Seismic Data Processing Report

Carried out by: **CGGVeritas**

For: ***ConocoPhillips***

Area: ***Browse Basin, Australia***

Survey: ***Poseidon and BKG06B Marine 3D***

Method: ***3D Pre-Stack Time Migration***

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1. Introduction

1.1. Scope of Report

This report describes the seismic data processing of the Poseidon 3D and BKG06B 3D marine datasets for ConocoPhillips Australia Exploration Pty Ltd performed by CGGVeritas Australia Pty Ltd. The Poseidon 3D dataset was new acquisition in 2009/2010, and the processing was carried out behind the acquisition. The BKG06B 3D survey was a legacy dataset from 2006 reprocessed by CGGVeritas Australia Pty. Ltd. as a second azimuth as it lies fully within the Poseidon volume and has an orientation 80 degrees different than that of Poseidon. All datasets lie primarily within blocks WA-398-P and WA-315-P of the Browse Basin with minor ingresses into the following blocks: WA-314-P, WA-30-R, WA-274-P and WA-411-P. The processing volume is 2829km^2.

In addition to the regular on-shore processing, CGGVeritas also sent a processor to the vessel to create a fast-track of the Poseidon data during the acquisition stage.

There were also four tie lines which were extended outside of the main survey area and into WA-314-P. These lines were acquired with the vessel in 3D configuration, i.e. 2 guns and 10 cables active. These are referred to as the extended lines in the report.

Another line was acquired diagonally across the entire survey, and incorporated the area covered by both Poseidon and BKG06B-3D surveys. This line was shot in 2D configuration, 2 guns and 1 cable and is referred to as 2D in the report.

The processing is covered by contract number COP.ES.78005 and registered under CGGVeritas crew number 501p1fi.

1.2. Purpose and Objectives of Processing

The key objectives of the processing project were as follows:

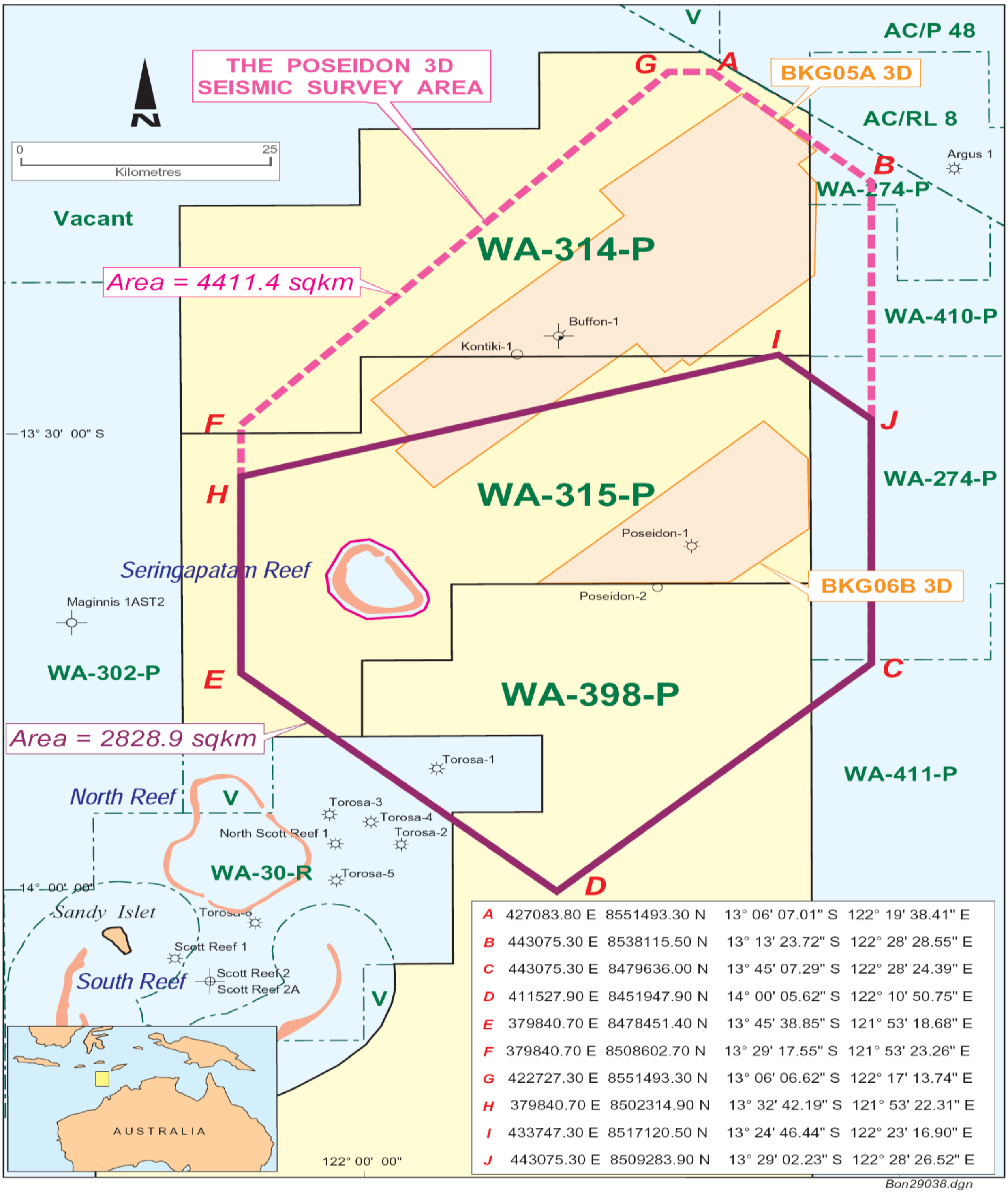
- Geological:
    - Improve fault plane definition
    - Improve primary target imaging
    - Improve reef imaging
    - Improve imaging of stratigraphic terminations

- Geophysical:
    - To obtain the best image and resolution at the target level (3000-3500ms)
    - To achieve the best image around the reef as possible
    - To achieve optimum multiple attenuation pre-migration

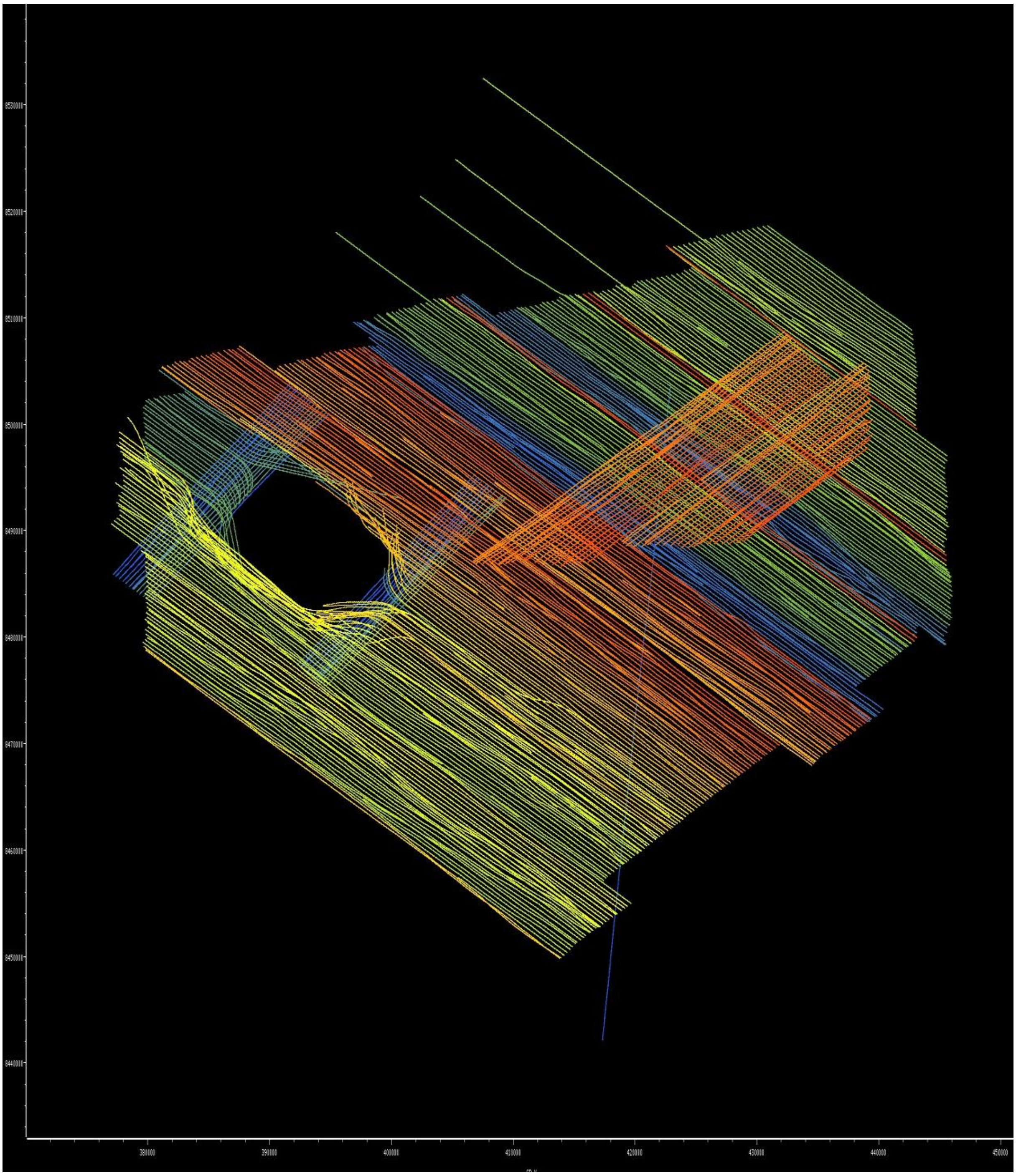
- To obtain accurate pre and post migration velocity fields for optimum imaging
- Production of AVO attributes

1.3. Location Map

The solid purple line CDEHIJC in the figure below shows the area to be processed within the Browse Basin:



The figure below shows the position of all shot points that are processed as part of this contract. Note the orthogonal lines around Seringapatam reef, extended lines and diagonal ties lines, as well as the BKG06B-3D survey:



2. Data Acquisition

2.1. Data Acquisition Parameters

The following table lists the parameters used in the acquisition of the Poseidon 3D survey:

Country of Survey	Australia
Area of Survey	Browse Basin
Block/Tenement	WA-315-P and WA-398-P
Survey Name	Poseidon 3D Marine
Data Type	Marine 3D
Volume	370 Sailed Lines covering 2829km ^{2} (Sequence 001 – 370, see section 7.1 for full list of lines processed)
Acquisition Contractor	CGGVeritas
Acquisition Vessel	Geowave Voyager
Acquisition Record Length	7000ms
Acquisition Sample Interval	2ms
Acquisition Direction	130°/310°
Acquisition Filter Applied	3Hz, 6dB/Oct – 200Hz, 370 dB/Oct
Source Separation	37.5m
Shot Interval	18.75m (flip –to- flop)
Source Depth	6m
Streamer Separation	75m
Streamer Length	6000m
No. Streamers	10
Channel Interval	12.5m
No. Channels	480
Streamer Depth	7m
2D Inline Near Offset	160m
Crossline Interval	12.5m
Inline Interval	18.75m

The following table lists the parameters used in the acquisition of the BKG06B-3D survey:

Country of Survey	Australia
Area of Survey	Browse Basin
Block/Tenement	WA-315-P
Survey Name	BKG06B-3D Marine
Data Type	Marine 3D
Volume	Sequence 001 – 053, see section 7.1 for full list of lines processed
Acquisition Contractor	Veritas
Acquisition Vessel	SR/V Veritas Viking II
Acquisition Record Length	6000ms
Acquisition Sample Interval	2ms
Acquisition Direction	50°/230°
Acquisition Filter Applied	3Hz, 12dB/Oct – 206Hz, 276 dB/Oct
Source Separation	50m
Shot Interval	18.75m (flip –to- flop)
Source Depth	6m
Streamer Separation	100m
Streamer Length	5550m
No. Streamers	8
Channel Interval	12.5m
No. Channels	444
Streamer Depth	7.5m
2D Inline Near Offset	138m
Crossline Interval	12.5m
Inline Interval	25m

2.2. Processing Parameters

The following table lists the parameters used in the processing of Poseidon 3D:

Processing Record Length	7000ms
Processing Sample Interval	4ms
Datum	WGS84
Grid Size	6.25 x 18.75m to 12.5 x 18.75m after trace drop

The following table lists the parameters used in the processing of BKG06B-3D:

Processing Record Length	6000ms
Processing Sample Interval	4ms
Datum	WGS84
Grid Size	6.25 x 25m to 12.5 x 18.75m after trace drop and regridding

3. Processing Sequence

3.1. Fast Track Processing Sequence

1. Navigation reformat

2. Seismic data reformat to internal CGGVeritas format
   a. 50ms SEG-D Delay
   b. High Cut Anti-Alias (AA) filter prior to Resampling: 100Hz, 110dB/Oct
   c. Resample from 2ms to 4ms
   d. Cut Record Length to 7000ms (6000ms for BKG06B-3D)
   e. De-bias and 3Hz, 18dB/Octave Butterworth low cut filter
   f. Navigation and Seismic Data merge
   g. Flag observer's reports edits

3. Gun and Cable Static correction using real depths

4. Apply deterministic Zero phasing filter on 0.5 m cable depth increments

5. Reverse polarity to make trough an increase in impedance

6. Cascaded Swell Noise Attenuation (SNA)
   a. Sort to back-to-back Shot Points (SP)
   b. Two passes of SNA, splitting into separate frequency bands

7. Apply Shot point and Channel Edits

8. Linear Noise Attenuation
   a. K-notch anti-alias filter with NMO wrap-around
   b. Extrapolation of SPs in fx-y domain
   c. Extend record length to 12000ms
   d. Forward Tau-P transform (1200 P traces)
   e. Tau-P mute for linear noise attenuation
   f. Reverse Tau-P transform

9. Apply Tidal Statics Correction

10. Linear Radon transform for residual linear noise attenuation

11. 3D Surface Related Multiple Elimination (SRME)
    a. Modelling
    b. Subtraction in the Shotpoint domain

12. Shot-to-shot amplitude correction
    a. Filter Length: 5 shot points

13. Normal Moveout (NMO) correction using manually picked stacking velocity field (1 x 1km)

14. High Resolution Radon De-multiple on NMO corrected gathers:
    a. High Resolution Parabolic Radon in 2D CMP domain (DTMIN–2000ms, DTMAX 1200ms, DTCUT 300ms, DDT 20ms, start time 1.7* water-bottom with 300ms taper)

