

**2D-SEISMIC REFLECTION DATA
INTERPRETATION OF LINE P2094-213,
MIANO AREA, SINDH
PAKISTAN**



By

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ABSTRACT

THIS DISSERTATION IS BASED ON THE INTERPRETATION OF 2D SEISMIC REFLECTION DATA. SEISMIC SURVEY WAS CARRIED OUT IN MIANO AREA IN 1994. THE DATA ACQUISITION AND PROCESSING WERE MADE ON SELECTING APPROPRIATE FIELD PARAMETERS. THIS DISSERTATION PERTAINS TO THE INTERPRETATION OF CDP 60 FOLD DATA. THE SEISMIC DATA ACQUISITION AND PROCESSING REGARDING TO MY LINE P2094-213 MIANO BLOCK 20 AREA WAS DONE BY OMY G.M.B.H PAKISTAN IN 1994. THE GIVEN SEISMIC LINE COVERS REFLECTION DATA FROM SHOT POINTS 102 -739. THE GIVEN SEISMIC LINE IS A DIP LINE WHICH RUNS IN AREA AS E-W DIRECTION.

THE DATA PASSED THROUGH A DESIRABLE PROCESSING SEQUENCE AND FINALLY A TIME SECTION WAS PREPARED. NMO (NORMAL MOVEOUT) AND INTERVAL VELOCITIES COMPUTED DURING PROCESSING ARE ALSO PROVIDED WITH THE SEISMIC SECTION AT SELECTED CDP'S AND ARE USED FOR THE COLLECTION OF AVERAGE VELOCITIES TO CONVERT THE GIVEN TIME SECTION INTO DEPTH SECTION. THE SEISMIC SECTION IS RECORDED FOR 5SEC.

IN THE ABSENCE OF WELL TOP AND CHECK SHOT ONLY PHANTOM HORIZONS COULD BE MARKED. SEVEN REFLECTORS R1, R2, R3, R4, R5, R6 AND R7 ARE MARKED DUE TO THEIR PROMINENT REFLECTION ON THE SEISMIC SECTION AND FAULTS WERE IDENTIFIED. VELOCITY ESTIMATION, A MEAN AVERAGE VELOCITY IS DETERMINED. TIME SECTION IS PREPARED BY USING TWO WAY ARRIVAL TIME FROM SEISMIC SECTION. USING THESE ARRIVAL TIMES AND AVERAGE VELOCITIES, DEPTH OF EACH REFLECTOR HAS BEEN CALCULATED AND IS REPRESENTED IN DEPTH SECTION. TWENTY THREE FAULTS ARE MARKED ON THE SECTION THIS SHOWS THAT AREA HAS NORMAL FAULT AND MAKING NEGATIVE FLOWER STRUCTURE. LATERAL AS WELL AS VERTICAL VARIATION IN THE VELOCITIES ARE OBSERVED IN THE AVERAGE VELOCITY MAP THAT MAY ATTRIBUTE TO STRUCTURAL AND PHYSICAL VARIATIONS IN THE SUBSURFACE MATERIAL.

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CHAPTER 1

INTRODUCTION