

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA MINN. LINE # 4	STATE MINN.	COUNTY TODD + Douglas	DATE 7-17-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROADS - HILLY	WEATHER CLEAR - WARM	LINE NO. 4	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	FILTER		REMARKS
							LOCUT	60 ~	
1	933	PULSE	1			474	Out	IN	RECORDER SET UP BETWEEN STA'S 301-#474
2	934	ELNI	2						WILL BE PUSHING LINE #4. STA # 33 OPEN DUE TO DRIVEWAY. STA # 144 OPEN DUE TO PAVED PARKING AREA.
3	935	DRD	4						
4	936	SUM TEST	2						
5	937	NRJ TEST	2						
6	932	SIMILARITY	1						50%
7	001	WIND STRIP	1						CHECKING LINE
8	002	1	4						70% 1-96 CORRELATION MADE ON FILE # 002
9	003	3	6						
10	004	5	8						
11	005	7	10						
12	006	9	12			474			EOI # 474
13	007	11	14			475			BOI # 475. FILE # 900-10 SEC. ALL ONES
14	008	12	15						
15	SKIP	13	16						
16	009	15	18						VIB # 17311 DOWN WITH BAD SERENOID (FIXING NOW)
17	010	17	20						
18	SKIP	19	22						
19	011	20	23						RAW SWEEP MADE ON FILE # 011
20	012	21	25						
21	013	23	26						
22	014	25	28			475			EOI # 475
23	015	27	30			476			BOI # 476 FILE # 900-10 SEC. ALL ONES
24	016	29	32						FINISHED FOR THE DAY. VIB # 17311 DOWN WITH
25	017	31	34						BAD A.I.F. LEAK

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8 - 40 Hz / 22 SEC.		SWEEP PATTERN CODE # 4163		SWEEPS PER PATTERN 16	
GEOPHONES PER PATCH 24		NO. OF RECORDING PATCHES 96		TYPE VIBRATOR 3-9100 1-9900	
REMARKS		TYPE GEOPHONE ETL - EV 22B		FREQUENCY 75 Hz.	
		OBSERVER SIMMONS		STATION INTERVAL 330'	
				PARTY MGR.	
				LINE DIR. 1 TO 24 W → E	

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CLIENT COCORP	AREA MINN. LINE #4	STATE MINN	COUNTY DOUGLAS & TODD	DATE 7-18-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROADS - HILLY	WEATHER PAVED & DIRT ROADS - HILLY CHANCE OF THUNDERSTORMS		LINE NO. 4

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	F I L T E R		RE MARKS
							LOCUT	60 ~	
1	933 PULSE	1 - 6 Sec.				476	Out	IN	RECORDER SETUP BETWEEN STA. 15 96497
2	934 EINI	2 - " "							INTERMITTANT THUNDERSTORMS + LIGHTNING
3	935 DBD	4 - " "							
4	936 SUM TEST	2 - " "							
5	937 NRI TEST	2 - " "							
6	938 SIMILARITY	1 - 22 SEC.		4					50%
7	015 WIND STRIP	1 - 6 SEC.							CHECKING LINE
8	016 27	30 - 125	6	4					70% 1-96 CORRELATION MADE ON FILE # 016
9	017 29	32 - 127	8						
10	018 31	34 - 129	10						
11	019 32	35 - 130	11						VP# 32 STACKED ON FIRST HALF DUE TO BARN.
12	SKIP 33	36 - 131	12						VP# 33 SKIPPED DUE TO BARN.
13	020 35	38 - 133	14						
14	021 37	40 - 135	16			476			E.D.T. #476
15	022 39	42 - 137	18			477			B.D.T. #477 FILE #900-10 SEC. ALLOES.
16	023 41	44 - 139	20						
17	024 43	46 - 141	22						
18	025 45	48 - 143	24						
19	026 47	50 - 145	26						STA. #144 OPEN DUE TO INTERSECTION.
20	027 48	51 - 146	27						
21	SKIP 49	52 - 147	28						VP# 49 SKIPPED DUE TO HOUSE.
22	028 51	54 - 149	30						50% VP# 51 STACKED ON LAST HALF DUE TO HOUSE.
23	029 53	56 - 151	32			477			70% E.D.T. #477
24	031 55	58 - 153	34			478			B.D.T. #478 FILE #900-10 SEC. ALLOES, FILE # 030 WIND STRIP.
25	032 57	60 - 155	36						

