

U.S. GEOLOGICAL SURVEY  
OPEN-FILE REPORT 75-330

1975

SEISMIC-REFLECTION PROFILES  
R/V KELEZ NOV-DEC 1973  
CONTINENTAL BORDERLAND OF SOUTHERN CALIFORNIA

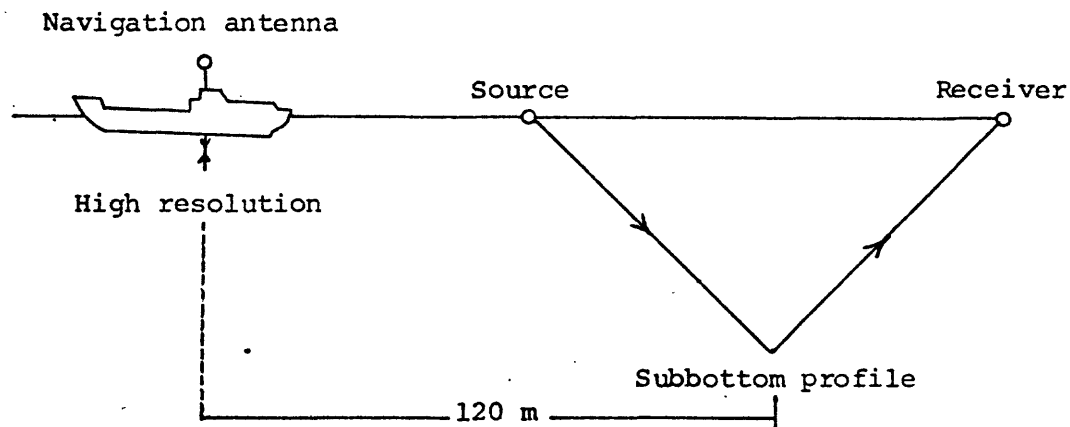
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NOTE:

These sheets accompany microfilms of reflection profiles recorded by the R/V KELEZ in November-December 1973. The survey lines were controlled by radio navigation provided by a contractor, except for line 995, which was controlled by Loran-A and radar.

RELATION OF PROFILES TO PLOTTED POSITIONS



## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj.	REMARKS
	327/ 2300				CAST off from Port Hueneme ATTEMPTING to calibrate navigation system
	328/ 0800				Navigation system not giving fixes.
	1035				streaming gear to run lines near San Nicolas Island by radar
	1110			120	Power for 120 KJ system on. Testing
911	1135				
	1200				fixes being taken on bridge every 15 min. beginning at 1200
	1245				working between two recorders
	1307				heavy seas over bow. Shut down 120 KJ generator
	1357				south buoy San Nicolas Is. circling
995	1434				
end 995	329/ 0551				Begin turn
	0552				middle of turn
951	0553				
	0545				lost navigation - fuse blew
	0652		136°		
	0704		131°		
	0725		126°		
	0731		120°		
	0732		107°		
end 951	0733				
	0740				Oceanside - outer buoy
994 <del>995</del>	0744		235°		

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE / TIME	SHOT POINT	COURSE / SPEED	POWER KJ	REMARKS
<del>994</del> <del>995</del>	<del>329</del> 0801				fix from navigation system
996	0914		090° / 6KT		head gasket blown on starboard engine. Will run for San Diego
986	1025		1740 / 4.7		
	1035				lower uniboom over side - testing
	1200		1750 / 4.7		
	1232		180°		Break in time
end 986	1726				
997	1728				
	1729		063°		
	1815				50' South of outer buoy San Diego whistler
	1840		068°		
	1927				magnetometer pulled in
end 997	1937				
	1941				Shut down machines in van
	1944		270°		going into San Diego Port
	2115				tied up at B Street Pier
	333 / 0845				Cast off from B Street Pier
	0933				streaming gear
	0955		206°		
998	0956				
	1014				Pass 50' SE of outer whistler buoy

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
998	333/ 1020	1A		90	
	1027	1			
	1041				momentary power failure
	1045	11			
2nd 998	1054				
978	1059		<del>0000</del>		
	1124	10			
	1132				change to starboard engine
	1154	20			
	1217				generator shut off
	1221			90	FILTER 25/98 Hz
	1224	30			
	1254	40			
	1324	50			
	1343				approach turn
975	1348				
	1351	1			
	1353		<del>2670</del>		
	1421	11			
	1448	20			
	1455				High resolution system off
	1509		<del>1600</del>		

