

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

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

CLIENT COCORP	AREA Michigan Line Two	STATE Michigan	COUNTY Gratiot	DATE 9-11-78
CREW NO. 6834	TERRAIN Flat - Farmland	WEATHER Overcast		LINE NO. Two

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES RL.NO.	F I L T E R			REMARKS
						LOCUT	60 ~	90 ~	
1	933 Pulse Test	1 - 6 Sec.			116	Out	Out		22 PAGES BOF# 001 (wind strip) ON REEL# 116 FILE# 900-10 SEC. ALL ONE'S O.B. SET UP BETWEEN STA.'S # 76 & 77 STARTING PUSHING NEW LINE # 2
274 435	EINT	2 - " "			↑	↑	↑		
326 939	DRD.	4 - " "							
433 954	Sum Test	2 - " "							
460 966	NRJ Test	2 - " "							
6	890 Similarity	1 - 31 Sec.		4	9:30			50%	
7	001 Wind Strip	1 - 6 Sec.		↑	10:30				RUNNING DOWN BAD CABLES & PHONES
8	002	5 - 100	1		11:00			70%	1-96 Correlation MADE ON FILE # 002 VP# stacked on last half
9	003	7 - 102	3		11:30			↑	
10	004	9 - 104	5		11:50				
11	SKIP	11 - 106	7		SKIP				VP# 749 SKIPPED DUE TO HOUSE
12	SKIP	13 - 108	9		SKIP				
13	005	15 - 110	11		12:20				VP# 11 STACKED ON LAST HALF DUE TO HOUSE
14	006	17 - 112	13		12:40				VIB# 14256 DOWN DUE TO BROCKE PIN IN LIFT CYLINDER (FIXED NOW)
15	007	19 - 114	15		1:15				
16	008	21 - 116	17		1:35				1 RAW SWEEP FOR DR KAUFMAN + 2 (1-48999-96) FOR GRAN GEARISER (Quilby Control) MADE ON FILE # 008
17	SKIP	23 - 118	19		SKIP				
18	SKIP	25 - 120	21		SKIP				VP# 5 SKIPPED DUE TO HOUSE
19	009	27 - 122	23		2:05				19420
20	SKIP	29 - 124	25		SKIP				VP# 25 SKIPPED DUE TO HOUSE
21	010	31 - 126	27		2:25				
22	SKIP	33 - 128	29		SKIP				VP# 15 29431 SKIPPED DUE TO HOUSE
23	SKIP	35 - 130	31		SKIP				
24	SKIP	37 - 132	33		SKIP				VP# 33 SKIPPED DUE TO HOUSE
25	011	39 - 134	35	↓	2:50	↓	↓	↓	↓

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10
SWEEP FREQUENCY 8-32 HZ.	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233X332211	
GEOPHONES PER PATCH 2.4	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-41100 1-4900	TYPE GEOPHONE ETH-EV22B	FREQUENCY 7.5 HZ.	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA Michigan Line Two	STATE Michigan	COUNTY Gratiot	DATE 9-11-78
CREW NO. 6834	TERRAIN FLAT - FARMLAND	WEATHER Overcast	LINE NO. Two	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TIME	TAPE RL.NO.	F I L T E R			REMARKS
							LOCUT	60 ~	90 ~	
1	012	41 - 136	37	4	3:10	116	Out	Out	90%	wind picking up
2	SKIP	43 - 138	39	↑	SKIP	↑	↑	↑	↑	
3	013	45 - 140	41		3:30	116				V.P.#41 stacked on last half due to House EOF #013 on Reel #116
4	015	47 - 142	43		4:00	117				BOF #014 (wind strip) on new Reel #117. File #900-10 seq. All One's
5	016	49 - 144	45		4:30	↑				1-96 Correlation made on File #015
6	017	51 - 146	47		4:50					OB. MOVE
7	018	53 - 148	3		5:20					OB. Set up Between Sta's 122 & 123 V.P.#49 stacked on last half
8	019	55 - 150	5		5:40					
9	020	57 - 152	7		6:00					
10	021	59 - 154	9	↓	6:20	↓	↓	↓	↓	
11					6:40					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
SWEEP FREQUENCY 8-32 Hz	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233x332211	
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 220'
REMARKS			OBSERVER Simmons	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA Michigan Line Two	STATE Michigan	COUNTY Gratiot	DATE 9-12-78
CREW NO. 6834	TERRAIN FLAT - FARMLAND	WEATHER Overcast - Intermitant Rain - Windy		LINE NO. Two

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES RL.NO.	F I L T E R			REMARKS
						LOCUT	60 ~	AMP DRIVE	
1 933	PULSE TEST	1 - 6 SEC.			117	Out	Out		OB. Set up BETWEEN STA'S 133 & 134
934-935	FINI	2 - " "			↑	↑	↑		OVERNIGHT RAIN AND CONTINUOUS INTERMITANT RAIN + DRIZZLE
936-939	DRD	4 - " "							CAUSING LEAKAGE PROBLEM (OLD PHONES) WIND AT 18mph
940-955	SUM TEST	2 - " "							QUIETING TO?
960-961	NRJ TEST	2 - " "							
6 890	SIMILARITY	1 - 31 SEC.		4	9:30			50%	RUNNING DOWN BAD CABLES + PHONES (TRYING TO ELIMINATE MOST OF
7 022	Wind Strip	1 - 6 SEC.		↑	10:30				LEAKAGE)
8 023	57	61 - 156	240		11:30			70%	1-96 CORRELATION MADE ON FILE # 023
9 024	59	63 - 158	2		11:50			↑	VIB # 12666 DOWN WITH BAD L.V.D.T. (FIXING NOW)
10 025	61	65 - 160	4		2:30				STANDING BY FOR RAIN
11 026	63	67 - 162	6		2:50				V.P. # 63 STACKED ON FIRST HALF DUE TO HOUSE
12 SKIP	65	69 - 164	8		SKIP	↓			V.P. # 65 SKIPPED DUE TO HOUSE
13 027	67	71 - 166	10		3:10	117			E.O.F. # 027 ON REEL # 117 V.P. # 67 STACKED ON LAST HALF
14 029	69	73 - 168	12		3:40	118			BOF. # 028 (WIND STRIP) ON NEW REEL # 118 FILE # 900-10 SEC. ALL ONE'S
15 030	71	75 - 170	14		4:00	↑			1-96 CORRELATION MADE ON FILE # 029
16 SKIP	73	77 - 172	16		SKIP				V.P. # 73 SKIPPED DUE TO HOUSE
17 031	75	79 - 174	18		4:20				
18 032	77	81 - 176	20		4:40				
19 033	79	83 - 178	22		5:40				waiting ON RAIN
20 034	81	85 - 180	24	↓	6:00	↓	↓	↓	RAW SWEEP MADE ON FILE # 034
21					6:20				FINISHED FOR THE DAY (STARTING TO RAIN AGAIN, VIB HAVE LONG
22									GO-AROUND DUE TO BRIDGE)
23									
24									
25									

