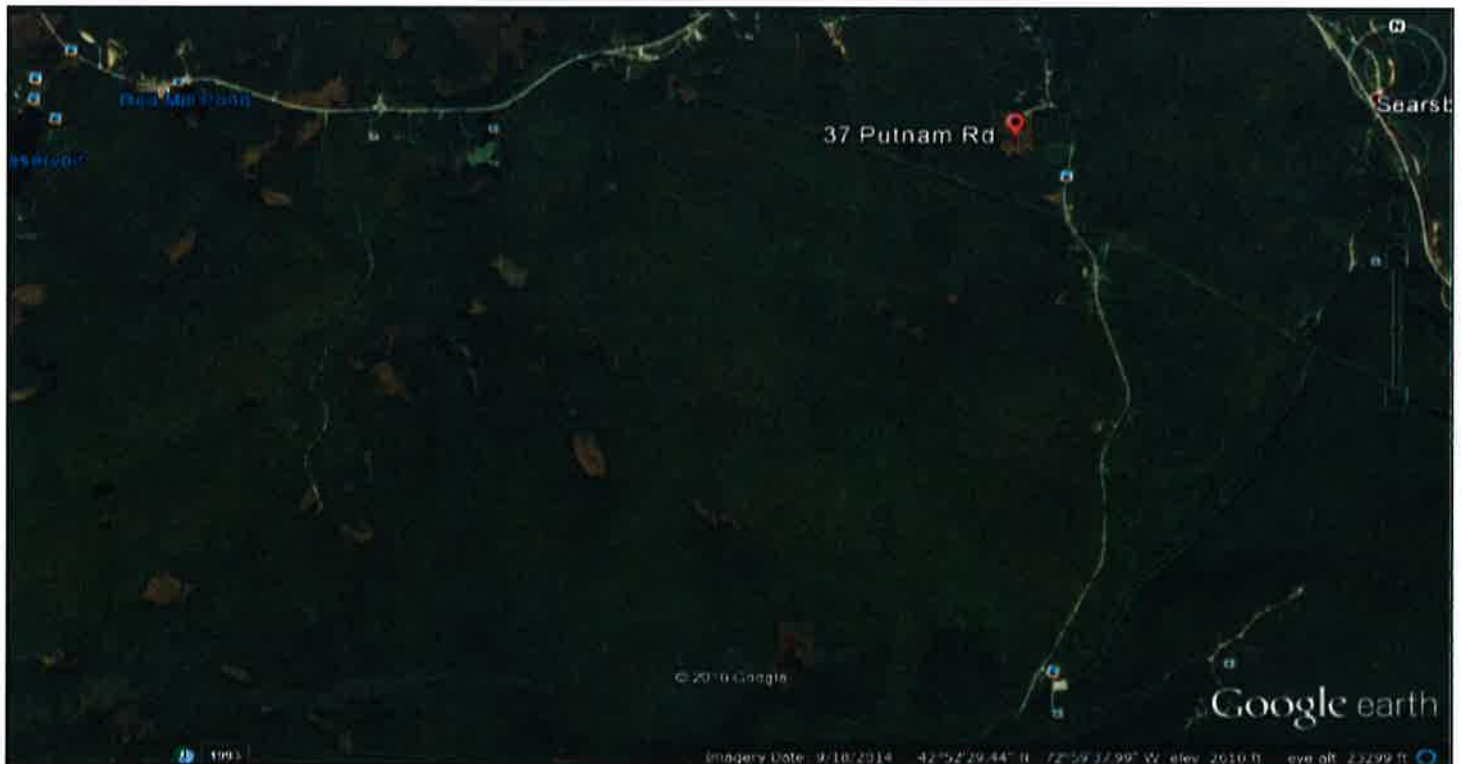




Job#	104-04-02718	Cust. PO#	N/A	
Date	3/1/2017	Cust. Supt. Name	Pat Clifford	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	50527	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards	Mud	
Post Shift Insp.Time (24hrs):	12:00:00 AM			
Blaster :	Butler,Dean T	Precautions Taken:		
License #:	1937		Watch footing stay away from slippery muddy slopes walk around	
Signature:				
		Weather Comments:	Muddy 45* cloudy	
No. of Crew Members	3			
Crew Members Names :				
Britt Gellenthien	Krystal Baker	Pat Defusco	N/A	
N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	
Seismograph Monitoring Plan (Not to Scale):				



Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stemming Stones	4.00
1966 Emulsion Blend	5.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2.00
Sub Drilling(ft)	4.00
Total Depth (ft)	15.00

Stemming Stones	6.00
1966 Emulsion Blend	9.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	376 Rt 8	BA18276	Threshold Not Met	N/A	N/A	N/A	4200	N/A



Job#	104-04-02718	Cust. PO#	N/A	
Date	3/6/2017	Cust. Supt. Name	pat clifford	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	50659	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards	mud and water	
Post Shift Insp.Time (24hrs):	12:00:00 AM			
Blaster :	Butler;Dean T	Precautions Taken:		
License #:	1937		watch footing and careful walking on shot	
Signature:				

DB

Weather
Comments:

sunny cold 5*

No. of Crew Members	3		
Crew Members Names :			
britt gellenthien	pat defusco	krystal baker	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2.00
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stemming Stones	5.00	
1966 Emulsion Blend	4.00	
TROJAN SPARTAN 350G 49/CS	0	
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		

Seismograhs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	376 rt 8	BA18276	Triggered	0.010	N/A	117.9	3000	213
Butler;Dean T	288 Rt 8	BA13714	Triggered	0.010	N/A	111.5	N/A	N/A

Date/Time MicL at 15:05:00 March 6, 2017
 Trigger Source Geo: 0.040 in/s, Mic: 110.0 dB(L)
 Range Geo: 10.000 in/s
 Record Time 2.0 sec at 4096 sps

Serial Number BA13714 V 10.72-8.17 BlastMate III
 Battery Level 6.1 Volts
 Unit Calibration December 9, 2016 by Instantel
 File Name O714GSK4.KC0

Notes

Location: 233 rt 8 searsburg vt
 Client: ja mcdonald 104-04-02718
 User Name: j taber
 General: set in back yard

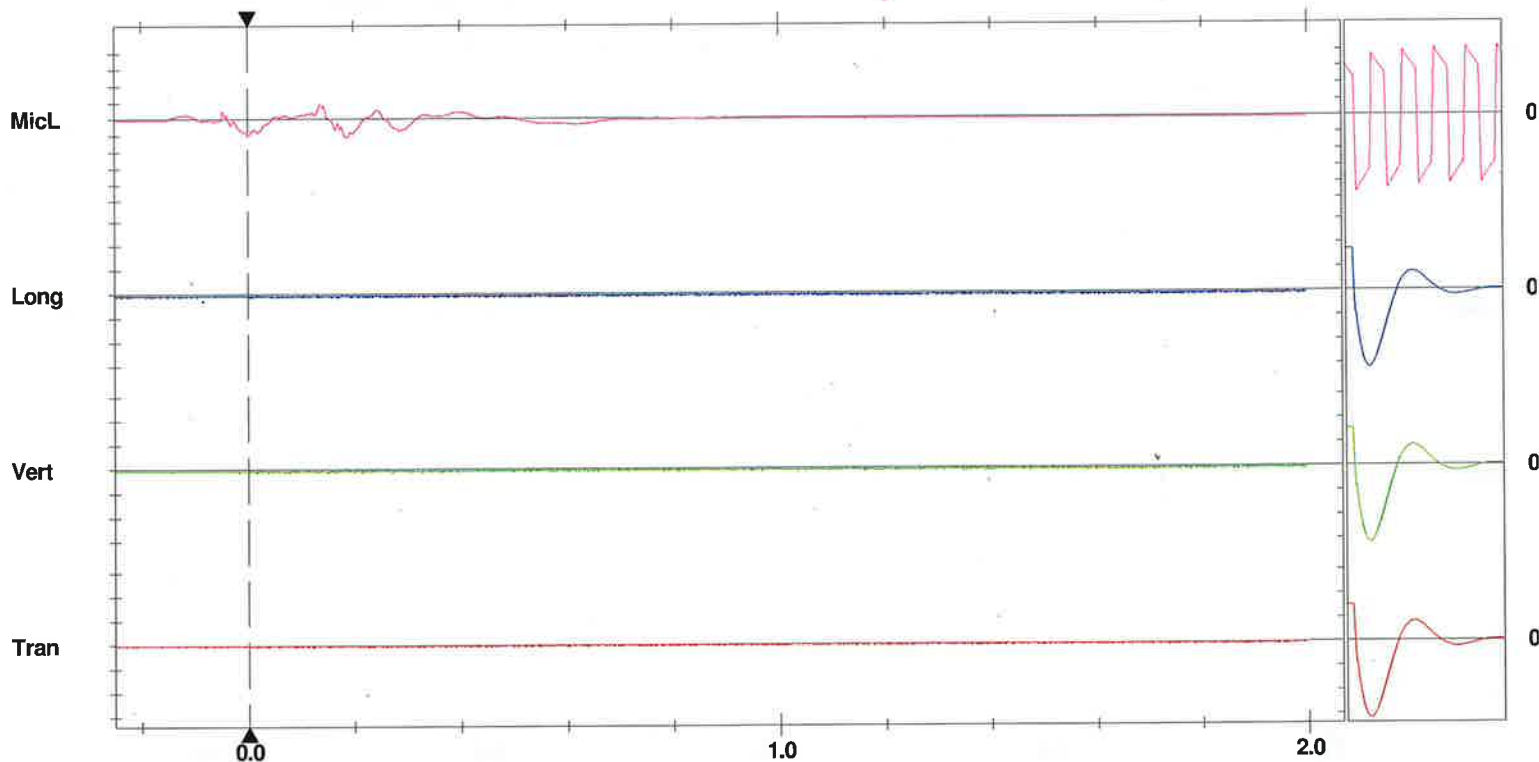
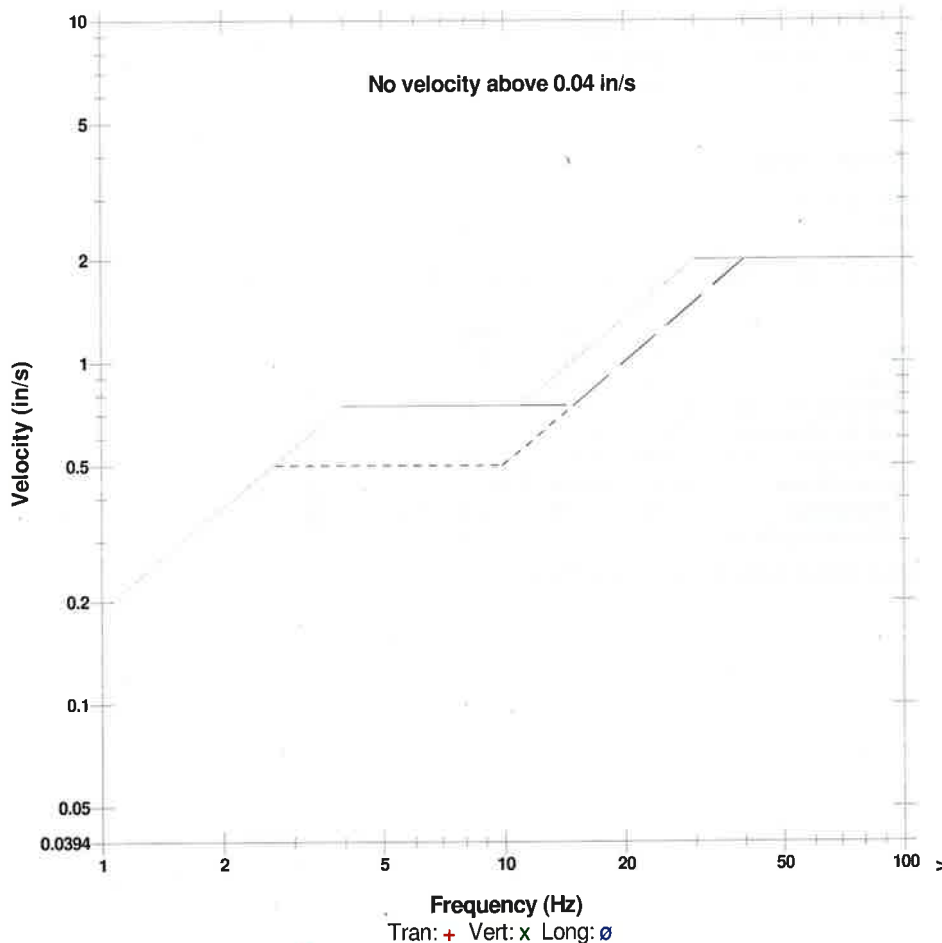
Extended Notes

Microphone Linear Weighting
 PSPL 111.5 dB(L) 0.001 psi(L) at 0.189 sec
 ZC Freq 8.4 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 570 mv)

	Tran	Vert	Long	
PPV	0.005	0.010	0.010	in/s
ZC Freq	>400	>400	>400	Hz
Time (Rel. to Trig)	-0.243	-0.143	-0.246	sec
Peak Acceleration	0.106	0.106	0.106	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.4	7.5	7.5	Hz
Overswing Ratio	3.9	3.9	4.2	

Peak Vector Sum 0.014 in/s at 0.079 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
 Trigger =

Sensor Check

Date/Time MicL at 15:06:16 March 6, 2017
Trigger Source Geo: 0.040 in/s, Mic: 110.0 dB(L)
Range Geo: 10.000 in/s
Record Time 3.25 sec (Auto=3Sec) at 1024 sps
Job Number: 1

Serial Number BA18276 V 10.72-8.17 BlastMate III
Battery Level 6.3 Volts
Unit Calibration December 12, 2016 by Instantel
File Name T276GSK4.MG0

Notes

Client: Ja McDonald 37 Putnam Rd Searsburg VT
 Location: 376 Rt 8 Searsburg VT
 User: J. Taber Job Number: 104 04 02718

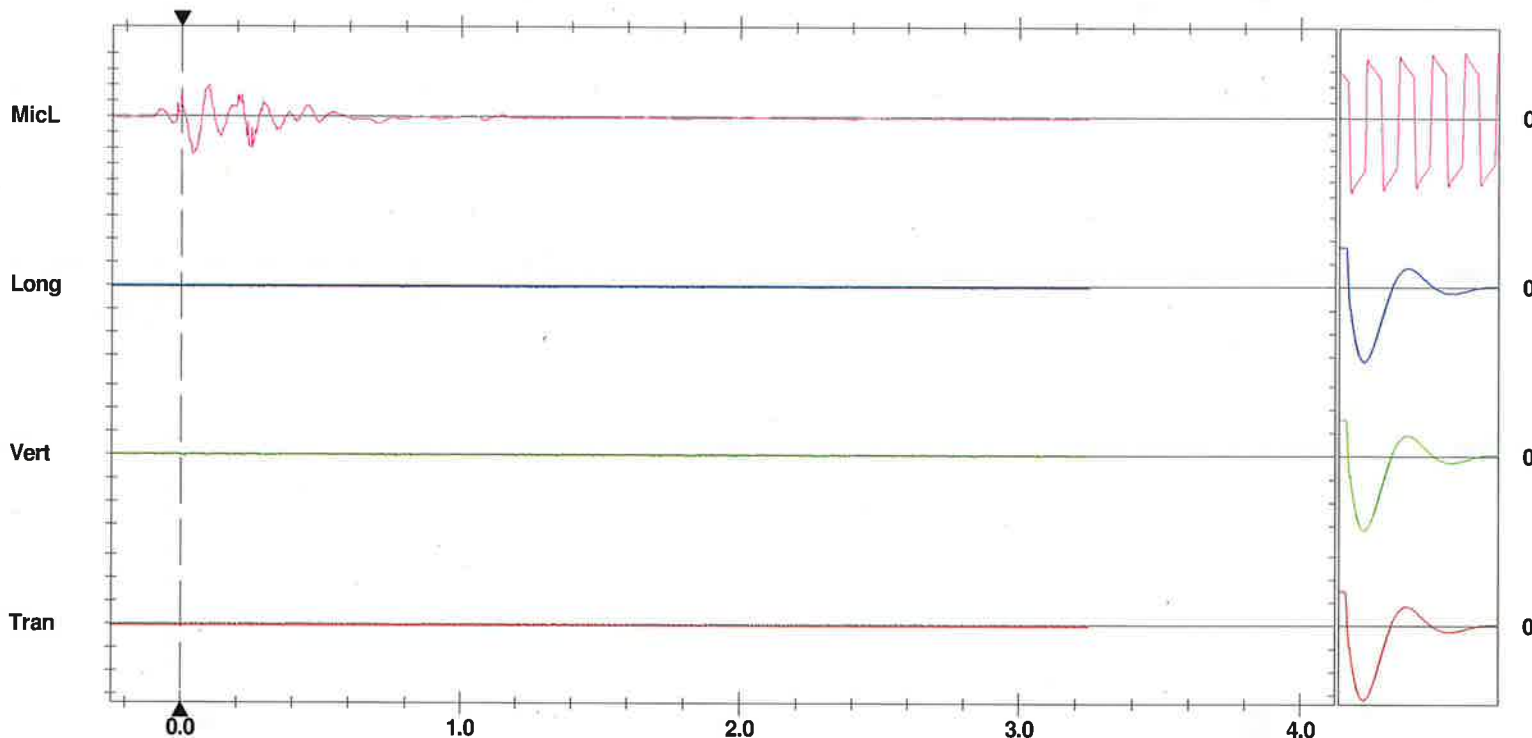
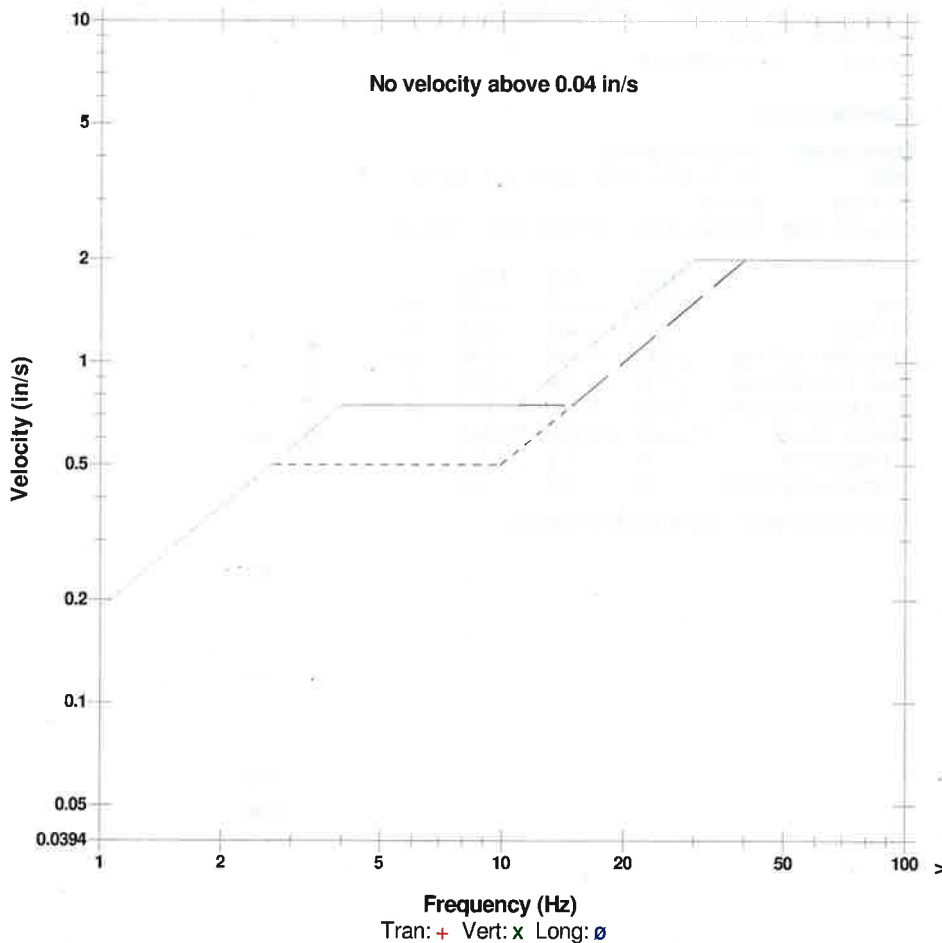
Extended Notes

Microphone Linear Weighting
PSPL 117.9 dB(L) 0.002 psi(L) at 0.042 sec
ZC Freq 8.7 Hz
Channel Test Passed (Freq = 20.1 Hz Amp = 578 mv)

	Tran	Vert	Long	
PPV	0.005	0.010	0.005	in/s
ZC Freq	>100	>100	>100	Hz
Time (Rel. to Trig)	-0.234	0.273	-0.200	sec
Peak Acceleration	0.027	0.027	0.027	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.5	7.4	Hz
Overswing Ratio	3.7	3.5	3.8	

Peak Vector Sum 0.010 in/s at 0.273 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
Trigger = ▶ —▶

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	3/8/2017	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tks#	50728	N/A
Job Address	Route 8 J.A. McDonald Inc. Deerfield	N/A	N/A	N/A
	Wind	N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM equipment

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:

License #: 1879 move equipment

Signature:

Weather
Comments:

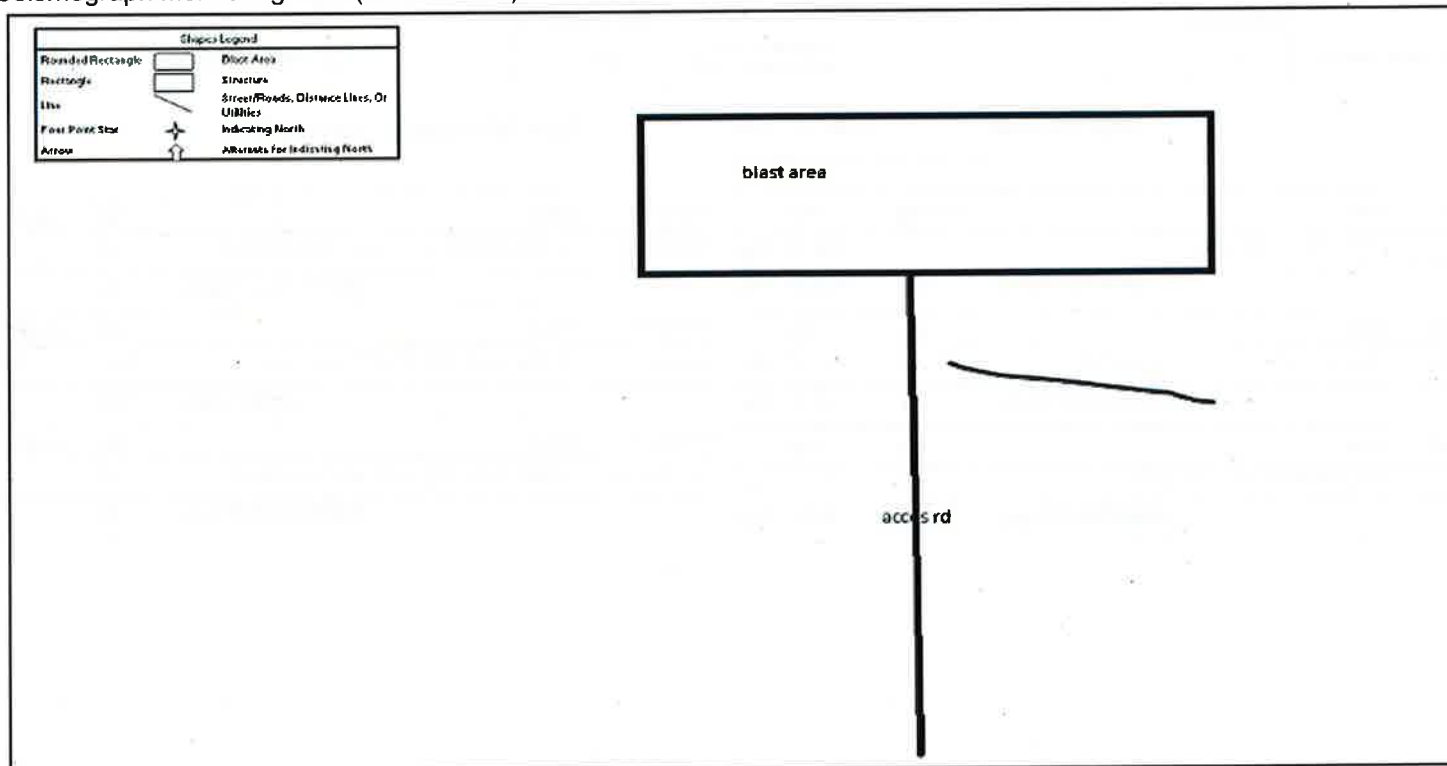
rain

No. of Crew Members 2

Crew Members Names :

Britt	Krystal	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 51 Shot Time (24hrs) 10:55 Shot VideoTaped: YWeather

Notes:

N/A

Weather Conditions: RainTemp (°F): 28-34Wind Direction: North-WestWind Spd: 15-20 MPH**Preblast**Blast Direction: East Max Holes/Delay: 2 Predicted K Factor: 160Blast Location: access rd round about Scale Dist.: 420.08Location of Structure: 37 putnam rd Max Weight/Delay: 51 Lbs Predicted PPV: 0.01Measurement Physical Measurement Dist. to Closest (Ft) Structure 3000 Railroad/Highway N/A Overhead Util N/A Underground Util N/A**Pay Quantities**Fire Detail # of Hrs: N/A**Pay Calculations Notes**Pay Running Length 6600 Feet

60x10x11=6600sqft

N/A N/A N/A

N/A N/A N/A

Shot Info**Configuration****1 - Open**

Total Drill Depth(Ft)	<u>720.00</u>	Total SqFt	<u>6600.00</u>	Powder	<u>1.07 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>3134</u>
Total Tons	<u>N/A</u>	Total Yards	<u>2933.33</u>	Factor	<u>0.94 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>52.23</u>

Cal Method Pattern# Holes 60Cover Used/No N/A**AVG****Min****Max**Drill Depth 129 15Stone Weight N/A /Cyd

Top Stemming

5 Min7 MaxBurden(Feet) 10 Feet10 10

Type of Terrian

Sloped

Charges/Hole

1 Min1 MaxSpacing (Feet) 11 Feet11 11

Type of Rock

Granite

Deck Stemming

N/A MinN/A MaxHole Diameter 44 4

Stemming Type

3/8" Crushed Stone

Charge Wgt/Deck

40 Min51 MaxOverBurden (Ft) 30 8

Height of Face

0

Depth of Water

0 Min4 MaxControl Row Taped N

Angled Holes /Face Bermed

N/N

Laser/BoreTracking

NTotal Pounds 3134.17 LbsType Of Initiation: **Non-Electric**

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		3058.00 Lbs
BA BULK Totals:		N/A	3058.00 Lbs

Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	9	29.97 Lbs
BAPACKAGED Totals:		9	29.97 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	60	46.20 Lbs
BOOSTERS Totals:		60	46.20 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	60	
DETS DHOLE Totals:		60	

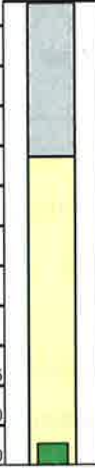
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	3500	3500
LINES Totals:		3500	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	10	
SURF DELAY Totals:		10	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	1
Sub Drilling(ft)	3
Total Depth (ft)	15.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	5
1966 Emulsion Blend	10
TROJAN SPARTAN 350G 49/CS	0

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco,Patrick E.	37 putnam rd	18276	Threshold Not Met	0	0	0	3000	N/A

Please See Attached for Seismograph Report



Job#	104-04-02718	Cust. PO#	N/A	
Date	3/17/2017	Cust. Supt. Name	Pat Clifford	
Customer Name	J.A. McDonald Inc.	Pick Tks#	50958	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 PM Deep Snow

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler;Dean T Precautions Taken:
 License #: 1937 Shovel paths in deep snow

Signature:

DB

Weather
Comments:

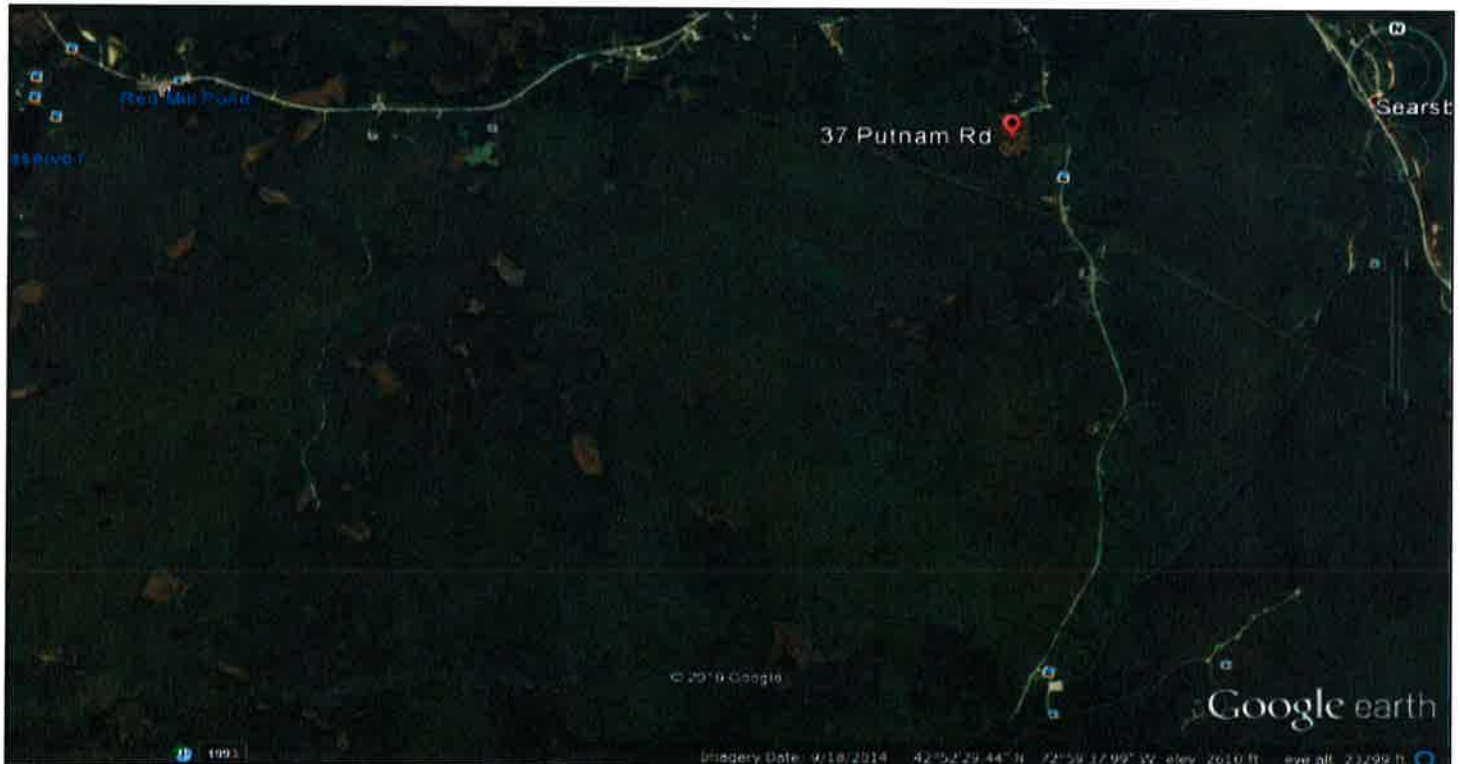
cold 10-30

No. of Crew Members 3

Crew Members Names :

Robert wetmore	Steve Matala	Britt Gellenthien	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 52 west Shot Time (24hrs) 14:07 Shot VideoTaped: Y **Weather**

Notes: N/A Weather Conditions: Sunny

Temp (°F): 10-30

Wind Direction: South-West

Wind Spd: 0-10 MPH

Preblast

Blast Direction: East Max Holes/Delay: 2.00 Predicted K Factor: 160

Blast Location: tower 8 pond, tower 7 and culdesac entrance Scale Dist.: 504.86

Location of Structure: 376 rt 8 Max Weight/Delay: 70.00 Lbs Predicted PPV: 0.01

Measurement Google Map Dist. to Closest (Ft) 4224 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A

Pay Square Area 22550.00 Feet

Pay Running Length 40.00 Feet

N/A N/A N/A

Pay Calculations Notes

205 holes x 10 x 11 pattern- shot pond at tower 8 finishing upper right side of tower 7 and pad, re shot high bottom in cul-de-sac entrance at 7 shot 40 if trench out of tower 8 pond

Trench 8 ft spacing x 5 holes = 40 lf trench

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1845.00</u>	Total SqFt	<u>22550.00</u>	Powder	<u>0.89</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>6707</u>
Total Tons	<u>N/A</u>	Total Yards	<u>7516.67</u>	Factor	<u>1.12</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>32.72</u>
Cal Method	<u>Pattern</u>						
# Holes	<u>205</u>	Cover Used/No	<u>N/A</u>				
	<u>AVG</u>	<u>Min</u>	<u>Max</u>				
Drill Depth	<u>9.00</u>		<u>8.00</u> <u>9.00</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>4.00</u> Min <u>6.00</u> Max
Burden(Feet)	<u>10.00</u>		<u>10.00</u> <u>10.00</u>	Type of Terrian	<u>Flat</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>11.00</u>		<u>11.00</u> <u>11.00</u>	Type of Rock	<u>Granite</u>	Deck Stemming	<u>0.00</u> Min <u>0.00</u> Max
Hole Diameter	<u>4.00</u>		<u>4.00</u> <u>4.00</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>28.00</u> Min <u>35.00</u> Max
OverBurden (Ft)	<u>0.00</u>		<u>0.00</u> <u>2.00</u>	Height of Face	<u>0.00</u>	Depth of Water	<u>0.00</u> Min <u>4.00</u> Max
Control Row Taped	<u>N</u>			Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>

Total Pounds 6706.81 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		6509.00 Lbs
BA BULK Totals:		N/A	6509.00 Lbs
Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	12.00	39.96 Lbs
BAPACKAGED Totals:		12.00	39.96 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	205.00	157.85 Lbs
BOOSTERS Totals:		205.00	157.85 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	205.00	
DETS DHOLE Totals:		205.00	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	2.00	5000.00
LINES Totals:		2.00	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	35.00	
DY25Z820ME	NONEL EZTL CPZ 25MS 20/FT 60/120/CS	2.00	
SURF DELAY Totals:		37.00	

Description: typical 10x11

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2.00
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stomming Stones	5.00
1966 Emulsion Blend	4.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stomming Stones	4.00
1966 Emulsion Blend	5.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	376 rt 8	BA18276	Triggered	0.010	N/A	119.6	4224	211

Date/Time MicL at 14:07:04 March 17, 2017
Trigger Source Geo: 0.040 in/s, Mic: 118.0 dB(L)
Range Geo: 10.000 in/s
Record Time 3.25 sec (Auto=3Sec) at 1024 sps
Job Number: 1

Serial Number BA18276 V 10.72-8.17 BlastMate III
Battery Level 6.1 Volts
Unit Calibration December 12, 2016 by Instantel
File Name T276GT4F.7S0

Notes

Client: Ja McDonald 37 Putnam Rd Searsburg VT
 Location: 376 Rt 8 Searsburg VT
 User: J. Taber Job Number: 104 04 02718

Extended Notes

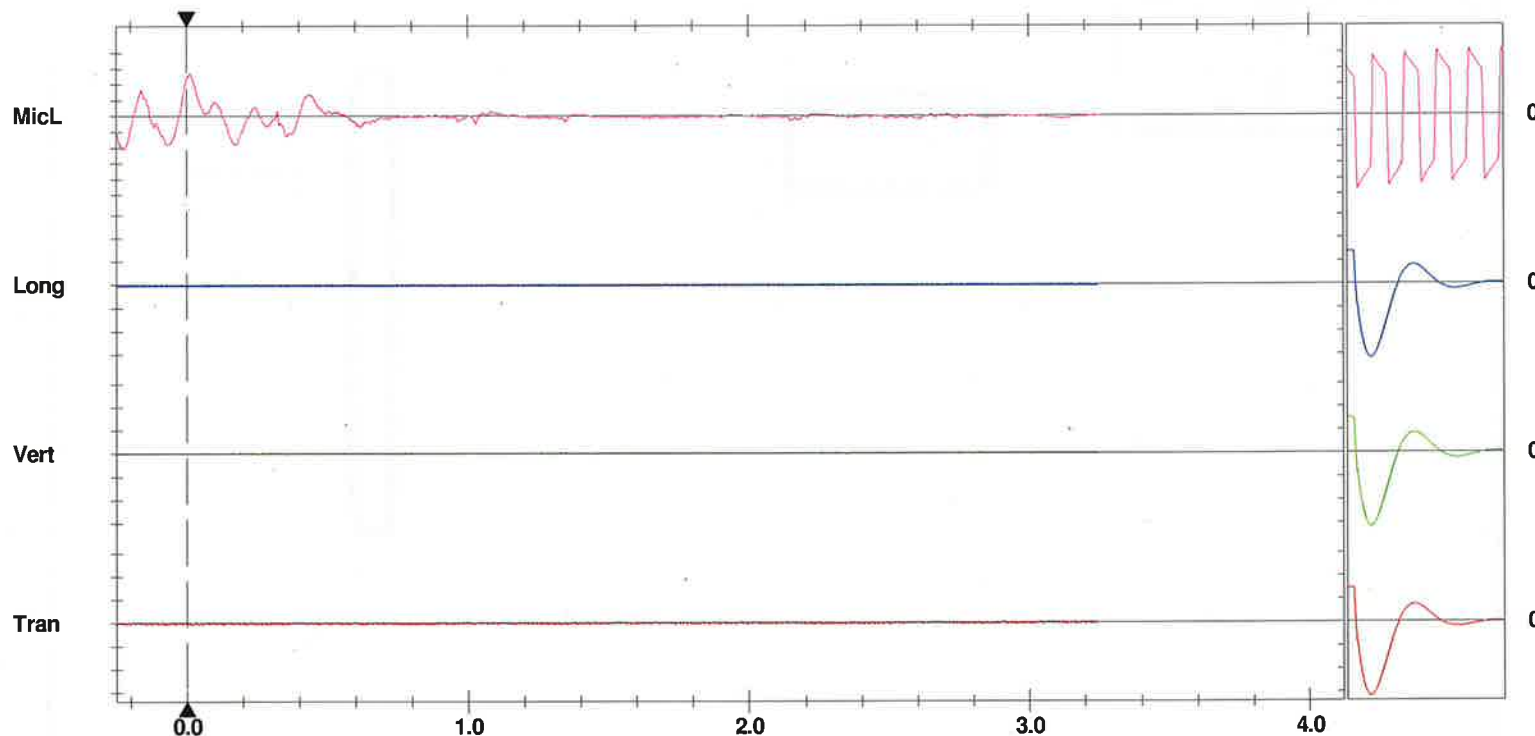
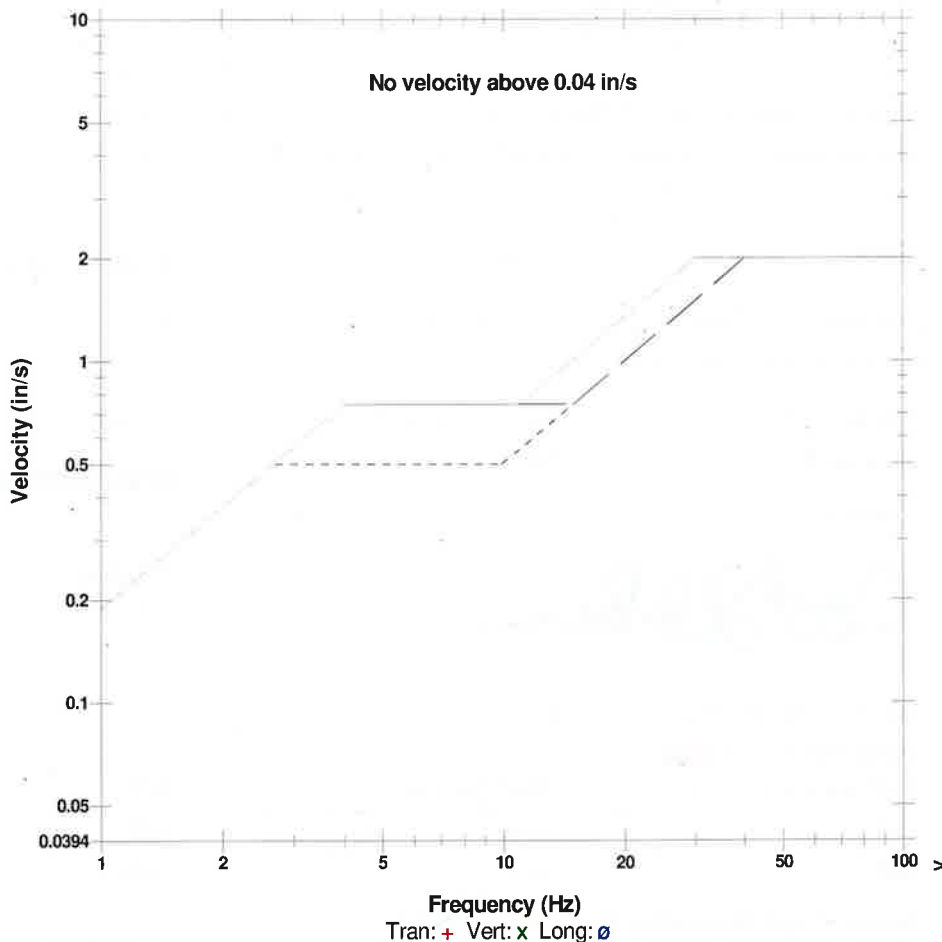
Microphone Linear Weighting
PSPL 119.6 dB(L) 0.003 psi(L) at 0.013 sec
ZC Freq 3.2 Hz
Channel Test Passed (Freq = 20.1 Hz Amp = 688 mv)

	Tran	Vert	Long	
PPV	0.005	0.010	0.005	in/s
ZC Freq	N/A	>100	>100	Hz
Time (Rel. to Trig)	-0.250	-0.221	-0.232	sec
Peak Acceleration	0.013	0.027	0.027	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.4	7.5	7.5	Hz
Overswing Ratio	4.2	3.7	3.9	

Peak Vector Sum 0.012 in/s at 0.470 sec

N/A: Not Applicable

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div

Trigger =

Sensor Check



Job# 104-04-02718 Cust. PO# N/A
 Date 3/23/2017 Cust. Supt. Name Buddy
 Customer Name J.A. McDonald Inc. Pick Tkts# 51140 N/A
 Job Address Route 8 J.A. McDonald Inc. Deerfield Wind N/A N/A
 State VT Permit No. Identify Hazards
 Pre Shift Insp. Time (24hrs) : 12:00:00 AM freeze/thaw
 Post Shift Insp. Time (24hrs): 12:00:00 AM
 Blaster : Barnum, Cody P. Precautions Taken:
 License #: 1951 choose you walking path and be sure of footing
 Signature:

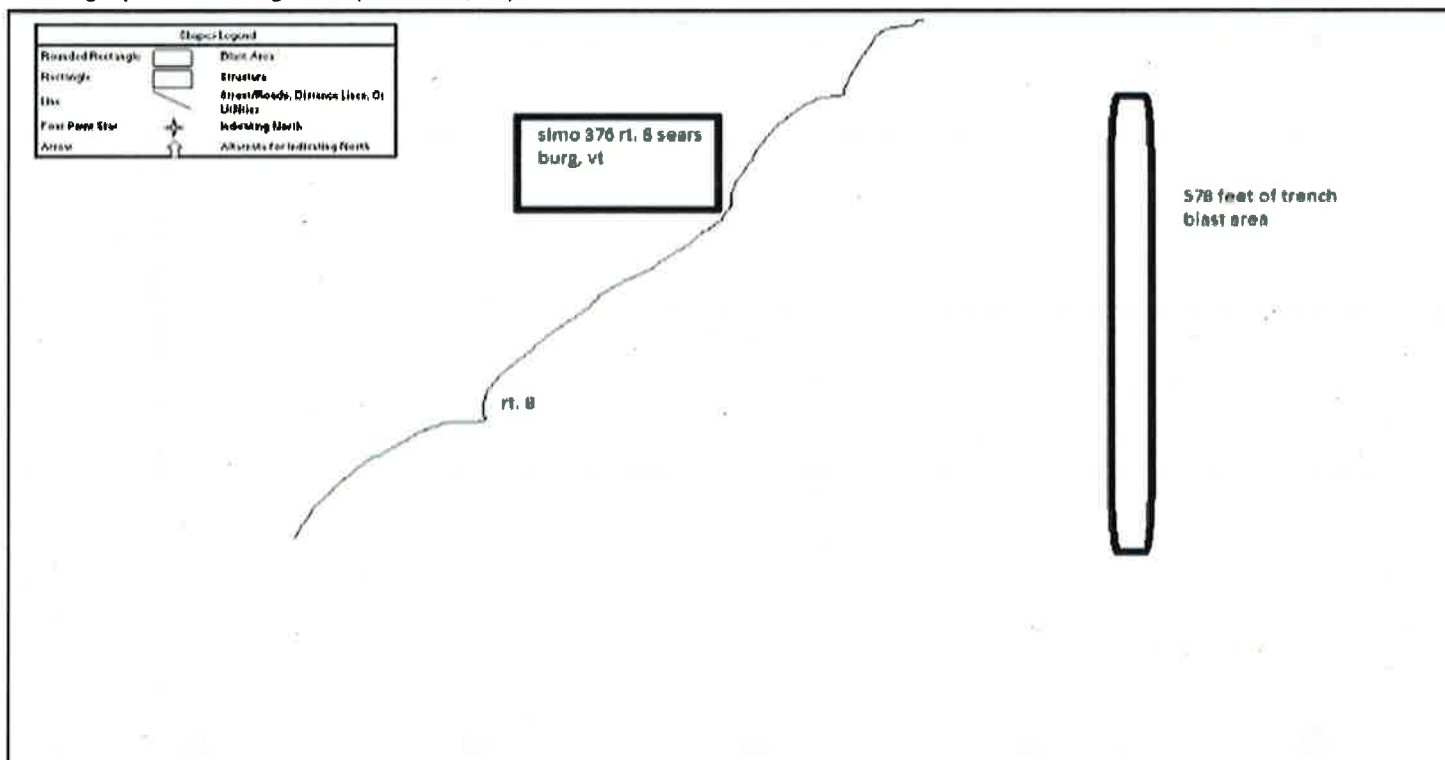
Cody P. Barnum

Weather
Comments:

clear/cold

No. of Crew Members 2
 Crew Members Names :
 Pat Defussco Britt Giliteen N/A N/A
 N/A N/A N/A N/A
 N/A N/A N/A N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 53 west Shot Time (24hrs) 12:35 Shot VideoTaped: Y Weather Clear

Notes: N/A Weather Conditions: Clear

Temp (°F): 0-20

Wind Direction: South-East

Wind Spd: 0-10 MPH

Preblast

Blast Direction: East Max Holes/Delay: 1.00 Predicted K Factor: 160

Blast Location: communication Line Scale Dist.: 761.05

Location of Structure: house 376 route 8 Max Weight/Delay: 21.15 Lbs Predicted PPV: 0.1600

Measurement Google Map Dist. to Closest (Ft) 3500 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A

Pay Running Length 578.00 Feet

N/A N/A N/A

N/A N/A N/A

Pay Calculations Notes

shot 74 holes for 578 feet of trench

Shot Info

Configuration

1 - Trench

Total Drill Depth(Ft)	<u>814.00</u>	Total SqFt	<u>4736.00</u>	Powder	<u>0.68</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>1314</u>
Total Tons	<u>N/A</u>	Total Yards	<u>1929.48</u>	Factor	<u>1.47</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>17.76</u>

Cal Method	Pattern								
# Holes	<u>74</u>	Cover Used/No	<u>N/A</u>						
	<u>AVG</u>	<u>Min</u>	<u>Max</u>						
Drill Depth	<u>11.00</u>	<u>11.00</u>	<u>11.00</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>4.00</u> Min	<u>5.00</u> Max	
Burden(Feet)	<u>8.00</u> Feet	<u>8.00</u>	<u>8.00</u>	Type of Terrian	<u>Sloped</u>	Charges/Hole	<u>1</u> Min	<u>2</u> Max	
Spacing (Feet)	<u>8.00</u> Feet	<u>8.00</u>	<u>8.00</u>	Type of Rock	<u>Gneiss</u>	Deck Stemming	<u>0.00</u> Min	<u>0.00</u> Max	
Hole Diameter	<u>4.00</u>	<u>4.00</u>	<u>4.00</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>16.65</u> Min	<u>21.15</u> Max	
OverBurden (Ft)	<u>2.00</u>	<u>0.00</u>	<u>3.00</u>	Height of Face	<u>11.00</u>	Depth of Water	<u>0.00</u> Min	<u>9.00</u> Max	
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>				

Total Pounds 1314.39 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	243.00	1027.89 Lbs
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	68.00	226.44 Lbs
BAPACKAGED Totals:		311.00	1254.33 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	78.00	60.06 Lbs
BOOSTERS Totals:		78.00	60.06 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	69.00	
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	9.00	
DETS DHOLE Totals:		78.00	

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	2500.00	
LINES Totals:		2500.00	

Product #	Desc	Qty	Length
DY17Z812ME	NONEL EZTL CPZ 17 MS 12FT 90/180/CS	11.00	
SURF DELAY Totals:		11.00	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2.00
Sub Drilling(ft)	3.00
Total Depth (ft)	11.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	4.00
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	7.00
TROJAN SPARTAN 350G 49/CS	0.00


Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Barnum,Cody P.	house 376 route 8	17132	Threshold Not Met	N/A	N/A	N/A	350	N/A

Event Report: Monitor Log - BlastMate III # BA17132-Compliance

Start Time	End Time	Status
-----	-----	SERIAL NUMBER: BA17132
Mar 23 /17 12:24:50		Start Monitoring Trigger Level: Geo: 0.0400 in/s Mic: 116.0 dB(L)
Mar 23 /17 12:25:31	Mar 23 /17 12:25:36	Event recorded. Trigger Level MicL: 116.0 dB(L)
Mar 23 /17 12:25:36		Start Monitoring Trigger Level: Geo: 0.0400 in/s Mic: 116.0 dB(L)
Mar 23 /17 12:35:05	Mar 23 /17 12:35:08	Event recorded. Trigger Level MicL: 116.0 dB(L)
Mar 23 /17 12:35:08	Mar 23 /17 12:36:22	No events recorded. (Keyboard Exit) Geo: 0.0400 in/s Mic: 116.0 dB(L)



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/7/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	45961	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 6:30:00 AM People and equipment in blast zone.

Post Shift Insp.Time (24hrs): 1:00:00 PM

Blaster : Taber, Joseph E.

License #: 1890

Signature:

Precautions Taken:

People and equipment moved to safe distance.

Weather
Comments:

Sunny

No. of Crew Members 3

Crew Members Names :

G. Keefe	D. Stone	Brett G.	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 1 Shot Time (24hrs) 12:17 Shot VideoTaped: Y **Weather**

Notes: Test shot Weather Conditions: Sunny

Temp (°F): 40-70

Wind Direction: South-West

Wind Spd: 0-5 MPH

Preblast

Blast Direction: West Max Holes/Delay: 3 Predicted K Factor: 160

Blast Location: Storm pond Scale Dist.: 112.69

Location of Structure: Existing tower Max Weight/Delay: 28.35 Lbs Predicted PPV: 0.08

Measurement Google Map Dist. to Closest (Ft) 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes

Pay Cubic Volume 1156.74 Yard

Pay Square Area 7808 Feet

N/A N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1098.00</u>	Total SqFt	<u>7808.00</u>	Powder	<u>0.44</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>1153</u>
Total Tons	<u>N/A</u>	Total Yards	<u>2602.67</u>	Factor	<u>2.26</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>9.45</u>

Cal Method Pattern

Holes 122 Cover Used/No N/A

	AVG	Min	Max						
Drill Depth	<u>9</u>	<u>9</u>	<u>15</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>6</u> Min	<u>7</u> Max	
Burden(Feet)	<u>8</u> Feet	<u>8</u>	<u>8</u>	Type of Terrian	<u>Sloped</u>	Charges/Hole	<u>1</u> Min	<u>1</u> Max	
Spacing (Feet)	<u>8</u> Feet	<u>8</u>	<u>8</u>	Type of Rock	<u>N/A</u>	Deck Stemming	<u>0</u> Min	<u>0</u> Max	
Hole Diameter	<u>3.5</u>	<u>3.5</u>	<u>3.5</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>15.77</u> Min	<u>42.04</u> Max	
OverBurden (Ft)	<u>1</u>	<u>0</u>	<u>6</u>	Height of Face	<u>0</u>	Depth of Water	<u>0</u> Min	<u>5</u> Max	

Control Row Taped N Angled Holes /Face Bermed N/Y Laser/BoreTracking N

Total Pounds 1152.94 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		1059.00 Lbs
BA BULK Totals:		N/A	1059.00 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	122	93.94 Lbs
BOOSTERS Totals:		122	93.94 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	122	
DETS DHOLE Totals:		122	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	1	2500
LINES Totals:		1	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	9	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	18	
SURF DELAY Totals:		27	

Descripton: 9' hole

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	2.5
TROJAN SPARTAN 350G 49/CS	0.5
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Descripton: 15' hole

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	15.00

Stemming Stones	7
1966 Emulsion Blend	7.5
TROJAN SPARTAN 350G 49/CS	0.5
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Taber,Joseph E.	Existing tower	3619	Triggered	0.125	47	114.4	600	240

Date/Time Vert at 12:17:00 October 7, 2016
 Trigger Source Geo: 0.050 in/s
 Range Geo: 9.999 in/s
 Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
 Battery Level 5.8 Volts
 Unit Calibration February 6, 2016 by Instantel
 File Name E619GKVZ.GC0

Notes

Location: 37 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 7, 2016 12:46:13 (V10.72)

Extended Notes

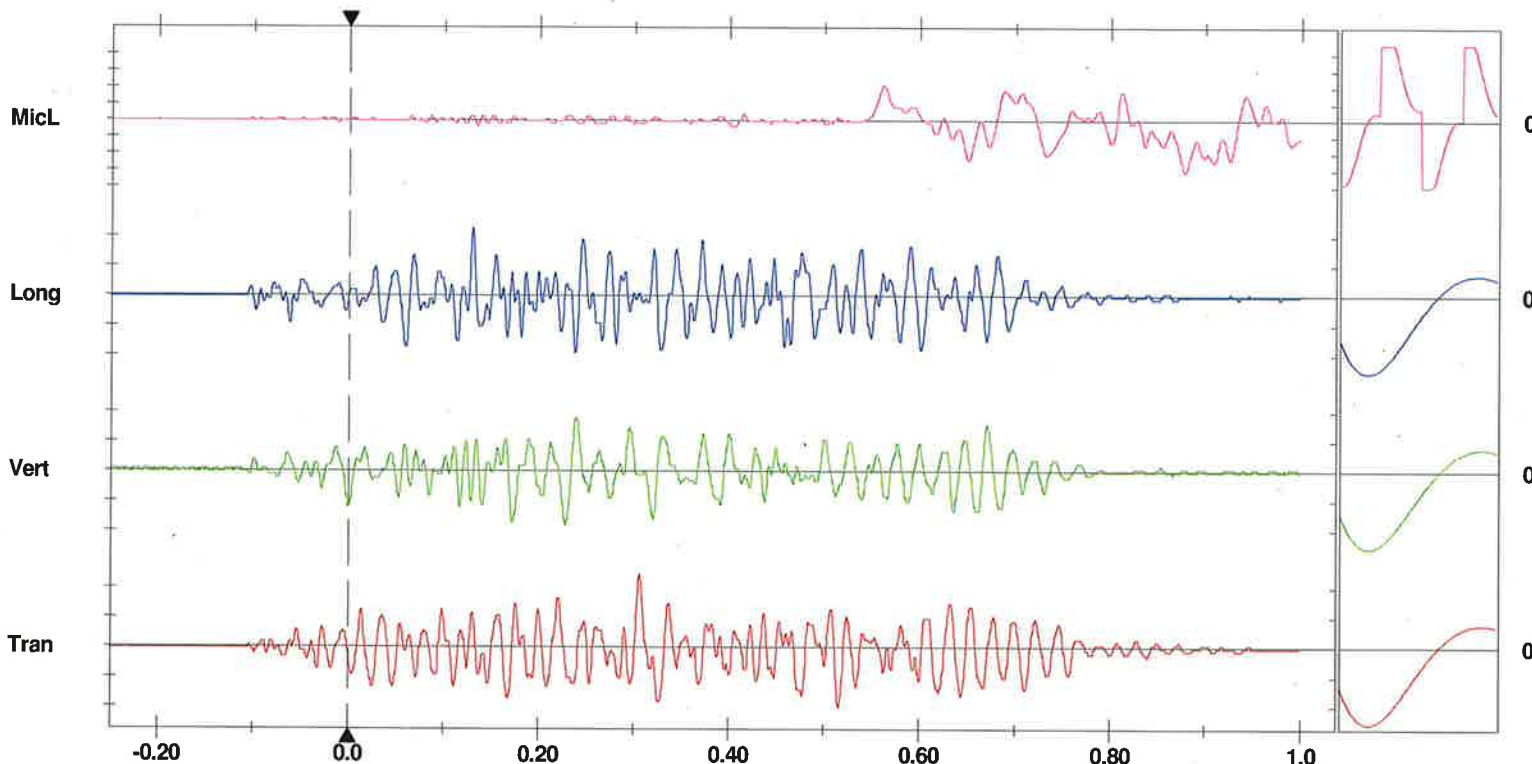
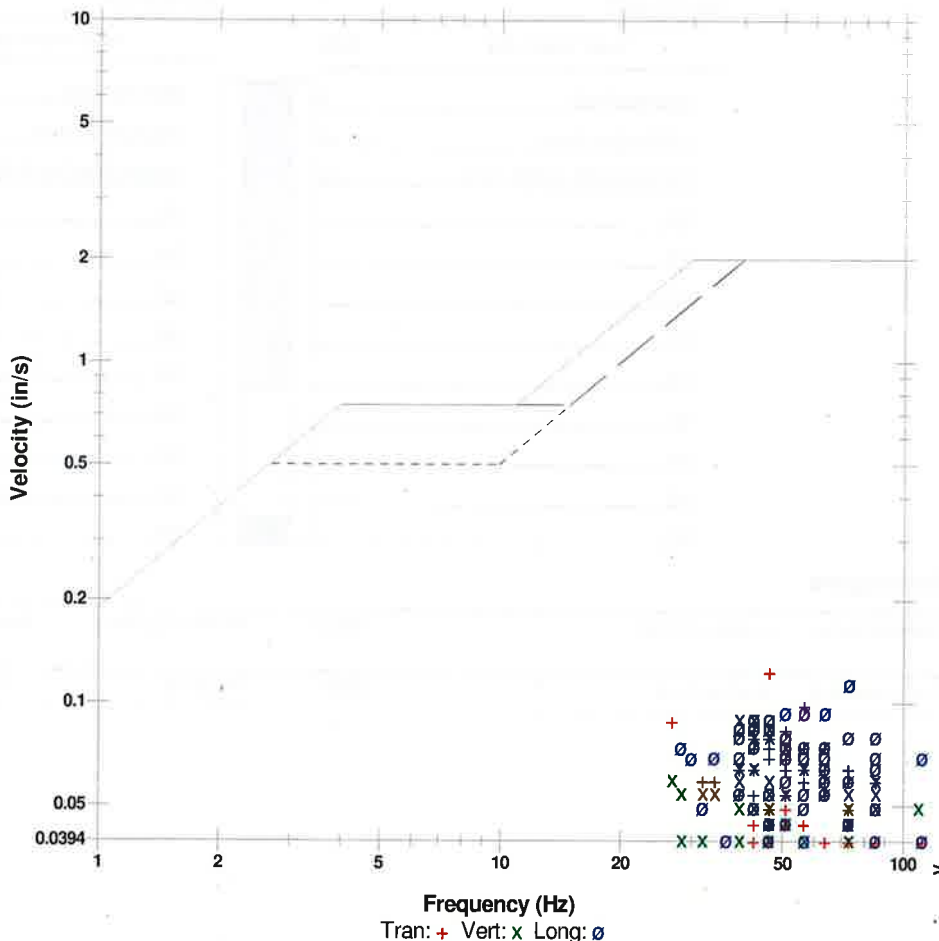
set at existing tower

Microphone Linear Weighting
 PSPL 114.4 dB(L) 0.002 psi(L) at 0.879 sec
 ZC Freq 5.0 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 539 mv)

	Tran	Vert	Long	
PPV	0.125	0.090	0.115	in/s
ZC Freq	47	43	73	Hz
Time (Rel. to Trig)	0.308	0.229	0.132	sec
Peak Acceleration	0.119	0.093	0.133	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.2	8.2	8.3	Hz
Overswing Ratio	3.5	3.4	3.6	

Peak Vector Sum 0.141 in/s at 0.239 sec

USBM RI8507 And OSMRE





Job#	104-04-02718	Cust. PO#	N/A	
Date	10/11/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tks#	46078	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM people and equipment

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:

License #: 1879 clear area

Signature:

Weather
Comments:

