

EDGE Readme.txt
EDGE 1989 Cook Inlet Marine Airgun Travel Time Picks for
Tomography Analysis

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The files contain a unique FFID, range (in kilometers), and reduced travel time (in seconds), reduced by 6 km/s. Zero travel time corresponds to the shottime. The files only contain picks of the first arrivals.

These files were picked from SEG Y formatted common receiver gathers recorded during the acquisition of EDGE 1989 Marine Airgun Lines in the Cook Inlet region of Southern Alaska using USGS Five-Day Recorders (see Brocher, T.M., and M.J. Moses, 1993, Onshore-offshore wide-angle seismic recordings of the 1989 Alaskan EDGE profile: Five-day recorder data, U.S. Geological Survey Open-file Report 93-238, 25 pp.).

The travel times for the first arrivals were picked in 19 September 2001 using ProMax; the first arrival picks were initially saved in ProMax format with FFID, range (in meters), and travel time (in millisecond) reduced to 8 km/s, with an offset of 4000 milliseconds. The picks were made from a single DLT containing all the SEG Y record sections made by Mike Moses in 1989 and 1990. I attempted to make picks for all traces for which the signal-to-noise was large enough.

A unique FFID was assigned to every shot in the complete shot time file for the entire EDGE 1989 Cook Inlet survey.

Line	FFID Range
301/302	890001-899029
303	99001-99657

Lines 301 and 302 were acquired with a small overlap to insure full fold coverage were they intersected. For the wide-angle gathers, we merged Lines 301 and 302 where they intersected. We omitted the short tailspreads used to insure full fold coverage.

Line 301 FFIDs 1-5222 = new FFID 890001-895222
Line 302 FFIDs 93-3549 = new FFID 895223-899029

At the time that the original SEGY files were created by Mike Moses, no null traces were inserted for missing shots on the tapes, thus the original FFID range for each common receiver gather was not always complete. For most lines at most receivers, however, there were no missing shots in the original SEGY files. For each incomplete gather, I compared the ranges versus picked FFID number versus files containing FFID and recalculated ranges. Missing FFIDs were identified and inserted. I believe that this procedure allows the true trace FFID to be calculated to within a few traces (say <200 meter error).

Travel time picks were made for two stations in the Cook Inlet area.

Station	Longitude	Latitude	Elevation (m)
Tutka Bay	-146.807333	60.893917	0.00
Gore Lake	-148.209333	60.752667	0.00

FILES:

xxx301piks.xcl - excel files containing the first arrival travel time picks for each station for line 301 and 302 (xxx = station name, TUT or GORE)

xxx303piks.xcl - excel files containing the first arrival travel time picks for each station for line 301 and 302 (xxx = station name, TUT or GORE)

EDGE Station Locations.xcl - excel file containing the latitude, longitude, and elevation for each station (this information also provided above)

301/302locations.xcl - excel file containing the FFID, latitude, longitude, elevation for each airgun shot on line 301 and 302

303locations.xcl - excel file containing the FFID, latitude, longitude, elevation for each airgun shot on line 303

EDGE Station Locations

		Lat	Long	elev., m	lat	lat	long	long
EDGE-1	Tut	59.4612	151.407	0.0	59	27.6739	151	24.4322
		32	203					
EDGE-3	Gore	59.2362	150.966	0.0	59	14.1739	150	58.0085
		32	808					