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10
SWEEP FREQUENCY 8-32 Hz	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233 x 332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-91100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	LINE DIR. 1 TO 24 E → W

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA Michigan Line Two	STATE Michigan	COUNTY Gratiot	DATE 9-14-78
CREW NO. 6834	TERRAIN Flat - Farmland	WEATHER Overcast - Rain & Drizzle	LINE NO. Two	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPE RL. NO.	FILTER		REMARKS
						LOCUT	60 ~	
1	933	PULSE TEST			118	Out	Out	O.B. SET UP BETWEEN STA'S 158 & 159
2	934	ETWI						Laying out phones that were picked up to dry
3	936	DRD						VIB. # 12646 DOWN DUE TO PROBLEM IN INST. CASE
4	934	Sum Test						GROUND EXTREMELY WET, STILL HAVING LEAKAGE PROBLEM (OLD PHONES)
5	941	NRT TEST						STANDING BY FOR RAIN
6	890	Similarity		4	10:30		50%	RUNNING DOWN BAD CABLES & PHONES. REVERSED PAIR (No Diode Plug)
7	035	Wind Strip			12:30			REPLACING 1 CABLE AT A TIME TO FIND BAD CABLE
8	035	83			1:40		70%	STANDING BY FOR RAIN. 1-96 CORRELATION MADE ON FILE # 035 (Two file # 035)
9	036	85			2:30			" " " "
10	037	87			3:00			STA. # 187 OPEN DUE TO HIGHWAY 27 CROSSING LINE AT STA'S 186-188
11	038	89			3:40			
12	039	91			4:30	118		F.O.F. # 040 ON REEL # 118 STANDING BY FOR RAIN
13	040	93			5:00	118		
14					5:20			FINISHED FOR THE DAY (Picking up phones to dry overnight) RAINING OFF AND ON
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8-32 Hz		SWEEP PATTERN		SWEEPS PER PATTERN 16	
SWEEP PATTERNS PER SETUP		PATCH PATTERN 112233x332211			
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-41100 1-4900	TYPE GEOPHONE FTL-EU22B	FREQUENCY 7.5 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER Simmons	PARTY MGR.	

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

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

CLIENT COCORP	AREA Michigan Line Two	STATE Michigan	COUNTY Gratiot	DATE 9-15-78
CREW NO. 6834	TERRAIN Flat - Farmland	WEATHER CLEAR - wet - windy		LINE NO. Two

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPE RL. NO.	F I L T E R			REMARKS
						LOCUT	60 ~	% DRIVE	
1 933	PULSE TEST	1 - 6 Sec.			119	Out	Out		BOF # 041 (WIND STRIP) FILE # 900-10 SEC. ALL ONE'S
934	EINT	2 - " "			↑	↑	↑		O.B. SET UP BETWEEN STA'S 190 & 191
936-939	DRD	4 - " "							Laying out phones that were picked up to Dry
940-955	SUM TEST	2 - " "							Hiway # 27 Crosses Line at Sta's 186-188
946-961	NR1 TEST	2 - " "							
6 890	Similarity	1 - 31 Sec.		4	10:30			50%	Running Down Bad Cables & phones
7 041	Wind Strip	1 - 6 Sec.		↑	12:30				Running TEST AS PER HOUSTON'S REQUEST
8 042	95	99 - 194	1		1:00			70%	1-96 Correlation MADE ON FILE # 042
9 043	97	101 - 196	3		1:30				
10 044	99	103 - 198	5		1:50				
11 045	101	105 - 200	7		2:20				Waiting on traffic. V.P. # 101 Stacked on Last half Due to house
12 046	103	107 - 202	9		2:40				V.P. # 103 Stacked on First half Due to house
13 SKIP	105	109 - 204	11		SKIP				V.P. # 105 Skipped Due to house
14 047	107	111 - 206	13		3:20				waiting on traffic V.P. # 107 Stacked on Last half Due to house
15 048	109	113 - 208	15		3:40				
16 049	111	115 - 210	17		4:00				
17 050	113	117 - 212	19		4:20				V.P. 113 Stacked on First half Due to house
18 SKIP	115	119 - 214	21		SKIP				
19 SKIP	117	121 - 216	23		SKIP				V.P. 115 & 117 Skipped Due to houses
20 051	119	123 - 218	25		4:40	↓			
21 052	121	125 - 220	27		5:00	119			EOF # 052 ON REEL # 119 RAW SWEEP MADE ON FILE # 052
22 054	123	127 - 222	29		5:30	120			BOF # 053 (WIND STRIP) ON NEW REEL # 120 FILE # 900-10 SEC. ALL ONE'S
23 SKIP	125	129 - 224	31		SKIP	↑			1-96 Correlation MADE ON FILE # 054 V.P. 125 Skipped Due to house
24 055	127	131 - 226	33		6:00				
25 056	129	133 - 228	35	↓	6:20	↓	↓	↓	6:40 FINISHED VIB. FOR THE DAY (Doing Similarity AS PER HOUSTON REQUEST) (NOT ON TAPE)

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10
SWEEP FREQUENCY 8-32 Hz	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233x332211	
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 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division

Geosource Inc.