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEG B
SWEEP FREQUENCY 8 - 40 Hz.	SWEEP PATTERN CODE # 4163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP 1	PATCH PATTERN 111122222221111 (CODE # 2125)	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-4100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 25 Hz	STATION INTERVAL 330'
REMARKS 4ms SAMPLE RATE		42 SEC. RECORD LENGTH		OBSERVER TO SIMMONS/KRAMER	PARTY MGR.

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CLIENT GDCORP	AREA MINN LINE # 4	STATE MINN	COUNTY Douglas + Todd	DATE 7-18-79
CREW NO. 6834	TERRAIN PAVED + DIRT ROAD	WEATHER CLEAR		LINE NO. 4

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	F I L T E R			REMARKS
							LOCUT	60 ~	AMP	
1	033	62 - 157	38	4		478	Out	IN	70%	1-96 CORRELATION MADE ON FILE # 033
2	034	64 - 159	40							
3	035	66 - 161	42						50%	V.P. # 163 STACKED ON FIRST HALF DUE TO FL FLET. SUBSTATION.
4	036	68 - 163	44							V.P. # 165 STACKED ON LAST HALF DUE TO FLET. SUBSTATION.
5	037	70 - 165	46						70%	
6	038	72 - 167	48			478				RECORDER MOVE E.D.T # 478
7	039	74 - 169	32			479				RECORDER SET UP BETWEEN SEAS 114 + 115 BOT. # 19, FILE # 900-105 SEC. ALLOWIES.
8	040	76 - 171	34							3 RAW SWEEPS MADE ON FILE # 040 (2 FOR QUALITY CONTROL + 1 FOR DR. KAUFMAN)
9	041	78 - 173	36							
10	042	80 - 175	38							
11										FINISHED FOR THE DAY
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEGB MPX-128
SWEEP FREQUENCY 8-40 Hz	SWEEP PATTERN CODE # 4163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 111122222221111	CODE # 2125
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-9100 1-4900	TYPE GEOPHONE FTL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 330
REMARKS 1/MS. SAMPLE RATE		42 SEC. RECORD LENGTH.		OBSERVER J.O. SIMMONS/KRAMER	PARTY MGR.

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DIGITAL VIBROSEIS RECORDER

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CLIENT COCORP	AREA MINN. LINE # 4	STATE MINN.	COUNTY TODD	DATE 7-19-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROADS	WEATHER CLEAR		LINE NO. 4

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	F I L T E R		REMARKS
							LOCUT	60 ~	
1 933	PULSE	1 — 6 SEC.				479	Out	In	RECORDER SETUP BETWEEN STA.'S 152+153
2 934	EINI	2 — " "							STAS # 152+153 LINE OFFSET NORTH 1,220'
3 936-939	DRD	4 — " "							
4 933+84	SUM TEST	2 — " "							
5 960/961	DIRT TEST	2 — " "							
6 932	Similarity	1 — 22 SEC.		4					50%
7 043	Wind Strip	1 — 6 SEC.							Checking line
8 044	79	82 — 177	3						70% 1-96 CORRELATION MADE ON FILE # 044
9 045	81	84 — 179	4			479			E.O.T. # 479
10 046	82	85 — 180	5			480			B.O.T. # 480. FILE # 900-10 SEC ALL ONE'S
11 SKIP	83	86 — 181	6						V.P. # 82 STACKED ON FIRST HALF DUE TO HOUSE; V.P. # 83 SKIPPED DUE TO HOUSE
12 047	85	88 — 183	8						50% V.P. # 85 STACKED ON LAST HALF DUE TO HOUSE.
13 048	87	90 — 185	10						70% STAS # 183+184 OPEN DUE TO CATTLE YARD.
14 049	88	91 — 186	11						50% V.P. # 88 STACKED ON FIRST HALF DUE TO HOUSE.
15 SKIP	89	92 — 187	12						V.P. # 89 SKIPPED DUE TO HOUSE.
16 050	91	94 — 189	14						70%
17 051	93	96 — 191	16						
18 052	95	98 — 193	18						
19 053	96	99 — 195	19			480			50% V.P. # 96 STACKED ON FIRST HALF DUE TO HOUSE. E.O.T. # 480
20 SKIP	97	100 — 196	20			481			V.P. # 97 SKIPPED DUE TO HOUSE. B.O.T. # 481. FILE # 900-10 SEC. ALL ONE'S.
21 054	99	102 — 197	22						V.P. # 99 STACKED ON FIRST HALF DUE TO HOUSE.
22 055	101	104 — 199	24						
23 056	103	106 — 201	26						
24 057	105	108 — 203	28						
25 058	107	110 — 205	30						FILE # 469 SHOULD HAVE BEEN FILE # 58. ERROR IN MTM-16