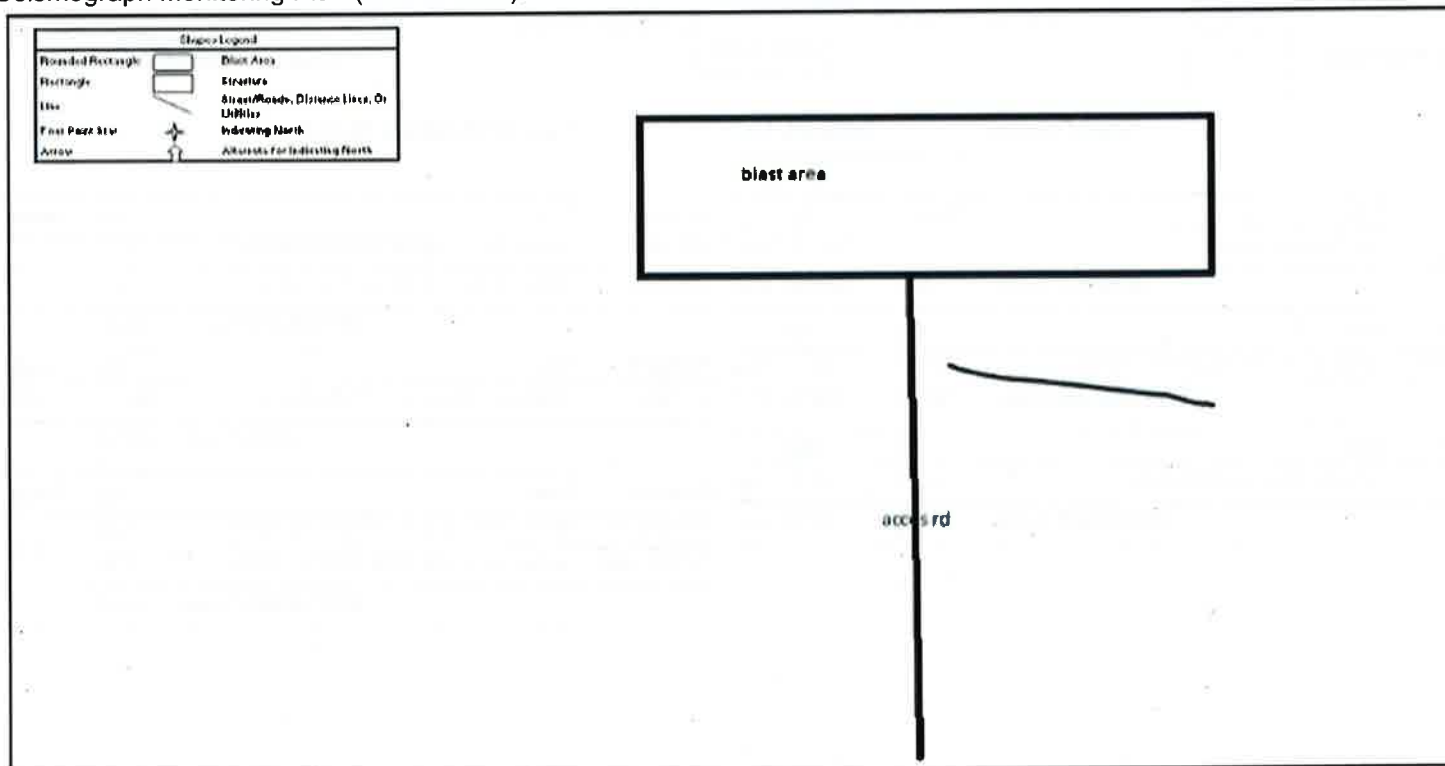
partly cloudy

No. of Crew Members 2

Crew Members Names :

Brett	Dean	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 2 Shot Time (24hrs) 13:22 Shot VideoTaped: N Weather

Notes: N/A

Weather Conditions: Partly Cloudy
Temp (°F): 32-40
Wind Direction: West
Wind Spd: 10-20 MPH

Preblast

Blast Direction: South-West Max Holes/Delay: 2.00 Predicted K Factor: 160
Blast Location: storm pond Scale Dist.: 54.19
Location of Structure: existing tower Max Weight/Delay: 133.00 Lbs Predicted PPV: 0.27
Measurement Physical Dist. to Closest (Ft) Structure 625 Railroad/Highway N/A Overhead Util N/A Underground Util N/A
Measurement

Pay Quantities

Fire Detail # of Hrs: N/A
Pay Square Area 9615.00 Feet
N/A N/A N/A
N/A N/A N/A

Pay Calculations Notes

74x10x12=8880sqft/ 15x7x7=735sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1691.00</u>	Total SqFt	<u>10680.00</u>	Powder	<u>0.78</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>5884</u>
Total Tons	<u>N/A</u>	Total Yards	<u>7515.56</u>	Factor	<u>1.28</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>66.11</u>

Cal Method	Pattern	
# Holes	<u>89</u>	Cover Used/No Blast Mats <u>9</u>
	AVG	Min Max
Drill Depth	<u>19.00</u>	<u>9.00</u> <u>25.00</u>
Burden(Feet)	<u>10.00</u> Feet	<u>10.00</u> <u>10.00</u>
Spacing (Feet)	<u>12.00</u> Feet	<u>12.00</u> <u>12.00</u>
Hole Diameter	<u>4.00</u>	<u>4.00</u> <u>4.00</u>
OverBurden (Ft)	<u>1.00</u>	<u>0.00</u> <u>7.00</u>

Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/N</u>	Laser/BoreTracking	<u>N</u>
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Total Pounds 5884.01 Lbs

Type Of Initiation: Non-Electric

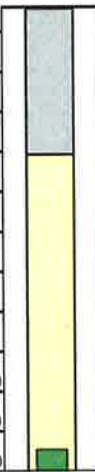
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		5525.00 Lbs
BA BULK Totals:		N/A	5525.00 Lbs
Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	87.00	289.71 Lbs
BAPACKAGED Totals:		87.00	289.71 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	90.00	69.30 Lbs
BOOSTERS Totals:		90.00	69.30 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	27.00	
DXABZ641	NONEL EZDET 25/350 40FT ZCOMP 30/CS	63.00	
DETS DHOLE Totals:		90.00	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	2500.00	2500.00
LINES Totals:		2500.00	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	15.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	17.00	
SURF DELAY Totals:		32.00	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	3.00
Total Depth (ft)	19.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	6.00
1966 Emulsion Blend	13.00
TROJAN SPARTAN 350G 49/CS	0.00

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	2288	Triggered	0.220	51.0	121.4	625	131

Date/Time Vert at 13:22:59 October 11, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.1 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GL3H.6B0

Notes

Location: 37 putnam rd
Client: McDonald
User Name: P Defusco
Converted: October 11, 2016 14:14:18 (V10.72)

Extended Notes

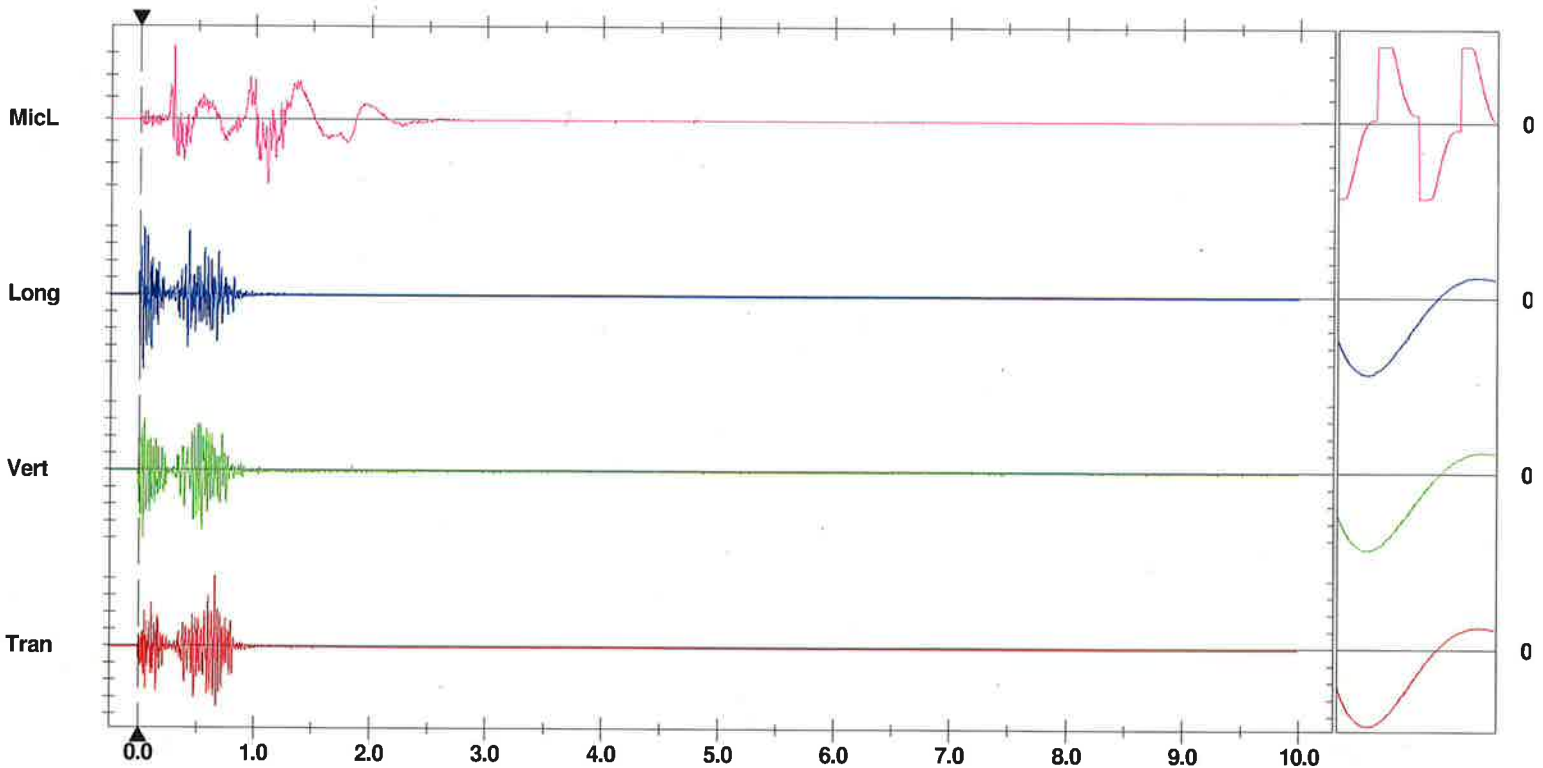
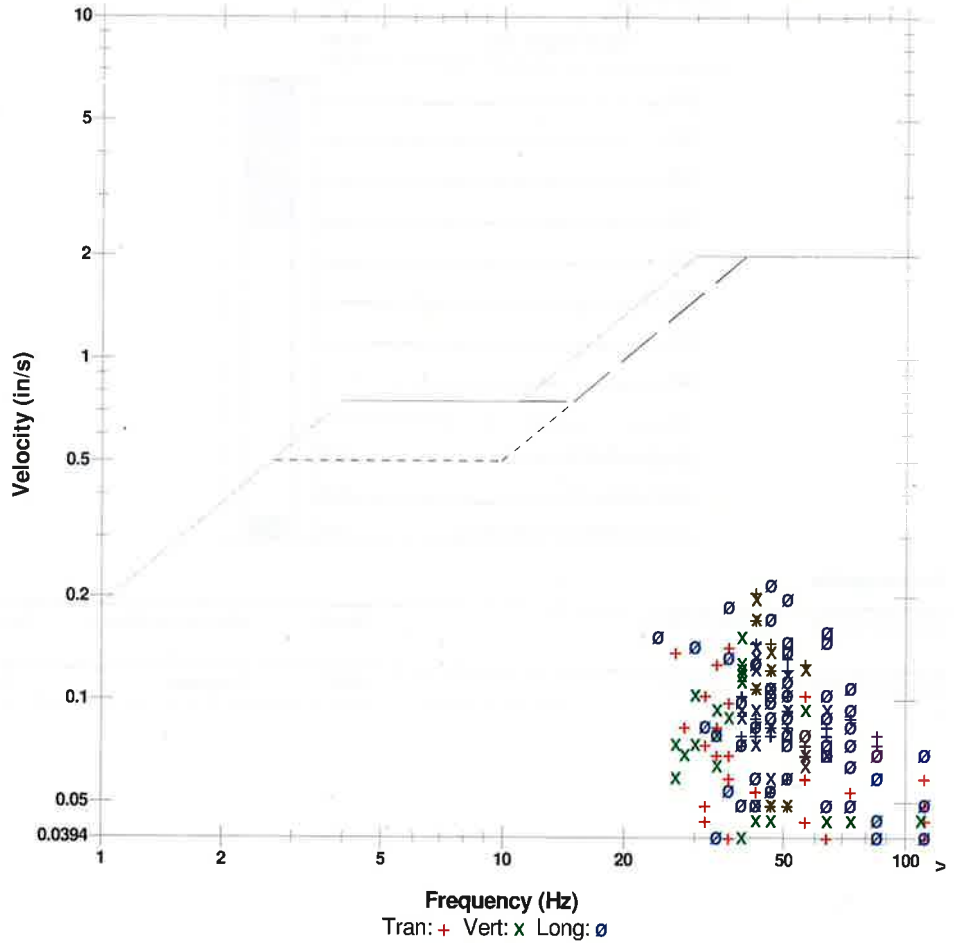
set at closest existing tower

Microphone Linear Weighting
PSPL 121.4 dB(L) 0.003 psi(L) at 0.302 sec
ZC Freq 34 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 566 mv)

	Tran	Vert	Long	
PPV	0.210	0.200	0.220	in/s
ZC Freq	43	43	51	Hz
Time (Rel. to Trig)	0.672	0.044	0.037	sec
Peak Acceleration	0.186	0.186	0.186	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.2	8.0	8.2	Hz
Overswing Ratio	3.3	3.6	3.6	

Peak Vector Sum 0.268 in/s at 0.045 sec

USBM RI8507 And OSMRE



Sensor Check

Job#	104-04-02718	Cust. PO#	N/A	
Date	10/12/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46144	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM access rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:
 License #: 1879 block rd and move equipment

Signature:



Weather
Comments:

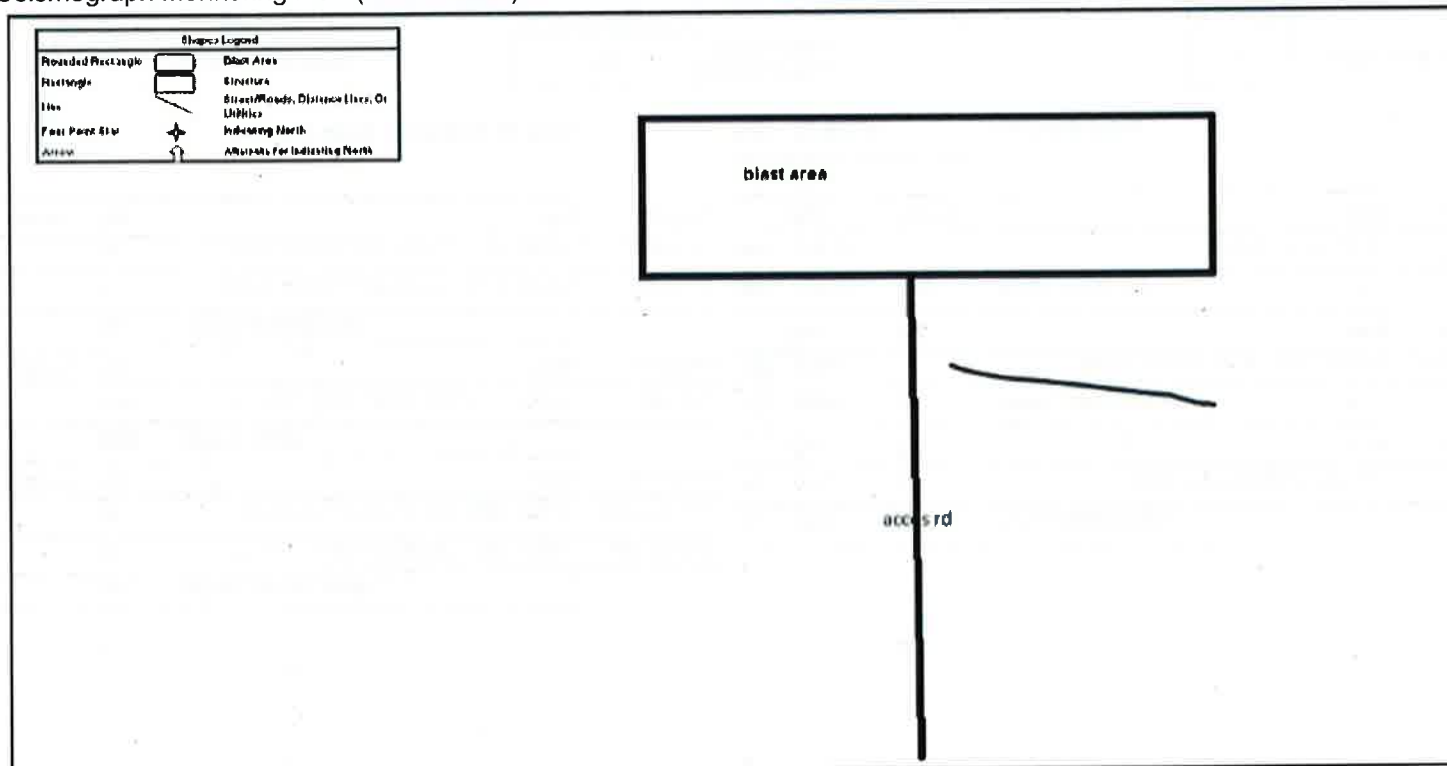
cloudy

No. of Crew Members 1

Crew Members Names :

Dean	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 3 Shot Time (24hrs) 13:38 Shot VideoTaped: Y **Weather**
 Notes: N/A Weather Conditions: Cloudy
 Temp (°F): 39-45
 Wind Direction: North-West
 Wind Spd: 15-25 MPH

Preblast

Blast Direction: South-East Max Holes/Delay: 2 Predicted K Factor: 240
 Blast Location: storm pond Scale Dist.: 63.78
 Location of Structure: existing tower Max Weight/Delay: 112 Lbs Predicted PPV: 0.31
 Measurement Physical Measurement Dist. to Closest (Ft) Structure 675 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A **Pay Calculations Notes**
 Pay Square Area 6355 Feet
 N/A N/A N/A
 N/A N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	1328.00	Total SqFt	7470.00	Powder	1.08 Lbs/Cyd	Total Product Weight (Lbs) :	4790
Total Tons	N/A	Total Yards	4426.67	Factor	0.92 Cyd/Lbs	Avg Weight / Hole (Lbs):	57.71

Cal Method	Pattern	
# Holes	83	Cover Used/No Blast Mats 12
	AVG	Min Max
Drill Depth	16	9 21
Burden(Feet)	9 Feet	9 9
Spacing (Feet)	10 Feet	10 10
Hole Diameter	4	4 4
OverBurden (Ft)	2	0 6
Control Row Taped	N	

Stone Weight	N/A /Cyd	Top Stemming	5 Min 8 Max
Type of Terrian	Flat/Sloped	Charges/Hole	1 Min 1 Max
Type of Rock	Mica/Schist	Deck Stemming	N/A Min N/A Max
Stemming Type	3/8" Crushed Stone	Charge Wgt/Deck	9 Min 112 Max
Height of Face	0	Depth of Water	0 Min 10 Max
Angled Holes /Face Bermed	N/N	Laser/BoreTracking	N

Total Pounds **4789.72 Lbs**

Type Of Initiation: Non-Electric

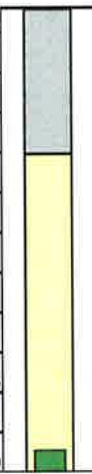
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		4536.00 Lbs
BA BULK Totals:		N/A	4536.00 Lbs
Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	57	189.81 Lbs
BAPACKAGED Totals:		57	189.81 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	83	63.91 Lbs
BOOSTERS Totals:		83	63.91 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	58	
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	25	
DETS DHOLE Totals:		83	
Product #	Desc	Qty	Length
DJ01000	NONEL STARTER 1000FT/305M 4/CS 1.4B	1000	1000
LINES Totals:		1000	
Product #	Desc	Qty	Length
DY17Z812ME	NONEL EZTL CPZ 17 MS 12FT 90/180/CS	19	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	30	
SURF DELAY Totals:		49	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	3
Total Depth (ft)	16.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	5
1966 Emulsion Blend	11
TROJAN SPARTAN 350G 49/CS	0


Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.305	43	120.6	675	235

Date/Time Long at 13:38:24 October 12, 2016
 Trigger Source Geo: 0.050 in/s
 Range Geo: 9.999 in/s
 Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
 Battery Level 6.3 Volts
 Unit Calibration February 6, 2016 by Instantel
 File Name E619GL5C.K00

Notes

Location: 37 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 12, 2016 14:43:36 (V10.72)

Extended Notes

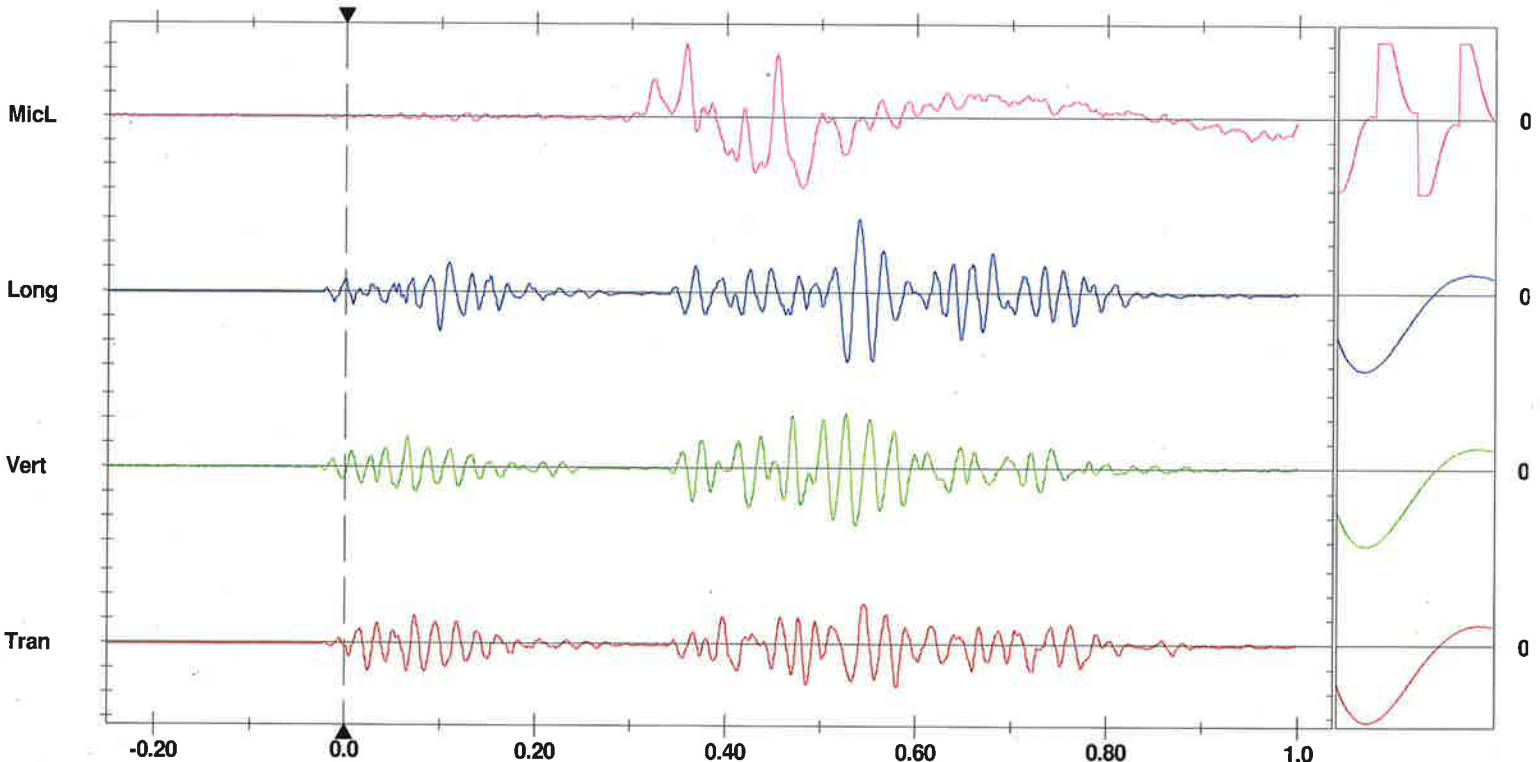
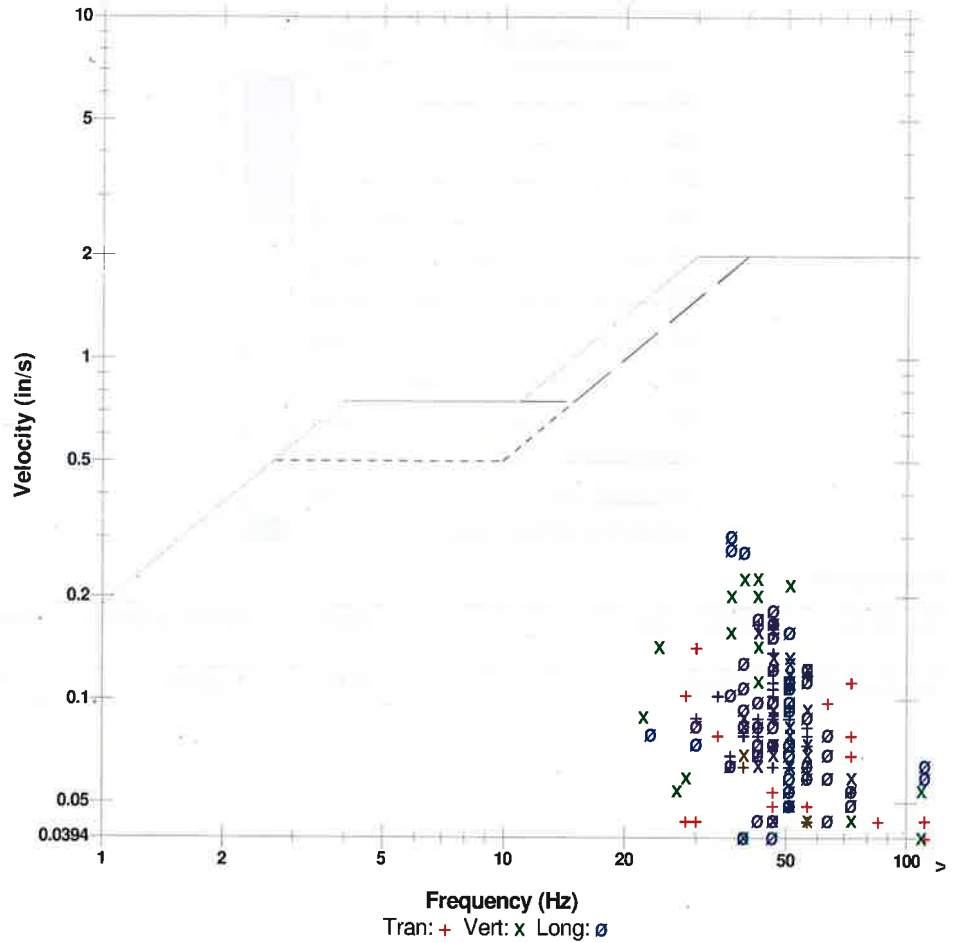
set at existing tower

Microphone Linear Weighting
 PSPL 120.6 dB(L) 0.003 psi(L) at 0.359 sec
 ZC Freq 8.0 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 538 mv)

	Tran	Vert	Long	
PPV	0.170	0.230	0.305	in/s
ZC Freq	39	43	34	Hz
Time (Rel. to Trig)	0.547	0.527	0.541	sec
Peak Acceleration	0.159	0.199	0.199	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.8	8.1	8.3	Hz
Overswing Ratio	3.7	3.4	3.7	

Peak Vector Sum 0.366 in/s at 0.528 sec

USBM RI8507 And OSMRE



Time Scale: 0.10 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
 Trigger = ▶ ◀

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/13/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46225	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM access rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:
 License #: 1879 clear rd and equipment

Signature:

Patrick E. DeFusco

Weather
Comments:

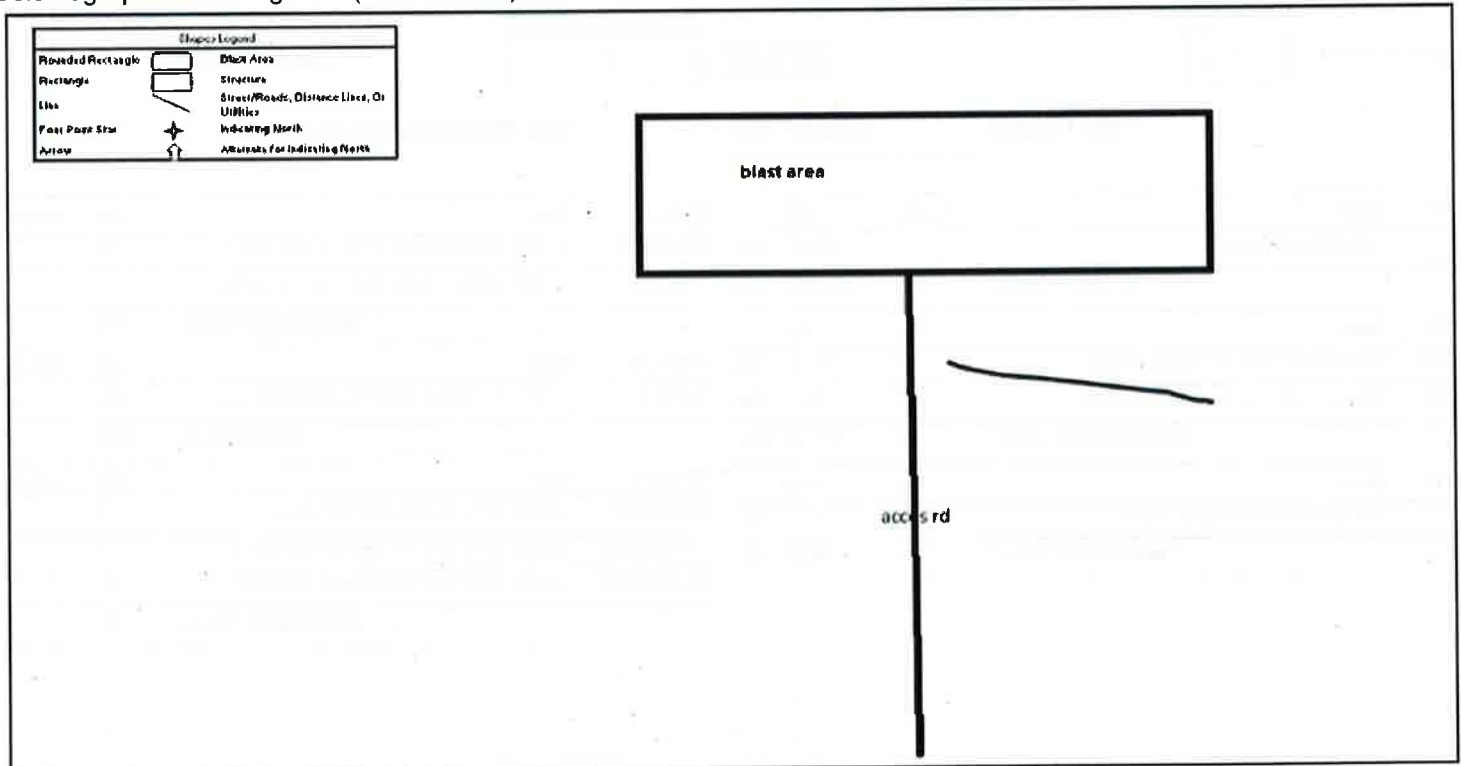
overcast

No. of Crew Members 2

Crew Members Names :

Dean	Jessi	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 4 Shot Time (24hrs) 13:17 Shot VideoTaped: Y **Weather**
 Notes: N/A Weather Conditions: Cloudy
 Temp (°F): 38-42
 Wind Direction: West
 Wind Spd: 15-25 MPH

Preblast

Blast Direction: South-East Max Holes/Delay: 2.00 Predicted K Factor: 160
 Blast Location: storm pond Scale Dist.: 42.45
 Location of Structure: existing tower Max Weight/Delay: 105 Lbs Predicted PPV: 0.40
 Measurement Physical Dist. to Closest (Ft) Structure 435 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
 Pay Square Area 9447 Feet
 N/A N/A N/A
 N/A N/A N/A

Pay Calculations Notes

88x9x11=8712/ 15x77=735

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1545.00</u>	Total SqFt	<u>10197.00</u>	Powder	<u>1.10 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>6236</u>
Total Tons	<u>N/A</u>	Total Yards	<u>5665.00</u>	Factor	<u>0.91 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>60.54</u>

Cal Method	Pattern						
# Holes	<u>103</u>	Cover Used/No	Blast Mats	<u>12</u>			
	AVG	Min	Max				
Drill Depth	<u>15.00</u>	<u>9.00</u>	<u>19.00</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>5.00</u> Min <u>9.00</u> Max
Burden(Feet)	<u>9.00</u> Feet	<u>9.00</u>	<u>9.00</u>	Type of Terrian	<u>Hilly</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>11.00</u> Feet	<u>11.00</u>	<u>11.00</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min <u>N/A</u> Max
Hole Diameter	<u>4.00</u>	<u>4.00</u>	<u>4.00</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>12</u> Min <u>105</u> Max
OverBurden (Ft)	<u>1.00</u>	<u>0.00</u>	<u>3.00</u>	Height of Face	<u>10</u>	Depth of Water	<u>0</u> Min <u>12</u> Max
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/N</u>	Laser/BoreTracking	<u>N</u>		

Total Pounds 6235.81 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		<u>5945.00 Lbs</u>
BA BULK Totals:		N/A	5945.00 Lbs

Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	<u>50</u>	<u>211.50 Lbs</u>
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	<u>0</u>	<u>0.00 Lbs</u>
BAPACKAGED Totals:		50	211.50 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	<u>103</u>	<u>79.31 Lbs</u>
BOOSTERS Totals:		103	79.31 Lbs

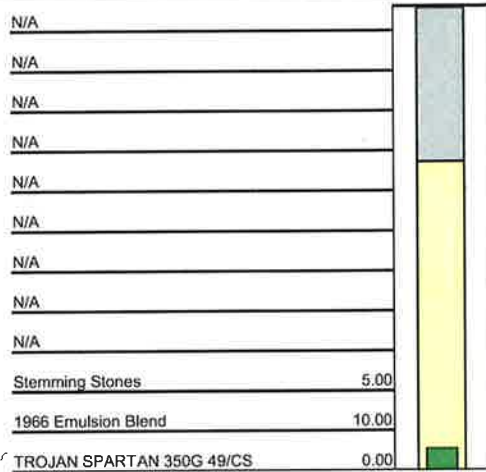
Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	<u>88</u>	
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	<u>15</u>	
DETS DHOLE Totals:		103	

Product #	Desc	Qty	Length
DJ01000	NONEL STARTER 1000FT/305M 4/CS 1.4B	<u>1000</u>	<u>1000</u>
LINES Totals:		1000	

Product #	Desc	Qty	Length
DY09820ME	NONEL EZTL 09/MS 20FT 60/120/CS	<u>5</u>	
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	<u>15</u>	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	<u>17</u>	
SURF DELAY Totals:		37	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	3
Total Depth (ft)	15.00

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.430	73	124.2	435	173

Date/Time Long at 13:17:48 October 13, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.2 Volts
Unit Calibration February 6, 2016 by Instanetel
File Name E619GL76.900

Notes
 Location: 37 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 13, 2016 13:33:26 (V10.72)

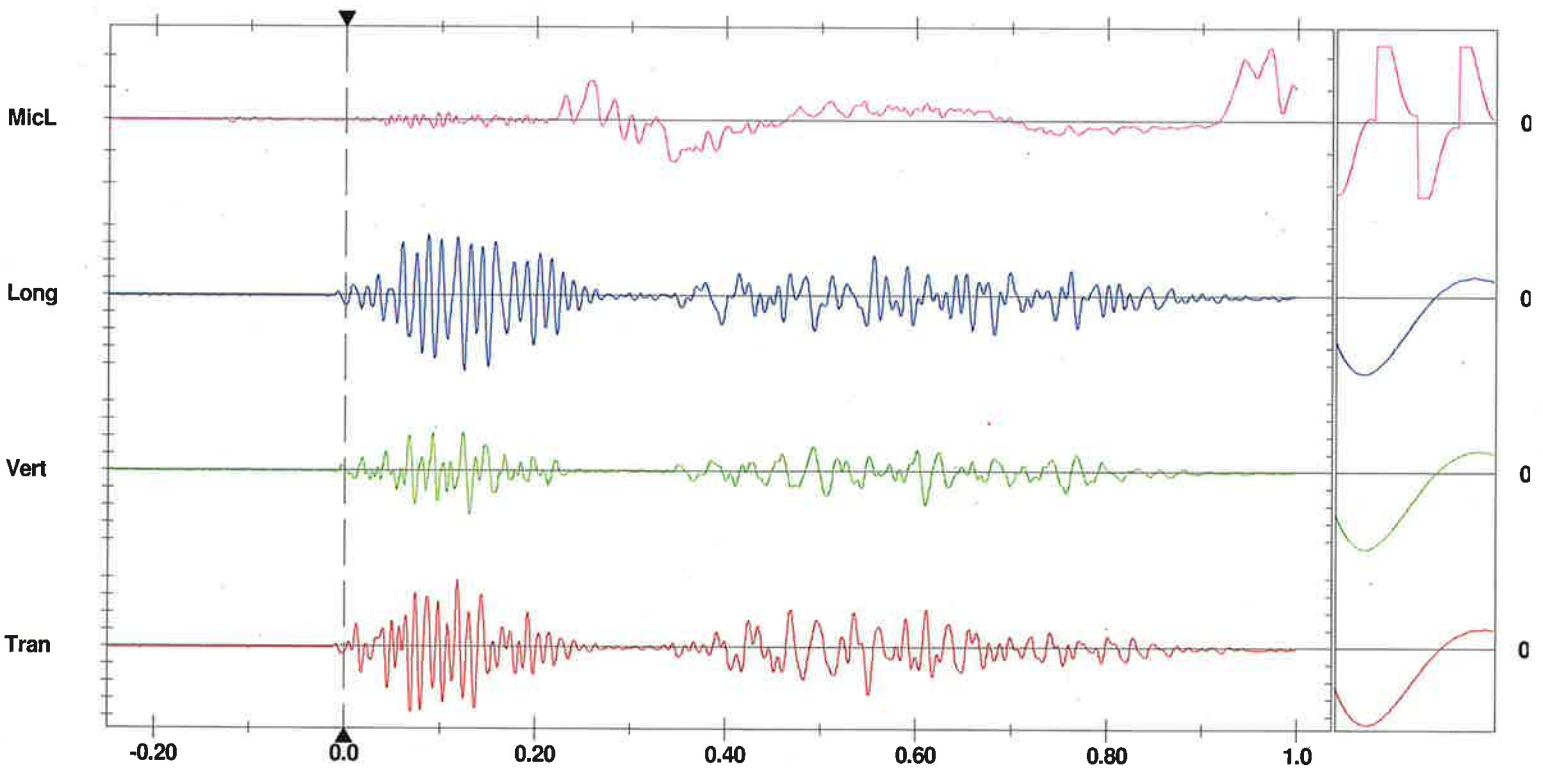
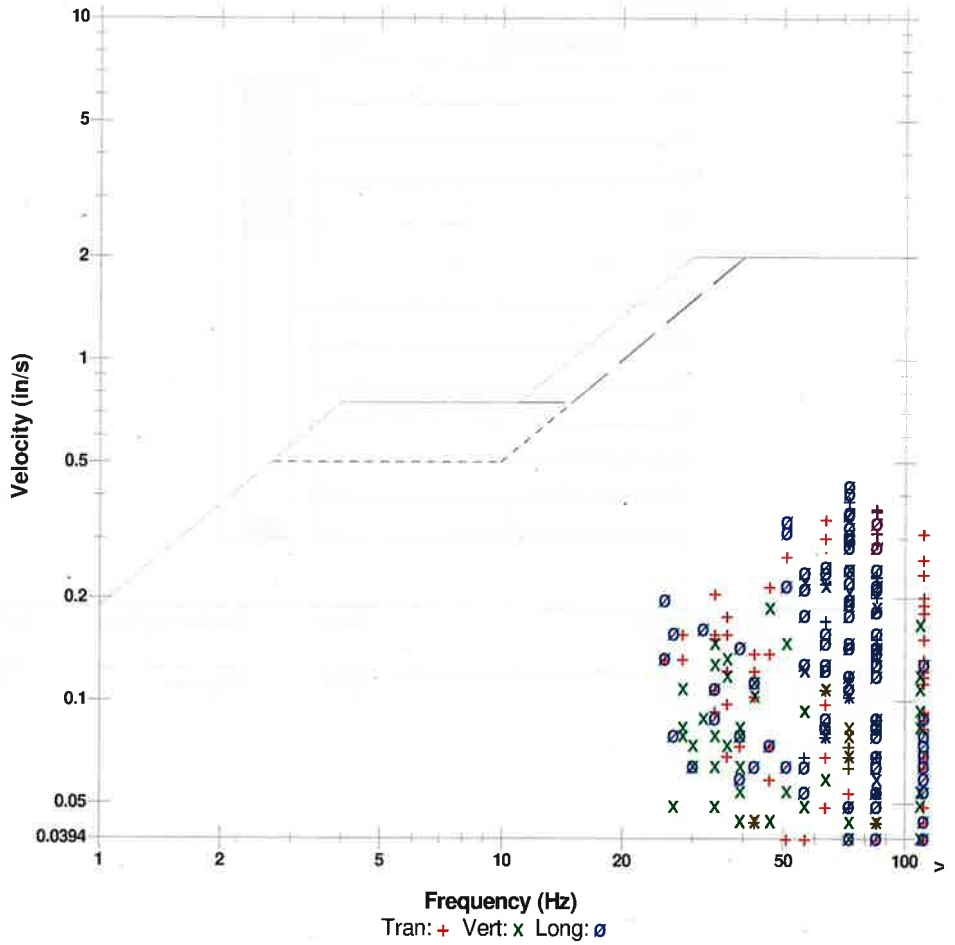
Extended Notes
 set at existing tower

Microphone Linear Weighting
PSPL 124.2 dB(L) 0.005 psi(L) at 0.973 sec
ZC Freq 6.0 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 539 mv)

	Tran	Vert	Long	
PPV	0.390	0.245	0.430	in/s
ZC Freq	73	73	73	Hz
Time (Rel. to Trig)	0.120	0.132	0.126	sec
Peak Acceleration	0.557	0.358	0.451	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.8	8.1	8.3	Hz
Overswing Ratio	3.8	3.5	3.7	

Peak Vector Sum 0.557 in/s at 0.126 sec

USBM RI8507 And OSMRE



Time Scale: 0.10 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.002 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/14/2016	Cust. Supt. Name	Bddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46284	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM access rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:

License #: 1879 clear rd and equipment

Signature:

Weather
Comments:

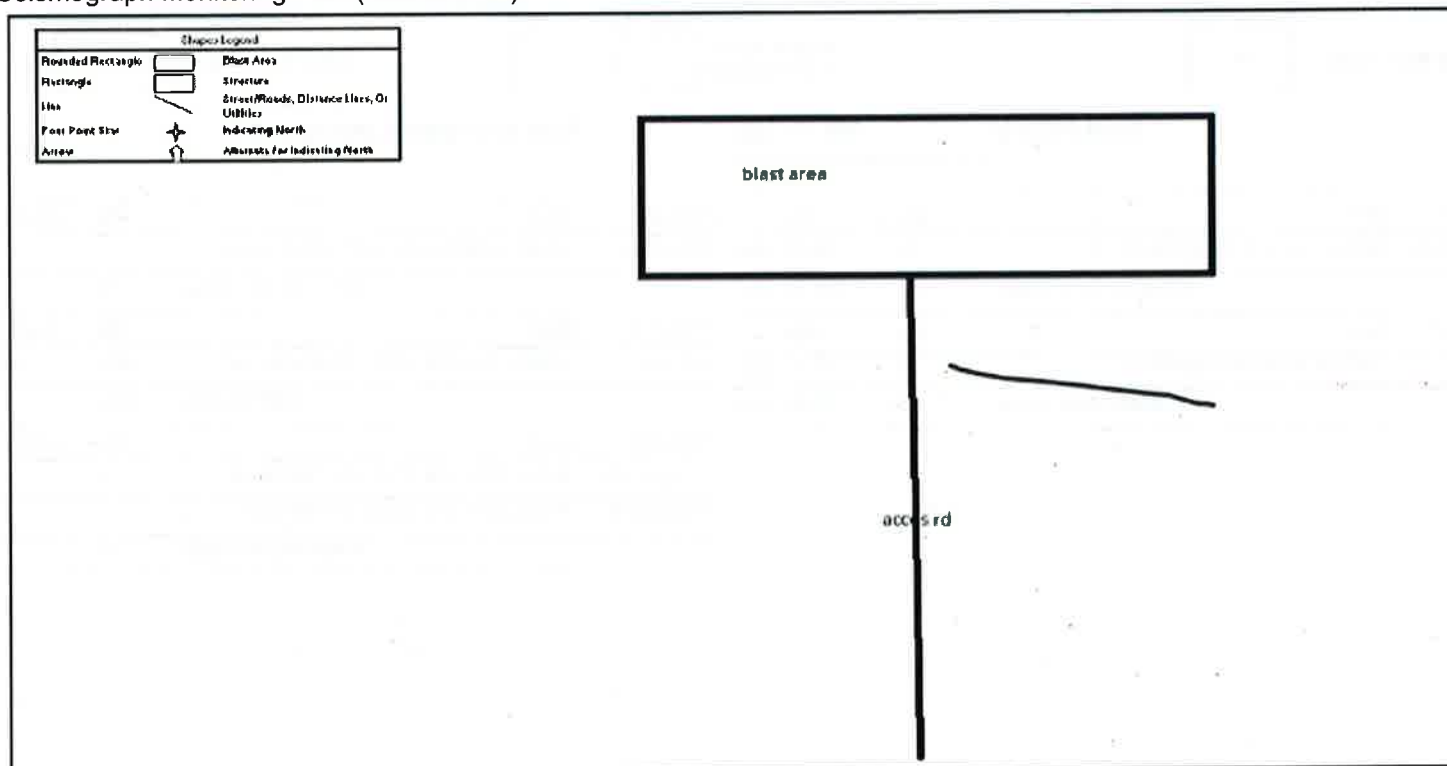
partly cloudy

No. of Crew Members 2

Crew Members Names :

Dean	Jessi	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 5 Shot Time (24hrs) 12:42 Shot VideoTaped: Y WeatherNotes: N/AWeather Conditions: Partly CloudyTemp (°F): 32-48Wind Direction: WestWind Spd: 10-20 MPH**Preblast**Blast Direction: South-EastMax Holes/Delay: 1Predicted K Factor: 160Blast Location: access rdScale Dist.: 103.08Location of Structure: existing towerMax Weight/Delay: 17 LbsPredicted PPV: 0.10Measurement Physical Measurement Dist. to Closest (Ft) Structure 425 Railroad/Highway N/A Overhead Util N/A Underground Util N/A**Pay Quantities**Fire Detail # of Hrs: N/A**Pay Calculations Notes**Pay Square Area 735 Feet

N/A N/A N/A

N/A N/A N/A

15x7x7=735sqft

Shot Info**Configuration****1 - Open**Total Drill Depth(Ft) 135.00Total SqFt 735.00Powder 0.74 Lbs/CydTotal Product Weight (Lbs) : 181Total Tons N/ATotal Yards 245.00Factor 1.35 Cyd/LbsAvg Weight / Hole (Lbs): 12.07Cal Method Pattern# Holes 15Cover Used/No Blast Mats 9**AVG****Min Max**Drill Depth 99 12Stone Weight N/A /CydTop Stemming 6 Min 7 MaxBurden(Feet) 7 Feet7 7Type of Terrian HillyCharges/Hole 1 Min 1 MaxSpacing (Feet) 7 Feet7 7Type of Rock Mica/SchistDeck Stemming N/A Min N/A MaxHole Diameter 4.004.00 4.00Stemming Type 3/8" Crushed StoneCharge Wgt/Deck 10 Min 17 MaxOverBurden (Ft) 1.000.00 3.00Height of Face 0Depth of Water 0 Min 5 MaxControl Row Taped NAngled Holes /Face Bermed N/NLaser/BoreTracking NTotal Pounds 180.75 LbsType Of Initiation: **Non-Electric**

Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	40	169.20 Lbs
BAPACKAGED Totals:		40	169.20 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	15	11.55 Lbs
BOOSTERS Totals:		15	11.55 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	15	
DETS DHOLE Totals:		15	

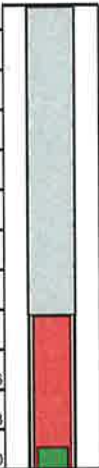
Product #	Desc	Qty	Length
DJ01000	NONEL STARTER 1000FT/305M 4/CS 1.4B	1000	1000
LINES Totals:		1000	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	5	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	15	
SURF DELAY Totals:		20	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	3.00
Total Depth (ft)	9.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	6
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	3
TROJAN SPARTAN 350G 49/CS	0.00

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.080	57	114.4	425	133

Date/Time Long at 12:42:47 October 14, 2016
 Trigger Source Geo: 0.050 in/s
 Range Geo: 9.999 in/s
 Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
 Battery Level 6.2 Volts
 Unit Calibration February 6, 2016 by Instantel
 File Name E619GL8Z.BB0

Notes

Location: 37 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 14, 2016 12:51:21 (V10.72)

Extended Notes

set at existing tower

Microphone Linear Weighting

PSPL 114.4 dB(L) 0.002 psi(L) at 0.419 sec

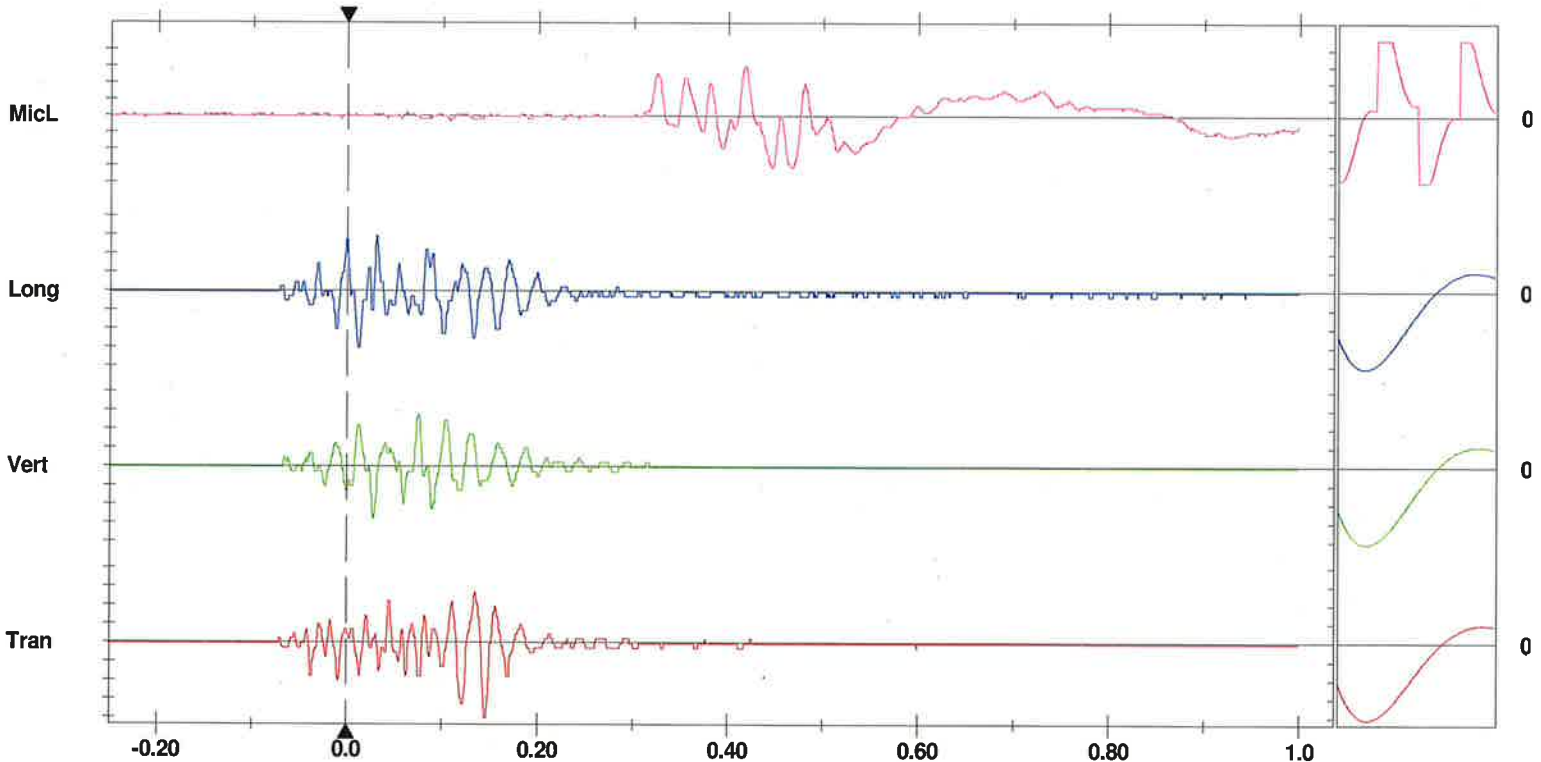
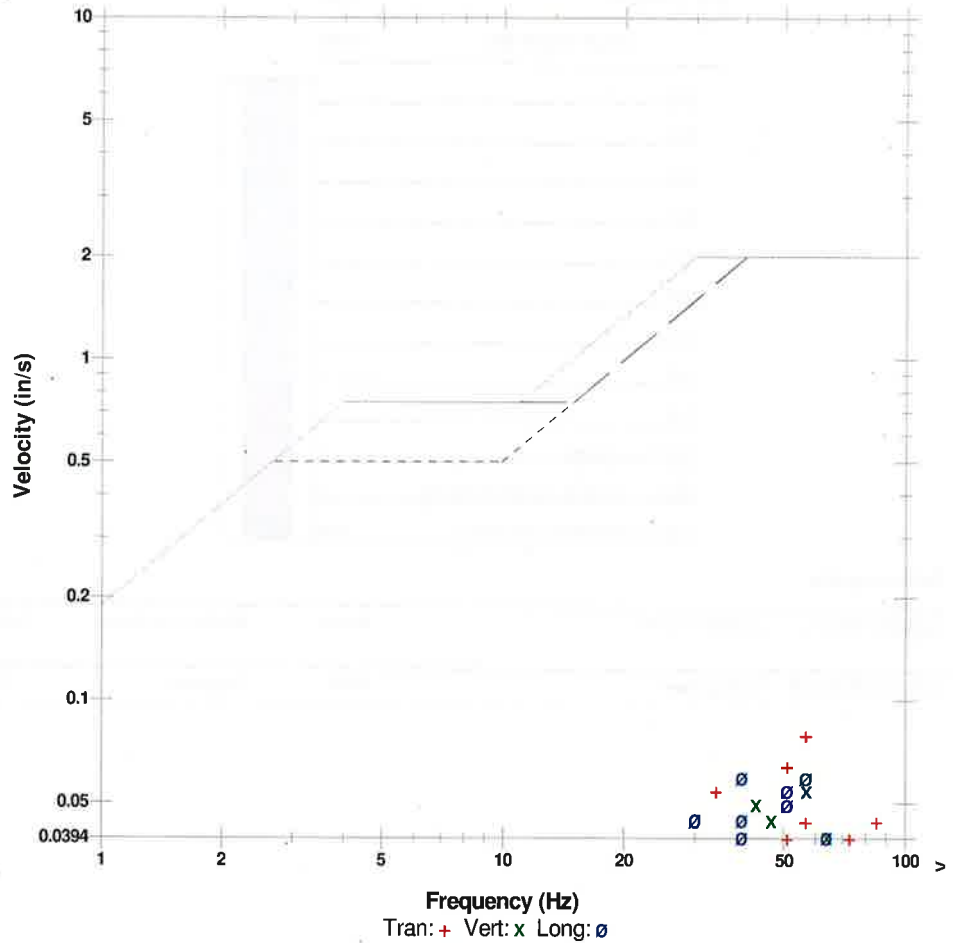
ZC Freq 32 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 537 mv)

	Tran	Vert	Long	
PPV	0.080	0.055	0.060	in/s
ZC Freq	57	57	39	Hz
Time (Rel. to Trig)	0.147	0.029	0.013	sec
Peak Acceleration	0.106	0.053	0.066	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.7	8.1	8.3	Hz
Overswing Ratio	3.9	3.5	3.8	

Peak Vector Sum 0.085 in/s at 0.147 sec

USBM RI8507 And OSMRE



Time Scale: 0.10 sec/div Amplitude Scale: Geo: 0.020 in/s/div Mic: 0.001 psi(L)/div
 Trigger = ▶ ◀

Sensor Check

Job#	104-04-02718	Cust. PO#	N/A	
Date	10/17/2016	Cust. Supt. Name	Bddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46339	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM access rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:

License #: 1879 clear rd and equipment

Signature:

Weather
Comments:

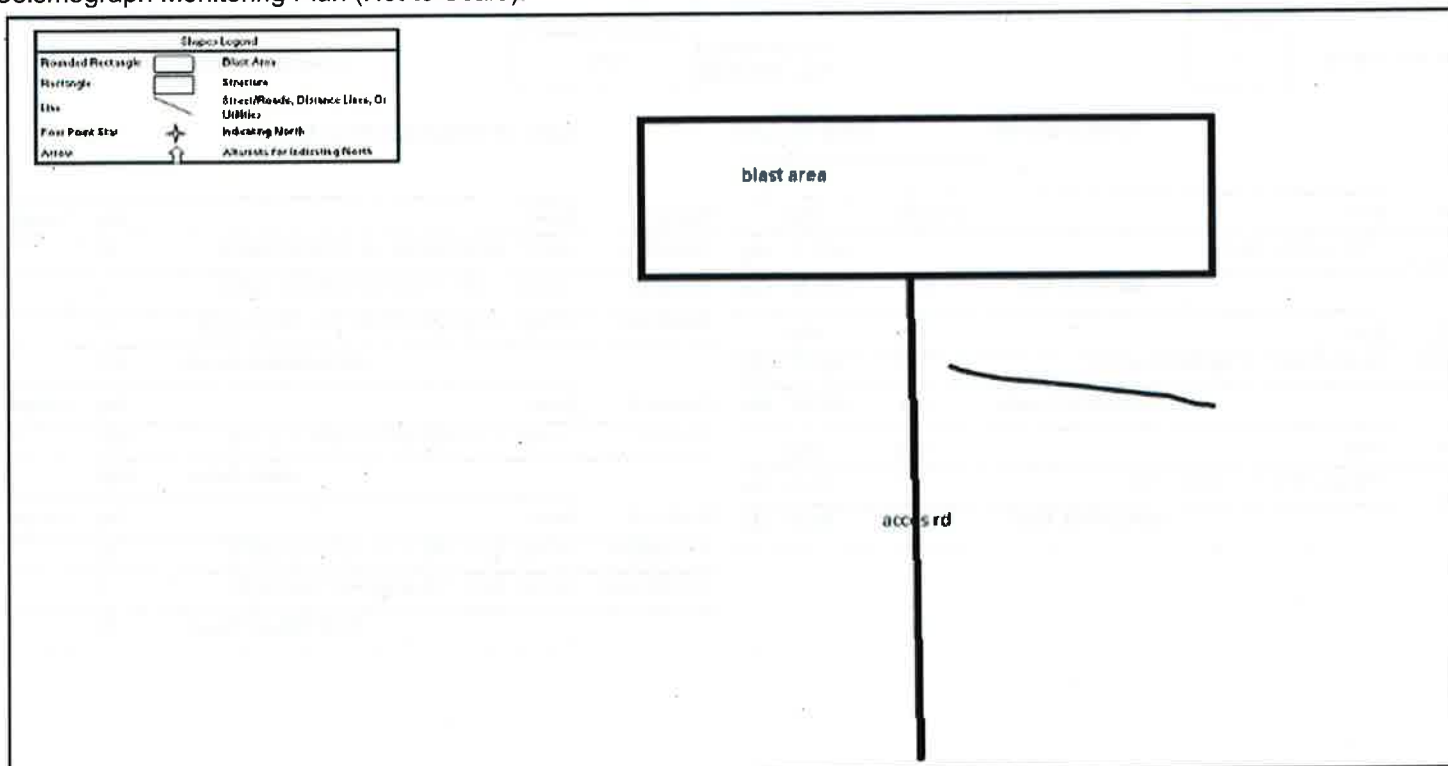
fog/rain

No. of Crew Members 2

Crew Members Names :

Jessi	Britt	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 6 Shot Time (24hrs) 12:59 Shot VideoTaped: Y Weather

Notes: N/A Weather Conditions: Rain

Temp (°F): 48-56

Wind Direction: North-West

Wind Spd: 10-20 MPH

Preblast

Blast Direction: South-East Max Holes/Delay: 2 Predicted K Factor: 160

Blast Location: access pad#1 Scale Dist.: 51.03

Location of Structure: existing tower Max Weight/Delay: 175 Lbs Predicted PPV: 0.30

Measurement Physical Measurement Dist. to Closest (Ft) Structure 675 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A

Pay Square Area 9720 Feet

N/A N/A N/A

N/A N/A N/A

Pay Calculations Notes

81x10x12=9720sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>2025.00</u>	Total SqFt	<u>8910.00</u>	Powder	<u>1.21 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>9960</u>
Total Tons	<u>N/A</u>	Total Yards	<u>8250.00</u>	Factor	<u>0.83 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>122.96</u>

Cal Method	Pattern						
# Holes	<u>81</u>	Cover Used/No	<u>N/A</u>				
	AVG	Min	Max				
Drill Depth	<u>25</u>	<u>12</u>	<u>30</u>	Stone Weight	<u>N/A /Cyd</u>	Top Stemming	<u>5</u> Min <u>7</u> Max
Burden(Feet)	<u>10</u> Feet	<u>10</u>	<u>10</u>	Type of Terrian	<u>Hilly</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>11</u> Feet	<u>11</u>	<u>11</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min <u>N/A</u> Max
Hole Diameter	<u>4</u>	<u>4</u>	<u>4</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>175</u> Min <u>40</u> Max
OverBurden (Ft)	<u>0</u>	<u>0</u>	<u>2</u>	Height of Face	<u>20</u>	Depth of Water	<u>0</u> Min <u>15</u> Max
Control Row Taped	<u>N</u>			Angled Holes /Face Bermed	<u>N/N</u>	Laser/BoreTracking	<u>N</u>