CLIENT COCORP	AREA Michigan Line # Two	STATE Michigan	COUNTY Gratiot	DATE 9-18-78
CREW NO. 6834	TERRAIN FLAT-FARMLAND	WEATHER OVERCAST - Rain & DRIZZLE	LINE NO. Two	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES RL.NO.	FILTER			REMARKS
						LOCUT	60~	% DRIVE	
1	933 Pulse Test				8:30 120	Out	Out		OB. Set up BETWEEN Sta.
934	935 EINT								RAIN OVER WEEKEND HAS LEFT GROUND EXTREMELY WET (STANDING WATER) STILL RAINING & DRIZZLING
936	939 DRD								
954	955 SUM TEST								
960	961 NRI TEST								
6	890 Similarity			4	9:30			50%	
7	057 Wind Strip				9:45				Running Down Bad Cables & phones (leakage)
8	058 131	135 - 230	1		10:45				1-96 Correlation made on UP# 131
9									
10									RAIN & DRIZZLE CAUSING TOO MUCH LEAKAGE & NOISE. Picking up phone too slow out OVERNIGHT
11									
12									
13									
14									Down Due to weather
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
SWEEP FREQUENCY 8-32 Hz	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233 X 332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 3-Y1100 1-Y900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT **COCORP** AREA **Michigan Line Two** STATE **Michigan** COUNTY **Gratiot** DATE **9-19-78**
 CREW NO. **6834** TERRAIN **Flat - Farmland** WEATHER **Overcast - Wet** LINE NO. **Two**

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	START TIME	TAPE RL. NO.	FILTER			REMARKS
							LOCUT	60 ~	70 ~	
1	933 Pulse Test	1-6 Sec.			8:30	120	Out	Out		OB. SET UP BETWEEN STA'S
2	935 EINT	2- " "								haying out line which was picked up to Dry out overnight
3	936-939 DRD	4- " "								Still extremely wet from rains
4	940-952 SUM TEST	2- " "								Highway # 27 crosses line at STA'S 187-189, STA # 188 Full
5	960-961 NRT TEST	2- " "								in median. Gas pump station at STA'S 182 & 183
6	890 Similarity	1-31 Sec.		5	9:30				50%	
7	059 Wind Strip	1-6 Sec.			12:00					Running Down Bad Cables & Phones
8	SKIP 133	137-232	3		SKIP				70%	VP # 133 SKIPPED DUE TO HOUSE
9	060 135	139-234	5	5	12:35					1-96 CORRELATION MADE ON FILE # 060
10	061 137	141-236	7		1:05					V.P. # 137 STACKED ON FIRST HALF DUE TO HOUSE
11	SKIP 139	143-238	9		SKIP					VP # 139 SKIPPED DUE TO HOUSE
12	062 141	145-240	11		1:25					VP # 141 STACKED ON FIRST HALF DUE TO HOUSE
13	SKIP 143	147-242	13		SKIP					VP # 143 SKIPPED DUE TO HOUSE
14	063 145	149-244	15		1:45					VP # 145 STACKED ON LAST HALF DUE TO HOUSE
15	064 147	151-246	17		2:05					
16	065 149	153-248	19		2:25	120				EOF # 065 ON REEL # 120
17	SKIP 151	155-250	21		SKIP					REEL # 121 MONTHLY TESTS RUNNING DOWN BAD TRACE
18	067 153	157-252	23		3:00	122				BOF # 066 (WIND STRIP) ON NEW REEL # 122 1-96 CORRELATION MADE ON FILE # 067
19	SKIP 155	159-254	25		SKIP					V.P. # 155 SKIPPED DUE TO HOUSE
20	068 157	161-256	27		3:30					
21	069 159	163-258	29		3:50					
22	SKIP 160	165-260	31		SKIP					V.P. # 161 SKIPPED DUE TO HOUSE
23	070 163	167-262	33	4	4:10					VIB # 1266? Down with BROKEN AIR LINE. Fixing Now
24	SKIP 165	169-264	35		SKIP					V.P. # 165 SKIPPED DUE TO HOUSE
25	071 168	171-266	37		4:30					VP # 167 STACKED ON LAST HALF DUE TO HOUSE FIN. SWEEP MADE ON FILE # 071

TOTAL SETUPS _____ TOTAL SWEEPS _____ TOTAL COVERAGE _____ TOTAL FIELD TIME _____ DRIVING TIME _____ SYSTEM NO. 1 FOR DR. KAUFMAN
 2 FOR GERRI GRANT/STER

SWEEP FREQUENCY **8-32 Hz** SWEEP PATTERN _____ SWEEPS PER PATTERN **16** SWEEP PATTERNS PER SETUP _____ PATCH PATTERN **112233X332211**

GEOPHONES PER PATCH **24** NO. OF RECORDING PATCHES **96** TYPE VIBRATOR **4-91100** TYPE GEOPHONE **FTL-EV22B** FREQUENCY **25 Hz** STATION INTERVAL **220'** LINE DIR. **1 TO 24 E → W**

REMARKS _____ OBSERVER **SIMMONS** PARTY MGR. _____

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

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

CLIENT COCORP	AREA MICHIGAN LINE TWO	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-19-78
CREW NO. 6834	TERRAIN FLAT-FARMLAND	WEATHER CLEAR-WET		LINE NO. TWO