15. Frequency Dependent Offset Noise Attenuation

16. Sort to Offset Volumes
    a. Output of 80 75m offset volumes (160-234m….6085-6159m)
    b. First 3 offset volumes purposefully over-populated (1-422m, 235-434m, 310-446m)

17. Static Binning and FXY trace regularization

18. Kirchhoff Dip Moveout (DMO) stack
    a. Removal of initial amplitude recovery
    b. Spherical Divergence correction (V^2/T) using PSTM VRMS field
    c. Apply an inner and outer mute to data
    d. Stack data with Max Dip = 50°

19. Full Kirchhoff Post Stack Time Migration
    a. Dip Limit : 75°
    b. 4km Half Aperture

20. Water-bottom dependant exponential diffracted multiple attenuation

21. Random Noise Attenuation (RNA)

22. Exponential Gain of 5 db/second

23. Double window Amplitude Gain Correction at 1000 ms and 400 ms

24. SEGY output of Final Stacks

3.2. Final Processing Sequence

1. Navigation reformat

2. Seismic data reformat to internal CGGVeritas format
    a. 50ms SEG-D Delay
    b. High Cut Anti-Alias (AA) filter prior to Resampling: 100Hz, 110dB/Oct
    c. Resample from 2ms to 4ms
    d. Cut Record Length to 7000ms (6000ms for BKG06B-3D)
    e. De-bias and 3Hz, 18dB/Octave Butterworth low cut filter
    f. Navigation and Seismic Data merge
    g. Flag observer's reports edits
3. Gun and Cable Static correction using real depths

4. Apply deterministic Zero phasing filter on 0.5 m cable depth increments

5. Apply Tidal Statics Correction (BKG06B-3D Only)

6. Reverse polarity to make trough an increase in impedance

7. Cascaded Swell Noise Attenuation (SNA)
    a. Sort to back-to-back Shot Points (SP)
    b. Two passes of SNA, splitting into separate frequency bands
    c. BKG06B-3D – Another 4 passes of SNA

8. Apply Shot point and Channel Edits

9. Linear Noise Attenuation
    a. K-notch anti-alias filter with NMO wrap-around
    b. Extrapolation of SPs in fx-y domain
    c. Extend record length to 12000ms (11000 ms for BKG06B-3D)
    d. Forward Tau-P transform (1200 P traces)
    e. Tau-P mute for linear noise attenuation
    f. Reverse Tau-P transform

10. Apply Tidal Statics Correction (Poseidon Only)

11. Linear Radon transform for residual linear noise attenuation

12. Trace drop to go from 6.25m Common Mid Point (CMP) spacing to 12.5m spacing (BKG06B-3D Only)

13. 3D Surface Related Multiple Elimination (SRME)
    a. Modelling
    b. Subtraction in the Shotpoint domain

14. Second order deconvolution in Tau-P domain
    a. Target window: 3800 – 5800ms

15. Shot-to-shot amplitude correction
    a. Filter Length: 5 shot points

16. Trace drop to go from 6.25m Common Mid Point (CMP) spacing to 12.5m spacing (Poseidon Only)

17. Normal Moveout (NMO) correction using manually picked stacking velocity field (1 x 1km) (Poseidon Only)

18. High Resolution Radon De-multiple on NMO corrected gathers:
    a. High Resolution Parabolic Radon in 2D CMP domain (DTMIN–2000ms, DTMAX 1200ms, DTCUT 300ms, DDT 20ms, start time 1.7* water-bottom with 300ms taper)

19. **SEGY Output of 2D CMP Gathers**
    a. Removal of NMO correction
    b. Removal of initial amplitude recovery

20. BKG06B-3D Re-gridding to Poseidon 3D grid
    a. Amplitude and Phase matching to Poseidon

21. Sort to Offset Volumes
    a. Output of 80 75m offset volumes (160-234m….6085-6159m)
    b. First 3 offset volumes purposefully over-populated (1-422m, 235-434m, 310-446m)

22. Automatic Bispectral Pre-Stack Time Migration (PSTM) velocity analysis on a 25 x 250m interval
    a. PSTM of target velocity inlines
    b. Automatic bispectral velocity picking
    c. Smoothing of raw picks for PSTM algorithm
    d. Output of PSTM VRMS and ETA fields on a 500 x 500m grid

23. 3D Data regularization
    a. Regularization of the dataset along two directions using Fourier Reconstruction

24. Diffracted multiple attenuation
    a. Start time 4000ms and 1000ms taper

25. Frequency Dependent Offset Noise Attenuation
    a. Removal of initial amplitude recovery
    b. Spherical Divergence correction (V^2/T) using PSTM VRMS field
    c. Phase Only Q Compensation with Q=135

26. Full Kirchhoff PSTM
    a. Dip Limit : 60°
    b. 4km Half Aperture

27. Residual velocity analysis parameters on a 12.5 x 18.75m grid
    a. Offline Residual Radon de-multiple, with DTCUT 240ms
    b. Automatic Bispectral velocity picking
    c. Removal of any erroneous picks and a small smoothing operator
    d. Output of final RMO VRMS and ETA fields on a 12.5 x 18.75m grid

28. Application of 12.5 x 18.75m RMO VRMS and ETA fields

29. **SEGY output of Raw PSTM Bin Gathers**
    a. Removal of final RNMO velocity and ETA fields

30. Residual Hi-Resolution RADON de-multiple
    a. Time Variant High Resolution Parabolic Radon in the CMP domain
        i. DTMIN-1000ms, DTMAX2000, DTCUT160ms, DDT 20ms, start time 1.9 * water-bottom with 300ms taper
        ii. DTMIN-1000ms, DTMAX2000ms, DTCUT100ms, DDT 20ms, start time 2.6 seconds with a 400 ms taper (500 ms taper for BKG06B-3D)

31. **SEGY output of Final PSTM Bin Gathers**

32. Final Angle Stacks
    a. Full Stack = 6 - 42°
    b. Near Stack = 6 - 18°
    c. Mid Stack = 18 - 30°
    d. Far Stack = 30 - 42°

33. **SEGY output of Raw AVA Stacks**

34. Post Stack processing
    a. Amplitude only Q Compensation
    b. Time Variant Scaling
    c. Diffracted Multiple Attenuation
    d. Random Noise Attenuation

35. **SEGY output of Final AVA Stacks**

36. AVO Product generation
    a. Gradient Stack
    b. Product Stack
    c. Lambda-Rho Stack
    d. Fluid Factor Stack
    e. Intercept Stack

37. **SEGY output of AVO Attribute Products**

3.3. Final Processing Sequence-2D and extended lines

For the extended lines, pre-processing of all 20 sublines was performed, migration and post-migration processing was limited to 1 central subline.

For the 2D line, the starboard gun was dropped and the line was processed as purely 2D.

1. Navigation reformat

2. Seismic data reformat to internal CGGVeritas format
   a. 50ms SEG-D Delay
   b. High Cut AA filter prior to Resampling: 100Hz, 110dB/Oct
   c. Resample from 2ms to 4ms
   d. Cut Record Length to 7000ms (6000ms for BKG06B-3D)
   e. De-bias and 3Hz, 18dB/Octave Butterworth low cut filter
   f. Navigation and Seismic Data merge
   g. Flag observer’s reports edits

3. Gun and Cable Static correction using real depths

4. Apply deterministic Zero phasing filter on 0.5 m cable depth increments

5. Reverse polarity to make trough an increase in impedance

6. Cascaded Swell noise attenuation
   a. Sort to back-to-back SPs
   b. Two passes of SNA, splitting into separate frequency bands

7. Apply Shot point and Channel Edits

8. Linear Noise Attenuation
   a. K-notch anti-alias filter with NMO wrap-around
   b. Extrapolation of SPs in fx-y domain
   c. Extend record length to 12000ms
   d. Forward Tau-P transform (1200 P traces)
   e. Tau-P mute for linear noise attenuation
   f. Reverse Tau-P transform

9. Apply Tidal Statics Correction

10. Linear Radon transform for residual linear noise attenuation

11. 2D SRME
   a. Modelling
   b. Subtraction in the Shotpoint domain

12. Second order deconvolution in Tau-P domain
    a. Target window: 3800 – 5800ms

13. Shot-to-shot amplitude correction
    a. Filter Length: 5 shot points

14. Trace drop to go from 6.25m CMP spacing to 12.5m

15. NMO correction using manually picked stacking velocity field (1 x 1km)

16. High Resolution Radon De-multiple on NMO corrected gathers:
    a. Two pass High Resolution Parabolic Radon in 2D CMP domain (DTMIN–2000ms, DTMAX 1200ms, DTCUT 300ms, DDT 20ms, start time 1.7* water-bottom with 300ms taper)

17. **SEGY Output of 2D CMP Gathers**
    a. Removal of NMO correction
    b. Removal of initial amplitude recovery

18. Sort to Offset Volumes
    a. Output of 80 75m offset volumes (160-234m….6085-6159m)
    b. First 3 offset volumes purposefully over-populated (1-422m, 235-434m, 310-446m)

19. Automatic Bispectral Pre-Stack Time Migration (PSTM) velocity analysis on a 900m interval over a chosen central inline.
    a. PSTM of velocity inlines
    b. Automatic bispectral velocity picking
    c. Smoothing of raw picks for PSTM algorithm
    d. Output of PSTM VRMS and ETA lines

20. Diffracted multiple attenuation
    a. Start time 4000ms and 1000ms taper

21. Frequency Dependent Offset Noise Attenuation
    a. Removal of initial amplitude recovery
    b. Spherical Divergence correction (V^2/T) using PSTM VRMS field
    c. Phase Only Q Compensation with Q=135

22. Full Kirchhoff PSTM
    a. Dip Limit : 60°
    b. 4km Half Aperture

23. Residual velocity analysis parameters every 12.5m along the line
    a. Offline Residual Radon de-multiple, with DTCUT 240ms
    b. Automatic Bispectral velocity picking
    c. Removal of any erroneous picks and a small smoothing operator
    d. Output of final RMO VRMS and ETA lines

24. Application of RMO VRMS and ETA velocities

25. **SEGY output of Raw PSTM Bin Gathers**
    a. Removal of final RNMO velocity and ETA fields

26. Residual Hi-Resolution RADON de-multiple
    a. Time Variant High Resolution Parabolic Radon in the CMP domain
        i. DTMIN-1000ms, DTMAX2000, DTCUT160ms, DDT 20ms, start time 1.9 * water-bottom with 300ms taper
        ii. DTMIN-1000ms, DTMAX2000ms, DTCUT100ms, DDT 20ms, start time 2.6 seconds with a 400 ms taper

27. **SEGY output of Final PSTM Bin Gathers**

28. Final Angle Stacks
    a. Full Stack = 6 - 42°
    b. Near Stack = 6 - 18°
    c. Mid Stack = 18 - 30°
    d. Far Stack = 30 - 42°

29. **SEGY output of Raw AVA Stacks**

30. Post Stack processing
    a. Amplitude only Q Compensation
    b. Time Variant Scaling
    c. Diffracted Multiple Attenuation
    d. Random Noise Attenuation

31. **SEGY output of Final AVA Stacks**

32. AVO Product generation
    a. Gradient Stack
    b. Product Stack
    c. Lambda-Rho Stack
    d. Fluid Factor Stack
    e. Intercept Stack

33. **SEGY output of AVO Attribute Products**

4. Processing and Parameter Testing

Testing was carried out on primarily Poseidon sequence 7, which runs through the well Kronos-1, and BKG06B-3D sequence 48. Noisy sequences were also picked to test the efficiency of any noise attenuation processes applied.

The following describes each processing stage that was applied to the Poseidon 3D data set. Technical Notes with detailed test results for each of the processing steps were provided to ConocoPhillips throughout the life of the project, these have been included in the appendices of this report. Section 6 of this processing report contains data examples from the following tests.

4.1. Processing Parameters

Reformat and Seismic/Navigation Merge

The SEG-D field seismic data and raw navigation data in NAV-P1 format were reformatted to CGGVeritas' internal format. The seismic and navigation data was merged for each sail line by synchronizing common header information from both datasets.

Resampling and Anti-alias Filtering

The Poseidon 3D data was resampled from 2ms to 4ms as part of the contract requirement. A high cut anti alias filter was applied prior to resampling to ensure that the maximum useable frequencies are retained. The filter allows for the conservation of higher frequencies while having a cut of frequencies above the ½ Nyquist (125Hz). The re-sampling did not notably affect the signal frequency content of the data and hence does not notably attenuate any useful data.

The following anti-alias filter was used:

100Hz/110dB

Low Cut Filtering

The Poseidon 3D dataset displayed a strong DC bias which needed to be removed as early on in the sequence as possible. This was achieved through the combination of a trace centring around zero amplitude and the application of a 3Hz low cut filter.

The following parameters were used:

-**Trace centering around zero amplitude**
-**Butterworth Low cut Filter of 3Hz/18dB**

Trace Edits and Amplitude Recovery

Shot, trace and channel edits were carried out as indicated in the observer's reports.

Correction for spherical divergence in the data was performed to compensate for the effects of geometrical spreading. In this case, compensation was performed on non-NMO corrected data. Each sample was multiplied by (T/250)2 .

T = sample time

Zero-phase filter derivation

Zero phasing was performed deterministically from the supplied far field signature. The following diagrams describe the process that we used to obtain the de-signature and zero phasing filter that was applied to this data set.

Swell Noise Attenuation

CGGVeritas' swell noise attenuation process relies on the differentiation between predictable and unpredictable signal, allowing attenuation of random noise as un-predictable signal while maintaining predictable signal such as reflections, diffractions and multiple.

Swell noise is also seen to have characteristic frequency content from this random noise attenuation and can be designed to have stronger application in different frequency bands. To do this we define an energy threshold parameter which analyses the ratio between a trace's energy and an average value; from this, impulsive noise can be identified.

The data was split in to four frequency bands (0-5, 5-10, 10-20, 20-30 Hz) and a different set of parameters was then applied to each band. The main focus was on the two lowest bands, 0-5 and 5-10Hz, as this is where the majority of the swell noise lies. The sorting of the input data was also found to have a large impact on the efficiency of the swell noise attenuation process, with shot points sorted back to back being the optimum domain to apply this process in. A cascaded two pass approach was applied in the shot-point domain, with the second pass efficiently attacking the larger patches of swell noise.

See slides 2 – 15 of section 6.

Linear Noise Attenuation

Several mutes, applied in the Tau-P domain, were tested to attenuate coherent linear noise. As the water bottom varied significantly along each 2D line a water bottom dependant mute was picked. Since it was difficult to pick a strong mute that didn't attenuate any primary data, a residual linear noise attenuation was carried out following the mute through the application of a linear radon transform.