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
975	<del>333</del> 1518	30	<del>2679</del>		
	1548	40			
	1554			90	Capacitor blew. 90kj system shut down
	1618	50			
	1648	60			
	1718	70			
	1748	80			
	1818	90			
	1848	100			
	1858			90	Start firing. 90kj system
	1918	110			
	1948	120			
	1949		<del>2749</del>		
	2018	130			
	2048	140			
	2101		<del>2629</del>		
	2118	150			
	2148	160			
	2221	171			
	2248	180			
	2318	190			
	2348	200			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
975	<del>334</del> 0018	210			
	0048	220			
	0118	230			
	0148	240			
END 975	0210				approaching turn to 327°
999	0212		<del>327°</del>		
	0239	10			
	0309	20			
	0312				approaching turn to 227°
940	0312				middle turn
	0313		<del>227°</del>		
	0315	1			
	0342	10			
	0412	20			
	0442	30			
	0512	40			
	0542	50			
	0612	60			
	0642	70			
	0654				Breaking line to 235° course adjustment
	0655		<del>235°</del>		
	0658				Begin turn to course 270°

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
740	334/ 0711				left to course 090°
	0721				50' south of Bishop Rock Bouy
	0725				turn back to course 270° for another pass on bouy
	0730		3000/		
	0733		2700/		
	0735				50' south of Bishop Rock Bouy
	0750				right to North
	0802				change course to 045°
	0804		0450/		
	0823		/4.7		starboard engine only
	0829				uniboom in water
940A	0837		2250/		
	0838	1			
	0848		/5kt		Change to 450 RPM on starboard engine
	0855				Pass American Delta 2
	0856		/4.7		
	0909	11			
	0936	20			
	1006	30			
	1039	41			
	1106	50			
end 940A	1109	51	3070/ 6KT		



## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
	<del>339</del> 1110				
139	1112	1	<del>3070</del>		
	1121	4			
End 939	1137	10	/4.7		Begin turn
938	1139		<del>0360</del>		
	1141	1			
	1209	10			
	1223	15			
	1239	20			Start high resolution
	1309	30			
	1338	40			
	1357				Two power supplies on high resolution system.
	1409	50			
	1439	60			
	1501				SHUT DOWN UNIBOOM (high res.) to clean
	1505				Start high resolution
	1509	70			
	1536	80			
	1606	90			
	1609				change paper in EPC recorder
	1614				start again
	1635		/6.1		

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
938	<del>334</del> 1642	102			
	1658				#3 capacitor misfiring
	1706	110			
end 938	1715:30				
001	1716		<del>306°</del>		middle of turn
	1718	1			
	1719		/4.7		Capacitors shut down for work
	1742		/6 KT		
	1745	10			
	1804				restart capacitor
	1815	20			
end 938	1818	21	<del>218°</del>		
936	1820	1	<del>218°</del>		
	1847	10			
	1850				Capacitors down for repairs
	1902				Capacitors on
	1918	20			
	1948	30			
	2018	40			
	2048	50			
	2056			60	#4 FIRING ERRATICALLY
	2111			90	STILL PROBLEMS WITH #4

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
936	334/ 2112			60	
	2118	60			
	2143				NAVIGATION EQUIPMENT PROBLEMS., ONE ZONE COUNT LOST
	2150			90	
	2211				NAVIGATOR IS RECORDING AND NAVIGATING
	2227	82			
END 936	2235				
935	2236	1	285°		
	2246		4.7KT		PULL IN LADDERS., SEISMIC SYSTEM DOWN FOR HI-SPEED RUN
	2322		293°		
	2339	22			
	2400				2300-2400 DEPTHS WERE ERRATIC
	335/ 0009	32			
	0033 <del>0033</del>	40			
	0040				STREAM GEAR
	0043		291° 5.4KT	120	START FIRING 120KJ SYSTEM ON LINE 935
	0045				STOPPED FATHOMETER TO CHANGE PAPER
	0050				START TURN TO 058°
END 935	0052				FATHOMETER OPERATING
931	0053		058°		
	0054	1			
	0121	10			

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
931	<del>335</del> 0151	20			
	0152				PROBLEMS WITH #4, FIRING ERRATICALLY
	0209			60	
	0221	30			
	0230?				PAPER STOPPED IN SEISMIC RECORDER
	0248	40			
	0258				RESTART SEISMIC RECORDER
	0310				APPROACHING TURN TO NEW LINE #930
	0312				STARTING TURN TO COURSE 325°
	0313				CAPACITORS SHUT OFF FOR REPAIRS
930	0315		<del>325°</del>		HALF WAY THRU TURN
	0325			60	RESTART CAPACITORS
	0342	10			
	0344				APPROACHING TURN TO COURSE 067° LINE 929
929	0345		<del>067°</del>		HALF WAY THRU TURN
	0348	1			
	0418	11			
	0445	20			
	0502		<del>6.6KE</del>		
	0515	30			
	0545	40			
	0618	51			