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TIME	TAPE RL.NO.	F I L T E R			REMARKS	
							LOCUT	60 ~	% ATTEN		
1	072	169	173-268	39	5	4:50	122	Out	Out	70%	VIB # 12667 FIXED + BACK ON LINE.
2	073	171	175-270	41		5:20					RUNNING DOWN BAD PHONES, REPLACING BAD CABLE
3	SKIP	173	177-272	43		SKIP					UP # 173 SKIPPED DUE TO HOUSE
4	074	175	179-274	45		5:40					
5	075	177	181-276	47		6:00					
6											
7						6:20					FINISHED FOR THE DAY
8											
9											
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.
SWEEP FREQUENCY 8-32 Hz		SWEEP PATTERN		SWEEPS PER PATTERN 16	
SWEEP PATTERNS PER SETUP		PATCH PATTERN 112233x332211			
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-4100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA Michigan Line Two	STATE Michigan	COUNTY Gratiot	DATE 9-20-78
CREW NO. 6834	TERRAIN Flat - Farmland	WEATHER Partly-Cloudy, Wet	LINE NO. Two	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPE RL.NO.	FILTER		REMARKS
						LOCUT	60 ~	
1	933 Pulse Test	1 - 6 Sec.			8:00 122	Out	Out	OIB. Set up Between Sta.'s 183 & 184
2	935 EINT	2 - " "						Hiway # 27 Crosses line between Sta's 187-189. Blacktop
3	936-939 DRD	4 - " "						Road Crosses line between Sta.'s 233 & 234
4	940-955 Sum Test	2 - " "						
5	960-961 NRJ Test	2 - " "						
6	890 Similarity	1 - 31 Sec.		5	8:50			50%
7	076 Windstrip	1 - 6 Sec.			9:40			
8	077 179	183 - 278	2		9:50			70%
9	SKIP 181	185 - 280	4		SKIP			1-96 Correlation made on file # 077
10	SKIP 183	187 - 282	6		SKIP			VP's # 181 & 183 Skipped due to house & gas pipeline
11	078 185	189 - 284	8		10:10			VP # 185
12	SKIP 187	191 - 286	10		SKIP			VP # 187 Skipped due to Hiway # 27
13	079 189	193 - 288	12		10:30 122			VP # 189 stacked on last half due to Hiway EOF 079 on Reel # 122
14	081 191	195 - 290	14		11:00 123			BOF # 080 (windstrip) on new Reel # 123. File # 90-10 sec. All One's
15	082 193	197 - 292	16		11:20			
16	083 195	199 - 294	18		11:40			
17	084 197	201 - 296	20		12:00			
18	085 199	203 - 298	22		12:20			Sta. # 299 Open due to Bridge
19	086 201	205 - 300	24		12:40			VP # 201 stacked on first half due to house
20	087 203	207 - 302	26	4	1:00			VIB # 12667 Down due to Air Leak. VP # 203 stacked on first half
21	SKIP 205	209 - 304	28		SKIP			
22	SKIP 207	211 - 306	30		SKIP			VP # 205 & 207 Skipped due to house
23	088 209	213 - 308	32		1:20			VP # 209 stacked on last half due to house. Rain Sweep made on file # 088
24	089 211	215 - 310	34		1:40			VP # 211 stacked on first half due to house
25	SKIP 213	217 - 312	36		SKIP			VP # 213 Skipped due to trailer

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10
SWEEP FREQUENCY 8-32 Hz.	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233X332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE ETL-FV22B	FREQUENCY 2.5 Hz	STATION INTERVAL 220'
REMARKS	OBSERVER Simmons		PARTY MGR.		

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA MICHIGAN LINE TWO	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-20-78
CREW NO. 6834	TERRAIN FLAT - FARMLAND	WEATHER CLEAR - WET	LINE NO. TWO	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES RL. NO.	FILTER			REMARKS
						LOCUT	60 ~	AMP	
1	090	219 - 314	38	4	2:10 123	Out	Out	70%	1-96 CORRELATION MADE ON FILE # 090
2	091	221 - 316	40		2:20				VP# 217 STACKED ON FIRST HALF DUE TO HOUSE
3	SKIP	223 - 318	42		SKIP				VP# 219 SKIPPED DUE TO HOUSE
4	092	225 - 320	44		2:40				VP# 221 STACKED ON LAST HALF DUE TO HOUSE
5	093	227 - 322	46		3:00				TRACTORS UP + DOWN LINE PLOWING FIELDS
6	SKIP	229 - 324	48		SKIP				O.B. TRUCK MOUE VP# 225 SKIPPED DUE TO HOUSE
7	SKIP	231 - 326	2		3:40				O.B. SET UP BETWEEN STA'S 301 & 302
8	094	233 - 328	4		4:00 123				EOF# 094 ON REEL # 123. WIND PICKING UP
9	095	235 - 330	6		4:20 124				BOF# 095 ON NEW REEL # 124 FILE # 900-10 SEC. ALL ONES
10	SKIP	237 - 332	8		SKIP				STANDING BY FOR STORM (COLD FRONT MOVING IN)
11	096	239 - 334	10		5:05				VP# 235 STACKED ON LAST HALF DUE TO HOUSE
12	097	241 - 336	12		5:25				
13									
14					5:45				FINISHED FOR THE DAY
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8-32 Hz.	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233 x 332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-91100 1-4900	TYPE GEOPHONE ETL - EV22B	FREQUENCY 7.5 Hz.	STATION INTERVAL 220'
REMARKS	OBSERVER SIMMONS			PARTY MGR.	
					LINE DIR. 1 TO 24 E → W

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA MICHIGAN LINE TWO	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-22-78
CREW NO. 6834	TERRAIN FLAT - FARMLAND	WEATHER CLEAR - WET	LINE NO. TWO	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES	TAPE RL.NO.	FILTER			REMARKS
							LOCUT	60~	% DRIVE	
1	933 PULSE TEST	1 - 6 SEC.								OB. SET UP BETWEEN STA'S # 314 & 315
2	934-935 ELNT	2 - " "								STA. # 299 OPEN DUE TO BRIDGE. BLACKTOP CROSSES LINE AT STA'S 265-266
3	936-939 DRD	4 - " "								
4	944-955 SUM TEST	2 - " "								
5	960-961 NRJ TEST	2 - " "								
6	890 Similarity	1 - 31 SEC.		5					50%	
7	098 Wind Strip	1 - 6 SEC.								RUNNING DOWN BAD CABLES & PHONES
8	099 239	248 - 338	1						70%	1-96 CORRELATION MADE ON FILE # 099
9	100 241	245 - 340	3							
10	SKIP 243	247 - 342	5							VP# 243 SKIPPED DUE TO HOUSE
11	101 245	249 - 344	7							VP. 245 STACKED ON LAST HALF DUE TO HOUSE
12	SKIP 247	251 - 346	9							VP'S # 247 & 249 SKIPPED DUE TO HOUSE
13	SKIP 249	253 - 348	11							
14	102 251	255 - 350	13							VP# 251 STACKED ON LAST HALF DUE TO HOUSE. WAITING ON TRAFFIC
15	103 253	257 - 352	15							VP. 253 " " First " " " "
16	SKIP 255	259 - 354	17							VP# 255 & 257
17	SKIP 257	261 - 356	19							
18	104 259	263 - 358	21							VP# 259 STACKED ON LAST HALF DUE TO HOUSE
19	SKIP 261	265 - 360	23							VP# 261 SKIPPED DUE TO FOUNDATION ON NEW HOUSE
20	105 263	267 - 362	25							VP# 263 STACKED ON LAST HALF DUE TO FOUNDATION
21	106 265	269 - 364	27							
22	SKIP 267	271 - 366	29							
23	107 269	273 - 368	31			124				EOF# 107 ON REEL # 124
24	SKIP 271	275 - 370	33			125				BOF# 108 (WIND STRIP) ON NEW REEL # 125. FILE # 900-10 SEC. ALL ONES
25	SKIP 273	277 - 372	35							VP# 271 & 273 SKIPPED DUE TO HOUSES