The Tau-P transform used for the muting produced some low frequency artifacts on the far offsets of the shot-points. The tapers in the Tau-P domain were adjusted, and while this helped to decrease these artifacts it was still relatively strong. To resolve this issue we used an extrapolation of the shot-points in the fx-y domain to pad the shot-points by 20 traces, and then dropped these traces after the reverse transform.

The following parameters were used:

Tau-P Transform:
-Extrapolation of SPs (extra 20 traces)
-Record Length extended to 12000ms prior to transform
-1200 p traces
-Pmin = -690000 equivalent slowness of 1450m/s
-Pmax = +690000 equivalent slowness of 1450m/s

Mute defined by water bottom time values:

For water bottom times from <600ms :

Time	*P Trace Offset*
T0000	*+690000,*
T0100	*+680000,*
T0200	*+660000,*
T0400	*+640000,*
T0600	*+580000,*
T0800	*+480000,*
T1000	*+400000,*
T1200	*+340000,*
T1400	*+290000,*
T1700	*+258000,*
T6300	*+220000,*
T8500	*+150000,*
T12000	*+ 50000,*

For water bottom times from 600ms – 700ms :

Time	*P Trace Offset*
T0000	*+700000,*
T0090	*+690000,*
T0100	*+680000,*
T0200	*+660000,*
T0400	*+640000,*
T0600	*+580000,*
T0800	*+480000,*
T1000	*+400000,*
T1200	*+340000,*

T1450	***+290000,***
T1700	***+258000,***
T6000	***+220000,***
T8500	***+100000,***
T12000	***+ 50000,***

For water bottom times from 700ms –800ms :

Time	***P Trace Offset***
T0000	***+700000,***
T0080	***+690000,***
T0100	***+680000,***
T0200	***+660000,***
T0300	***+640000,***
T0500	***+580000,***
T0800	***+480000,***
T1000	***+400000,***
T1200	***+340000,***
T1400	***+290000,***
T1600	***+258000,***
T1800	***+220000,***
T6000	***+100000,***
T12000	***+ 50000,***

For water bottom times from 800ms-900ms :

Time	***P Trace Offset***
T0100	***+700000,***
T0200	***+690000,***
T0300	***+680000,***
T0400	***+660000,***
T0600	***+640000,***
T0900	***+580000,***
T1100	***+480000,***
T1300	***+400000,***
T1500	***+340000,***
T1700	***+290000,***
T1900	***+258000,***
T6000	***+220000,***
T8500	***+100000,***
T12000	***+ 50000,***

For water bottom times from 900ms-1000ms :

Time	***P Trace Offset***
T0100	***+700000,***
T0200	***+690000,***
T0300	***+680000,***

T0400	***+660000,***
T0600	***+640000,***
T0900	***+580000,***
T1100	***+480000,***
T1300	***+400000,***
T1600	***+340000,***
T1900	***+290000,***
T2200	***+258000,***
T6000	***+220000,***
T8500	***+ 60000,***
T12000	***+ 30000,***

For water bottom times from 1000ms-1100ms :

Time	***P Trace Offset***
T0150	***+700000,***
T0200	***+690000,***
T0300	***+680000,***
T0500	***+660000,***
T0900	***+640000,***
T1400	***+580000,***
T1800	***+480000,***
T2200	***+400000,***
T2600	***+340000,***
T2900	***+290000,***
T3200	***+258000,***
T6000	***+220000,***
T8500	***+ 70000,***
T12000	***+ 40000,***

For water bottom times from 1100ms-1200ms :

Time	***P Trace Offset***
T0150	***+700000,***
T0200	***+690000,***
T0300	***+680000,***
T0500	***+660000,***
T0900	***+640000,***
T1400	***+580000,***
T1800	***+480000,***
T2200	***+400000,***
T2600	***+340000,***
T2900	***+290000,***
T3200	***+258000,***
T6000	***+220000,***
T8500	***+ 80000,***
T12000	***+ 50000,***

For water bottom times from 1200ms-1270ms :

Time	***P Trace Offset***
T0150	***+700000,***

T0200	***+690000,***
T0300	***+680000,***
T0500	***+660000,***
T0900	***+640000,***
T1400	***+580000,***
T1800	***+480000,***
T2200	***+400000,***
T2600	***+340000,***
T2900	***+290000,***
T3200	***+258000,***
T6000	***+220000,***
T8500	***+ 90000,***
T12000	***+ 60000,***

For water bottom times from 1270ms-1420ms :

Time	***P Trace Offset***
T0150	***+700000,***
T0200	***+690000,***
T0300	***+680000,***
T0500	***+660000,***
T0900	***+640000,***
T1400	***+580000,***
T1800	***+480000,***
T2200	***+400000,***
T2600	***+340000,***
T2900	***+290000,***
T3200	***+258000,***
T6000	***+220000,***
T8500	***+ 90000,***
T12000	***+ 60000,***

For water bottom times from 1420ms-1620ms :

Time	***P Trace Offset***
T0150	***+700000,***
T0200	***+690000,***
T0300	***+680000,***
T0400	***+660000,***
T1000	***+640000,***
T1400	***+580000,***
T1900	***+480000,***
T2600	***+400000,***
T3000	***+340000,***
T3400	***+290000,***
T3800	***+258000,***
T6000	***+220000,***
T8500	***+ 100000,***
T12000	***+ 60000,***

For water bottom times from 1620ms-1800ms :

Time	***P Trace Offset***
T0150	***+700000,***
T0200	***+690000,***
T0300	***+680000,***
T0400	***+660000,***
T1000	***+640000,***
T1400	***+580000,***
T1900	***+480000,***
T2600	***+400000,***
T3000	***+340000,***
T3400	***+290000,***
T3800	***+258000,***
T6000	***+220000,***
T8500	***+100000,***
T12000	***+ 60000,***

For water bottom times from > 1800ms :

Time	***P Trace Offset***
T0150	***+700000,***
T0200	***+690000,***
T0300	***+680000,***
T0400	***+660000,***
T1000	***+640000,***
T1400	***+580000,***
T1900	***+480000,***
T2600	***+400000,***
T3000	***+340000,***
T3400	***+290000,***
T3800	***+258000,***
T6000	***+220000,***
T8500	***+100000,***
T12000	***+ 60000,***

Linear Radon:

Signal is preserved between DTMIN=-3000ms, and DTCUT=2000ms, linear noise is removed between DTCUT=2000ms and DTMAX=8000ms

See slides 16 – 29 of section 6.

3D Surface Related Multiple Elimination (SRME)

CGGVeritas applied a two phase 3D SRME process. First the modelling of multiples performed in the CMP (3D) domain. Second the subtraction of multiples previously modelled. A least squares adaptive subtraction of the 3D SRME model was performed in the 3D CMP domain. This used a two pass approach starting with a global adaptation of the model followed by a localized adaptation before the subtraction is performed.

See slides 30 - 43 of section 6.

Deconvolution In the Tau-P Domain

Much of the short period multiple energy had been effectively attenuated through the 3D SRME process. A first order deconvolution in the tau-p domain was tested on this data set but due to the large character differences in the shallow and deep sections of the data set, separated by the strong Cenomanian Shale reflector, a satisfactory set of deconvolution design windows couldn't be defined to give a geophysically sound result over the entire section.

Instead a second order deconvolution, targeting water layer peg legs that have a second order response which therefore require the use of a second order operator to attenuate, was tested and used. The method used to do this is the Norsk-Hydro multiple suppression procedure written by Dmitri Lokshtanov which was applied using CGGVeritas' "REMUL" program.

The following parameters were used:

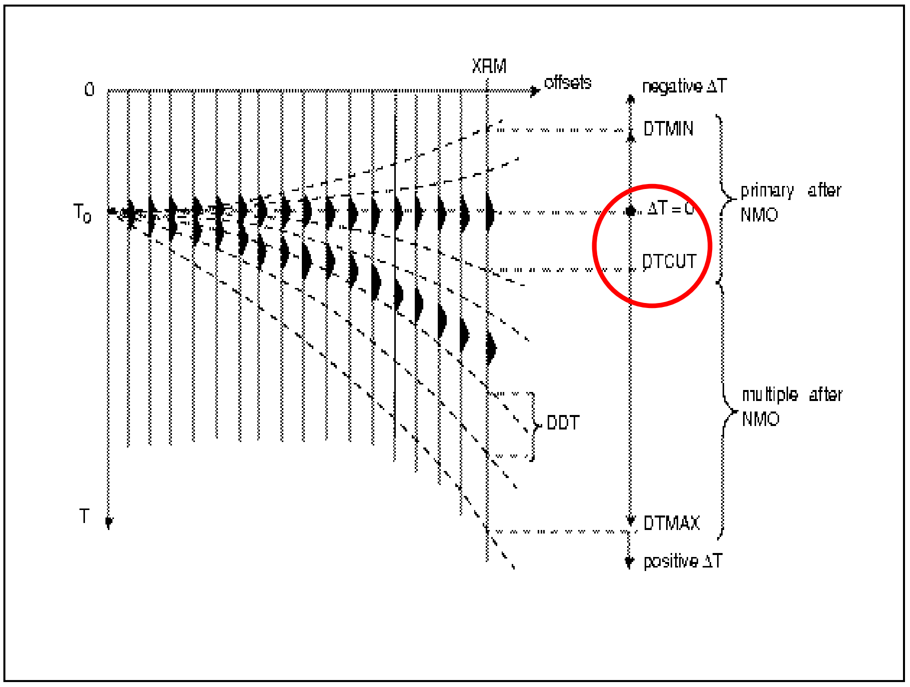
Tau-P Transform
-Record Length extended to 12000ms prior to transform
-3400 p traces
-Pmin = -690000 equivalent slowness of 1450m/s
-Pmax = +690000 equivalent slowness of 1450m/s

Second Order Deconvolution
Target Window: 3800 – 5800ms

See slides 44 - 57 of section 6.

High Resolution Radon De-multiple

The accompanying diagram shows the principle parameters tested for HR RADON de-multiple. For the Hi-Resolution RADON the data is transformed into the "Radon" domain along "p" curves at DDT intervals. Data outside DTMAX and DTMIN boundaries will not be transformed into the "Radon" space. The DTCUT parameter defines the primary model. The diagram shows multiple and primary events after NMO correction.



In this process the accuracy of the velocity field to flatten the real event is important. Prior to this process a 1 x 1 km velocity field was manually picked by CGGVeritas and qc'd by ConocoPhillips ensuring we could choose the strongest DTCUT parameter possible at this stage in the processing sequence.

High Resolution Radon De-multiple
-Trace Drop from 6.25 to 12.5m CMP spacing
-DTCUT = 300ms
-DTMIN = -1000ms
-DTMAX = 2000ms

See slides 58 –71 of section 6.

BKG06B-3D Re-gridding and Phase and amplitude Matching

The BKG06B-3D survey was re-gridded to be on the same grid as the Poseidon 3D survey . This was done pre-migration to ensure a good match between the surveys in the 3D regularization and interpolation algorithm.

The survey was also transformed from an AGD84 to a WGS84 datum. The BKG06B-3D dataset was then phase rotated, and the amplitude matched to the Poseidon survey in order to allow a direct comparison of the two.

See slides 72 –76 of section 6.

Pre-Stack Time Migration (PSTM) Velocity Analysis

A full 3D Kirchhoff PSTM was run on a 25 x 250m grid. This was then used as the input to CGGVeritas' automatic bi-spectral picking program, HDPIC. HDPIC generates volumes of (VRMS) velocity and anelliptical (ETA) moveout parameters, which allows us to implement a full anisotropic PSTM migration.

A reference velocity field, along with user defined maximum and minimum values of velocity and anellipticity, are used to define the 3D picking corridor used by HDPIC. In this case the manually picked 1 x 1 km Radon velocity field was used as a reference.

The raw VRMS and ETA fields generated by HDPIC are filtered using geostatistical methods to define a smooth VRMS and ETA field, required for PSTM.

500 x 500m PSTM Velocity Analysis:
-Kirchhoff Pre-Stack time migration 25m x 250m
-Automatic anisotropic velocity analysis @ 25m x 250m using manually picked velocity field as guide
-Geostatistical interpolation and Filtering
-Output Vrms 1 and Eta 1 @ 500mX500m

The complete fields were qc'ed by ConocoPhillips representatives as stand alone products, and applied to a 500 x 500m grid of data in both 3D stack and bin gather form.

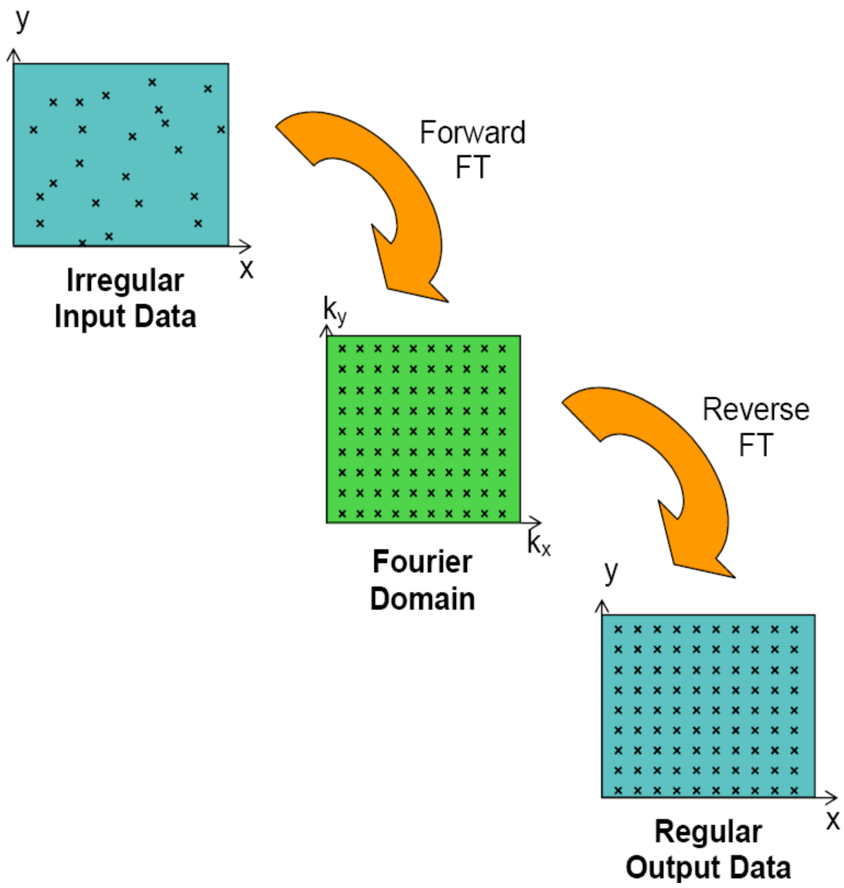
3D Binning And Regularisation

3D seismic data is inconsistent across the volume within three domains:

-Midpoint – the midpoint of seismic traces do not fall exactly on bin centre
-Offset – the offset is not identical for all traces in an offset class
-Azimuth – the azimuth is not consistent across the survey

All three domains affect the timing and amplitude of events and produce non-orthogonal patterns within the data. Kirchhoff migration algorithms can struggle with non-consistent operators produced with inconsistencies within the data, leaving migration smiles. Bin centering in the offset domain can help to reduce migration artifacts, giving a cleaner result.