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
929	<del>335</del> 0645	60			
	0659		<del>335</del>		BEGIN TURN TO NEW COURSE 335°
	0701				MIDDLE OF TURN
002	0702		335°		
	0703	1			
	0707				CUT ROLL TO REPAIR BINDING. ROLLED TOGETHER AND SECOND PIECE CALLED CONTINUATION OF ROLL #2. 120K3 SYSTEM
	0730	10			
	0733				BEGIN TURN TO LINE 927, COURSE 251
	0734				HALF WAY
927	0735		251°		
	0740	2			
	0806	11			
	0833	20			
	0904	30			
	0933	40			
	1006	51			
	1033	60			
	1103	70			
	1133	80			
	1203	90			
	1229				START TURN TO NEW COURSE OF 155°
END 927	1230				SHUT DOWN CAPACITORS

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
	<del>333</del> 1236				STARTING TURN TO NEW COURSE OF 045°
926	1303	10			
	1307			90	CAPACITORS STARTED
	1333	20			
	1400				RESET CLOCK
	1403	30			
	1433	40			
	1503	50			
	1533	60			
	1603	70			
END 926	1603:30				START TURN
003	1604				MIDDLE OF TURN
	1604:30				STEADY ON DUE N
	1606	1			
	1609:30				SEISMIC PROFILE STOPPED
	1614				SEISMIC PROFILE RESTARTED
	1632	10			
	1703	20			
	1733	30			
END 003	1737				START TURN
911	1739				MIDDLE OF TURN
	1741		<del>237°</del>		

## Scientific Log for R/V KELEZ NOV-DEC 1973

NE	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
11	<del>335</del> 1742	1			
	1812	11			
	1839	20			
	1909	30			
	1939	40			
	2009	50			
	2039	60			
	~2045				FUSES BLOWN ON #1 CAPACITOR BANK, SHUT DOWN FOR REPAIRING
	2109	70			
	2115				RESTART BIG SYSTEM
	2139	80			BEGIN TURN
	2144				MIDDLE OF TURN
712	2145	1	<del>0440</del>		
	2149				SHUT DOWN BIG SYSTEM TO ADJUST RAYTHEON PAPER, 1 CHARGE ELECTRODE
	2157				START FIRING
	2212	10			
	2242	20			
	2308			90	#3 FIRING ERRATICALLY
	2312	30			
	2348	42			
	<del>336</del> 0012	50			
713	0018				MIDDLE OF TURN, LEFT TURN TO COURSE 251°

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
913	<del>336</del> 0021	1			
	0032			120	
	0051	11			
	0121	21			
	0148	30			
	0218	40			
	0248	50			
	0323	62			
	0348	70			
	0414				BEGIN TURN TO LINE 914 COURSE 302°
END 913	0415				MIDDLE OF TURN
914	0416		<del>302°</del> 4kt		
	0418	1			
	0448	11			
	0515	20			
	0548	31			
	0615	40			
	0618				BEGIN TURN TO LINE 915 COURSE 066°
	0619				HALF WAY THROUGH TURN
915	0620		<del>066°</del>		ROUGH SEAS
	0621	1			
	0648	10			



## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
715	<del>336</del> 0721	21			
	0732				POWER FAILURE. ALL MACHINES STOPPED
	0923				POWER RESTORED. BIG SYSTEM & GIFFY ON
	0948	70			
	1018	80			
	1051	91			
	1118	100			
	1148	110			
END 915	1200				START TURN TO COURSE 256° LINE 004
004	1202		<del>256°</del>		MIDDLE OF TURN
	1203	1			
	1230	10			
	1300	20			
	1330	30			
	1400	40			
	1430	50			
	1451		<del>290°</del>		
	1500	60			
	1504				BEGGS ROCK BUOY ON PORTSIDE
END 004	1510				STARTING TURN TO LINE 918, COURSE 170°
918	1512	1			HALF WAY THRU TURN
	~1513				CHAIR SLID INTO EMERGENCY-OFF BUTTON. CAPACITORS TURNED OFF.