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
			11		MDS-10
SWEEP FREQUENCY	SWEEP PATTERN	SWEEPS PER PATTERN	SWEEP PATTERNS PER SETUP	PATCH PATTERN	
8-32 Hz		16		112233 X 332211	
GEOPHONES PER PATCH	NO. OF RECORDING PATCHES	TYPE VIBRATOR	TYPE GEOPHONE	FREQUENCY	STATION INTERVAL
24	96	4-4100 1-4900	ETL-EV22B	25 Hz	220'
REMARKS	OBSERVER			PARTY MGR.	
	SIMMONS				

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

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

CLIENT COCORP	AREA Michigan Line # Two	STATE Michigan	COUNTY GRATIOT	DATE 9-22-78
CREW NO. 6834	TERRAIN Flat - FARMLAND	WEATHER CLEAR - WET - COOL		LINE NO. Two

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES RL. NO.	F I L T E R			REMARKS
						LOCUT	60 ~	20% 20% 20%	
1	275	279 - 374	37	5	2:00 125	Out	Out	20%	1-96 CORRELATION MADE ON FILE # 109
2	277	281 - 376	39		2:30				
3	279	283 - 378	41		2:50				
4	SKIP	285 - 380	43		SKIP				VP # 281 SKIPPED DUE TO HOUSE
5	283	287 - 382	45		3:10				RAW SWEEP MADE ON FILE # 112. (FOR DR. KAUFMAN 2/1-48, 49-96) FOR GERM
6	285	289 - 384	47		3:30				OB MOVIE GRAPHISER
7	SKIP	291 - 386			SKIP				OB SET UP BETWEEN STA. 363 & 364 VP # 287 SKIPPED DUE TO HOUSE
8	289	293 - 388	2		4:00				
9	291	295 - 390	4		4:20				
10	293	297 - 392	6		4:40				
11	295	299 - 393	8		5:00				
12									
13					5:20				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-10
SWEEP FREQUENCY 8-32 Hz	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112232X332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 2.5 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

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

CLIENT COCORP	AREA MICHIGAN LINE TWO	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-23-78
CREW NO. 6834	TERRAIN FLAT - FARMLAND	WEATHER CLEAR - WET - COLD	LINE NO. TWO	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP SWEEP TIME	TAPE RL. NO.	FILTER			REMARKS
							LOCUT	60 ~	AMP % DRIVE	
1	933	PULSE TEST				125	Out	Out		OB. SET UP BETWEEN STA. 363 & 364
2	934	EINT								
3	936-939	DRD								
4	940-955	SUM TEST								
5	960-961	NRJ TEST								
6	890	SIMILARITY		5					50%	
7	118	WIND STRIP								RUNNING DOWN BAD CABLES
8	119	297	301-396	10					70%	1-96 CORRELATION MADE ON FILE # 119
9	120	299	305-398	12						
10	121	301	305-400	14		125				EOF # 121 ON REEL # 125
11	122	303	307-402	16		126				BOF # 122 ON NEW REEL # 126. FILE # 900 - 10 SEC. ALLOW'S
12	SKIP	305	309-404	18						SKIP SI
13	SKIP	307	311-406	20						SKIP
14	SKIP	309	313-408	22						SKIP
15	123	311	315-410	24						
16	124	313	317-412	26						
17	SKIP	315	319-414	28						SKIP
18	125	317	321-416	30						V.P. # 302-309 SKIPPED DUE TO HOUSES & BARNES
19	126	319	323-418	32						
20	127	321	325-420	34		126				EOF # ON REEL # 126. V.P. # 321 STACKED ON FIRST HALF
21	SKIP	323								SKIP
22	"	323								SKIP
23	"	327								V.P. # 323-341 SKIPPED DUE TO DRAINAGE TILE
24	"	329								WILL START ON STA. # 343 PULLING SPREAD TO MAINTAIN
25	"	331								STACK INTERGITY THRU SKIP, WILL START WITH NEW REEL # 127. MOVING CABLES & PHONES FROM FRONT TO REAR OF LINE

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8-32 HZ	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233 X 332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 HZ	STATION INTERVAL 220'
REMARKS	OBSERVER SIMMONS		PARTY MGR.		

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA Michigan Line Two	STATE Michigan	COUNTY GRATIOT	DATE 9-23-78
CREW NO. 6834	TERRAIN Flat - FARMLAND	WEATHER CLEAR - WET	LINE NO. Two	

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	AMP GAIN	TAPE RL.NO.	F I L T E R			REMARKS
							LOCUT	60 ~	ADRIIVE	
1	SKIP			5	SKIP		Out	Out	70%	
2	"				"					
3	"				"					
4	SKIP				SKIP					FILE #128 (WIND STRIP) O.B. SET UP BETWEEN STA'S 315 & 316
5	128	244 - 339	1		:	127				BOF #128 ON NEW REEL #127. FILE #900-10 SEC. ALL ONE'S
6	130	246 - 341	3		:					
7	131	248 - 343	5		:					
8	132	250 - 345	7							waiting on traffic
9	133	252 - 347	9							
10	134	254 - 349	11							
11	135	256 - 351	13							
12	SKIP	258 - 353	15		SKIP					V.P.'S 357 & 359 SKIPPED DUE TO HOUSE
13	SKIP	260 - 355	17		SKIP					
14	136	262 - 357	19							
15	137	264 - 359	21							
16	138	266 - 361	23							
17	139	268 - 363	25							
18										
19										FINISHED FOR THE DAY
20										
21										
22										
23										
24										
25										

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10
SWEEP FREQUENCY 8-32 Hz	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233x332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 75 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

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

CLIENT COCORP	AREA Michigan Line 2 (Two)	STATE Michigan	COUNTY Gratiot	DATE 9-25-78
CREW NO. 6834	TERRAIN FLAT - FARMLAND	WEATHER CLEAR - COOL		LINE NO. 2 (Two)