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8 — 40 Hz / 22 SEC.		SWEEP PATTERN CODE # 4163		SWEEPS PER PATTERN 16	
GEOPHONES PER PATCH 24		NO. OF RECORDING PATCHES 96		TYPE VIBRATOR 5-4100 / 1-4900	
TYPE GEOPHONE 27L-EV22B		FREQUENCY 7.5 Hz.		STATION INTERVAL 330'	
REMARKS 4 MS SAMPLE RATE 42 SEC RECORD LENGTH.			OBSERVER/TO SIMMONS/KRAMER		PARTY MGR.

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CLIENT COCORP	AREA MINN LINE #4	STATE MINN	COUNTY TODD	DATE 7-19-79
CREW NO. 6834	TERRAIN PAVED + DIRT ROAD	WEATHER CLEAR		LINE NO. 4

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	F I L T E R			REMARKS	
							LOCUT	60 ~	20 ~		
1	059	109	112 - 207	32	4		481	OUT	IN	70%	
2	060	110	113 - 208	33						40%	DRIVES TURNED 40% FOR BARN + HOUSE.
3	SKIP	111	114 - 209	34							V.P.#111 SKIPPED DUE TO BARN.
4	SKIP	113	116 - 212	36							V.P.#113 SKIPPED DUE TO HOUSE.
5	061	114	117 - 213	37		481				50%	V.P.#114 STACKED ON LAST HALF DUE TO HOUSE. E.D.T.#481
6	063	115	118 - 215	38		482					B.O.T.#482 FILE #90-10SEC. ALONE'S; FILE #062 WIND STRIP.
7	064	117	120 - 215	40						70%	
8	065	119	122 - 217	42							1-96 CORRELATION MADE ON FILE #065
9	066	120	123 - 218	43							
10	SKIP	121	124 - 219	44							V.P.#121 SKIPPED DUE TO HOUSE.
11	067	123	126 - 221	46							RAW SWEEP MADE ON FILE #067
12	068	124	127 - 222	47							V.P.#124 STACKED ON FIRST HALF DUE TO HOUSE.
13	SKIP	125	128 - 223	48							V.P.#125 SKIPPED DUE TO HOUSE.
14											
15											FINISHED FOR THE DAY.
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEGB MPX-12B
SWEEP FREQUENCY 8-40 Hz / 22 SEC	SWEEP PATTERN CODE #4163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 11112222221111	CODE # 2125
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-41100 14900	TYPE GEOPHONE ETL-EV22B	FREQUENCY	STATION INTERVAL
REMARKS 4 M.S. SAMPLE RATE		42 SEC. RECORD LENGTH		OBSERVER J.O. SIMMONS / KRAMER	PARTY MGR.

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CLIENT COCORP	AREA MINN. LINE #4	STATE MINN.	COUNTY TODD	DATE 7-20-79
CREW NO. 6834	TERRAIN PAVED + DIRT ROADS	WEATHER CLEAR		LINE NO. 4