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
918	<del>336</del> 1515				STARTED CAPACITORS UP, ALL OK., 120 KJ
	1539	10			
	1545				START TURN TO 066°
END 918	1547				MIDDLE OF TURN
	1549		<del>336°</del>		
	1600				MIDDLE OF TURN, CIRCLING TO LINE 915A
	1607				STARTING TURN TO LINE 915A, COURSE 246°
915A	1608				MIDDLE OF TURN
	1609	1			
	1610		<del>246°</del>		
	1636	10			
	1706	20			
	1736	30			
	1806	40			
	1834				START TURN TO COURSE 122°, LINE 005
END 915A	1836	50			
	1837				HALF WAY THROUGH TURN
005	1839	1			
	1840		<del>122°</del>		
	1906	10			
	1936	20			
	2006	30			

Scientific Log for R/V KELEZ

NOV-DEC 1973

LINE No.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
05	<del>336</del> 2039	41			
	2044		<del>138°</del>		
	2106	50			
	2136	60			
	2206	70			
	2236	80			
	2306	90			
	2328			90	#4 FIRING ERRATICALLY
	2336	100			
	<del>337</del> 0009	111			
	0015				10° TURN TO LEFT, NEW COURSE 127°
	0016		<del>127°</del>		
	0036	120			
	0050				STARTED VP #4, 12015 NOW WORKING
	0106	130			
	0136	140			
	0206	150			
	0236	160			
	0306	170			
	0339	181			
	0406	190			
	0411				BEGIN TURN TO 001°, LINE 006

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
	<del>337</del> 0412				MIDDLE OF TURN
06	0414		<del>011°</del>		
	0415	1			
	0442	10			
	0512	20			
	0545	31			
	0612	40			
	0615	41			TURNING RIGHT TO COURSE 068°, LINE 941
	0616				HALF MARK
941	0617		<del>068°</del>		
	0618	1			
	0651	12			
	0715	20			
	0745	30			
	0815	40			
	0827				LINE 941 TO BE CUT 5000' SHORT (COX REQUEST). (LINE 942 RUN 5000' FURTHER SW FROM SAN CLEMENTE IS. THAN PLANNED)
	0841				BEGIN TURN TO 332°
	0842	49			SHUT DOWN GENERATOR (AC 440) FOR OIL CHANGE
942	0844		<del>332°</del>		
	0845	1			
	0852				RESTART SEISMIC
	0915	11			

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
	<del>337</del> 0942	20			
END 942	0955				BEGINNING OF TURN
	0956				MIDDLE OF TURN
943	0957	1	<del>243°</del>		
	1024	10			
	1054	20			
	1130	32			
	1157	40			
	1209				START TURN TO RIGHT
END 943	1210				
944	1211		<del>321°</del>		
	1212	1			
	1239	10			
	1312	21			
	1320				STARTING TURN TO 065°, LINE 945
END 944	1321				MIDDLE OF TURN
945	1322		<del>065°</del>		
	1327	2			
	1351	10			
	1421	20			
	1454	31			
	1521	40			

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
745	<del>337</del> 1551	50			
	1621				BEGIN TURN TO COURSE 180°, LINE 007
	1622				HALF WAY THROUGH TURN
	1623	1			
007	1625		<del>180°</del>		
	1645				SHUT DOWN SPARKER. REDUCE SPEED - HEADING FOR WILSON COVE, SAN CLEMENTE.
	1706				PUT SEISMIC RECORDING ON STANDBY. FATHOMETER STILL RUNNING.
	1724				ALL MACHINES OFF. DROP ANCHOR AT WILSON COVE, SAN CLEMENTE ISLAND TO CHECK STARBOARD ENGINE SHAFT DEFLECTION.
	1920				UNDERWAY AGAIN. ALL GEAR THROWN OUT
	1927		<del>315°</del>		START FATHOMETER
	1931				START SEISMIC RECORDER
008	1933	1			
	1949				HEADING RIGHT TO NORTH 000°
	1950				HALF WAY THROUGH TURN
	1951		<del>000°</del>		
	2000	10			
END 008	2008				BEGIN TURN
745A	2009	1	<del>065°</del>		
	2039	10			
	2109	20			
	2136	30			CHANGE FILTER TO 98/25
	2206	40			BEGIN TURN TO COURSE 155°

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE No.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
09	337 2209	1	155°		
	2236	10			
END 209	2303				
748	2306	1	234°		
	2333	10			
	338 0003	20			
	0039	32			
	0050				START TURN TO 136° ON TO LINE 949
	0051	36			
END 748	0052				MIDDLE OF TURN
749	0053		136°		
	0054	1			120 K3 RECORDER STOPPED TO REPLACE STYLUS SPRING
	0102				120 K3 RECORDER STARTED
	0121	10			
	0138				START TURN TO LINE #950, COURSE 063°
END 949	0139	16			MIDDLE OF TURN
950	0141		063°		
	0142	1			
	0209	10			
	0233				CHANGE PAPER IN FATHOMETER
	0236				FATHOMETER WORKING AGAIN
	0239	20			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
950	<del>338</del> 0242	31			
	0339	40			
	0409	50			
	0439	60			
	0509	70			
	0539	80			
	0612	91			
	0639	100			
	0712	111	<del>6.3kt</del>		
	0739	120			
	0812	131			
	0816		<del>4.7kt</del>		SPEED CHANGED ON STARBOARD ENGINE
	0825				UNIBOOM IN WATER
	0845	142			
	0850				CHANGE TO PORT ENGINE
	0855				CHANGE TO STARBOARD ENGINE
	0909	150			
	1009	170			
	1042	181			
	1045				START TURN
951A	1048	1	<del>140°</del>		
	1056				UNIBOOM DOWN. CHANGED BELT.



## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
	<del>338</del> 1109	8			
END 51A	1148	22			BEGIN TURN
952	1151	1	<del>240°</del>		
	1218	10			
	1223				TURN OFF UNIBOOM TO CLEAN OFF KELP
	1226				TURN UNIBOOM BACK ON
	1228				CHANGE PAPER ON UNIBOOM
	1230				UNIBOOM BACK ON
	1243				SWITCH HIGH RESOLUTION TO OTHER RECORDER
	1248	20			
	1250				UNIBOOM. TURNED OFF
	1318	30			
	1348	40			
	1418	50			
	1445	59			START TURN TO LINE 010, COURSE 151°
END 952	1446				
010	1448	1			
	1449		<del>151°</del>		
	1515	10			
	1539	18			
	1540				TURNING TO 059°, LINE 954
END 010	1541				MIDDLE OF TURN

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
754	<del>338</del> 1542	1			
	1612	11			
	1642	21			
	1715	32			
	1729				START HIGH RESOLUTION
	1739	40			
	1809	50			
	1836				BEGIN TURN TO LINE 955, 148° COURSE
	1839	1			JUST PAST MIDDLE OF TURN
955	1840		<del>148°</del>		
	1843				OCEANSIDE OUTER BUOY
	1847	4			
	1848				MIDDLE OF TURN TO COURSE 236°, LINE 956
956	1849	1	<del>236°</del>		
	1918	10			BROUGHT HIGH RESOLUTION CATAMARAN IN TO CLEAN KELP OFF
	1922				PLACE CATAMARAN BACK INTO WATER
	1940				BOTH HIGH RESOLUTION RECORDERS ARE BEING WORKED ON
	1948	20			
	2017				START TURN TO LEFT
957	2019		<del>141°</del>		
	2020				STEADY ON COURSE
	2021	1			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
957	<del>338</del> 2035				START TURN TO LEFT
	2036	6			
END 757	2037				
758	2038		<del>056°</del>		
	2039	1			
	2105	10			
	2136	20			
END 958	2200	28			
959	2203	1	<del>112°</del>		
	2215	5			
END 959	2216				
960	2218	1	<del>236°</del>		
	2219				STEADY ON COURSE.
	2303				SHUT DOWN UNIBOOM, WATER TOO DEEP, CHANGE BELT & PAPER
	2315	20			
END 960	2345	30			
961	2347		<del>141°</del>		
	2348	1			
	<del>339</del> 0001				TURNING LEFT TO LINE 962, COURSE 056°
END 961	0003				
962	0004		<del>056°</del>		
	0006	1			

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
962	<del>339</del> 0033	10			
	0106	21			
	0133	30			
	0136	31			START TURN TO LINE # 963, COURSE 168°
END 962	0138				
963	0139	1			
	0140		168°		
	0151	5			START TURN TO LINE # 964, COURSE 235°
END 963	0152				
964	0153		235°		
	0154	1			
	0221	10			
	0251	20			
	0321	30			
	0351	40			
	0412	47			START TURN TO LINE # 970, COURSE 080°
	0414				HALF WAY THROUGH TURN
970	0415	1	080°		
	0430		4.3 kt		
	0443	10			
	0512	20			
	0542	30			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
970	339/ 0559				START HIGH RESOLUTION
	0612	40			
	0639	49			
	0640				STARTING TURN TO RIGHT, LINE #969
	0642	1			MIDDLE OF TURN
	0644		238°		
	0709	10			
	0732				HIGH RESOLUTION TURNED OFF
	0742	21			
	0811	31			
	0842	41			
	0909	50			
END 969	0930	57			
972	0933	1	084°		
	1000	10			
	1027			90	#3 HANGFIRING
	1036	22			
	1100	30			
	1115			60	#1 HANGFIRING
	1133	41			START UNIBOOM
END 972	1151	47			
973	1154	1	240°		

