ABSTRAK

ANALISIS PERBANDINGAN HASIL PENGOLAHAN DATA SEISMIK REFLEKSI LAUT 2D METODE KONVENSIONAL DAN METODE *COMMON REFLECTION SURFACE* (CRS) DENGAN PENGAPLIKASIAN *DATA ENHANCEMENT*

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Telah dilakukan penelitian untuk mengolah data 2D metode seismik refleksi laut memakai *software* ProMAX. Pengolahan data 2D seismik refleksi laut bertujuan untuk mendapatkan kenampakan struktur geologi bawah permukaan yang sesuai dengan keadaan sebenarnya serta memperbesar rasio sinyal seismik terhadap sinyal gangguan (S/N). Secara garis besar tahap pengolahan data dimulai dari *preprocessing, processing,* dan *final processing*. Dalam pengolahan data digunakan metode konvensional dan metode *Common Reflection Surface (CRS)*. Untuk meningkatkan *Signal to Noise Ratio*(S/N) maka dilakukan *data enhancement* seperti F-K filter, Radon filter, K-L filter, F-X *deconvolution,* dan *dip scan stack*. Dari hasil pengolahan data memperlihatkan metode *Common Reflection Surface (CRS)* menghasilkan penampang yang lebih baik dibandingkan metode konvensional. Hal tersebut dibuktikan dengan perbedaan ketegasan dan kemenerusan pola reflektor serta keberadaan *noise* setelah model penampang *stack* seismik antara metode konvensional dan metode *Common Reflection Surface (CRS)* dibandingkan. Selanjutnya, untuk mengembalikan reflektor ke titik yang seharusnya dilakukan proses migrasi.

Kata kunci: ProMAX, CMP *Stack,* CRS *Stack, Data Enhancement*

ABSTRACT

COMPARATIVE ANALYSIS OF 2D SEISMIC DATA PROCESSING CONVENTIONAL METHODS AND COMMON REFLECTION SURFACE (CRS) METHODS WITH APPLICATION OF DATA ENHANCEMENT

By

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Research has been carried out to process 2D data using sea reflection seismic method using ProMAX software. Processing of 2D sea reflection seismic data aims to obtain the appearance of subsurface geological structures that match the actual situation and increase the ratio of seismic signals to disturbance signals (S/N). Broadly speaking, the data processing stage starts from pre-processing, processing, and final processing. In data processing, conventional methods and Common Reflection Surface (CRS) methods are used. To increase the Signal to Noise Ratio (S/N), data enhancements are carried out such as F-K filters, Radon filters, K-L filters, F-X deconvolution, and dip scan stacks. The results of data processing show that the Common Reflection Surface (CRS) method produces a better cross-section than the conventional method. This is evidenced by the difference in the firmness and continuity of the reflector pattern and the presence of noise after the seismic stack cross section model between the conventional method and the Common Reflection Surface (CRS) method is compared. Next, to return the reflector to the point where the migration process should be carried out.

Keyword: ProMAX, CMP *Stack*, CRS *Stack*, *Data Enhancement*