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	F I L T E R		REMARKS
							LOCUT	60 ~	
1	PULSE	1 - 6 SEC.				482	OUT	IN	RECORDER SET UP BETWEEN STA'S 201 + 202
2	EINI	2 - " "							
3	DRD	4 - " "							
4	SUM TEST	2 - " "							
5	NRT TEST	2 - " "							
6	932 Similarity	1 - 22 SEC.		4		482			50% E.O.T. # 482
7	069 Wind Strip	1 - 6 SEC.				483			CHECKING LINE. BOT. # 483. FILE # 900-10 SEC. ALL ONES
8	070 127	130 - 225	1	4					70% V.P. # 127 STACKED ON LAST HALF DUE TO HOUSE; 1-96 CORRELATION MADE ON FILE # 070
9	071 129	132 - 227	3						
10	072 131	134 - 229	5						50% V.P. # 131 STACKED ON FIRST HALF DUE TO HOUSE.
11	073 133	136 - 231	7						40% V.P. # 133 STACKED ON LAST HALF DUE TO HOUSE.
12	SKIP	138 - 233	9						
13	SKIP	140 - 235	11						V.P.s # 135 + 137 SKIPPED DUE TO HOUSES.
14	074 138	141 - 236	12						V.P. # 138 STACKED ON LAST HALF DUE TO HOUSE.
15	075 139	142 - 237	13						70%
16	076 140	143 - 238	14						VIB # 14256 DOWN DUE TO BROKEN HOSE ON SERVO (DOWN 5 Hz)
17	077 141	144 - 239	15			483			E.O.T. # 483
18	079 142	145 - 240	16			484			BOT. # 484 FILE # 900-10 SEC. ALL ONES. FILE # 078 WIND STRIP
19	SKIP	146 - 241	17						V.P. # 143 SKIPPED DUE TO HOUSE.
20	SKIP	148 - 243	19						V.P. # 145 SKIPPED DUE TO HOUSE. STA # 242 OPEN DUE TO SWAMP
21	080 146	149 - 244	20						50% V.P. # 146 STACKED ON LAST HALF DUE TO HOUSE.
22	081 147	150 - 245	21						70%
23	082 149	152 - 247	23						
24	083 151	154 - 249	25						
25	084 153	156 - 251	27						

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEGB MPX-2B
SWEEP FREQUENCY 8-40 Hz / 22 SEC.	SWEEP PATTERN CODE # 4163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP 1	PATCH PATTERN 222 X 222 (# 2125)	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-41100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz.	STATION INTERVAL 330'
REMARKS 1/MS. SAMPLE RATE 42 SEC. RECORD LENGTH		OBSERVER / JO SIMMONS / KRAMER		PARTY MGR.	

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Petty-Ray Geophysical
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Geosource Inc.

CLIENT GOCORP	AREA MINN LINE #4	STATE MINN	COUNTY TODD	DATE 7-20-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROAD	WEATHER CLEAR	LINE NO. 4	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL.NO.	FILTER			REMARKS
							LOCUT	60~	OTHER	
1	085	155	158 - 253	29	4	484	Dot	IN	70%	Clutch out on A/C COMPRESSOR, HEAT CAUSING PROBLEMS E.O.T. #484 with TAPE TRANSPORT. FILE #086 ON TAPE AS FILE #602 B.O.T. #485 FILE #900-10SEC ALLOWED. WILL WORK AS LONG AS POSSIBLE (UNTIL HEAT PROBLEM SHUTS UP DOWN)
2	086	156	159 - 254	30		484				
3		157	160 - 255	31		485				
4		158	161 - 256	32						
5		159	162 - 257	33						
6	SKIP	161	164 - 259	35						
7	SKIP	163	166 - 261	37						
8	SKIP	165	168 - 263	39						
9	SKIP	167	170 - 265	41						
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEGB MPX-128
SWEEP FREQUENCY 8-40 Hz / 22 SEC	SWEEP PATTERN CODE #4163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 111122222221111	CODE #2125
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-41100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz.	STATION INTERVAL 330'
REMARKS 4M.S. SAMPLE RATE.	42 SEC. RECORD LENGTH.	OBSERVER 30.	SIMMONS/KRAMER	PARTY MGR.	LINE DIR. W → E.