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
173	<del>339</del> 1220	10			
	1226				HIGH RESOLUTION SYSTEM TURNED OFF
	1251	20			
	1321	30			
	1351				CAPACITORS SHUT OFF, OIL ADDED TO GENERATOR, NEW ELECTRODES
	1356				TURNING TO LINE # 968, COURSE 093°
	1357	1			
	1400				START FIRING
	1406		<del>4.91kt</del>		
	1424	10			
	1450			90	#1 HANG FIRING
	1451	19			(NOTE ON CHARTS CORRECT SHOT POINT # 20 → 19)
	1453				HIGH RESOLUTION SYSTEM STARTED UP
	1524	30			
	1539	35			
END 968	1540				
967	1542	1			
	1543		<del>211°</del>		
	1612	11			
	1615				BEGIN TURN TO COURSE 273°, LINE 966
	1616				HALF WAY THROUGH TURN
966	1617		<del>273°</del>		

Scientific Log for R/V KELEZ

NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
766	<del>339</del> 1618	1			
	1645	10			
	1658				END HIGH RESOLUTION
	1715	20			
	1745	30			
	1812	39			BEGIN TURN TO COURSE 115°, LINE # 974
	1814				MIDDLE OF TURN
	1815	1			
974	1816		<del>115°</del>		
	1842	10			
	1912	20			
	1920				START HIGH RESOLUTION
	1942	30			
END 974	2015	41			
011	2018	1	<del>180°</del>		
	2045	10			
	2127	23			
END 011	2129	24			
<del>979</del> 979	2130	1	<del>267°</del>		
	2157	10			
	2224	20			UNIBOOM SHUT DOWN AT 2231
	2257	30			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
179	<del>339</del> 2330	41			
	2400	51			
	<del>340</del> 0014				120 KJ WORKING
	0016				START TURN TO COURSE 206°, LINE # 980
END 979	0018	57			
980	0019		<del>206°</del> 4.9Kc		
	0021	1			
	0025			90	
	0048	10			
	0056				STARTING TURN TO 104°, LINE # 981
	0057	13			
END 980	0058				
981	0059		<del>104°</del>		
	0100	1			
	0127	10			
	0157	20			
	0230	31			
	0252				TURN HIGH RESOLUTION ON
	0257	40			
	0327	50			
	0328				SHUT OFF HIGH RESOLUTION SYSTEM DUE TO ZERO OIL PRESSURE IN GENERATOR. GENERATOR SHUT DOWN TOO.
	0348				GENERATOR STARTED UP AGAIN BUT IT HAS A BAD OIL PRESSURE GAUGE. HIGH RESOLUTION BACK ON TOO.



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Scientific Log for R/V KELEZ

NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
181	340 <del>0357</del>	60			
	0427	70			
	0457	80			
	0530	91			
	0554	99			
982	0555				BEGIN TURN TO LINE # 982
	0556				MIDDLE OF TURN
982 <del>987</del>	0557	1	356°		
	0624	10			
	0627	11			BEGIN TURN TO LEFT, LINE # 983, COURSE 283°
	0628				HALF WAY
	0629	1	283°		
	0657	10			
	0727	20			
	0757	30			GIFT FATHOMETER STOPPED. BELT FIXED SO IT IS OKAY
	0826	40			
	0857	50			
	0926	60			
END 983	0927				BEGIN TURN
012	0930	1	000°		
END 012	0943				
984	0945	1	093°		

Scientific Log for R/V KELEZ

NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
984	340 1018	12			
	1024				SHUT DOWN UNIBOOM FOR HI-SPEED RUN INTO DAGO
	1029				PULLED IN UNIBOOM
	1030				SOMETHING HAPPENED TO GIFFY BECAUSE IT STOPPED SO IT WAS SHUT DOWN. ALSO, HIGH VOLTAGE ROOM SHUT DOWN AND LADDER PULLED IN.
	1100				GIFFY SHUT DOWN. PAPER ROLL CHANGED.
	1118				PASSED OUTER WHISTLER BOUY, SAN DIEGO.
	1215				TIED UP AT B STREET PIER, SAN DIEGO.
	341 0910				CAST OFF FROM B STREET PIER, SAN DIEGO.
	1011		11kt		START DEPTH RECORDER.
	1016				CLOCK CHECK
077	1027	2			
	1051	10			(CALLED 1052)
	1121	20			
	1122		9kt		
	1129		6kt		
	1132		330°		
	1141				START TESTING SPARKER 120KJ, 3/3 SEC SCAN/FR 16-98 HZ
	1151	30			
	1208				STARTING TURN TO LINE# 966A, COURSE 273°
	1209	36			
	1210		273°		
	1212	1			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
177	341 1239	10	7.1kt		
	1248		6.8kt		
	1309	20			
	1339	30			
	1409	40			
	1439	50			
	1509	60			
	1539	70			
	1553				START TURN TO LINE # 965, COURSE 122°
END 966A	1554	75			
965	1556		122°		
	1557	1			
	1630	12			
	1640				BEGIN TURN TO COURSE 055°, LINE 964-A
	1641	15			HALF WAY THROUGH TURN
964-A	1642	1	055°		
	1648		6.9kt		
	1709	10			
	1714		7.1kt		
	1739	20			
	1809	30			
	1839	40			