REC.NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	START TIME	TAPE RL.NO.	FILTER			REMARKS
							LOCUT	60~	DRIVE	
1	933	PULSE TEST			8:30	127	Out	Out		O.B. Set up BETWEEN STA'S 340 & 341
2	934 935	EINT								
3	936 937	DRD								
4	938 939	SUM TEST								
5	940 941	NRJ TEST								
6	890	Similarity		5	9:30				50%	VIB# 12666 DOWN DUE TO WATER LEAK
7	140	Wind Strip			10:45					Running Down Bad Cables & Phones
8	141	369	270-365	2	4	11:00	127		70%	EOF# 141 ON REEL# 127. 1-96 CORRELATION MADE ON FILE# 141
9	142	371	272-367	4		11:35	128			BOF# 142 ON NEW REEL# 128
10	143	373	274-369	6		12:15				VP# 373 STACKED ON FIRST HALF DUE TO HOUSE
11	SKIP	375	276-371	8		SKIP				VP# 375 SKIPPED DUE TO HOUSE
12	144	377	278-378	10		12:35				VP# 377 STACKED ON FIRST HALF DUE TO HOUSE
13	SKIP	379	280-375	12		SKIP				VP'S# 379 & 381 SKIPPED DUE TO HOUSE
14	SKIP	381	282-378	14		SKIP				
15	145	383	284-379	16		12:55				
16	146	385	286-381	18	4	1:15				
17	147	387	288-385	20	5	1:35				VIB# 12666 BACK ON LINE
18	SKIP	389	290-385	22		SKIP				VP# 389 SKIPPED DUE TO HOUSE
19	148	391	292-387	24		1:55				
20	149	393	294-389	26		2:15				
21	SKIP	395	296-391	28		SKIP				VP# 395 SKIPPED DUE TO HOUSE
22	150	397	298-393	30		2:35				VP# 397 STACKED ON LAST HALF DUE TO HOUSE
23	151	399	300-395	32		2:55				
24	SKIP	401	302-397	34		SKIP				VP# 401 SKIPPED DUE TO HOUSE
25	152	403	304-399	36		3:15				VP# 403 STACKED ON LAST HALF DUE TO HOUSE

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8-32 Hz.		SWEEP PATTERN		SWEEPS PER PATTERN 16	
SWEEP PATTERNS PER SETUP		PATCH PATTERN 112233X332211			
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 2.5 Hz.	STATION INTERVAL 220'
REMARKS			OBSERVER Simmons	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA MICHIGAN LINE 2 (Two)	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-25-78
CREW NO. 6834	TERRAIN FLAT - FARMLAND	WEATHER CLEAR - COOL	LINE NO. 2 (Two)	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	START TIME	TAPE RL. NO.	FILTER			REMARKS
							LOCUT	60 ~	70 ~	
1	153	306 - 401	38	5	3:33	128	Out	Out	70%	
2	SKIP	308 - 403	40	↑	SKIP	↑	↑	↑	↑	VP# 407 SKIPPED DUE TO HOUSE
3	154	310 - 405	42	↑	3:52	↑	↑	↑	↑	VP# 409 STUCK ON FIRST HALF DUE TO HOUSE
4	SKIP	312 - 407	44	↑	SKIP	↓				VP# 411 SKIPPED DUE TO HOUSE
5	155	314 - 409	46	↑	4:15	128				EOF # 155 ON REEL # 128
6	SKIP	316 - 411	48	↑	SKIP	129				VP# 415 & 417 SKIPPED DUE TO
7	SKIP	318 - 413		↑	SKIP	↑				OB. MOVE. OB SET UP BETWEEN STA'S 391 + 392
8	157	320 - 415	1	↑	4:55					BOF # 156 (WIND STRIP) ON NEW REEL # 129. FILE # 900-10 SEC. ALL ONES
9	SKIP	322 - 417	3	↑	SKIP					1-96 CORRELATION MADE ON FILE # 157. VP# 421 SKIPPED DUE TO HOUSE
10	158	324 - 419	5	↑	5:45					RUNNING DOWN BAD CABLE, WAITING ON TRAFFIC.
11	SKIP	326 - 421	7	↑	SKIP					VP# 425 SKIPPED DUE TO HOUSE
12	159	328 - 423	9	↑	6:05					
13	160	330 - 425	11	↓	6:20	↓	↓	↓	↓	RAW SWEEP MADE ON FILE # 160
14										
15					6:40					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.
SWEEP FREQUENCY 8-32 HZ	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233 X 332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-4100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 9.5 HZ	STATION INTERVAL 220'
REMARKS	OBSERVER SIMMONS		PARTY MGR.		

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA MICHIGAN LINE 2 (Two)	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-26-78
CREW NO. 6834	TERRAIN FLAT - FARMLAND	WEATHER CLEAR - COOL - WINDY	LINE NO. 2 (Two)	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TIME	TAPE RL. NO.	FILTER			REMARKS
							LOCUT	60 ~	80 ~	
1	933 Pulse Test				8:30	129	Out	Out	80 ~	O.B. Set up BETWEEN STA.'S 403 & 404
234	0935 E.L.M.I									FARMERS ALONG ENTIRE LINE HARVESTING BEAN CROP, TRACTORS UP AND DOWN LINE.
236	939 DRD									WIND PICKING UP.
244	955 Sum Test									
240	961 NRJ Test									
6	890 Similarity			5	9:30					50%
7	161 Wind Strip				11:00					
8	162 431	332 - 427	1		11:30					70%
9	163 433	334 - 429	3		12:10					
10	164 433	336 - 431	5		12:30					
11	165 439	338 - 433	7		12:50					
12	SKIP 439	340 - 435	9		SKIP					
13	166 441	342 - 437	11		1:10					
14	SKIP 443	344 - 439	13		SKIP					
15	167 445	346 - 441	15		1:30					
16	168 449	348 - 443	17		1:50	Y				
17	169 449	350 - 445	19		2:10	129				
18	SKIP 451	352 - 447	21		SKIP					
19	SKIP 452	354 - 449	23		SKIP					
20	SKIP 453	356 - 451	25		SKIP					
21	171 459	358 - 453	27		2:40	130				
22	172 459	360 - 452	29		3:20					
23	SKIP 461	362 - 457	31		SKIP					
24	173 463	364 - 459	33		3:50					
25	SKIP 465	366 - 461	35	Y	SKIP	Y	Y	Y	Y	

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8-32 Hz		SWEEP PATTERN		SWEEPS PER PATTERN 16	
SWEEP PATTERNS PER SETUP		PATCH PATTERN 112233X332211			
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 2.5 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER Simmons	PARTY MGR.	

