CONTENTS

PAGE NO.

CHAPTER - I INTRODUCTION

General (1), Study area (2), Location (4), Geography (5), Physiography & Drainage (5), Climate (7), Flora & Fauna (8), Communicationn & Transport (8), Purpose & Scope of Investigatino (9) 1 - 11

CHAPTER - II PREVIOUS WORK 12 - 21

CHAPTER - III GEOLOGICAL SETTING 22 - 44

General (22), General Geological Setting (33), Deccan Trap (33), Laterite rocks (36), Gaj Formation (36), Ratanpur Clay (37), Bhumbli Conglomerate (37), Kuda Sandstone (37), Quaternary deposits (38), Alluvium (39), Structure of the Study Area (40)

CHAPTER - IV MODE OF OCCURRENCE 45 - 81

Classification of the Deposits (47), Section wise Description (51), Budhel (51), Rajpara (54), Badi (56), Padwa (58), Morchand (60), Thalsar (63), Alang (65), Mathwada (67), Devaliya (69), Sakhavadar (71), Malanka (73), Adhevada (73), Tagadi (76), Thoradi (76).

CHAPTER - V LABORATORY INVESTIGATION 82 - 174

Major oxide and trace element analyses (82), Sample preperation (83), XRD analyses (83), Section wise behaviour of major and trace elements (84), Discussion (162), Tests for determining industrial utility (165), Swelling index (165), Gel formation value (166), Base

exchange capacity (167), pH (168), Filtration loss (169), Moisture content (170), Fineness (dry) (171), Fineness (wet) (172), Specific Gravity (173).

CHAPTER - VI GENESIS OF THE BENTONITE DEPOSITS 175 - 206

Background information (175), Lateritisation Processes (181), Climatic Condition (182), Topography (186), pH of the hydrolising solution (191), Nature and Composition of the Parent rock (193), Genetic model (196), Formation of Bentonite (198), Chemistry of the Weathering of Deccan Trap Basalts (202).

CHAPTER - VII CONCLUSION 207 - 213

REFERENCES 214 - 239