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
964-A	<del>341</del> 1962	51			
	1939	60			
	1954	65			
	1955				BEGIN TURN TO LINE #014, COURSE 303°
	1956				MIDDLE OF TURN
014	1957	1	<del>3030</del>		
	2024	10			
	2029				PAPER ON SPARKER, SO SHUT DOWN
	2045	17			
954-A	2048	1	<del>2590</del> 7 kt		(NOT CORRECT HEADING, SEE 2057)
	2057				MANUVERING BACK TO CORRECT HEADING OF 239°
	2102				START CHECKING SPARKER. ALIGN STYL1.
	2115	10			
	2124		<del>6.69 kt</del>		
	2145	20			
	2215	30			
	2240				PAPER TORN, SPARKER SHUT DOWN.
	2245	40			
	2251				TESTING SPARKER
	2256				START LINE.
	2345	60			
	<del>342</del> 0015	70			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
954-A	<del>342</del> <del>0025</del>		<del>7.4kt</del>		
	0045	80			
	0115	90			
	0145	100			
	0202				STARTING TURN TO COURSE 155°, LINE # 925
	0203	106			
END 954-A	0204				
925	0205		<del>155°</del>		
	0206	1			
	0233	10			
	0303	20			
	0333	30			
	0403	40			
	0433	50			
	0454	57			BEGIN TURN TO COURSE 029°, LINE # 924
	0455				HALF WAY THROUGH TURN
	0456		<del>029°</del>		
924	0457	1			
	0502		<del>6.2kt</del>		
	0524	10			
	0557	21			
	0624	30			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
924	<del>342</del> 0657	41			
	0724	50			
	0757	61			
	0820		<del>6.46 Kt</del>		
	0824	70			
	0825				CLOCKS CHECKED, NO CHANGE NEEDED
	0854	80			
	0924	90			
	0957	101			
	1027	111			
	1054	120			
	1124	130			
	1145	137			
	1146				START LEFT TURN
END 924	1148				
952A	1149	1			
	1150		<del>240°</del>		
	1204		<del>6.51 Kt</del>		
	1215	10			
	1245	20			
	1315	30			
	1345	40			

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
952 A	<del>342</del> 1415	50			
	1445	60			
	1515	70			
	1545	80			
	1615	90			
	1645	100			
	1715	110			
	1732				START TURN TO RIGHT
END 952A	1733	116			
925-A	1735		<del>3350</del>		
	1736	1			
	1744		<del>6.5kt</del>		
	1809	12			
	1833	20			
	1855		<del>6.1kt</del>	90	BANK #1 ON SPARKERS SHUT DOWN
	1903	30			
	1933	40			
	2003	50			
	2020			120	
	2033	60			
	2037		<del>6.65kt</del>		
	2042	63			START TURN TO RIGHT

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
END 25-A	<del>342</del> <del>2044</del>				
45-B	2045	1	<del>065°</del>		
	2049				CHANGE PAPER IN FATHOMETER
	2112	10			
	2137		<del>6.33kt</del>		ADDING A FEW RPM'S
	2142	20			
	2149		<del>6.4kt</del>		
	2212	30			
	2242	40			
	2312	50			
	2342	60			
	<del>343</del> <del>0015</del>	71			
	0042	80			
	0112	90			
	0145	101			
	0152				SHUT DOWN CAPACITORS TO CHECK OUT VOLTAGE
	0155				CAPACITORS BACK ON
	0215	111			
	0218		<del>4.5kt</del>		
	0230				HIGH RESOLUTION SYSTEM TURNED ON
	0242	120			
	0312	130			



## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE #	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
	<del>343</del> 0339	139			TURNING TO RIGHT TO LINE # 946, COURSE 132°
VP 15B	0342				
946	0409	10			
	0411				SHUT DOWN BANK #1 OF SPARKER
	0439	20			
	0515	32			
	0517				BEGIN TURN TO COURSE 247°, LINE # 947
	0518	33			
	0520				MIDDLE OF TURN
	0521	1			
947	0526		<del>247°</del>		
	0551	11			
	0552		<del>4.2KT</del>		
	0618	20			
	0630				STOP HIGH RESOLUTION
	0635		<del>5.5KT</del>		
	0648	30			
	0718	40			
	0748	50			
	0750				BANK #1 WORKING AGAIN 120KJ
	0801		<del>6.4KT</del>		
	0818	60			