Total Pounds 9960.06 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		9282.00 Lbs
BA BULK Totals:		N/A	9282.00 Lbs
Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	139	587.97 Lbs
BAPACKAGED Totals:		139	587.97 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	117	90.09 Lbs
BOOSTERS Totals:		117	90.09 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	36	
DXABZ641	NONEL EZDET 25/350 40FT ZCOMP 30/CS	11	
DXABZ660	NONEL EZDET 25/350 60FT ZCOMP 25/50/CS	70	
DETS DHOLE Totals:		117	
Product #	Desc	Qty	Length
DJ01000	NONEL STARTER 1000FT/305M 4/CS 1.4B	1000	1000
LINES Totals:		1000	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	25	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	2	
SURF DELAY Totals:		27	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	3
Total Depth (ft)	29.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	5
1966 Emulsion Blend	24
TROJAN SPARTAN 350G 49/CS	0

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.865	43	121.6	675	467

Date/Time Long at 12:59:05 October 17, 2016
 Trigger Source Geo: 0.050 in/s
 Range Geo: 9.999 in/s
 Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
 Battery Level 6.1 Volts
 Unit Calibration February 6, 2016 by Instantel
 File Name E619GLEK.2H0

Notes
 Location: 37 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 17, 2016 13:37:35 (V10.72)

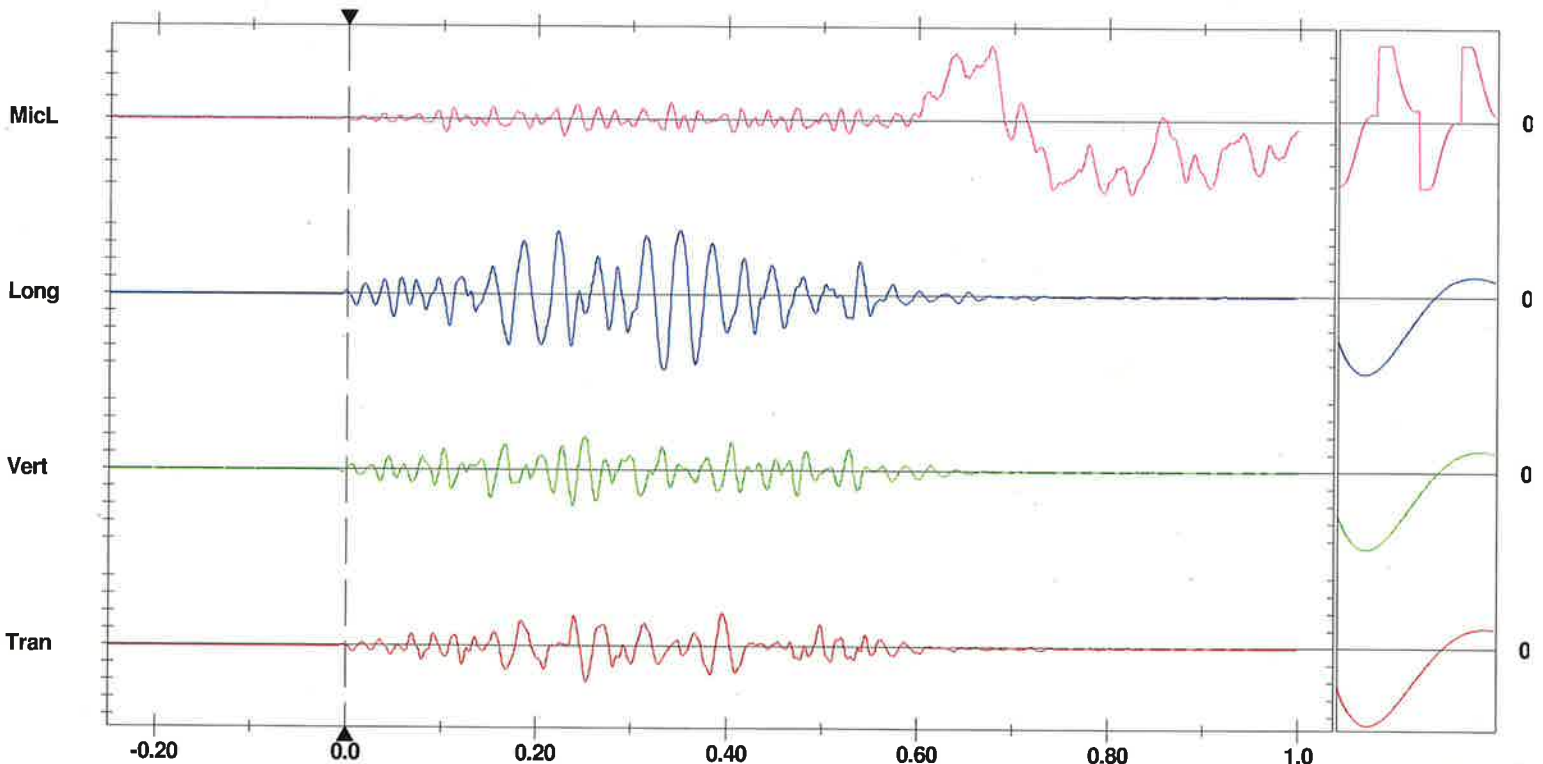
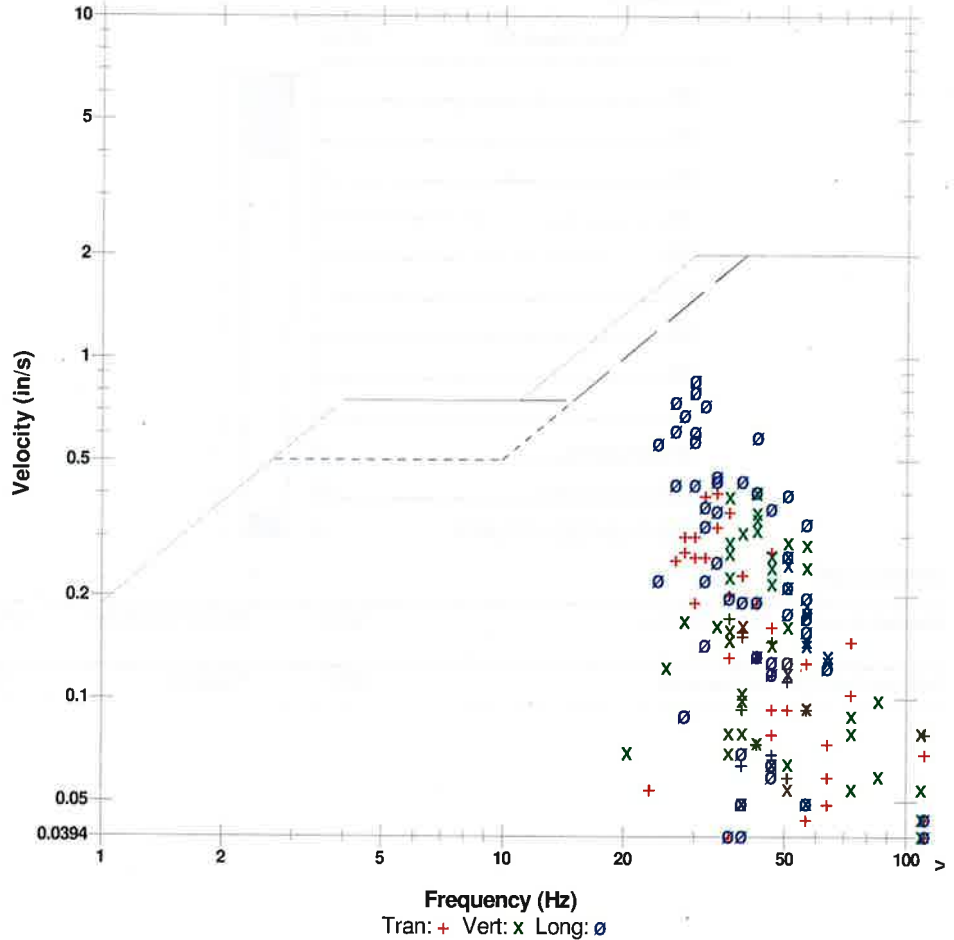
Extended Notes
 set at existing tower

Microphone Linear Weighting
 PSPL 121.6 dB(L) 0.003 psi(L) at 0.678 sec
 ZC Freq 5.0 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 539 mv)

	Tran	Vert	Long	
PPV	0.410	0.405	0.865	in/s
ZC Freq	34	43	30	Hz
Time (Rel. to Trig)	0.255	0.240	0.334	sec
Peak Acceleration	0.252	0.358	0.557	g
Peak Displacement	0.002	0.002	0.005	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.7	8.1	8.5	Hz
Overswing Ratio	3.8	3.5	3.7	

Peak Vector Sum 0.919 in/s at 0.334 sec

USBM RI8507 And OSMRE





Job#	104-04-02718	Cust. PO#	N/A	
Date	10/18/2016	Cust. Supt. Name	Bddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	68457	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM road and equipment

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:
License #: 1879 clear rd and move equipment

Signature:

Weather
Comments:

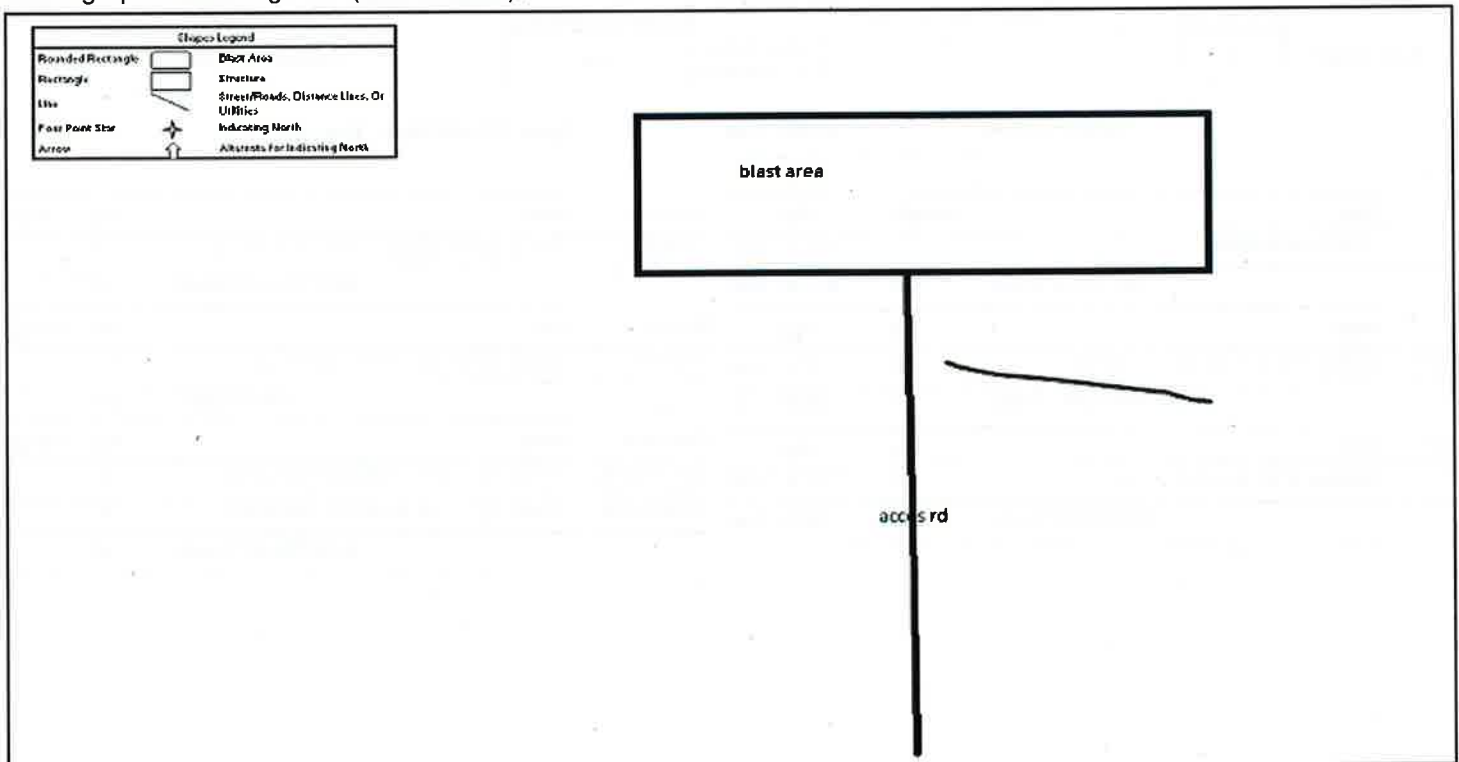
partly clody

No. of Crew Members 3

Crew Members Names :

Dean	Jessi	Britt	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 1 Shot Time (24hrs) 13:02 Shot VideoTaped: YWeather

Notes:

N/A

Weather Conditions: Partly CloudyTemp (°F): 69-74Wind Direction: WestWind Spd: 5-10 MPHPreblastBlast Direction: North-EastMax Holes/Delay: 2Predicted K Factor: 240Blast Location: 37 putnam rdScale Dist.: 130.96Location of Structure: 21 putnam rdMax Weight/Delay: 14 Lbs Predicted PPV: 0.10Measurement Physical Measurement Dist. to Closest (Ft) Structure 490 Railroad/Highway N/A Overhead Util N/A Underground Util N/APay QuantitiesFire Detail # of Hrs: N/APay Calculations NotesPay Square Area 2058 Feet

42x7x7=2058sqft

N/A N/A N/A

N/A N/A N/A

Shot InfoConfiguration1 - OpenTotal Drill Depth(Ft) 378.00Total SqFt 2058.00

Powder

0.87 Lbs/Cyd

Total Product Weight (Lbs):

599Total Tons N/ATotal Yards 686.00

Factor

1.15 Cyd/Lbs

Avg Weight / Hole (Lbs):

14.26Cal Method Pattern# Holes 42Cover Used/No Blast Mats 18AVGMinMaxDrill Depth 99 9Stone Weight N/A /Cyd

Top Stemming

6 Min7 MaxBurden(Feet) 7 Feet7 7

Type of Terrian

Hilly

Charges/Hole

1 Min1 MaxSpacing (Feet) 7 Feet7 7

Type of Rock

Mica/Schist

Deck Stemming

N/A MinN/A MaxHole Diameter 3.53.5 3.5

Stemming Type

3/8" Crushed Stone

Charge Wgt/Deck

10 Min14 MaxOverBurden (Ft) 10 2

Height of Face

5

Depth of Water

0 Min4 Max

Control Row Taped

N

Angled Holes /Face Bermed

N/N

Laser/BoreTracking

NTotal Pounds 598.80 LbsType Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		526.50 Lbs
BA BULK Totals:		N/A	526.50 Lbs

Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	12	39.96 Lbs
BAPACKAGED Totals:		12	39.96 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	42	32.34 Lbs
BOOSTERS Totals:		42	32.34 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	42	
DETS DHOLE Totals:		42	

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	500	500
LINES Totals:		500	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	21	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	37	
SURF DELAY Totals:		58	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	3
Total Depth (ft)	9.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 350G 49/CS	0

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	21 putnam rd	3619	Triggered	0.260	57	116.2	490	634

Shot # 2 Shot Time (24hrs) 15:10 Shot VideoTaped: YWeather

Notes:

N/A

Weather Conditions: Partly CloudyTemp (°F): 68-75Wind Direction: WestWind Spd: 5-10 MPHPreblast

Blast Direction: West Max Holes/Delay: 2 Predicted K Factor: 240
Blast Location: 37 ptnam re Scale Dist.: 101.56
Location of Structure: 21 putnam rd Max Weight/Delay: 14 Lbs Predicted PPV: 0.15
Measurement Physical Measurement Dist. to Closest (Ft) Structure 380 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay QuantitiesFire Detail # of Hrs: N/APay Calculations NotesPay Square Area 2058 Feet

42x7x7=2058sqft

N/A N/A N/A

N/A N/A N/A

Shot InfoConfiguration1 - Open

Total Drill Depth(Ft) 378.00 Total SqFt 2058.00 Powder 0.81 Lbs/Cyd Total Product Weight (Lbs): 559
Total Tons N/A Total Yards 686.00 Factor 1.23 Cyd/Lbs Avg Weight / Hole (Lbs): 13.31

Cal Method Pattern# Holes 42Cover Used/No Blast Mats 18AVGMinMax

Drill Depth	<u>9</u>	<u>9</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>6</u> Min	<u>7</u> Max
Burden(Feet)	<u>7</u> Feet	<u>7</u>	Type of Terrian	<u>Hilly</u>	Charges/Hole	<u>1</u> Min	<u>1</u> Max
Spacing (Feet)	<u>7</u> Feet	<u>7</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min	<u>N/A</u> Max
Hole Diameter	<u>3.5</u>	<u>3.5</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>10</u> Min	<u>14</u> Max
OverBurden (Ft)	<u>1</u>	<u>0</u>	Height of Face	<u>5</u>	Depth of Water	<u>0</u> Min	<u>4</u> Max

Control Row Taped NAngled Holes /Face Bermed N/NLaser/BoreTracking NTotal Pounds 558.84 LbsType Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		526.50 Lbs
BA BULK Totals:		N/A	526.50 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	42	32.34 Lbs
BOOSTERS Totals:		42	32.34 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	42	
DETS DHOLE Totals:		42	

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	500	500
LINES Totals:		500	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	37	
SURF DELAY Totals:		44	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	3
Total Depth (ft)	9.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 350G 49/CS	0

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	21 putnam rd	3619	Triggered	0.430	51	116.3	380	699

Date/Time Long at 13:02:27 October 18, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration February 6, 2016 by Instantel
File Name E619GLGE.W30

Notes

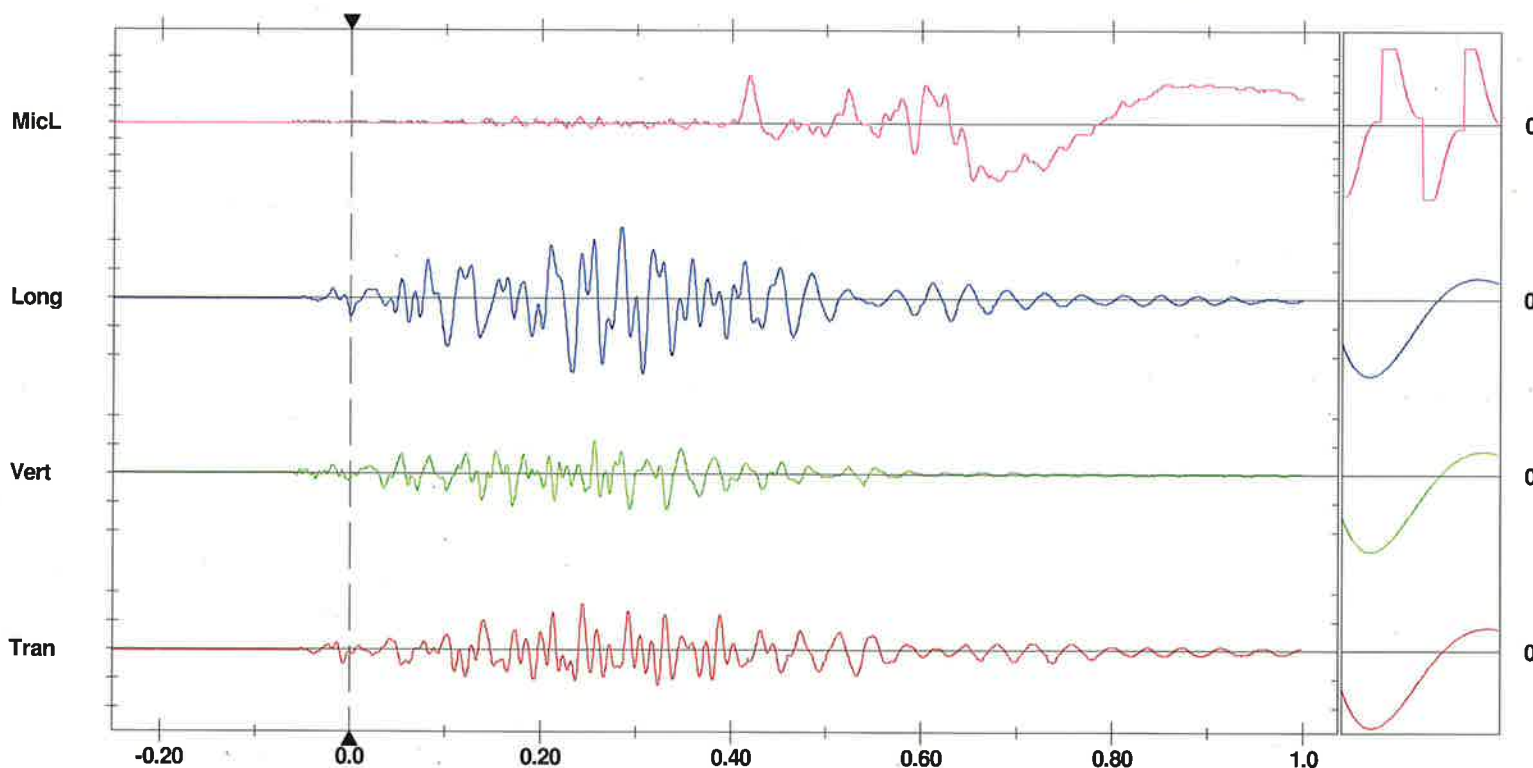
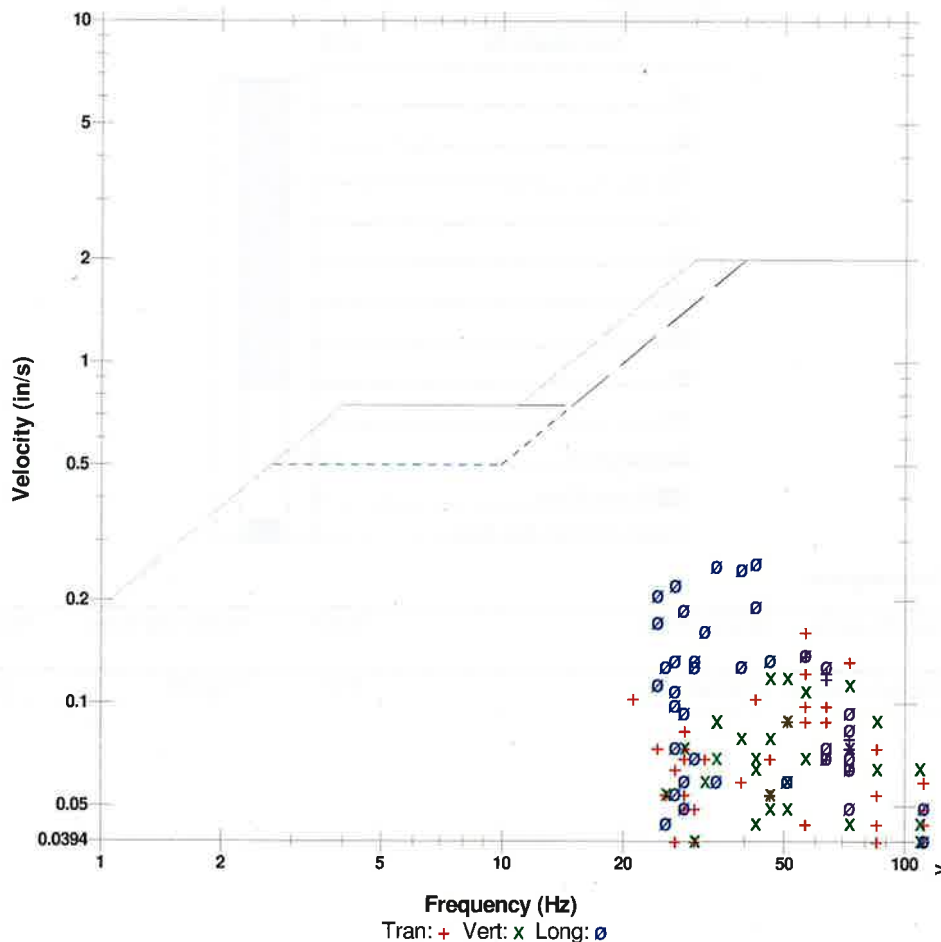
Location: 21 Putnam Rd
Client: JA McDonald
User Name: J.Taber
Converted: October 18, 2016 15:24:06 (V10.72)

Microphone Linear Weighting
PSPL 115.2 dB(L) 0.002 psi(L) at 0.654 sec
ZC Freq 4.0 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 538 mv)

	Tran	Vert	Long	
PPV	0.165	0.120	0.260	in/s
ZC Freq	57	51	47	Hz
Time (Rel. to Trig)	0.246	0.295	0.308	sec
Peak Acceleration	0.172	0.133	0.199	g
Peak Displacement	0.001	0.000	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.0	8.2	8.5	Hz
Overswing Ratio	3.7	3.4	3.6	

Peak Vector Sum 0.269 in/s at 0.285 sec

USBM RI8507 And OSMRE



Sensor Check

Date/Time Vert at 15:10:55 October 18, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.2 Volts
Unit Calibration February 6, 2016 by InstanTel
File Name E619GLGK.U70

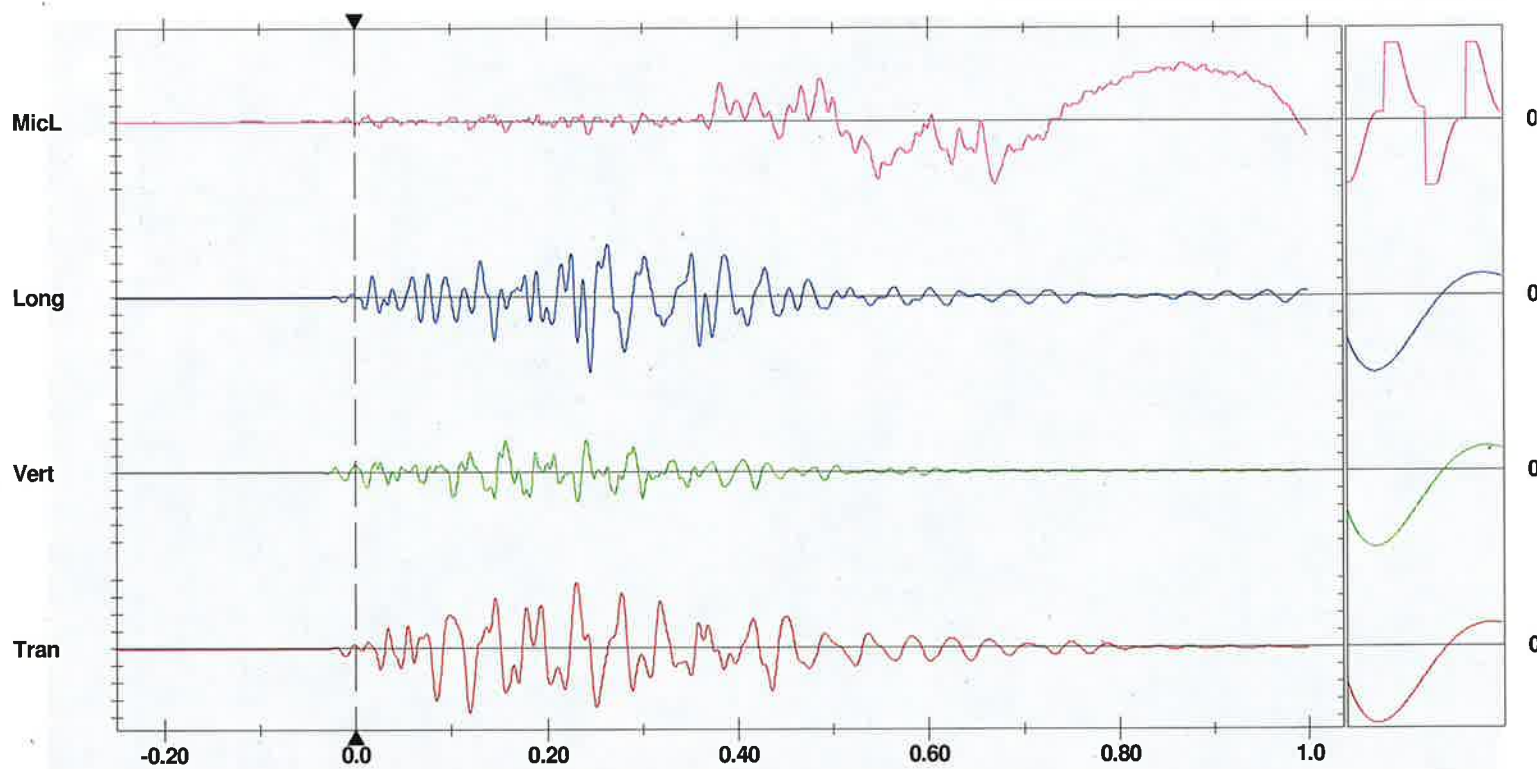
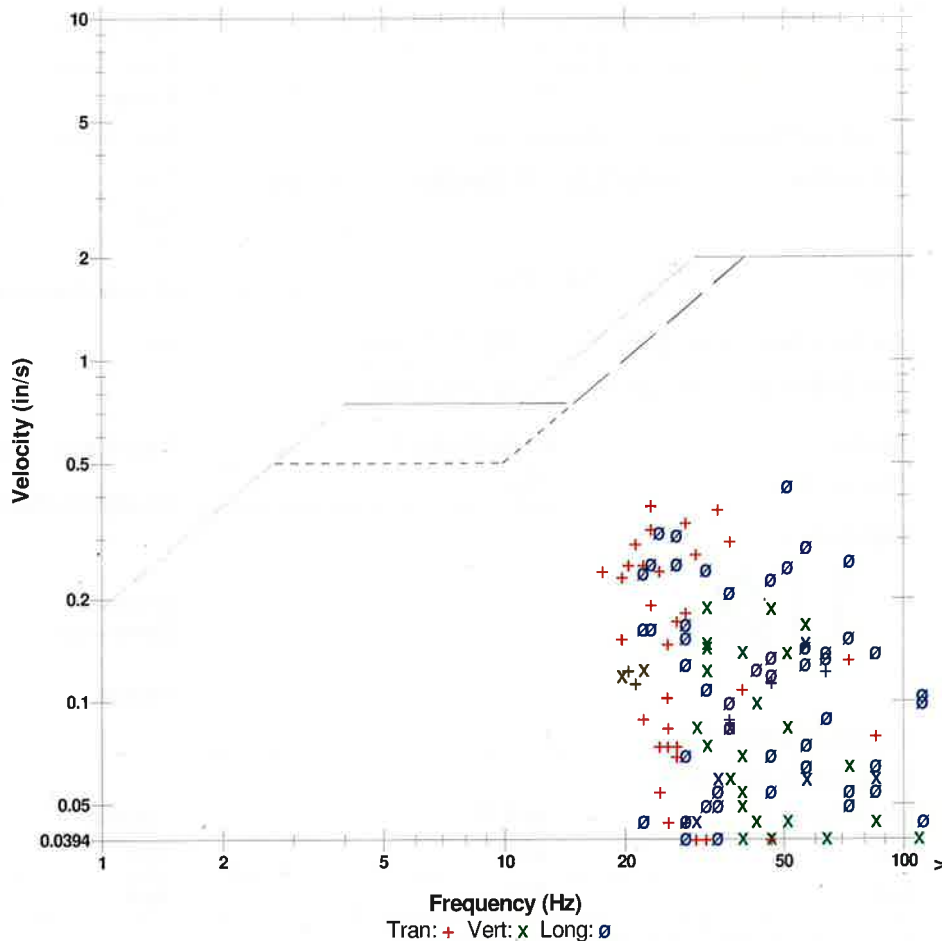
Notes
 Location: 21 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 18, 2016 15:26:30 (V10.72)

Microphone Linear Weighting
PSPL 116.3 dB(L) 0.002 psi(L) at 0.671 sec
ZC Freq 7.0 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 537 mv)

	Tran	Vert	Long	
PPV	0.380	0.190	0.430	in/s
ZC Freq	23	32	51	Hz
Time (Rel. to Trig)	0.231	0.158	0.246	sec
Peak Acceleration	0.239	0.212	0.331	g
Peak Displacement	0.002	0.001	0.002	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.0	8.2	8.3	Hz
Overswing Ratio	3.6	3.3	3.6	

Peak Vector Sum 0.479 in/s at 0.233 sec

USBM RI8507 And OSMRE



Time Scale: 0.10 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/19/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46461	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM mud

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler;Dean T

License #: 1937

Precautions Taken:

Use caution when driving bulk truck to shot

Signature:

Weather
Comments:

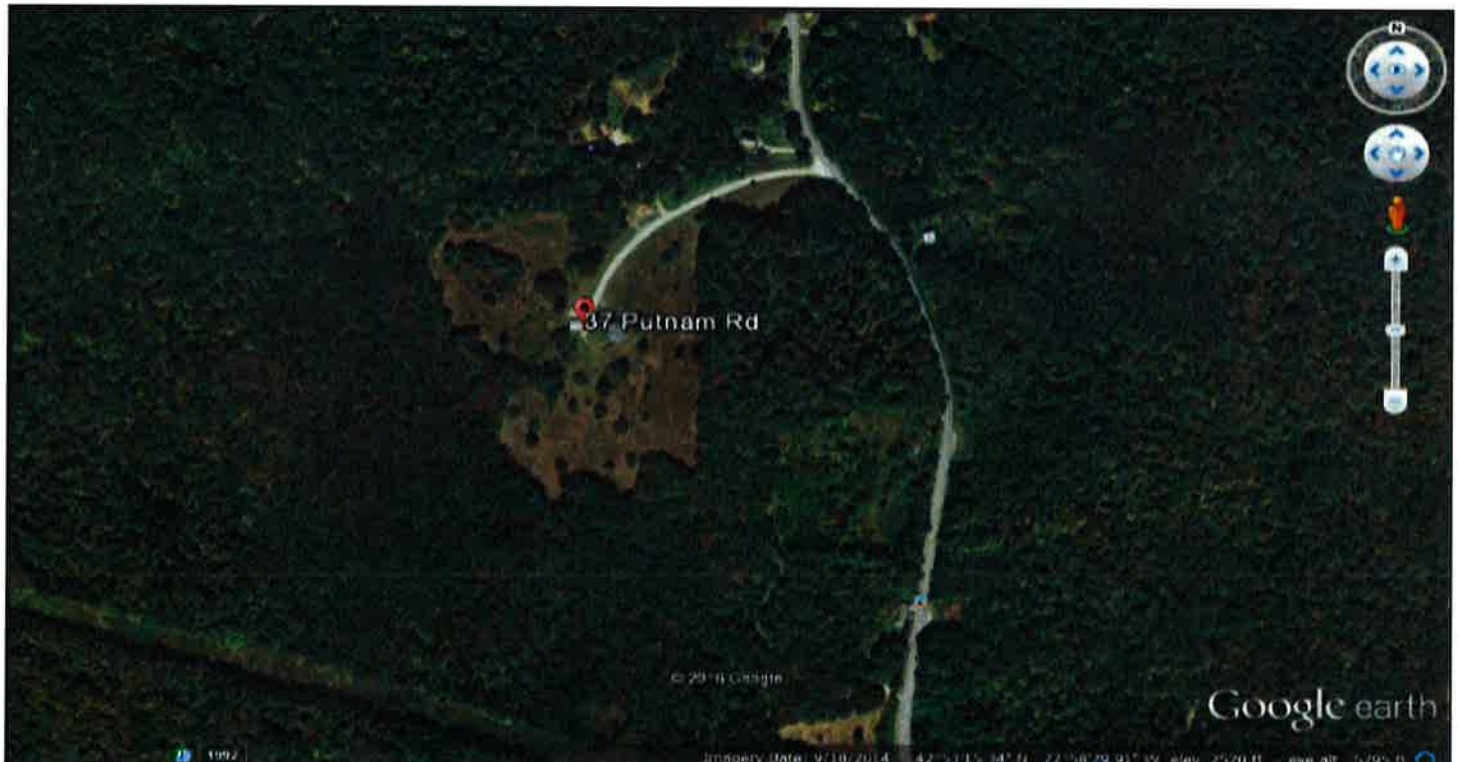
sunny 65

No. of Crew Members 3

Crew Members Names :

pat defusco	britt G	Jesse	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 3 Shot Time (24hrs) 13:57 Shot VideoTaped: Y**Weather**

Notes:

N/A

Weather Conditions: SunnyTemp (°F): 50-65Wind Direction: South-EastWind Spd: 5-15 MPH**Preblast**Blast Direction: WestMax Holes/Delay: 2.00Predicted K Factor: 160Blast Location: o/m padScale Dist.: 122.98Location of Structure: 21 putnam rdMax Weight/Delay: 20.00 LbsPredicted PPV: 0.07Measurement Range Finder Dist. to Closest (Ft) Structure 550 Railroad/Highway N/A Overhead Util N/A Underground Util N/A**Pay Quantities**Fire Detail # of Hrs: N/A**Pay Calculations Notes**Pay Square Area 1029.00 Feet

N/A N/A N/A

N/A N/A N/A

21x7x7=1029 sqft

Shot Info**Configuration****1 - Open**Total Drill Depth(Ft) 187.00Total SqFt 833.00

Powder

0.94 Lbs/Cyd

Total Product Weight (Lbs) :

318Total Tons N/ATotal Yards 339.37

Factor

1.07 Cyd/Lbs

Avg Weight / Hole (Lbs):

18.71

Cal Method

Pattern

Holes

17Cover Used/No Blast Mats 6

AVG

Min

Max

Drill Depth 11.0011.00 14.00

Stone Weight

N/A /Cyd

Top Stemming

6.00 Min8.00 MaxBurden(Feet) 7.00 Feet7.00 7.00

Type of Terrian

Flat/Sloped

Charges/Hole

1 Min1 MaxSpacing (Feet) 7.00 Feet7.00 7.00

Type of Rock

Mica/Schist

Deck Stemming

0.00 Min0.00 MaxHole Diameter 3.503.50 3.50

Stemming Type

3/8" Crushed Stone

Charge Wgt/Deck

20.00 Min24.00 MaxOverBurden (Ft) 0.001.00 3.00

Height of Face

0.00

Depth of Water

0.00 Min1.00 Max

Control Row Taped

N

Angled Holes /Face Bermed

N/Y

Laser/BoreTracking

N

Total Pounds

317.65 LbsType Of Initiation: Non-Electric

Product #	Desc	Qty	Wgt	
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	72.00	304.56	Lbs
BAPACKAGED Totals:		72.00	304.56	Lbs

Product #	Desc	Qty	Wgt	
SP0350	TROJAN SPARTAN 350G 49/CS	17.00	13.09	Lbs
BOOSTERS Totals:		17.00	13.09	Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	17.00	
DETS DHOLE Totals:		17.00	

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.20	500.00
LINES Totals:		0.20	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	15.00	
SURF DELAY Totals:		22.00	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	3.00
Sub Drilling(ft)	4.00
Total Depth (ft)	11.00

Stemming Stones	7.00
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	4.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	4.00
Total Depth (ft)	14.00

Stemming Stones	6.00
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	8.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismograhs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	3619	Triggered	0.280	N/A	117.5	550	618

Date/Time Tran at 13:57:34 October 19, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.2 Volts
Unit Calibration February 6, 2016 by Instantel
File Name E619GLIC.3Y0

Notes

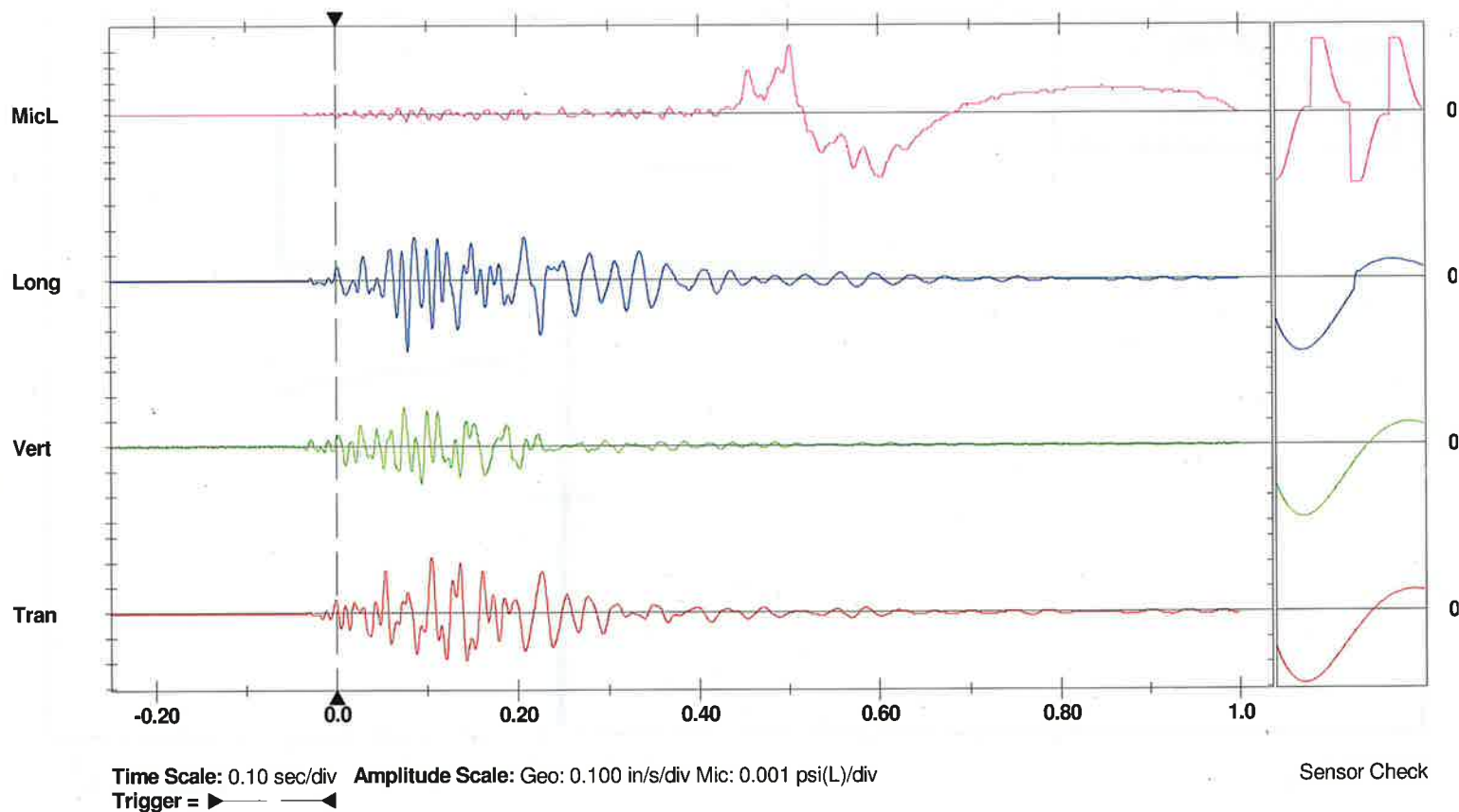
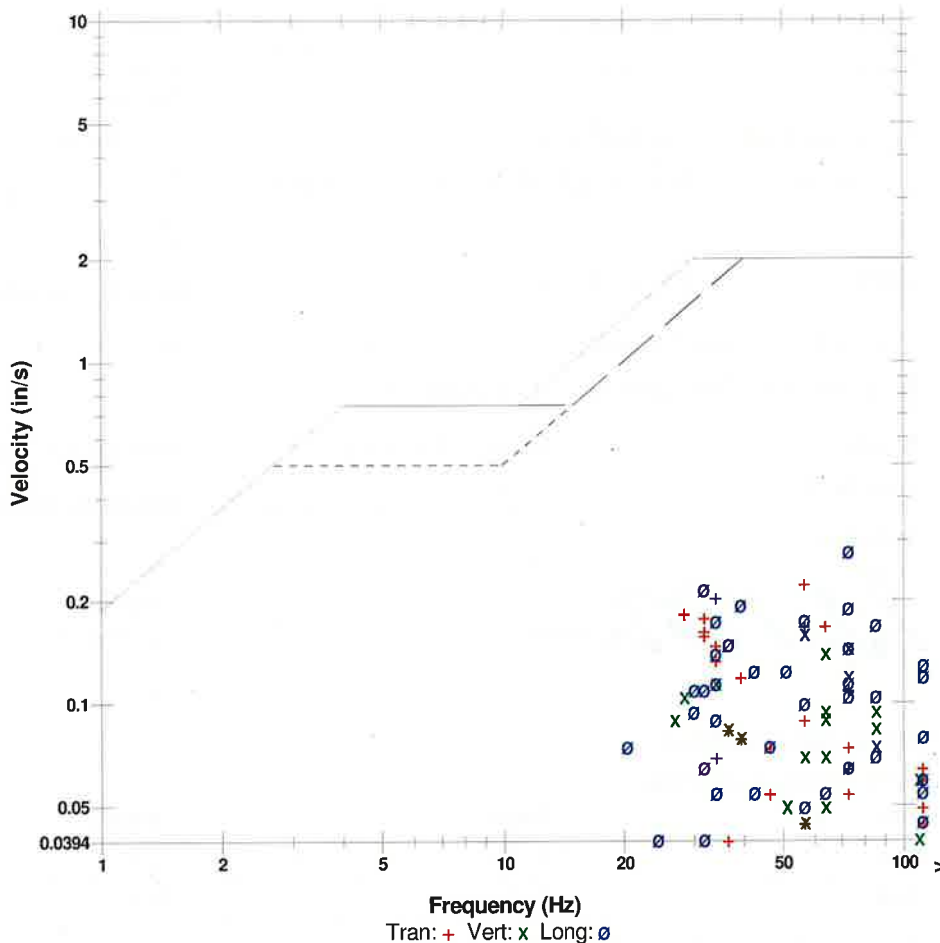
Location: 21 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 19, 2016 14:07:49 (V10.72)

Microphone Linear Weighting
PSPL 117.5 dB(L) 0.002 psi(L) at 0.502 sec
ZC Freq 5.0 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 538 mv)

	Tran	Vert	Long	
PPV	0.225	0.160	0.280	in/s
ZC Freq	51	57	73	Hz
Time (Rel. to Trig)	0.106	0.076	0.080	sec
Peak Acceleration	0.225	0.212	0.305	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.8	8.2	9.4	Hz
Overswing Ratio	3.6	3.4	4.0	

Peak Vector Sum 0.296 in/s at 0.080 sec

USBM RI8507 And OSMRE





Job#	104-04-02718	Cust. PO#	N/A	
Date	10/20/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46504	46540
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM access rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken: clear rd and move equipment
 License #: 1879

Signature:

Weather
Comments:

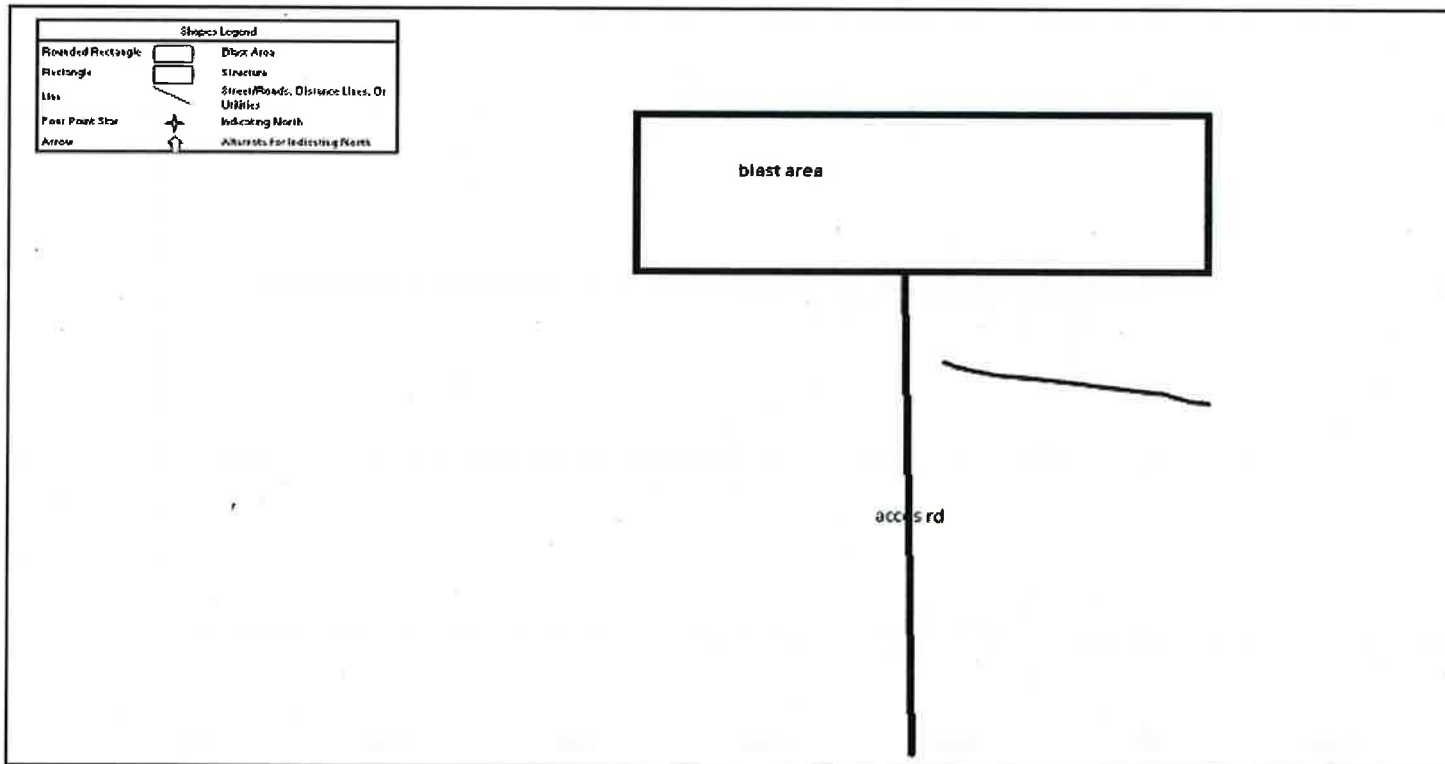
Rain

No. of Crew Members 3

Crew Members Names :

Britt	Brian	Jessi	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 7 Shot Time (24hrs) 14:11 Shot VideoTaped: Y **Weather**
 Notes: N/A Weather Conditions: Rain
 Temp (°F): 49-57
 Wind Direction: West
 Wind Spd: 10-20 MPH

Preblast
 Blast Direction: South-East Max Holes/Delay: 2 Predicted K Factor: 160
 Blast Location: tower #1 Scale Dist.: 45.36
 Location of Structure: existing tower Max Weight/Delay: 175 Lbs Predicted PPV: 0.36
 Measurement Physical Dist. to Closest (Ft) Structure 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities
 Fire Detail # of Hrs: N/A Pay Calculations Notes
 Pay Square Area 25670 Feet
 N/A N/A N/A
 N/A N/A N/A

Shot Info
 Configuration 1 - Open

Total Drill Depth(Ft)	<u>4560.00</u>	Total SqFt	<u>33440.00</u>	Powder	<u>1.25</u> Lbs/Cyd	Total Product	<u>23140</u>
Total Tons	<u>N/A</u>	Total	<u>18577.78</u>	Factor	<u>0.80</u> Cyd/Lbs	Avg Weight /	<u>76.12</u>
		Yards				Hole (Lbs):	

Cal Method	Pattern						
# Holes	<u>304</u>	Cover Used/No	<u>N/A</u>				
	AVG	Min	Max				
Drill Depth	<u>15</u>	<u>9</u>	<u>30</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>5</u> Min <u>7</u> Max
Burden(Feet)	<u>10</u> Feet	<u>10</u>	<u>10</u>	Type of Terrian	<u>Hilly</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>11</u> Feet	<u>11</u>	<u>11</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min <u>N/A</u> Max
Hole Diameter	<u>4</u>	<u>4</u>	<u>4</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>15</u> Min <u>175</u> Max
OverBurden (Ft)	<u>0</u>	<u>0</u>	<u>4</u>	Height of Face	<u>20</u>	Depth of Water	<u>0</u> Min <u>15</u> Max
Control Row Taped	<u>N</u>			Angled Holes /Face Bermed	<u>N/N</u>	Laser/BoreTracking	<u>N</u>

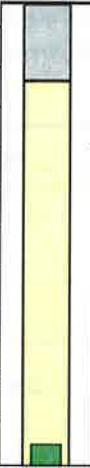
Total Pounds 23140.32 Lbs Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt	Product #	Desc	Qty	Length
1966	1966 Emulsion Blend		22897.00 Lbs	DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	192	
BA BULK Totals:				DXABZ641	NONEL EZDET 25/350 40FT ZCOMP 30/CS	124	
				DETS DHOLE Totals:			
Product #	Desc	Qty	Wgt	Product #	Desc	Qty	Length
SP0350	TROJAN SPARTAN 350G 49/CS	316	243.32 Lbs	DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	2000	2000
BOOSTERS Totals:				LINES Totals:			
Product #	Desc	Qty	Length	Product #	Desc	Qty	Length
				DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	37	
				DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	6	
				SURF DELAY Totals:			

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	30.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	5
1966 Emulsion Blend	25
TROJAN SPARTAN 350G 49/CS	0

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.440	34	93	600	197

Date/Time Tran at 14:11:54 October 20, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.1 Volts
Unit Calibration February 6, 2016 by InstanTel
File Name E619GLK7.FU0

Notes

Location: Existing tower
Client: JA McDonald
User Name: J.Taber
Converted: October 20, 2016 15:13:16 (V10.72)

Extended Notes

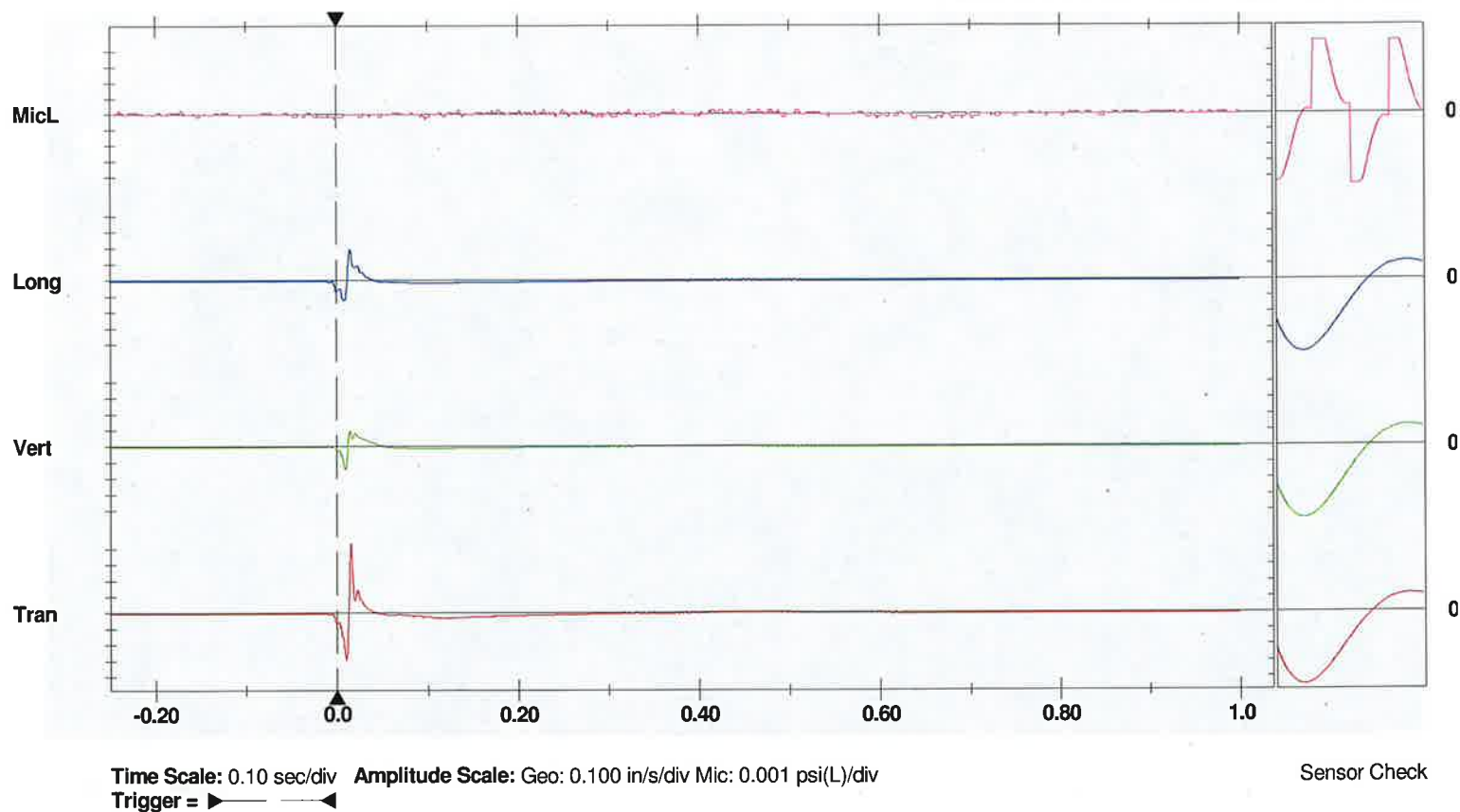
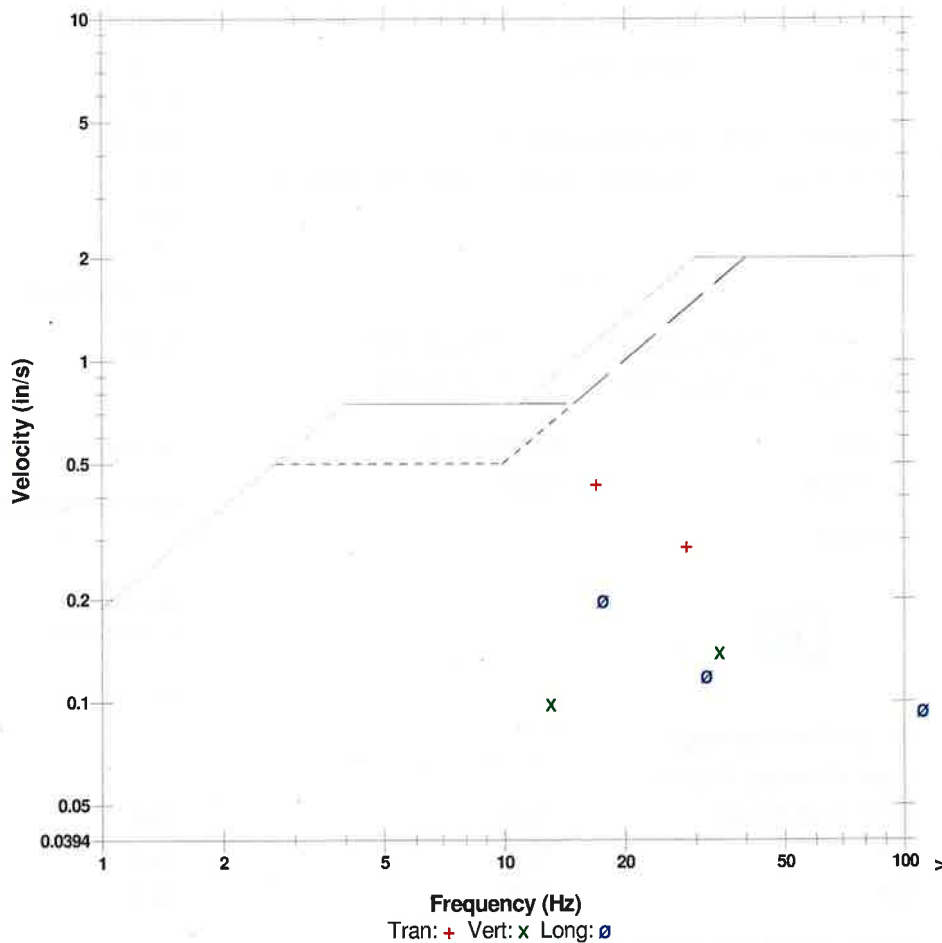
104-04-02718

Microphone Linear Weighting
PSPL 93.98 dB(L) 0.000 psi(L) at -0.001 sec
ZC Freq N/A
Channel Test Passed (Freq = 20.0 Hz Amp = 537 mv)

	Tran	Vert	Long	
PPV	0.440	0.140	0.200	in/s
ZC Freq	17	34	17	Hz
Time (Rel. to Trig)	0.017	0.011	0.016	sec
Peak Acceleration	0.570	0.225	0.252	g
Peak Displacement	0.002	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.0	8.1	8.1	Hz
Overswing Ratio	3.8	3.5	3.9	

Peak Vector Sum 0.481 in/s at 0.017 sec
N/A: Not Applicable

USBM RI8507 And OSMRE





Job#	104-04-02718	Cust. PO#	N/A	
Date	10/20/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46551	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	46500	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards _____

Pre Shift Insp.Time (24hrs) : 12:00:00 PM Terrain

Post Shift Insp.Time (24hrs): 12:00:00 PM

Blaster : Butler;Dean T Precautions Taken:
 License #: 1937 watch footing pick a path

Signature:

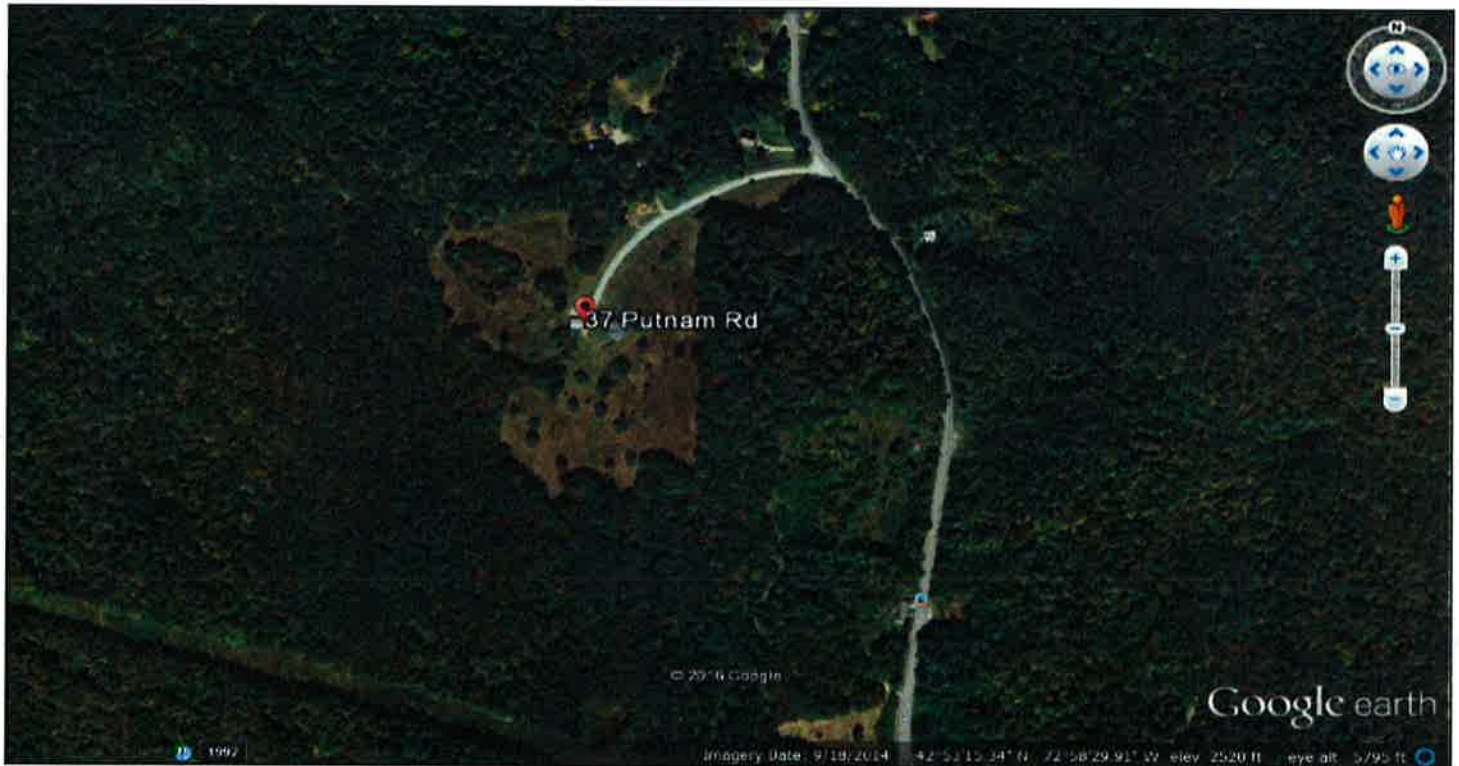
OB

Weather
Comments:

cool 40-60

No. of Crew Members	<u>1</u>		
Crew Members Names :			
aVATAVIA BLUE	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 4 Shot Time (24hrs) 14:46 Shot VideoTaped: YWeather

Notes:

N/A

Weather Conditions: SunnyTemp (°F): 40-60Wind Direction: South-EastWind Spd: 5-10 MPHPreblastBlast Direction: West Max Holes/Delay: 1 Predicted K Factor: 160Blast Location: o/m building area Scale Dist.: 86.96Location of Structure: 21 putnam rd Max Weight/Delay: 40 Lbs Predicted PPV: 0.13Measurement Google Map Dist. to Closest (Ft) Structure 550 Railroad/Highway N/A Overhead Util N/A Underground Util N/APay QuantitiesFire Detail # of Hrs: N/APay Calculations NotesPay Square Area 2058 Feet

42X7X7=2058 SQFT

N/A N/A N/A

N/A N/A N/A

Shot InfoConfiguration1 - OpenTotal Drill Depth(Ft) 480.00 Total SqFt 1960.00 Powder 2.30 Lbs/Cyd Total Product Weight (Lbs) : 2003Total Tons N/A Total Yards 871.11 Factor 0.43 Cyd/Lbs Avg Weight / Hole (Lbs): 50.08Cal Method Pattern# Holes 40Cover Used/No Blast Mats 21AVGMinMaxDrill Depth 1211 14Stone Weight N/A /CydTop Stemming 7 Min 9 MaxBurden(Feet) 7 Feet7 7Type of Terrian FlatCharges/Hole 1 Min 1 MaxSpacing (Feet) 7 Feet7 7Type of Rock Mica/SchistDeck Stemming 0 Min 0 MaxHole Diameter 3.53.5 3.5Stemming Type 3/8" Crushed StoneCharge Wgt/Deck 20 Min 40 MaxOverBurden (Ft) 10 3Height of Face 0Depth of Water 0 Min 1 MaxControl Row Taped NAngled Holes /Face Bermed N/YLaser/BoreTracking NTotal Pounds 2002.80 LbsType Of Initiation: Non-Electric

Product # Desc Density Wgt

1966 1966 Emulsion Blend 1.26 1962.00 Lbs

BA BULK Totals: N/A 1962.00 Lbs

Product # Desc Qty Wgt

QD51427516 Blastex 2 3/4 X 16 38LBS/CS 9/STKS 2 8.46 Lbs

BAPACKAGED Totals: 2 8.46 Lbs

Product # Desc Qty Wgt

SP0350 TROJAN SPARTAN 350G 49/CS 42 32.34 Lbs

BOOSTERS Totals: 42 32.34 Lbs

Product # Desc Qty Length

DXABZ623 NONEL EZDET 25/350 24FT ZCOMP 60/CS 42

DETS DHOLE Totals: 42

Product # Desc Qty Length

DJ25025 NONEL LEADLINE 2500FT/762M 2/CS 0.2 500

LINES Totals: 0.2

Product # Desc Qty Length

DY17Z820ME NONEL EZTL CPZ 17 MS 20/FT 60/120/CS 7

DY25Z812ME NONEL EZTL CPZ 25 MS 12FT 90/180/CS 35

SURF DELAY Totals: 42

Description: TYPICAL (FACE)

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	11.00

Stemming Stones	7
1966 Emulsion Blend	4
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: TYPICAL

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	14.00

Stemming Stones	6
1966 Emulsion Blend	8
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.315	N/A	97	550	399

Date/Time Long at 14:46:06 October 20, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by Instatel
File Name D288GLK9.0U0

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 20, 2016 15:29:51 (V10.72)

Extended Notes

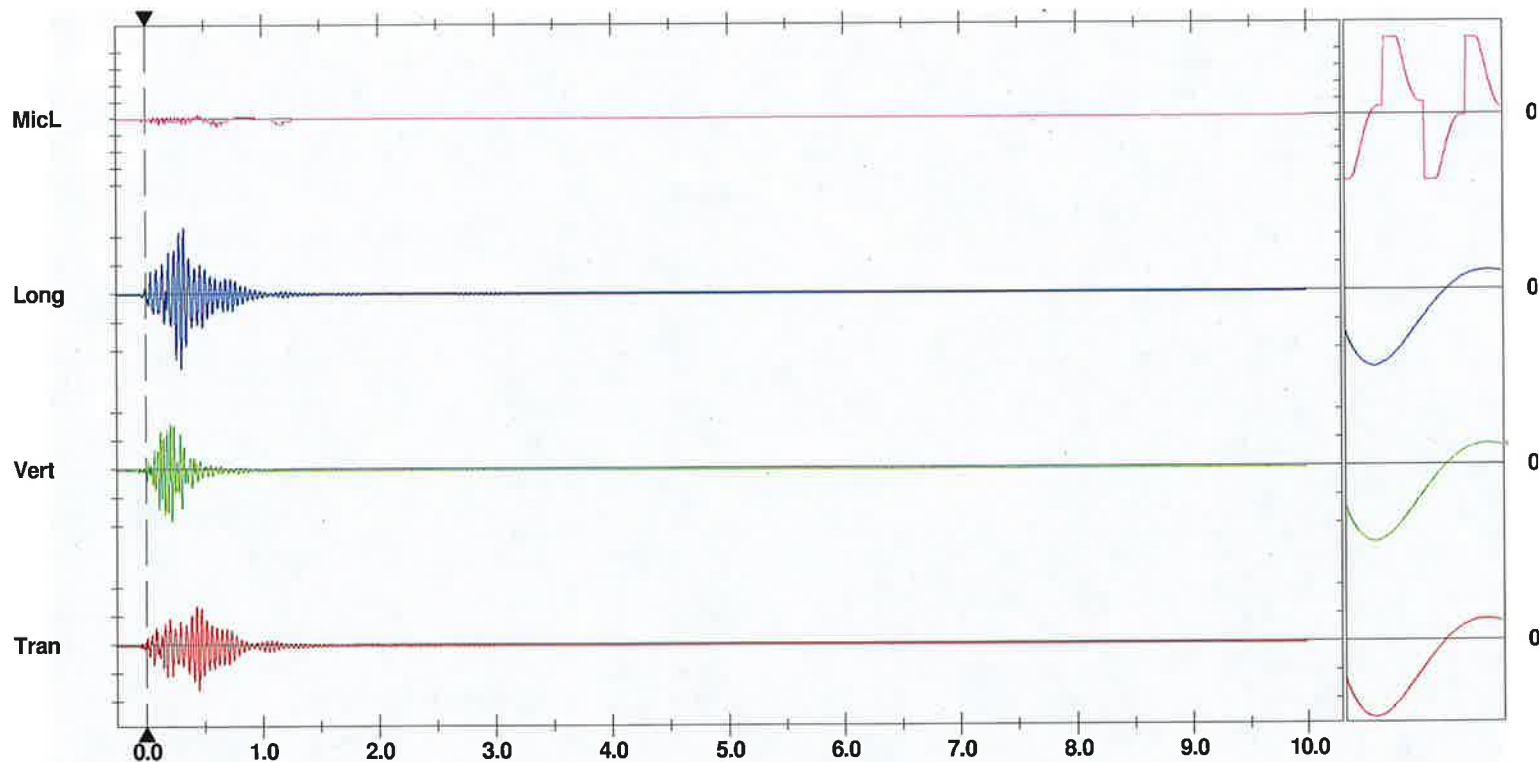
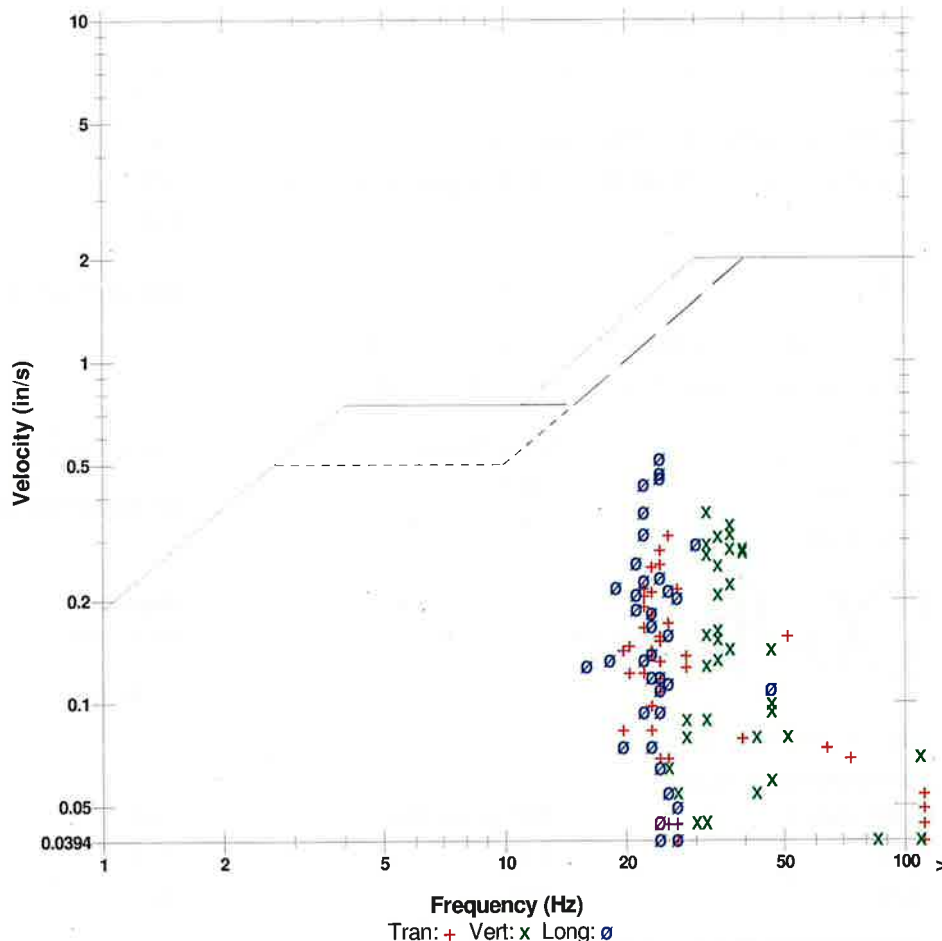
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 97.50 dB(L) 0.000 psi(L) at 0.627 sec
ZC Freq 30 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 565 mv)

	Tran	Vert	Long	
PPV	0.315	0.365	0.525	in/s
ZC Freq	26	32	24	Hz
Time (Rel. to Trig)	0.462	0.231	0.313	sec
Peak Acceleration	0.172	0.225	0.212	g
Peak Displacement	0.002	0.002	0.003	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.1	8.0	8.0	Hz
Overswing Ratio	3.5	3.6	4.0	

Peak Vector Sum 0.571 in/s at 0.313 sec

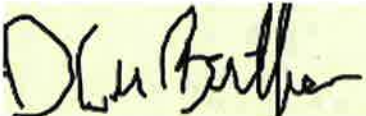
USBM RI8507 And OSMRE



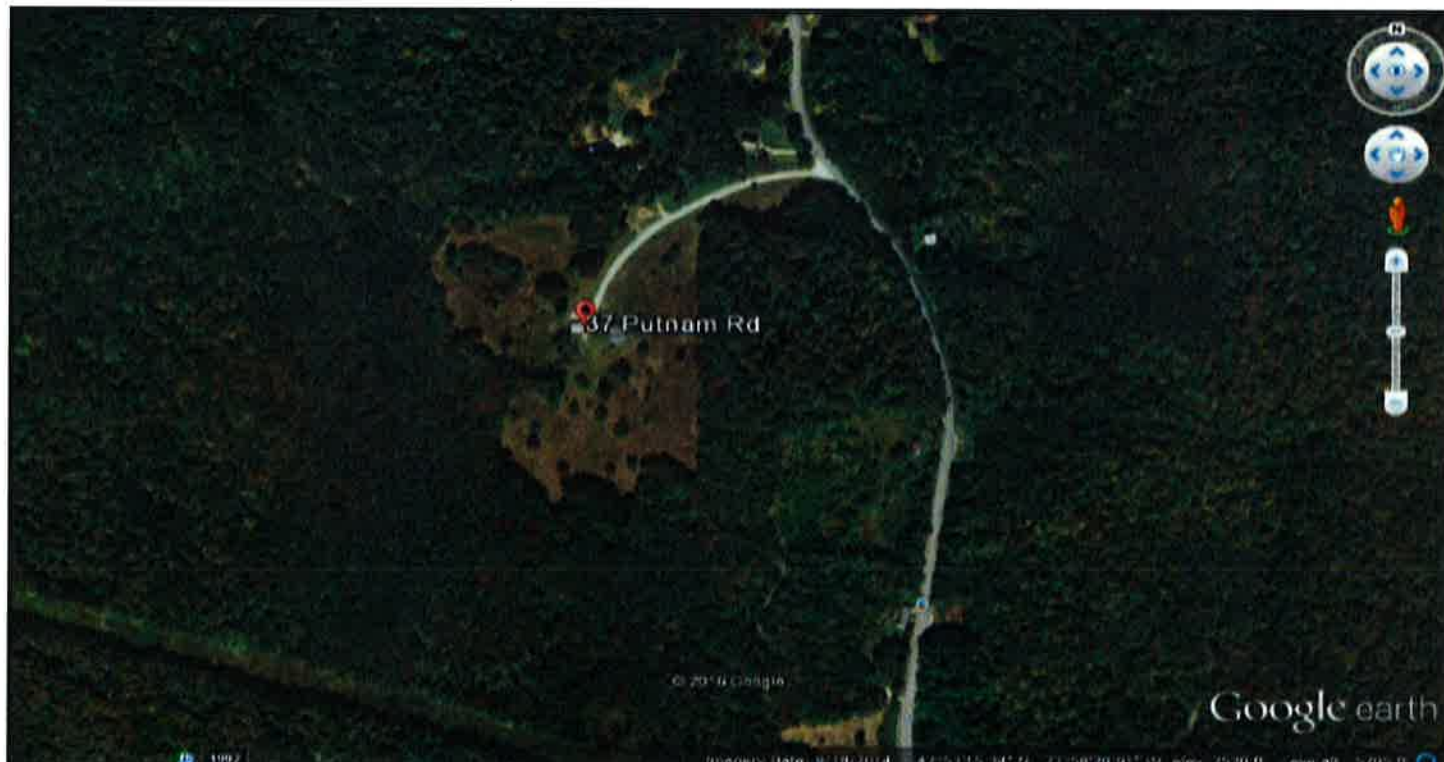
Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.200 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/21/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tks#	46576	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards		
Post Shift Insp.Time (24hrs):	12:00:00 AM	Mud		
Blaster :	Butler;Dean T	Precautions Taken:		
License #:	1937	Use excavator to create rock path so trucks can get into shot		
Signature:				
No. of Crew Members	2	Weather		
Crew Members Names :		Comments:		
pat defusco	britt gellenthien	cloudy rainy 50		
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot #

5

Shot Time (24hrs)

10:38

Shot VideoTaped:

Y

Weather

Notes:

N/A

Weather Conditions:

Cloudy

Temp (°F):

50-60

Wind Direction:

South

Wind Spd:

5-10

MPH

Preblast

Blast Direction:

South-West

Max Holes/Delay:

1.00

Predicted K Factor:

160

Blast Location:

o/m building

Scale Dist.:

94.87

Location of Structure:

21 putnam rd

Max Weight/Delay:

40.00

Lbs

Predicted PPV:

0.11

Measurement

Google Map

Dist. to Closest (Ft)

Structure

600

Railroad/Highway

N/A

Overhead Util

N/A

Underground Util

N/A

Pay Quantities

Fire Detail # of Hrs:

N/A

Pay Square Area

1470.00

Feet

N/A

N/A

N/A

N/A

N/A

N/A

Pay Calculations Notes

30holes x7x7 pattern= 1470 Sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)

330.00

Total SqFt

1470.00

Powder

1.79

Lbs/Cyd

Total Product Weight (Lbs) :

1073

Total Tons

N/A

Total Yards

598.89

Powder Factor

0.56

Cyd/Lbs

Avg Weight / Hole (Lbs):

35.77

Cal Method

Pattern

Holes

30

Cover Used/No Blast Mats

21

AVG

Min

Max

Drill Depth

11.00

9.00

12.00

Burden(Feet)

7.00

Feet

7.00

7.00

Spacing (Feet)

7.00

Feet

7.00

7.00

Hole Diameter

3.50

3.50

3.50

OverBurden (Ft)

1.00

0.00

3.00

Control Row Taped

N

Stone Weight

N/A

/Cyd

Type of Terrian

Flat

Type of Rock

Mica/Schist

Stemming Type

3/8" Crushed Stone

Height of Face

0.00

Angled Holes /Face Bermed

N/Y

Top Stemming

6.00

Min

8.00

Max

Charges/Hole

1

Min

1

Max

Deck Stemming

0.00

Min

0.00

Max

Charge Wgt/Deck

20.00

Min

40.00

Max

Depth of Water

0.00

Min

1.00

Max

Laser/BoreTracking

N

Total Pounds

1073.10

Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt	Product #	Desc	Qty	Length
1966	1966 Emulsion Blend		1050.00 Lbs	DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	30.00	
BA BULK Totals:				DETS DHOLE Totals:			
N/A 1050.00 Lbs				30.00			
Product #	Desc	Qty	Wgt	Product #	Desc	Qty	Length
SP0350	TROJAN SPARTAN 350G 49/CS	30.00	23.10 Lbs	DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.10	250.00
BOOSTERS Totals:				LINES Totals:			
30.00 23.10 Lbs				0.10			
Product #	Desc	Qty	Length	Product #	Desc	Qty	Length
				DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	8.00	
				DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	33.00	
				SURF DELAY Totals:			
				41.00			

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	3.00
Sub Drilling(ft)	4.00
Total Depth (ft)	11.00

Stemming Stones	0.00
1966 Emulsion Blend	5.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	4.00
Total Depth (ft)	14.00

Stemming Stones	6.00
1966 Emulsion Blend	8.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismograhs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	2288	Triggered	0.385	N/A	107.0	600	561

Shot # 6 Shot Time (24hrs) 12:48 Shot VideoTaped: Y **Weather**

Notes: N/A Weather Conditions: Cloudy

Temp (°F): 50-60

Wind Direction: South-East

Wind Spd: 5-15 MPH

Preblast

Blast Direction: South-West Max Holes/Delay: 2.00 Predicted K Factor: 160

Blast Location: o/m building Scale Dist.: 71.71

Location of Structure: 21 putnam rd Max Weight/Delay: 70.00 Lbs Predicted PPV: 0.17

Measurement Google Map Dist. to Closest (Ft) 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes

Pay Square Area 3024 Feet 48 holes x 7x9 pattern = 3024

N/A N/A

N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>672.00</u>	Total SqFt	<u>3024.00</u>	Powder	<u>1.38 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>2169</u>
Total Tons	<u>N/A</u>	Total Yards	<u>1568.00</u>	Factor	<u>0.72 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>45.19</u>

Cal Method	Pattern						
# Holes	<u>48</u>	Cover Used/No	<u>21</u>	Blast Mats			
	AVG	Min	Max				
Drill Depth	<u>14.00</u>	<u>12.00</u>	<u>20.00</u>	Stone Weight	<u>N/A /Cyd</u>	Top Stemming	<u>6.00</u> Min <u>8.00</u> Max
Burden(Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>	Type of Terrian	<u>Flat</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>9.00</u> Feet	<u>9.00</u>	<u>9.00</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0.00</u> Min <u>0.00</u> Max
Hole Diameter	<u>3.50</u>	<u>3.50</u>	<u>3.50</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>20.00</u> Min <u>70.00</u> Max
OverBurden (Ft)	<u>1.00</u>	<u>0.00</u>	<u>3.00</u>	Height of Face	<u>0.00</u>	Depth of Water	<u>0.00</u> Min <u>1.00</u> Max
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>		

Total Pounds 2168.73 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt	Product #	Desc	Qty	Length
1966	1966 Emulsion Blend		2131.00 Lbs	DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	31	
BA BULK Totals:				DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	18	
				DETS DHOLE Totals:			
Product #	Desc	Qty	Wgt	Product #	Desc	Qty	Length
SP0350	TROJAN SPARTAN 350G 49/CS	49	37.73 Lbs	DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.1	250
BOOSTERS Totals:				LINES Totals:			
Product #	Desc	Qty	Length	Product #	Desc	Qty	Length
				DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	17	
				DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	40	
				SURF DELAY Totals:			

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	20.00

Stemming Stones	6
1966 Emulsion Blend	14
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	14.00

Stemming Stones	6
1966 Emulsion Blend	8
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	2288	Triggered	0.615	N/A	112.0	600	573

Date/Time Vert at 10:38:45 October 21, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by Instantel
File Name D288GLLS.8L0

Notes

Location: 21 putnam rd
 Client: McDonald
 User Name: D Butler
 Converted: October 21, 2016 13:31:21 (V10.72)

Extended Notes

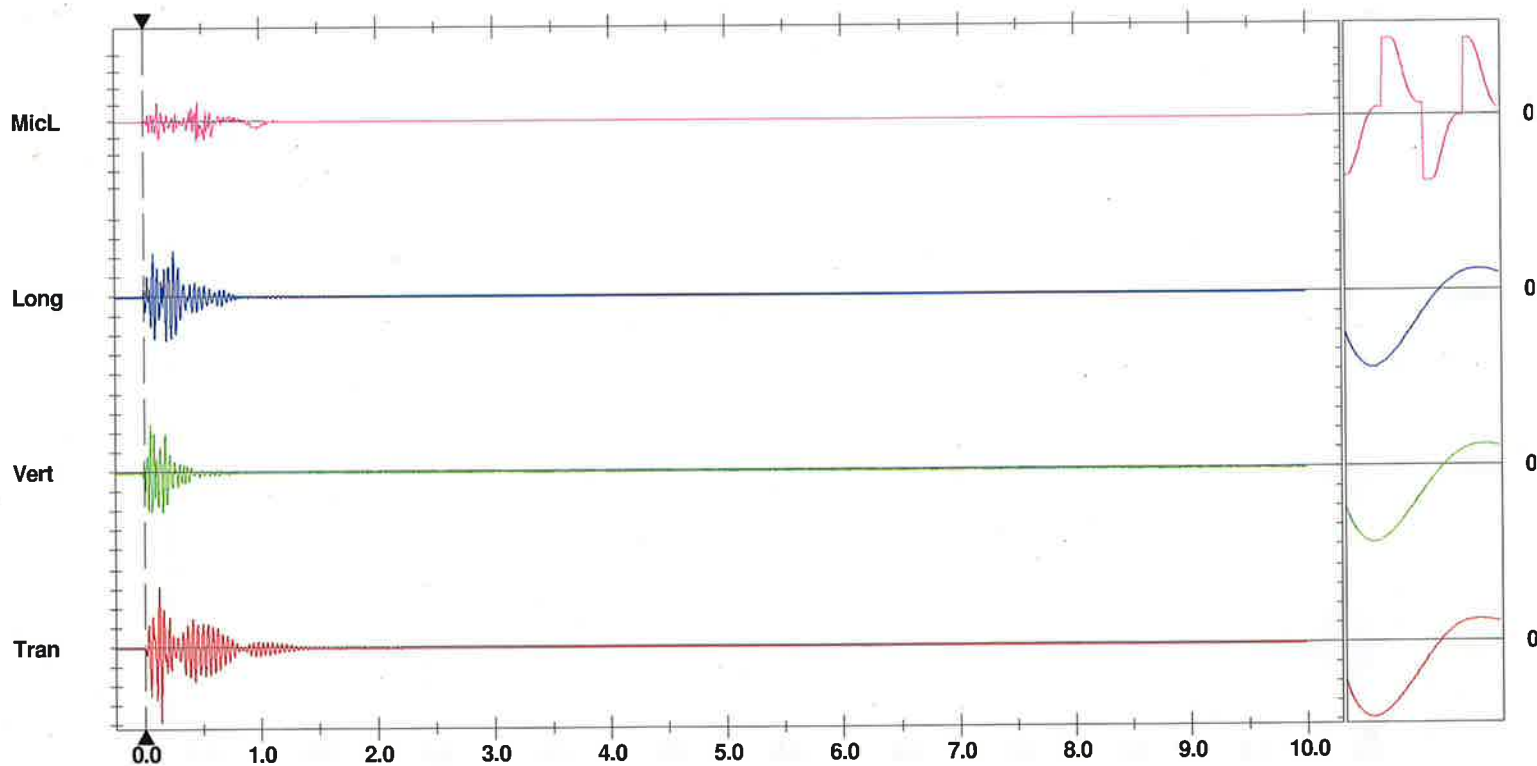
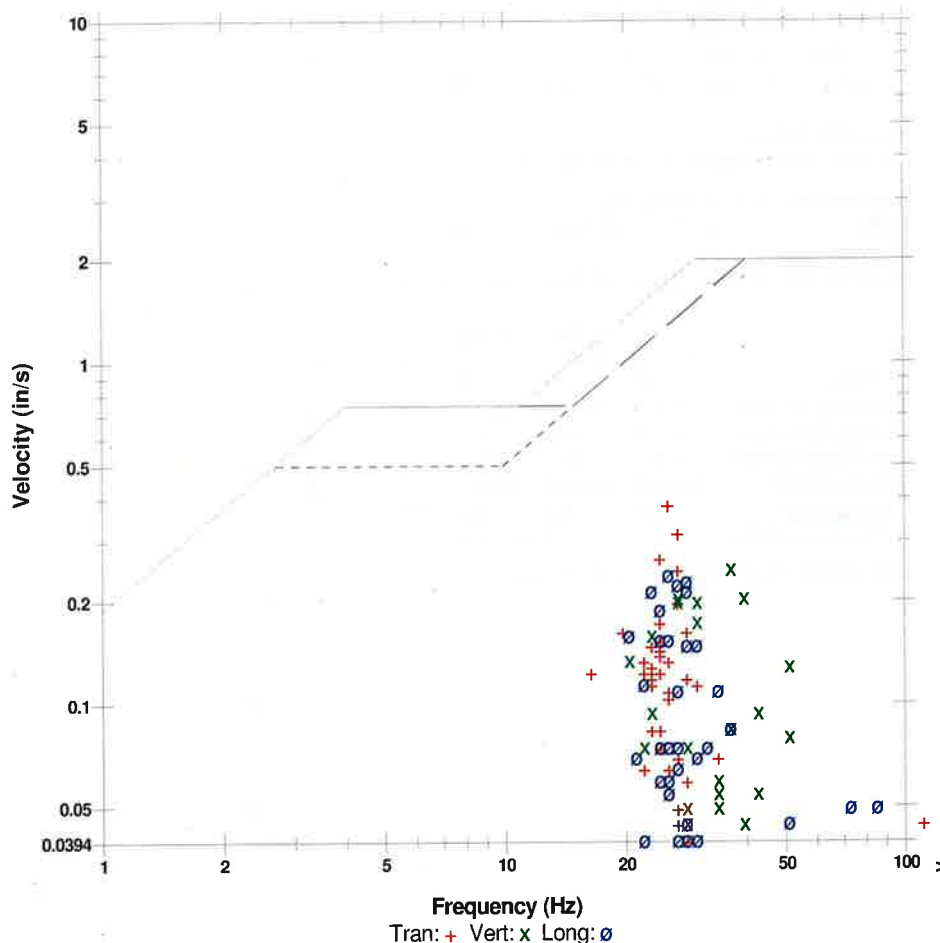
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 107.0 dB(L) 0.001 psi(L) at 0.475 sec
ZC Freq 51 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 535 mv)

	Tran	Vert	Long	
PPV	0.385	0.250	0.240	in/s
ZC Freq	26	37	26	Hz
Time (Rel. to Trig)	0.147	0.056	0.259	sec
Peak Acceleration	0.172	0.159	0.159	g
Peak Displacement	0.002	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.3	8.1	8.3	Hz
Overswing Ratio	3.4	3.6	3.6	

Peak Vector Sum 0.388 in/s at 0.147 sec

USBM R18507 And OSMRE



Date/Time Tran at 12:48:29 October 21, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by Instanteel
File Name D288GLLY.8T0

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 21, 2016 13:31:21 (V10.72)

Extended Notes

Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting

PSPL 112.0 dB(L) 0.001 psi(L) at 0.556 sec

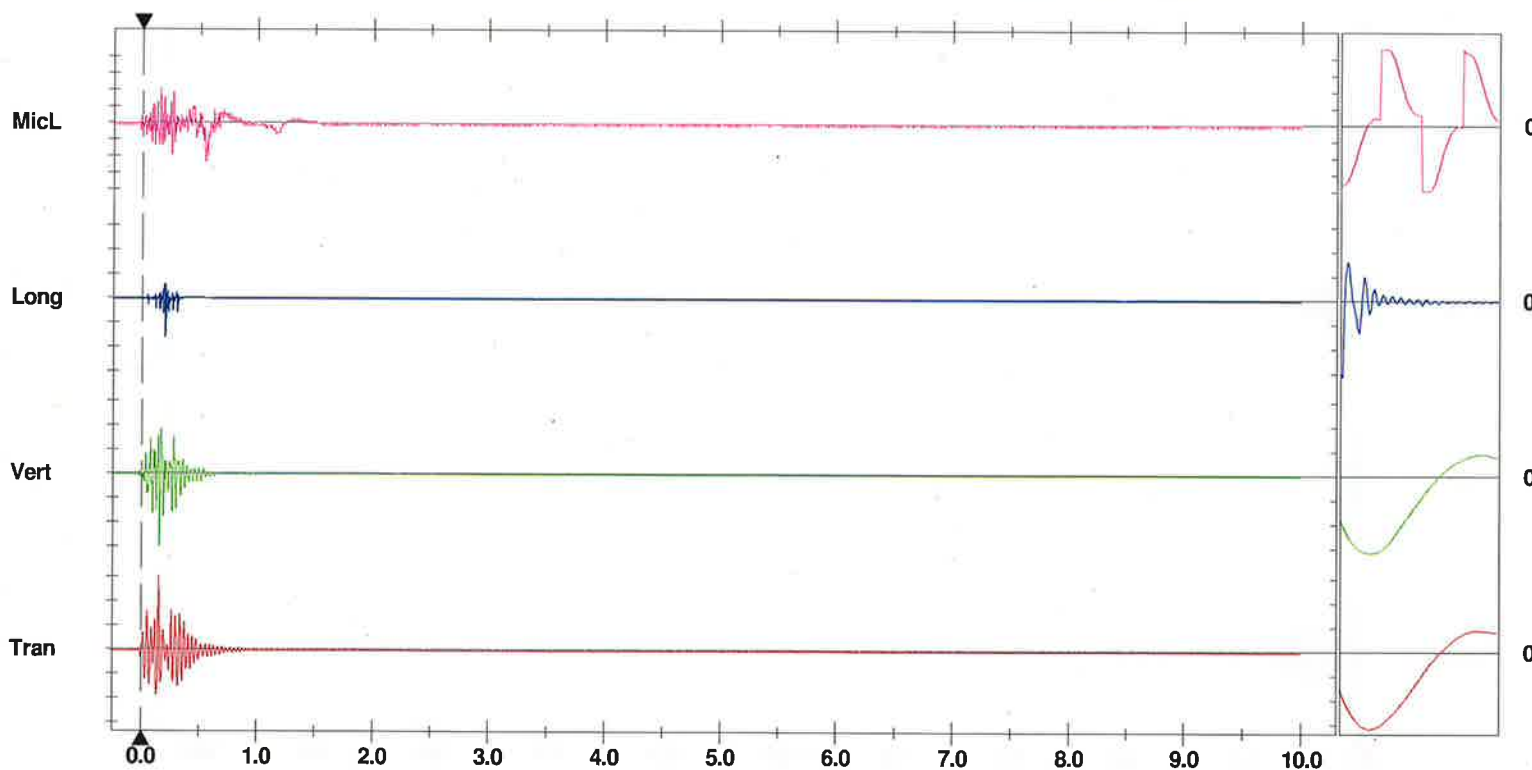
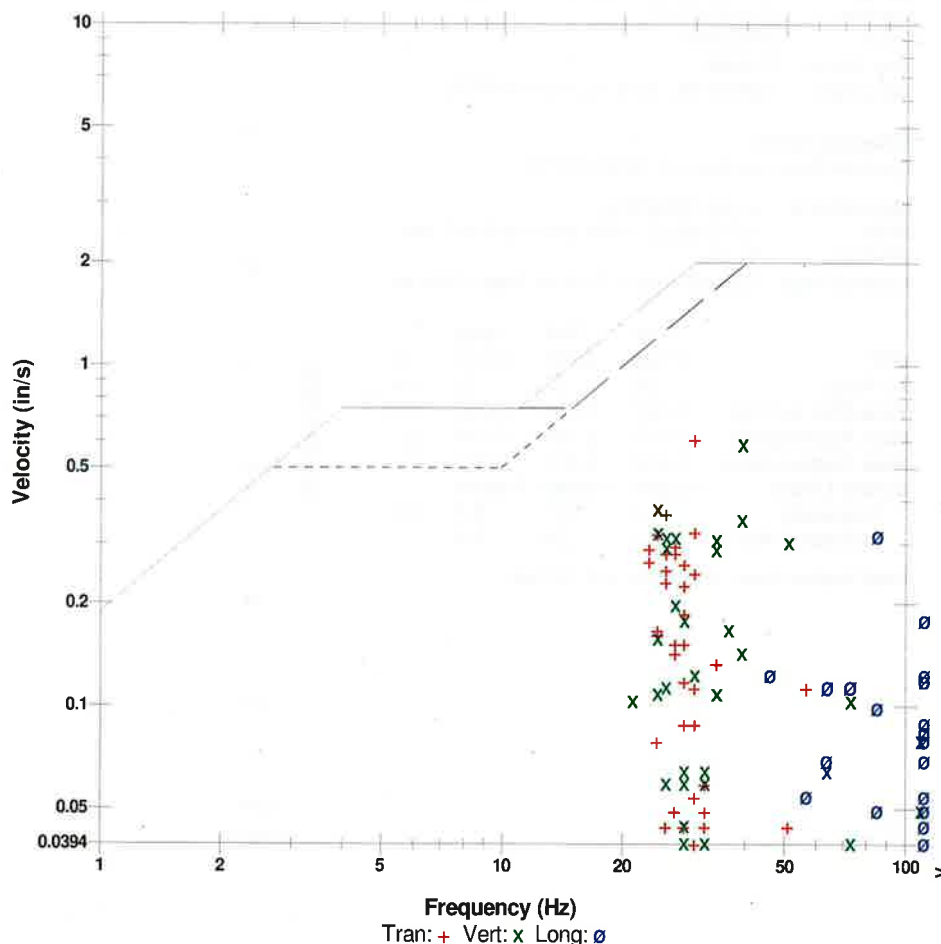
ZC Freq 8.0 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 522 mv)

	Tran	Vert	Long	
PPV	0.615	0.595	0.320	in/s
ZC Freq	30	39	85	Hz
Time (Rel. to Trig)	0.160	0.163	0.206	sec
Peak Acceleration	0.318	0.318	0.597	g
Peak Displacement	0.003	0.002	0.001	in
Sensor Check	Passed	Passed	Check	
Frequency	8.1	8.2	0.0	Hz
Overswing Ratio	3.4	3.3	6549.6	

Peak Vector Sum 0.804 in/s at 0.162 sec

USBM RI8507 And OSMRE



Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/24/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46662	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM Colder weather, snow on ground, muddy

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler;Dean T

License #: 1937

Signature:

Precautions Taken:

use caution when walking on rough terrain

Weather
Comments:

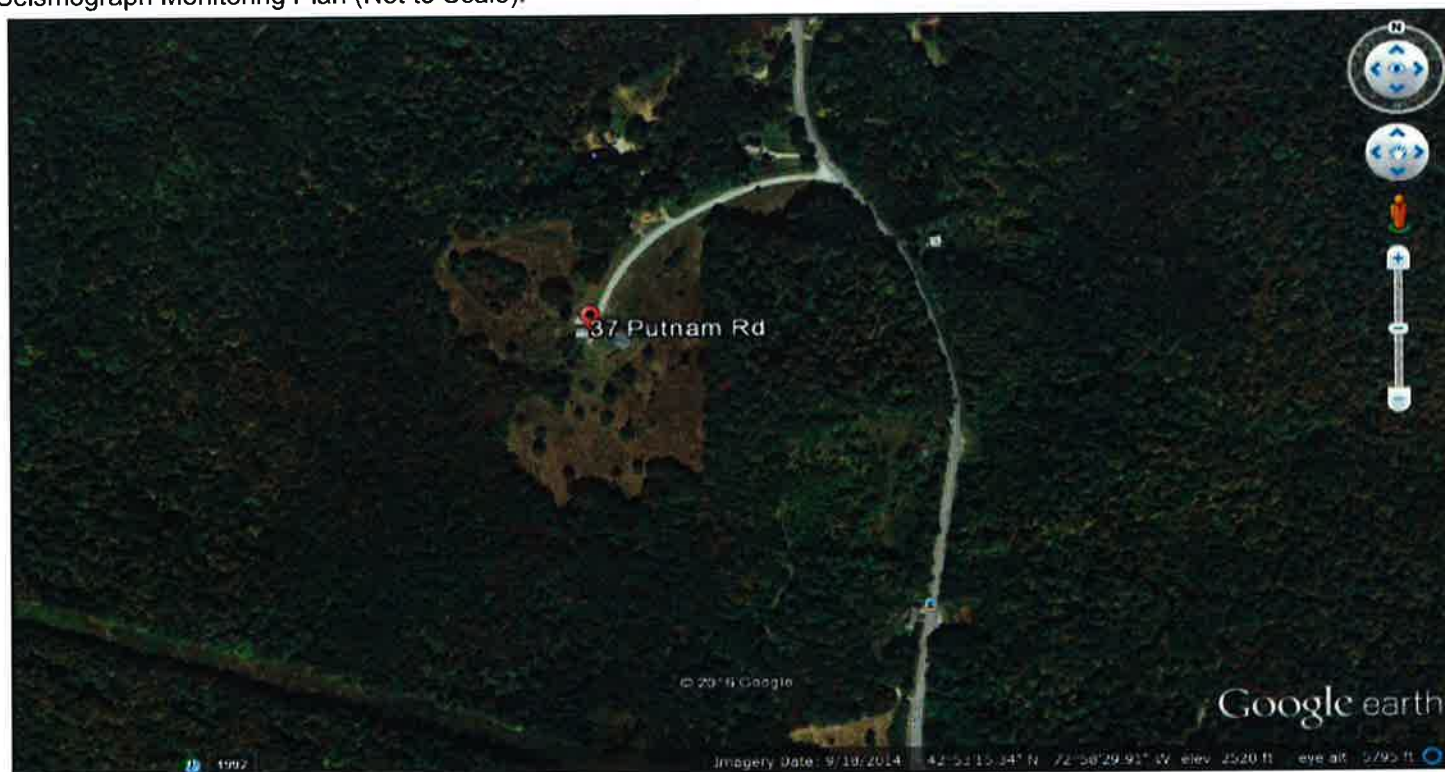
cool cloudy 35-50

No. of Crew Members 2

Crew Members Names :

brian charron	N/A	britt gellenthein	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 7 Shot Time (24hrs) 13:22 Shot VideoTaped: Y **Weather**
 Notes: N/A Weather Conditions: Cloudy
 Temp (°F): 30-50
 Wind Direction: South-East
 Wind Spd: 0-10 MPH

Preblast

Blast Direction: South-West Max Holes/Delay: 1 Predicted K Factor: 160
 Blast Location: o/m building Scale Dist.: 101.42
 Location of Structure: 21 putnam rd Max Weight/Delay: 35 Lbs Predicted PPV: 0.10
 Measurement Google Map Dist. to Closest (Ft) 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes
 Pay Square Area 1575 Feet 25holesx7x9 pattern =1575 sqft
 N/A N/A
 N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>300.00</u>	Total SqFt	<u>1575.00</u>	Powder	<u>0.77 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>539</u>
Total Tons	<u>N/A</u>	Total Yards	<u>700.00</u>	Factor	<u>1.30 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>21.56</u>

Cal Method	Pattern								
# Holes	<u>25</u>	Cover Used/No	Blast Mats	<u>21</u>					
	AVG	Min	Max						
Drill Depth	<u>12</u>		<u>9</u>	<u>14</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>6</u> Min	<u>8</u> Max
Burden(Feet)	<u>7</u> Feet		<u>7</u>	<u>7</u>	Type of Terrian	<u>Flat/Sloped</u>	Charges/Hole	<u>1</u> Min	<u>1</u> Max
Spacing (Feet)	<u>9</u> Feet		<u>9</u>	<u>9</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0</u> Min	<u>0</u> Max
Hole Diameter	<u>3.5</u>		<u>3.5</u>	<u>3.5</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>15</u> Min	<u>35</u> Max
OverBurden (Ft)	<u>1</u>		<u>0</u>	<u>2</u>	Height of Face	<u>4</u>	Depth of Water	<u>0</u> Min	<u>4</u> Max
Control Row Taped	<u>N</u>				Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>	

Total Pounds 538.71 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	506.00 Lbs
BA BULK Totals:		N/A	506.00 Lbs
Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	3	12.69 Lbs
BAPACKAGED Totals:		3	12.69 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	26	20.02 Lbs
BOOSTERS Totals:		26	20.02 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	26	
DETS DHOLE Totals:		26	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.2	500
LINES Totals:		0.2	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	8	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	27	
SURF DELAY Totals:		35	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	14.00

Stemming Stones	6
1966 Emulsion Blend	8
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	1
Sub Drilling(ft)	4
Total Depth (ft)	13.00

Stemming Stones	6
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	1
1966 Emulsion Blend	6
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.12	N/A	139	600	195

Date/Time Long at 13:22:20 October 24, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.4 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GLRJ.T80

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 24, 2016 17:00:58 (V10.72)

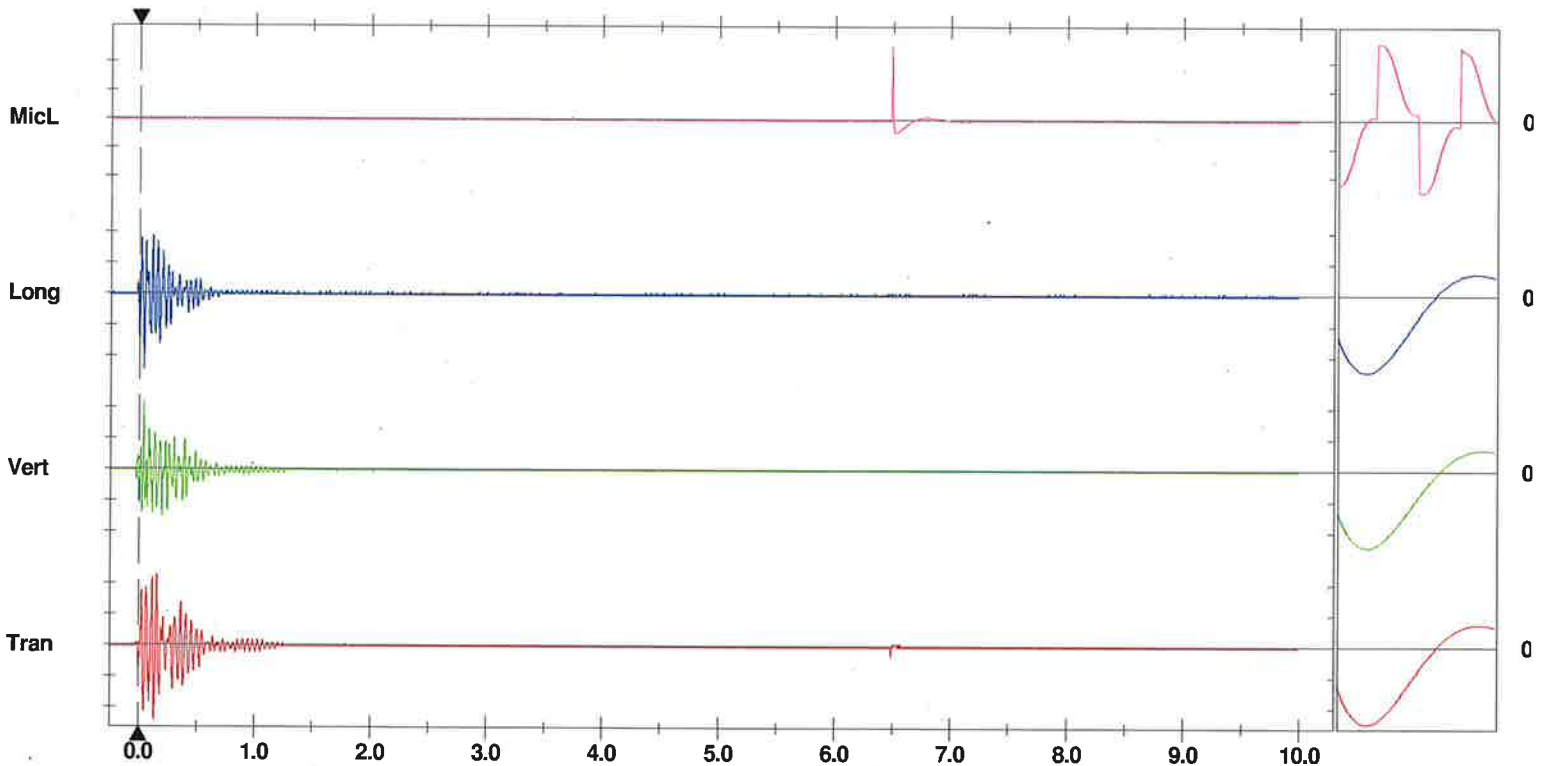
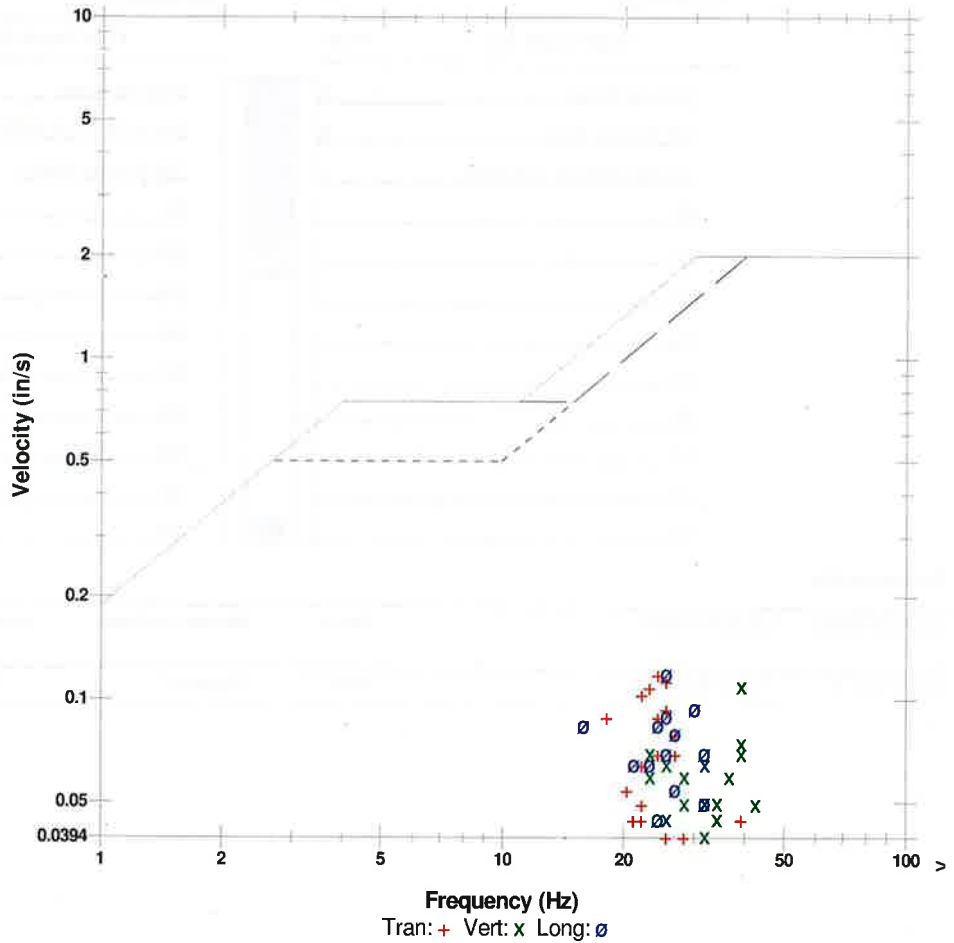
Extended Notes

Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 139.0 dB(L) 0.026 psi(L) at 6.499 sec
ZC Freq 28 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 501 mv)

	Tran	Vert	Long	
PPV	0.120	0.110	0.120	in/s
ZC Freq	26	39	26	Hz
Time (Rel. to Trig)	0.142	0.045	0.044	sec
Peak Acceleration	0.080	0.066	0.066	g
Peak Displacement	0.001	0.000	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.2	8.0	8.3	Hz
Overswing Ratio	3.3	3.5	3.5	

Peak Vector Sum 0.175 in/s at 0.045 sec

USBM RI8507 And OSMRE


Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.010 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/25/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46728	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	46754	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 PM chilly.

Post Shift Insp.Time (24hrs): 12:00:00 PM

Blaster : Butler,Dean T

License #: 1937

Signature:

Precautions Taken:

Dress appropriately and use caution when walking on shot, rocks are frozen into ground.

Weather
Comments:

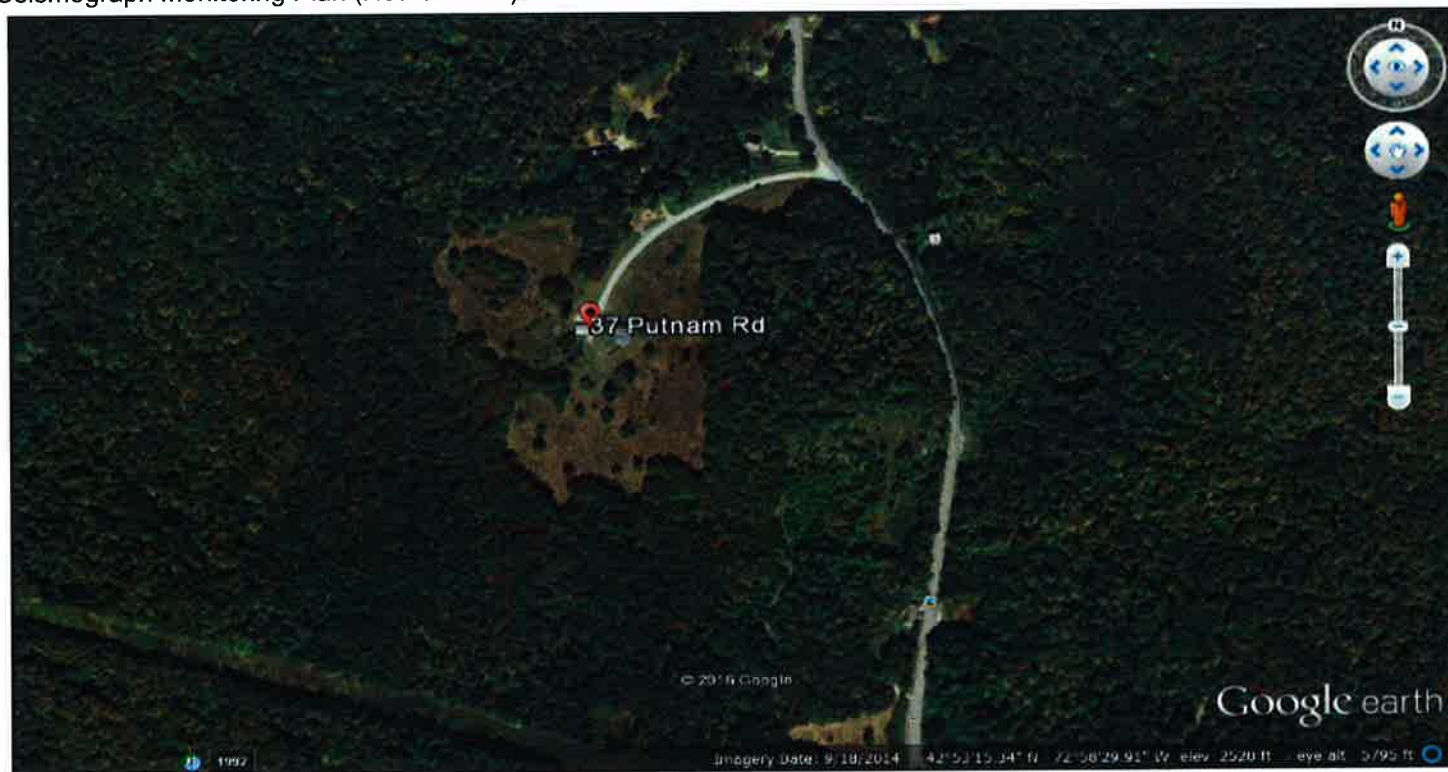
cold 30*

No. of Crew Members 2

Crew Members Names :

brian charron	britt gellenthein	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 8 Shot Time (24hrs) 15:34 Shot VideoTaped: y **Weather**

Notes: N/A Weather Conditions: Partly Cloudy

Temp (°F): 30-40

Wind Direction: West

Wind Spd: 5-15 MPH

Preblast

Blast Direction: North Max Holes/Delay: 2 Predicted K Factor: 160

Blast Location: on building Scale Dist.: 47.43

Location of Structure: 21 putnam rd Max Weight/Delay: 160 Lbs Predicted PPV: 0.33

Measurement Google Map Dist. to Closest (Ft) 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes

Pay Square Area 5760 Feet 80 holesx8x9 pattern =5760 sqft

N/A N/A

N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1280.00</u>	Total SqFt	<u>5760.00</u>	Powder	<u>1.46 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>4999</u>
Total Tons	<u>N/A</u>	Total Yards	<u>3413.33</u>	Factor	<u>0.68 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>62.49</u>

Cal Method Pattern

Holes 80 Cover Used/No Blast Mats 21

AVG	Min	Max
Drill Depth <u>16</u>	<u>14</u>	<u>23</u>
Burden(Feet) <u>8</u> Feet	<u>8</u>	<u>8</u>
Spacing (Feet) <u>9</u> Feet	<u>9</u>	<u>9</u>
Hole Diameter <u>3.5</u>	<u>3.5</u>	<u>3.5</u>
OverBurden (Ft) <u>1</u>	<u>0</u>	<u>3</u>

Stone Weight N/A /Cyd Top Stemming 6 Min 9 Max

Type of Terrian Flat/Sloped Charges/Hole 1 Min 1 Max

Type of Rock Mica/Schist Deck Stemming 0 Min 0 Max

Stemming Type 3/8" Crushed Stone Charge Wgt/Deck 40 Min 80 Max

Height of Face 0 Depth of Water 0 Min 5 Max

Control Row Taped N Angled Holes /Face Bermed N/N Laser/BoreTracking N

Total Pounds 4999.05 Lbs

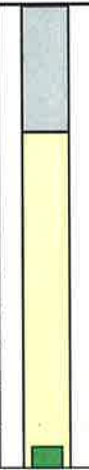
Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	4874.00 Lbs
BA BULK Totals:		N/A	4874.00 Lbs
Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	15	63.45 Lbs
BAPACKAGED Totals:		15	63.45 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	80	61.60 Lbs
BOOSTERS Totals:		80	61.60 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	80	
DETS DHOLE Totals:		80	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.2	500
LINES Totals:		0.2	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	14	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	86	
SURF DELAY Totals:		100	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	22.00

Sterming Stones	6	
1966 Emulsion Blend	16	
TROJAN SPARTAN 350G 49/CS	0	
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.44	N/A	120.6	600	211

Date/Time Long at 15:34:00 October 25, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GLTK.KO0

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 25, 2016 16:21:06 (V10.72)

Extended Notes

Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting

PSPL 120.6 dB(L) 0.003 psi(L) at 0.407 sec

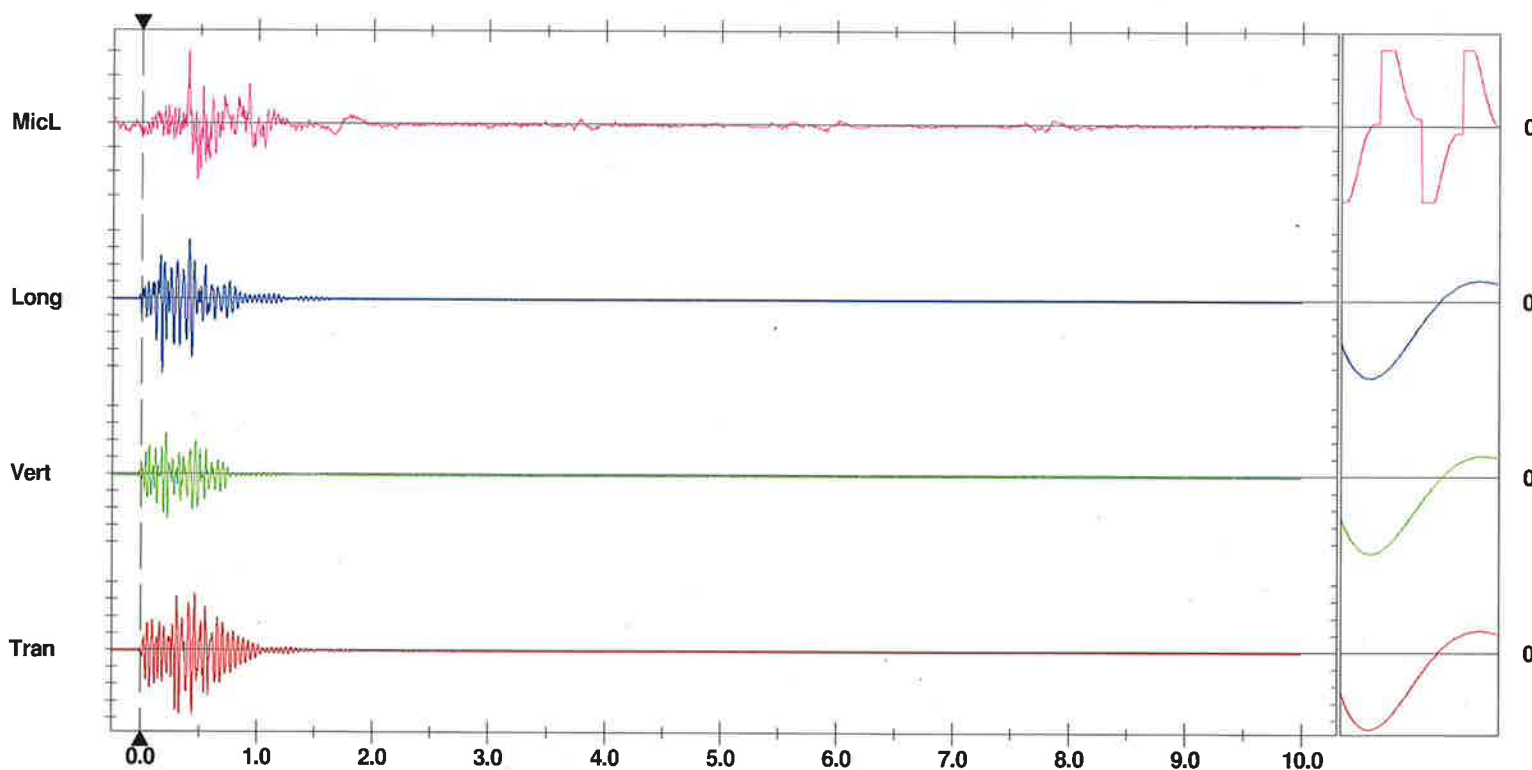
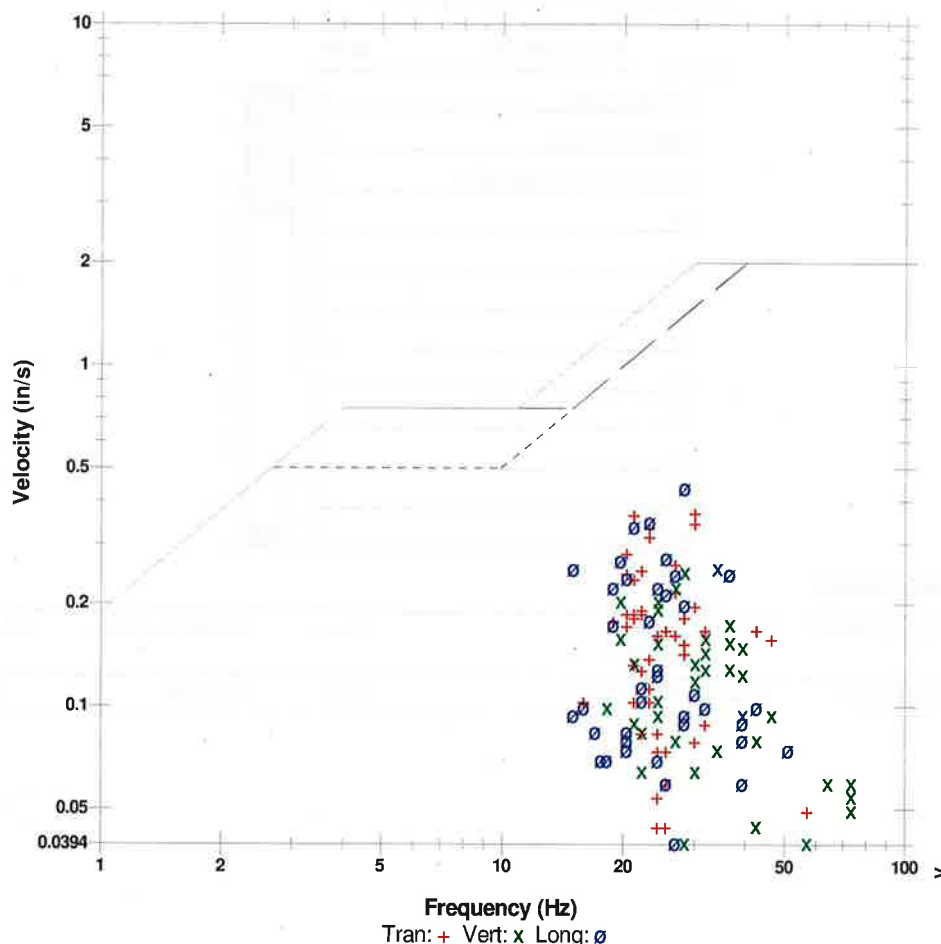
ZC Freq 12 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 565 mv)