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DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc. 4

CLIENT CUGDRP	AREA MINN LINE #4	STATE MINN	COUNTY TODD	DATE 7-21-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROAD	WEATHER CLEAR		LINE NO. 4

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	F I L T E R		REMARKS
							LOCUT	60 ~	
1	933	PULSE TEST				485	Dot	IN	B.O.T. #485; FILE #900-10 SEC. ALIEN'S.
934-935		EINT							RECORDER SET UP BETWEEN STAS. 231 & 232.
936-937		DRD							
953-954		Sum TEST							
960-961		NRJ TEST							
6	932	Similarity		4					50%
7	087	WIND STRIP							70%
8	088	157	160 - 255	1	4				CHECKING LINE; CHANGED DRIVE UNIT + EXCITATION CARD IN VIB. #1731 MADE SIMILARITY STRIPS (PAPER MONITOR ONLY)
9	089	158	161 - 256	2					1-96 CORRELATION MADE ON FILE #088
10	090	159	162 - 257	3					
11	091	160	163 - 258	4					
12	SKIP	161	164 - 259	5					V.P.'s #161-163 SKIPPED DUE TO WALK ONLY PERMIT.
13	SKIP	163	166 - 261	7					
14	092	165	168 - 263	9					
15	SKIP	167	170 - 265	11					V.P. #167 SKIPPED DUE TO HOUSE.
16	093	169	172 - 267	13		485			E.O.T. #485
17	094	170	173 - 268	14		486			B.O.T. #486. FILE #900-10 SEC. ALIEN'S.
18	095	171	174 - 269	15					RECORDING TRUCK DOWN TO REPAIR HOSE + RECHARGE AIR CON. (2 Hrs)
19	096	172	175 - 270	16					
20	097	173	176 - 271	17					
21	098	174	177 - 272	18					40% V.P. #174 STACKED ON FIRST HALF DUE TO HOUSE FILE #57 SHOULD HAVE BEEN #098
22	SKIP	175	178 - 273	19					V.P. #175 SKIPPED DUE TO HOUSE.
23	SKIP	177	180 - 275	21					
24	099	179	182 - 277	23					V.P. #179 STACKED ON LAST HALF DUE TO HOUSE. AIR CON. DOT ON - RECORDING TRUCK SENDING BY TO COOL OFF INST. FINISHED FOR THE DAY

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEGB MPX-28
SWEEP FREQUENCY 8-40 Hz / 2.2 SEC.	SWEEP PATTERN CODE #4163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 11112222221111	CODE #2125
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-9100 / 1-9900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 330'
REMARKS 4 M.S. SAMPLE RATE RECORD LENGTH		OBSERVER J.S. SIMMONS / KRAMER		PARTY MGR.	

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DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA MINN LINE #4	STATE MINN	COUNTY TODD	DATE 7-28-79
CREW NO. 6834	TERRAIN PAVED + DIRT ROAD	WEATHER OVERCAST - HUMID	LINE NO. 4	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	FILTER		REMARKS		
							LOCUT	60 ~			
1	933	Pulse Test	1	—	6 SEC						
2	934-935	EINT	2	—	" "					RECORDER SET UP BETWEEN STAs 250 & 251	
3	936-939	DRD	4	—	" "					HIWAY #71 CROSS LINE BETWEEN STAs #278 & 279	
4	953-954	SUM TEST	2	—	" "						
5	960-961	NRJ-TEST	2	—	" "						
6	932	Similarity	1	—	22 SEC				50%		
7	099	WINDSTRIP	1	—	6 SEC					CHECKING LINE	
8	100	179	182	-	277	2			5	486	50% 1-96 CORRELATION MADE ON FILE #100; B.O.T. #486
9	101	180	183	-	278	5				487	70% B.O.T. #487 FILE #900-10 SEC. ALONE'S.
10	102	181	184	-	279	6					
11	SKIP	183	186	-	281	8					STAs #281 + 282 WILL BE OPEN DUE TO SWAMP
12	SKIP	185	188	-	283	10					V.P. #183 + 185 SKIPPED DUE TO WALK ONLY PERMIT.
13	103	186	189	-	284	11					50% V.P. #186 STACKED ON LAST HALF DUE TO SKIP.
14	104	187	190	-	285	12					
15	105	188	191	-	286	13					V.P. #188 STACKED ON FIRST HALF DUE TO BARN.
16	SKIP	189	192	-	287	14					V.P. #189 SKIPPED DUE TO HOUSE + BARN.
17	106	191	194	-	289	16					NOISE ON STAs. 285-288 CLOSED BY IRRIGATION WELLS. STAs #289 OPEN FOR SWAMP.
18	107	193	196	-	291	18					70%
19	108	195	198	-	293	20				488	V.P. #195 STACKED ON FIRST HALF DUE TO BARN. B.O.T. #487
20	SKIP	197	200	-	295	22				488	B.O.T. #488 FILE #900-10 SEC. ALONE'S. V.P. #197 SKIPPED DUE TO HOUSE.
21	109	198	201	-	296	23					40% V.P. #198 STACKED ON LAST HALF DUE TO HOUSE.
22	110	199	202	-	297	24					70%
23	111	201	204	-	299	26					
24	112	202	205	-	300	27					
25	SKIP	203	206	-	301	28					V.P. #203 SKIPPED DUE TO HOUSE.