This process was performed using CGGVeritas' "REG3D" program. This program performs the regularization of data along two directions using Fourier Reconstruction. The input data are transformed using an irregular 2D Fourier decomposition that respects the input data positions. The reverse transform maps the data to a regular grid.



Binning and Regularisation:

-Input grid = 12.5 x 18.75m
-Output grid = 12.5 x 18.75m
-Missing trace restoration
-Bin centring in both the inline and crossline directions

See slides 77 – 93 of section 6.

Random Noise Attenuation

Prior to the final Pre-Stack Time Migration process we decided to carry out a final noise attenuation step on the individual offset cubes. This process was performed on frequency dependent acoustic noise, and also using CGGVeritas' "SPARN" program, which effectively attenuated any random noise remaining within the dataset, particularly in the shallow section.

At this stage we also decided to address the issue of amplitude striping that was present in the dataset. This was a safe process in terms of preserving the AVO integrity of the data set as it was applied on each offset separately. To carry out this process we applied a spatial amplitude balancing in the inline direction, using a design length of 18 traces. This gave us a nice filter which didn't leave a processing footprint in the data set which can sometimes be seen after this process.

Random Noise Attenuation:

-Frequency band of 3 – 125 Hz used to attenuate frequency dependent noise

-Amplitude balancing per offset over 11 traces in the inline direction.

-Removal of $(T/250)^2$ amplitude correction and application of TV^2 correction using the PSTM VRMS field

See slides 94 – 101 of section 6.

Full Kirchhoff Pre-Stack Time Migration

Pre-stack time migration was performed with full Kirchhoff migration using CGGVeritas' TIKIM A+ sequence, which takes into account anisotropy. The Kirchhoff pre-stack time migration treats each output sample as the apex of a diffraction curve. Input samples are summed along the diffraction curve, which is characterized by a locally defined RMS velocity. The reflector image is thus built by constructive interference. Non-hyperbolic move-out behaviour can be taken into account by the use of an effective anisotropy parameter ETA.

The main parameters tested for this process were the aperture length and the imaging dip limit. For the aperture length 3, 4 and 5 km half lengths were compared, with a 4km half aperture was chosen as being suitable for this dataset. Several time variant dip limits were tested before deciding on a relatively small dip aperture in the shallow to avoid migration artifacts and then opening this aperture with increasing time. We also carried out a more accurate velocity dependant spherical divergence correction prior to the PSTM.

Pre-Stack Time Migration:

-Input grid: 12.5 x 18.75m

-Output grid: 12.5 x 18.75m

-Record Length: 7000ms (6000ms BKG06B-3D)

-Half Aperture Length: 4km

-Dip Limit: 60°

See slides 102 – 104 of section 6.

Residual Velocity Analysis On A 12.5 x 18.75m Grid

The primary criteria used for residual velocity analysis testing was gather flatness, and therefore stack response. Before applying HDPIC an offline Radon de-multiple was applied to optimize the automatic bi-spectral picking, using a stronger cut of 240ms. The HDPIC parameters chosen for the RMO analysis used narrower picking corridor parameters for both the VRMS and ETA than those applied for the PSTM velocity analysis. This allowed us to use a much smaller filter to remove any erroneous picks and therefore maintain the higher accuracy of the automatic picking process on this dense grid.

Residual Move-Out Correction:

-Offline Radon de-multiple applied, with DTCUT 240ms (180 ms for BKG06B-3D)
-Removal of any erroneous picks and a small smoothing operator
-VRMS and ETA fields output on a 12.5 x 18.75m grid

See slides 105 – 109 of section 6.

Residual Radon De-multiple

A time variant DTCUT was used for the second pass of RADON de-multiple it was anticipated that the improvement in the velocity field through automated dense velocity analysis would enable a tight cut-off to be implemented.

It was shown that a second pass of RADON de-multiple at this stage, after the application of the final RNMO VRMS and ETA fields, was effective in differentiating between primary and multiple energy; by discriminating on the basis of move-out, particularly on the CMP gathers.

Residual Radon De-multiple:

-DTMIN-1000ms, DTMAX2000, DTCUT160ms, DDT 20ms, start time 1.9 * water-bottom with 300ms taper
-DTMIN-1000ms, DTMAX2000ms, DTCUT100ms, DDT 20ms, start time 2.6 seconds with a 400 ms taper

See slides 110 – 116 of section 6.

Final Angle Mute For Stacking

Based on the CMP gather displays it was agreed that flat and consistent data was available to 42 degrees of incidence for the full stack volume. The inner trace angle mute was tested to try to preserve as much of these near traces as possible, while ensuring the quality of the stack was not compromised.

True angles were calculated using the smooth PSTM velocity field and used in the muting of the gathers before stack.

Final Angle Mutes:
-Full Stack = 6 – 42°
-Near Stack = 6-18°
-Mid Stack = 18-30°
-Far Stack = 30-42°

See slides 117 – 125 of section 6.

Post Stack Processing

We found that small amounts of noise were left in the data set after stacking. In order to attenuate this noise we applied a frequency dependent noise filter, followed by CGGVeritas' "SPARN" program in the crossline direction.

Post Stack Processing:
-Frequency dependent noise attenuation in the inline domain
-2D random noise attenuation in the crossline domain
-Exponential Gain of 3dB / sec

See slides 126 –136 of section 6.

AVO Attribute Data

The following AVO attribute data stacks were produced for the Poseidon 3D data set. They were produced using an input data angle range of 1 - 42°. The fitting algorithm used was the Andrew's robust statistic fitting algorithm.

AVO Attributes:
-Intercept
-Gradient
-Product
-Fluid Factor
-Lambda-Rho

See slides 137 – 142 of section 6.

5. Conclusions & Further Work

Stringent quality control on the part of CGGVeritas was performed at each processing step to ensure the quality of the data was improved as the processing progressed. Quality control involved the review at each processing step of SP / CMP gathers, inline / crossline stacks, amplitude maps, timeslices and statistical graphs where necessary.

The processing sequence incorporating many of CGGVeritas' latest modules was applied and the objective of producing a good quality, high resolution product has been achieved. The generation of correct and detailed velocity fields was a key element to the success of producing a high quality result.

6. Data Examples Throughout The Processing Sequence

Final Report Slides-POSEIDON3D.ppt

7. Appendices

7.1. List Of Lines Processed

Poseidon 3D

Sail Line	Sequence Number	First SP	Last SP
P09A3630P01S002	002	1179	3226
P09A3230P01S003	003	1004	3662
P09A3610P01S004	004	1163	3240
P09A3210P01S005	005	1001	3676
P09A2790P01S006	006	904	3806
P09A2450P01S007	007	1117	4201
P09A2770P01S008	008	907	3820
P09A2430P01S009	009	1120	3129
P09A2430P02S010	010	2970	4215
P09A2750P01S011	011	911	3833
P09A2410P01S012	012	1123	4229
P09A2730P01S013	013	914	3848
P09A2390P01S014	014	1126	4243
P09A2710P01S015	015	917	3862
P09A2370P01S016	016	1129	4256
P09A2690P01S017	017	920	3875
P09A2350P01S018	018	1132	4270
P09A2690W01S019	019	920	3875
P09A2330P01S020	020	1135	4284
P09A2670P01S021	021	923	3889
P09A2330W02S022	022	1135	4284
P09A2650P01S023	023	926	3903
P09A2310P01S024	024	1138	4298
P09A2630P02S026	026	929	3917
P09A2290P01S027	027	1141	4312
P09A2630W03S028	028	929	3917
P09A2270P01S029	029	1144	4326
P09A2610P01S030	030	932	3931
P09A2250P01S031	031	1147	4339
P09A2590P01S032	032	935	3944
P09A2250W02S033	033	1147	4339
P09A2570P01S034	034	2306	3958
P09A2230P01S037	037	1150	4353
P09A2610C02S038	038	3405	3931
P09A2570P04S039	039	938	2465
P09A2210P01S040	040	1153	4367
P09A2550P01S041	041	3584	3972
P09A2310C02S042	042	3350	3810
P09A2550P02S043	043	941	3744
P09A2190P01S044	044	1157	4381
P09A2530P01S045	045	944	3986
P09A2270F02S048	048	1260	2565
P09A2310C03S050	050	3350	3810
P09A2530W03S051	051	944	3986
P09A2190W03S052	052	1157	4381

P09A2510P01S053	053	947	4000
P09A2170P01S054	054	1160	4395
P09A2490P01S055	055	950	4014
P09A2250F03S056	056	1480	3100
P09A2550F03S057	057	1150	2666
P09A2390F02S058	058	1700	3525
P09A2470P01S059	059	954	4027
P09A2610F03S060	060	1130	2185
P09A2150P01S061	061	2110	4408
P09A2470W02S062	062	954	4027
P09A2150F02S063	063	1163	4408
P09A2470W03S064	064	954	4027
P09A2150F03S065	065	1163	2640
P09A2690C03S066	066	1810	2210
P09A2430F03S067	067	1800	4215
P09A2750C02S068	068	2961	3335
P09A2470W04S069	069	954	2050
P09A2130P01S070	070	1166	3355
P09A2530F04S071	071	2446	3380
P09A2470F05S072	072	954	1760
P09A2110D01S073	073	1169	3391
P09A2470F06S074	074	954	2550
P09A2090D01S075	075	1172	3240
P09A2470F07S076	076	954	1740
P09A2090G02S077	077	1172	3400
P09A2630F04S078	078	2450	2930
P09A2070D01S080	080	1175	3155
P09A2150F05S081	081	2481	3435
P09A2130F02S082	082	2620	3505
P09A2050D01S083	083	1178	3270
P09A2030D01S084	084	1181	3370
P09A2030G02S085	085	1181	3210
P09A2010D01S086	086	1184	3080
P09A1990D01S087	087	1187	3090
P09A1990G02S088	088	1187	3080
P09A1970D01S089	089	1190	3115
P09A1950D01S090	090	1193	3091
P09A1930D01S091	091	1196	1713
P09A1930D02S092	092	1553	2975
P09A1910D01S093	093	1199	3210
P09A1770D01S094	094	1221	3100
P09A1790D01S095	095	1218	3100
P09A1810D01S096	096	1215	3090
P09A1010P01S097	097	1178	3561
P09A1830D01S098	098	1212	3090
P09A1030P01S099	099	1175	3578
P09A1830G02S100	100	1212	2840
P09A1850D01S101	101	1209	3100
P09A1870D01S102	102	1206	3070
P09A1890D01S103	103	1203	3100
P09A1890G02S104	104	1203	3100
P09A1890G03S105	105	1203	3100
P09A1890G04S106	106	1325	3100
P09A1910G02S107	107	2080	3100

P09A2130F03S108	108	3345	3980
P09A1350P01S109	109	1125	3846
P09A1870G02S110	110	1206	2215
P09A1750P01S111	111	1224	4342
P09A1370P01S112	112	1122	3863
P09A1970Z02S113	113	1585	4361
P09A1390P01S114	114	1119	3880
P09A1730P01S115	115	1227	4325
P09A1330P01S116	116	2220	3830
P09A1710P01S117	117	1230	4309
P09A1310P01S118	118	1132	3813
P09A1710W02S119	119	1230	4309
P09A1290P01120	120	1135	3796
P09A1690P01121	121	1233	4292
P09A1270P01122	122	1138	3779
P09A1710F03123	123	1928	2813
P09A1330P02124	124	1129	2379
P09A1670P01125	125	1236	4275
P09A1250P01126	126	1141	3763
P09A1650P01127	127	1239	4258
P09A1230P01128	128	1144	3746
P09A1850G02129	129	1255	1791
P09A1870G03130	130	2028	2509
P09A1830G03131	131	1599	2254
P09A1650W02132	132	1239	4258
P09A1230W02133	133	1144	3746
P09A1630P01134	134	1242	4241
P09A1210P01135	135	1147	3729
P09A1610P01136	136	1246	4185
P09A1190R02138	138	1150	3712
P09A1610W02139	139	1467	4225
P09A1170P01140	140	1153	3695
P09A1590P01141	141	1249	4208
P09A1150P01142	142	1156	3679
P09A1570P01143	143	1252	4191
P09A1410P01144	144	2220	3897
P09A1550P01145	145	1255	4174
P09A1150W02146	146	1156	3679
P09A1550W02147	147	1255	1826
P09A1550W03148	148	1667	4174
P09A1130P01149	149	1159	3662
P09A1530P01150	150	1258	4157
P09A1130W02151	151	1159	3662
P09A1510P01152	152	1261	4141
P09A1110P01153	153	1162	3645
P09A1510W02154	154	1261	4141
P09A1090P01155	155	1165	3628
P09A1490P01156	156	1264	4124
P09A1090W02157	157	1165	3628
P09A1550W04158	158	1667	2417
P09A1490P02159	159	3041	4124
P09A1570F02161	161	3400	4191
P09A1230C04162	162	3372	3746
P09A1270F02163	163	2377	2771