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

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

CLIENT COCORP	AREA MICHIGAN LINE 2 (Two)	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-26-78
CREW NO. 6834	TERRAIN Flat - FARMLAND	WEATHER CLEAR - COOL - WINDY		LINE NO. 2 (Two)

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	SKIP TIME	TAPE RL. NO.	F I L T E R			RE MARKS
							LOCUT	60 ~	PASSIVE	
1	SKIP 467	368 - 463	37	5	SKIP	130	Out	Out	70%	VP # 467 & 469 SKIPPED DUE TO HOUSE
2	SKIP 469	370 - 465	39	↑	SKIP	↑	↑	↑	↑	
3	174 471	372 - 467	41	↑	5:30	↑	↑	↑	↑	WAITING ON TRAFFIC. RAW SWEEP (FOR DE KAUFMAN & 2 [48-49-96] FOR ^{GENERAL} GEARISEN)
4	172 473	374 - 469	43	↑	5:20	↑	↑	↑	↑	MADE ON FILE 174 TRAFFIC PICKING UP (WILL SHOOT IN BETWEEN NOISE)
5	176 475	376 - 471	45	↑	5:50	↑	↑	↑	↑	WAITING ON TRAFFIC
6	SKIP 477	378 - 473	47	↓	SKIP	↓	↓	↓	↓	VP'S 477 & 479 SKIPPED DUE TO HOUSE
7	SKIP 479	380 - 475	49	↓	SKIP	↓	↓	↓	↓	
8										
9					6:20					FINISHED FOR THE DAY
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.
SWEEP FREQUENCY 8-32 Hz.		SWEEP PATTERN		SWEEPS PER PATTERN 16	
SWEEP PATTERNS PER SETUP		PATCH PATTERN 112233X332211			
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE ETL - EV2.2B	FREQUENCY ?5 Hz.	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA Michigan Line 2 (Two)	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-27-78
CREW NO. 6834	TERRAIN FLAT-FARMLAND	WEATHER CLEAR-COOL	LINE NO. 2 (Two)	

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES	TAPE RL. NO.	FILTER			REMARKS
							LOCUT	60~	70~	
1 933	PULSE TEST	1 — 6 SEC.			8:50	130	Out	Out		O.B. SET UP BETWEEN STA'S 453 & 454
2 934	EINT	2 — " "								FARMERS HARVESTING BEANS ALONG INTIRE LINE
3 936-939	DRD	4 — " "								STORM MOVING IN FROM WEST. STARTING TO GET OVER
4 944-952	SUM TEST	2 — " "								CAST & CLOUDY, WIND PICKING UP.
5 960-961	NRJ TEST	2 — " "								
6 890	SIMILARITY	1 — 31 SEC.		5	9:30				50%	
7 177	WIND STRIP	1 — 6 SEC.			11:00					RUNNING DOWN BAD CABLES & PHONES
8 178	481	382 — 477	1		11:10				70%	1-96 CORRELATION MADE ON FILE # 178
9 179	483	384 — 479	3		11:30					
10 180	485	386 — 481	5		12:10					WAITING ON TRAFFIC
11 181	487	388 — 483	7		12:50					" " "
12 182	489	390 — 485	9		1:30					" " "
13 183	491	392 — 487	11		1:50	130				E.O.F. # 183 ON REEL # 130 (STANDING BY FOR RAIN & LIGHTING)
14 184	493	394 — 489	13			131				BOF # 184 ON NEW REEL # 131. FILE # 900-10 SEC. ALL ONES
15	495	396 — 491	15							
16	497	398 — 493	17		2:45					FINISHED FOR DAY DUE TO WEATHER
17	499	400 — 495	19							
18	501	402 — 497	21							
19	503	404 — 499	23							
20	505	406 — 501	25							
21	507	408 — 503	27							
22	509	410 — 505	29							
23	511	412 — 507	31							
24	513	414 — 509	33							
25	515	416 — 511	35							

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO. MDS-10
SWEEP FREQUENCY 8-32 Hz	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233X332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE FTL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER Simmons	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA MICHIGAN LINE 2 (Two)	STATE MICHIGAN	COUNTY GRATIOT	DATE 9-28-78
CREW NO. 6834	TERRAIN FLAT-FARMLAND	WEATHER CLEAR-WET		LINE NO. 2 (Two)

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES RL. NO.	F L T E R				REMARKS
						LOCUT	60~	50%	70%	
1 933	PULSE TEST	1-6 SEC.			131	Out	Out			BOF. #184 (WIND STRIP) ON NEW REEL #131
484-0035	E.I.N.T.	2- " "				↑	↑	↑		OB. SETUP BETWEEN STA'S 463 & 464
486-939	DRD.	4- " "								FARMERS HARVESTING BEANS & CORN ALONG INTIRE LINE
484-0035	SUM TEST	2- " "								LINE VERY WET FROM RAIN YESTERDAY
910-0061	NRJ TEST	2- " "								COUNTY GRADING ROAD FROM STA. #517-469
6 890	SIMILARITY	1-315 SEC.		5	9:30				50%	
7 184	WIND STRIP	1-6 SEC.			10:45					RUNNING DOWN BAD CABLES & PHONES
8 185	493	394-489	3		11:00				70%	1-96 CORRELATION MADE ON FILE #185
9 SKIP	495	396-491	5		SKIP					VP# 495 & 497 SKIPPED DUE TO HOUSE
10 SKIP	497	398-493	7		SKIP					
11 186	499	400-495	9		11:30					VP# 499 STACKED ON LAST HALF DUE TO HOUSE (WAITING ON TRAFFIC)
12 187	501	402-497	11		11:50					
13 SKIP	503	404-499	13		SKIP					VP# 503 SKIPPED DUE TO HOUSE
14 188	505	406-501	15		12:20					VP# 505 STACKED ON LAST HALF DUE TO HOUSE (WAITING ON TRAFFIC)
15 189	507	408-503	17		12:40					
16 SKIP	509	410-505	19		SKIP					VP# 509 SKIPPED DUE TO HOUSE
17 190	511	412-507	21		1:00					
18 191	513	414-509	23		1:20					
19 192	515	416-511	25		1:40					
20 193	517	418-513	27		2:00					VP# 517 STACKED ON FIRST HALF DUE TO INTERSECTION
21 SKIP *	519	420-515	29		SKIP					NOW IN MONTCHARM COUNTY. VP# 519 SKIPPED DUE TO INTERSECTION
22 194	521	422-517	31		2:20					VP# 521 STACKED ON LAST HALF DUE TO INTERSECTION
23 SKIP	523	424-519	33		SKIP					VP# 523 & 524 SKIPPED DUE TO HOUSE
24 SKIP	525	426-521	35		SKIP					
25 195	527	428-523	37	↓	2:40	↓	↓	↓	↓	VP# 527 STACKED ON FIRST HALF DUE TO HOUSE

