

# Stacking Velocity Cube and Time Interpretations for the Sri Lanka Sector of the Cauvery Basin



Calderdale Geoscience Limited, a Geoscience Consultancy established in 2004, in association with Consultant Reservoir Engineer AJ Jayasekera, have been authorized by PRDS Sri Lanka to digitize the stacking velocities and two way time interpretations from legacy 2D seismic and seismic mapping in the Sri Lanka Sector of the Cauvery Basin. The seismic was originally acquired during the 1970s and 1980s and to date have been available in original hardcopy at PRDS and as scanned images of variable quality.

Technical work completed:

All the available 2D stacking velocities have been digitized and are available in text format. The velocities have also been processed to produce 3D velocity cubes covering three different areas (Figure 1). These are available as a complete set, individually or as bespoke subsets. Two-way-time grids used during the velocity cube build are available as part of this product or can be purchased separately.

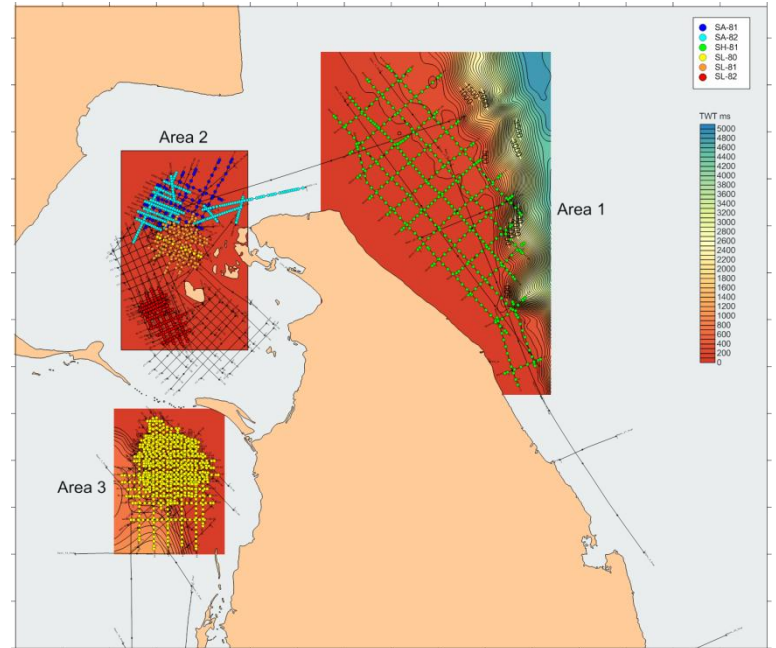
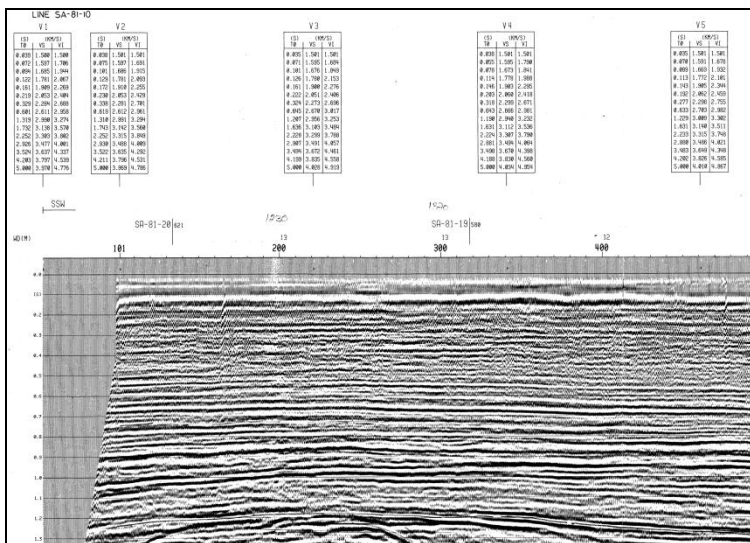


Fig 1. Current Velocity Cube Coverage

## Digitizing Example: Typical stacking velocity display



Example scanned image of 2D seismic from the Cauvery Basin, with stacking velocities posted above the seismic section. These stacking velocities have been captured during the vectorization of the seismic image.

The stacking velocity panels have been extracted from the scanned images and converted to data tables using optical character recognition (see right). The process includes extensive checking to ensure that the velocities are accurately transcribed. All of the panels have been converted to consistent data units.

These velocity tables, in combination with the shot point locations and the two-way-time grids, form the basis of our velocity cubes.

0.039	1.500	1.500
0.072	1.597	1.706
0.094	1.685	1.944
0.122	1.781	2.067
0.161	1.909	2.269
0.219	2.053	2.404
0.329	2.284	2.688
0.601	2.611	2.958
1.319	2.990	3.274
1.732	3.138	3.570
2.252	3.303	3.802
2.926	3.477	4.001
3.524	3.637	4.337
4.203	3.797	4.539
5.000	3.970	4.776



LINE	SHOTPOINT	TIME MS	VRMS M/S	VINT M/S
SA-81-10	53	39	1500	1500
SA-81-10	53	72	1597	1704
SA-81-10	53	94	1685	1945
SA-81-10	53	122	1781	2070
SA-81-10	53	161	1909	2263
SA-81-10	53	219	2053	2408
SA-81-10	53	329	2284	2685
SA-81-10	53	601	2611	2958
SA-81-10	53	1319	2990	3273
SA-81-10	53	1732	3138	3569
SA-81-10	53	2252	3303	3801
SA-81-10	53	2926	3477	4003
SA-81-10	53	3524	3637	4335
SA-81-10	53	4203	3797	4537
SA-81-10	53	5000	3970	4779
SA-81-10	101	38	1501	1501
SA-81-10	101	75	1597	1689
SA-81-10	101	101	1686	1919
SA-81-10	101	129	1781	2088
SA-81-10	101	172	1910	2253
SA-81-10	101	230	2053	2428
SA-81-10	101	338	2281	2703
SA-81-10	101	619	2612	2961
SA-81-10	101	1310	2991	3293
SA-81-10	101	1743	3142	3560
SA-81-10	101	2252	3315	3848
SA-81-10	101	2930	3488	4009
SA-81-10	101	3522	3635	4289
SA-81-10	101	4211	3796	4530
SA-81-10	101	5000	3969	4787