	Tran	Vert	Long	
PPV	0.375	0.255	0.440	in/s
ZC Freq	30	37	30	Hz
Time (Rel. to Trig)	0.341	0.234	0.183	sec
Peak Acceleration	0.239	0.146	0.186	g
Peak Displacement	0.003	0.001	0.002	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.3	8.0	8.2	Hz
Overswing Ratio	3.3	3.5	3.6	

Peak Vector Sum 0.466 in/s at 0.183 sec

USBM RI8507 And OSMRE



Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/26/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46801	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM mud slippery conditions

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler,Dean T

License #: 1937

Signature:

Precautions Taken:

Top couple inches of ground frozen, underneath is slippery mud, rocks are slippery also pick appropriate path

Weather
Comments:

cool partyl cloudy 25-45*

No. of Crew Members 0

Crew Members Names :

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):

Shot # 9 Shot Time (24hrs) 11:16 Shot VideoTaped: Y **Weather**

Notes: N/A Weather Conditions: Partly Cloudy

Temp (°F): 25-45

Wind Direction: North

Wind Spd: 5-15 MPH

Preblast

Blast Direction: West Max Holes/Delay: 2.00 Predicted K Factor: 242

Blast Location: access rd towards tower 1 west Scale Dist.: 180.74

Location of Structure: 21 putnam rd Max Weight/Delay: 15 Lbs Predicted PPV: 0.06

Measurement Google Map Dist. to Closest (Ft) 700 Structure 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes

Pay Square Area 2058 Feet 42 holes x7x7 pattern = 2058

N/A N/A N/A

N/A N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>378.00</u>	Total SqFt	<u>2058.00</u>	Powder	<u>1.04 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>714</u>
Total Tons	<u>N/A</u>	Total Yards	<u>686.00</u>	Factor	<u>0.96 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>17.00</u>

Cal Method Pattern

Holes 42 Cover Used/No Blast Mats 21

	AVG	Min	Max															
Drill Depth	<u>9.00</u>	<u>8.00</u>	<u>10.00</u>	Stone Weight	<u>N/A</u>	<u>/Cyd</u>	Top Stemming	<u>6.00</u>	Min	<u>8.00</u>	Max							
Burden(Feet)	<u>7.00</u>	<u>7.00</u>	<u>7.00</u>	Type of Terrian	<u>Flat/Sloped</u>		Charges/Hole	<u>1</u>	Min	<u>1</u>	Max							
Spacing (Feet)	<u>7.00</u>	<u>7.00</u>	<u>7.00</u>	Type of Rock	<u>Mica/Schist</u>		Deck Stemming	<u>0.00</u>	Min	<u>0.00</u>	Max							
Hole Diameter	<u>3.50</u>	<u>3.50</u>	<u>3.50</u>	Stemming Type	<u>3/8" Crushed Stone</u>		Charge Wgt/Deck	<u>15.00</u>	Min	<u>20.00</u>	Max							
OverBurden (Ft)	<u>2.00</u>	<u>0.00</u>	<u>4.00</u>	Height of Face	<u>0.00</u>		Depth of Water	<u>0.00</u>	Min	<u>6.00</u>	Max							

Control Row Taped N Angled Holes /Face Bermed N/N Laser/BoreTracking N

Total Pounds 714.48 Lbs Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	696.00 Lbs
BA BULK Totals:		N/A	696.00 Lbs
Product #	Desc	Qty	Wgt
SP0200	TROJAN SPARTAN 1/2 # 200G 72/CS	42.00	18.48 Lbs
BOOSTERS Totals:		42.00	18.48 Lbs

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.4	1000
LINES Totals:		0.4	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	1.00	
SURF DELAY Totals:		8.00	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 1/2 # 200G 72/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 1/2 # 200G 72/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.135	N/A	117.8	700	552

Date/Time Vert at 11:00:16 October 26, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GLV2.KG0

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 26, 2016 15:18:55 (V10.72)

Extended Notes

Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting

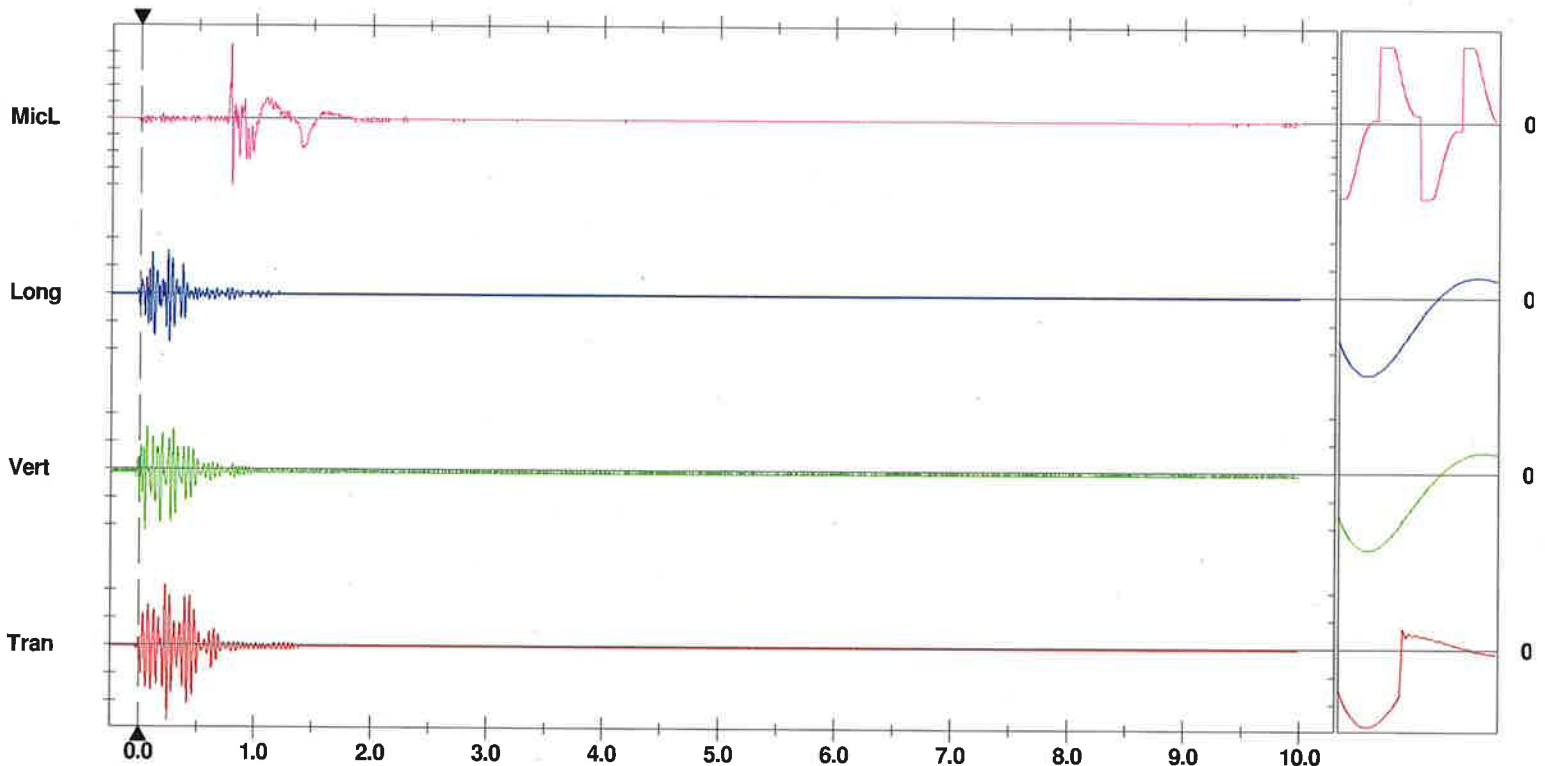
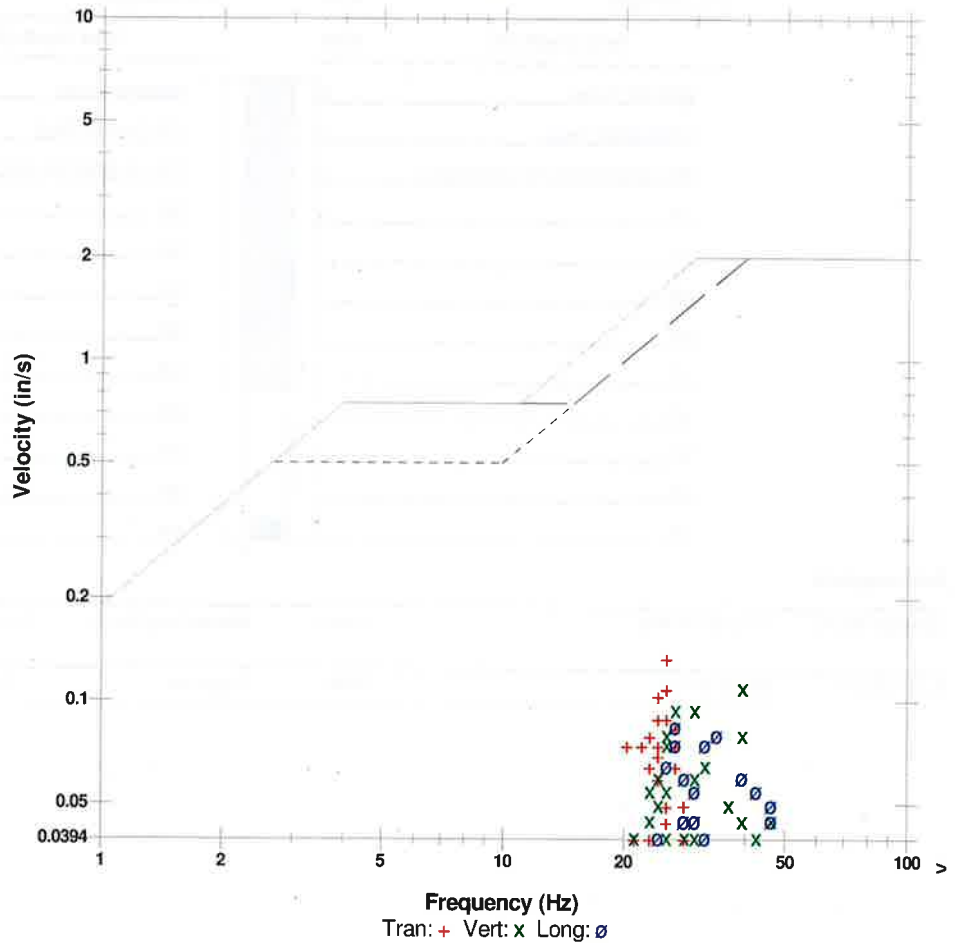
PSPL 117.8 dB(L) 0.002 psi(L) at 0.789 sec

ZC Freq 16 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 564 mv)

	Tran	Vert	Long	
PPV	0.135	0.110	0.085	in/s
ZC Freq	27	39	28	Hz
Time (Rel. to Trig)	0.253	0.054	0.257	sec
Peak Acceleration	0.066	0.080	0.053	g
Peak Displacement	0.001	0.001	0.000	in
Sensor Check	Check	Passed	Passed	
Frequency	12.4	8.0	8.2	Hz
Overswing Ratio	4.5	3.6	3.6	

Peak Vector Sum 0.153 in/s at 0.255 sec

USBM RI8507 And OSMRE


Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/26/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46803	N/A
Job Address	Route 8 J.A. McDonald Inc. Deerfield	N/A	N/A	N/A
	Wind	N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM Equipment & Personnel

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Charron; Brian J.

License #: 1132

Precautions Taken:

Moved all out of Blast zone

Signature:

Weather
Comments:

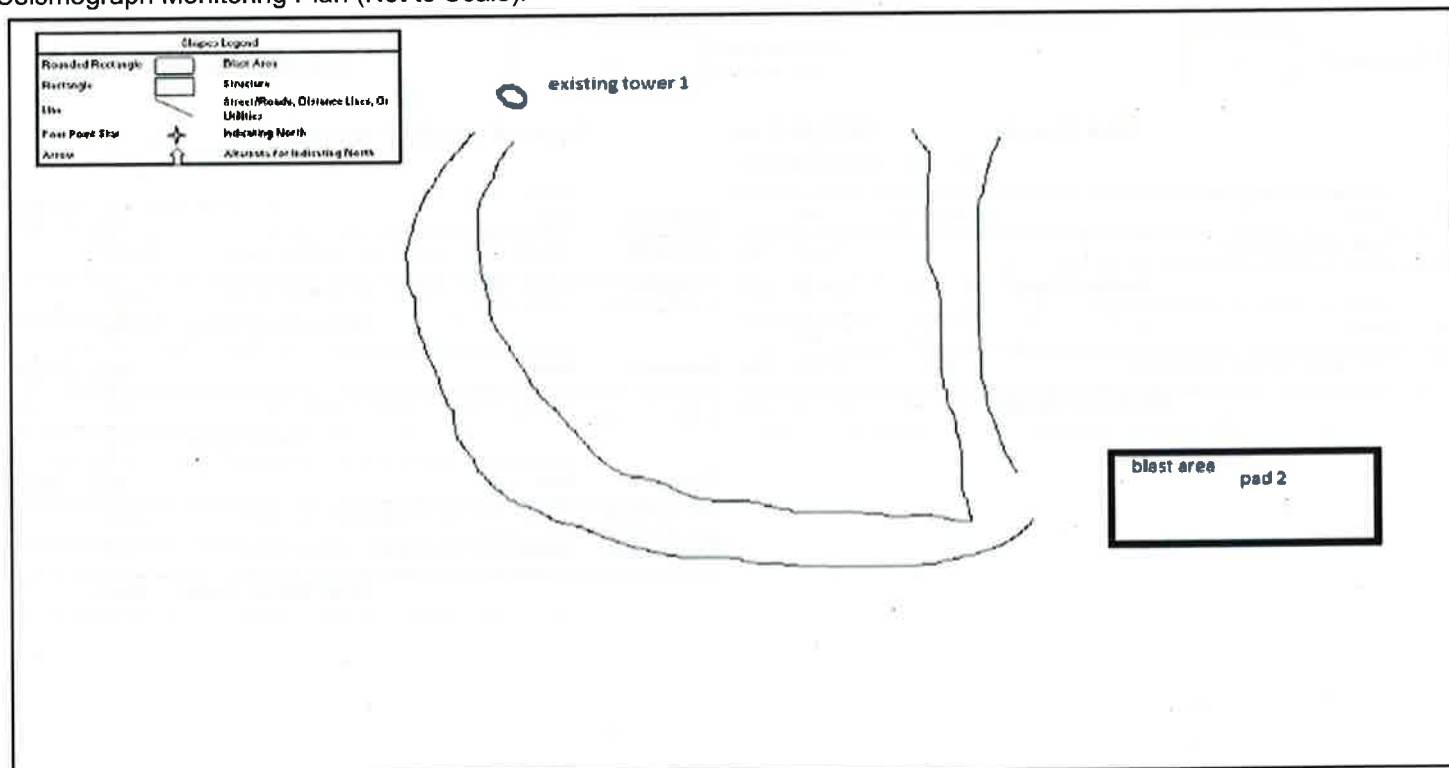
Over cast

No. of Crew Members 3

Crew Members Names :

Cody B.	Dean B	Britt G	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 8 Shot Time (24hrs) 15:22 Shot VideoTaped: y Weather Cloudy

Notes: Bulk product used in shot on tower 2 is a combination of two pick tickets. East ridge used 14,388 lb bulk emulsion, 277 350g Boosters, 255 30' ez Dets, 22 40' EzDet, 36 17 Ms EZTL, 6 25 ms Eztl. This note is only due to ebr issues related to computer work and working off multiple pick tickets, ticket # 46803,46801

Weather Conditions: Cloudy
Temp (°F): 30-40
Wind Direction: West
Wind Spd: 10-15 MPH

Preblast

Blast Direction: East Max Holes/Delay: 2.00 Predicted K Factor: 242
Blast Location: Tower pad #2 Scale Dist.: 64.82
Location of Structure: existing tower 1 Max Weight/Delay: 238.00 Lbs Predicted PPV: 0.31
Measurement Physical Measurement Dist. to Closest (Ft) Structure 1000 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
Pay Square Area 24930.00 Feet
N/A N/A N/A
N/A N/A N/A

Pay Calculations Notes

277 holes x 9x10 pattern = 24,930 sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	3601.00	Total SqFt	24930.00	Powder	0.64 Lbs/Cyd	Total Product Weight (Lbs) :	7637
Total Tons	N/A	Total Yards	12003.33	Factor	1.57 Cyd/Lbs	Avg Weight / Hole (Lbs):	27.57
Cal Method	Pattern						
# Holes	277	Cover Used/No	N/A				
	AVG	Min	Max				
Drill Depth	13.00	10.00	21.00	Stone Weight	N/A /Cyd	Top Stemming	4.00 Min 5.00 Max
Burden(Feet)	9.00	9.00	9.00	Type of Terrian	Sloped	Charges/Hole	1 Min 1 Max
Spacing (Feet)	10.00	10.00	10.00	Type of Rock	Mica/Schist	Deck Stemming	0.00 Min 0.00 Max
Hole Diameter	4.00	4.00	4.00	Stemming Type	3/8" Crushed Stone	Charge Wgt/Deck	35.00 Min 119.00 Max
OverBurden (Ft)	1.00	0.00	3.00	Height of Face	0.00	Depth of Water	9.00 Min 15.00 Max
Control Row Taped	N	Angled Holes /Face Bermed	N/Y			Laser/BoreTracking	N

Total Pounds 7637.29 Lbs

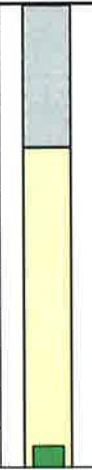
Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		7424.00 Lbs
BA BULK Totals:		N/A	7424.00 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	277.00	213.29 Lbs
BOOSTERS Totals:		277.00	213.29 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	255.00	
DXABZ641	NONEL EZDET 25/350 40FT ZCOMP 30/CS	22.00	
DETS DHOLE Totals:		277.00	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	1.00	2500.00
LINES Totals:		1.00	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	36.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	6.00	
SURF DELAY Totals:		42.00	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	4.00
Total Depth (ft)	13.00

Stemming Stones	4.00	
1966 Emulsion Blend	9.00	
TROJAN SPARTAN 350G 49/CS	0.00	
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Charron;Brian J.	existing tower 1	3042	Triggered	0.145	N/A	127.6	1000	115

Date/Time Long at 15:22:18 October 26, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.5 Volts
Unit Calibration January 26, 2016 by Instatel
File Name D288GLVE.P60

Notes

Location: Existing Tower 1 East
Client: McDonald
User Name: D Butler
Converted: October 26, 2016 15:37:42 (V10.72)

Extended Notes

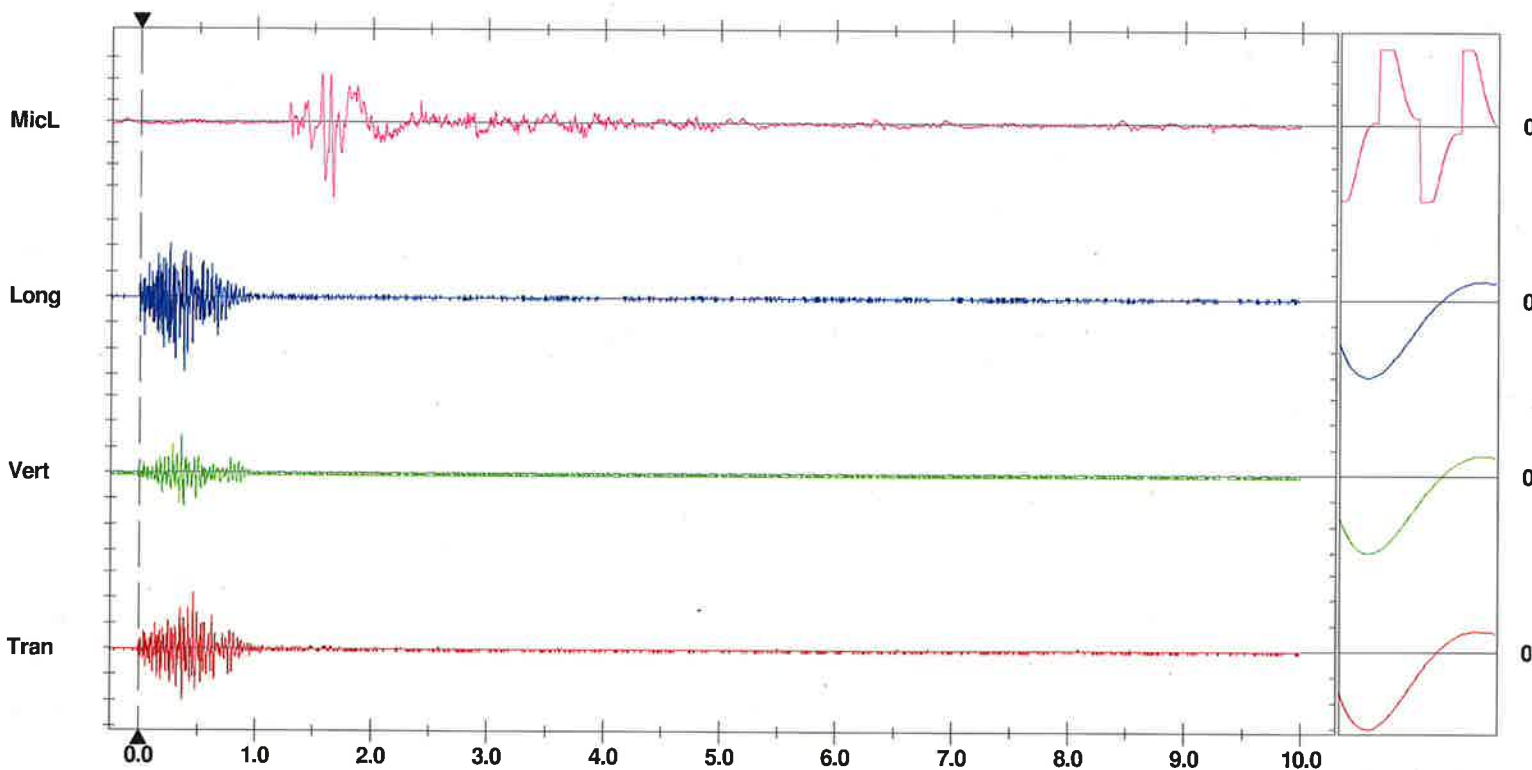
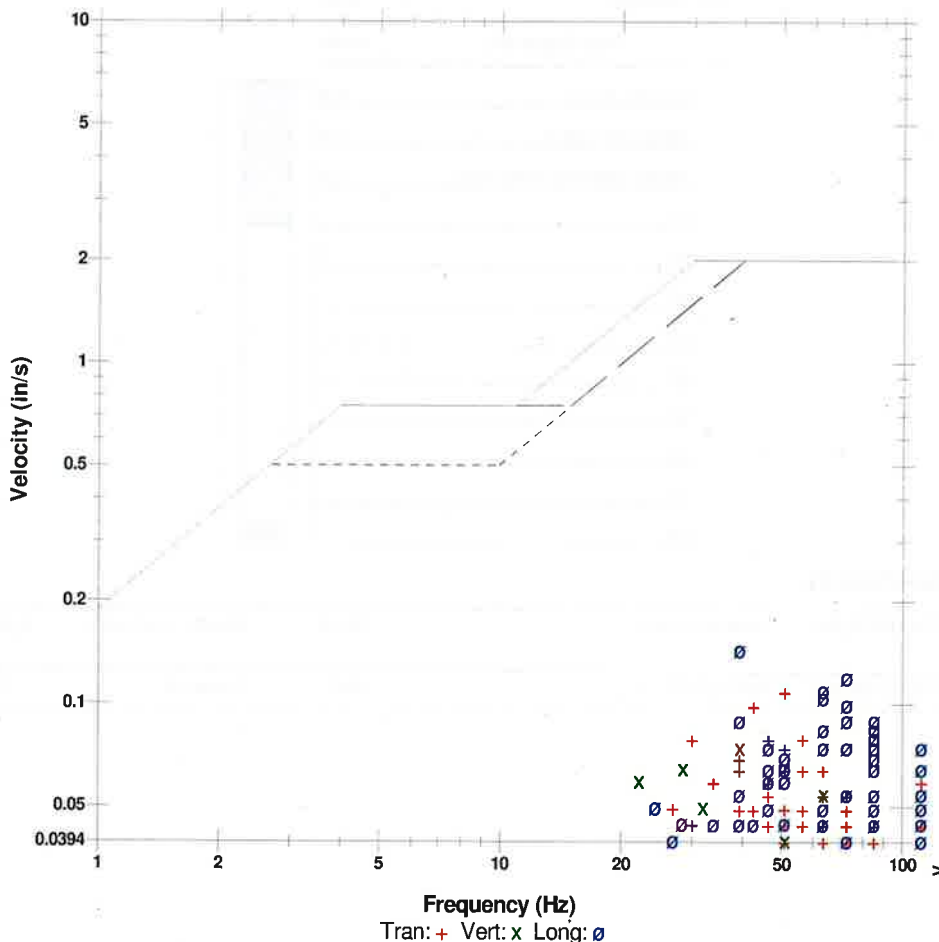
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 127.6 dB(L) 0.007 psi(L) at 1.668 sec
ZC Freq 11 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 565 mv)

	Tran	Vert	Long	
PPV	0.110	0.075	0.145	in/s
ZC Freq	47	39	39	Hz
Time (Rel. to Trig)	0.469	0.361	0.381	sec
Peak Acceleration	0.093	0.053	0.146	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.2	7.8	8.0	Hz
Overswing Ratio	3.4	3.6	3.8	

Peak Vector Sum 0.153 in/s at 0.381 sec

USBM RI8507 And OSMRE



Time Scale: 0.50 sec/div Amplitude Scale: Geo: 0.050 in/s/div Mic: 0.002 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/26/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46801	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM mud slippery conditions

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler,Dean T

License #: 1937

Signature:

Precautions Taken:

Top couple inches of ground frozen, underneath is slippery mud, rocks are slippery also pick appropriate path

Weather
Comments:

cool partyl cloudy 25-45*

No. of Crew Members 0

Crew Members Names :

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):

Shot # 9 Shot Time (24hrs) 11:16 Shot VideoTaped: Y **Weather**

Notes: N/A Weather Conditions: Partly Cloudy

Temp (°F): 25-45

Wind Direction: North

Wind Spd: 5-15 MPH

Preblast

Blast Direction: West Max Holes/Delay: 2.00 Predicted K Factor: 242

Blast Location: access rd towards tower 1 west Scale Dist.: 180.74

Location of Structure: 21 putnam rd Max Weight/Delay: 15 Lbs Predicted PPV: 0.06

Measurement Google Map Dist. to Closest (Ft) 700 Structure 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A

Pay Square Area 2058 Feet

N/A N/A N/A

N/A N/A N/A

Pay Calculations Notes

42 holes x7x7 pattern = 2058

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	378.00	Total SqFt	2058.00	Powder	1.04 Lbs/Cyd	Total Product Weight (Lbs) :	714
Total Tons	N/A	Total Yards	686.00	Factor	0.96 Cyd/Lbs	Avg Weight / Hole (Lbs):	17.00
Cal Method	Pattern						
# Holes	42	Cover Used/No Blast Mats	21				
	AVG	Min	Max				
Drill Depth	9.00	8.00	10.00	Stone Weight	N/A /Cyd	Top Stemming	6.00 Min 8.00 Max
Burden(Feet)	7.00 Feet	7.00	7.00	Type of Terrian	Flat/Sloped	Charges/Hole	1 Min 1 Max
Spacing (Feet)	7.00 Feet	7.00	7.00	Type of Rock	Mica/Schist	Deck Stemming	0.00 Min 0.00 Max
Hole Diameter	3.50	3.50	3.50	Stemming Type	3/8" Crushed Stone	Charge Wgt/Deck	15.00 Min 20.00 Max
OverBurden (Ft)	2.00	0.00	4.00	Height of Face	0.00	Depth of Water	0.00 Min 6.00 Max
Control Row Taped	N	Angled Holes /Face Bermed	N/N			Laser/BoreTracking	N

Total Pounds 714.48 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	696.00 Lbs
BA BULK Totals:		N/A	696.00 Lbs
Product #	Desc	Qty	Wgt
SP0200	TROJAN SPARTAN 1/2 # 200G 72/CS	42.00	18.48 Lbs
BOOSTERS Totals:		42.00	18.48 Lbs

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.4	1000
LINES Totals:		0.4	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	1.00	
SURF DELAY Totals:		8.00	

Description: typical

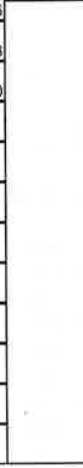
Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 1/2 # 200G 72/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	


Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 1/2 # 200G 72/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	


Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	2288	Triggered	0.135	N/A	117.8	700	552

Date/Time Vert at 11:00:16 October 26, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GLV2.KG0

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 26, 2016 15:18:55 (V10.72)

Extended Notes

Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting

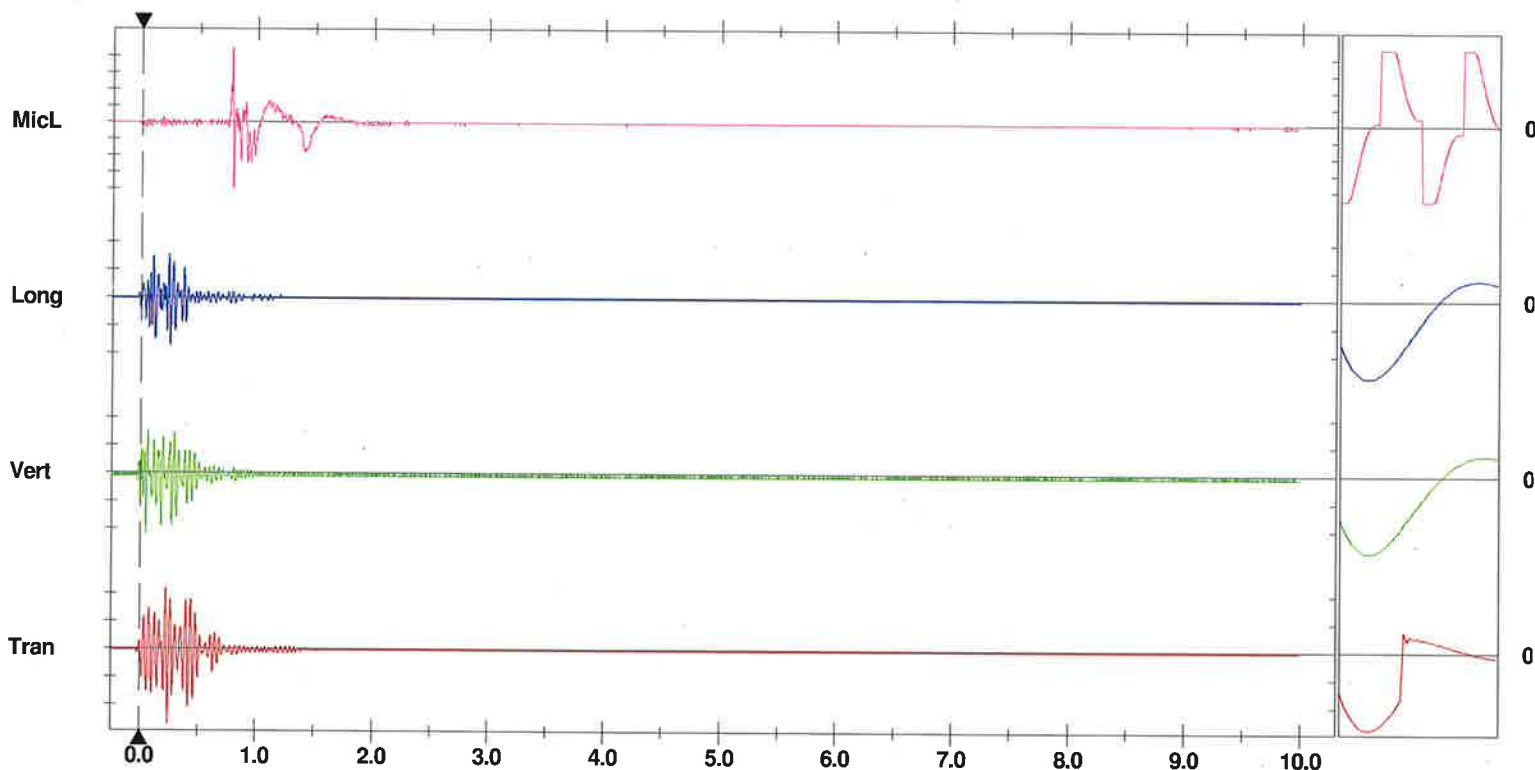
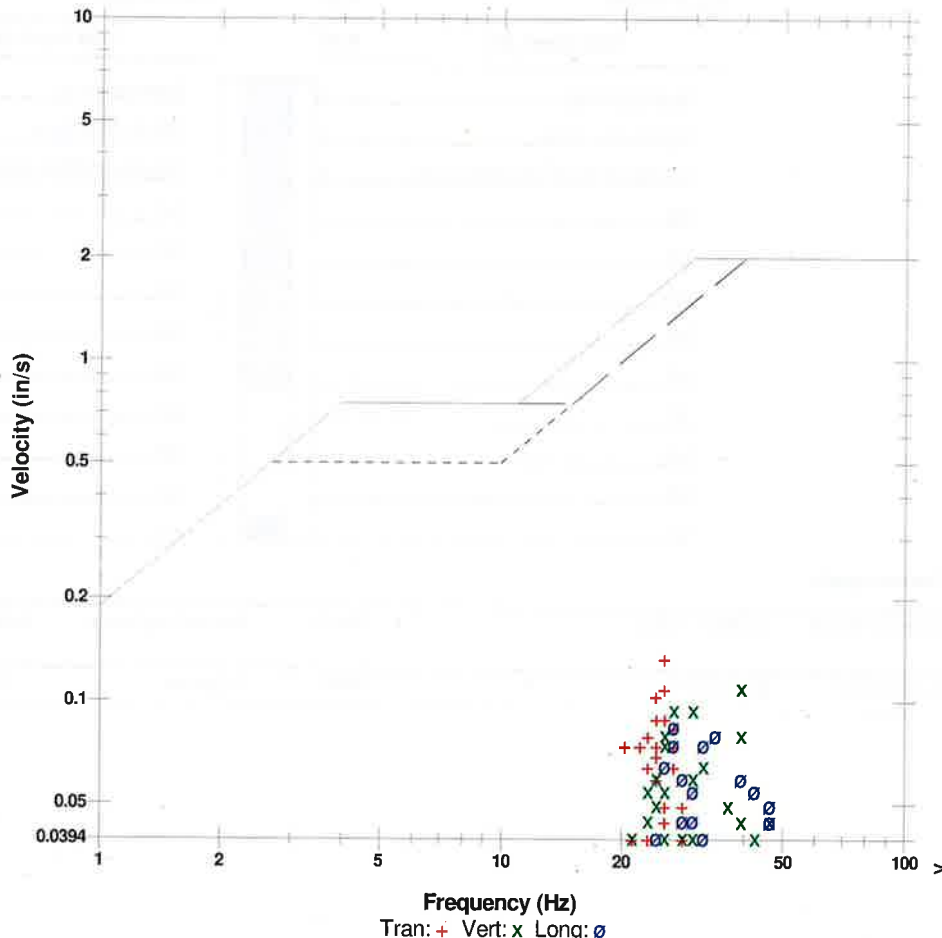
PSPL 117.8 dB(L) 0.002 psi(L) at 0.789 sec

ZC Freq 16 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 564 mv)

	Tran	Vert	Long	
PPV	0.135	0.110	0.085	in/s
ZC Freq	27	39	28	Hz
Time (Rel. to Trig)	0.253	0.054	0.257	sec
Peak Acceleration	0.066	0.080	0.053	g
Peak Displacement	0.001	0.001	0.000	in
Sensor Check	Check	Passed	Passed	
Frequency	12.4	8.0	8.2	Hz
Overswing Ratio	4.5	3.6	3.6	

Peak Vector Sum 0.153 in/s at 0.255 sec

USBM RI8507 And OSMRE


Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/27/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46864	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 PM snow

Post Shift Insp.Time (24hrs): 12:00:00 PM

Blaster : Butler;Dean T

License #: 1937

Signature:

DB

Precautions Taken:

chain trucks up, very slippery caregul when walking

Weather
Comments:

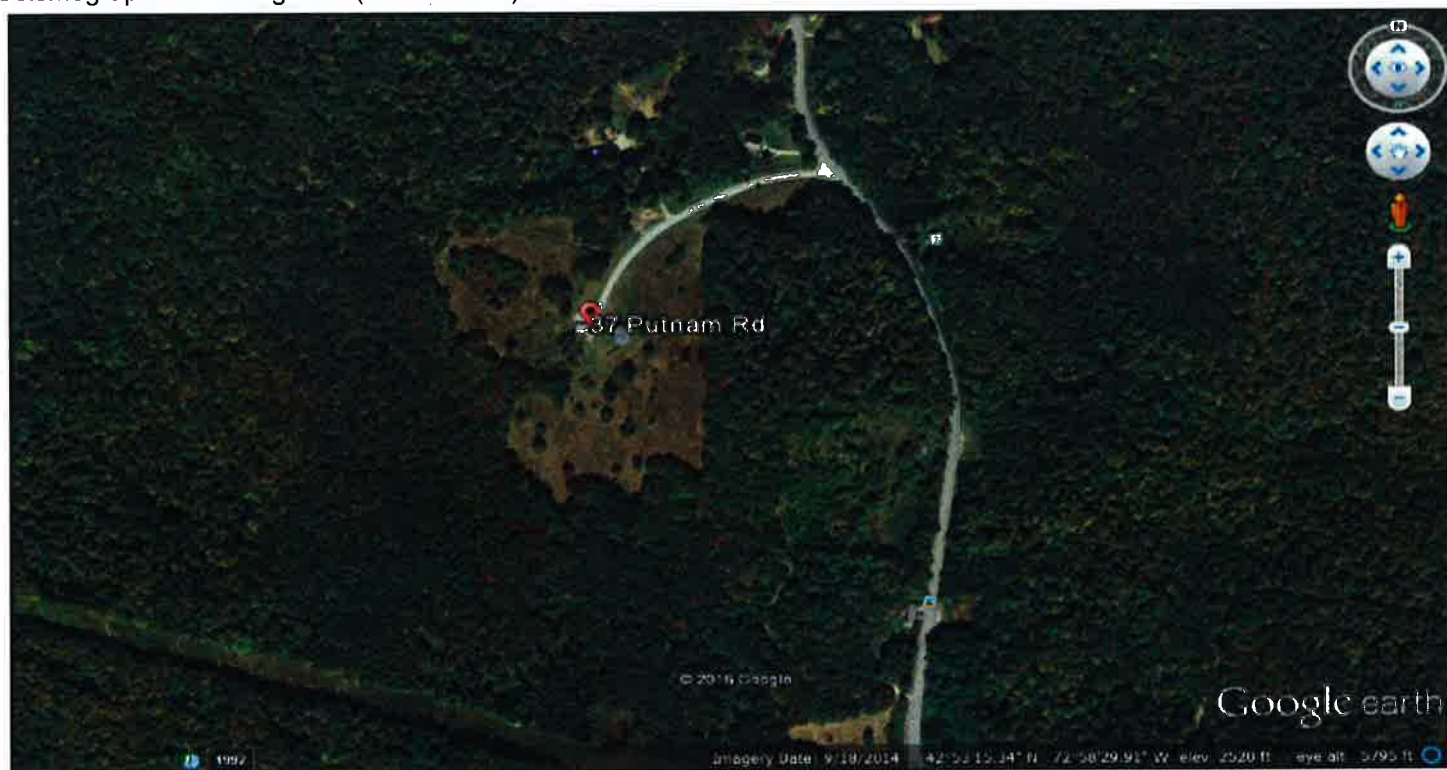
snowy 24-30

No. of Crew Members 2

Crew Members Names :

ritt gellenthien	brian charron	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 10 Shot Time (24hrs) 2:30 Shot VideoTaped: Y **Weather**

Notes: N/A Weather Conditions: Rain

Temp (°F): 30-40

Wind Direction: South-East

Wind Spd: 5-10 MPH

Preblast

Blast Direction: West Max Holes/Delay: 1 Predicted K Factor: 160

Blast Location: access rd towards towers Scale Dist.: 180.74

Location of Structure: 21 pulnam rd Max Weight/Delay: 15 Lbs Predicted PPV: 0.04

Measurement Google Map Dist. to Closest (Ft) 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes

Pay Square Area 637 Feet 13x7x7=637 sqft

N/A N/A

N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>108.00</u>	Total SqFt	<u>588.00</u>	Powder	<u>0.87 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>170</u>
Total Tons	<u>N/A</u>	Total Yards	<u>196.00</u>	Factor	<u>1.15 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>14.17</u>

Cal Method Pattern

Holes 12 Cover Used/No N/A

AVG Min Max

Drill Depth	<u>9</u>	<u>9</u>	<u>12</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>6</u> Min	<u>8</u> Max
Burden(Feet)	<u>7</u> Feet	<u>7</u>	<u>7</u>	Type of Terrian	<u>Flat</u>	Charges/Hole	<u>1</u> Min	<u>2</u> Max
Spacing (Feet)	<u>7</u> Feet	<u>7</u>	<u>7</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0</u> Min	<u>0</u> Max
Hole Diameter	<u>3.5</u>	<u>3.5</u>	<u>3.5</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>3.33</u> Min	<u>15</u> Max
OverBurden (Ft)	<u>1</u>	<u>0</u>	<u>5</u>	Height of Face	<u>0</u>	Depth of Water	<u>0</u> Min	<u>5</u> Max

Control Row Taped N Angled Holes /Face Bermed N/Y Laser/BoreTracking N

Total Pounds 170.00 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		<u>150.00 Lbs</u>
BA BULK Totals:		<u>N/A</u>	<u>150.00 Lbs</u>
Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	<u>3</u>	<u>9.99 Lbs</u>
BAPACKAGED Totals:		<u>3</u>	<u>9.99 Lbs</u>
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	<u>13</u>	<u>10.01 Lbs</u>
BOOSTERS Totals:		<u>13</u>	<u>10.01 Lbs</u>

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	<u>13</u>	
DETS DHOLE Totals:		<u>13</u>	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	<u>3</u>	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS		
SURF DELAY Totals:		<u>3</u>	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	9.00

Stemming Stones	6	
1966 Emulsion Blend	3	
TROJAN SPARTAN 350G 49/CS	0	
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
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Job#	104-04-02718	Cust. PO#	N/A	
Date	10/28/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	68463	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM snow
 Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler;Dean T Precautions Taken:
 License #: 1937 very slippery, walk with caution

Signature:

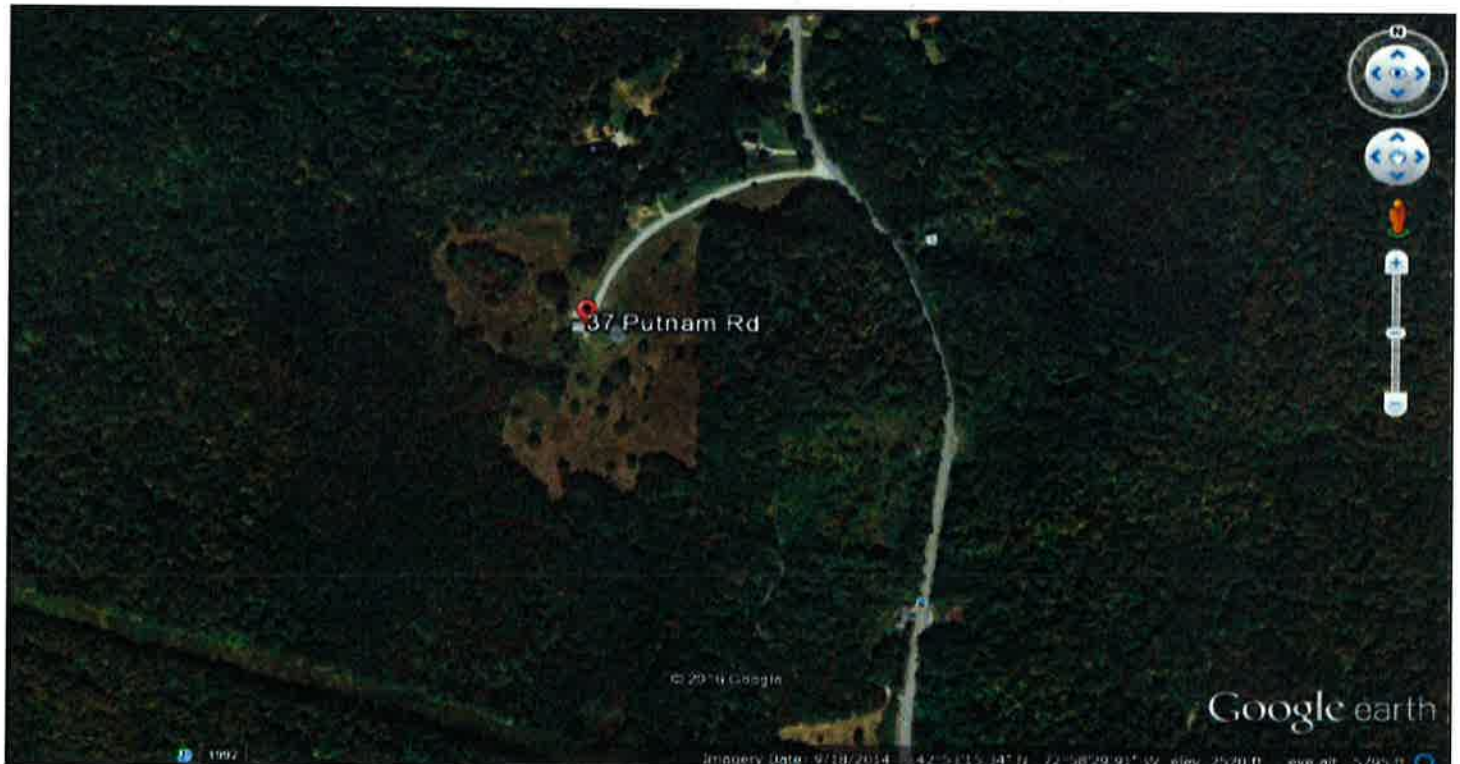
08

Weather
Comments:

snowy cool 25-40

No. of Crew Members	<u>3</u>		
Crew Members Names :			
Britt Gellenthien	Brad morehouse	Mike warrington	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 11 Shot Time (24hrs) 14:24 Shot VideoTaped: Y

Weather

Notes:

N/A

Weather Conditions: Cloudy

Temp (°F): 25-40

Wind Direction: South-East

Wind Spd: 5-10 MPH

Preblast

Blast Direction: West Max Holes/Delay: 2.00 Predicted K Factor: 160

Blast Location: access rd to tower 1 wes t Scale Dist.: 127.80

Location of Structure: 21 putnam rd Max Weight/Delay: 30.00 Lbs Predicted PPV: 0.07

Measurement Google Map Dist. to Closest (Ft) Structure 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A

Pay Calculations Notes

Pay Square Area 2303.00 Feet

N/A N/A N/A

N/A N/A N/A

47x7x7=2303 sqft

Shot Info**Configuration****1 - Open**

Total Drill Depth(Ft) 423.00

Total SqFt 2303.00

Powder 0.85 Lbs/Cyd

Total Product Weight (Lbs) : 654

Total Tons N/A

Total Yards 767.67

Factor 1.17 Cyd/Lbs

Avg Weight / Hole (Lbs): 13.91

Cal Method Pattern

Holes 47

Cover Used/No N/A

AVG**Min Max**

Drill Depth 9.00

8.00 12.00

Stone Weight N/A /Cyd

Top Stemming 6.00 Min 8.00 Max

Burden(Feet) 7.00 Feet

7.00 7.00

Type of Terrian Flat

Charges/Hole 1 Min 1 Max

Spacing (Feet) 7.00 Feet

7.00 7.00

Type of Rock Mica/Schist

Deck Stemming 0.00 Min 0.00 Max

Hole Diameter 3.50

3.50 3.50

Stemming Type 3/8" Crushed Stone

Charge Wgt/Deck 15.00 Min 20.00 Max

OverBurden (Ft) 0.00

0.00 3.00

Height of Face 0.00

Depth of Water 7.00 Min 9.00 Max

Control Row Taped N

Angled Holes /Face Bermed N/N

Laser/BoreTracking N

Total Pounds 654.19 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
405	Bulk Powernel 1500 Emulsion		618.00 Lbs
BA BULK Totals:		N/A	618.00 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	47.00	36.19 Lbs
BOOSTERS Totals:		47.00	36.19 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	47.00	
DETS DHOLE Totals:		47.00	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	11.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	6.00	
SURF DELAY Totals:		17.00	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2.00
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stemming Stones	6.00
Bulk Powdermel 1500 Emulsion	3.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

**Seismographs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.145	N/A	111.5	700	340

Date/Time Vert at 14:24:58 October 28, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by Instanetel
File Name D288GLZ1.DM0

Notes

Location: 21 Putnam Rd.
Client: McDonald
User Name: D Butler
Converted: October 31, 2016 06:45:47 (V10.72)

Extended Notes

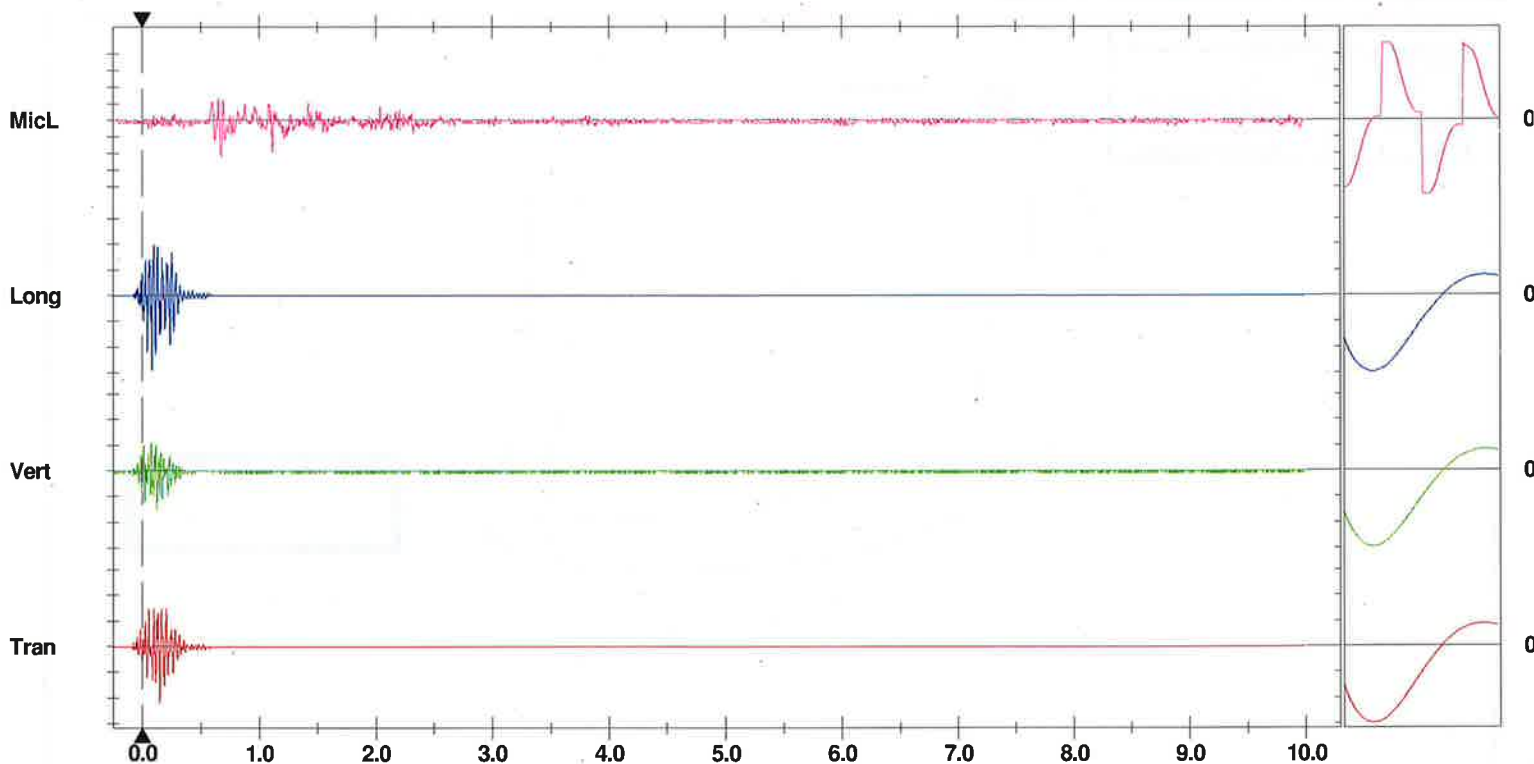
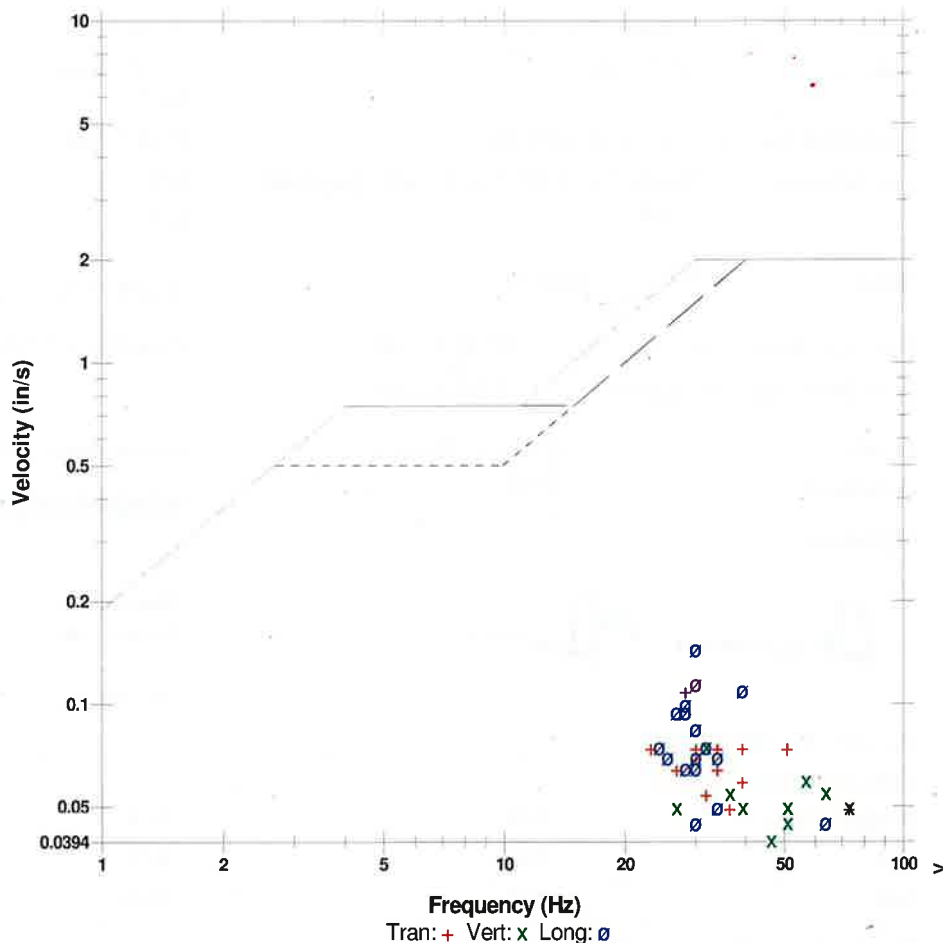
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 111.5 dB(L) 0.001 psi(L) at 0.684 sec
ZC Freq 20 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 520 mv)

	Tran	Vert	Long	
PPV	0.110	0.075	0.145	in/s
ZC Freq	28	34	30	Hz
Time (Rel. to Trig)	0.155	0.128	0.086	sec
Peak Acceleration	0.093	0.066	0.119	g
Peak Displacement	0.000	0.000	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.1	8.0	8.0	Hz
Overswing Ratio	3.4	3.6	3.7	

Peak Vector Sum 0.146 in/s at 0.086 sec

USBM RI8507 And OSMRE



Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



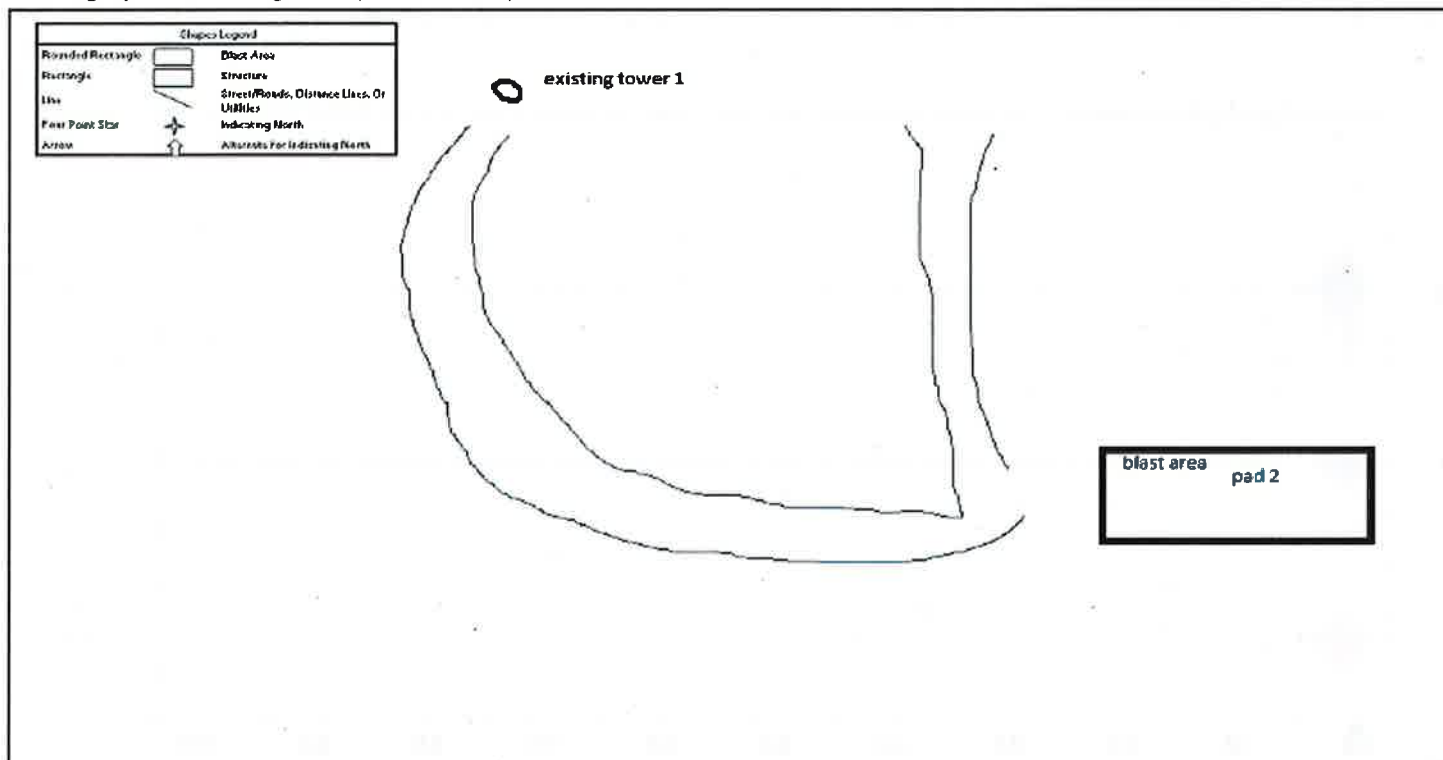
Job#	104-04-02718	Cust. PO#	N/A	
Date	10/28/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tks#	46902	N/A
Job Address	Route 8 J.A. McDonald Inc. Deerfield Wind	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards		
Post Shift Insp.Time (24hrs):	12:00:00 AM	Equipment & Personnel		
Blaster :	Charron; Brian J.	Precautions Taken:		
License #:	1132	Moved all out of blast zone		
Signature:				