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8-32 Hz		SWEEP PATTERN		SWEEPS PER PATTERN 16	
SWEEP PATTERNS PER SETUP		PATCH PATTERN 112233X32211			
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-4100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 2.5 Hz.	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER

Petty-Ray Geophysical
Division
Geosource Inc.

CLIENT COCORP	AREA Michigan Line #2 (Two)	STATE Michigan	COUNTY Gratiot - Montcalm	DATE 9-28-78
CREW NO. 6834	TERRAIN Flat - Farmland	WEATHER Clear - Wet		LINE NO. 2 (Two)

SKIP
BAD REC →

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	SKIP GATE TIME	TAPE RL. NO.	FILTER			REMARKS
							LOCUT	60 ~	90 ~	
1	SKIP	430-525	39	5	SKIP	131	Out	Out	70%	VP# 529 SKIPPED DUE TO HOUSE
2	196	432-527	41	↑	3:00	131	↑	↑	↑	E.O.F #196 ON REEL #131
3	198	434-529	43		3:50	132				B.O.F #197 (WIND STRIP) ON NEW REEL #132. FILE # 900-10 SEC. ALL ONE'S
4	SKIP	436-531	45		SKIP	↑				1-96 CORRELATION MADE ON FILE #198 VP# 535 & 537 SKIPPED DUE TO HOUSE
5	SKIP	438-533	47		SKIP					O.B. MOVE. WAITING ON TRAFFIC ON VP# 533.
6	199	440-535	3		4:35					O.B. SET UP BETWEEN STA.'S 509 & 510 (WAITING ON TRAFFIC)
7	SKIP	442-537	5		SKIP					VP# 541 SKIPPED DUE TO HOUSE
8	200	444-539	7		5:00					(WAITING ON TRAFFIC)
9	201	446-541	9	↓	5:30					RAW SWEEP MADE ON FILE #201
10	202	448-543	11	4	5:50					16344 Down with Power Supply Problem
11	203	450-545	13	4	6:10	↓	↓	↓	↓	
12										
13					6:30					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.
SWEEP FREQUENCY 8-32 Hz		SWEEP PATTERN		SWEEPS PER PATTERN 16	
SWEEP PATTERNS PER SETUP		PATCH PATTERN 112233x322211			
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-41100 1-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 220'
REMARKS			OBSERVER SIMMONS	PARTY MGR.	

**OBSERVER'S REPORT
DIGITAL VIBROSEIS RECORDER**

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

CLIENT COCORP	AREA MICHIGAN LINE #2 (Two)	STATE MICHIGAN	COUNTY GRATIOT - MONTCALM	DATE 9-29-78
CREW NO. 6834	TERRAIN FLAT - FARM LAND	WEATHER CLEAR - COOL		LINE NO. 2 (Two)

REC. NO.	SWEEP POINT	PATCH LOCATIONS	CDP SW.	NO VIB	TAPES	TAPE RL. NO.	FILTER			REMARKS
							LOCUT	60 ~	KEEP	
1	933	PULSE TEST				132	Out	Out		OB. Set up BETWEEN STA'S 517 & 518
2	934	EINT				↑	↑	↑		WILL BE VIB IN BETWEEN NOSIE Set up By CONSTRUCTION & FARMERS.
3	935	DRD								
4	937	DRD								
5	944	SUM TEST								
6	945	NRJ TEST								
6	890	Similarity		5	9:30				50%	
7	204	WIND STRIP			9:45					Running Down BAD CABLES & PHONES
8	205	551	452-547	7	5	10:00			70%	1-96 CORRELATION MADE ON FILE # 205
9	206	553	454-549	9	↑	10:45			↑	WAITING ON TRAFFIC
10	SKIP	555	456-551	11		SKIP				V.P.# 555 SKIPPED DUE TO CONSTRUCTION ON ROAD
11	207	557	458-553	13		11:30				WAITING ON TRAFFIC
12	SKIP	559	460-555	15		SKIP				V.P.# 559 SKIPPED DUE TO HOUSE
13	208	561	462-557	17		12:10				WAITING ON TRAFFIC. RAW SWEEP (FOR DR KAUFMAN 2/1-40:49-96) (FOR GEAR GEARUSERS) MADE
14	209	563	464-559	19		12:40				ON FILE # 208
15	210	565	466-561	21		1:00				E.O.F.# 210 ON REEL # 132
16	SKIP	567	468-563	23		SKIP				V.P.'S 567 & 569 SKIPPED DUE TO HOUSES
17	SKIP	569	470-565	25	↓	SKIP	↓	↓	↓	
18										
19		E.O.L.				1:30				E.O.L.# 2 picking up line
20										
21										
22										
23										
24										
25										

TOTAL SETUPS	TOTAL SWEEPS	TOTAL COVERAGE	TOTAL FIELD TIME	DRIVING TIME	SYSTEM NO.
SWEEP FREQUENCY 8-32 Hz	SWEEP PATTERN	SWEEPS PER PATTERN 16	SWEEP PATTERNS PER SETUP	PATCH PATTERN 112233X332211	
GEOPHONES PER PATCH 24	NO. OF RECORDING PATCHES 96	TYPE VIBRATOR 4-4100 4-4900	TYPE GEOPHONE ETL-EV22B	FREQUENCY 7.5 Hz	STATION INTERVAL 220'
REMARKS	OBSERVER Simmons		PARTY MGR.		