P09A1310C02164	164	1188	1582
P09A1610W02165	165	1246	1850
P09A1410P02166	166	1116	2379
P09A1470P01167	167	1267	4107
P09A1070P01168	168	1683	3612
P09A1070P02169	169	1168	1842
P09A1450P01170	170	1270	4090
P09A1050P01171	171	1172	3595
P09A1430P01172	172	1273	4074
P09A1050W02173	173	1172	3595
P09A1430W02174	174	1273	1922
P09A1050F03175	175	1172	2350
P09A1430W03176	176	1273	4074
P09A1050W04177	177	1172	3595
P09A1430W04178	178	1762	4074
P09A1190C03179	179	2700	3380
P09A1430F05180	180	2190	4074
P09A1050F05181	181	1172	3137
P09A1610R04182	182	1246	1627
P09A1050F06183	183	1172	1780
P09A3190P01184	184	1003	3690
P09A3590P01185	185	1146	3253
P09A4050P01186	186	1692	3096
P09A3650P01187	187	1196	3212
P09A4070P01188	188	1709	3082
P09A3670P01189	189	1213	3198
P09A4090P01190	190	1725	3068
P09A3690P01191	191	1230	3184
P09A4110P01192	192	1742	3054
P09A3690W02193	193	1230	3182
P09A4110W02194	194	1742	3054
P09A3710P01195	195	1246	3171
P09A4130P01196	196	1759	3040
P09A3730P01197	197	1263	3157
P09A4150P01198	198	1776	3027
P09A3730W02199	199	1263	3157
P09A4170P01200	200	1792	3013
P09A3750P01201	201	1280	3143
P09A4190P01202	202	1809	4260
P09A3770P01203	203	1297	4100
P09A4190W02204	204	1809	2999
P09A3790P01205	205	1314	3115
P09A4210P01206	206	1826	2985
P09A3810P01207	207	1330	3101
P09A4230P01208	208	1843	2971
P09A3810W01209	209	2588	3101
P09A4190C03210	210	2230	2815
P09A3810W03211	211	1330	2747
P09A4230W02212	212	1843	2971
P09A3830P01213	213	1347	3088
P09A4250P01214	214	1860	2957
P09A3850P01215	215	1880	3074
P09A3850P02216	216	1364	2039
P09A4270P01217	217	1876	2944

P09A3870P01218	218	1381	3060
P09A4290P01219	219	1893	2930
P09A3890P01220	220	1397	3046
P09A4310P01221	221	1910	2916
P09A3910P01222	222	1414	3032
P09A4330P01223	223	1927	2902
P09A3930P01224	224	1431	3019
P09A4350P01225	225	1943	2888
P09A3950P01226	226	1448	3005
P09A4370P01227	227	1960	2875
P09A3970P01228	228	1465	2991
P09A3990P01230	230	1481	2977
P09A4390P02231	231	1977	2861
P09A3990W02232	232	1481	2977
P09A4410P01233	233	1994	2847
P09A4010P01S234	234	1498	2963
P09A4430P01235	235	2011	2833
P09A4010F02236	236	2225	2963
P09A4110F03237	237	2050	2450
P09A3810Z04238	238	2587	3101
P09A3170P01239	239	1006	3702
P09A3570P01240	240	1129	3267
P09A3150P01241	241	1009	3717
P09A3550P01242	242	1112	3281
P09A3130P01243	243	1203	4260
P09A3530P01244	244	1095	4100
P09A3130W02245	245	1012	3731
P09A3530W02246	246	1095	3295
P09A3110P01247	247	1015	3745
P09A3510P01248	248	1079	3309
P09A3090P02250	250	1018	3759
P09A3510W02251	251	1079	3309
P09A3090W03252	252	1018	3759
P09A3490P01253	253	1666	3323
P09A3490P02254	254	1062	1825
P09A3070P01255	255	1021	3773
P09A3470P01256	256	1045	3336
P09A3050P01257	257	1024	3787
P09A3450P01258	258	1028	3350
P09A3030P01259	259	1028	3800
P09A3450W02260	260	1028	3350
P09A3030W02261	261	1028	3800
P09A3430P01262	262	1012	3364
P09A3010P01263	263	1031	3814
P09A3410P01264	264	2621	3378
P09A3410P02265	265	995	2780
P09A2990P01266	266	1034	1592
P09A2990P02267	267	1435	3828
P09A3390P01268	268	978	3392
P09A2990W03269	269	1034	3828
P09A3370P01270	270	2529	3405
P09A3370P02271	271	961	2688
P09A2970P01272	272	1037	3842
P09A3370W03273	273	961	3405

P09A2950P01274	274	1040	3856
P09A3350P01275	275	944	3419
P09A2950W02276	276	1040	3856
P09A1770D02277	277	3450	4199
P09A1790D02278	278	3434	4216
P09A1770G03279	279	3515	4199
P09A1750D02280	280	3565	4182
P09A1750G03281	281	3589	4182
P09A1810D02282	282	3650	4232
P09A1830G04283	283	3694	4249
P09A1830G05284	284	3700	4249
P09A1850D03285	285	3650	4266
P09A1870D04286	286	3715	4283
P09A1890D05287	287	3715	4300
P09A1910D03288	288	3715	4316
P09A1930D03289	289	3715	4333
P09A1950D02290	290	3715	4350
P09A1950G03291	291	3713	4350
P09A1970D03292	292	3715	4362
P09A1990D03293	293	3715	4359
P09A2010D02294	294	3715	4345
P09A2030D03295	295	3715	4331
P09A2030G04296	296	3180	4331
P09A2150F06297	297	3170	4408
P09A2050D02298	298	3425	4318
P09A2070D02299	299	3508	4304
P09A2090D03300	300	3519	4290
P09A2110D02301	301	3715	4276
P09A2130D04302	302	3715	4262
P09A2130G05303	303	3693	4262
P09A1910G04304	304	2480	3000
P09A1890G07306	306	2480	3015
P09A9390X01307	307	841	2068
P09A9210X01308	308	1001	2230
P09A9370X01309	309	841	2068
P09A9210Y03311	311	1001	2230
P09A9350X01312	312	841	2068
P09A9190X01313	313	1001	2230
P09A9330X01314	314	841	2069
P09A9170X01315	315	1001	2230
P09A9310X01316	316	841	2069
P09A9170Y02317	317	1001	1530
P09A3350W02318	318	944	3419
P09A3130P03319	319	1012	1400
P09A3250P01320	320	1020	3648
P09A3330P01321	321	928	3433
P09A3250W02322	322	1020	3648
P09A3330W02323	323	1222	3433
P09A3130C04324	324	1012	1400
P09A3330W03325	325	928	1381
P09A3270P01326	326	1037	3635
P09A3310P01327	327	911	3447
P09A3270W02328	328	1037	3635
P09A3290P01329	329	894	3461

P09A2930P01330	330	1043	3870
P09A3290W02331	331	894	3461
P09A2910P01332	332	1046	3883
P09A2790W02333	333	904	3806
P09A2910W02334	334	1046	3883
P09A2810P01335	335	901	3792
P09A2890P01336	336	1049	3897
P09A2830P01337	337	898	3779
P09A2870P01338	338	1052	3911
P09A2850P01339	339	2976	3765
P09A2850P02340	340	895	3135
P09A3270F03341	341	1200	2642
P09A2810F02342	342	1901	2667
P09A3270F04343	343	1335	2685
P09A2850F03344	344	895	2721
P09A2870F02345	345	1052	3810
P09A2850F04346	346	895	3510
P09A3270F05347	347	1420	2735
P09A3290F03348	348	1580	2350
P09A2870F03349	349	1951	3225
P09A9310Y02350	350	841	2069
P09A9170Y03351	351	1001	2230
P09A9290X01352	352	841	2069
P09A9150X01353	353	1001	2230
P09A9270X01354	354	841	2069
P09A9130X01355	355	1001	2230
P09A9250X01356	356	841	2069
P09A9110X01357	357	1001	2230
P09A9230X01358	358	841	2069
P09A9090X01359	359	1001	2230
P09A9230Y02360	360	841	2069
P09A9070X01361	361	1001	2229
P09A9230Y03362	362	841	2069
P09A9070Y02363	363	1001	2229
P09A9230Y04364	364	841	2069
P09A9070Y03365	365	1001	2229
P09A9410X01366	366	841	2068
P09A9070Y04367	367	1001	2229
P09A9230Y05368	368	841	2069
P09A9050X01369	369	1001	2229
P09A1812T01370	370	1001	6391

BKG06B-3D

Sail Line	Sequence Number	First SP	Last SP
2520P1-01	001	1809	2532
2248P1-02	002	1232	2644
2504P1-03	003	1783	2550
2232P1-04	004	1206	2643
2488P1-05	005	1758	2568
2216P1-06	006	1181	2643
2472P1-07	007	1733	2586

2200P1-08	008	1156	2642
2456P1-09	009	1708	2604
2184P1-10	010	1131	2642
2456F1-11	011	1708	2604
2168P1-12	012	1106	2642
2440P1-13	013	1682	2622
2168F1-14	014	2021	2642
2424P1-15	015	1657	2362
2168F2-16	016	1106	2030
2408P1-17	017	1632	2658
2152P1-18	018	1080	2641
2392P1-19	019	1607	2676
2136P1-20	020	1055	2641
2376P1-21	021	1582	2694
2120P1-22	022	1030	2640
2376F1-23	023	1582	2694
2104P1-24	024	1005	2640
2360P1-25	025	1556	2712
2088P1-26	026	979	2640
2344P1-27	027	1531	2730
2072P1-28	028	954	2639
2328P1-29	029	1506	2748
2056P1-30	030	929	2639
2312P1-31	031	1481	2766
2056F1-32	032	929	2639
2312F1-33	033	1481	2766
2424P2-34	034	2353	2640
2040P1-35	035	904	2639
2296P1-36	036	1455	2784
2024P1-37	037	879	2638
2280P1-38	038	1430	2792
2008P1-39	039	853	2638
2264P1-40	040	1405	2792
2008F1-41	041	853	2638
2344P2-42	042	2157	2258
2344P3-43	043	2157	2258
2424F1-44	044	2330	2615
2008F2-45	045	853	2638
2264F1-46	046	1405	1729
2264F2-47	047	1405	2792
2008F3-48	048	853	2350
2504F1-49	049	1873	2445
2072F1-50	050	1880	2639
2264F3-51	051	1870	2666
2008F4-52	052	1912	2323
2008F5-53	053	1470	1911

7.2. Processing Grid Details

7.2.1. Poseidon 3D Processing Grid

First line number : Last line number :	IN LINE (18.75m) **983** **5620**	CROSS LINE (6.25m) **159** **11562**
Grid origin : (centre of BIN)	IN LINE : BIN 0 Y0 **8429426.296**	CROSS LINE : BIN 0 X0 **409111.308**
Azimuth Along X-Axis: Azimuth Along Y-Axis:	**2.443460953** radians **0.87266463** radians	
DATUM: PROJECTION: ZONE:	**WGS84** **002 UTM** **51S**	

Corner Points for Poseidon 3D

Inline	**Crossline**	**X**	**Y**
983	504	416132.61	8447595.01
4419	504	457544.20	8496947.43
983	5556	367756.90	8488187.05
4419	5556	409168.49	8537539.47

7.2.2. Poseidon 3D Processing Polygon

The WGS84, UTM51 S coordinates for the processing polygon are:

411588.020, 8451824.474

383538.109, 8463122.952

391083.399, 8493506.281

403135.667, 8507869.614

457210.194, 8525155.248

451963.117, 8499941.641

411588.020, 8451824.474

7.3. Processing Personnel

For CGGVeritas :

Nigel Mudge – Production Manager

Imam Sarjono – Processing Team Leader, Senior Geophysicist

Mathieu Lange – Project leader, Geophysicist

Subodh Notiyal – Project leader, Geophysicist

Amanda Nicholls – Geophysicist

Shane Richardson – Geophysicist

Himani Dixit - Geophysicist

For ConocoPhillips:

Pat Jonklaas – Senior Geoscientist

Robert Bril – Processing Specialist

Dave Lane – Geophysical Advisor

7.4. Final Processing Deliverables

7.4.1 CMP De-multiple Gathers

The following table lists the 3592 tapes that were delivered to ConocoPhillips containing the 2D CMP de-multiple gathers, in SEGY format.

Poseidon 3D

Tape Number	Sequence Number	Sail Line	First SP	Last SP
701248	001	P09A4030P01S001	1675	3109
701248	002	P09A3630P01S002	1179	3226
701248	003	P09A3230P01S003	1004	3662
701248	004	P09A3610P01S004	1163	3240
701248	005	P09A3210P01S005	1001	3676
701248	006	P09A2790P01S006	904	3806
701248	007	P09A2450P01S007	1117	4201
701248	008	P09A2770P01S008	907	3820
701248	009	P09A2430P01S009	1120	3129
701248	010	P09A2430P02S010	2970	4215
701249	011	P09A2750P01S011	911	3833
701249	012	P09A2410P01S012	1123	4229
701249	013	P09A2730P01S013	914	3848

701249	014	P09A2390P01S014	1126	4243
701249	015	P09A2710P01S015	917	3862
701249	016	P09A2370P01S016	1129	4256
701249	017	P09A2690P01S017	920	3875
701249	018	P09A2350P01S018	1132	4270
701250	019	P09A2690W01S019	920	3875
701250	020	P09A2330P01S020	1135	4284
701250	021	P09A2670P01S021	923	3889
701250	022	P09A2330W02S022	1135	4284
701250	023	P09A2650P01S023	926	3903
701250	024	P09A2310P01S024	1138	4298
701250	026	P09A2630P02S026	929	3917
701250	027	P09A2290P01S027	1141	4312
701251	028	P09A2630W03S028	929	3917
701251	029	P09A2270P01S029	1144	4326
701251	030	P09A2610P01S030	932	3931
701251	031	P09A2250P01S031	1147	4339
701251	032	P09A2590P01S032	935	3944
701251	033	P09A2250W02S033	1147	4339
701251	034	P09A2570P01S034	2306	3958
701251	037	P09A2230P01S037	1150	4353
701251	038	P09A2610C02S038	3405	3931
701251	039	P09A2570P04S039	938	2465
701252	040	P09A2210P01S040	1153	4367
701252	041	P09A2550P01S041	3584	3972
701252	042	P09A2310C02S042	3350	3810
701252	043	P09A2550P02S043	941	3744
701252	044	P09A2190P01S044	1157	4381
701252	045	P09A2530P01S045	944	3986
701252	048	P09A2270F02S048	1260	2565
701252	050	P09A2310C03S050	3350	3810
701252	051	P09A2530W03S051	944	3986
701252	052	P09A2190W03S052	1157	4381
701252	053	P09A2510P01S053	947	4000
701253	054	P09A2170P01S054	1160	4395
701253	055	P09A2490P01S055	950	4014
701253	056	P09A2250F03S056	1480	3100
701253	057	P09A2550F03S057	1150	2666
701253	058	P09A2390F02S058	1700	3525
701253	059	P09A2470P01S059	954	4027
701253	060	P09A2610F03S060	1130	2185
701253	061	P09A2150P01S061	2110	4408
701253	062	P09A2470W02S062	954	4027
701253	063	P09A2150F02S063	1163	4408
701254	064	P09A2470W03S064	954	4027
701254	065	P09A2150F03S065	1163	2640
701254	066	P09A2690C03S066	1810	2210
701254	067	P09A2430F03S067	1800	4215
701254	068	P09A2750C02S068	2961	3335
701254	069	P09A2470W04S069	954	2050
701254	070	P09A2130P01S070	1166	3355
701254	071	P09A2530F04S071	2446	3380
701254	072	P09A2470F05S072	954	1760
701254	073	P09A2110D01S073	1169	3391