301302locations.xcl

890001	59.275220	153.799910
890002	59.275080	153.799090
890003	59.274920	153.798280
890004	59.274780	153.797420
890005	59.274670	153.796620
890006	59.274530	153.795750
890007	59.274390	153.794920
890008	59.274250	153.794080
890009	59.274080	153.793240
890010	59.273940	153.792420
890011	59.273800	153.791580
890012	59.273690	153.790760
890013	59.273560	153.789890
890014	59.273420	153.789060
890015	59.273280	153.788250
890016	59.273170	153.787380
890017	59.273030	153.786560
890018	59.272890	153.785690
890019	59.272750	153.784880
890020	59.272610	153.784030
890021	59.272500	153.783190
890022	59.272360	153.782360
890023	59.272220	153.781520
890024	59.272110	153.780670
890025	59.272000	153.779860
890026	59.271860	153.779010
890027	59.271720	153.778170
890028	59.271580	153.777300
890029	59.271470	153.776470
890030	59.271360	153.775600
890031	59.271220	153.774780
890032	59.271140	153.773910
890033	59.271000	153.773090
890034	59.270890	153.772250
890035	59.270750	153.771420
890036	59.270640	153.770550
890037	59.270500	153.769730
890038	59.270390	153.768860
890039	59.270250	153.768050
890040	59.270110	153.767230
890041	59.270000	153.766360
890042	59.269860	153.765530
890043	59.269780	153.764660
890044	59.269670	153.763840
890045	59.269550	153.762940
890046	59.269470	153.762120
890047	59.269390	153.761220
890048	59.269280	153.760390

303locations.xcl

99001	59.450000	153.233340
99002	59.449580	153.233550
99003	59.449140	153.233840
99004	59.448720	153.234090
99005	59.448280	153.234330
99006	59.447860	153.234590
99007	59.447420	153.234860
99008	59.447000	153.235110
99009	59.446560	153.235410
99010	59.446140	153.235690
99011	59.445720	153.235950
99012	59.445280	153.236190
99013	59.444830	153.236420
99014	59.444420	153.236630
99015	59.444000	153.236830
99016	59.443550	153.237080
99017	59.443110	153.237270
99018	59.442670	153.237530
99019	59.442250	153.237780
99020	59.441810	153.238010
99021	59.441390	153.238220
99022	59.440940	153.238450
99023	59.440530	153.238660
99024	59.440080	153.238920
99025	59.439640	153.239110
99026	59.439220	153.239360
99027	59.438780	153.239580
99028	59.438330	153.239780
99029	59.437920	153.240010
99030	59.437470	153.240220
99031	59.437030	153.240480
99032	59.436610	153.240660
99033	59.436160	153.240890
99034	59.435750	153.241100
99035	59.435310	153.241360
99036	59.434860	153.241580
99037	59.434440	153.241780
99038	59.434000	153.242030
99039	59.433560	153.242220
99040	59.433140	153.242450
99041	59.432690	153.242690
99042	59.432250	153.242920
99043	59.431840	153.243130
99044	59.431390	153.243330
99045	59.430970	153.243610
99046	59.430080	153.244080
99047	59.429670	153.244310
99048	59.429220	153.244580
99049	59.428810	153.244810

GORE 301.piks.xcl

890476	-139.874	0.789
890477	-139.827	0.782
890478	-139.779	0.775
890479	-139.732	0.768
890480	-139.683	0.770
890481	-139.636	0.762
890482	-139.588	0.764
890483	-139.540	0.757
890490	-139.205	0.771
890491	-139.158	0.764
890492	-139.109	0.757
890493	-139.060	0.759
890494	-139.012	0.752
890495	-138.961	0.735
890496	-138.911	0.737
890497	-138.865	0.730
890498	-138.821	0.704
890499	-138.775	0.697
890500	-138.732	0.690
890501	-138.687	0.691
890502	-138.642	0.684
890503	-138.598	0.677
890507	-138.416	0.657
890508	-138.368	0.649
890509	-138.319	0.651
890510	-138.272	0.644
890511	-138.223	0.646
890512	-138.177	0.639
890513	-138.128	0.632
890514	-138.081	0.634
890515	-138.030	0.627
890516	-137.984	0.629
890517	-137.934	0.621
890522	-137.689	0.613
890523	-137.641	0.606
890524	-137.592	0.608
890525	-137.543	0.601
890526	-137.495	0.603
890527	-137.446	0.596
890528	-137.399	0.598
890529	-137.350	0.590
890530	-137.305	0.583
890531	-137.257	0.585
890535	-137.066	0.584
890536	-137.018	0.586
890537	-136.970	0.588
890538	-136.923	0.590
890539	-136.877	0.592

