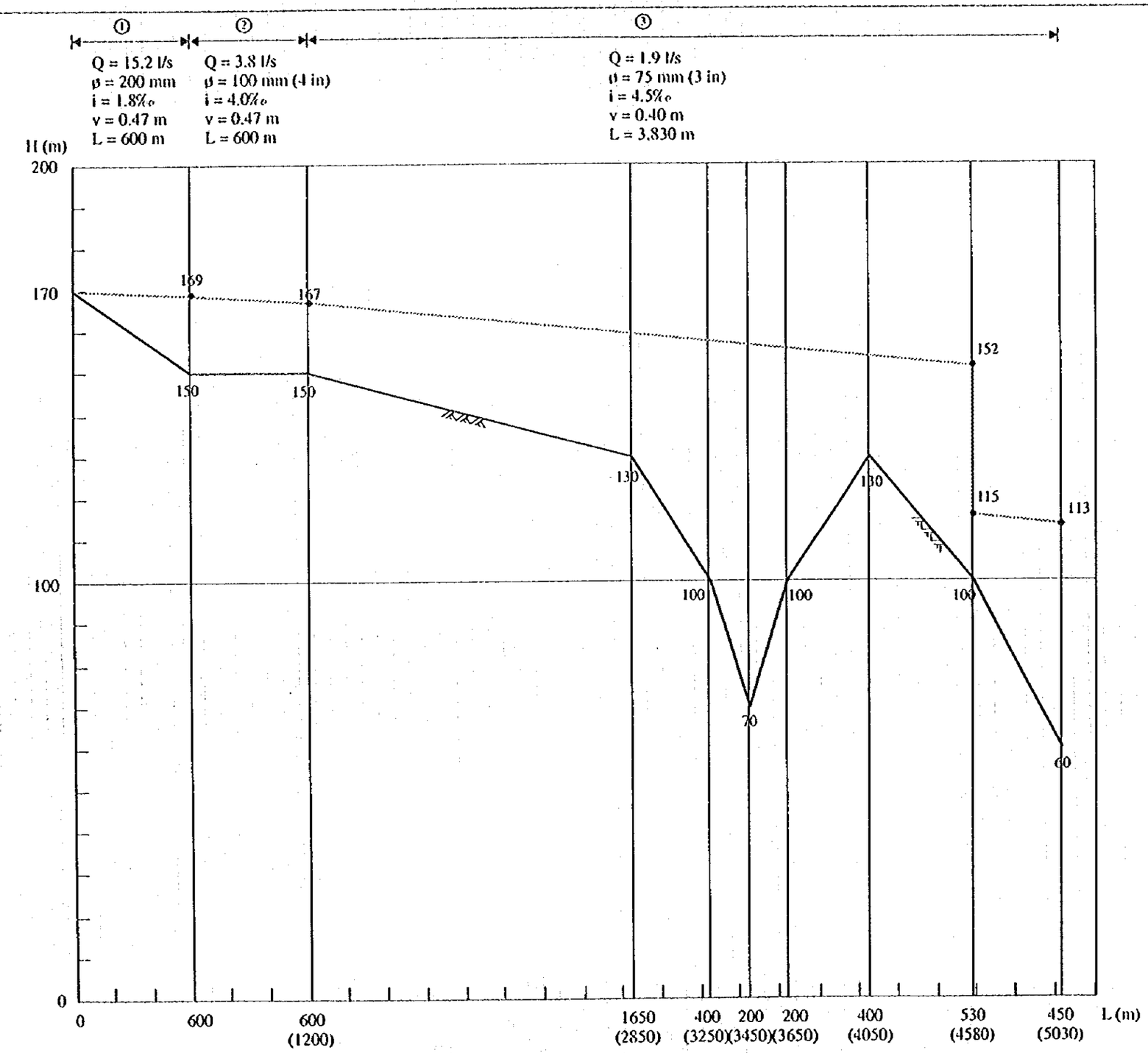

N
LEGEND
Planned Distribution Pipe (Gravity system)
Planned Distribution Pipe (Pumping System)
Commune Boundary
Main Distribution Tank
Distribution Tank
Stand Pipe
P Pumping Facilities
ϕ = Diameter of Pipe (mm)
L = Length of Pipe (m)
V = Volume of Tank (m3)
Boukeria
El Hamria
Chahbia
Ifouta
Tachla
Achit
Dehar Mennkach
Bouhelal
Ouel Anitrine
Khenadek el Berd
Arhbalou
Zlayah
Lalla
Fradoua
Hajer Touil
Korlba
Ain bou Aissa
Heddadine
El Homar
Bir Kala
Ouled Hamidou
Ras el Hajen
Mechtala
El Aidoua
Moustiet
SCALE
Drawing 3.3 Plan of Teroual Water Supply System

DWG. 3.4



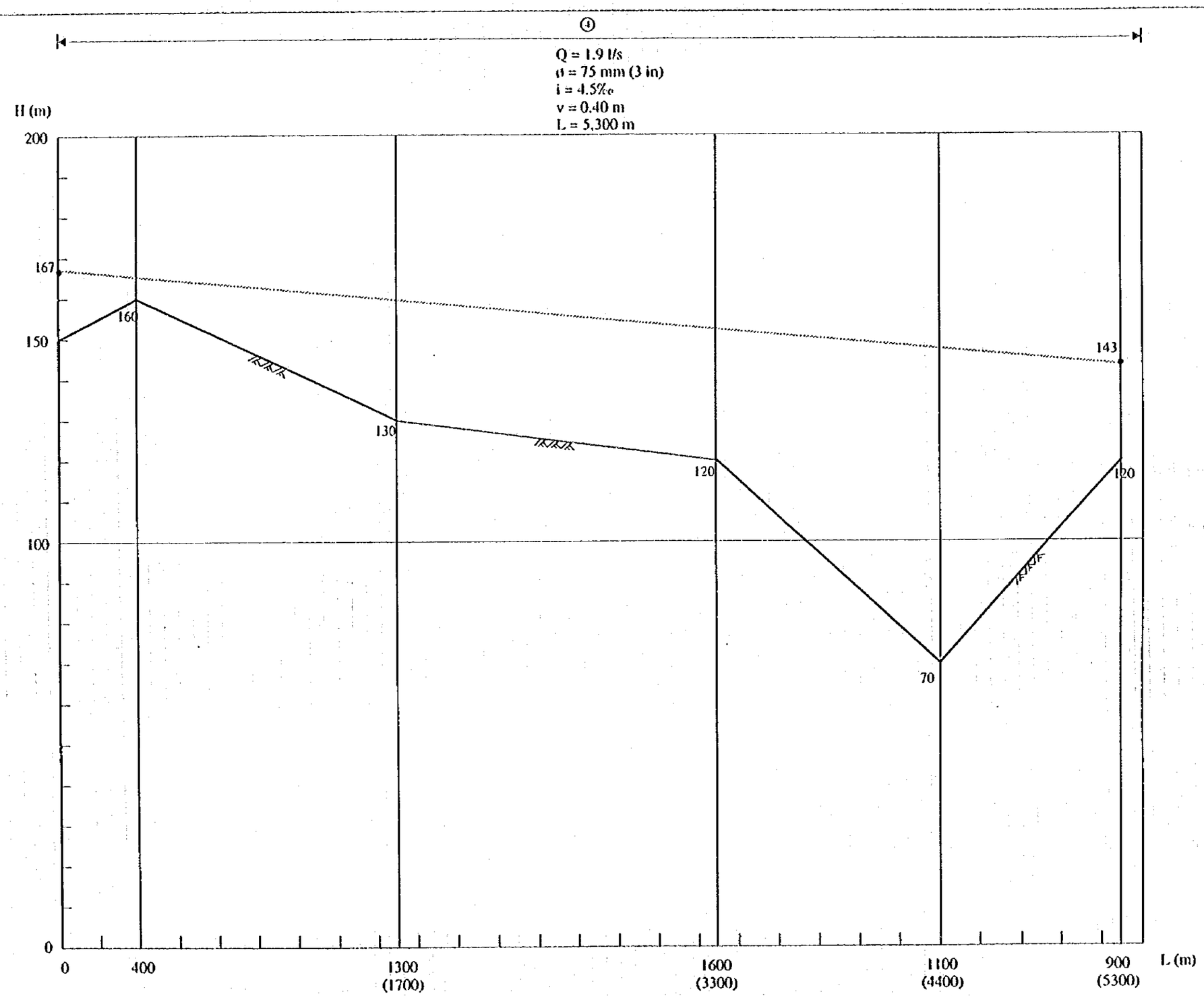
Drawing 3.4 Plan of Ain Berda Water Supply System