701254	074	P09A2470F06S074	954	2550
701254	075	P09A2090D01S075	1172	3240
701254	076	P09A2470F07S076	954	1740
701254	077	P09A2090G02S077	1172	3400
701254	078	P09A2630F04S078	2450	2930
701254	080	P09A2070D01S080	1175	3155
701255	081	P09A2150F05S081	2481	3435
701255	082	P09A2130F02S082	2620	3505
701255	083	P09A2050D01S083	1178	3270
701255	084	P09A2030D01S084	1181	3370
701255	085	P09A2030G02S085	1181	3210
701255	086	P09A2010D01S086	1184	3080
701255	087	P09A1990D01S087	1187	3090
701255	088	P09A1990G02S088	1187	3080
701255	089	P09A1970D01S089	1190	3115
701255	090	P09A1950D01S090	1193	3091
701255	091	P09A1930D01S091	1196	1713
701255	092	P09A1930D02S092	1553	2975
701255	093	P09A1910D01S093	1199	3210
701255	094	P09A1770D01S094	1221	3100
701256	095	P09A1790D01S095	1218	3100
701256	096	P09A1810D01S096	1215	3090
701256	097	P09A1010P01S097	1178	3561
701256	098	P09A1830D01S098	1212	3090
701256	099	P09A1030P01S099	1175	3578
701256	100	P09A1830G02S100	1212	2840
701256	101	P09A1850D01S101	1209	3100
701256	102	P09A1870D01S102	1206	3070
701256	103	P09A1890D01S103	1203	3100
701256	104	P09A1890G02S104	1203	3100
701256	105	P09A1890G03S105	1203	3100
701256	106	P09A1890G04S106	1325	3100
701256	107	P09A1910G02S107	2080	3100
701257	108	P09A2130F03S108	3345	3980
701257	109	P09A1350P01S109	1125	3846
701257	110	P09A1870G02S110	1206	2215
701257	111	P09A1750P01S111	1224	4342
701257	112	P09A1370P01S112	1122	3863
701257	113	P09A1970Z02S113	1585	4361
701257	114	P09A1390P01S114	1119	3880
701257	115	P09A1730P01S115	1227	4325
701257	116	P09A1330P01S116	2220	3830
701257	117	P09A1710P01S117	1230	4309
701258	118	P09A1310P01S118	1132	3813
701258	119	P09A1710W02S119	1230	4309
701258	120	P09A1290P01120	1135	3796
701258	121	P09A1690P01121	1233	4292
701258	122	P09A1270P01122	1138	3779
701258	123	P09A1710F03123	1928	2813
701258	124	P09A1330P02124	1129	2379
701258	125	P09A1670P01125	1236	4275
701258	126	P09A1250P01126	1141	3763
701258	127	P09A1650P01127	1239	4258
701259	128	P09A1230P01128	1144	3746

701259	129	P09A1850G02129	1255	1791
701259	130	P09A1870G03130	2028	2509
701259	131	P09A1830G03131	1599	2254
701259	132	P09A1650W02132	1239	4258
701259	133	P09A1230W02133	1144	3746
701259	134	P09A1630P01134	1242	4241
701259	135	P09A1210P01135	1147	3729
701259	136	P09A1610P01136	1246	4185
701259	138	P09A1190R02138	1150	3712
701259	139	P09A1610W02139	1467	4225
701260	140	P09A1170P01140	1153	3695
701260	141	P09A1590P01141	1249	4208
701260	142	P09A1150P01142	1156	3679
701260	143	P09A1570P01143	1252	4191
701260	144	P09A1410P01144	2220	3897
701260	145	P09A1550P01145	1255	4174
701260	146	P09A1150W02146	1156	3679
701260	147	P09A1550W02147	1255	1826
701260	148	P09A1550W03148	1667	4174
701260	149	P09A1130P01149	1159	3662
701261	150	P09A1530P01150	1258	4157
701261	151	P09A1130W02151	1159	3662
701261	152	P09A1510P01152	1261	4141
701261	153	P09A1110P01153	1162	3645
701261	154	P09A1510W02154	1261	4141
701261	155	P09A1090P01155	1165	3628
701261	156	P09A1490P01156	1264	4124
701261	157	P09A1090W02157	1165	3628
701261	158	P09A1550W04158	1667	2417
701261	159	P09A1490P02159	3041	4124
701261	161	P09A1570F02161	3400	4191
701261	162	P09A1230C04162	3372	3746
701262	163	P09A1270F02163	2377	2771
701262	164	P09A1310C02164	1188	1582
701262	165	P09A1610W02165	1246	1850
701262	166	P09A1410P02166	1116	2379
701262	167	P09A1470P01167	1267	4107
701262	168	P09A1070P01168	1683	3612
701262	169	P09A1070P02169	1168	1842
701262	170	P09A1450P01170	1270	4090
701262	171	P09A1050P01171	1172	3595
701262	172	P09A1430P01172	1273	4074
701262	173	P09A1050W02173	1172	3595
701262	174	P09A1430W02174	1273	1922
701262	175	P09A1050F03175	1172	2350
701262	176	P09A1430W03176	1273	4074
701263	177	P09A1050W04177	1172	3595
701263	178	P09A1430W04178	1762	4074
701263	179	P09A1190C03179	2700	3380
701263	180	P09A1430F05180	2190	4074
701263	181	P09A1050F05181	1172	3137
701263	182	P09A1610R04182	1246	1627
701263	183	P09A1050F06183	1172	1780
701263	184	P09A3190P01184	1003	3690

701263	185	P09A3590P01185	1146	3253
701263	186	P09A4050P01186	1692	3096
701263	187	P09A3650P01187	1196	3212
701263	188	P09A4070P01188	1709	3082
701263	189	P09A3670P01189	1213	3198
701263	190	P09A4090P01190	1725	3068
701264	191	P09A3690P01191	1230	3184
701264	192	P09A4110P01192	1742	3054
701264	193	P09A3690W02193	1230	3182
701264	194	P09A4110W02194	1742	3054
701264	195	P09A3710P01195	1246	3171
701264	196	P09A4130P01196	1759	3040
701264	197	P09A3730P01197	1263	3157
701264	198	P09A4150P01198	1776	3027
701264	199	P09A3730W02199	1263	3157
701264	200	P09A4170P01200	1792	3013
701264	201	P09A3750P01201	1280	3143
701264	202	P09A4190P01202	1809	4260
701264	203	P09A3770P01203	1297	4100
701264	204	P09A4190W02204	1809	2999
701265	205	P09A3790P01205	1314	3115
701265	206	P09A4210P01206	1826	2985
701265	207	P09A3810P01207	1330	3101
701265	208	P09A4230P01208	1843	2971
701265	209	P09A3810W01209	2588	3101
701265	210	P09A4190C03210	2230	2815
701265	211	P09A3810W03211	1330	2747
701265	212	P09A4230W02212	1843	2971
701265	213	P09A3830P01213	1347	3088
701265	214	P09A4250P01214	1860	2957
701265	215	P09A3850P01215	1880	3074
701265	216	P09A3850P02216	1364	2039
701265	217	P09A4270P01217	1876	2944
701265	218	P09A3870P01218	1381	3060
701265	219	P09A4290P01219	1893	2930
701265	220	P09A3890P01220	1397	3046
701265	221	P09A4310P01221	1910	2916
701265	222	P09A3910P01222	1414	3032
701265	223	P09A4330P01223	1927	2902
701266	224	P09A3930P01224	1431	3019
701266	225	P09A4350P01225	1943	2888
701266	226	P09A3950P01226	1448	3005
701266	227	P09A4370P01227	1960	2875
701266	228	P09A3970P01228	1465	2991
701266	230	P09A3990P01230	1481	2977
701266	231	P09A4390P02231	1977	2861
701266	232	P09A3990W02232	1481	2977
701266	233	P09A4410P01233	1994	2847
701266	234	P09A4010P01S234	1498	2963
701266	235	P09A4430P01235	2011	2833
701266	236	P09A4010F02236	2225	2963
701266	237	P09A4110F03237	2050	2450
701266	238	P09A3810Z04238	2587	3101
701266	239	P09A3170P01239	1006	3702

701266	240	P09A3570P01240	1129	3267
701266	241	P09A3150P01241	1009	3717
701267	242	P09A3550P01242	1112	3281
701267	243	P09A3130P01243	1203	4260
701267	244	P09A3530P01244	1095	4100
701267	245	P09A3130W02245	1012	3731
701267	246	P09A3530W02246	1095	3295
701267	247	P09A3110P01247	1015	3745
701267	248	P09A3510P01248	1079	3309
701267	250	P09A3090P02250	1018	3759
701267	251	P09A3510W02251	1079	3309
701268	252	P09A3090W03252	1018	3759
701268	253	P09A3490P01253	1666	3323
701268	254	P09A3490P02254	1062	1825
701268	255	P09A3070P01255	1021	3773
701268	256	P09A3470P01256	1045	3336
701268	257	P09A3050P01257	1024	3787
701268	258	P09A3450P01258	1028	3350
701268	259	P09A3030P01259	1028	3800
701268	260	P09A3450W02260	1028	3350
701268	261	P09A3030W02261	1028	3800
701269	262	P09A3430P01262	1012	3364
701269	263	P09A3010P01263	1031	3814
701269	264	P09A3410P01264	2621	3378
701269	265	P09A3410P02265	995	2780
701269	266	P09A2990P01266	1034	1592
701269	267	P09A2990P02267	1435	3828
701269	268	P09A3390P01268	978	3392
701269	269	P09A2990W03269	1034	3828
701269	270	P09A3370P01270	2529	3405
701269	271	P09A3370P02271	961	2688
701269	272	P09A2970P01272	1037	3842
701269	273	P09A3370W03273	961	3405
701270	274	P09A2950P01274	1040	3856
701270	275	P09A3350P01275	944	3419
701270	276	P09A2950W02276	1040	3856
701270	277	P09A1770D02277	3450	4199
701270	278	P09A1790D02278	3434	4216
701270	279	P09A1770G03279	3515	4199
701270	280	P09A1750D02280	3565	4182
701270	281	P09A1750G03281	3589	4182
701270	282	P09A1810D02282	3650	4232
701270	283	P09A1830G04283	3694	4249
701270	284	P09A1830G05284	3700	4249
701270	285	P09A1850D03285	3650	4266
701270	286	P09A1870D04286	3715	4283
701270	287	P09A1890D05287	3715	4300
701270	288	P09A1910D03288	3715	4316
701270	289	P09A1930D03289	3715	4333
701270	290	P09A1950D02290	3715	4350
701270	291	P09A1950G03291	3713	4350
701270	292	P09A1970D03292	3715	4362
701270	293	P09A1990D03293	3715	4359
701270	294	P09A2010D02294	3715	4345

701270	295	P09A2030D03295	3715	4331
701270	296	P09A2030G04296	3180	4331
701270	297	P09A2150F06297	3170	4408
701270	298	P09A2050D02298	3425	4318
701270	299	P09A2070D02299	3508	4304
701271	300	P09A2090D03300	3519	4290
701271	301	P09A2110D02301	3715	4276
701271	302	P09A2130D04302	3715	4262
701271	303	P09A2130G05303	3693	4262
701271	304	P09A1910G04304	2480	3000
701271	306	P09A1890G07306	2480	3015
701271	307	P09A9390X01307	841	2068
701271	308	P09A9210X01308	1001	2230
701271	309	P09A9370X01309	841	2068
701271	311	P09A9210Y03311	1001	2230
701271	312	P09A9350X01312	841	2068
701271	313	P09A9190X01313	1001	2230
701271	314	P09A9330X01314	841	2069
701271	315	P09A9170X01315	1001	2230
701271	316	P09A9310X01316	841	2069
701271	317	P09A9170Y02317	1001	1530
701271	318	P09A3350W02318	944	3419
701271	319	P09A3130P03319	1012	1400
701271	320	P09A3250P01320	1020	3648
701271	321	P09A3330P01321	928	3433
701272	322	P09A3250W02322	1020	3648
701272	323	P09A3330W02323	1222	3433
701272	324	P09A3130C04324	1012	1400
701272	325	P09A3330W03325	928	1381
701272	326	P09A3270P01326	1037	3635
701272	327	P09A3310P01327	911	3447
701272	328	P09A3270W02328	1037	3635
701272	329	P09A3290P01329	894	3461
701272	330	P09A2930P01330	1043	3870
701272	331	P09A3290W02331	894	3461
701272	332	P09A2910P01332	1046	3883
701273	333	P09A2790W02333	904	3806
701273	334	P09A2910W02334	1046	3883
701273	335	P09A2810P01335	901	3792
701273	336	P09A2890P01336	1049	3897
701273	337	P09A2830P01337	898	3779
701273	338	P09A2870P01338	1052	3911
701273	339	P09A2850P01339	2976	3765
701273	340	P09A2850P02340	895	3135
701273	341	P09A3270F03341	1200	2642
701273	342	P09A2810F02342	1901	2667
701273	343	P09A3270F04343	1335	2685
701274	344	P09A2850F03344	895	2721
701274	345	P09A2870F02345	1052	3810
701274	346	P09A2850F04346	895	3510
701274	347	P09A3270F05347	1420	2735
701274	348	P09A3290F03348	1580	2350
701274	349	P09A2870F03349	1951	3225
701274	350	P09A9310Y02350	841	2069

701274	351	P09A9170Y03351	1001	2230
701274	352	P09A9290X01352	841	2069
701274	353	P09A9150X01353	1001	2230
701274	354	P09A9270X01354	841	2069
701274	355	P09A9130X01355	1001	2230
701274	356	P09A9250X01356	841	2069
701274	357	P09A9110X01357	1001	2230
701274	358	P09A9230X01358	841	2069
701274	359	P09A9090X01359	1001	2230
701274	360	P09A9230Y02360	841	2069
701275	361	P09A9070X01361	1001	2229
701275	362	P09A9230Y03362	841	2069
701275	363	P09A9070Y02363	1001	2229
701275	364	P09A9230Y04364	841	2069
701275	365	P09A9070Y03365	1001	2229
701275	366	P09A9410X01366	841	2068
701275	367	P09A9070Y04367	1001	2229
701275	368	P09A9230Y05368	841	2069
701275	369	P09A9050X01369	1001	2229