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
947	<del>343</del> 0845		<del>6.25kt</del>		
	0848	70			
	0918	80			
	0948	90			
	1000				SIDE ECHO DEPTH AMBIGUITIES?
	1017		<del>5.92kt</del>		
	1018	100			
	1057	113			
	1112	118			
END 947	1113		<del>234°</del>		
948-A	1115	1			
	1145	11			
	1200			90	BANK #1 FIRING ERRATICALLY, SO SHUT OFF.
	1212	20			
	1232				START TURN TO LINE # 015, COURSE 294°
END 948A	1233	27			
015	1234		<del>294°</del>		
	1236	1			
	1238				SHUT DOWN CAPACITORS TO ADD OIL TO GENERATOR
	1248				START UP CAPACITORS, 90 KJ
	1306	11			
	1314				START TURN TO COURSE 335°, LINE 925 B.

## Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
END 215	343 1315	14			
25B	1316		335°		
	1318	1			
	1319		7kt		
	1320				SEISMIC RECORDER TURNED OFF TO WORK ON STYLUS
	1333		7.3kt		
	1345	10			
	1347				RECORDER TURNED ON
	1358				SEISMIC RECORDER OFF AGAIN
	1405				RECORDER TURNED ON
	1415	20			
	1424		7.5kt		
	1445	30			
	1518	41			
	1548	51			
END 925B	1553		6 kt		START TURN TO COURSE 218°, LINE # 936A
<del>936A</del>	1554	1			
<del>936A</del>	1557		218°		END TURN
	1626	10			
	1642		6.2kt		
	1651	20			
	1727	32.			

Scientific Log for R/V KELEZ NOV-DEC 1973

LINE NO.	DATE TIME	SHOT POINT	COURSE SPEED	POWER Kj	REMARKS
736 A	<del>343</del> 1751	40			
	1821	50			
	1851	60			
	1921	70			
	1930		<del>5.88kt</del>		
	1951	80			
	2024	91	<del>7.1kt</del>		START TURN
END 936-A	2026				
016	2027	1	<del>335°</del>		
	2054	10			
	2124	20			
	2151		<del>000°</del>		BEAR TO STARBOARD TO NORTH TO AVOID A VESSE
	2200	32			
	2221				COMING LEFT TO 335°
	2224	40			
	2254	50			
	2300	52	<del>6kt</del>		START TURN TO RIGHT
END 016	2302				
926-A	2303	1	<del>047°</del>		
	2330	10			
	2338		<del>6.12kt</del>		
	2400	20			

[illegible]

## R/V KELEZ--NOVEMBER 25 (DAY 329) to DECEMBER 9 (DAY 343), 1973

## High-Resolution Record Log

Roll	Line	Begin Day-time	End Day-time	Quality
1	986	329-1400	329- 1726	Bottom only visible
	997	1726	1820	"
2	978	333- 1114	333- 1448	Subbottom clear to unreadable
	975	1448	1455	Unreadable
3	940A	334- 0850	334- 0955	Bottom only to unreadable
3A	940A	0956	1007	Subbottom faint to bottom only
	938	1007	1609	Bottom only
4	938	1614	1627	"
	950	338-0825	338-1046	Subbottom faint
	951A	1046	1148	"
	952	1148	1228	"
4A	952	1230	1243	Unreadable
5	952	1244	1300	"
	956	1444	2001	Bottom only
	958	2115	2200	"
	959	2200	2216	Subbottom faint
	960	2216	2303	"
6	962	339-0101	339-0138	Subbottom clear
	963	0138	0152	"
	964	0152	0237	"
	970	0559	0642	"
	969	0642	0732	"
	972	1132	1151	"
	973	1151	1226	"
	968	1454	1521	Bottom only
7	974	2000	2016	Subbottom clear
	011	2017	2127	"
	979	2127	2328	Subbottom clear to bottom only
	981	340-0252	340-0537	Subbottom clear
8	954	338-1729	338-1840	Unreadable
	955	1840	1848	"
	956	1848	1942	"
	968	339-1522	339-1540	Bottom only
	967	1540	1620	"
	966	1620	1658	Subbottom faint
	974	1920	1957	"

Roll	Line	Begin Day-time	End Day-time	Quality
8A	981	340-0541	340-0555	Bottom only
	981	0555	0628	"
	983	0628	0853	Subbottom clear to faint
9	983	0855	0929	Subbottom faint
	012	0929	0943	Subbottom clear
	984	0943	1024	"
9A	945A	343-0230	343-0342	Bottom only
	946	0342	0525	Subbottom faint to bottom only
	947	0525	0630	"