DWG. 3.5

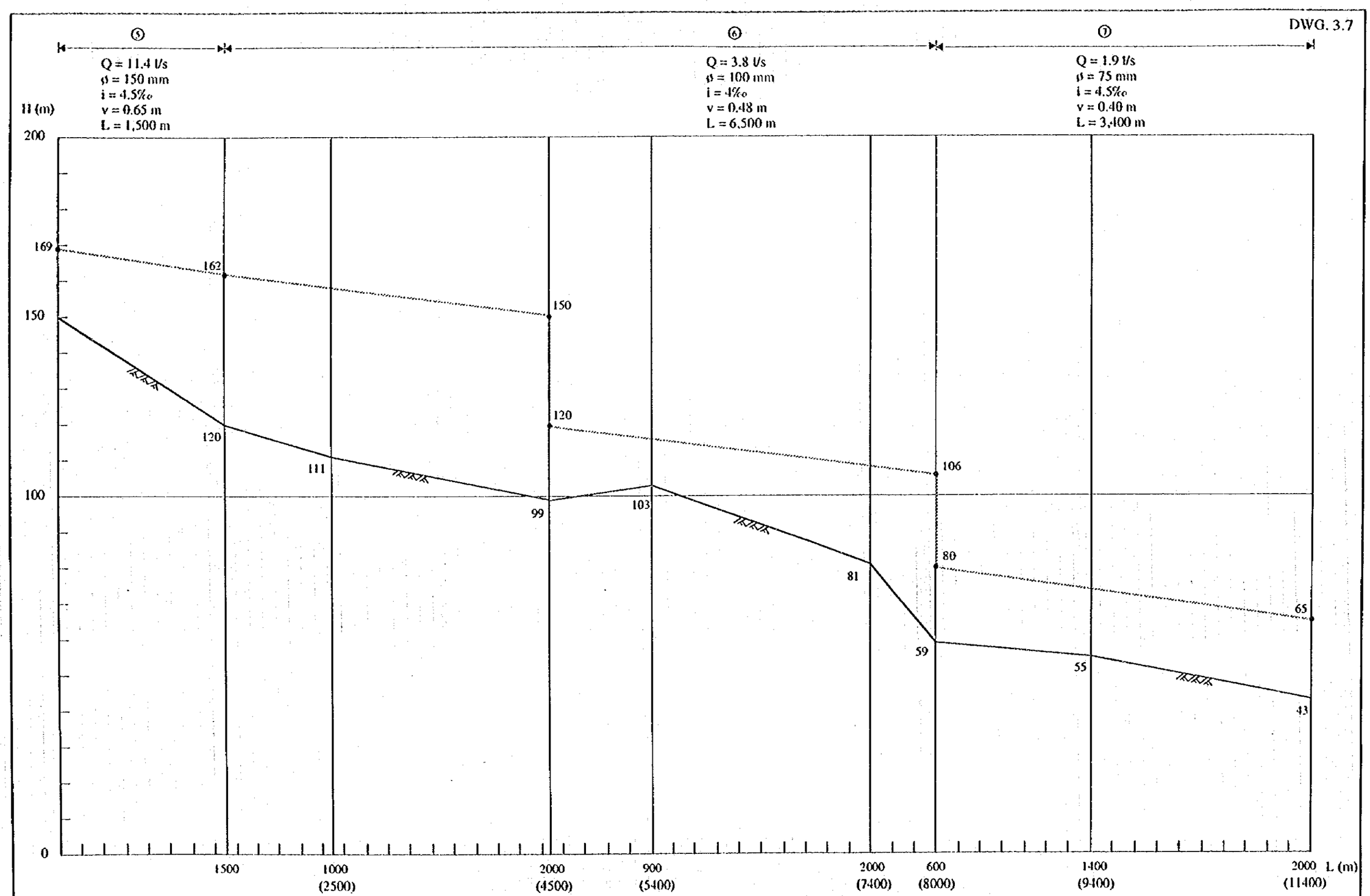


Drawing 3.5 Hydraulic Profile (Ain Defali) (1/6)