GORE303piks.xcl

99001	131.156	0.661
99002	131.161	0.661
99003	131.169	0.661
99004	131.175	0.673
99005	131.180	0.672
99006	131.187	0.672
99007	131.195	0.672
99008	131.201	0.684
99009	131.210	0.683
99010	131.218	0.683
99011	131.225	0.683
99012	131.230	0.683
99013	131.235	0.682
99014	131.240	0.682
99015	131.243	0.682
99016	131.249	0.682
99017	131.252	0.682
99021	131.275	0.681
99022	131.280	0.681
99023	131.285	0.680
99024	131.292	0.680
99025	131.295	0.680
99026	131.301	0.680
99027	131.306	0.679
99028	131.310	0.679
99029	131.315	0.667
99030	131.319	0.667
99031	131.326	0.666
99032	131.329	0.666
99033	131.335	0.666
99034	131.339	0.666
99035	131.347	0.665
99036	131.351	0.665
99045	131.400	0.639
99046	131.412	0.638
99047	131.418	0.638
99048	131.426	0.625
99049	131.432	0.625
99050	131.439	0.625
99051	131.446	0.624
99052	131.455	0.624
99053	131.460	0.624
99054	131.467	0.624
99055	131.473	0.611
99056	131.479	0.611
99057	131.484	0.611
99058	131.490	0.610
99059	131.493	0.610
99060	131.499	0.610

TUT301piks.xcl

890038	-135.958	0.077
890039	-135.915	0.070
890040	-135.868	0.062
890041	-135.825	0.055
890042	-135.777	0.048
890043	-135.733	0.050
890044	-135.685	0.042
890045	-135.640	0.035
890046	-135.591	0.037
890047	-135.547	0.020
890048	-135.500	0.022
890049	-135.456	0.015
890050	-135.410	0.008
890051	-135.366	0.000
890052	-135.319	0.002
890053	-135.275	-0.005
890054	-135.229	-0.012
890055	-135.185	-0.020
890056	-135.139	-0.009
890057	-135.094	-0.007
890058	-135.048	-0.014
890059	-135.004	-0.012
890060	-134.957	-0.010
890061	-134.914	-0.009
890062	-134.867	-0.016
890063	-134.822	-0.014
890064	-134.776	-0.021
890065	-134.731	-0.019
890066	-134.686	-0.017
890067	-134.641	-0.016
890068	-134.595	-0.023
890069	-134.551	-0.021
890072	-134.415	-0.025
890073	-134.372	-0.023
890074	-134.324	-0.030
890075	-134.280	-0.028
890076	-134.234	-0.026
890077	-134.189	-0.024
890078	-134.145	-0.032
890079	-134.101	-0.030
890080	-134.054	-0.028
890084	-133.869	0.007
890085	-133.824	0.009
890086	-133.778	0.011
890087	-133.731	0.013
890088	-133.685	0.006
890089	-133.638	0.008
890090	-133.594	0.010
890091	-133.548	0.012

TUT303piks.xcl

99011	103.741	0.452
99012	103.756	0.451
99013	103.771	0.441
99014	103.784	0.441
99015	103.797	0.440
99016	103.813	0.439
99017	103.825	0.430
99018	103.841	0.429
99019	103.857	0.428
99020	103.872	0.428
99021	103.885	0.418
99022	103.900	0.417
99023	103.914	0.417
99024	103.930	0.407
99025	103.943	0.406
99026	103.959	0.406
99027	103.973	0.405
99028	103.986	0.405
99029	104.001	0.395
99030	104.015	0.394
99031	104.032	0.393
99032	104.044	0.384
99033	104.059	0.383
99034	104.073	0.383
99035	104.089	0.382
99036	104.104	0.372
99037	104.117	0.371
99038	104.134	0.371
99039	104.147	0.361
99040	104.162	0.360
99041	104.177	0.360
99043	104.207	0.359
99044	104.220	0.358
99045	104.238	0.357
99046	104.270	0.356
99047	104.285	0.355
99048	104.302	0.355
99049	104.318	0.363
99050	104.334	0.362
99051	104.350	0.362
99052	104.369	0.361
99053	104.383	0.360
99054	104.400	0.360
99055	104.415	0.359
99056	104.431	0.358
99057	104.445	0.358
99058	104.461	0.357
99059	104.474	0.357
99060	104.489	0.365