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MD610 SEGB MPX-128
SWEEP FREQUENCY 8-40 Hz/22 SEC.	SWEEP PATTERN CODE #5163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 1111 2222222 1111 CODE #2125	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR #-4100 1-4400	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5.	STATION INTERVAL 330'
REMARKS 4MS. SAMPLE RATE.	1/2 SEC. RECORD LENGTH	OBSERVER J.O. SIMMONS / KRAMER	PARTY MGR.	LINE DIR. W-E	

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

**Petty-Ray Geophysical
Division**
Geosource Inc.

CLIENT COGORP	AREA MINN LINE #4	STATE MINN	COUNTY TODD	DATE 7-23-79
CREW NO. 6834	TERRAIN PAVED + DIRT ROAD	WEATHER OVERCAST - HUMID	LINE NO. 4	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL.NO.	F I L T E R			RE MARKS
							LOCUT	60 ~	STRIKE	
1	113	205	208-303	30	5	488	OUT	IN	70%	V.P.#205 STACKED ON LAST HALF DUE TO HOUSE.
2	114	207	210-305	32						
3	115	209	212-307	34						
4	116	211	214-309	36		488				E.D.T.#488
5	118	212	215-310	37		489			40%	B.O.T.#489 FILE #900-10 SEC. ALONE; FILE #117 WIND STRIP
6	SKIP	213	216-311	38						V.P.#212 STACKED ON FIRST HALF DUE TO HOUSE V.P.#213 SKIPPED DUE TO HOUSE.
7	SKIP	215	218-313	40						V.P.#213 & 215 SKIPPED DUE TO HOUSE.
8	119	216	219-314	41					70%	V.P.#216 STACKED ON LAST HALF DUE TO HOUSE.
9	120	217	220-315	42						1-96 CORRELATION MADE ON FILE #120
10	121	219	222-317	44						3 RAW SWEEPS MADE ON FILE #121 (2 FOR QUALITY CONTROL + 1 FOR DR. KRAUFMAN)
11	122	221	224-319	46						
12	123	223	226-321	48						
13	124	224	227-322	49					50%	FINISHED FOR THE DAY
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS. # SEGB MA. 128
SWEEP FREQUENCY 8-40 Hz / 22 SEC.	SWEEP PATTERN CODE #5163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 222222 	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-9700 1-9900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 330'
REMARKS 4 M.S. SAMPLE RATE		OBSERVER J.S.D. SIMMONS/KRAMER		PARTY MGR.	
		42 SEC RECORD LENGTH			