Weather
Comments:

over cast

No. of Crew Members	1		
Crew Members Names :			
Morgan Putvain	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 9 Shot Time (24hrs) 13:22 Shot VideoTaped: Y Weather

Notes:

N/A

Weather Conditions: CloudyTemp (°F): 35-40Wind Direction: South-WestWind Spd: 10-20 MPH**Preblast**Blast Direction: East Max Holes/Delay: 2 Predicted K Factor: 240Blast Location: road way to T 3 Scale Dist.: 204.12Location of Structure: Existing tower 1 Max Weight/Delay: 150 Lbs Predicted PPV: 0.05Measurement Physical Measurement Dist. to Closest (Ft) Structure 2500 Railroad/Highway N/A Overhead Util N/A Underground Util N/A**Pay Quantities**Fire Detail # of Hrs: N/A**Pay Calculations Notes**Pay Square Area 10125 Feet

N/A N/A N/A

N/A N/A N/A

9x9x125=10,125

Shot Info**Configuration****1 - Open**Total Drill Depth(Ft) 1625.00 Total SqFt 10125.00 Powder 1.78 Lbs/Cyd Total Product Weight (Lbs) : 8677Total Tons N/A Total Yards 4875.00 Factor 0.56 Cyd/Lbs Avg Weight / Hole (Lbs): 69.42**Cal Method**

Pattern

Holes 125Cover Used/No N/A**AVG****Min****Max**Drill Depth 13Burden(Feet) 9 FeetSpacing (Feet) 9 FeetHole Diameter 4OverBurden (Ft) 0Control Row Taped N10 179 99 94 40 1Stone Weight N/A /CydType of Terrian Flat/SlopedType of Rock Mica/SchistStemming Type 3/8" Crushed StoneHeight of Face 0Angled Holes /Face Bermed N/Y

Top Stemming

Charges/Hole

Deck Stemming

Charge Wgt/Deck

Depth of Water

3 Min 4 Max1 Min 1 Max0 Min 0 Max55 Min 75 Max0 Min 5 MaxLaser/BoreTracking NTotal Pounds 8677.25 LbsType Of Initiation: **Non-Electric**

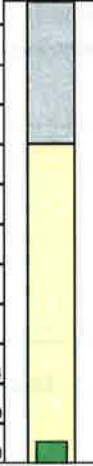
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		8581.00 Lbs
BA BULK Totals:		N/A	8581.00 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	125	96.25 Lbs
BOOSTERS Totals:		125	96.25 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	125	
DETS DHOLE Totals:		125	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	1	2500
LINES Totals:		1	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	9	
SURF DELAY Totals:		9	

Descripton: Typical

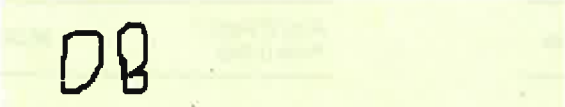
Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	13.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	4
1966 Emulsion Blend	9
TROJAN SPARTAN 350G 49/CS	0

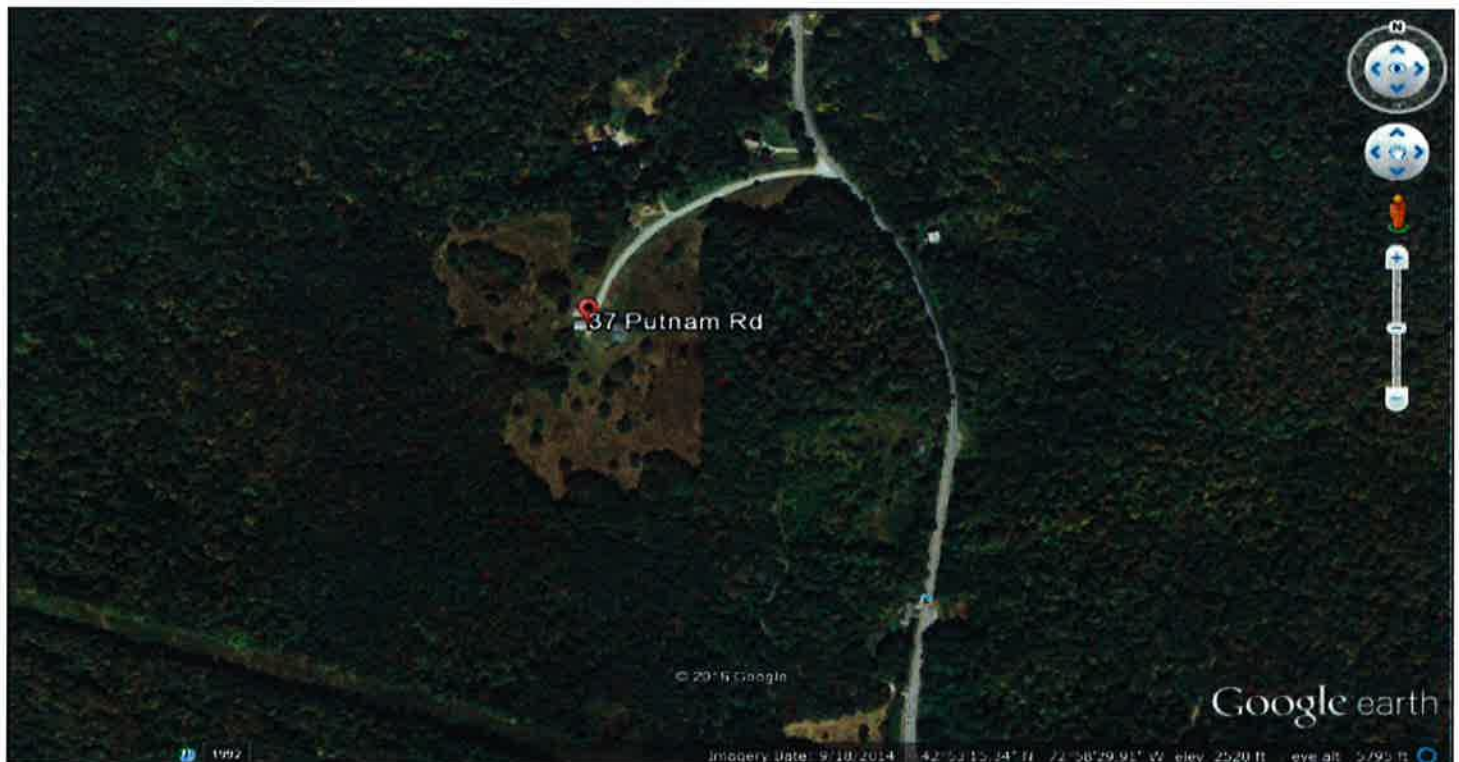
**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Charron;Brian J.	Existing tower 1	3042	Threshold Not Met	0	0	0	2500	N/A



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/31/2016	Cust. Supt. Name	buddy bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46967	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards	mud, wet holws	
Post Shift Insp.Time (24hrs):	12:00:00 AM			
Blaster :	Butler,Dean T	Precautions Taken:	load accordingly, watch footing on mud stay out of deep watery areas to avoid getting stuck	
License #:	1937	Weather Comments:	beautiful weather sun shining 30-50	
Signature:				
No. of Crew Members	2			
Crew Members Names :				
britt	pat	N/A	N/A	
N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	

Seismograph Monitoring Plan (Not to Scale):



Shot # 12 Shot Time (24hrs) 14:23 Shot VideoTaped: Y

Weather

Notes: N/A

Weather Conditions: Partly Cloudy
Temp (°F): 30-50
Wind Direction: South-West
Wind Spd: 0-10 MPH

Preblast

Blast Direction: West Max Holes/Delay: 2 Predicted K Factor: 160
Blast Location: bottom of access rd to tower pads Scale Dist.: 127.80
Location of Structure: 21 putnam rd Max Weight/Delay: 30 Lbs Predicted PPV: 0.07
Measurement Google Map Dist. to Closest (Ft) 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
Pay Square Area 4606 Feet
N/A N/A
N/A N/A

Pay Calculations Notes

94 holes x 7x7 pattern = 4606

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>846.00</u>	Total SqFt	<u>4606.00</u>	Powder	<u>1.27</u> Lbs/Cyd	Total Product Weight (Lbs)	<u>1945</u>
Total Tons	<u>N/A</u>	Total Yards	<u>1535.33</u>	Factor	<u>0.79</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>20.69</u>

Cal Method	<u>Pattern</u>								
# Holes	<u>94</u>	Cover Used/No	<u>N/A</u>						
	<u>AVG</u>	<u>Min</u>	<u>Max</u>						
Drill Depth	<u>9</u>	<u>5</u>	<u>13</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>5.5</u> Min	<u>7</u> Max	
Burden(Feet)	<u>7</u> Feet	<u>7</u>	<u>7</u>	Type of Terrian	<u>Flat/Sloped</u>	Charges/Hole	<u>1</u> Min	<u>1</u> Max	
Spacing (Feet)	<u>7</u> Feet	<u>7</u>	<u>7</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0</u> Min	<u>0</u> Max	
Hole Diameter	<u>3.5</u>	<u>3.5</u>	<u>3.5</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>5</u> Min	<u>20</u> Max	
OverBurden (Ft)	<u>2</u>	<u>0</u>	<u>5</u>	Height of Face	<u>0</u>	Depth of Water	<u>0</u> Min	<u>13</u> Max	
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>				

Total Pounds 1945.38 Lbs

Type Of Initiation: Non-Electric

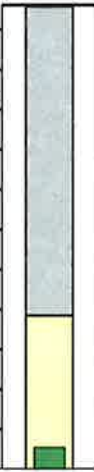
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	1873.00 Lbs
BA BULK Totals:		N/A	1873.00 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	94	72.38 Lbs
BOOSTERS Totals:		94	72.38 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	82	
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	12	
DETS DHOLE Totals:		94	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.4	1000
LINES Totals:		0.4	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	11	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	5	
SURF DELAY Totals:		16	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2
Sub Drilling(ft)	4
Total Depth (ft)	9.00

N/A	
Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

**Seismographs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.135	N/A	116.9	700	317

Date/Time Vert at 14:23:44 October 31, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by Instantel
File Name D288GM4L.BK0

Notes
 Location: 21 Putnam Rd.
 Client: McDonald
 User Name: D Butler
 Converted: November 1, 2016 06:24:49 (V10.72)

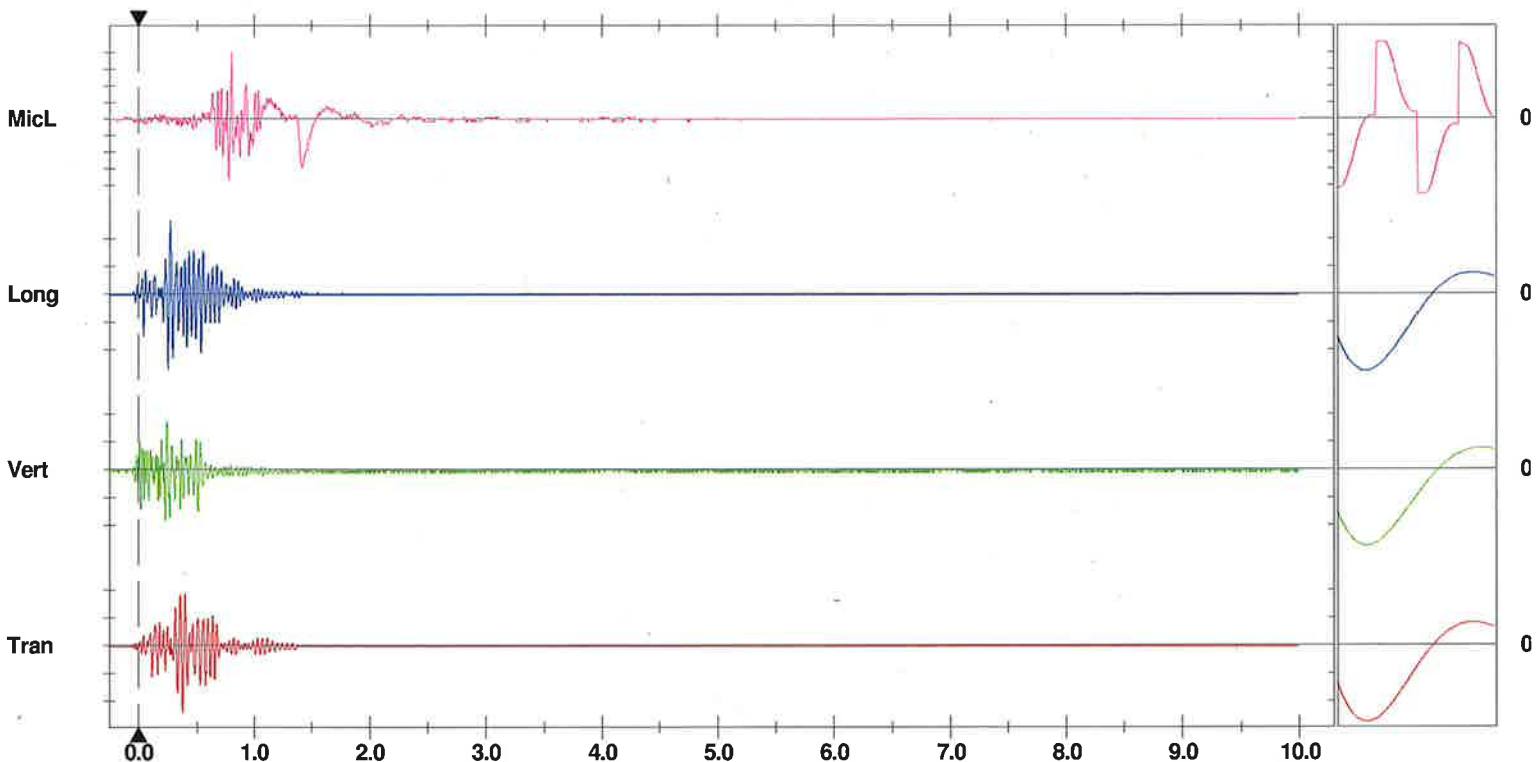
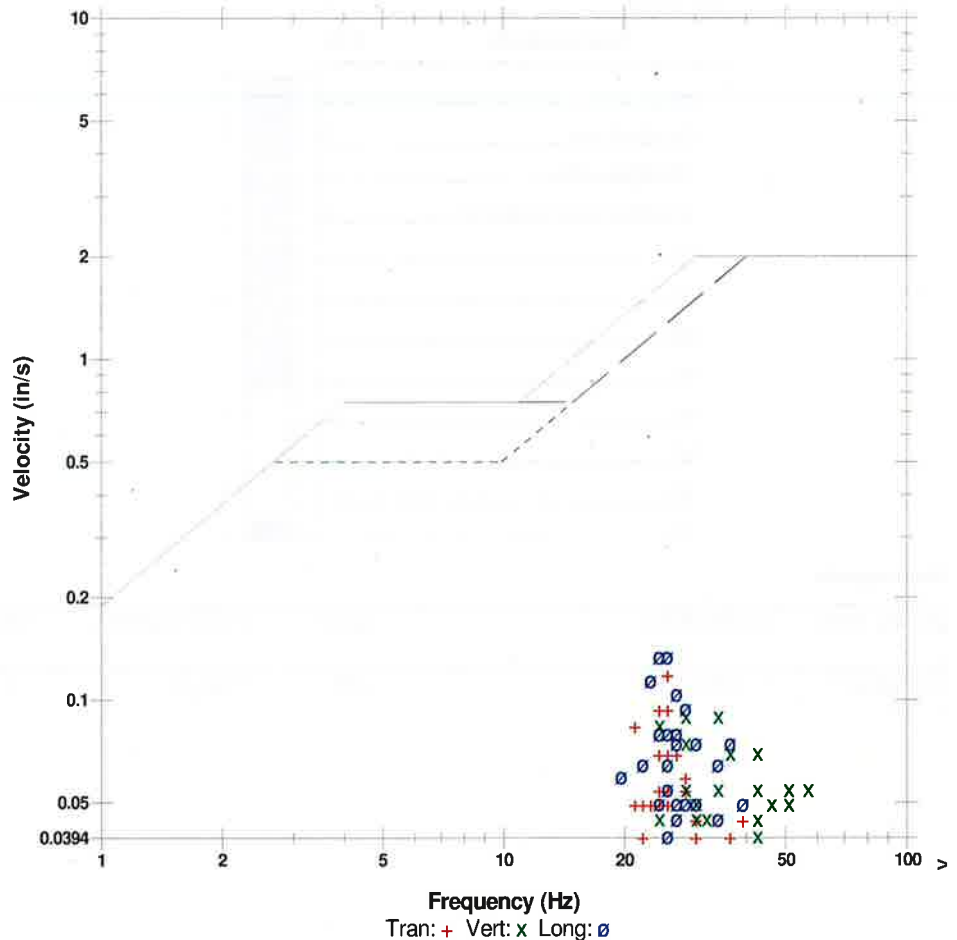
Extended Notes
 Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 116.9 dB(L) 0.002 psi(L) at 0.809 sec
ZC Freq 27 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 528 mv)

	Tran	Vert	Long	
PPV	0.120	0.090	0.135	in/s
ZC Freq	26	34	24	Hz
Time (Rel. to Trig)	0.386	0.234	0.259	sec
Peak Acceleration	0.066	0.066	0.066	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.5	8.0	8.5	Hz
Overswing Ratio	3.3	3.6	3.6	

Peak Vector Sum 0.153 in/s at 0.275 sec

USBM RI8507 And OSMRE



Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/7/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	45961	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 6:30:00 AM People and equipment in blast zone.

Post Shift Insp.Time (24hrs): 1:00:00 PM

Blaster : Taber, Joseph E.

License #: 1890

Signature:

Precautions Taken:

People and equipment moved to safe distance.

Weather
Comments:

Sunny

No. of Crew Members 3

Crew Members Names :

G. Keefe	D. Stone	Brett G.	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 1 Shot Time (24hrs) 12:17 Shot VideoTaped: YWeather

Notes: Test shot

Weather Conditions: SunnyTemp (°F): 40-70Wind Direction: South-WestWind Spd: 0-5 MPH**Preblast**Blast Direction: West Max Holes/Delay: 3 Predicted K Factor: 160Blast Location: Storm pond Scale Dist.: 112.69Location of Structure: Existing tower Max Weight/Delay: 28.35 Lbs Predicted PPV: 0.08Measurement Google Map Dist. to Closest (Ft) 600 Structure 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A**Pay Quantities**Fire Detail # of Hrs: N/A**Pay Calculations Notes**Pay Cubic Volume 1156.74 YardPay Square Area 7808 FeetN/A N/A N/A**Shot Info****Configuration****1 - Open**

Total Drill Depth(Ft)	<u>1098.00</u>	Total SqFt	<u>7808.00</u>	Powder	<u>0.44</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>1153</u>
Total Tons	<u>N/A</u>	Total Yards	<u>2602.67</u>	Factor	<u>2.26</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>9.45</u>

Cal Method Pattern# Holes 122Cover Used/No N/A**AVG****Min** **Max**Drill Depth 99 15Stone Weight N/A /CydTop Stemming 6 Min 7 MaxBurden(Feet) 8 Feet8 8Type of Terrian SlopedCharges/Hole 1 Min 1 MaxSpacing (Feet) 8 Feet8 8Type of Rock N/ADeck Stemming 0 Min 0 MaxHole Diameter 3.53.5 3.5Stemming Type 3/8" Crushed StoneCharge Wgt/Deck 15.77 Min 42.04 MaxOverBurden (Ft) 10 6Height of Face 0Depth of Water 0 Min 5 MaxControl Row Taped NAngled Holes /Face Bermed N/YLaser/BoreTracking NTotal Pounds 1152.94 LbsType Of Initiation: **Non-Electric**

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		1059.00 Lbs
BA BULK Totals:		N/A	1059.00 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	122	93.94 Lbs
BOOSTERS Totals:		122	93.94 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	122	
DETS DHOLE Totals:		122	

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	1	2500
LINES Totals:		1	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	9	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	18	
SURF DELAY Totals:		27	

Description: 9' hole

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	2.5
TROJAN SPARTAN 350G 49/CS	0.5
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: 15' hole

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	15.00

Stemming Stones	7
1966 Emulsion Blend	7.5
TROJAN SPARTAN 350G 49/CS	0.5
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Taber,Joseph E.	Existing tower	3619	Triggered	0.125	47	114.4	600	240

Date/Time Vert at 12:17:00 October 7, 2016
 Trigger Source Geo: 0.050 in/s
 Range Geo: 9.999 in/s
 Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
 Battery Level 5.8 Volts
 Unit Calibration February 6, 2016 by Instantel
 File Name E619GKVZ.GC0

Notes

Location: 37 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 7, 2016 12:46:13 (V10.72)

Extended Notes

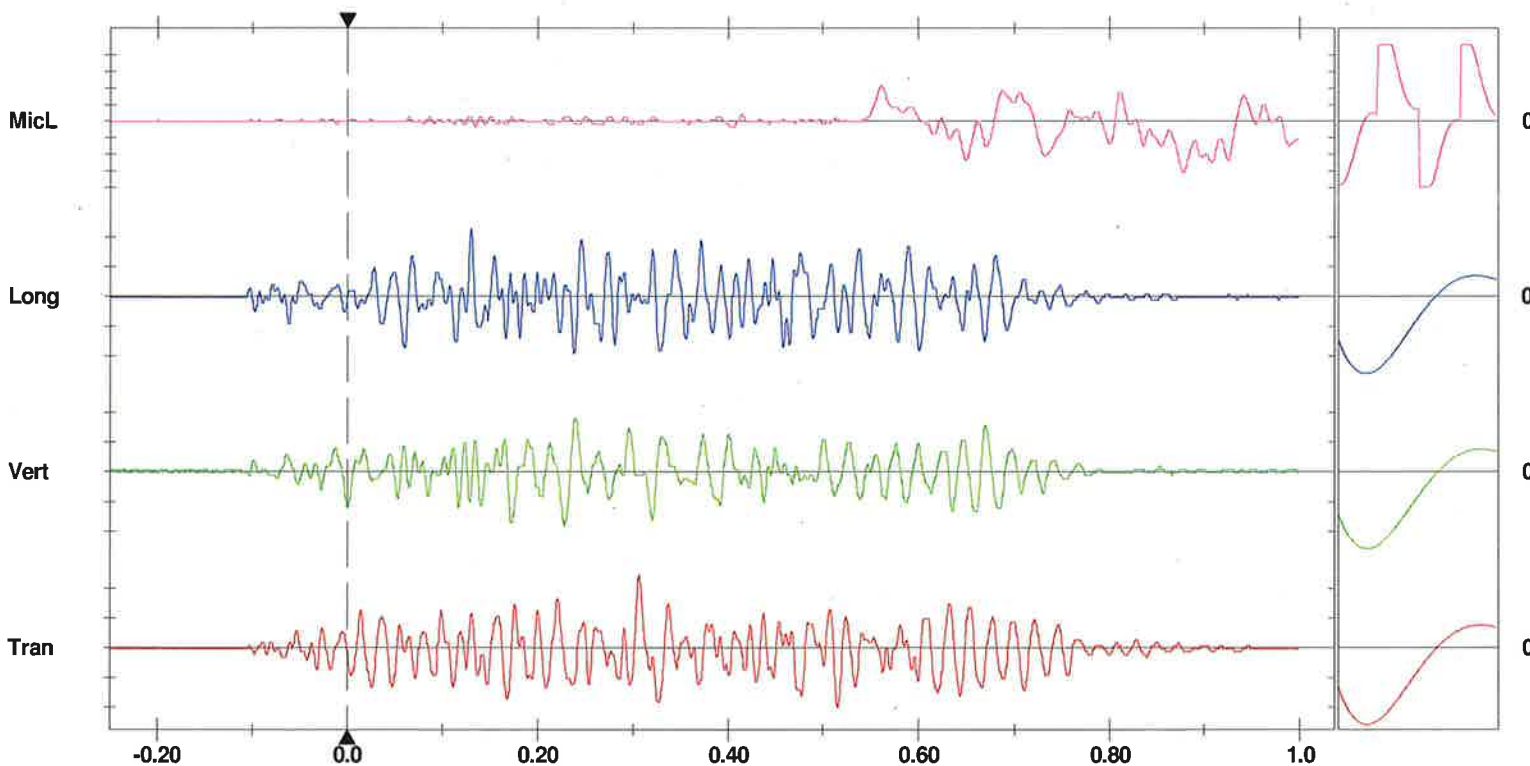
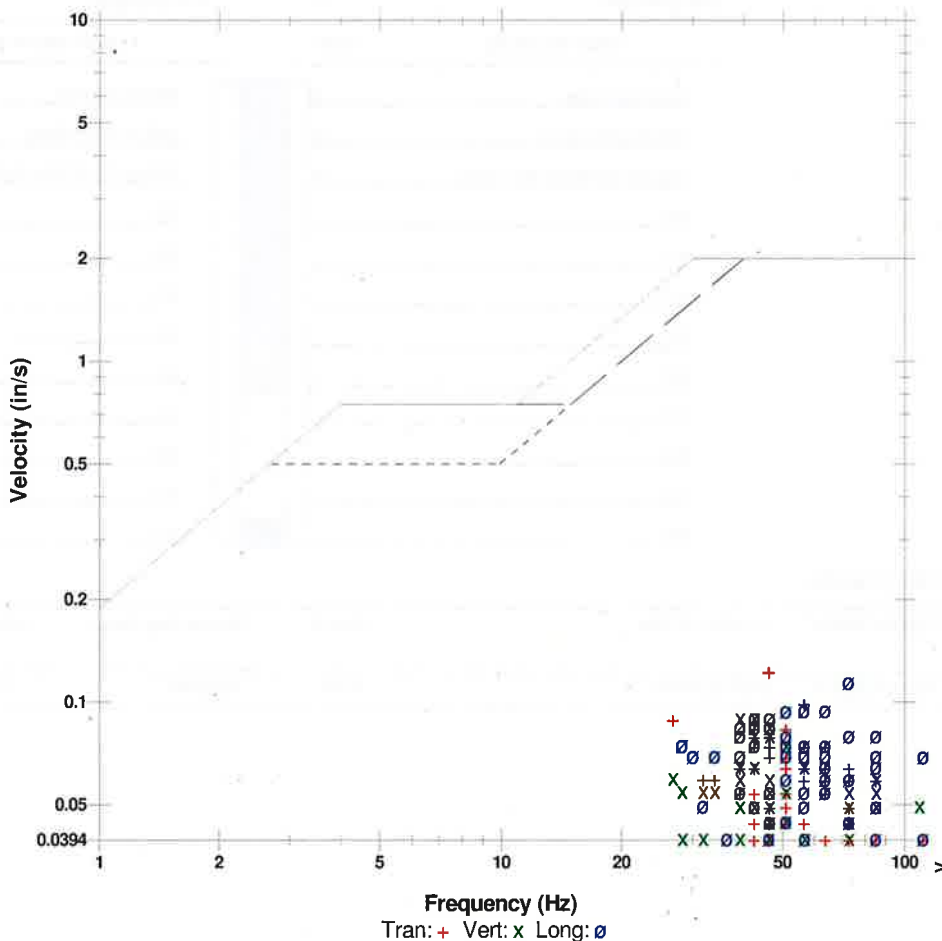
set at existing tower

Microphone Linear Weighting
 PSPL 114.4 dB(L) 0.002 psi(L) at 0.879 sec
 ZC Freq 5.0 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 539 mv)

	Tran	Vert	Long	
PPV	0.125	0.090	0.115	in/s
ZC Freq	47	43	73	Hz
Time (Rel. to Trig)	0.308	0.229	0.132	sec
Peak Acceleration	0.119	0.093	0.133	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.2	8.2	8.3	Hz
Overswing Ratio	3.5	3.4	3.6	

Peak Vector Sum 0.141 in/s at 0.239 sec

USBM RI8507 And OSMRE



Time Scale: 0.10 sec/div Amplitude Scale: Geo: 0.050 in/s/div Mic: 0.001 psi(L)/div
 Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/11/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tks#	46078	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM people and eqvipment

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:

License #: 1879 clear area

Signature:

Weather
Comments:

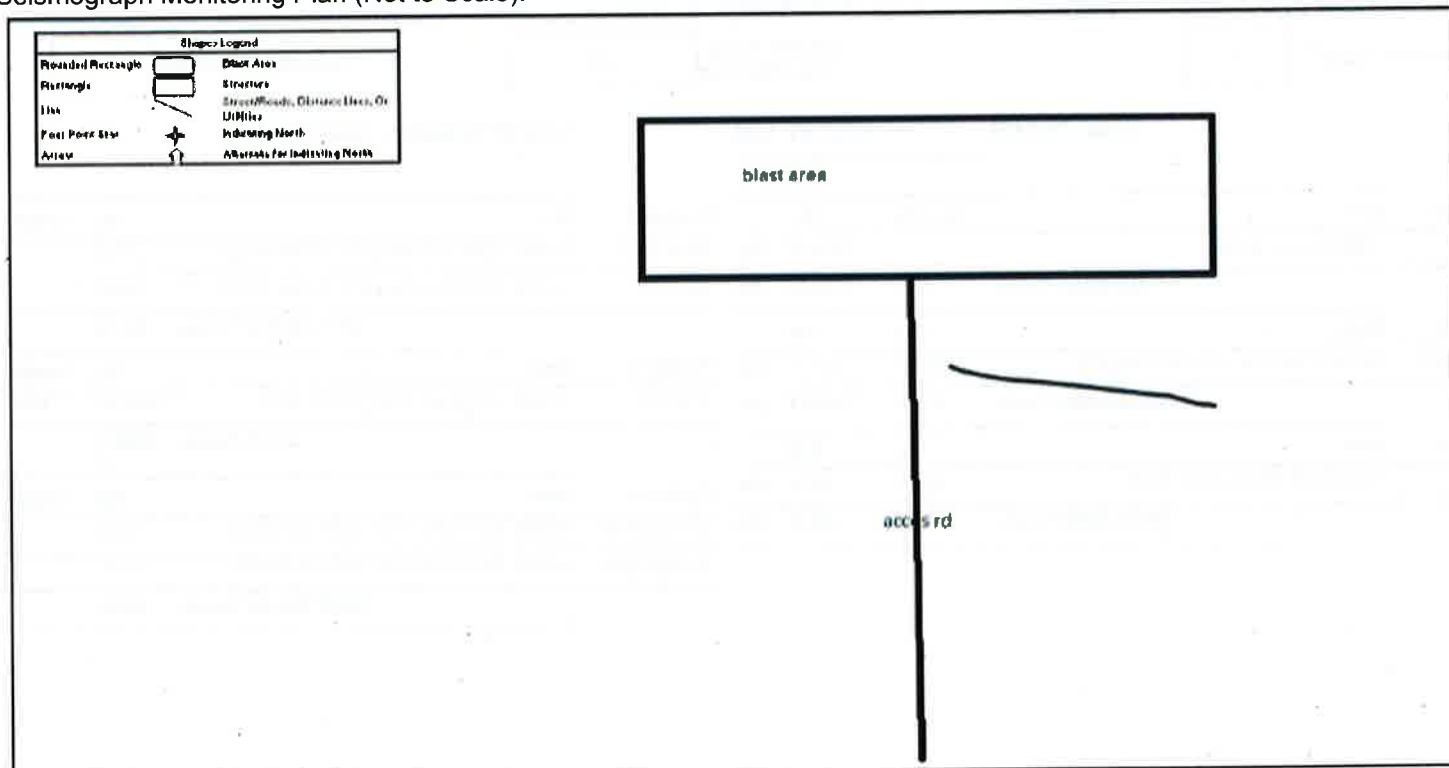
partly cloudy

No. of Crew Members 2

Crew Members Names :

Brett	Dean	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 2 Shot Time (24hrs) 13:22 Shot VideoTaped: N Weather

Notes: N/A Weather Conditions: Partly Cloudy
 Temp (°F): 32-40
 Wind Direction: West
 Wind Spd: 10-20 MPH

Preblast

Blast Direction: South-West Max Holes/Delay: 2.00 Predicted K Factor: 160
 Blast Location: storm pond Scale Dist.: 54.19
 Location of Structure: existing tower Max Weight/Delay: 133.00 Lbs Predicted PPV: 0.27
 Measurement Physical Dist. to Closest (Ft) Structure 625 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
 Pay Square Area 9615.00 Feet
 N/A N/A N/A
 N/A N/A N/A

Pay Calculations Notes

74x10x12=8880sqft/ 15x7x7=735sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1691.00</u>	Total SqFt	<u>10680.00</u>	Powder	<u>0.78</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>5884</u>
Total Tons	<u>N/A</u>	Total Yards	<u>7515.56</u>	Factor	<u>1.28</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>66.11</u>

Cal Method	Pattern	
# Holes	<u>89</u>	Cover Used/No Blast Mats <u>9</u>
	<u>AVG</u>	<u>Min</u> <u>Max</u>
Drill Depth	<u>19.00</u>	<u>9.00</u> <u>25.00</u>
Burden(Feet)	<u>10.00</u> Feet	<u>10.00</u> <u>10.00</u>
Spacing (Feet)	<u>12.00</u> Feet	<u>12.00</u> <u>12.00</u>
Hole Diameter	<u>4.00</u>	<u>4.00</u> <u>4.00</u>
OverBurden (Ft)	<u>1.00</u>	<u>0.00</u> <u>7.00</u>
Control Row Taped	<u>N</u>	

Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>5.00</u> Min <u>9.00</u> Max
Type of Terrian	<u>Flat/Sloped</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min <u>N/A</u> Max
Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>6.00</u> Min <u>133.00</u> Max
Height of Face	<u>12.00</u>	Depth of Water	<u>9.00</u> Min <u>10.00</u> Max
Angled Holes /Face Bermed	<u>N/N</u>	Laser/BoreTracking	<u>N</u>

Total Pounds 5884.01 Lbs

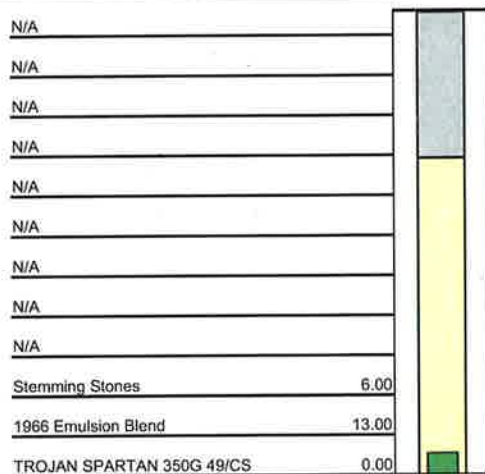
Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		5525.00 Lbs
BA BULK Totals:		N/A	5525.00 Lbs
Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	87.00	289.71 Lbs
BAPACKAGED Totals:		87.00	289.71 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	90.00	69.30 Lbs
BOOSTERS Totals:		90.00	69.30 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	27.00	
DXABZ641	NONEL EZDET 25/350 40FT ZCOMP 30/CS	63.00	
DETS DHOLE Totals:		90.00	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	2500.00	2500.00
LINES Totals:		2500.00	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	15.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	17.00	
SURF DELAY Totals:		32.00	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	3.00
Total Depth (ft)	19.00

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	2288	Triggered	0.220	51.0	121.4	625	131

Date/Time Vert at 13:22:59 October 11, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.1 Volts
Unit Calibration January 26, 2016 by Instantel
File Name D288GL3H.6B0

Notes
 Location: 37 putnam rd
 Client: McDonald
 User Name: P Defusco
 Converted: October 11, 2016 14:14:18 (V10.72)

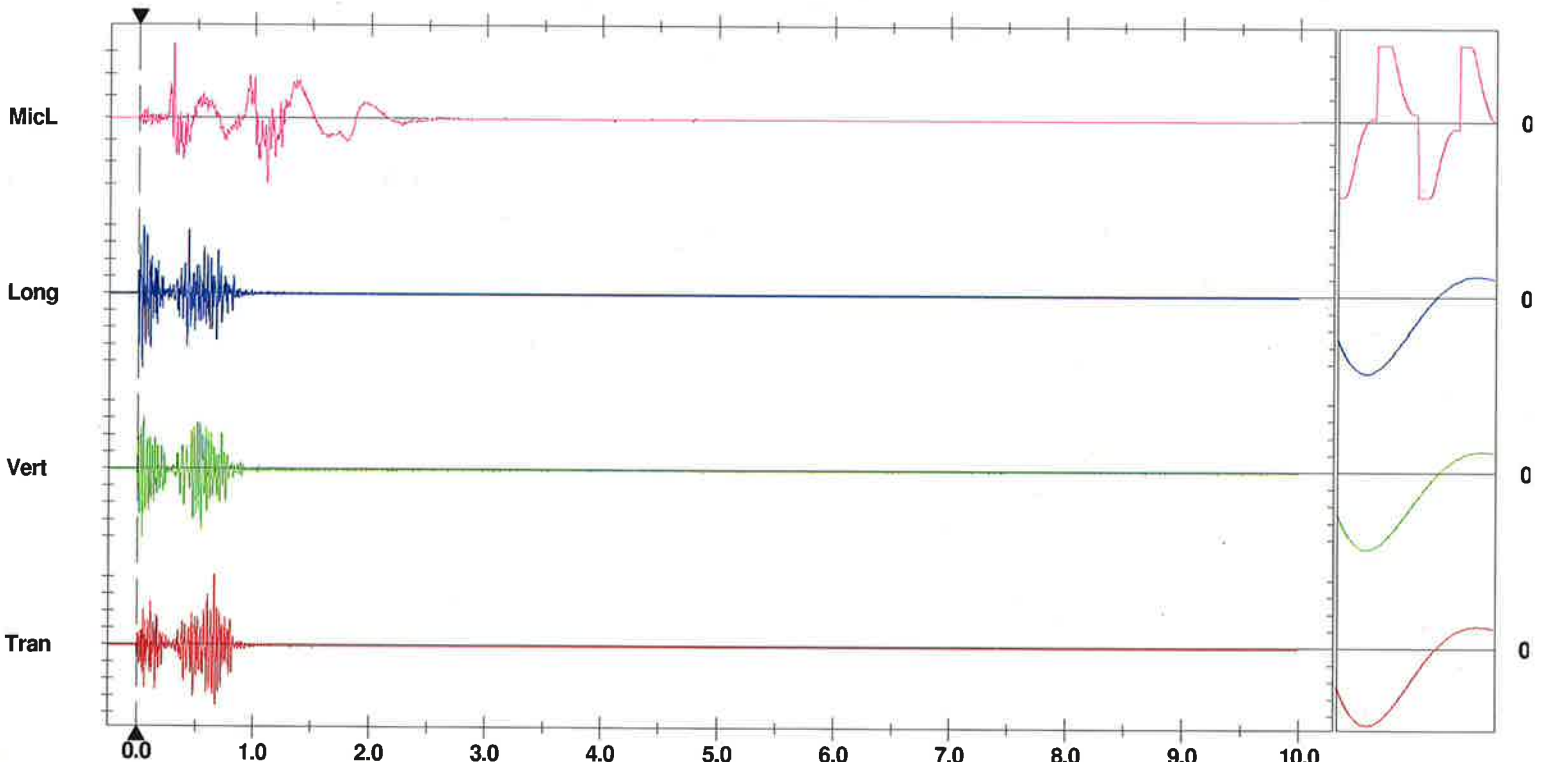
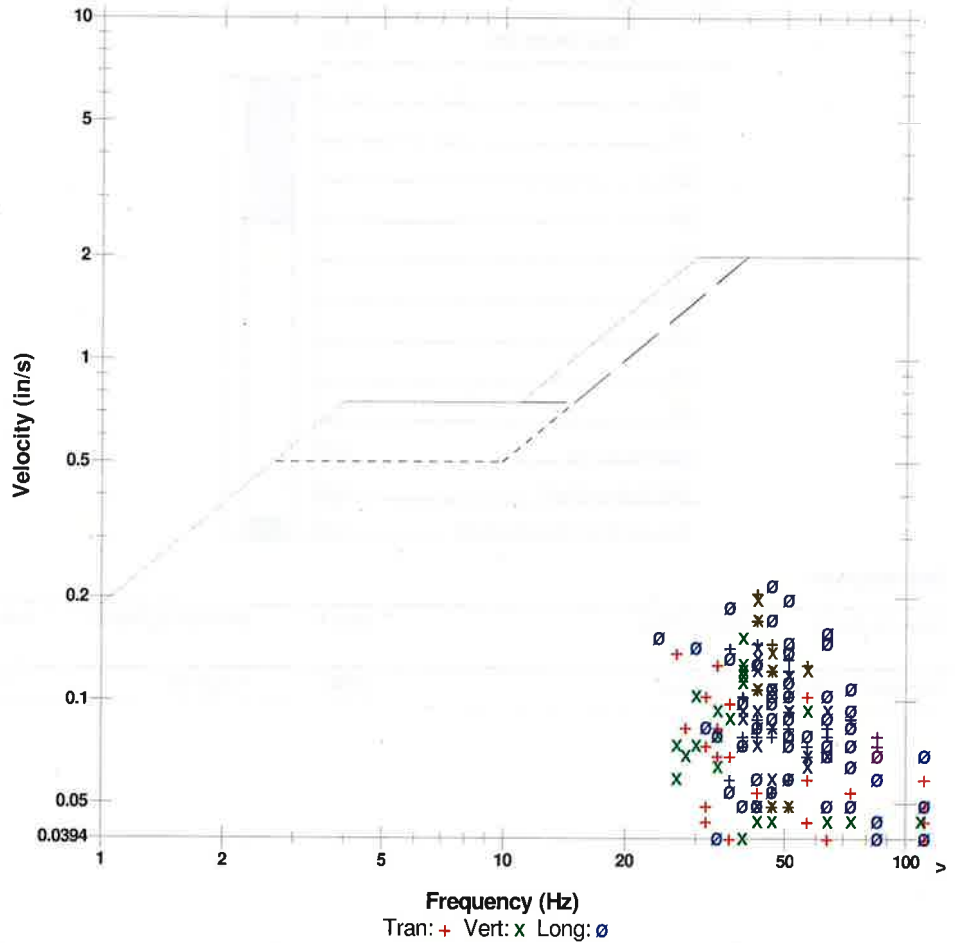
Extended Notes
 set at closest existing tower

Microphone Linear Weighting
PSPL 121.4 dB(L) 0.003 psi(L) at 0.302 sec
ZC Freq 34 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 566 mv)

	Tran	Vert	Long	
PPV	0.210	0.200	0.220	in/s
ZC Freq	43	43	51	Hz
Time (Rel. to Trig)	0.672	0.044	0.037	sec
Peak Acceleration	0.186	0.186	0.186	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.2	8.0	8.2	Hz
Overswing Ratio	3.3	3.6	3.6	

Peak Vector Sum 0.268 in/s at 0.045 sec

USBM RI8507 And OSMRE



Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/12/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46144	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM access rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:
 License #: 1879 block rd and move equipment

Signature:

Weather
Comments:

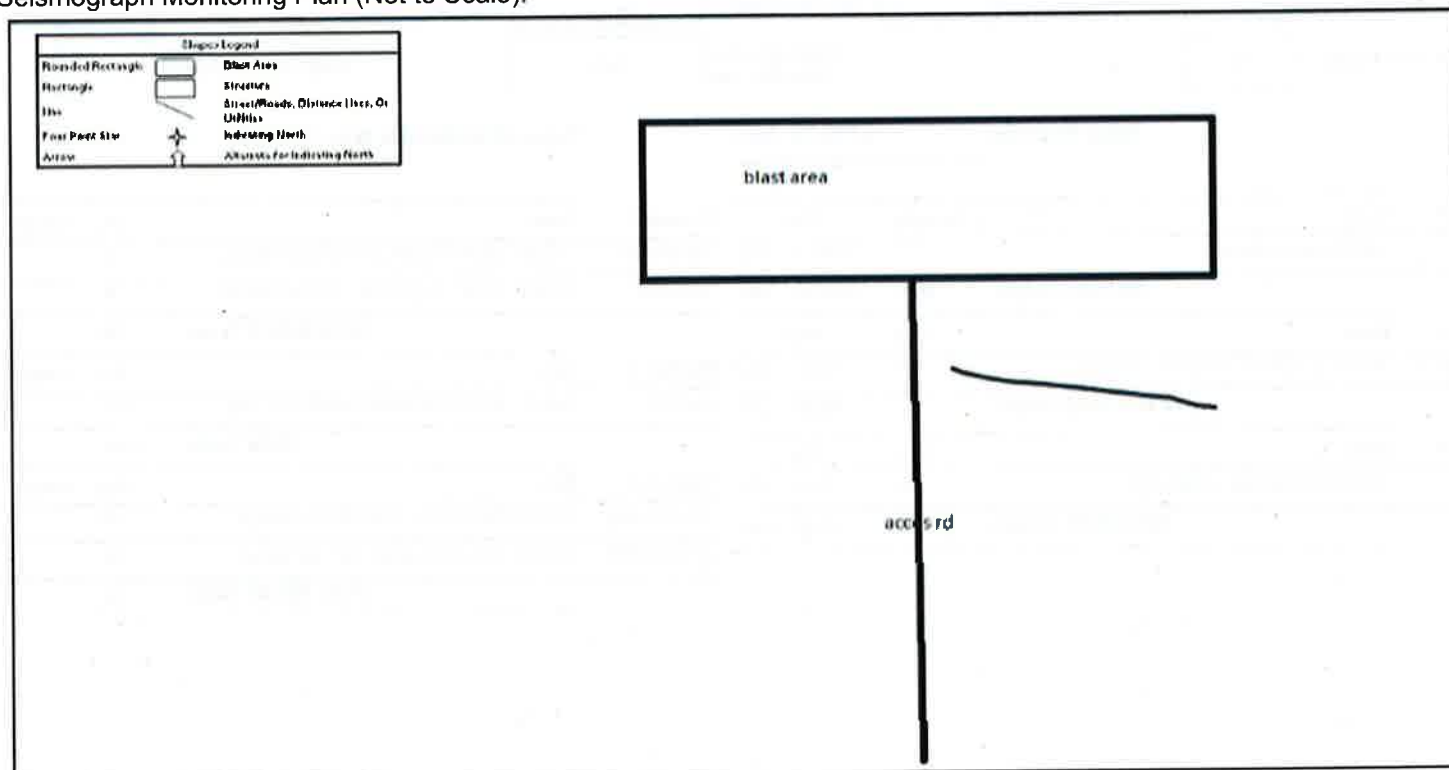
cloudy

No. of Crew Members 1

Crew Members Names :

Dean	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 3 Shot Time (24hrs) 13:38 Shot VideoTaped: Y Weather Cloudy
 Notes: N/A Weather Conditions: Cloudy
 Temp (°F): 39-45
 Wind Direction: North-West
 Wind Spd: 15-25 MPH

Preblast

Blast Direction: South-East Max Holes/Delay: 2 Predicted K Factor: 240
 Blast Location: storm pond Scale Dist.: 63.78
 Location of Structure: existing tower Max Weight/Delay: 112 Lbs Predicted PPV: 0.31
 Measurement Physical Measurement Dist. to Closest (Ft) Structure 675 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
 Pay Square Area 6355 Feet
 N/A N/A N/A
 N/A N/A N/A

Pay Calculations Notes

24x9x11=2376sqft/ 34x9x9=2754sqft/ 25x7x7=1225sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1328.00</u>	Total SqFt	<u>7470.00</u>	Powder Factor	<u>1.08 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>4790</u>
Total Tons	<u>N/A</u>	Total Yards	<u>4426.67</u>		<u>0.92 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>57.71</u>

Cal Method	Pattern						
# Holes	<u>83</u>	Cover Used/No	Blast Mats	<u>12</u>			
	<u>AVG</u>	<u>Min</u>	<u>Max</u>				
Drill Depth	<u>16</u>	<u>9</u>	<u>21</u>	Stone Weight	<u>N/A /Cyd</u>	Top Stemming	<u>5</u> Min <u>8</u> Max
Burden(Feet)	<u>9</u> Feet	<u>9</u>	<u>9</u>	Type of Terrian	<u>Flat/Sloped</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>10</u> Feet	<u>10</u>	<u>10</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min <u>N/A</u> Max
Hole Diameter	<u>4</u>	<u>4</u>	<u>4</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>9</u> Min <u>112</u> Max
OverBurden (Ft)	<u>2</u>	<u>0</u>	<u>6</u>	Height of Face	<u>0</u>	Depth of Water	<u>0</u> Min <u>10</u> Max
Control Row Taped	<u>N</u>			Angled Holes /Face Bermed	<u>N/N</u>	Laser/BoreTracking	<u>N</u>

Total Pounds 4789.72 Lbs

Type Of Initiation: Non-Electric

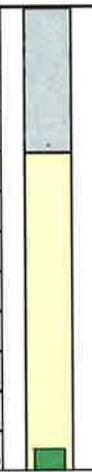
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		4536.00 Lbs
BA BULK Totals:		N/A	4536.00 Lbs
Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	57	189.81 Lbs
BAPACKAGED Totals:		57	189.81 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	83	63.91 Lbs
BOOSTERS Totals:		83	63.91 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	58	
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	25	
DETS DHOLE Totals:		83	
Product #	Desc	Qty	Length
DJ01000	NONEL STARTER 1000FT/305M 4/CS 1.4B	1000	1000
LINES Totals:		1000	
Product #	Desc	Qty	Length
DY17Z812ME	NONEL EZTL CPZ 17 MS 12FT 90/180/CS	19	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	30	
SURF DELAY Totals:		49	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	3
Total Depth (ft)	16.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	5
1966 Emulsion Blend	11
TROJAN SPARTAN 350G 49/CS	0


Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.305	43	120.6	675	235

Date/Time Long at 13:38:24 October 12, 2016
 Trigger Source Geo: 0.050 in/s
 Range Geo: 9.999 in/s
 Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
 Battery Level 6.3 Volts
 Unit Calibration February 6, 2016 by Instantel
 File Name E619GL5C.K00

Notes

Location: 37 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 12, 2016 14:43:36 (V10.72)

Extended Notes

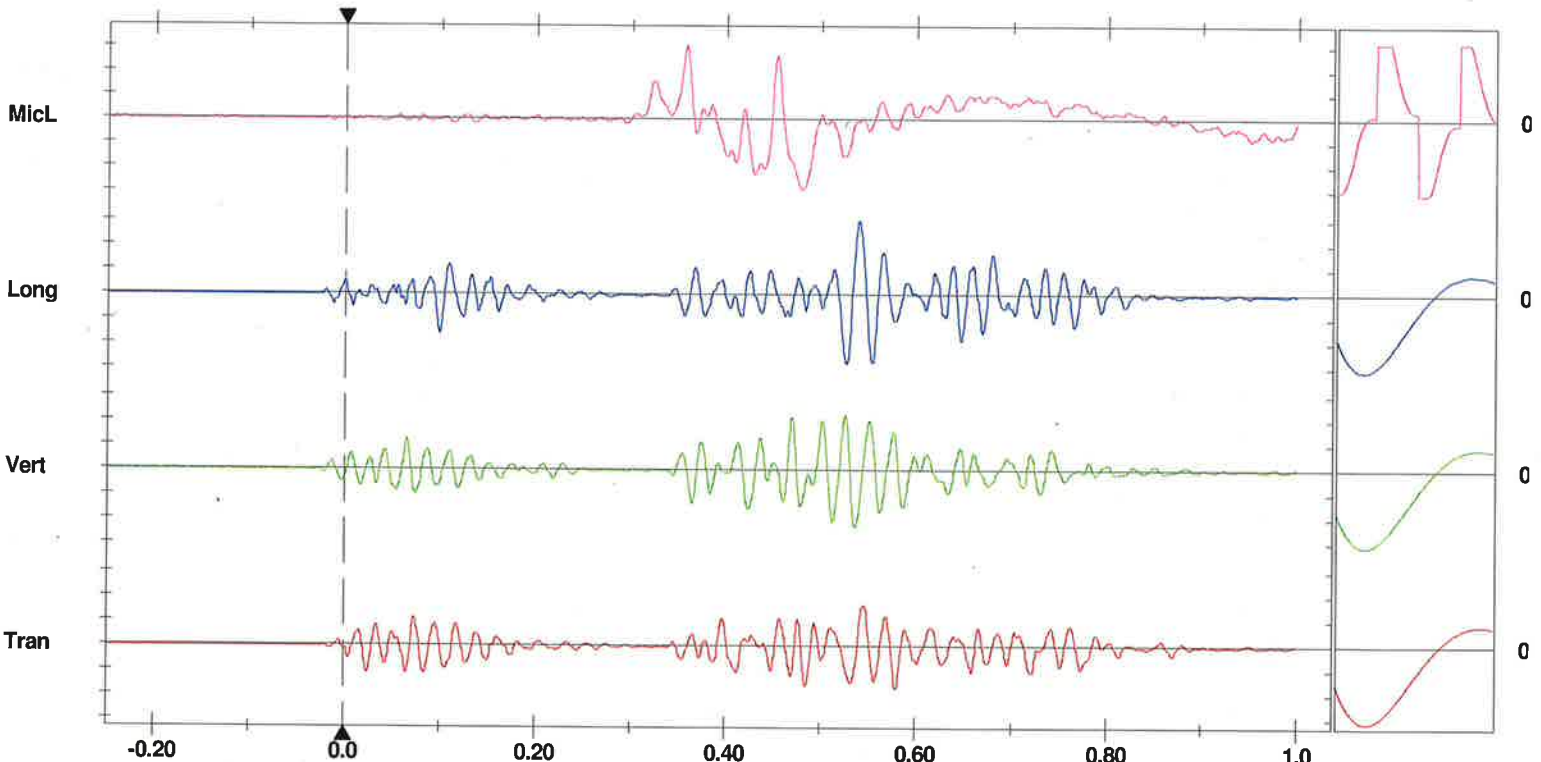
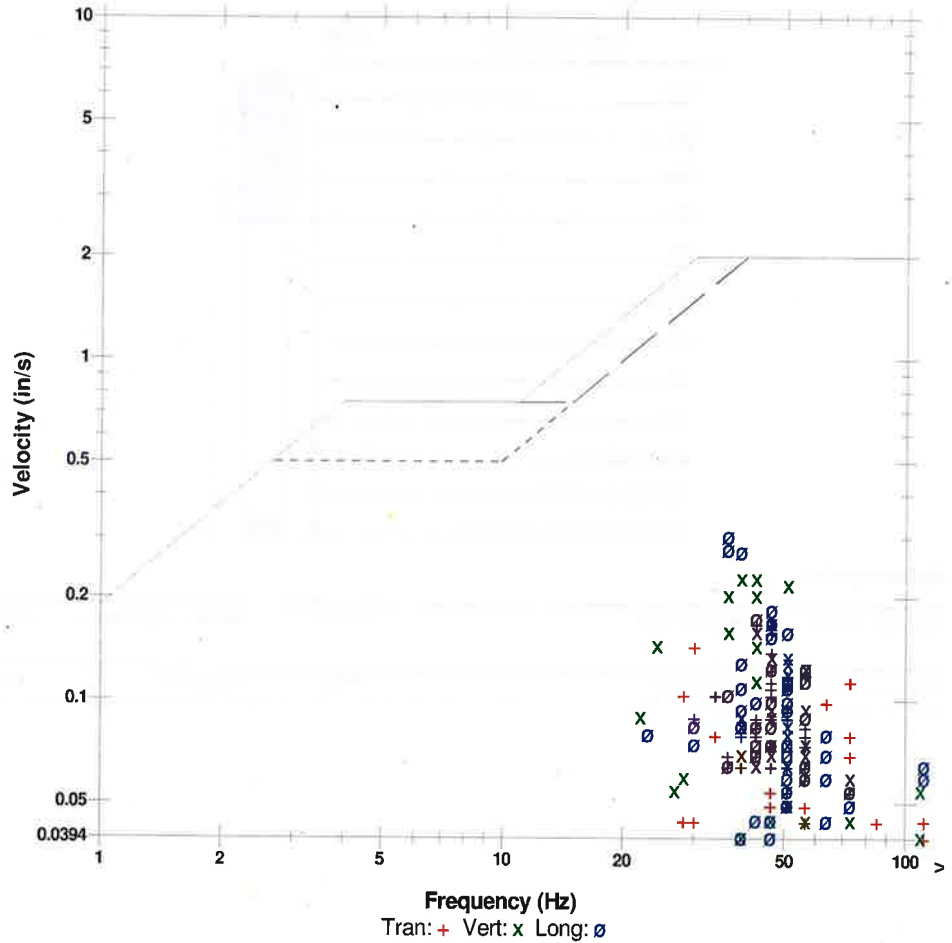
set at existing tower

Microphone Linear Weighting
 PSPL 120.6 dB(L) 0.003 psi(L) at 0.359 sec
 ZC Freq 8.0 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 538 mv)

	Tran	Vert	Long	
PPV	0.170	0.230	0.305	in/s
ZC Freq	39	43	34	Hz
Time (Rel. to Trig)	0.547	0.527	0.541	sec
Peak Acceleration	0.159	0.199	0.199	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.8	8.1	8.3	Hz
Overswing Ratio	3.7	3.4	3.7	

Peak Vector Sum 0.366 in/s at 0.528 sec

USBM RI8507 And OSMRE



Time Scale: 0.10 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
 Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/13/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46225	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM access rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:

License #: 1879 clear rd and equipment

Signature:

Patrick E. DeFusco

Weather
Comments:

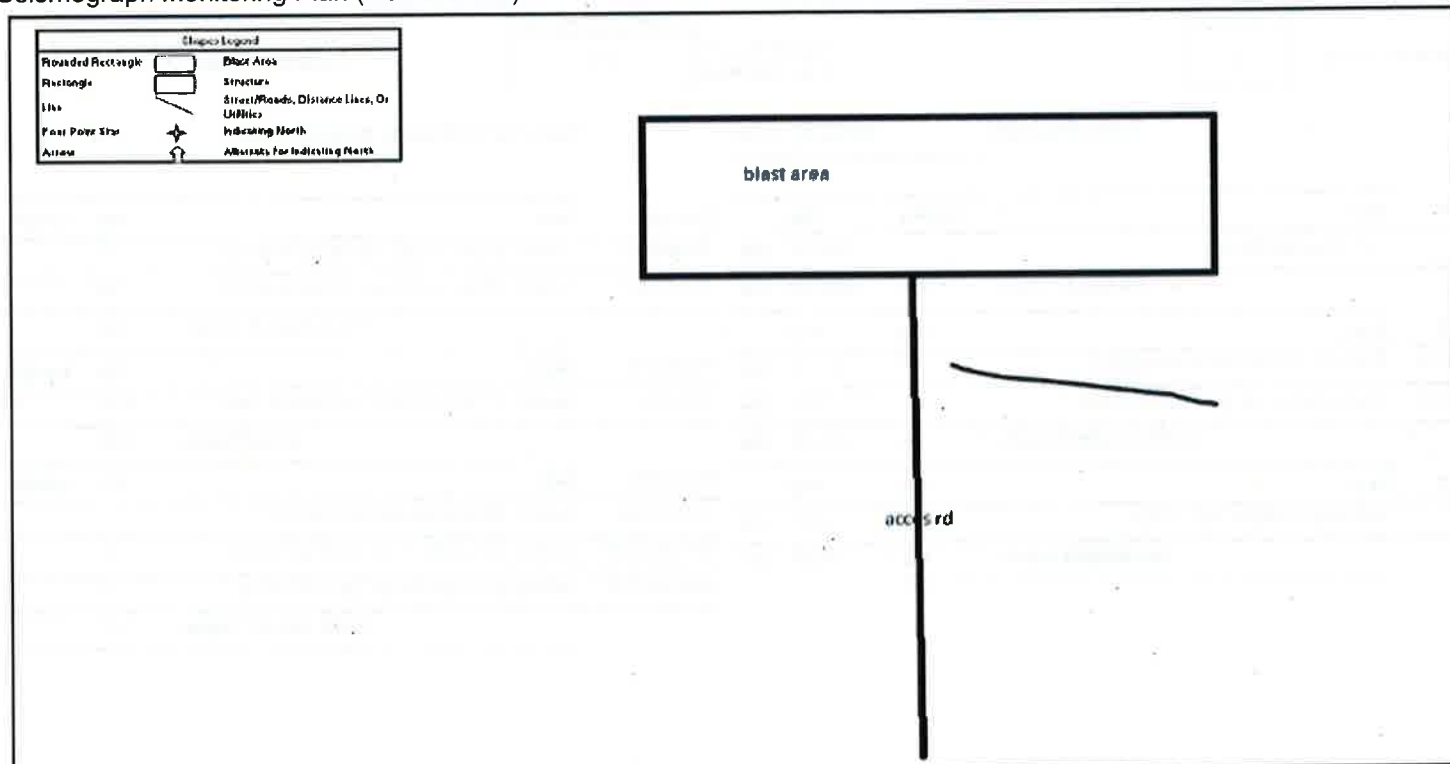
overcast

No. of Crew Members 2

Crew Members Names :