"2D" Extended Lines

Tape Number	Sequence Number	Sail Line	First SP	Last SP
701352	202	P09A4190P01202	2760	4260
701352	203	P09A3770P01203	2900	4100
701352	243	P09A3130P01243	3060	4260
701352	244	P09A3530P01244	3050	4100
701352	370	P09A1812T01370	1001	6391
701355	202	P09A4190P01202	2760	4260
701355	203	P09A3770P01203	2900	4100
701355	243	P09A3130P01243	3060	4260
701355	244	P09A3530P01244	3050	4100
701355	370	P09A1812T01370	1001	6391
701361	202	P09A4190P01202	2760	4260
701361	203	P09A3770P01203	2900	4100
701361	243	P09A3130P01243	3060	4260
701361	244	P09A3530P01244	3050	4100
701361	370	P09A1812T01370	1001	6391
701367	202	P09A4190P01202	2760	4260
701367	203	P09A3770P01203	2900	4100
701367	243	P09A3130P01243	3060	4260
701367	244	P09A3530P01244	3050	4100
701367	370	P09A1812T01370	1001	6391

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Tape Number	Sequence Number	Sail Line	First SP	Last SP
701343	1	2520P1-01	1809	2532
701343	2	2248P1-02	1232	2644
701343	3	2504P1-03	1783	2550
701343	4	2232P1-04	1206	2643

701343	5	2488P1-05	1758	2568
701343	6	2216P1-06	1181	2643
701343	7	2472P1-07	1733	2586
701343	8	2200P1-08	1156	2642
701343	9	2456P1-09	1708	2604
701343	10	2184P1-10	1131	2642
701343	11	2456F1-11	1708	2604
701343	12	2168P1-12	1106	2642
701343	13	2440P1-13	1682	2622
701343	14	2168F1-14	2021	2642
701343	15	2424P1-15	1657	2362
701343	16	2168F2-16	1106	2030
701343	17	2408P1-17	1632	2658
701343	18	2152P1-18	1080	2641
701343	19	2392P1-19	1607	2676
701343	20	2136P1-20	1055	2641
701343	21	2376P1-21	1582	2694
701343	22	2120P1-22	1030	2640
701343	23	2376F1-23	1582	2694
701343	24	2104P1-24	1005	2640
701343	25	2360P1-25	1556	2712
701343	26	2088P1-26	979	2640
701343	27	2344P1-27	1531	2730
701343	28	2072P1-28	954	2639
701343	29	2328P1-29	1506	2748
701344	30	2056P1-30	929	2639
701344	31	2312P1-31	1481	2766
701344	32	2056F1-32	929	2639
701344	33	2312F1-33	1481	2766
701344	34	2424P2-34	2353	2640
701344	35	2040P1-35	904	2639
701344	36	2296P1-36	1455	2784
701344	37	2024P1-37	879	2638
701344	38	2280P1-38	1430	2792
701344	39	2008P1-39	853	2638
701344	40	2264P1-40	1405	2792
701344	41	2008F1-41	853	2638
701344	43	2344P3-43	2157	2258
701344	44	2424F1-44	2330	2615
701344	45	2008F2-45	853	2638
701344	46	2264F1-46	1405	1729
701344	47	2264F2-47	1405	2792
701344	48	2008F3-48	853	2350
701344	49	2504F1-49	1873	2445
701344	50	2072F1-50	1880	2639
701344	51	2264F3-51	1870	2666
701344	52	2008F4-52	1912	2323
701344	53	2008F5-53	1470	1911

7.4.2 Raw 3D PSTM Bin Gathers

The following table lists the 3592 tapes that were delivered to ConocoPhillips containing the raw 3D PSTM bin gathers, in SEGY format.

Poseidon 3D

Tape Number	Inline Range	Data Type
701276	1000 - 1209	Raw 3D CMP gathers
701277	1210 - 1399	Raw 3D CMP gathers
701278	1400 - 1579	Raw 3D CMP gathers
701279	1580 - 1749	Raw 3D CMP gathers
701280	1750 - 1909	Raw 3D CMP gathers
701281	1910 - 2059	Raw 3D CMP gathers
701282	2060 - 2209	Raw 3D CMP gathers
701283	2210 - 2369	Raw 3D CMP gathers
701284	2370 - 2529	Raw 3D CMP gathers
701285	2530 - 2709	Raw 3D CMP gathers
701286	2710 - 2889	Raw 3D CMP gathers
701287	2890 - 3069	Raw 3D CMP gathers
701288	3070 - 3259	Raw 3D CMP gathers
701289	3260 - 3469	Raw 3D CMP gathers
701290	3470 - 3719	Raw 3D CMP gathers
701291	3720 - 4039	Raw 3D CMP gathers
701292	4040 - 4409	Raw 3D CMP gathers

"2D" Extended Lines

Tape Number	Inline Range	Data Type
701353	4155	Raw 3D CMP gathers
701353	3760	Raw 3D CMP gathers
701353	3151	Raw 3D CMP gathers
701353	3536	Raw 3D CMP gathers
701353	"4500"	Raw 3D CMP gathers
701356	4155	Raw 3D CMP gathers
701356	3760	Raw 3D CMP gathers
701356	3151	Raw 3D CMP gathers
701356	3536	Raw 3D CMP gathers
701356	"4500"	Raw 3D CMP gathers
701362	4155	Raw 3D CMP gathers
701362	3760	Raw 3D CMP gathers
701362	3151	Raw 3D CMP gathers
701362	3536	Raw 3D CMP gathers
701362	"4500"	Raw 3D CMP gathers
701368	4155	Raw 3D CMP gathers
701368	3760	Raw 3D CMP gathers
701368	3151	Raw 3D CMP gathers
701368	3536	Raw 3D CMP gathers
701368	"4500"	Raw 3D CMP gathers

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Tape Number	Inline Range	Data Type
701374	2284 - 3100	Raw 3D CMP gathers
701375	3101 - 3650	Raw 3D CMP gathers
701376	3651 - 4195	Raw 3D CMP gathers

7.4.3 Final 3D PSTM Bin Gathers

The following table lists the 3592 tapes that were delivered to ConocoPhillips containing the final 3D PSTM bin gathers, in SEGY format.

POSEIDON 3D

Tape Number	Inline Range	Data Type
701293	1000 - 1209	Final 3D CMP gathers (Full Volume)
701294	1210 - 1399	Final 3D CMP gathers (Full Volume)
701295	1400 - 1579	Final 3D CMP gathers (Full Volume)
701296	1580 - 1749	Final 3D CMP gathers (Full Volume)
701297	1750 - 1909	Final 3D CMP gathers (Full Volume)
701298	1910 - 2059	Final 3D CMP gathers (Full Volume)
701299	2060 - 2209	Final 3D CMP gathers (Full Volume)
701300	2210 - 2369	Final 3D CMP gathers (Full Volume)
701301	2370 - 2529	Final 3D CMP gathers (Full Volume)
701302	2530 - 2699	Final 3D CMP gathers (Full Volume)
701303	2700 - 2879	Final 3D CMP gathers (Full Volume)
701304	2880 - 3059	Final 3D CMP gathers (Full Volume)
701305	3060 - 3249	Final 3D CMP gathers (Full Volume)
701306	3250 - 3459	Final 3D CMP gathers (Full Volume)
701307	3460 - 3699	Final 3D CMP gathers (Full Volume)
701308	3700 - 4019	Final 3D CMP gathers (Full Volume)
701309	4020 - 4409	Final 3D CMP gathers (Full Volume)
701310	1000 - 1209	Final 3D CMP gathers (Full Volume)
701311	1210 - 1399	Final 3D CMP gathers (Full Volume)
701312	1400 - 1579	Final 3D CMP gathers (Full Volume)
701313	1580 - 1749	Final 3D CMP gathers (Full Volume)
701314	1750 - 1909	Final 3D CMP gathers (Full Volume)
701315	1910 - 2059	Final 3D CMP gathers (Full Volume)
701316	2060 - 2209	Final 3D CMP gathers (Full Volume)
701317	2210 - 2369	Final 3D CMP gathers (Full Volume)
701318	2370 - 2529	Final 3D CMP gathers (Full Volume)
701319	2530 - 2699	Final 3D CMP gathers (Full Volume)
701320	2700 - 2879	Final 3D CMP gathers (Full Volume)
701321	2880 - 3059	Final 3D CMP gathers (Full Volume)
701322	3060 - 3249	Final 3D CMP gathers (Full Volume)
701323	3250 - 3459	Final 3D CMP gathers (Full Volume)
701324	3460 - 3699	Final 3D CMP gathers (Full Volume)
701325	3700 - 4019	Final 3D CMP gathers (Full Volume)
701326	4020 - 4409	Final 3D CMP gathers (Full Volume)
701327	1000 - 1209	Final 3D CMP gathers (Woodside Volume)

701328	1210 - 1399	Final 3D CMP gathers (Woodside Volume)
701329	1400 - 1579	Final 3D CMP gathers (Woodside Volume)
701330	1580 - 1728	Final 3D CMP gathers (Woodside Volume)
701331	2841 - 2879	Final 3D CMP gathers (Santos Volume)
701332	2880 - 3059	Final 3D CMP gathers (Santos Volume)
701333	3060 - 3249	Final 3D CMP gathers (Santos Volume)
701334	3250 - 3459	Final 3D CMP gathers (Santos Volume)
701335	3460 - 3699	Final 3D CMP gathers (Santos Volume)
701336	3700 - 4019	Final 3D CMP gathers (Santos Volume)
701337	4020 - 4427	Final 3D CMP gathers (Santos Volume)
701338	2603 - 2699	Final 3D CMP gathers (Coveyork Volume)
701339	2700 - 2879	Final 3D CMP gathers (Coveyork Volume)
701340	2880 - 3059	Final 3D CMP gathers (Coveyork Volume)
701341	3060 - 3215	Final 3D CMP gathers (Coveyork Volume)

“2D” Extended Lines

Tape Number	Inline Range	Data Type
701354	4155	Final 3D CMP gathers
701354	3760	Final 3D CMP gathers
701354	3151	Final 3D CMP gathers
701354	3536	Final 3D CMP gathers
701354	“4500”	Final 3D CMP gathers
701357	4155	Final 3D CMP gathers
701357	3760	Final 3D CMP gathers
701357	3151	Final 3D CMP gathers
701357	3536	Final 3D CMP gathers
701357	“4500”	Final 3D CMP gathers
701363	4155	Final 3D CMP gathers
701363	3760	Final 3D CMP gathers
701363	3151	Final 3D CMP gathers
701363	3536	Final 3D CMP gathers
701363	“4500”	Final 3D CMP gathers
701369	4155	Final 3D CMP gathers
701369	3760	Final 3D CMP gathers
701369	3151	Final 3D CMP gathers
701369	3536	Final 3D CMP gathers
701369	“4500”	Final 3D CMP gathers

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Tape Number	Inline Range	Data Type
701377	2284 - 3160	Final 3D CMP gathers (Full Volume)
701402	3161 - 3800	Final 3D CMP gathers (Full Volume)
701403	3801 - 4195	Final 3D CMP gathers (Full Volume)

7.4.4 Final Stack Products

The following tables list the 3592, and SDLT, tapes that were delivered to ConocoPhillips containing the PSTM stack and AVO attribute data, in SEGY format.

Poseidon 3D

Tape Number	Inline Range	Cross-Line Range	Data Type	Stack Volume
701091	1000 – 4400	500 – 5560	Raw 3D Stack Volume	Full Volume
701094	1000 – 4400	500 – 5560	Raw 3D Stack Volume	Near Stacks
701095	1000 – 4400	500 – 5560	Raw 3D Stack Volume	Mid Stacks
701096	1000 – 4400	500 – 5560	Raw 3D Stack Volume	Far Stacks
701097	1000 – 4400	500 – 5560	Final 3D Stack Volume	Full Volume
701098	1000 – 4400	500 – 5560	Final 3D Stack Volume	Near Stacks
701099	1000 – 4400	500 – 5560	Final 3D Stack Volume	Mid Stacks
701100	1000 – 4400	500 – 5560	Final 3D Stack Volume	Far Stacks
701101	1000 – 4400	500 – 5560	Final 3D Stack with AGC	Full Volume
701102	1000 – 4400	500 – 5560	Final 3D Stack with AGC	Full Volume
701394	1000 – 4400	500 – 5560	Final 3D Stack with AGC	Full Volume
701395	1000 – 4400	500 – 5560	Final 3D Stack with AGC	Full Volume
701396	1000 – 4400	500 – 5560	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701397	1000 – 4400	500 – 5560	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701398	1000 – 4400	500 – 5560	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701399	1000 – 4400	500 – 5560	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701400	1000 – 4400	500 – 5560	RNMO (Stacking) Velocity	Final 3D Velocity
701401	1000 – 4400	500 – 5560	RNMO (Stacking) Anisotropy	Final 3D Anisotropy

"2D" Extended Lines

Tape Number	Inline Range	Cross-Line Range	Data Type	Stack Volume
701350	4155	3262 - 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701350	3760	3671 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701350	3151	4318 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701350	3536	3909 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701350	"4500"	3 - 8323	Raw 2D Stack Volume	Full, Near, Mid, Far
701358	4155	3262 - 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701358	3760	3671 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701358	3151	4318 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701358	3536	3909 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701358	"4500"	3 - 8323	Raw 2D Stack Volume	Full, Near, Mid, Far
701364	4155	3262 - 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701364	3760	3671 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701364	3151	4318 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far

701364	3536	3909 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701364	"4500"	3 - 8323	Raw 2D Stack Volume	Full, Near, Mid, Far
701370	4155	3262 - 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701370	3760	3671 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701370	3151	4318 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701370	3536	3909 – 5600	Raw 2D Stack Volume	Full, Near, Mid, Far
701370	"4500"	3 - 8323	Raw 2D Stack Volume	Full, Near, Mid, Far
701359	4155	3262 - 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701359	3760	3671 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701359	3151	4318 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701359	3536	3909 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701359	"4500"	3 - 8323	Final 2D Stack Volume	Full, Near, Mid, Far
701365	4155	3262 - 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701365	3760	3671 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701365	3151	4318 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701365	3536	3909 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701365	"4500"	3 - 8323	Final 2D Stack Volume	Full, Near, Mid, Far
701371	4155	3262 - 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701371	3760	3671 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701371	3151	4318 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701371	3536	3909 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701371	"4500"	3 - 8323	Final 2D Stack Volume	Full, Near, Mid, Far
701373	4155	3262 - 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701373	3760	3671 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701373	3151	4318 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701373	3536	3909 – 5600	Final 2D Stack Volume	Full, Near, Mid, Far
701373	"4500"	3 - 8323	Final 2D Stack Volume	Full, Near, Mid, Far
701351	4155	3262 - 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701351	3760	3671 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701351	3151	4318 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701351	3536	3909 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701351	"4500"	3 - 8323	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701360	4155	3262 - 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701360	3760	3671 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701360	3151	4318 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701360	3536	3909 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho

701360	"4500"	3 - 8323	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701366	4155	3262 - 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701366	3760	3671 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701366	3151	4318 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701366	3536	3909 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701366	"4500"	3 - 8323	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701372	4155	3262 - 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701372	3760	3671 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701372	3151	4318 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701372	3536	3909 – 5600	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701372	"4500"	3 - 8323	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho

BKG06B-3D

Tape Number	Inline Range	Cross-Line Range	Data Type	Stack Volume
701404	2284 – 4195	1663 – 3127	Raw 3D Stack Volume	Full, Near, Mid, Far
701405	2284 – 4195	1663 – 3127	Raw 3D Stack Volume	Full, Near, Mid, Far
701406	2284 – 4195	1663 – 3127	FINAL STACKS: Full + 3 Angles	Full, Near, Mid, Far
701407	2284 – 4195	1663 – 3127	FINAL STACKS: Full + 3 Angles	Full, Near, Mid, Far
701408	2284 – 4195	1663 – 3127	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho
701409	2284 - 4195	1663 - 3127	AVO Attributes	Intercept, Gradient, Product, Fluid Factor, Lambda-Rho

7.4.5 Other Final Deliverables

The following items have also been delivered to ConocoPhillips:

- ASCII listing of the trace edits applied – included with this processing report, "Poseidon_3D_Final_Edits.xls" and "BKG06b_3D_Final_Edits.xls" on DVD
- Source Signature and Inverse filter information – included with this report in both SEGY and ASCII format, "Poseidon_Far_Field_Signature.segy", "Poseidon_Far_Field_Signature.ascii", "Poseidon_Zero_Phase_Filter_50dm.segy" "Poseidon_Zero_Phase_Filter_55dm.segy" "Poseidon_Zero_Phase_Filter_60dm.segy" "Poseidon_Zero_Phase_Filter_65dm.segy" "Poseidon_Zero_Phase_Filter_70dm.segy" "Poseidon_Zero_Phase_Filter_75dm.segy" "Poseidon_Zero_Phase_Filter_80dm.segy" "Poseidon_Zero_Phase_Filter_85dm.segy" "Poseidon_Zero_Phase_Filter_90dm.segy" "Poseidon_Zero_Phase_Filter_50dm.ascii", "Poseidon_Zero_Phase_Filter_55dm.ascii" "Poseidon_Zero_Phase_Filter_60dm.ascii" "Poseidon_Zero_Phase_Filter_65dm.ascii" "Poseidon_Zero_Phase_Filter_70dm.ascii" "Poseidon_Zero_Phase_Filter_75dm.ascii" "Poseidon_Zero_Phase_Filter_80dm.ascii" "Poseidon_Zero_Phase_Filter_85dm.ascii" "Poseidon_Zero_Phase_Filter_90dm.ascii" "BKG06B_Far_Field_Signature.segy", "BKG06B_Far_Field_Signature.ascii", "BKG06B_Zero_Phase_Filter_40dm.segy" "BKG06B_Zero_Phase_Filter_45dm.segy" "BKG06B_Zero_Phase_Filter_50dm.segy" "BKG06B_Zero_Phase_Filter_55dm.segy" "BKG06B_Zero_Phase_Filter_60dm.segy" "BKG06B_Zero_Phase_Filter_65dm.segy" "BKG06B_Zero_Phase_Filter_70dm.segy" "BKG06B_Zero_Phase_Filter_75dm.segy" "BKG06B_Zero_Phase_Filter_80dm.segy" "BKG06B_Zero_Phase_Filter_85dm.segy" "BKG06B_Zero_Phase_Filter_90dm.segy" "BKG06B_Zero_Phase_Filter_95dm.segy" "BKG06B_Zero_Phase_Filter_100dm.segy" "BKG06B_Zero_Phase_Filter_105dm.segy" "BKG06B_Zero_Phase_Filter_110dm.segy" "BKG06B_Zero_Phase_Filter_115dm.segy" "BKG06B_Zero_Phase_Filter_120dm.segy" "BKG06B_Zero_Phase_Filter_40dm.ascii", "BKG06B_Zero_Phase_Filter_45dm.ascii" "BKG06B_Zero_Phase_Filter_50dm.ascii"

"BKG06B_Zero_Phase_Filter_55dm.ascii"
"BKG06B_Zero_Phase_Filter_60dm.ascii"
"BKG06B_Zero_Phase_Filter_65dm.ascii"
"BKG06B_Zero_Phase_Filter_70dm.ascii"
"BKG06B_Zero_Phase_Filter_75dm.ascii"
"BKG06B_Zero_Phase_Filter_80dm.ascii"
"BKG06B_Zero_Phase_Filter_85dm.ascii"
"BKG06B_Zero_Phase_Filter_90dm.ascii"
"BKG06B_Zero_Phase_Filter_95dm.ascii"
"BKG06B_Zero_Phase_Filter_100dm.ascii"
"BKG06B_Zero_Phase_Filter_105dm.ascii"
"BKG06B_Zero_Phase_Filter_110dm.ascii"
"BKG06B_Zero_Phase_Filter_115dm.ascii"
"BKG06B_Zero_Phase_Filter_120dm.ascii" On DVD

- 3D Velocity Fields, pre and post Migration in both ConocoPhillips internal format and Western format – included with this processing report

    - Radon de-multiple manually picked velocity field on a 900m x 900m grid
        - Poseidon_3D_RADON_Velocity.cop
        - Poseidon_3D_RADON_Velocity.westernb

    - Migration velocity field on a 900 x 900m grid
        - Poseidon_3D_Migration_Velocity.cop
        - Poseidon_3D_Migration_Velocity.westernb

    - Smoothed Migration velocity field on a 900 x 900m grid
        - Poseidon_3D_Smooth_Migration_Velocity.cop
        - Poseidon_3D_Smooth_Migration_Velocity.westernb
        - BKG06B_3D_Smooth_Migration_Velocity.cop
        - BKG06B_3D_Smooth_Migration_Velocity.westernb

    - Final stacking VRMS and ETA fields on a 37.5m x 37.5m grid
        - Poseidon_3D_RNMO_Velocity_Part1.cop
        - Poseidon_3D_RNMO_Velocity_Part2.cop
        - Poseidon_3D_RNMO_Velocity_Part3.cop
        - Poseidon_3D_RNMO_Velocity_Part4.cop
        - Poseidon_3D_RNMO_Velocity_Part5.cop
        - Poseidon_3D_RNMO_Velocity_Part6.cop
        - Poseidon_3D_RNMO_Velocity_Part7.cop
        - Poseidon_3D_RNMO_Velocity_Part8.cop
        - Poseidon_3D_RNMO_Velocity_Part9.cop
        - Poseidon_3D_RNMO_Velocity_Part10.cop
        - Poseidon_3D_RNMO_Velocity_Part11.cop
        - Poseidon_3D_RNMO_Velocity_Part12.cop
        - Poseidon_3D_RNMO_Velocity_Part13.cop
        - Poseidon_3D_RNMO_Anisotropy_Part1.cop
        - Poseidon_3D_RNMO_Anisotropy_Part2.cop
        - Poseidon_3D_RNMO_Anisotropy_Part3.cop
        - Poseidon_3D_RNMO_Anisotropy_Part4.cop
        - Poseidon_3D_RNMO_Anisotropy_Part5.cop

- Poseidon_3D_RNMO_Anisotropy_Part6.cop
- Poseidon_3D_RNMO_Anisotropy_Part7.cop
- Poseidon_3D_RNMO_Anisotropy_Part8.cop
- Poseidon_3D_RNMO_Anisotropy_Part9.cop
- Poseidon_3D_RNMO_Anisotropy_Part10.cop
- Poseidon_3D_RNMO_Anisotropy_Part11.cop
- Poseidon_3D_RNMO_Anisotropy_Part12.cop
- Poseidon_3D_RNMO_Anisotropy_Part13.cop
- Poseidon_3D_RNMO_Velocity_Part1.westernb
- Poseidon_3D_RNMO_Velocity_Part2.westernb
- Poseidon_3D_RNMO_Velocity_Part3.westernb
- Poseidon_3D_RNMO_Velocity_Part4.westernb
- Poseidon_3D_RNMO_Velocity_Part5.westernb
- Poseidon_3D_RNMO_Velocity_Part6.westernb
- Poseidon_3D_RNMO_Velocity_Part7.westernb
- Poseidon_3D_RNMO_Velocity_Part8.westernb
- Poseidon_3D_RNMO_Velocity_Part9.westernb
- Poseidon_3D_RNMO_Velocity_Part10.westernb
- Poseidon_3D_RNMO_Velocity_Part11.westernb
- Poseidon_3D_RNMO_Velocity_Part12.westernb
- Poseidon_3D_RNMO_Velocity_Part13.westernb
- Poseidon_3D_RNMO_Anisotropy_Part1.westernb
- Poseidon_3D_RNMO_Anisotropy_Part2.westernb
- Poseidon_3D_RNMO_Anisotropy_Part3.westernb
- Poseidon_3D_RNMO_Anisotropy_Part4.westernb
- Poseidon_3D_RNMO_Anisotropy_Part5.westernb
- Poseidon_3D_RNMO_Anisotropy_Part6.westernb
- Poseidon_3D_RNMO_Anisotropy_Part7.westernb
- Poseidon_3D_RNMO_Anisotropy_Part8.westernb
- Poseidon_3D_RNMO_Anisotropy_Part9.westernb
- Poseidon_3D_RNMO_Anisotropy_Part10.westernb
- Poseidon_3D_RNMO_Anisotropy_Part11.westernb
- Poseidon_3D_RNMO_Anisotropy_Part12.westernb
- Poseidon_3D_RNMO_Anisotropy_Part13.westernb
- BKG06B_3D_RNMO_Velocity_Part1.cop
- BKG06B_3D_RNMO_Velocity_Part2.cop
- BKG06B_3D_RNMO_Velocity_Part3.cop
- BKG06B_3D_RNMO_Velocity_Part4.cop
- BKG06B_3D_RNMO_Velocity_Part5.cop
- BKG06B_3D_RNMO_Velocity_Part6.cop
- BKG06B_3D_RNMO_Velocity_Part7.cop
- BKG06B_3D_RNMO_Velocity_Part8.cop
- BKG06B_3D_RNMO_Velocity_Part1.westernb
- BKG06B_3D_RNMO_Velocity_Part2.westernb
- BKG06B_3D_RNMO_Velocity_Part3.westernb
- BKG06B_3D_RNMO_Velocity_Part4.westernb
- BKG06B_3D_RNMO_Velocity_Part5.westernb
- BKG06B_3D_RNMO_Velocity_Part6.westernb
- BKG06B_3D_RNMO_Velocity_Part7.westernb
- BKG06B_3D_RNMO_Velocity_Part8.westernb
- BKG06B_3D_RNMO_Anistoropy_Part1.cop
- BKG06B_3D_RNMO_Anistoropy_Part2.cop

    - BKG06B_3D_RNMO_Anistoropy_Part3.cop
    - BKG06B_3D_RNMO_Anistoropy_Part4.cop
    - BKG06B_3D_RNMO_Anistoropy_Part5.cop
    - BKG06B_3D_RNMO_Anistoropy_Part6.cop
    - BKG06B_3D_RNMO_Anistoropy_Part7.cop
    - BKG06B_3D_RNMO_Anistoropy_Part8.cop
    - BKG06B_3D_RNMO_Anistoropy_Part1.westernb
    - BKG06B_3D_RNMO_Anistoropy_Part2.westernb
    - BKG06B_3D_RNMO_Anistoropy_Part3.westernb
    - BKG06B_3D_RNMO_Anistoropy_Part4.westernb
    - BKG06B_3D_RNMO_Anistoropy_Part5.westernb
    - BKG06B_3D_RNMO_Anistoropy_Part6.westernb
    - BKG06B_3D_RNMO_Anistoropy_Part7.westernb
    - BKG06B_3D_RNMO_Anistoropy_Part8.westernb

- Final High Density RNMO stacking fields, SI4ms, RL7000ms – provided on 3592 (VRMS = #701400, ETA = #701401- See above)

- All 3D Velocity Fields in ascii format, tarred to 3592

- Bin centre listing, in ASCII format, including stacking fold pre and post regularization – included with this processing report (Poseidon_3D_Fold_Regularised.ascii, Poseidon_3D_Fold_Unregularized.ascii, BKG06B_3D_Regualarized_Fold.ascii, BKG06B_3D_Unregularized_Fold.ascii)

- Final Processed Bin Grid Definition in UKOOA 3D P6/98 format – included with this processing report (Poseidon3D_FinalCornerPoints.p698)

- Technical Notes provided through the life of the processing project – included with this processing report

- Weekly Status reports provided throughout the life of the processing project – included with this processing report

7.5. SEGY Definition

The following table describes the SEGY header locations, provided by ConocoPhillips, that have been used to produce the SEGY products for this project.

Standard SEGY Headers	Byte Location	Format
Original Field Record Number	9 - 12	Integer
Channel	13-16	Integer
Navigation shot number	17-20	Integer
CMP Number	21-24	Integer
Offset	37-40	Integer
Water Bottom	65-68	Integer
Elevation Scalar	69-70	Integer
Coordinate Scalar	71-72	Integer
Source Coordinate - X	73-76	Integer
Source Coordinate - Y	77-80	Integer
Receiver Coordinate - X	81-84	Integer
Receiver Coordinate - Y	85-88	Integer
Mute Time - Start	111-112	Integer
Mute Time - End	113-114	Integer
Number of Samples	115-116	Integer
Sample Rate	117-118	Integer
CMP Grid Coordinate - X	119-120	Integer
CMP Grid Coordinate - Y	121-122	Integer
Source Grid Coordinate - X	123-124	Integer
Source Grid Coordinate - Y	125-126	Integer
Receiver Grid Coordinate - X	127-128	Integer
Receiver Grid Coordinate - Y	129-130	Integer
Non-Standard Locations		
Sail Line	197-200	Integer
Survey Identification # (if data from multiple surveys)	181-182	Integer
CMP X (meters)	201-204	Integer
CMP Y (meters)	205-208	Integer
Navigation gun number	237-238	Integer
Navigation streamer number	239-240	Integer

END OF DOCUMENT