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA MINN. LINE #4	STATE MINN.	COUNTY TODD	DATE 7-24-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROADS - HILLY	WEATHER OVERCAST - WET	LINE NO. 4	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	F I L T E R		REMARKS
							LOCUT	60 ~	
1	933 PULSE	1 — 6 SEC.				489	Out	IN	RECORDER SET UP BETWEEN STA'S 301 + 302
2	934 ETNI	2 — " "							OVERNITE RAINS LEFT LINE VERY WET.
3	935 DRD	4 — " "							
4	936 Sum Test	2 — " "							
5	937 NRI TEST	2 — " "				489			E.D.T.#489
6	938 Similarity	1 — 22 SEC.				490			B.D.T.#490; FILE #900-10SEC. ALONE'S.
7	125 Wind Strip	1 — 6 SEC.							CHECKING LINE.
8	Skip 225	228 — 323							70%
9	126 227	230 — 325	1						1-96 CORRELATION MADE ON FILE #126
10	127 228	231 — 326	2						40% VP#228 STACKED ON FIRST HALF DUE TO HOUSE
11	Skip 229	232 — 327	3						VP#229 SKIPPED DUE TO HOUSE
12	128 230	233 — 328	4						VP#230 STACKED ON LAST HALF DUE TO HOUSE
13	129 231	234 — 329	5						70%
14	130 232	235 — 330	6						
15	131 233	236 — 331	7						
16	132 234	237 — 332	8			490			E.D.T.#490
17	133 235	238 — 333	9			491			B.D.T.#491; FILE #900-10SEC. ALONE'S. FILE #302 SHOULD HAVE BEEN #133
18	134 236	239 — 334	10						
19	135 237	240 — 335	11						
20	136 238	241 — 336	12						
21	Skip 239	242 — 337	13						VP'S 239 - 259 SKIPPED DUE TO WALK ONLY PERMIT
22	" 241	244 — 339	15						
23	" 243	246 — 341	17						
24	" 245	248 — 343	19						
25	Skip 247	250 — 345	21						

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEG B MPX-128
SWEEP FREQUENCY 8-40 Hz / 22.5 SEC	SWEEP PATTERN CODE #5163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP 1	PATCH PATTERN IIII 2222 X 2222 IIII (CODE #2125)	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100'S 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 25 Hz	STATION INTERVAL 350'
REMARKS	OBSERVER TO SIMMONS/KRAMER		PARTY MGR.		

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

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CLIENT COCORP	AREA MINN. LINE #4	STATE MINN.	COUNTY TODD	DATE 7-24-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROADS - HILLY	WEATHER OVERCAST & WET	LINE NO. 4	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL.NO.	F I L T E R			RE MARKS
							LOCUT	60 ~	RELATIVE	
1	Skip	249	252 - 347	23		491	Out	IN	70%	
2	"	251	254 - 349	25						
3	"	253	256 - 351	27						
4	"	255	258 - 353	29						
5	"	257	260 - 355	31						
6	Skip	259	262 - 357	33						
7	137	260	263 - 358	34						VP#260 STACKED ON LAST HALF, DUE TO HIGH PRESSURE GAS LINE.
8	138	261	264 - 359	35						
9	139	262	265 - 360	36						
10	140	263	266 - 361	37		491				E.O.T.#491
11	142	264	267 - 362	38		492				B.O.T.#492; FILE#900-10SEC. ALONES; FILE#141 WIND SKIP.
12	143	265	268 - 363	39						
13	144	266	269 - 364	40						
14	145	267	270 - 365	41						
15	146	268	271 - 366	42						
16	147	269	272 - 367	43						1-96 CORRELATION MADE ON FILE#147
17	148	270	273 - 368	44						RAW SWEEP MADE ON FILE#148
18	149	271	274 - 369	45	4	492				E.O.T.#492
19	150	272	275 - 370	46		493				B.O.T.#493
20	Skip	273	276 - 372	48						
21										
22										FINISHED FOR THE DAY
23										
24										
25										

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEGB MPX-128
SWEEP FREQUENCY 8-40Hz/22SEC.	SWEEP PATTERN CODE#5163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP 1	PATCH PATTERN 222X222 (CODE 2125)	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-4100 1-4900	TYPE GEOPHONE ETH-EV22B	FREQUENCY 75 Hz.	STATION INTERVAL 330'
REMARKS 4 M.S. SAMPLE RATE			OBSERVER SIMMONS/KRAMER		LINE DIR. 1 TO 24 W. → E.