Dean	Jessi	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 4 Shot Time (24hrs) 13:17 Shot VideoTaped: Y WeatherNotes: N/AWeather Conditions: CloudyTemp (°F): 38-42Wind Direction: WestWind Spd: 15-25 MPH

Preblast

Blast Direction: South-East Max Holes/Delay: 2.00 Predicted K Factor: 160
Blast Location: storm pond Scale Dist.: 42.45
Location of Structure: existing tower Max Weight/Delay: 105 Lbs Predicted PPV: 0.40
Measurement Physical Dist. to Closest (Ft) Structure 435 Railroad/Highway N/A Overhead Util N/A Underground Util N/A
Measurement

Pay Quantities

Fire Detail # of Hrs: N/A

Pay Calculations Notes

Pay Square Area 9447 FeetN/A N/A N/AN/A N/A N/A

88x9x11=8712/ 15x77=735

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1545.00</u>	Total SqFt	<u>10197.00</u>	Powder	<u>1.10 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>6236</u>
Total Tons	<u>N/A</u>	Total Yards	<u>5665.00</u>	Factor	<u>0.91 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>60.54</u>

Cal Method Pattern

Holes 103

AVG 15.00 Min 9.00 Max 19.00

Drill Depth 15.00 Feet

Burden(Feet) 9.00 Feet

Spacing (Feet) 11.00 Feet

Hole Diameter 4.00

OverBurden (Ft) 1.00

Cover Used/No Blast Mats 12

Stone Weight N/A /Cyd

Type of Terrian Hilly

Type of Rock Mica/Schist

Stemming Type 3/8" Crushed Stone

Height of Face 10

Angled Holes /Face Bermed N/N

Top Stemming 5.00 Min 9.00 Max

Charges/Hole 1 Min 1 Max

Deck Stemming N/A Min N/A Max

Charge Wgt/Deck 12 Min 105 Max

Depth of Water 0 Min 12 Max

Control Row Taped N

Laser/BoreTracking N

Total Pounds 6235.81 LbsType Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		5945.00 Lbs
BA BULK Totals:		N/A	5945.00 Lbs

Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	50	211.50 Lbs
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	0	0.00 Lbs
BAPACKAGED Totals:		50	211.50 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	103	79.31 Lbs
BOOSTERS Totals:		103	79.31 Lbs

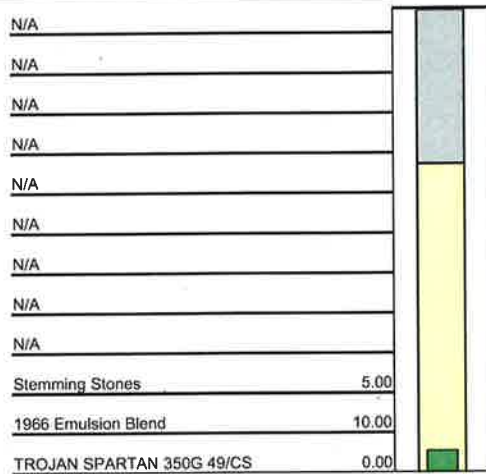
Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	88	
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	15	
DETS DHOLE Totals:		103	

Product #	Desc	Qty	Length
DJ01000	NONEL STARTER 1000FT/305M 4/CS 1.4B	1000	1000
LINES Totals:		1000	

Product #	Desc	Qty	Length
DY09820ME	NONEL EZTL 09/MS 20FT 60/120/CS	5	
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	15	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	17	
SURF DELAY Totals:		37	

Description: typical

Elevation	Feet'
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	3
Total Depth (ft)	15.00

**Seismographs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.430	73	124.2	435	173

Date/Time Long at 13:17:48 October 13, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.2 Volts
Unit Calibration February 6, 2016 by Instantel
File Name E619GL76.900

Notes

Location: 37 Putnam Rd
Client: JA McDonald
User Name: J.Taber
Converted: October 13, 2016 13:33:26 (V10.72)

Extended Notes

set at existing tower

Microphone Linear Weighting

PSPL 124.2 dB(L) 0.005 psi(L) at 0.973 sec

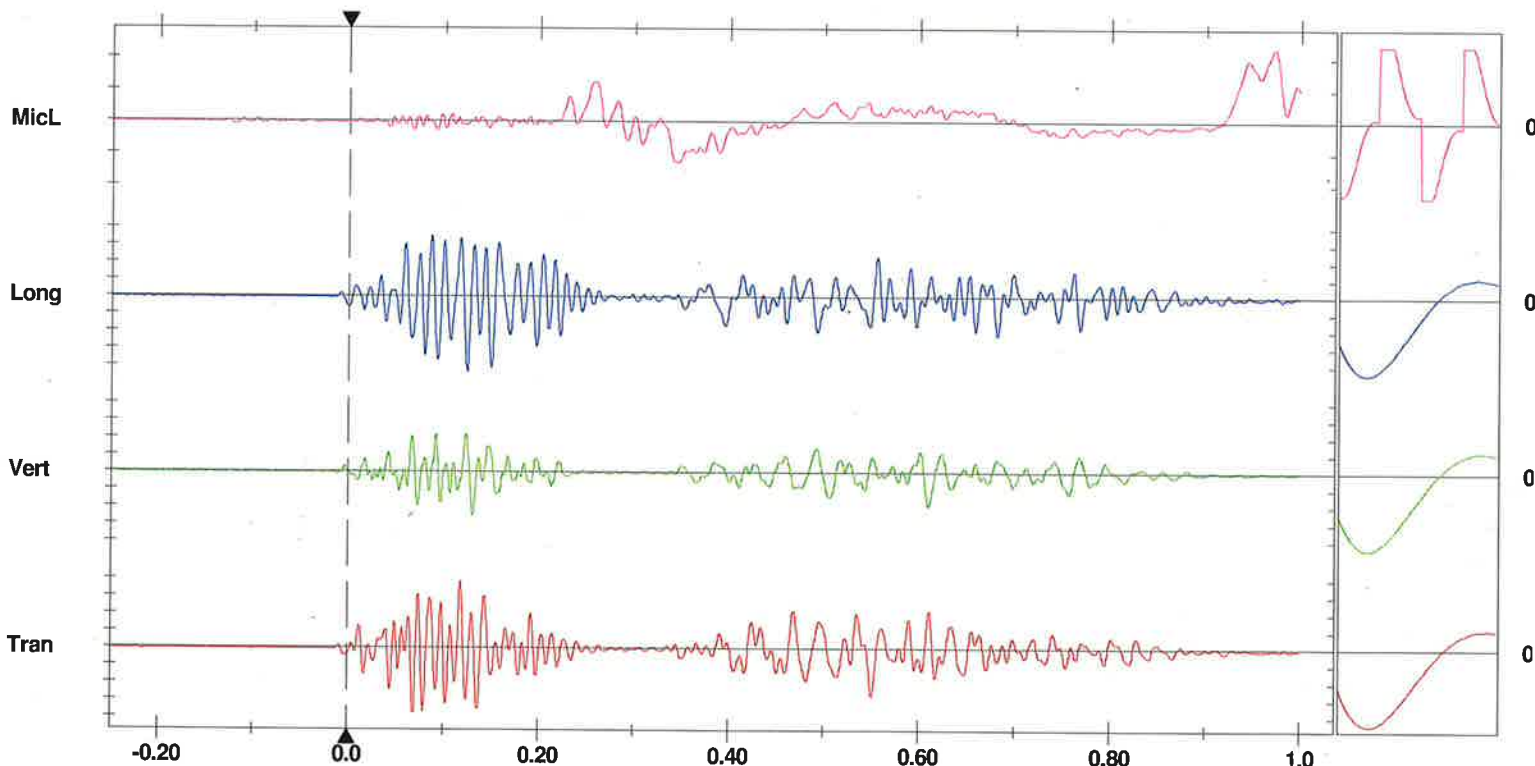
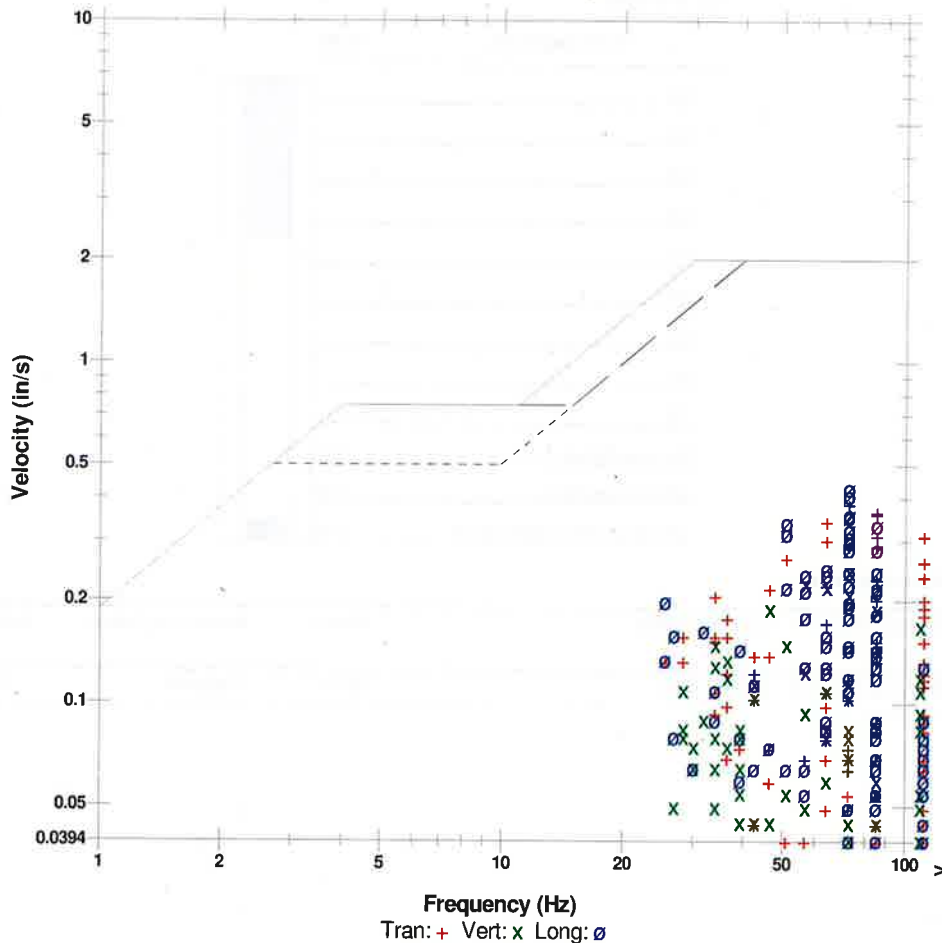
ZC Freq 6.0 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 539 mv)

	Tran	Vert	Long	
PPV	0.390	0.245	0.430	in/s
ZC Freq	73	73	73	Hz
Time (Rel. to Trig)	0.120	0.132	0.126	sec
Peak Acceleration	0.557	0.358	0.451	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.8	8.1	8.3	Hz
Overswing Ratio	3.8	3.5	3.7	

Peak Vector Sum 0.557 in/s at 0.126 sec

USBM RI8507 And OSMRE



Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/14/2016	Cust. Supt. Name	Bddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46284	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM aces rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:
 License #: 1879 clear rd and equipment

Signature:

Weather
Comments:

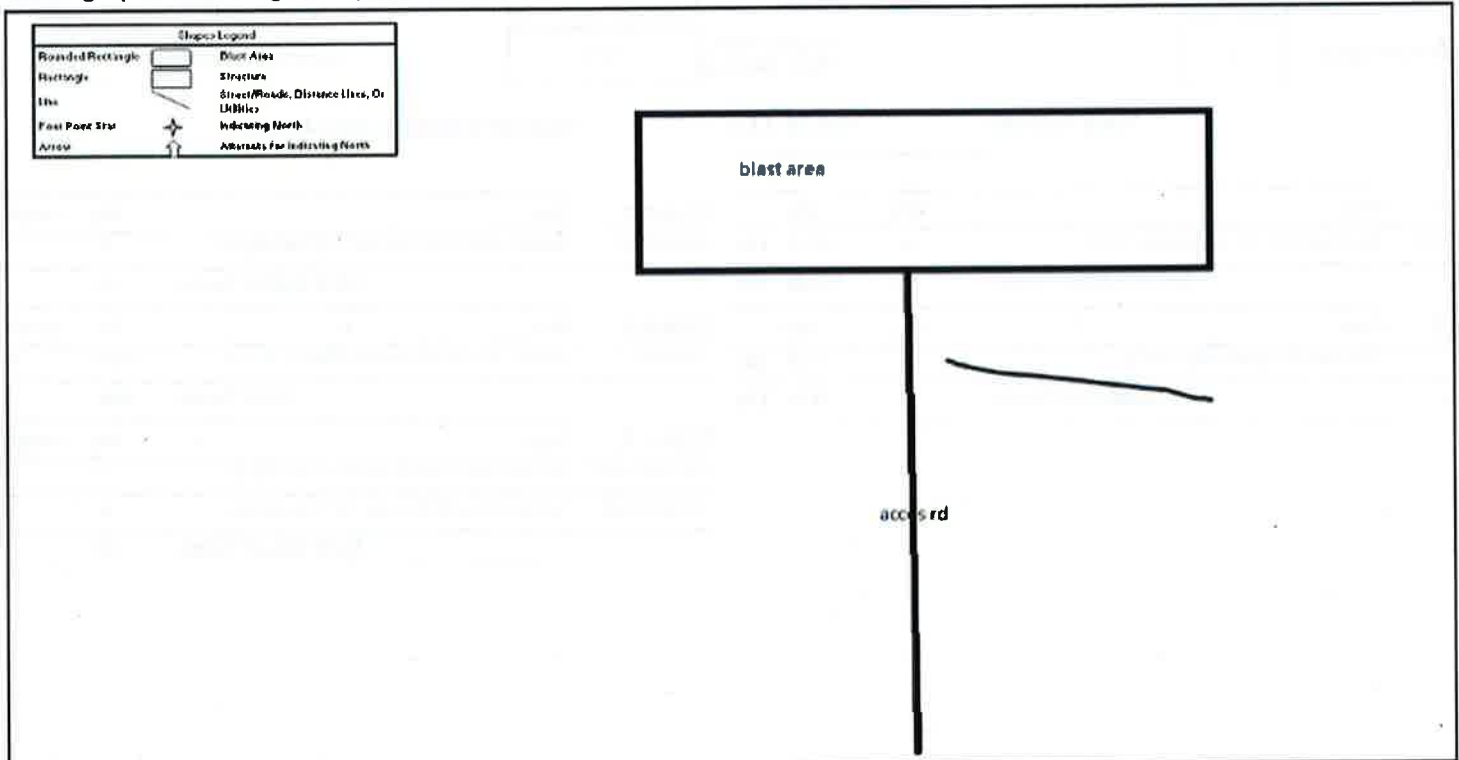
partly cloudy

No. of Crew Members 2

Crew Members Names :

Dean	Jessi	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 5 Shot Time (24hrs) 12:42 Shot VideoTaped: Y **Weather**

Notes: N/A Weather Conditions: Partly Cloudy

Temp (°F): 32-48

Wind Direction: West

Wind Spd: 10-20 MPH

Preblast

Blast Direction: South-East Max Holes/Delay: 1 Predicted K Factor: 160

Blast Location: access rd Scale Dist.: 103.08

Location of Structure: existing tower Max Weight/Delay: 17 Lbs Predicted PPV: 0.10

Measurement Physical Measurement Dist. to Closest (Ft) Structure 425 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes

Pay Square Area 735 Feet 15x7x7=735sqft

N/A N/A N/A

N/A N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	135.00	Total SqFt	735.00	Powder	0.74 Lbs/Cyd	Total Product Weight (Lbs) :	181
Total Tons	N/A	Total Yards	245.00	Factor	1.35 Cyd/Lbs	Avg Weight / Hole (Lbs):	12.07

Cal Method	Pattern	
# Holes	15	
AVG	Min	Max
Drill Depth	9	12
Burden(Feet)	7	7
Spacing (Feet)	7	7
Hole Diameter	4.00	4.00
OverBurden (Ft)	1.00	3.00
Control Row Taped	N	

Cover Used/No	Blast Mats	9
Stone Weight	N/A	/Cyd
Type of Terrian	Hilly	
Type of Rock	Mica/Schist	
Stemming Type	3/8" Crushed Stone	
Height of Face	0	
Angled Holes /Face Bermed	N/N	
Top Stemming	6	Min
Charges/Hole	1	Min
Deck Stemming	N/A	Min
Charge Wgt/Deck	10	Min
Depth of Water	0	Min
	7	Max
	1	Max
	N/A	Max
	17	Max
	5	Max
Laser/BoreTracking	N	

Total Pounds **180.75 Lbs**

Type Of Initiation: Non-Electric

Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	40	169.20 Lbs
BAPACKAGED Totals:		40	169.20 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	15	11.55 Lbs
BOOSTERS Totals:		15	11.55 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	15	
DETS DHOLE Totals:		15	
Product #	Desc	Qty	Length
DJ01000	NONEL STARTER 1000FT/305M 4/CS 1.4B	1000	1000
LINES Totals:		1000	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	5	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	15	
SURF DELAY Totals:		20	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	3.00
Total Depth (ft)	9.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	6
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	3
TROJAN SPARTAN 350G 49/CS	0.00


Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.080	57	114.4	425	133

Date/Time Long at 12:42:47 October 14, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.2 Volts
Unit Calibration February 6, 2016 by Instantel
File Name E619GL8Z.BB0

Notes

Location: 37 Putnam Rd
Client: JA McDonald
User Name: J.Taber
Converted: October 14, 2016 12:51:21 (V10.72)

Extended Notes

set at existing tower

Microphone Linear Weighting

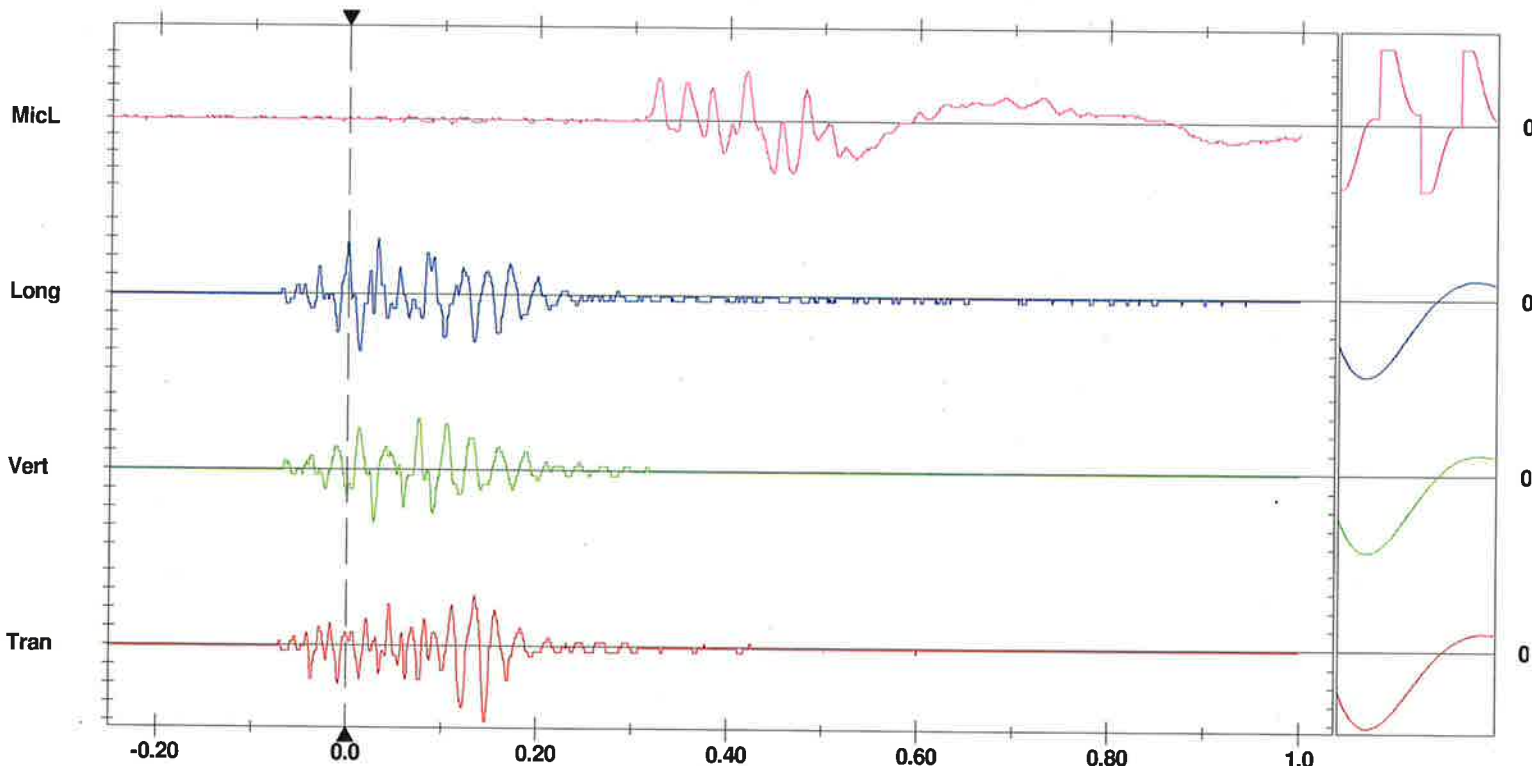
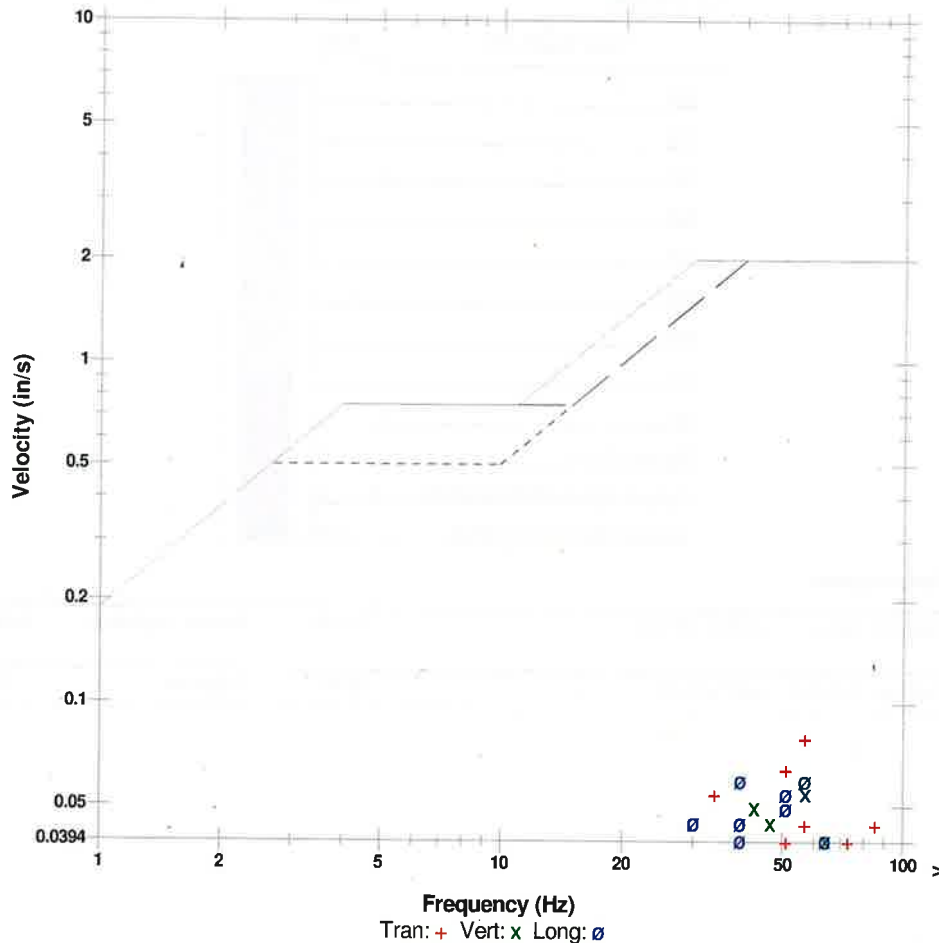
PSPL 114.4 dB(L) 0.002 psi(L) at 0.419 sec

ZC Freq 32 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 537 mv)

	Tran	Vert	Long	
PPV	0.080	0.055	0.060	in/s
ZC Freq	57	57	39	Hz
Time (Rel. to Trig)	0.147	0.029	0.013	sec
Peak Acceleration	0.106	0.053	0.066	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.7	8.1	8.3	Hz
Overswing Ratio	3.9	3.5	3.8	

Peak Vector Sum 0.085 in/s at 0.147 sec

USBM RI8507 And OSMRE


Time Scale: 0.10 sec/div **Amplitude Scale:** Geo: 0.020 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/17/2016	Cust. Supt. Name	Bddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46339	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM accs rd

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:

License #: 1879 clear rd and equipment

Signature:

Weather
Comments:

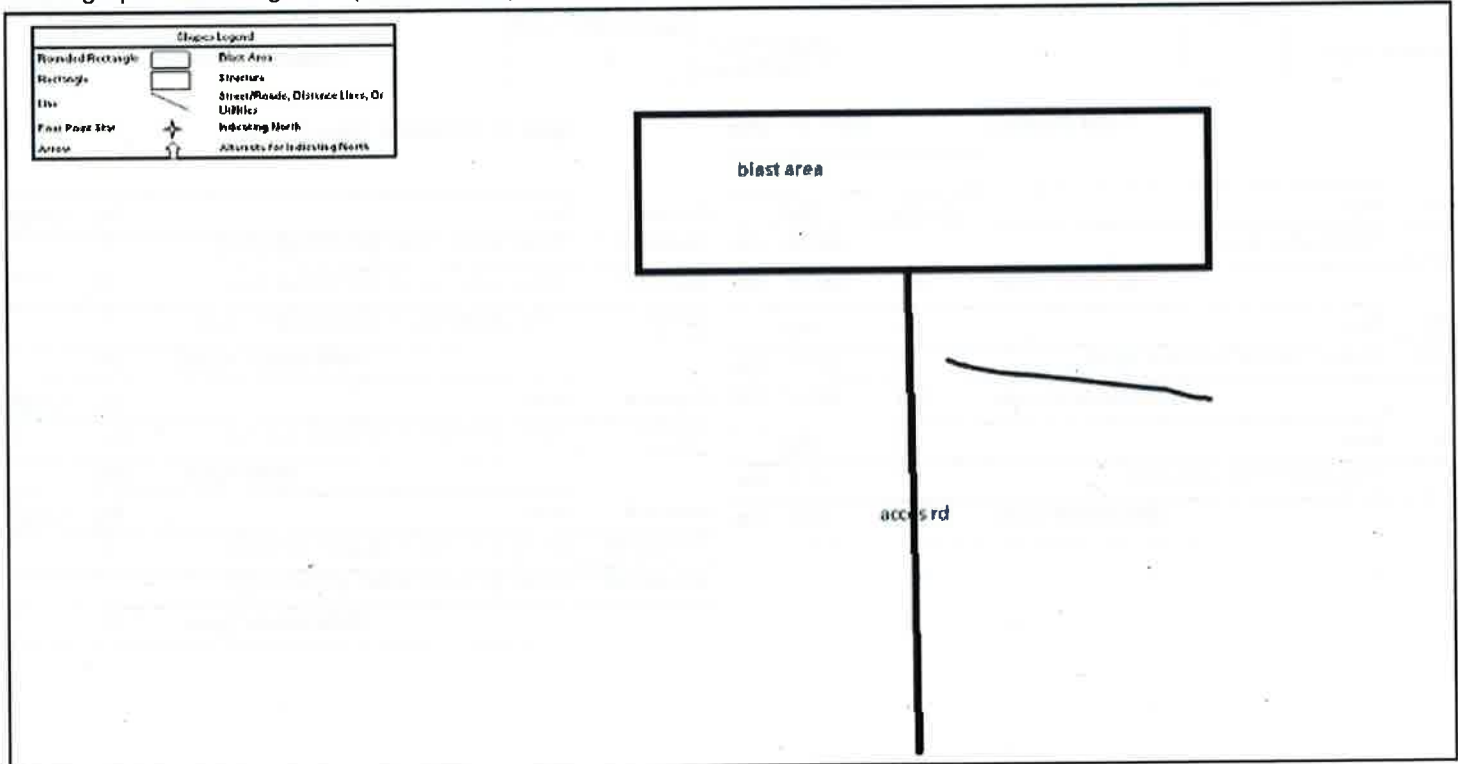
fog/rain

No. of Crew Members 2

Crew Members Names :

Jessi	Britt	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 6 Shot Time (24hrs) 12:59 Shot VideoTaped: Y **Weather**

Notes: N/A Weather Conditions: Rain

Temp (°F): 48-56

Wind Direction: North-West

Wind Spd: 10-20 MPH

Preblast

Blast Direction: South-East Max Holes/Delay: 2 Predicted K Factor: 160

Blast Location: access pad#1 Scale Dist.: 51.03

Location of Structure: existing tower Max Weight/Delay: 175 Lbs Predicted PPV: 0.30

Measurement Physical Measurement Dist. to Closest (Ft) Structure 675 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes

Pay Square Area 9720 Feet 81x10x12=9720sqft

N/A N/A N/A

N/A N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>2025.00</u>	Total SqFt	<u>8910.00</u>	Powder	<u>1.21</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>9960</u>
Total Tons	<u>N/A</u>	Total Yards	<u>8250.00</u>	Factor	<u>0.83</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>122.96</u>

Cal Method Pattern

Holes 81 Cover Used/No N/A

	AVG	Min	Max						
Drill Depth	<u>25</u>	<u>12</u>	<u>30</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>5</u> Min	<u>7</u> Max	
Burden(Feet)	<u>10</u> Feet	<u>10</u>	<u>10</u>	Type of Terrian	<u>Hilly</u>	Charges/Hole	<u>1</u> Min	<u>1</u> Max	
Spacing (Feet)	<u>11</u> Feet	<u>11</u>	<u>11</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min	<u>N/A</u> Max	
Hole Diameter	<u>4</u>	<u>4</u>	<u>4</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>175</u> Min	<u>40</u> Max	
OverBurden (Ft)	<u>0</u>	<u>0</u>	<u>2</u>	Height of Face	<u>20</u>	Depth of Water	<u>0</u> Min	<u>15</u> Max	

Control Row Taped N Angled Holes /Face Bermed N/N Laser/BoreTracking N

Total Pounds 9960.06 Lbs

Type Of Initiation: Non-Electric

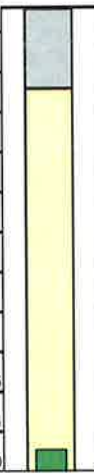
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		9282.00 Lbs
BA BULK Totals:		N/A	9282.00 Lbs
Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	139	587.97 Lbs
BAPACKAGED Totals:		139	587.97 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	117	90.09 Lbs
BOOSTERS Totals:		117	90.09 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350'24FT ZCOMP 60/CS	36	
DXABZ641	NONEL EZDET 25/350 40FT ZCOMP 30/CS	11	
DXABZ660	NONEL EZDET 25/350 60FT ZCOMP 25/50/CS	70	
DETS DHOLE Totals:		117	
Product #	Desc	Qty	Length
DJ01000	NONEL STARTER 1000FT/305M 4/CS 1.4B	1000	1000
LINES Totals:		1000	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	25	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	2	
SURF DELAY Totals:		27	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	3
Total Depth (ft)	29.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	5
1966 Emulsion Blend	24
TROJAN SPARTAN 350G 49/CS	0


Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.865	43	121.6	675	467

Date/Time Long at 12:59:05 October 17, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.1 Volts
Unit Calibration February 6, 2016 by Instantel
File Name E619GLEK.2H0

Notes

Location: 37 Putnam Rd
Client: JA McDonald
User Name: J.Taber
Converted: October 17, 2016 13:37:35 (V10.72)

Extended Notes

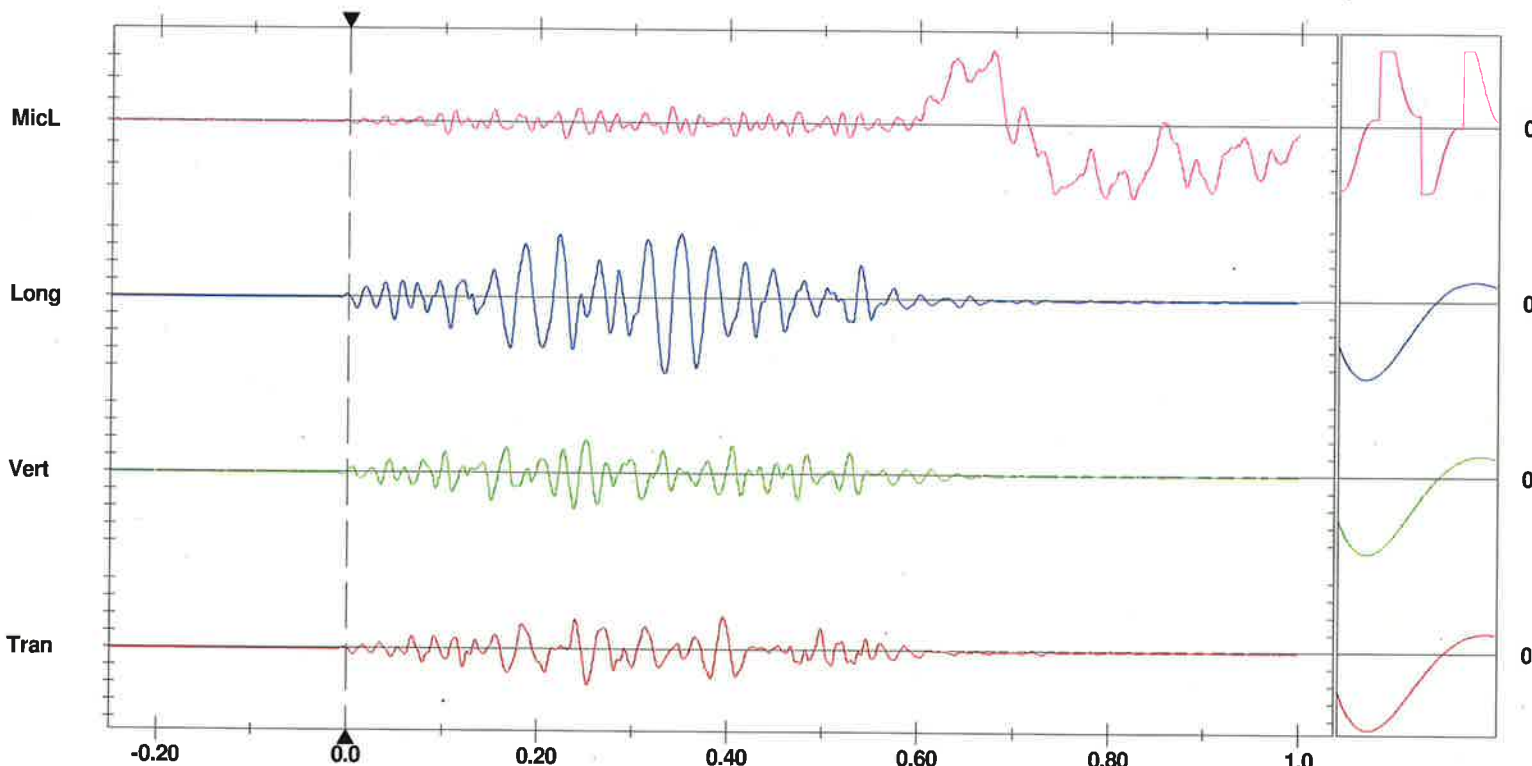
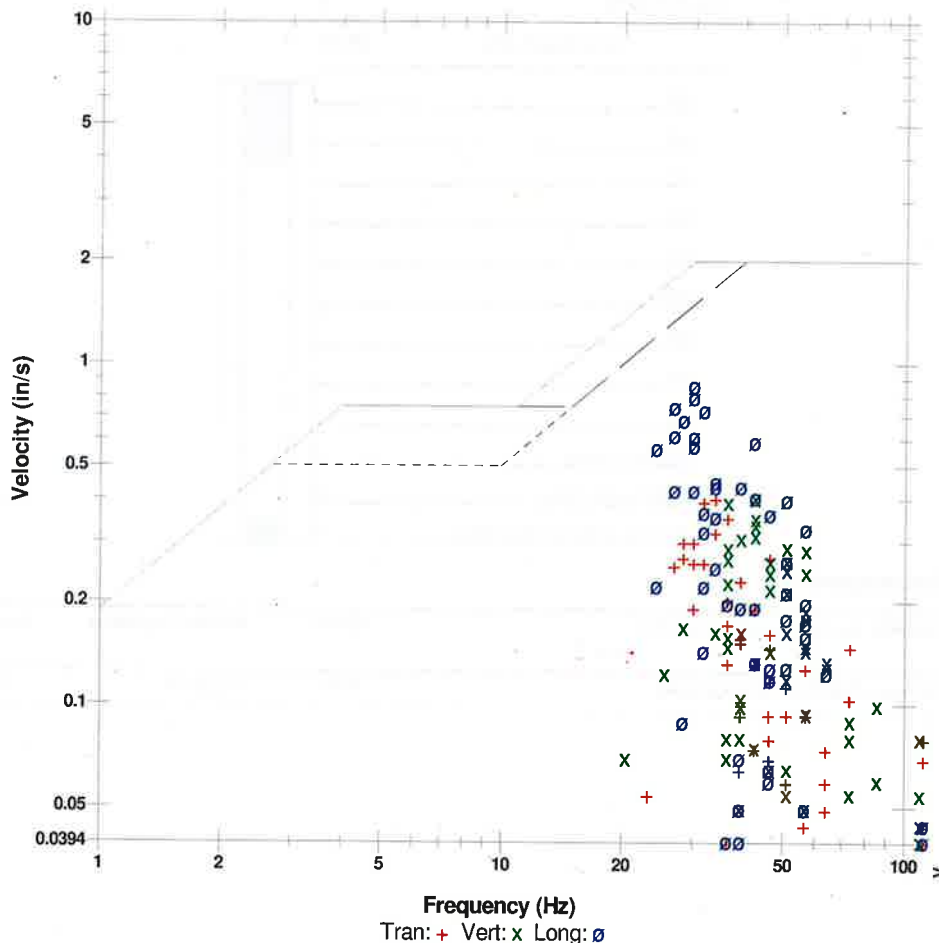
set at existing tower

Microphone Linear Weighting
PSPL 121.6 dB(L) 0.003 psi(L) at 0.678 sec
ZC Freq 5.0 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 539 mv)

	Tran	Vert	Long	
PPV	0.410	0.405	0.865	in/s
ZC Freq	34	43	30	Hz
Time (Rel. to Trig)	0.255	0.240	0.334	sec
Peak Acceleration	0.252	0.358	0.557	g
Peak Displacement	0.002	0.002	0.005	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.7	8.1	8.5	Hz
Overswing Ratio	3.8	3.5	3.7	

Peak Vector Sum 0.919 in/s at 0.334 sec

USBM RI8507 And OSMRE



Time Scale: 0.10 sec/div Amplitude Scale: Geo: 0.200 in/s/div Mic: 0.001 psi(L)/div
Trigger = ▶

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/18/2016	Cust. Supt. Name	Bddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	68457	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp. Time (24hrs) : 12:00:00 AM road and equipment

Post Shift Insp. Time (24hrs): 12:00:00 AM

Blaster : DeFusco;Patrick E. Precautions Taken:
License #: 1879 clear rd and move equipment

Signature:

Weather
Comments:

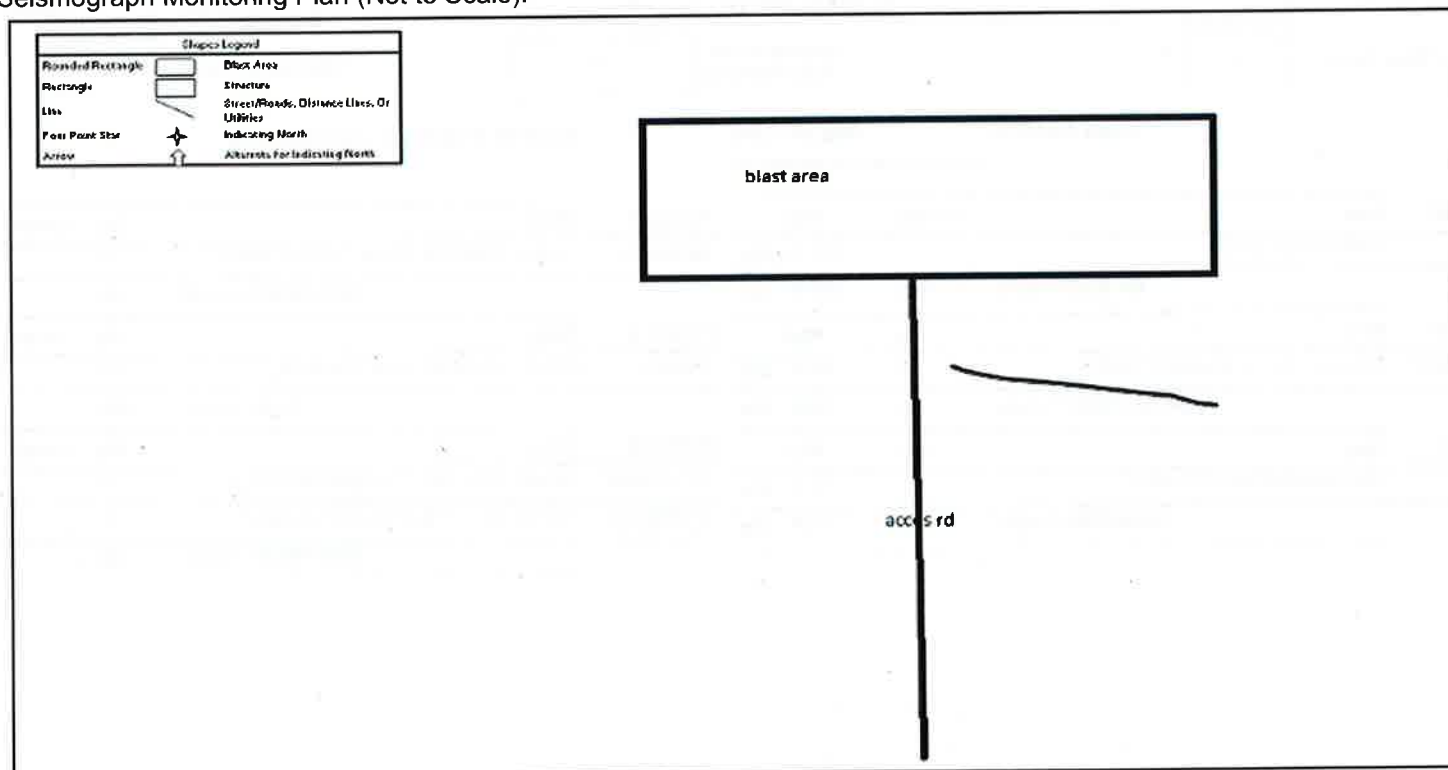
partly clody

No. of Crew Members 3

Crew Members Names :

Dean	Jessi	Britt	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 1 Shot Time (24hrs) 13:02 Shot VideoTaped: Y **Weather**
 Notes: N/A Weather Conditions: Partly Cloudy
 Temp (°F): 69-74
 Wind Direction: West
 Wind Spd: 5-10 MPH

Preblast

Blast Direction: North-East Max Holes/Delay: 2 Predicted K Factor: 240
 Blast Location: 37 putnam rd Scale Dist.: 130.96
 Location of Structure: 21 putnam rd Max Weight/Delay: 14 Lbs Predicted PPV: 0.10
 Measurement Physical Dist. to Closest (Ft) Structure 490 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
 Pay Square Area 2058 Feet
 N/A N/A N/A
 N/A N/A N/A

Pay Calculations Notes

42x7x7=2058sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>378.00</u>	Total SqFt	<u>2058.00</u>	Powder	<u>0.87 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>599</u>
Total Tons	<u>N/A</u>	Total Yards	<u>686.00</u>	Factor	<u>1.15 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>14.26</u>

Cal Method	Pattern	
# Holes	<u>42</u>	Cover Used/No Blast Mats <u>18</u>
	AVG	Min Max
Drill Depth	<u>9</u>	<u>9 9</u>
Burden(Feet)	<u>7</u> Feet	<u>7 7</u>
Spacing (Feet)	<u>7</u> Feet	<u>7 7</u>
Hole Diameter	<u>3.5</u>	<u>3.5 3.5</u>
OverBurden (Ft)	<u>1</u>	<u>0 2</u>
Control Row Taped	<u>N</u>	

Stone Weight	<u>N/A /Cyd</u>	Top Stemming	<u>6</u> Min <u>7</u> Max
Type of Terrian	<u>Hilly</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min <u>N/A</u> Max
Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>10</u> Min <u>14</u> Max
Height of Face	<u>5</u>	Depth of Water	<u>0</u> Min <u>4</u> Max
Angled Holes /Face Bermed	<u>N/N</u>	Laser/BoreTracking	<u>N</u>

Total Pounds 598.80 Lbs

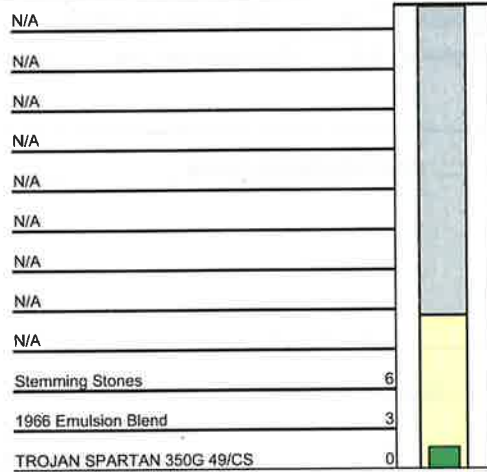
Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		526.50 Lbs
BA BULK Totals:		N/A	526.50 Lbs
Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	12	39.96 Lbs
BAPACKAGED Totals:		12	39.96 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	42	32.34 Lbs
BOOSTERS Totals:		42	32.34 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	42	
DETS DHOLE Totals:		42	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	500	500
LINES Totals:		500	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	21	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	37	
SURF DELAY Totals:		58	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	3
Total Depth (ft)	9.00

**Seismographs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	21 putnam rd	3619	Triggered	0.260	57	116.2	490	634

Shot # 2 Shot Time (24hrs) 15:10 Shot VideoTaped: Y **Weather**
 Notes: N/A Weather Conditions: Partly Cloudy
 Temp (°F): 68-75
 Wind Direction: West
 Wind Spd: 5-10 MPH

Preblast

Blast Direction: West Max Holes/Delay: 2 Predicted K Factor: 240
 Blast Location: 37 ptam re Scale Dist.: 101.56
 Location of Structure: 21 putnam rd Max Weight/Delay: 14 Lbs Predicted PPV: 0.15
 Measurement Physical Dist. to Closest (Ft) 380 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
 Pay Square Area 2058 Feet
 N/A N/A N/A
 N/A N/A N/A

Pay Calculations Notes

42x7x7=2058sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>378.00</u>	Total SqFt	<u>2058.00</u>	Powder	<u>0.81 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>559</u>
Total Tons	<u>N/A</u>	Total Yards	<u>686.00</u>	Factor	<u>1.23 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>13.31</u>

Cal Method	<u>Pattern</u>		
# Holes	<u>42</u>	Cover Used/No Blast Mats	<u>18</u>
	<u>AVG</u>	<u>Min</u>	<u>Max</u>
Drill Depth	<u>9</u>	<u>9</u>	<u>9</u>
Burden(Feet)	<u>7</u> Feet	<u>7</u>	<u>7</u>
Spacing (Feet)	<u>7</u> Feet	<u>7</u>	<u>7</u>
Hole Diameter	<u>3.5</u>	<u>3.5</u>	<u>3.5</u>
OverBurden (Ft)	<u>1</u>	<u>0</u>	<u>2</u>
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/N</u>
		Laser/BoreTracking	<u>N</u>

Stone Weight	<u>N/A /Cyd</u>	Top Stemming	<u>6</u> Min <u>7</u> Max
Type of Terrian	<u>Hilly</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>N/A</u> Min <u>N/A</u> Max
Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>10</u> Min <u>14</u> Max
Height of Face	<u>5</u>	Depth of Water	<u>0</u> Min <u>4</u> Max

Total Pounds 558.84 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		526.50 Lbs
BA BULK Totals:		N/A	526.50 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	42	32.34 Lbs
BOOSTERS Totals:		42	32.34 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	42	
DETS DHOLE Totals:		42	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	500	500
LINES Totals:		500	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	37	
SURF DELAY Totals:		44	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	3
Total Depth (ft)	9.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 350G 49/CS	0

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	21 putnam rd	3619	Triggered	0.430	51	116.3	380	699

Date/Time Long at 13:02:27 October 18, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration February 6, 2016 by Instantel
File Name E619GLGE.W30

Notes

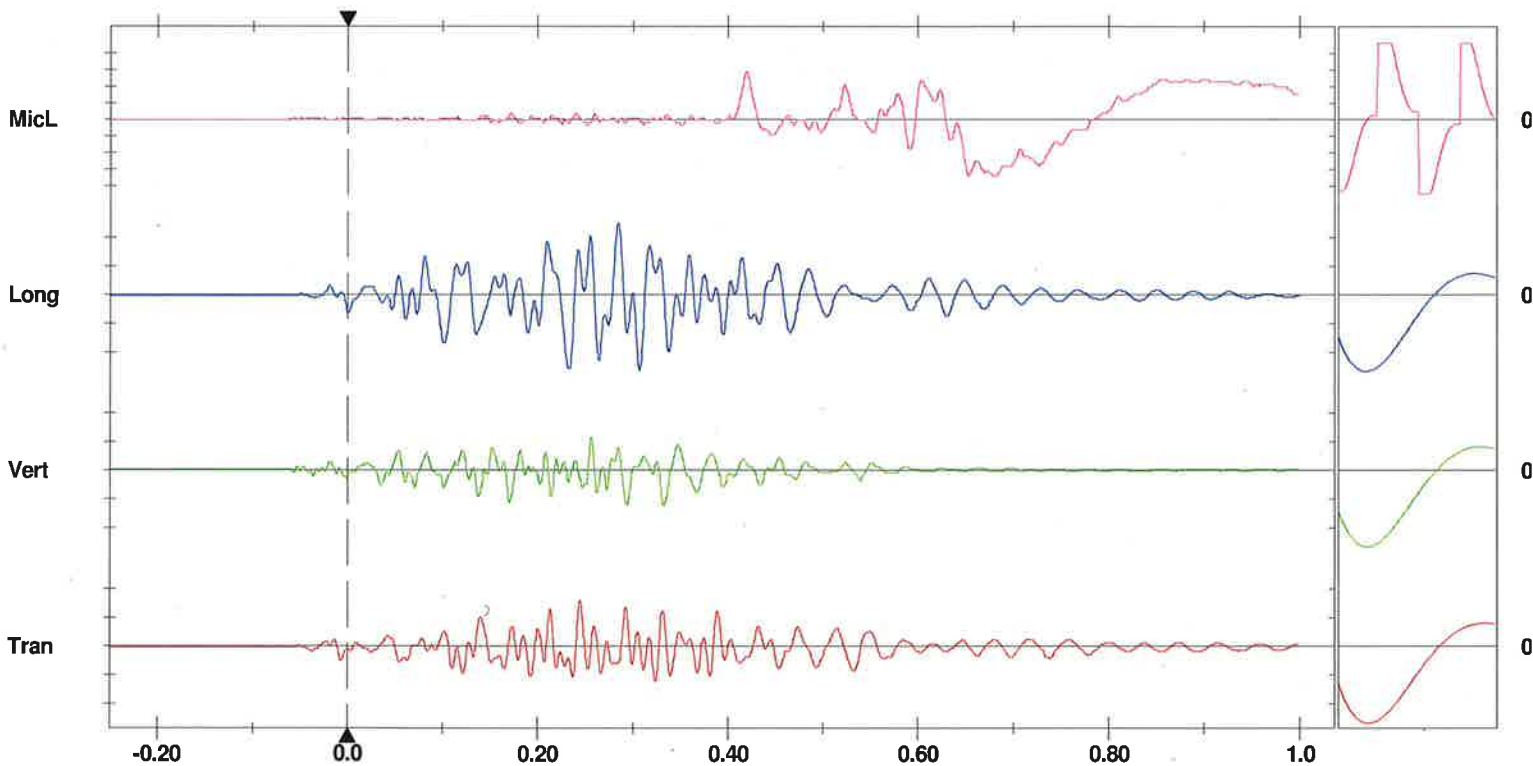
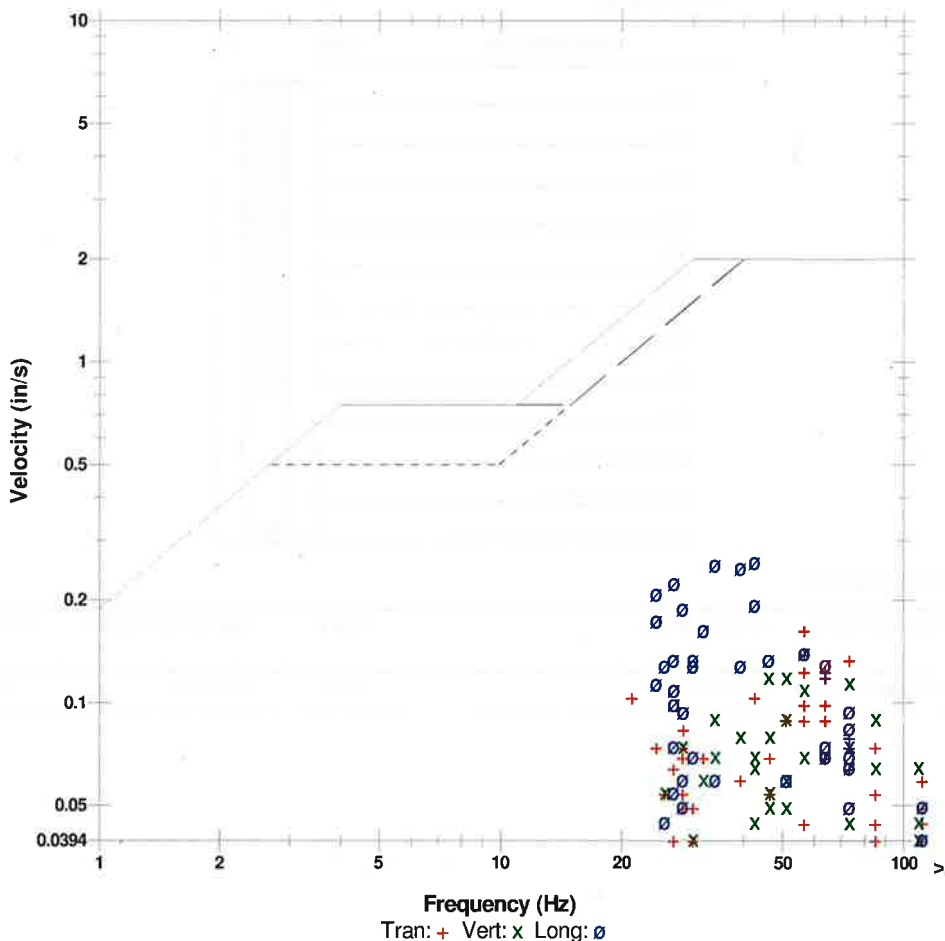
Location: 21 Putnam Rd
Client: JA McDonald
User Name: J.Taber
Converted: October 18, 2016 15:24:06 (V10.72)

Microphone Linear Weighting
PSPL 115.2 dB(L) 0.002 psi(L) at 0.654 sec
ZC Freq 4.0 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 538 mv)

	Tran	Vert	Long	
PPV	0.165	0.120	0.260	in/s
ZC Freq	57	51	47	Hz
Time (Rel. to Trig)	0.246	0.295	0.308	sec
Peak Acceleration	0.172	0.133	0.199	g
Peak Displacement	0.001	0.000	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.0	8.2	8.5	Hz
Overswing Ratio	3.7	3.4	3.6	

Peak Vector Sum 0.269 in/s at 0.285 sec

USBM R18507 And OSMRE



Sensor Check

Date/Time Vert at 15:10:55 October 18, 2016
 Trigger Source Geo: 0.050 in/s
 Range Geo: 9.999 in/s
 Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
 Battery Level 6.2 Volts
 Unit Calibration February 6, 2016 by Instantel
 File Name E619GLGK.U70

Notes

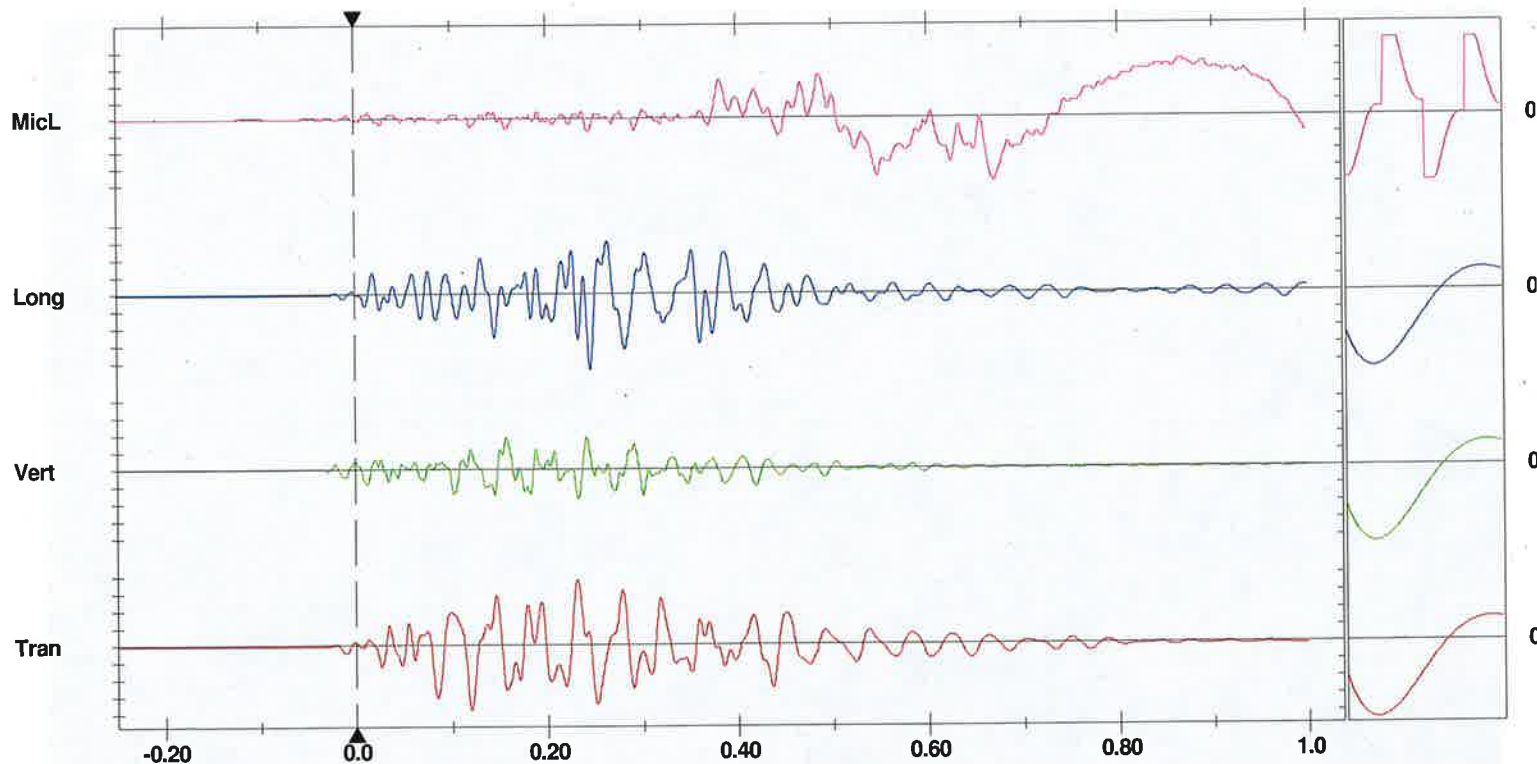
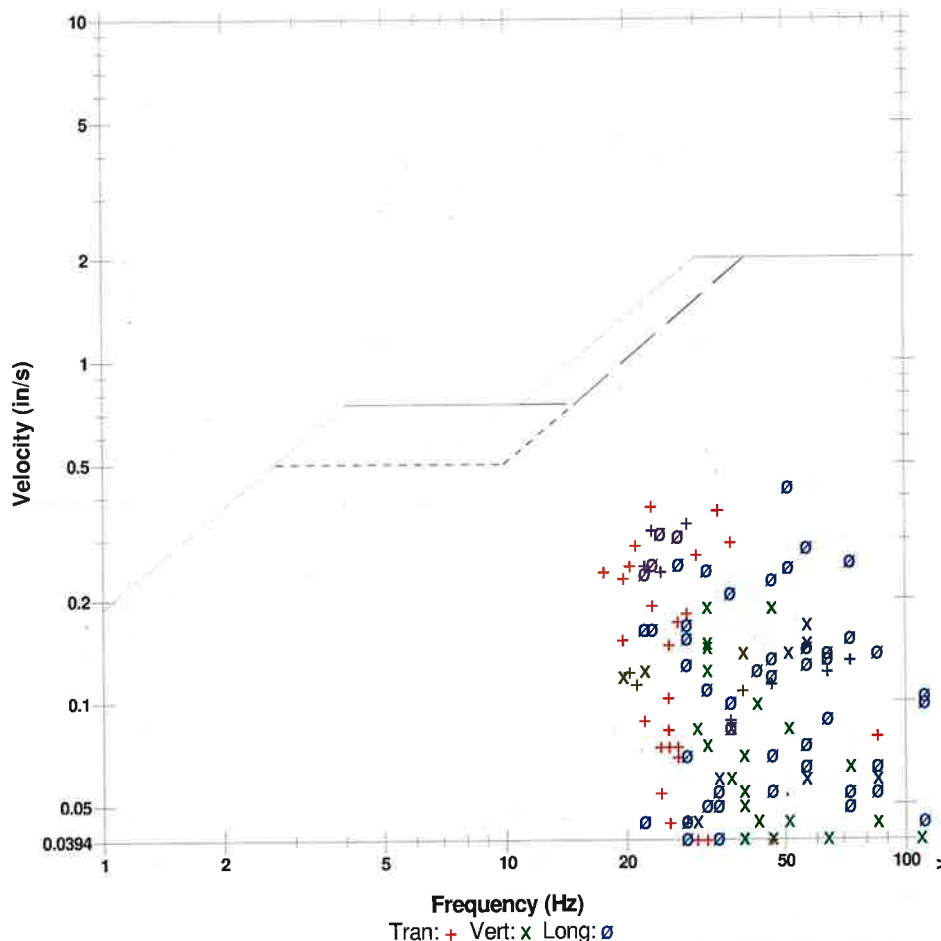
Location: 21 Putnam Rd
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 18, 2016 15:26:30 (V10.72)