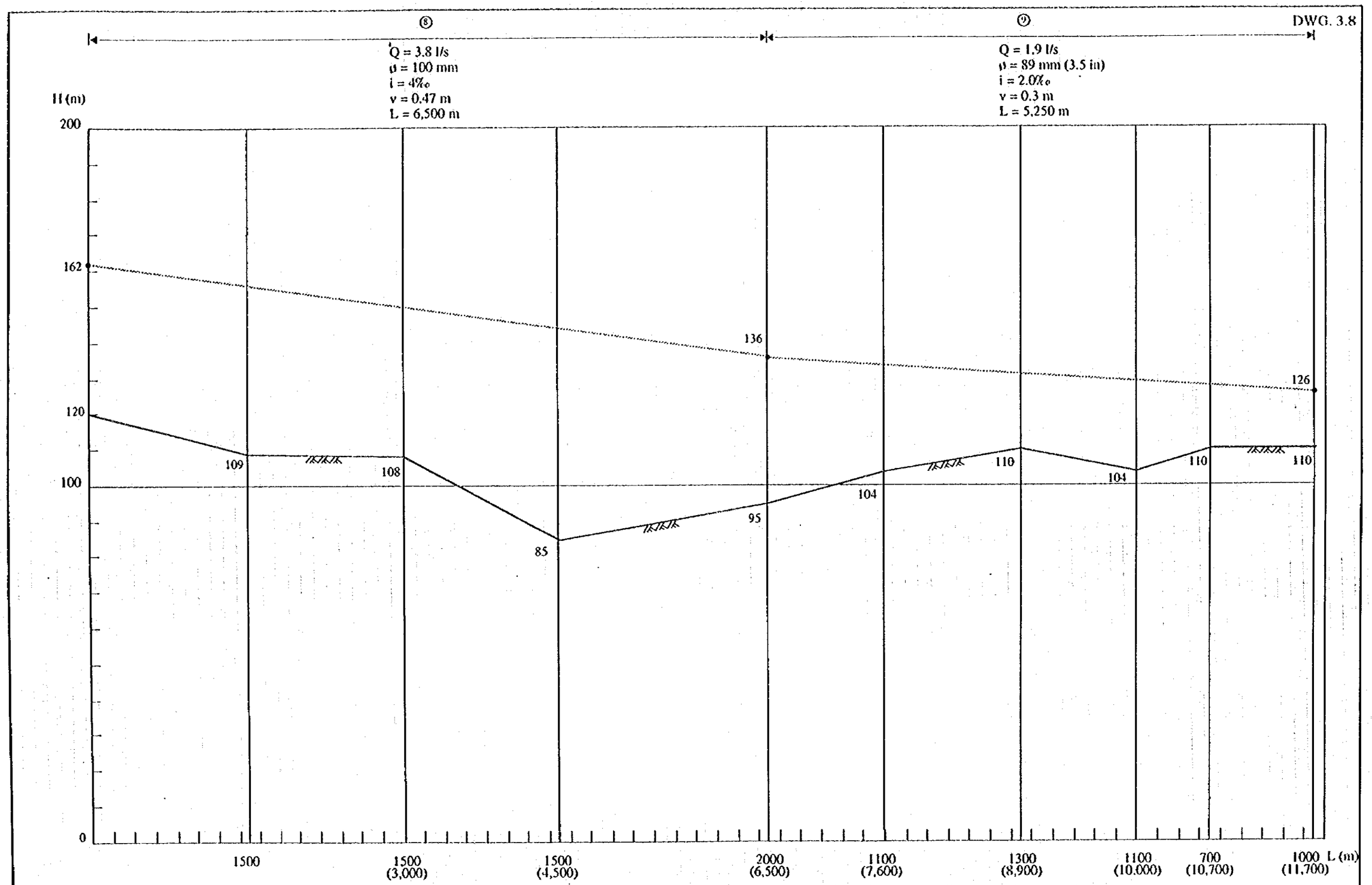
DWG. 3.6



Drawing 3.6 Hydraulic Profile (Ain Defali) (2/6)

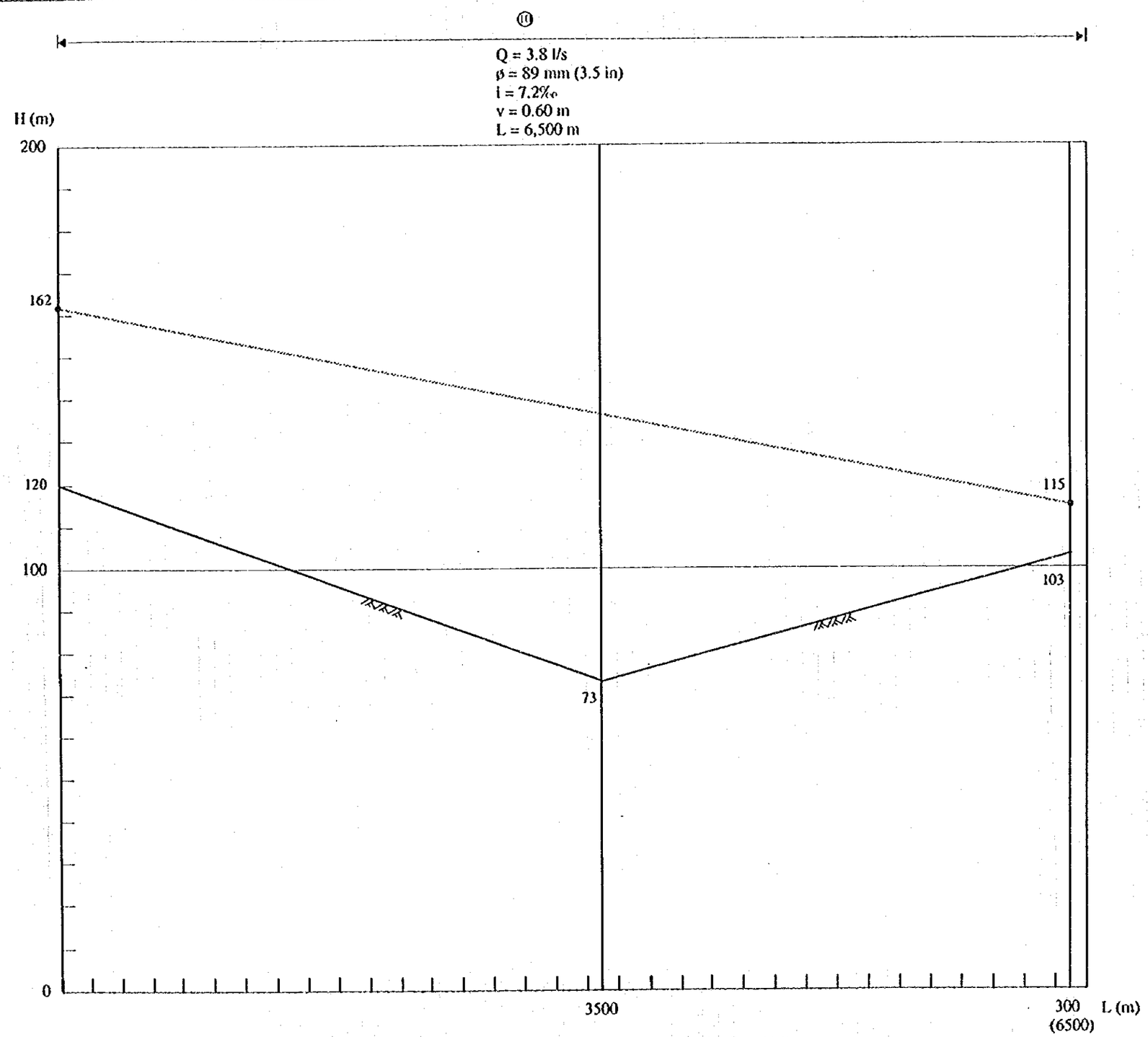


Drawing 3.7 Hydraulic Profile (Ain Defali) (3/6)



