KIDANE ARAYA

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Houston, TX 77025
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Objective A position in **seismic** data processing. **Main Focus** in **3D Depth Imaging**.

Experience

PGS Tensor **1998 – 1999**
Houston, TX

Senior Geophysicist at the 3D Depth Imaging Group. Testing and evaluating 3D Depth migration algorithms. Processed 3D Data from the over thrust belt in the Rockies. Processed **16 – component land vertical cable data** from a synthetic model representing the Gullfaks field in the North Sea, treating the first layer as rock. Used the **Marathon Salt Model** and other proprietary models to evaluate 3D traveltime computation by **Ray Tracing**, **eikonal solvers** and **wavefront expansion methods**. Conducted quality control study of 3D Land seismic data from Oklahoma and Texas.

RICE UNIVERSITY **1995 – 1998**
Houston, TX

Research Scientist at The Rice Inversion Project of the Department of Computational and Applied Mathematics. Involved in code development and seismic data processing using **ProMAX^{TM}**, **Seismic Unix** and **The Rice Inversion Project softwares**. Main focus **Depth Imaging** and **AVO** analysis.

EXXON PRODUCTION RESEARCH COMPANY **5/1992 – 9/1992**
Houston, TX **5/1991 – 9/1991**
Research Assistant- Developed visco-elastic wave modeling and migration/inversion algorithms. Applied inversion theory in seismic data from the Gulf of Mexico.

MOBIL RESEARCH LABORATORY **5/1990 – 9/1990**
Dallas, TX

Research assistant I. Developed 3-D time migration techniques. Process 3-D marine data from the Gulf of Mexico using this code.

METROPOLITAN STATE COLLEGE OF DENVER **1989 – 1990**
Department of Mathematical Sciences

Denver, CO

Instructor - Taught the following courses: Finite Mathematics and Calculus.

NATIONAL EARTHQUAKE INFORMATION CENTER **1986 – 1987**
Golden, CO

Technical Assistant - Analyzed and processed earthquake data. Developed software to streamline data processing and interpretation.

NATIONAL OIL & GAS EXPLORATION PROJECT **1982 – 1983**
Dire Dawa, Ethiopia

Jr. Geophysicist - Assisted with geophysical well logging with the Soviet Petroleum Exploration Expedition in Ethiopia in the Ogaden Basin. Responsible for field data acquisition, processing and preliminary interpretation.

ETHIOPIAN INSTITUTE OF GEOLOGICAL SURVEY **1979 – 1982**
Addis Ababa, Ethiopia

Geophysicist - Responsible for Conducting geophysical data acquisition (electrical, gravity and magnetics). Directed and supervised field party which conducted seven ground water investigations and two engineering geophysical investigations.

ADDIS ABABA UNIVERSITY **1978 – 1979**
Bahr-Dar Academy of Pedagogy

Bahr-Dar Ethiopia

Graduate Assistant - Taught Level 1 and Level 2 Physics courses. Directed physics laboratory classes also.

ADDIS ABABA UNIVERSITY **1977 – 1978**
Addis Ababa, Ethiopia

Lab instructor - Directed physics laboratory classes for Level 1 and Level 2 Physics courses.

Education

COLORADO SCHOOL OF MINES Ph.D. Geophysics **12/1993**
Golden, CO

Doctorate thesis: *Comparison of Asymptotic and Generalized Ray Analysis of Horizontally Polarized Shear Waves.*
Advisor: Dr. F.A. Hadsell.

COLORADO SCHOOL OF MINES M. Sc. Geophysics **5/1986**
Masters thesis: *Seismic investigation of the Southern Red Sea.*
Advisor: Prof. R.L. Sengbush.

ADDIS ABABA UNIVERSITY B. Sc. Physics **7/1978**
Addis Ababa, Ethiopia

Publications

"True Amplitude ray tracing along the strike of a 2.5D earth model," *SEG abstract 1989.*

"Prestack inversion of common-offset strike data," *SEG abstract 1990.*

"Linear visco-elastic inversion of seismic data from the Gulf of Mexico" *EPR proprietary report, 1992.*

"Comparisons of asymptotic and generalized ray analysis of horizontally polarized shear waves" *SEG abstract 1993.*

"2D and 2.5D Kirchhoff inversion using upwind finite difference amplitudes," *SEG abstract 1996.*

"Acoustic Asymptotics and AVO," *SEG abstract 1998.*

Personal

Holds valid U.S. work permit. Active Member of Society of Exploration Geophysicists. Experienced with C, FORTRAN and UNIX.

References

Available upon request. **March 1999.**