GEO-252-A

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

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CLIENT COCORP	AREA MINN. LINE #4	STATE MINN.	COUNTY TODD	DATE 7-25-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROADS	WEATHER CLEAR - WARM	LINE NO. 4	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL. NO.	F L T E R	RE MARKS
							LOCUT 60 ~	
1 933	PULSE	1 - 6 SEC.				493	Out IN	RECORDER SET UP BETWEEN STA'S 344 & 345
934 935	EINI	2 - " "						
936 939	DRD	4 - " "						
953 954	SUM TEST	2 - " "						
960 961	NRJ TEST	2 - " "						
6 932	Similarity	1 - 22 SEC.		5				50%
7 151	Wind Strip	1 - 6 SEC.						CHECKING LINE
8 152	274	277 - 372	5	5				70% 1-96 CORRELATION MADE ON FILE # 152
9 153	275	278 - 373	6					
10 154	276	279 - 374	7					
11 155	277	280 - 375	8			493		40% V.P.#277 STACKED ON FIRST HALF DUE TO HOUSE. E.D.T.#493
12 SKIP	279	282 - 377	10			494		B.O.T.#494 FILE #900-10SEC. ALONE'S
13 "	281	284 - 379	12					VP'S 279-293 SKIPPED DUE TO WALK-ONLY PERMIT (Hiway #71 (CROSS COUNTRY))
14 "	283	286 - 381	14					
15 "	285	288 - 383	16					
16 "	287	290 - 385	18					
17 "	289	292 - 387	20					
18 "	291	294 - 389	22					
19 SKIP	293	296 - 391	24					
20 156	294	297 - 392	25					40% V.P.#294 STACKED ON LAST HALF DUE TO HOUSE
21 157	295	298 - 393	26					70%
22 158	296	299 - 394	27					
23 159	297	300 - 395	28					
24 160	298	301 - 396	29					
25 161	299	302 - 397	30					V.P.#299 STACKED ON FIRST HALF DUE TO HOUSE.

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEG B MPX-128
SWEEP FREQUENCY 8-40 Hz / 22 SEC.	SWEEP PATTERN CODE # 5163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP 1	PATCH PATTERN 2222 2222 (CODE # 2125)	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-9100'S 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 330'
REMARKS 4ms Sample Rate 1/2 SEC. RECORD LENGTH	OBSERVER/TO SIMMONS/KRAMER	PARTY MGR.			

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

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CLIENT COCORP	AREA MINN. LINE # 4	STATE MINN.	COUNTY TODD	DATE 7-25-79
CREW NO. 6834	TERRAIN PAVED & DIRT ROADS	WEATHER CLEAR - WARM	LINE NO. 4	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL.NO.	F I L T E R			RE MARKS
							LOGUT	60 ~	% DRIVE	
1	SKIP 301	304-399	32	5		494	OUT	TN		VP# 301 SKIPPED DUE TO HOUSE
2	SKIP 302	305-400	33							VP# 302 SKIPPED DUE TO CHURCH
3	162 303	306-401	34						70%	V.P.# 303 STACKED ON LAST HALF DUE TO CHURCH
4	163 304	307-402	35			494				E.D.T.#494
5	165 305	308-403	36			495				B.O.T.#495. FILE#900-10SEC. ALONE'S, FILE#164 WIND STRIP.
6	SKIP 307	310-405	38							VP# 307 SKIPPED DUE TO HOUSE
7	166 308	311-406	39							V.P.# 308 STACKED ON LAST DUE TO HOUSE.
8	167 309	312-407	40							1-96 CORRELATION MADE ON FILE#167
9	168 310	313-408	41						50%	V.P.# 310 STACKED ON FIRST HALF DUE TO HOUSE.
10	SKIP 311	314-409	42							VP# 311 SKIPPED DUE TO HOUSE
11	169 313	316-411	44						70%	RAW SWEEP MADE ON FILE#169
12	170 314	317-412	45							
13	171 315	318-413	46			495				E.D.T.#495:
14	SKIP 316	319-414	47							V.P.s# 316 & 317 SKIPPED DUE TO HOUSES.
15	SKIP 317	320-415	48							
16										E.O.L.#4
17										
18										
19										
20										
21										
22										
23										
24										
25										

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10 SEGB MPX-120
SWEEP FREQUENCY 8-40 Hz / 22 SEC.	SWEEP PATTERN CODE# 5163	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP 1	PATCH PATTERN 222 x 222 (CODE # 2125)	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-4100'S 1-4900	TYPE GEOPHONE ETH-FV22B	FREQUENCY 25 Hz.	STATION INTERVAL 330'
REMARKS 4ms. SAMPLE RATE 4/2 SEC. RECORD LENGTH	OBSERVER SIMMONS/KRAMER	PARTY MGR.			