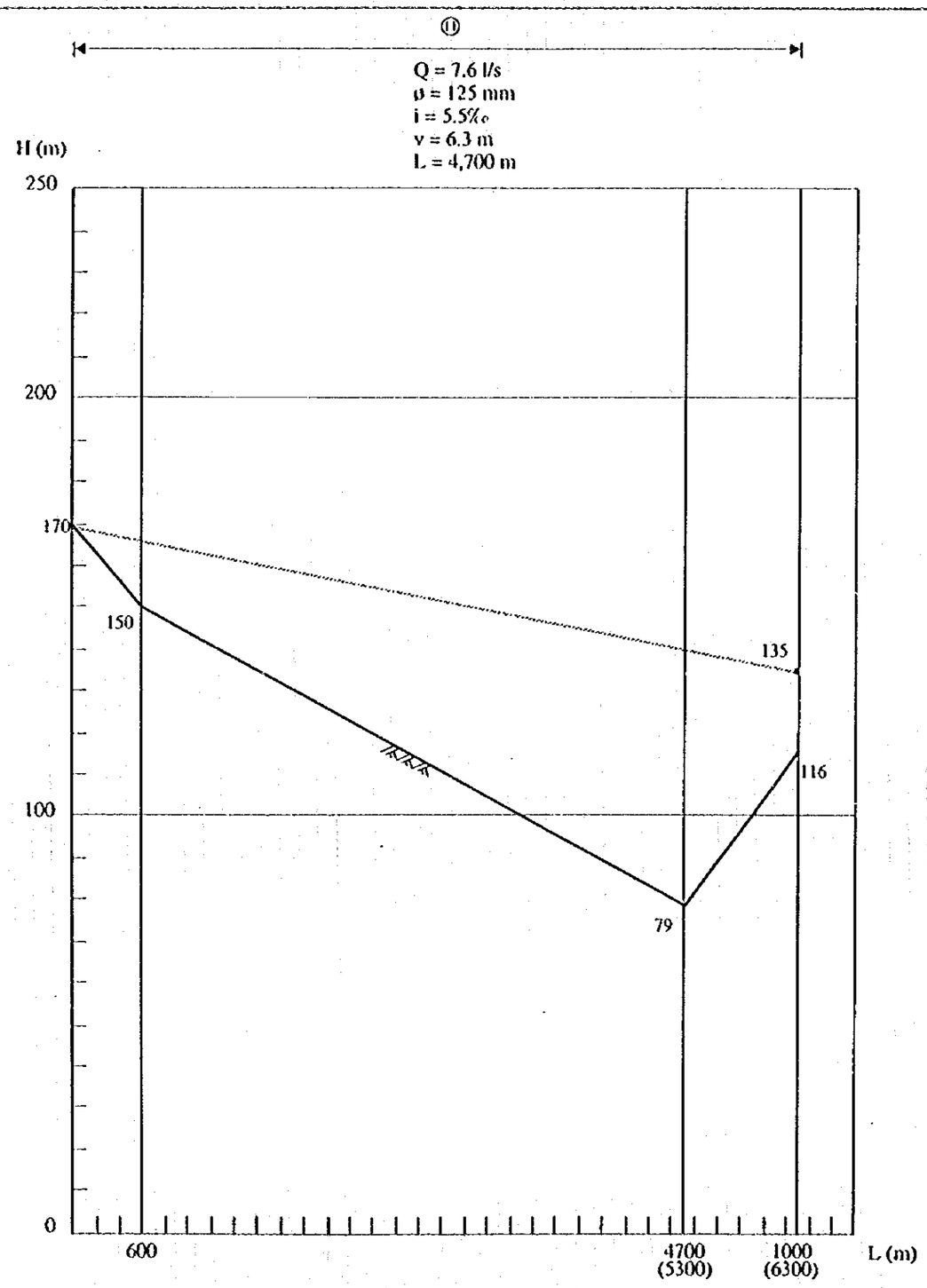
Drawing 3.8 Hydraulic Profile (Ain Defali) (4/6)

DWG. 3.9



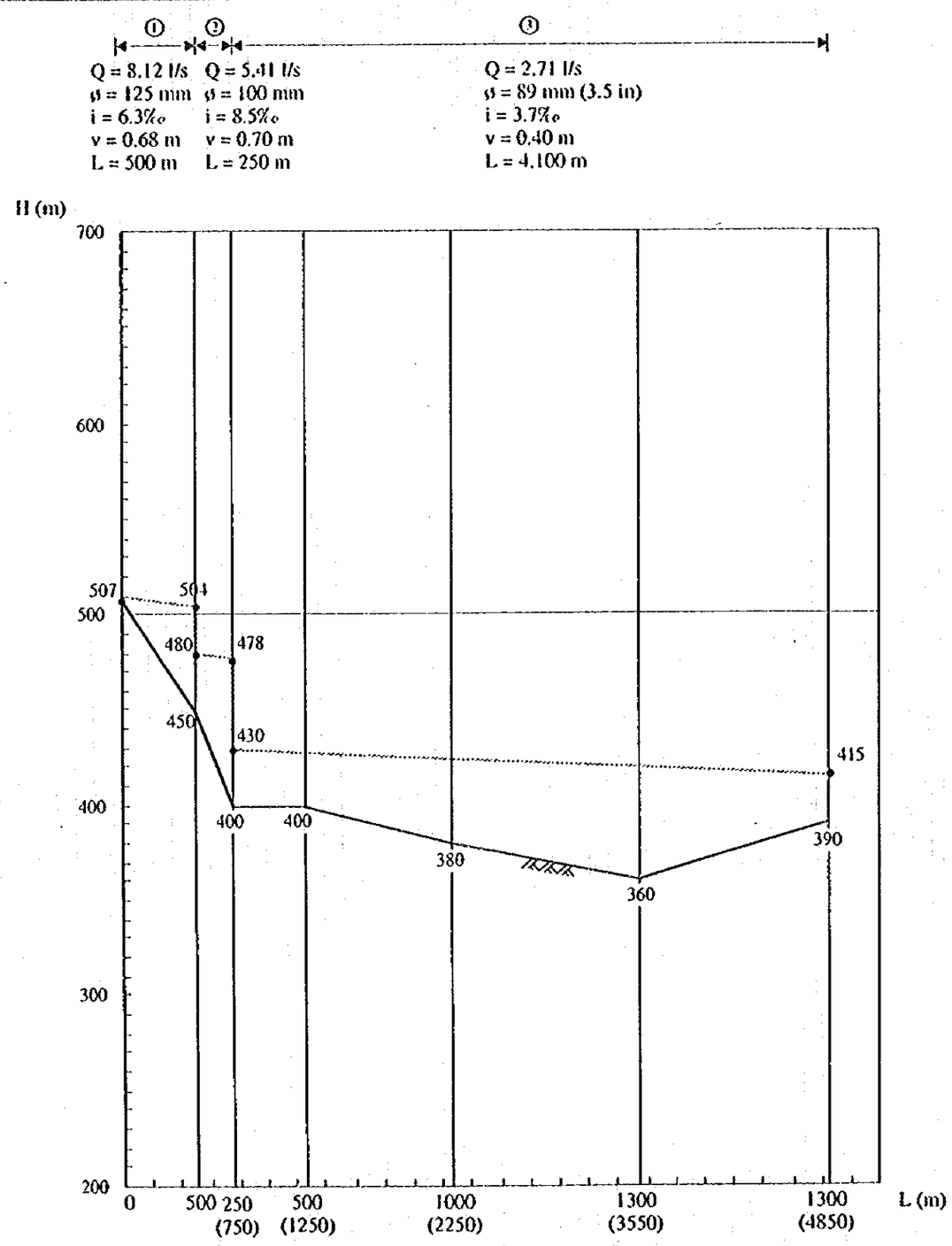
Drawing 3.9 Hydraulic Profile (Ain Defali) (5/6)

DWG. 3.10



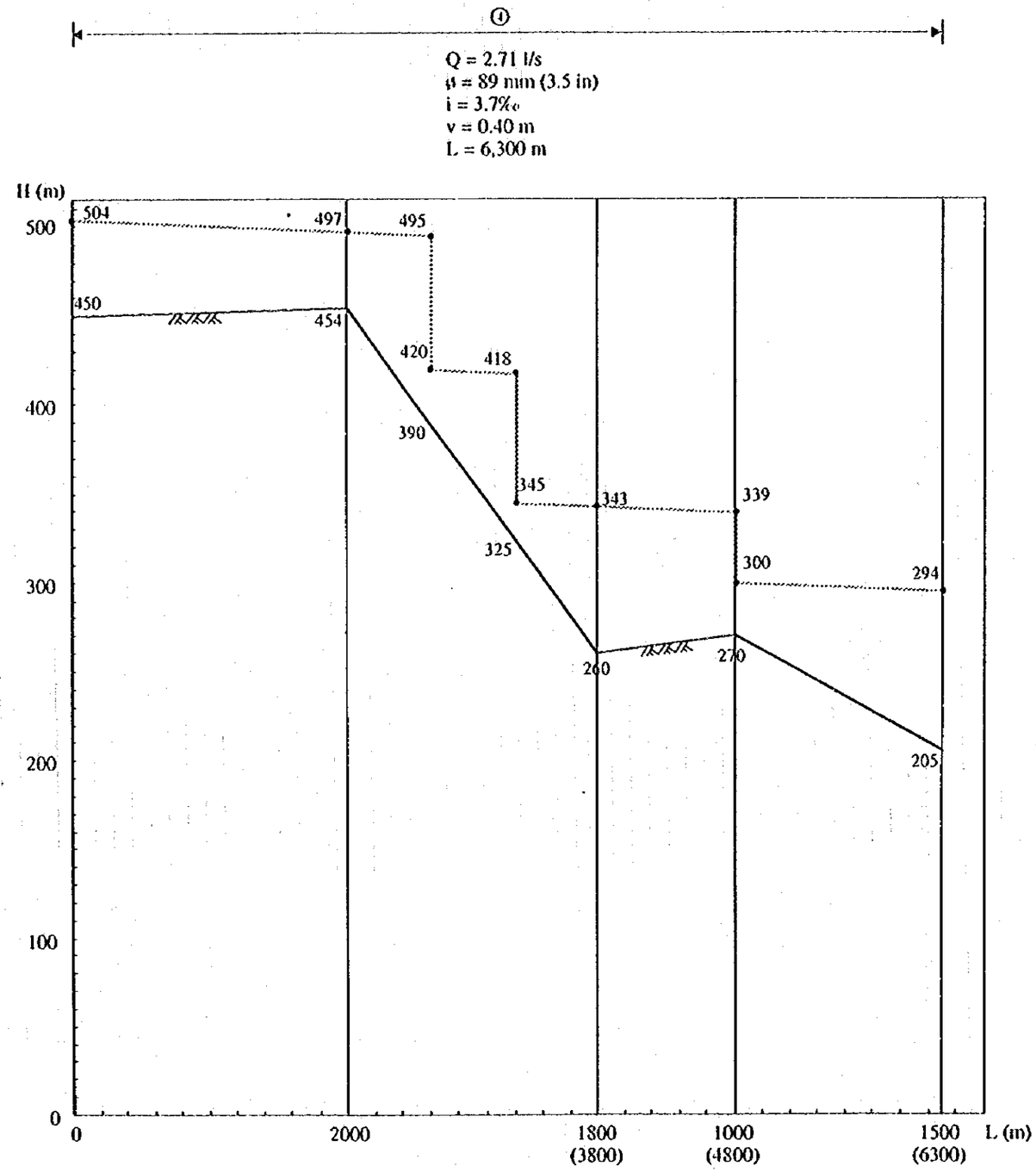
Drawing 3.10 Hydraulic Profile (Ain Defali) (6/6)

DWG. 3.11



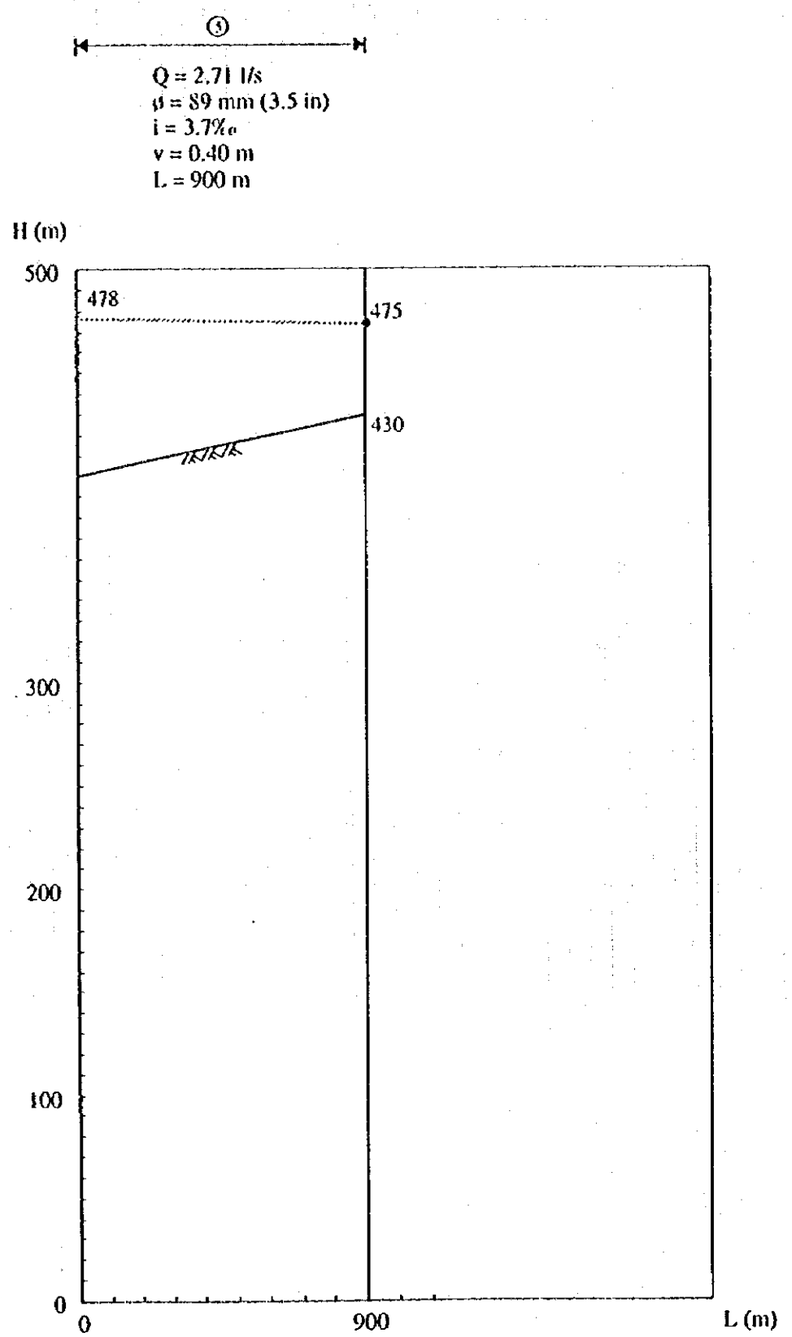
Drawing 3.11 Hydraulic Profile (Teroual) (1/3)

DWG. 3.12

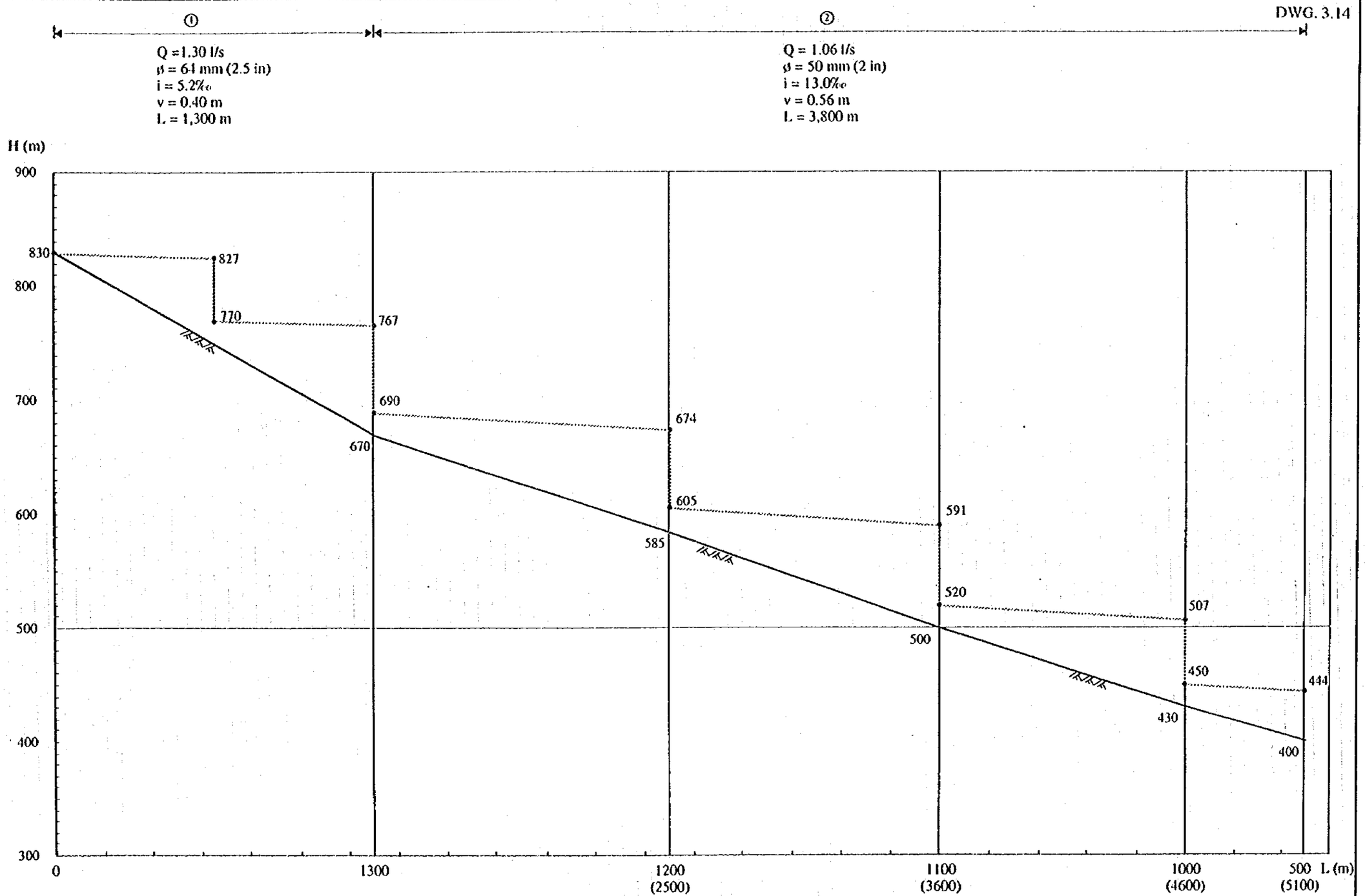


Drawing 3.12 Hydraulic Profile (Teroual) (2/3)

DWG. 3.13

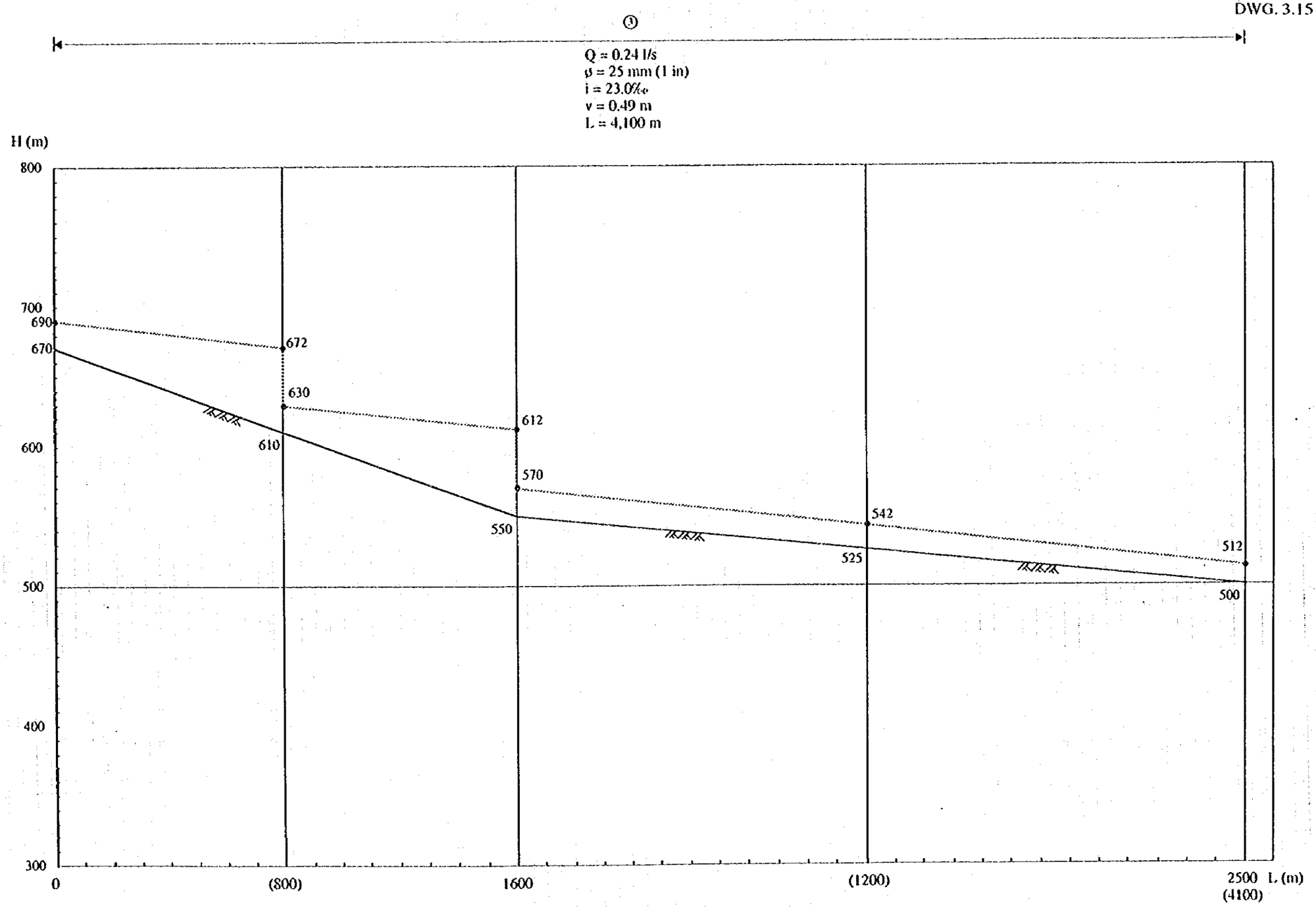


Drawing 3.13 Hydraulic Profile (Teroual) (3/3)



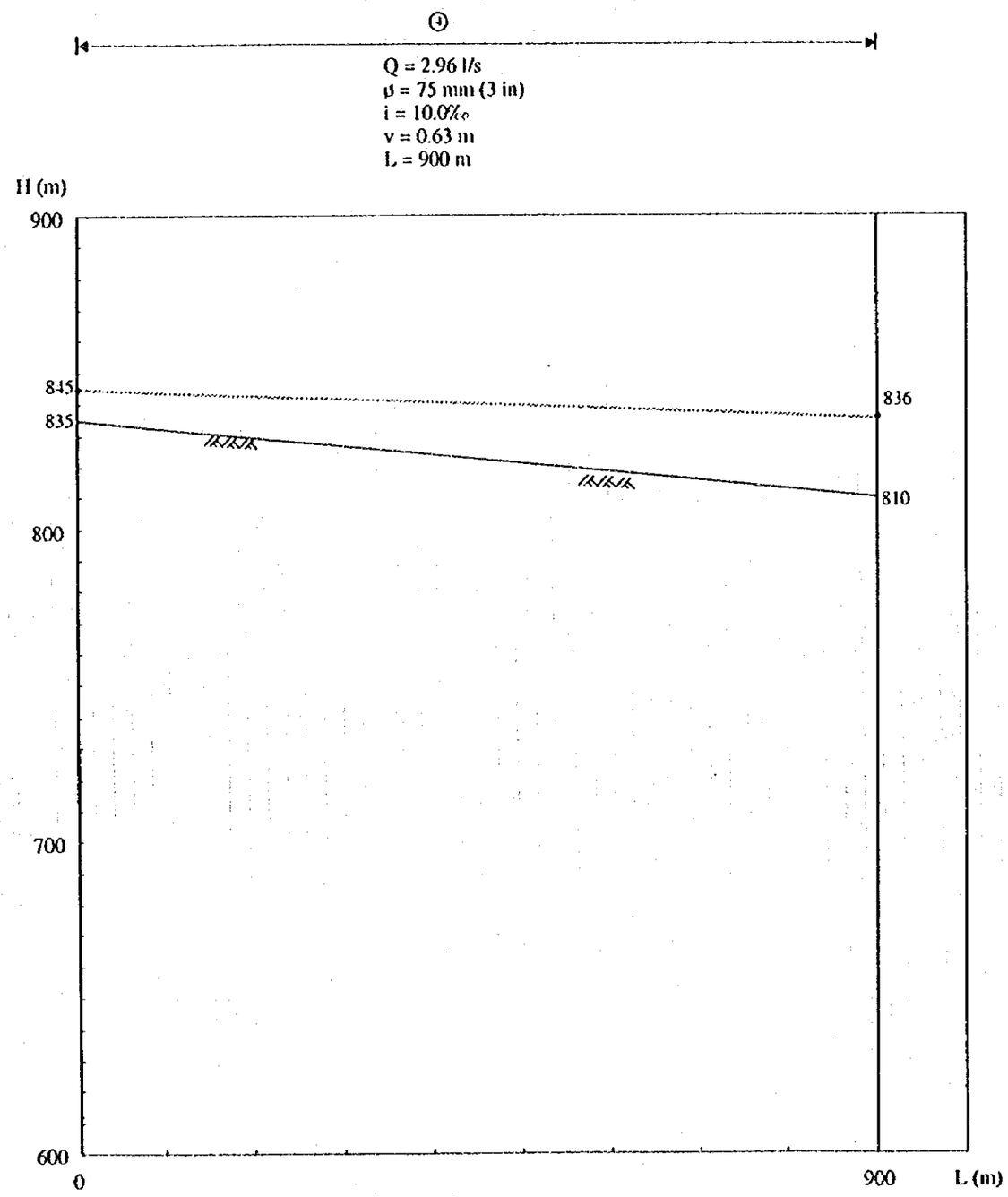
Drawing 3.14 Hydraulic Profile (Ain Berda) (1/4)

DWG. 3.15



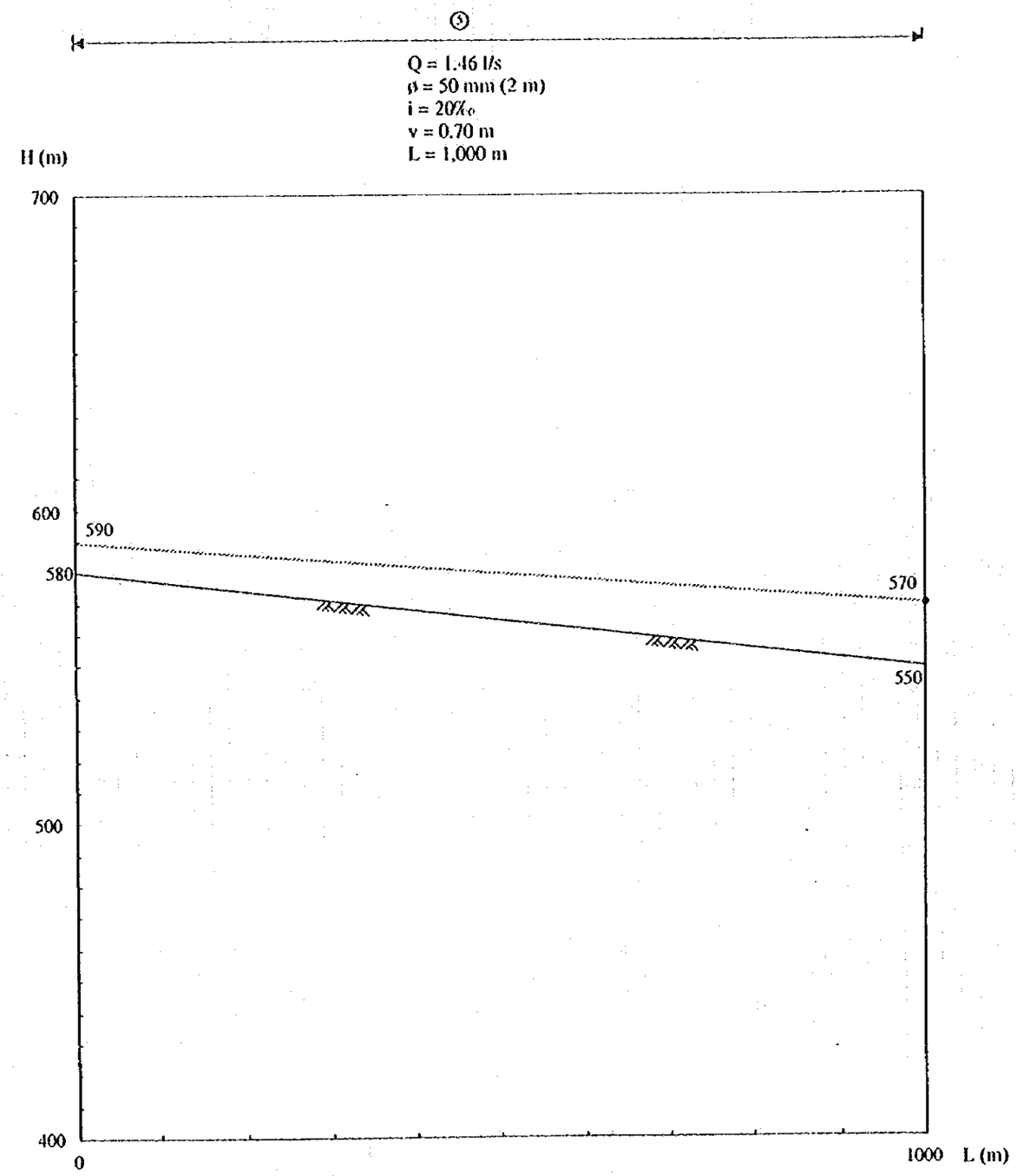
Drawing 3.15 Hydraulic Profile (Ain Berda) (2/4)

DWG. 3.16

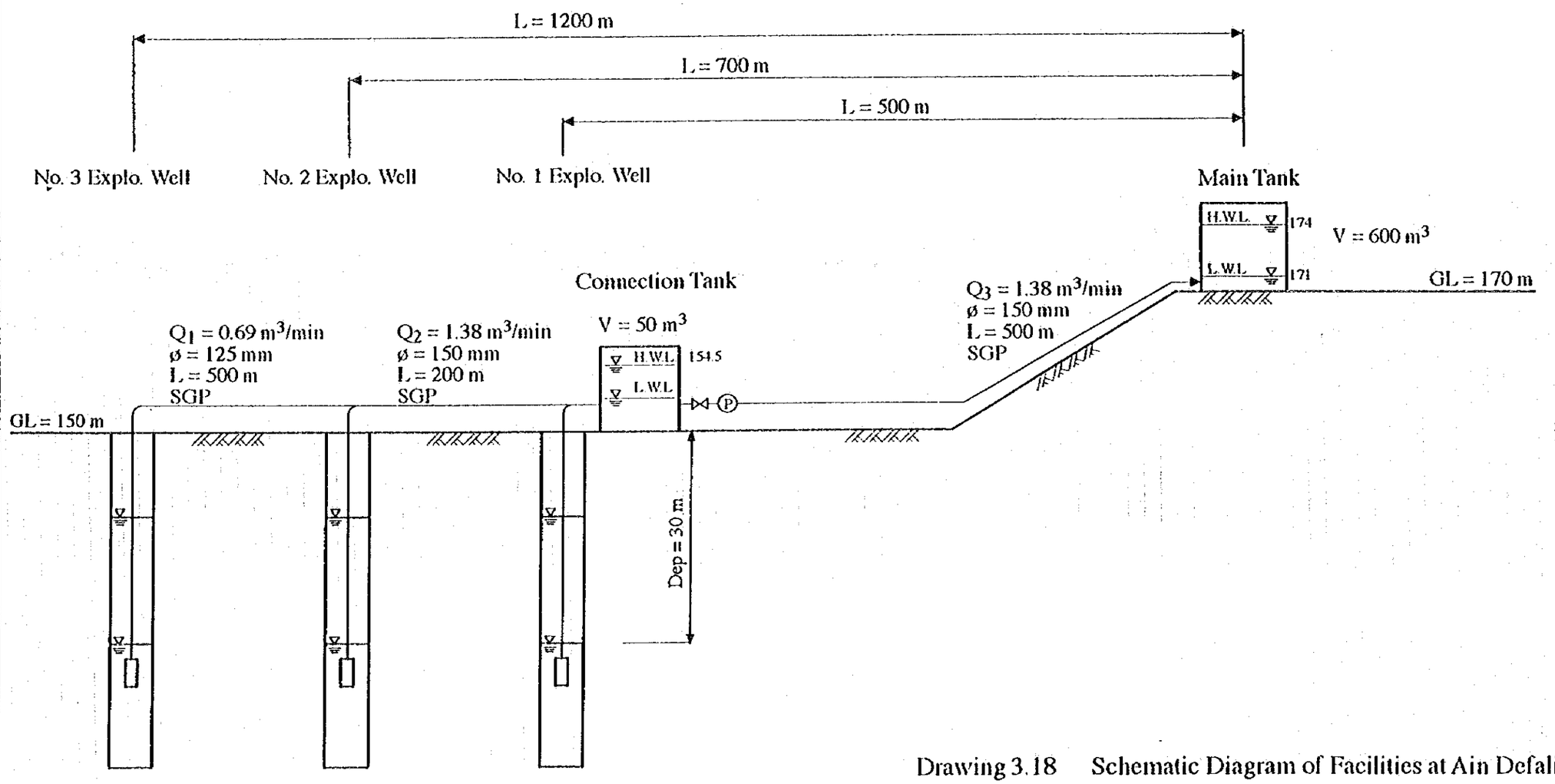


Drawing 3.16 Hydraulic Profile (Ain Berda) (3/4)

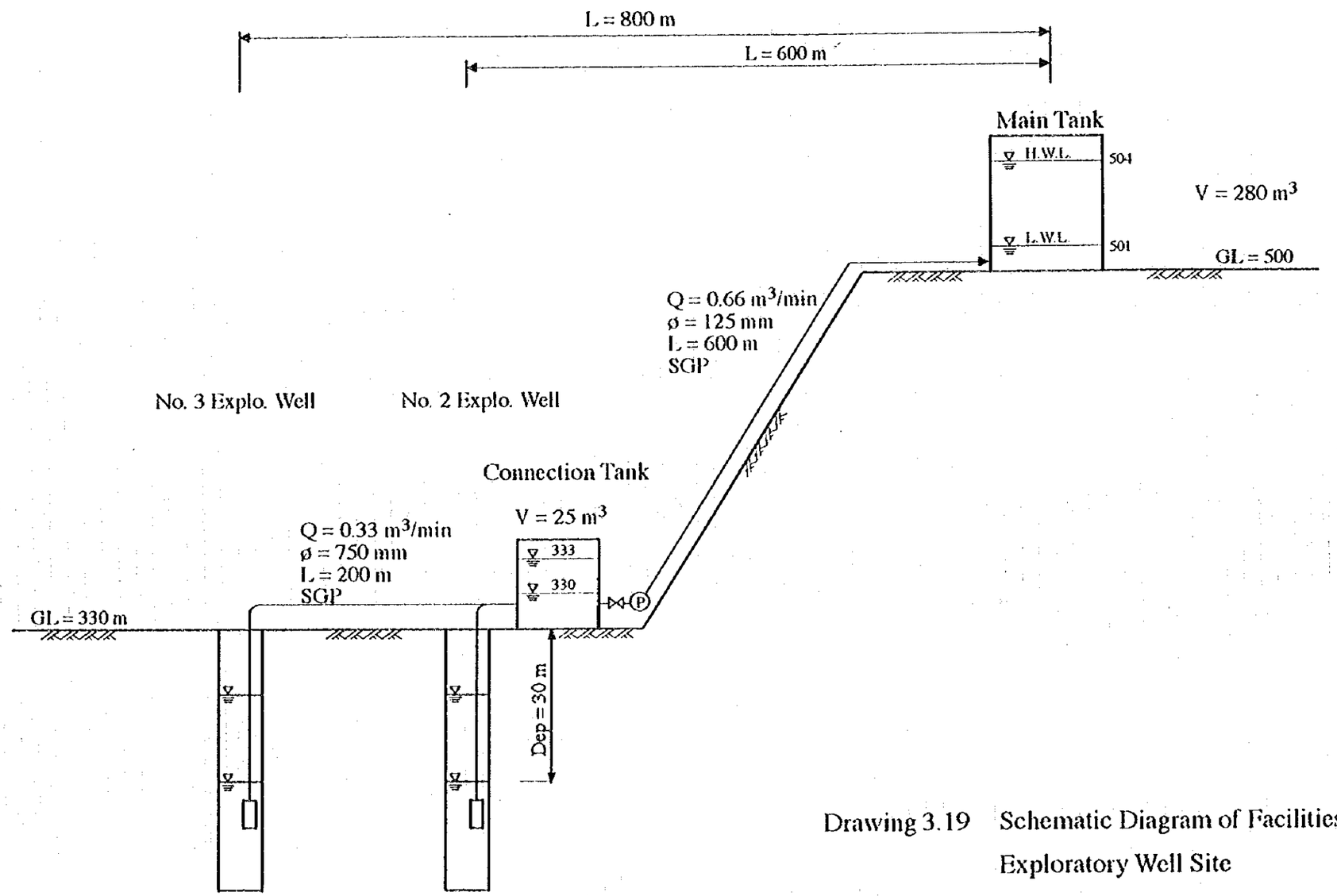
DWG. 3.17



Drawing 3.17 Hydraulic Profile (Ain Berda) (4/4)



Drawing 3.18 Schematic Diagram of Facilities at Ain Defali Exploratory Well Site



Drawing 3.19 Schematic Diagram of Facilities at Teroual Exploratory Well Site