Microphone Linear Weighting
 PSPL 116.3 dB(L) 0.002 psi(L) at 0.671 sec
 ZC Freq 7.0 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 537 mv)

	Tran	Vert	Long	
PPV	0.380	0.190	0.430	in/s
ZC Freq	23	32	51	Hz
Time (Rel. to Trig)	0.231	0.158	0.246	sec
Peak Acceleration	0.239	0.212	0.331	g
Peak Displacement	0.002	0.001	0.002	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.0	8.2	8.3	Hz
Overswing Ratio	3.6	3.3	3.6	

Peak Vector Sum 0.479 in/s at 0.233 sec

USBM RI8507 And OSMRE



Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/19/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46461	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM mud

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler,Dean T

License #: 1937

Precautions Taken:

Use caution when driving bulk truck to shot

Signature:

Weather
Comments:

sunny 65

No. of Crew Members 3

Crew Members Names :

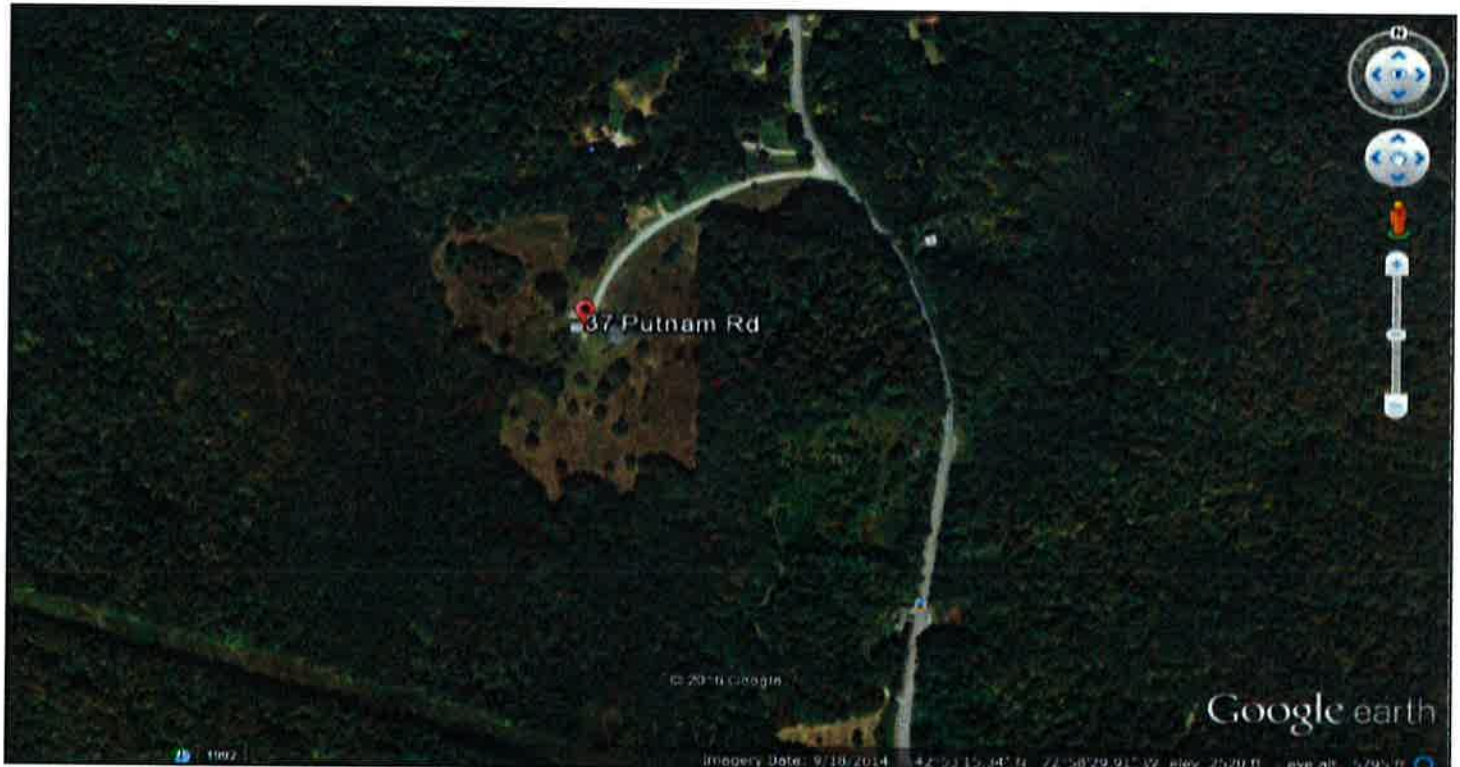
pat defusco britt G

Jesse N/A

N/A N/A N/A N/A

N/A N/A N/A N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 3 Shot Time (24hrs) 13:57 Shot VideoTaped: Y**Weather****Notes:**

N/A

Weather Conditions: SunnyTemp (°F): 50-65Wind Direction: South-EastWind Spd: 5-15 MPH**Preblast**

Blast Direction: West Max Holes/Delay: 2.00 Predicted K Factor: 160
 Blast Location: o/m pad Scale Dist.: 122.98
 Location of Structure: 21 putnam rd Max Weight/Delay: 20.00 Lbs Predicted PPV: 0.07
 Measurement Range Finder Dist. to Closest (Ft) 550 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
 Pay Square Area 1029.00 Feet
 N/A N/A N/A
 N/A N/A N/A

Pay Calculations Notes

21x7x7=1029 sqft

Shot Info**Configuration****1 - Open**

Total Drill Depth(Ft)	<u>187.00</u>	Total SqFt	<u>833.00</u>	Powder	<u>0.94</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>318</u>
Total Tons	<u>N/A</u>	Total Yards	<u>339.37</u>	Factor	<u>1.07</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>18.71</u>

Cal Method	Pattern						
# Holes	<u>17</u>	Cover Used/No	Blast Mats	<u>6</u>			

	AVG	Min	Max				
Drill Depth	<u>11.00</u>	<u>11.00</u>	<u>14.00</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>6.00</u> Min <u>8.00</u> Max
Burden(Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>	Type of Terrian	<u>Flat/Sloped</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0.00</u> Min <u>0.00</u> Max
Hole Diameter	<u>3.50</u>	<u>3.50</u>	<u>3.50</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>20.00</u> Min <u>24.00</u> Max
OverBurden (Ft)	<u>0.00</u>	<u>1.00</u>	<u>3.00</u>	Height of Face	<u>0.00</u>	Depth of Water	<u>0.00</u> Min <u>1.00</u> Max

Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>
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Total Pounds 317.65 LbsType Of Initiation: Non-Electric

Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	72.00	304.56 Lbs
BAPACKAGED Totals:		72.00	304.56 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	17.00	13.09 Lbs
BOOSTERS Totals:		17.00	13.09 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	17.00	
DETS DHOLE Totals:		17.00	

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.20	500.00
LINES Totals:		0.20	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	15.00	
SURF DELAY Totals:		22.00	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	3.00
Sub Drilling(ft)	4.00
Total Depth (ft)	11.00

Stemming Stones	7.00
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	4.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	4.00
Total Depth (ft)	14.00

Stemming Stones	6.00
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	8.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	3619	Triggered	0.280	N/A	117.5	550	618

Date/Time Tran at 13:57:34 October 19, 2016
Trigger Source Geo: 0.050 in/s
Range Geo: 9.999 in/s
Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
Battery Level 6.2 Volts
Unit Calibration February 6, 2016 by Instantel
File Name E619GLIC.3Y0

Notes

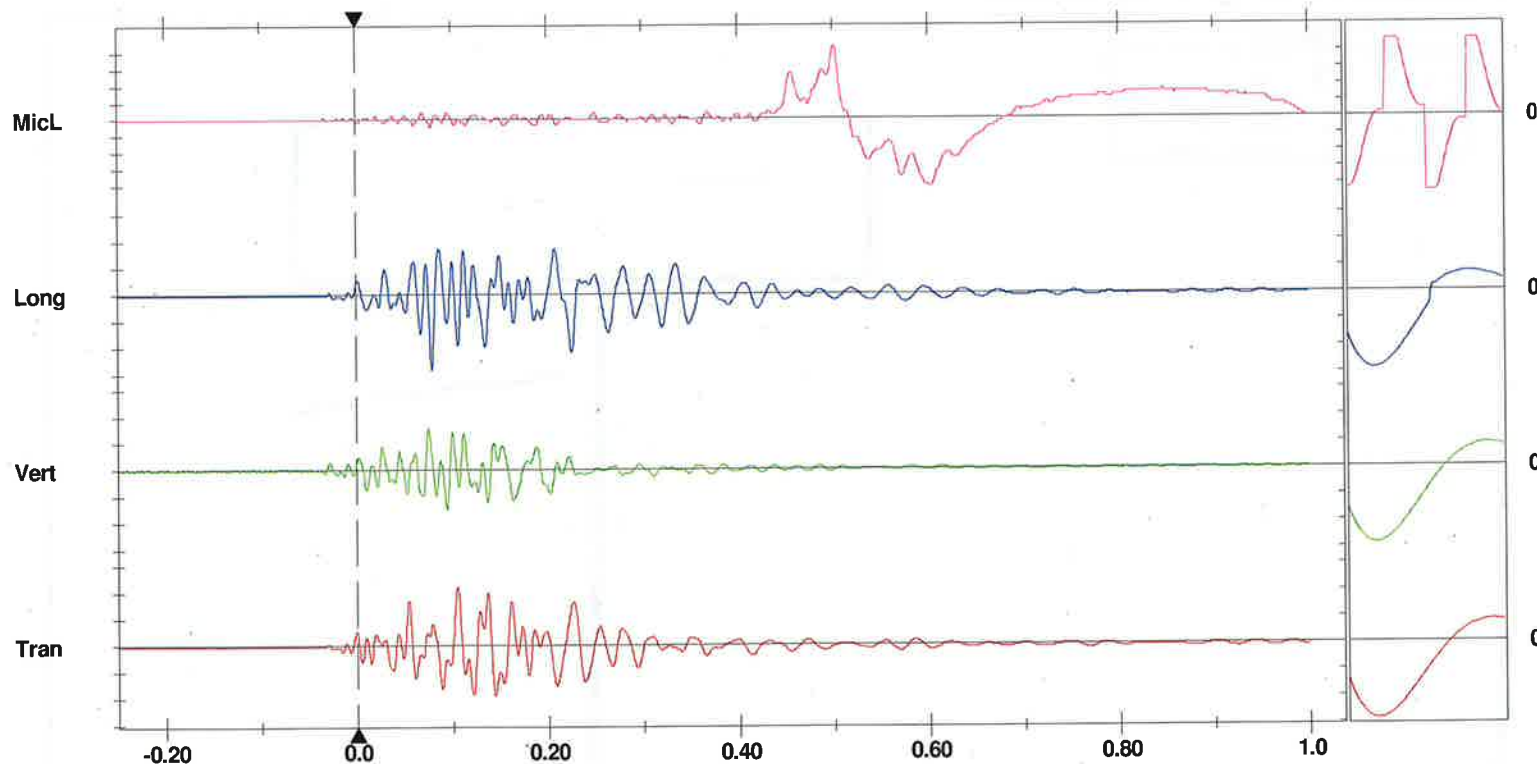
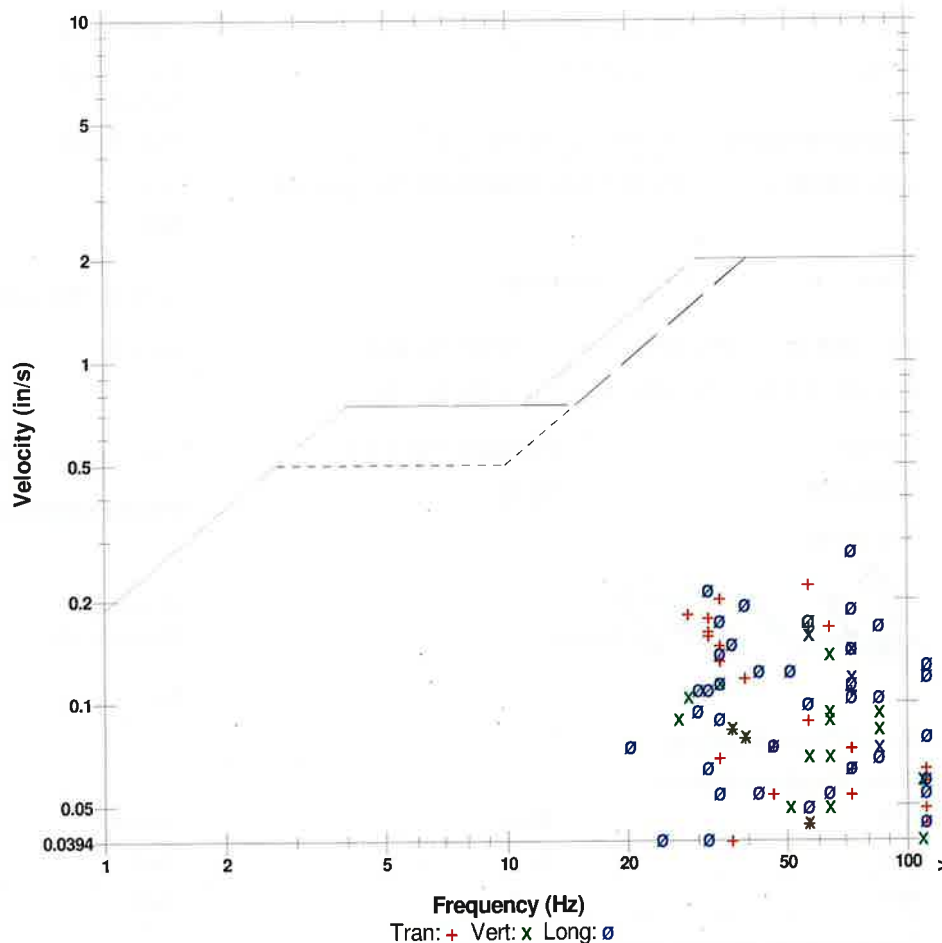
Location: 21 Putnam Rd
Client: JA McDonald
User Name: J.Taber
Converted: October 19, 2016 14:07:49 (V10.72)

Microphone Linear Weighting
PSPL 117.5 dB(L) 0.002 psi(L) at 0.502 sec
ZC Freq 5.0 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 538 mv)

	Tran	Vert	Long	
PPV	0.225	0.160	0.280	in/s
ZC Freq	51	57	73	Hz
Time (Rel. to Trig)	0.106	0.076	0.080	sec
Peak Acceleration	0.225	0.212	0.305	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.8	8.2	9.4	Hz
Overswing Ratio	3.6	3.4	4.0	

Peak Vector Sum 0.296 in/s at 0.080 sec

USBM R18507 And OSMRE



Time Scale: 0.10 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



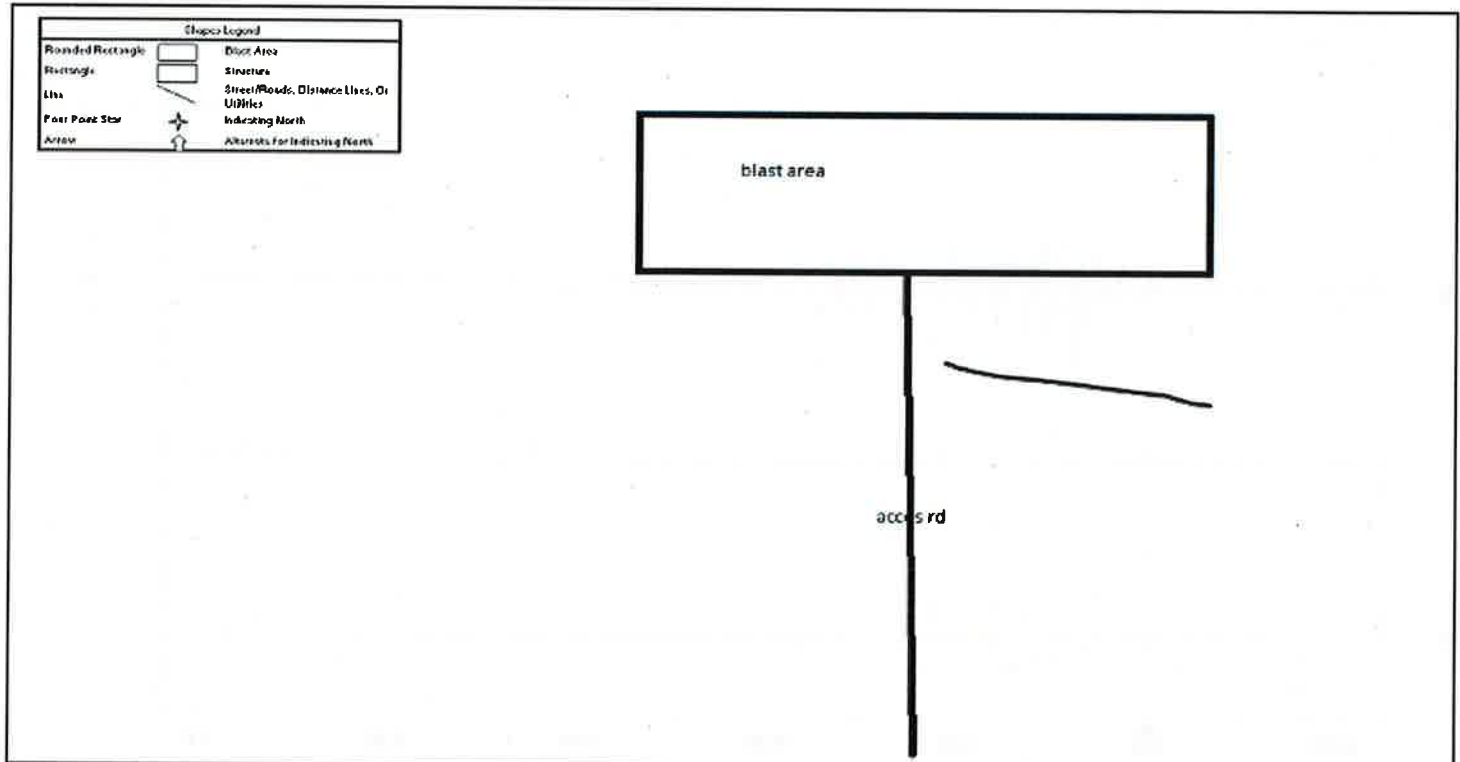
Job# 104-04-02718 Cust. PO# N/A
 Date 10/20/2016 Cust. Supt. Name Buddy
 Customer Name J.A. McDonald Inc. Pick Tkts# 46504 46540
 Job Address Route 8 J.A. McDonald Inc. Various N/A N/A N/A
 N/A N/A N/A N/A
 State VT Permit No. _____ Identify Hazards
 Pre Shift Insp.Time (24hrs) : 12:00:00 AM access rd
 Post Shift Insp.Time (24hrs): 12:00:00 AM
 Blaster : DeFusco;Patrick E. Precautions Taken:
 License #: 1879 clear rd and move equipment
 Signature:

Weather
Comments:

Rain

No. of Crew Members 3
 Crew Members Names :
 Britt Brian Jessi N/A
 N/A N/A N/A N/A
 N/A N/A N/A N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 7 Shot Time (24hrs) 14:11 Shot VideoTaped: Y**Weather****Notes:**

N/A

Weather Conditions: RainTemp (°F): 49-57Wind Direction: WestWind Spd: 10-20 MPH**Preblast**Blast Direction: South-East Max Holes/Delay: 2 Predicted K Factor: 160Blast Location: tower #1 Scale Dist.: 45.36Location of Structure: existing tower Max Weight/Delay: 175 Lbs Predicted PPV: 0.36Measurement Physical Measurement Dist. to Closest (Ft) Structure 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A**Pay Quantities**Fire Detail # of Hrs: N/A**Pay Calculations Notes**Pay Square Area 25670 Feet

N/A N/A N/A

N/A N/A N/A

100x10x11=1100/ 114x9x10=10260/ 90x7x7=4140

Shot Info**Configuration****1 - Open**Total Drill Depth(Ft) 4560.00Total SqFt 33440.00

Powder

1.25 Lbs/Cyd

Total Product Weight (Lbs) :

23140

Total Tons N/ATotal Yards 18577.78

Factor

0.80 Cyd/Lbs

Avg Weight / Hole (Lbs):

76.12

Cal Method

Pattern

Holes

304

Cover Used/No N/A

AVG

Min

Max

Drill Depth

15

9

30

Burden(Feet)

10

Feet

10

10

Spacing (Feet)

11

Feet

11

11

Hole Diameter

4

4

4

OverBurden (Ft)

0

0

4

Control Row Taped

N

Angled Holes /Face Bermed

N/N

Laser/BoreTracking

N

Total Pounds 23140.32 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		22897.00 Lbs
BA BULK Totals:		N/A	22897.00 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	316	243.32 Lbs
BOOSTERS Totals:		316	243.32 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	192	
DXABZ641	NONEL EZDET 25/350 40FT ZCOMP 30/CS	124	

DETS DHOLE Totals: 316

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	2000	2000

LINES Totals: 2000

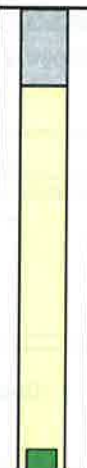
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	37	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	6	

SURF DELAY Totals: 43

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	30.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	5
1966 Emulsion Blend	25
TROJAN SPARTAN 350G 49/CS	0

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
DeFusco;Patrick E.	existing tower	3619	Triggered	0.440	34	93	600	197

Date/Time Tran at 14:11:54 October 20, 2016
 Trigger Source Geo: 0.050 in/s
 Range Geo: 9.999 in/s
 Record Time 1.0 sec at 1024 sps

Serial Number 3619 V 5.52 BlastMate II/477
 Battery Level 6.1 Volts
 Unit Calibration February 6, 2016 by Instantel
 File Name E619GLK7.FU0

Notes

Location: Existing tower
 Client: JA McDonald
 User Name: J.Taber
 Converted: October 20, 2016 15:13:16 (V10.72)

Extended Notes

104-04-02718

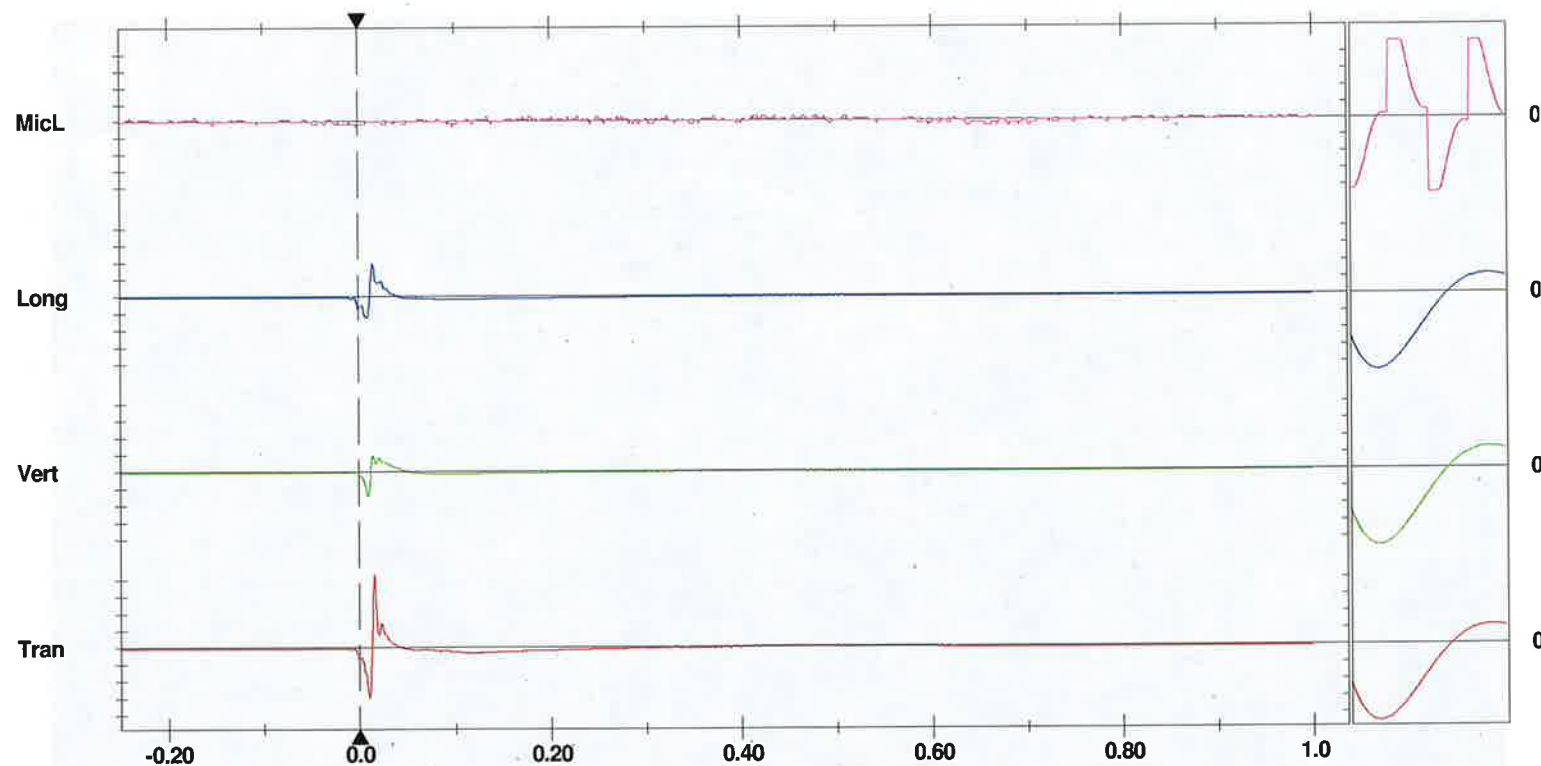
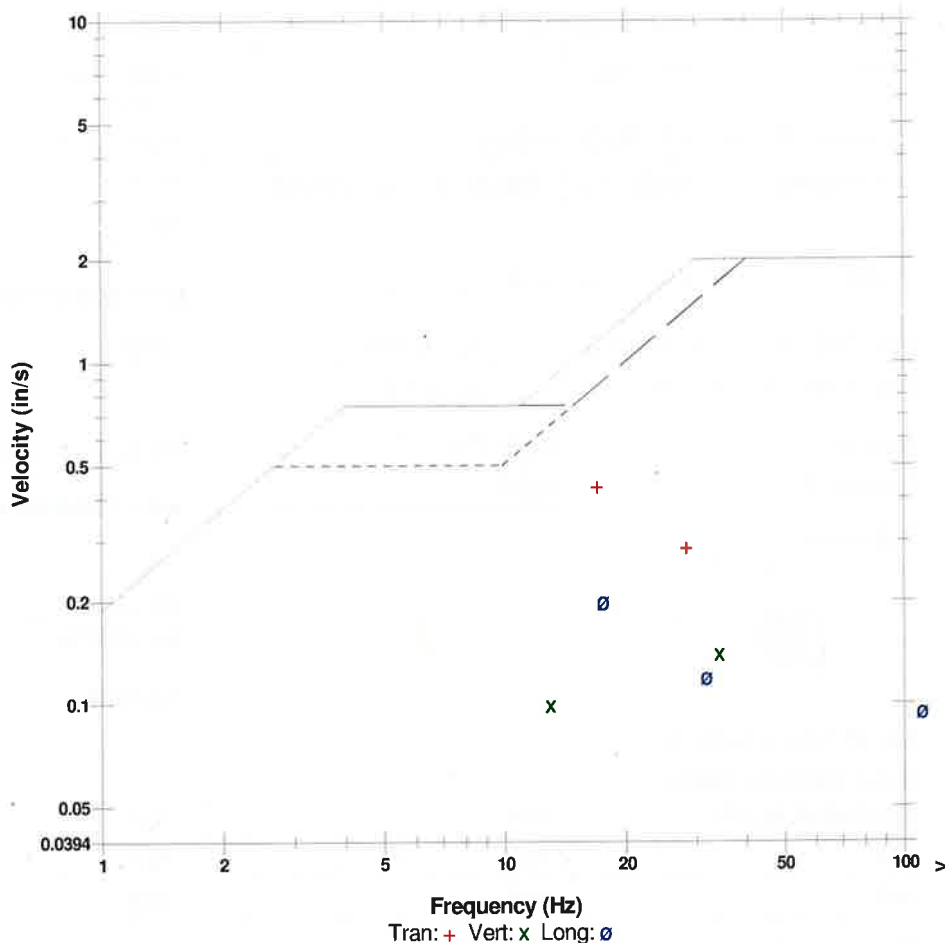
Microphone Linear Weighting
 PSPL 93.98 dB(L) 0.000 psi(L) at -0.001 sec
 ZC Freq N/A
 Channel Test Passed (Freq = 20.0 Hz Amp = 537 mv)

	Tran	Vert	Long	
PPV	0.440	0.140	0.200	in/s
ZC Freq	17	34	17	Hz
Time (Rel. to Trig)	0.017	0.011	0.016	sec
Peak Acceleration	0.570	0.225	0.252	g
Peak Displacement	0.002	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.0	8.1	8.1	Hz
Overswing Ratio	3.8	3.5	3.9	

Peak Vector Sum 0.481 in/s at 0.017 sec

N/A: Not Applicable

USBM RI8507 And OSMRE



Time Scale: 0.10 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
 Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/20/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46551	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	46500	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 PM	Identify Hazards	Terrain	
Post Shift Insp.Time (24hrs):	12:00:00 PM			
Blaster :	Butler;Dean T	Precautions Taken:	watch footing pick a path	
License #:	1937			
Signature:				

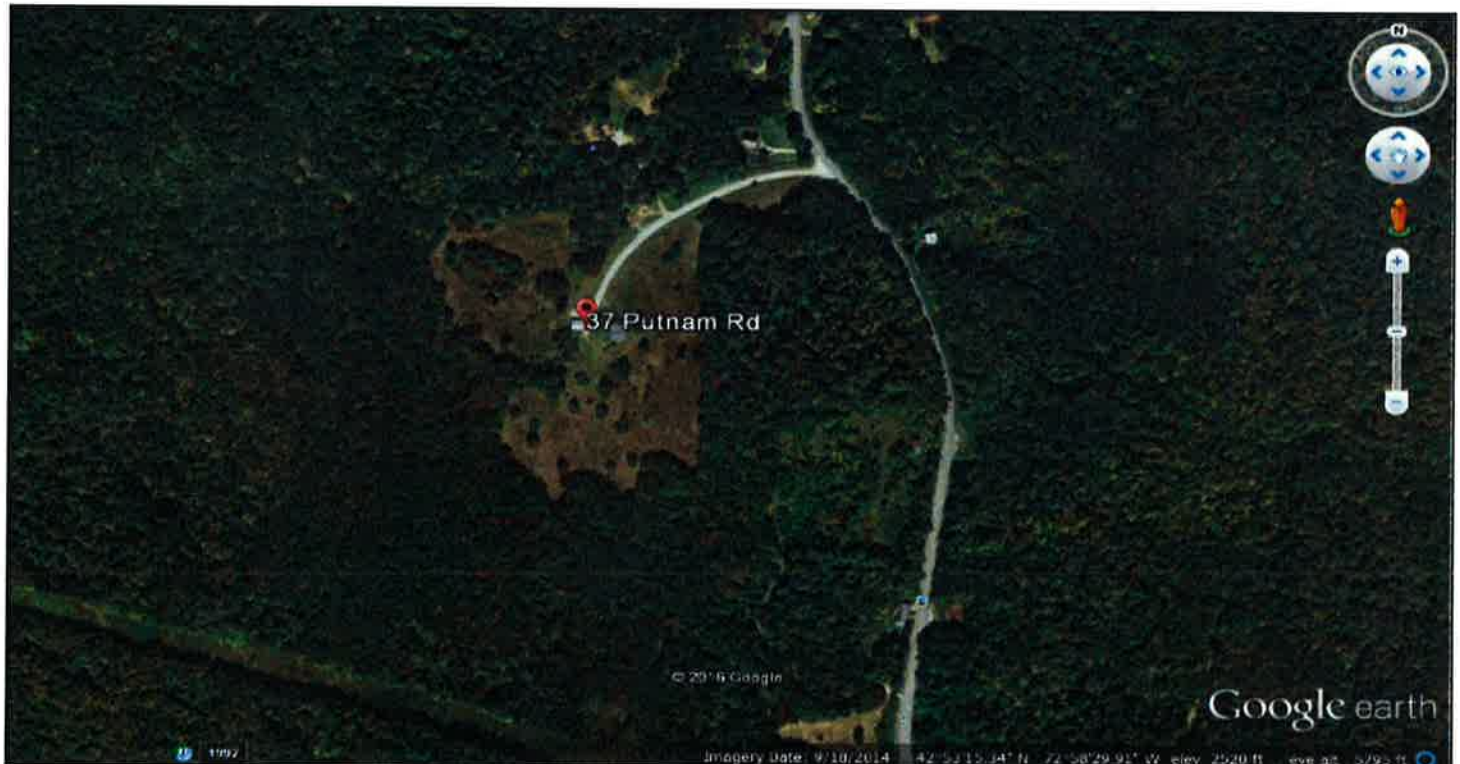
OB

Weather
Comments:

cool 40-60

No. of Crew Members	1		
Crew Members Names :			
aVATAVIA BLUE	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 4 Shot Time (24hrs) 14:46 Shot VideoTaped: Y**Weather****Notes:**

N/A

Weather Conditions: SunnyTemp (°F): 40-60Wind Direction: South-EastWind Spd: 5-10 MPH**Preblast**Blast Direction: West Max Holes/Delay: 1 Predicted K Factor: 160Blast Location: o/m building area Scale Dist.: 86.96Location of Structure: 21 putnam rd Max Weight/Delay: 40 Lbs Predicted PPV: 0.13Measurement Google Map Dist. to Closest (Ft) Structure 550 Railroad/Highway N/A Overhead Util N/A Underground Util N/A**Pay Quantities**Fire Detail # of Hrs: N/A**Pay Calculations Notes**Pay Square Area 2058 Feet

N/A N/A N/A

N/A N/A N/A

42X7X7=2058 SQFT

Shot Info**Configuration****1 - Open**Total Drill Depth(Ft) 480.00 Total SqFt 1960.00 Powder 2.30 Lbs/Cyd Total Product Weight (Lbs) : 2003Total Tons N/A Total Yards 871.11 Factor 0.43 Cyd/Lbs Avg Weight / Hole (Lbs): 50.08Cal Method Pattern# Holes 40Cover Used/No Blast Mats 21**AVG****Min Max**Drill Depth 1211 14Stone Weight N/A /CydTop Stemming 7 Min 9 MaxBurden(Feet) 7 Feet7 7Type of Terrian FlatCharges/Hole 1 Min 1 MaxSpacing (Feet) 7 Feet7 7Type of Rock Mica/SchistDeck Stemming 0 Min 0 MaxHole Diameter 3.53.5 3.5Stemming Type 3/8" Crushed StoneCharge Wgt/Deck 20 Min 40 MaxOverBurden (Ft) 10 3Height of Face 0Depth of Water 0 Min 1 MaxControl Row Taped NAngled Holes
/Face BermedN/Y

Laser/BoreTracking

NTotal Pounds 2002.80 LbsType Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	1962.00 Lbs
BA BULK Totals:		N/A	1962.00 Lbs

Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	2	8.46 Lbs
BAPACKAGED Totals:		2	8.46 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	42	32.34 Lbs
BOOSTERS Totals:		42	32.34 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	42	
DETS DHOLE Totals:		42	

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.2	500
LINES Totals:		0.2	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	35	
SURF DELAY Totals:		42	

Descripton: TYPICAL (FACE)

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	11.00

Stemming Stones	7
1966 Emulsion Blend	4
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Descripton: TYPICAL

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	14.00

Stemming Stones	6
1966 Emulsion Blend	8
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismograhs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.315	N/A	97	550	399

Date/Time Long at 14:46:06 October 20, 2016
 Trigger Source Geo: 0.040 in/s
 Range Geo: 9.999 in/s
 Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
 Battery Level 6.3 Volts
 Unit Calibration January 26, 2016 by Instantel
 File Name D288GLK9.0U0

Notes
 Location: 21 putnam rd
 Client: McDonald
 User Name: D Butler
 Converted: October 20, 2016 15:29:51 (V10.72)

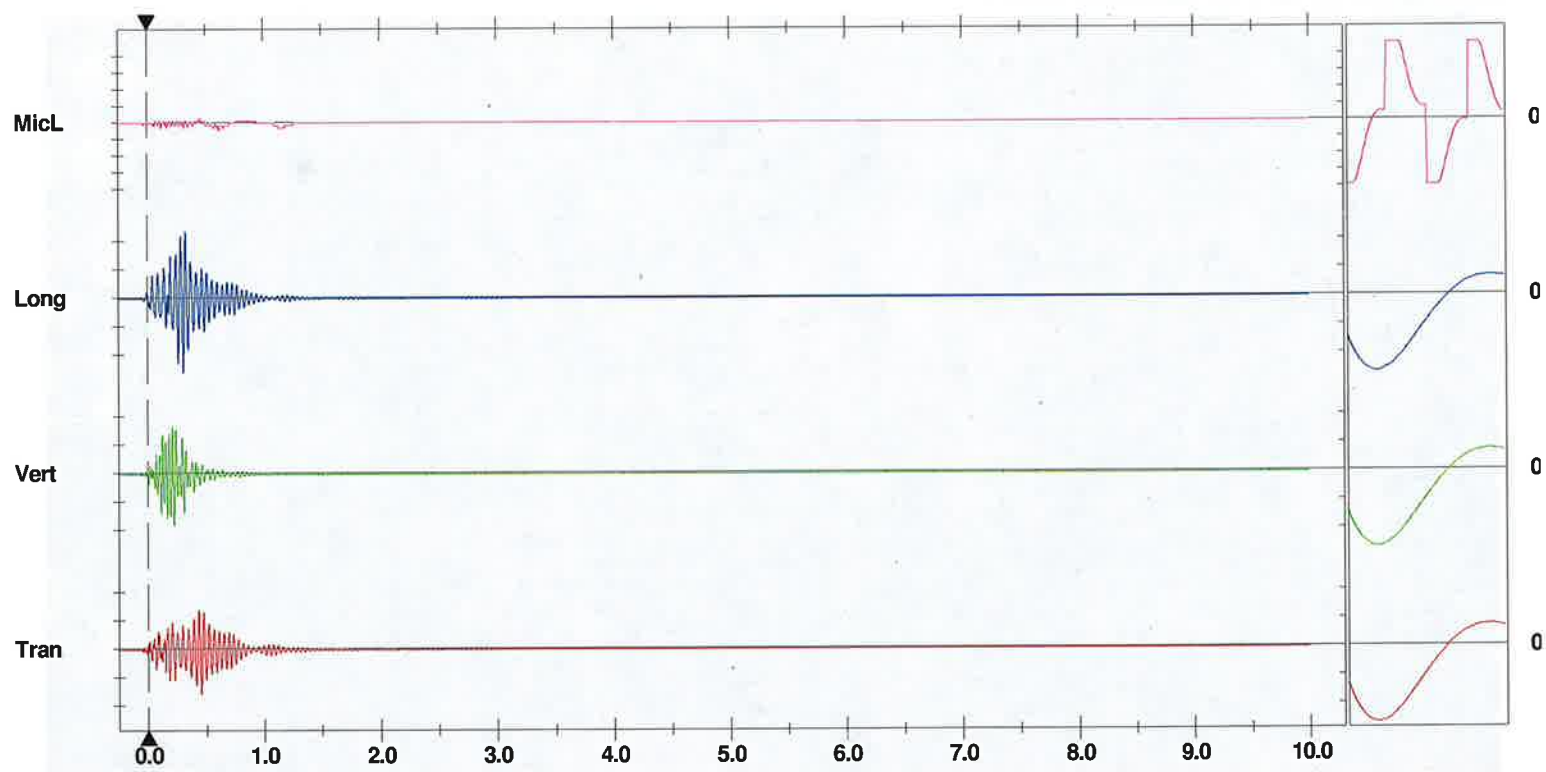
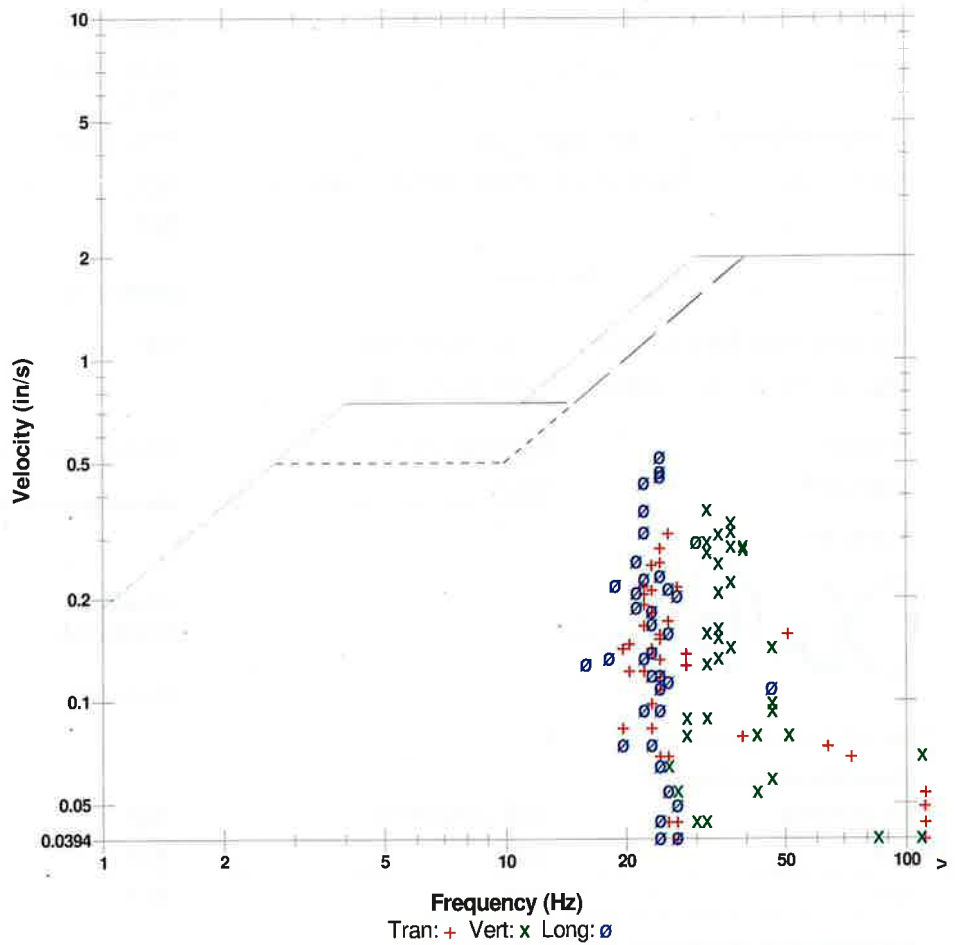
Extended Notes
 Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
 PSPL 97.50 dB(L) 0.000 psi(L) at 0.627 sec
 ZC Freq 30 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 565 mv)

	Tran	Vert	Long	
PPV	0.315	0.365	0.525	in/s
ZC Freq	26	32	24	Hz
Time (Rel. to Trig)	0.462	0.231	0.313	sec
Peak Acceleration	0.172	0.225	0.212	g
Peak Displacement	0.002	0.002	0.003	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.1	8.0	8.0	Hz
Overswing Ratio	3.5	3.6	4.0	

Peak Vector Sum 0.571 in/s at 0.313 sec

USBM RI8507 And OSMRE



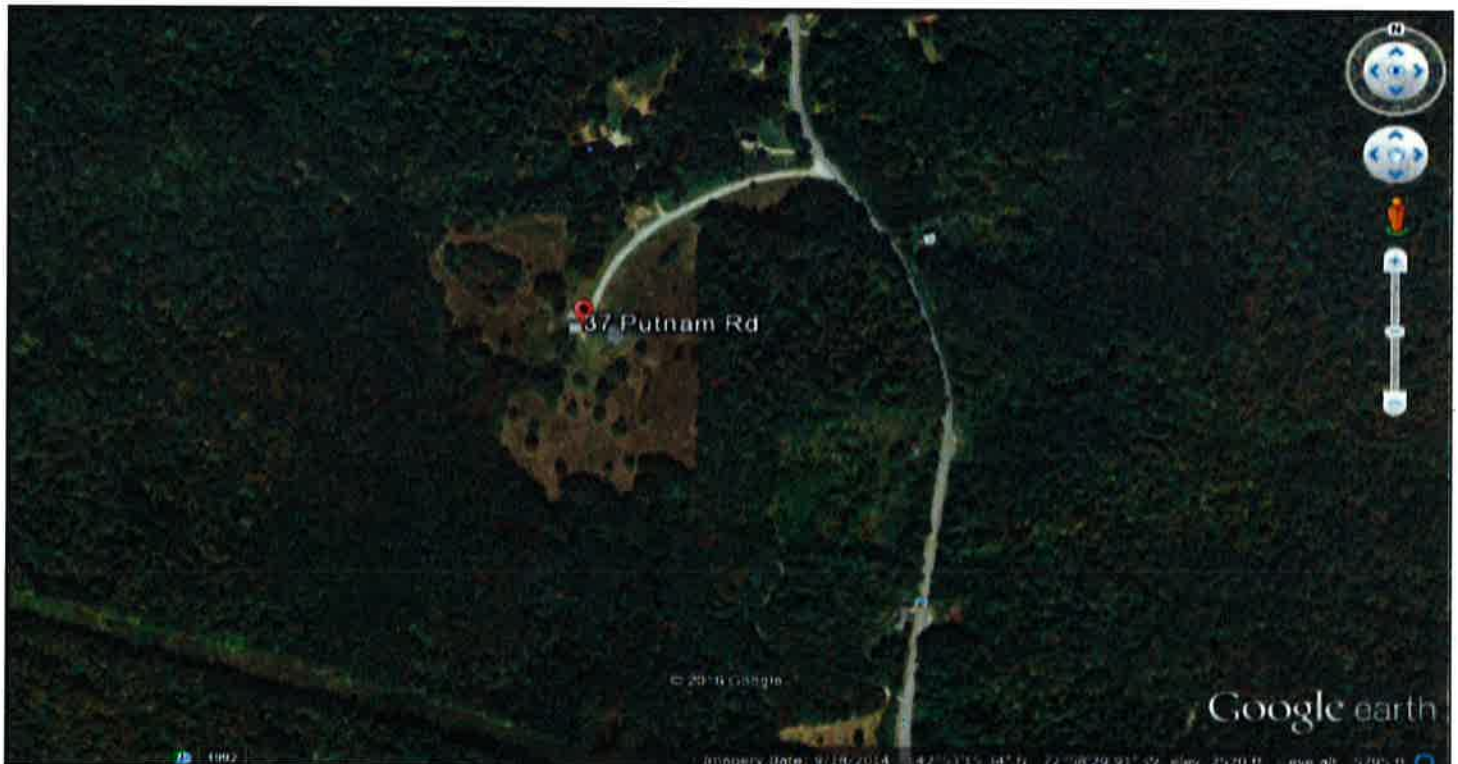
Time Scale: 0.50 sec/div Amplitude Scale: Geo: 0.200 in/s/div Mic: 0.001 psi(L)/div
 Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/21/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46576	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards	Mud	
Post Shift Insp.Time (24hrs):	12:00:00 AM			
Blaster :	Butler;Dean T	Precautions Taken:		
License #:	1937		Use excavator to create rock path so trucks can get into shot	
Signature:				
No. of Crew Members	2	Weather Comments:	cloudy rainy 50	
Crew Members Names :				
pat defusco	britt gellenthien	N/A	N/A	
N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	

Seismograph Monitoring Plan (Not to Scale):



Shot # 5 Shot Time (24hrs) 10:38 Shot VideoTaped: y **Weather**

Notes: N/A

Weather Conditions: Cloudy
Temp (°F): 50-60
Wind Direction: South
Wind Spd: 5-10 MPH

Preblast

Blast Direction: South-West Max Holes/Delay: 1.00 Predicted K Factor: 160
Blast Location: o/m building Scale Dist.: 94.87
Location of Structure: 21 putnam rd Max Weight/Delay: 40.00 Lbs Predicted PPV: 0.11
Measurement Google Map Dist. to Closest (Ft) 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
Pay Square Area 1470.00 Feet
N/A N/A N/A
N/A N/A N/A

Pay Calculations Notes

30holes x7x7 pattern= 1470 Sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>330.00</u>	Total SqFt	<u>1470.00</u>	Powder	<u>1.79</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>1073</u>
Total Tons	<u>N/A</u>	Total Yards	<u>598.89</u>	Factor	<u>0.56</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>35.77</u>

Cal Method	Pattern						
# Holes	<u>30</u>	Cover Used/No	Blast Mats	<u>21</u>			
	AVG	Min	Max				
Drill Depth	<u>11.00</u>	<u>9.00</u>	<u>12.00</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>6.00</u> Min <u>8.00</u> Max
Burden(Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>	Type of Terrian	<u>Flat</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0.00</u> Min <u>0.00</u> Max
Hole Diameter	<u>3.50</u>	<u>3.50</u>	<u>3.50</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>20.00</u> Min <u>40.00</u> Max
OverBurden (Ft)	<u>1.00</u>	<u>0.00</u>	<u>3.00</u>	Height of Face	<u>0.00</u>	Depth of Water	<u>0.00</u> Min <u>1.00</u> Max
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>		

Total Pounds 1073.10 Lbs

Type Of Initiation: Non-Electric

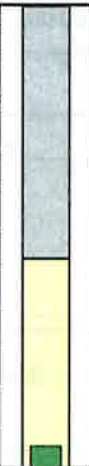
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		1050.00 Lbs
BA BULK Totals:		N/A	1050.00 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	30.00	23.10 Lbs
BOOSTERS Totals:		30.00	23.10 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	30.00	
DETS DHOLE Totals:		30.00	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.10	250.00
LINES Totals:		0.10	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	8.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	33.00	
SURF DELAY Totals:		41.00	

Descripton: typical

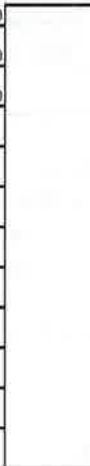
Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	3.00
Sub Drilling(ft)	4.00
Total Depth (ft)	11.00

Stemming Stones	6.00
1966 Emulsion Blend	5.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

**Descripton: typical**

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	4.00
Total Depth (ft)	14.00

Stemming Stones	6.00
1966 Emulsion Blend	8.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	2288	Triggered	0.385	N/A	107.0	600	561

Shot # 6 Shot Time (24hrs) 12:48 Shot VideoTaped: Y **Weather**
Notes: N/A Weather Conditions: Cloudy
Temp (°F): 50-60
Wind Direction: South-East
Wind Spd: 5-15 MPH

Preblast

Blast Direction: South-West Max Holes/Delay: 2.00 Predicted K Factor: 160
Blast Location: o/m building Scale Dist.: 71.71
Location of Structure: 21 putnam rd Max Weight/Delay: 70.00 Lbs Predicted PPV: 0.17
Measurement Google Map Dist. to Closest (Ft) 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A

Pay Calculations Notes

Pay Square Area 3024 Feet

N/A N/A

N/A N/A

48 holes x 7x9 pattern = 3024

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>672.00</u>	Total SqFt	<u>3024.00</u>	Powder	<u>1.38</u> Lbs/Cyd	Total Product Weight (Lbs) :	<u>2169</u>
Total Tons	<u>N/A</u>	Total Yards	<u>1568.00</u>	Factor	<u>0.72</u> Cyd/Lbs	Avg Weight / Hole (Lbs):	<u>45.19</u>

Cal Method	Pattern								
# Holes	<u>48</u>	Cover Used/No	Blast Mats	<u>21</u>					
	<u>AVG</u>	<u>Min</u>	<u>Max</u>						
Drill Depth	<u>14.00</u>		<u>12.00</u>	<u>20.00</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>6.00</u> Min	<u>8.00</u> Max
Burden(Feet)	<u>7.00</u> Feet		<u>7.00</u>	<u>7.00</u>	Type of Terrian	<u>Flat</u>	Charges/Hole	<u>1</u> Min	<u>1</u> Max
Spacing (Feet)	<u>9.00</u> Feet		<u>9.00</u>	<u>9.00</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0.00</u> Min	<u>0.00</u> Max
Hole Diameter	<u>3.50</u>		<u>3.50</u>	<u>3.50</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>20.00</u> Min	<u>70.00</u> Max
OverBurden (Ft)	<u>1.00</u>		<u>0.00</u>	<u>3.00</u>	Height of Face	<u>0.00</u>	Depth of Water	<u>0.00</u> Min	<u>1.00</u> Max
Control Row Taped	<u>N</u>				Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>	

Total Pounds 2168.73 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		2131.00 Lbs
BA BULK Totals:		N/A	2131.00 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	49	37.73 Lbs
BOOSTERS Totals:		49	37.73 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	31	
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	18	
DETS DHOLE Totals:		49	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.1	250
LINES Totals:		0.1	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	17	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	40	
SURF DELAY Totals:		57	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	20.00

Stemming Stones	6
1966 Emulsion Blend	14
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	14.00

Stemming Stones	6
1966 Emulsion Blend	8
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	2288	Triggered	0.615	N/A	112.0	600	573

Date/Time Vert at 10:38:45 October 21, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GLLS.8L0

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 21, 2016 13:31:21 (V10.72)

Extended Notes

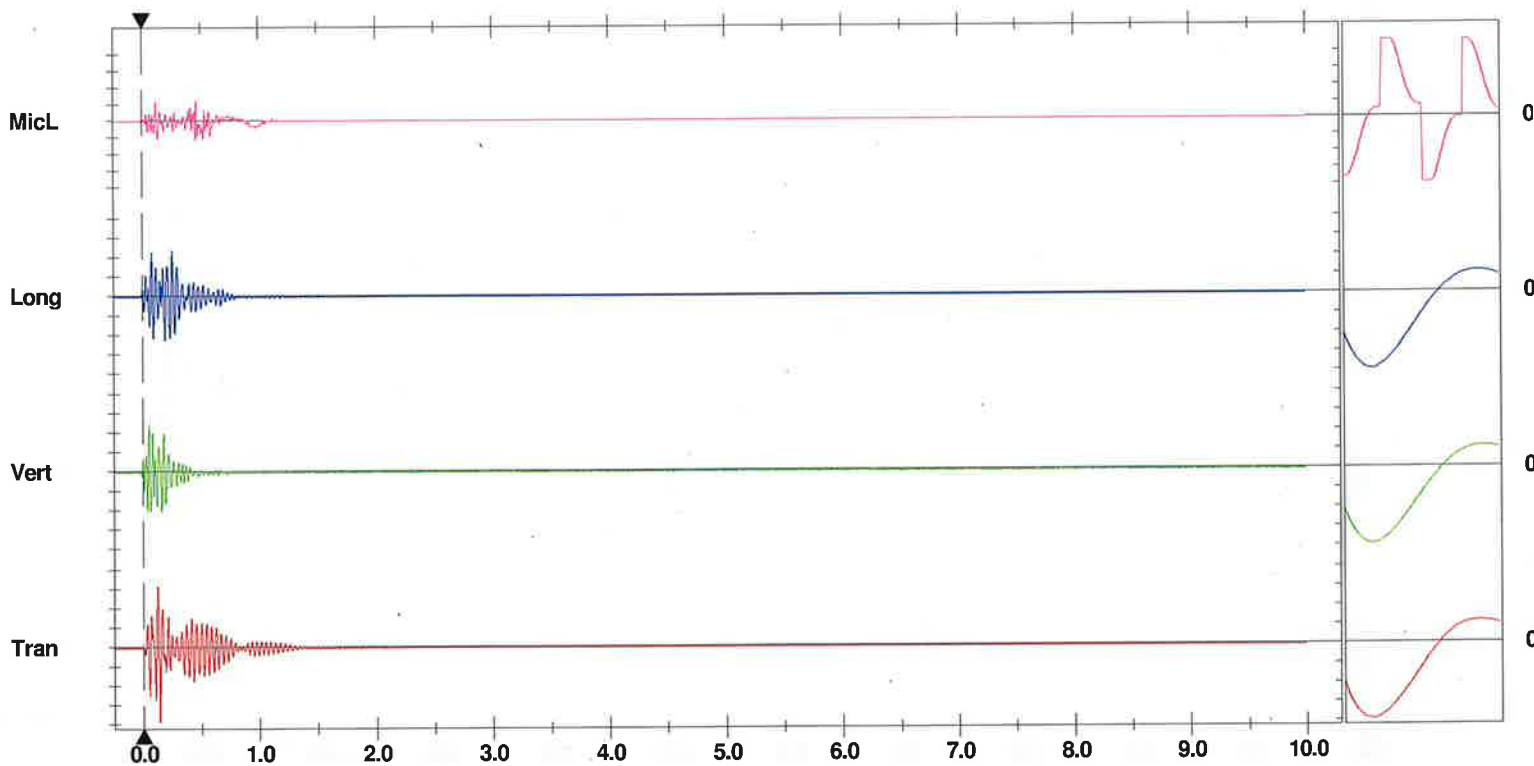
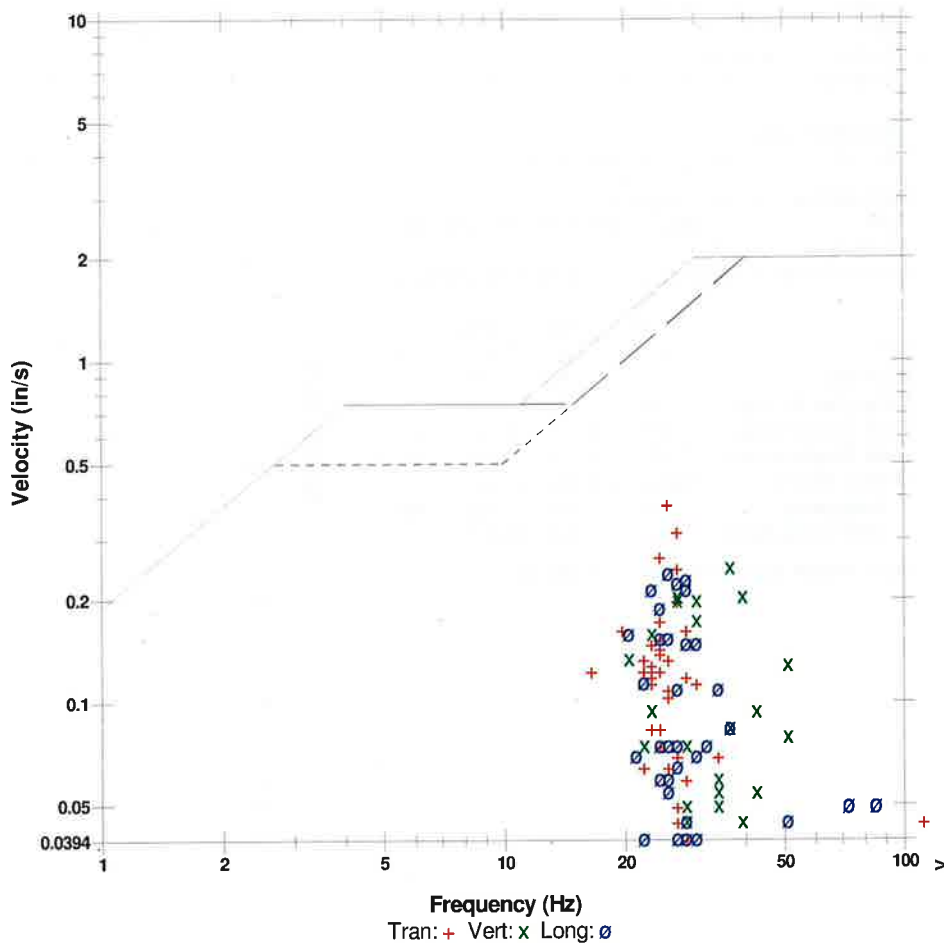
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 107.0 dB(L) 0.001 psi(L) at 0.475 sec
ZC Freq 51 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 535 mv)

	Tran	Vert	Long	
PPV	0.385	0.250	0.240	in/s
ZC Freq	26	37	26	Hz
Time (Rel. to Trig)	0.147	0.056	0.259	sec
Peak Acceleration	0.172	0.159	0.159	g
Peak Displacement	0.002	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.3	8.1	8.3	Hz
Overswing Ratio	3.4	3.6	3.6	

Peak Vector Sum 0.388 in/s at 0.147 sec

USBM R18507 And OSMRE



Date/Time Tran at 12:48:29 October 21, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by Instantel
File Name D288GLLY.8T0

Maine Drilling & Blasting

Notes

Location: 21 putnam rd
 Client: McDonald
 User Name: D Butler
 Converted: October 21, 2016 13:31:21 (V10.72)

Extended Notes

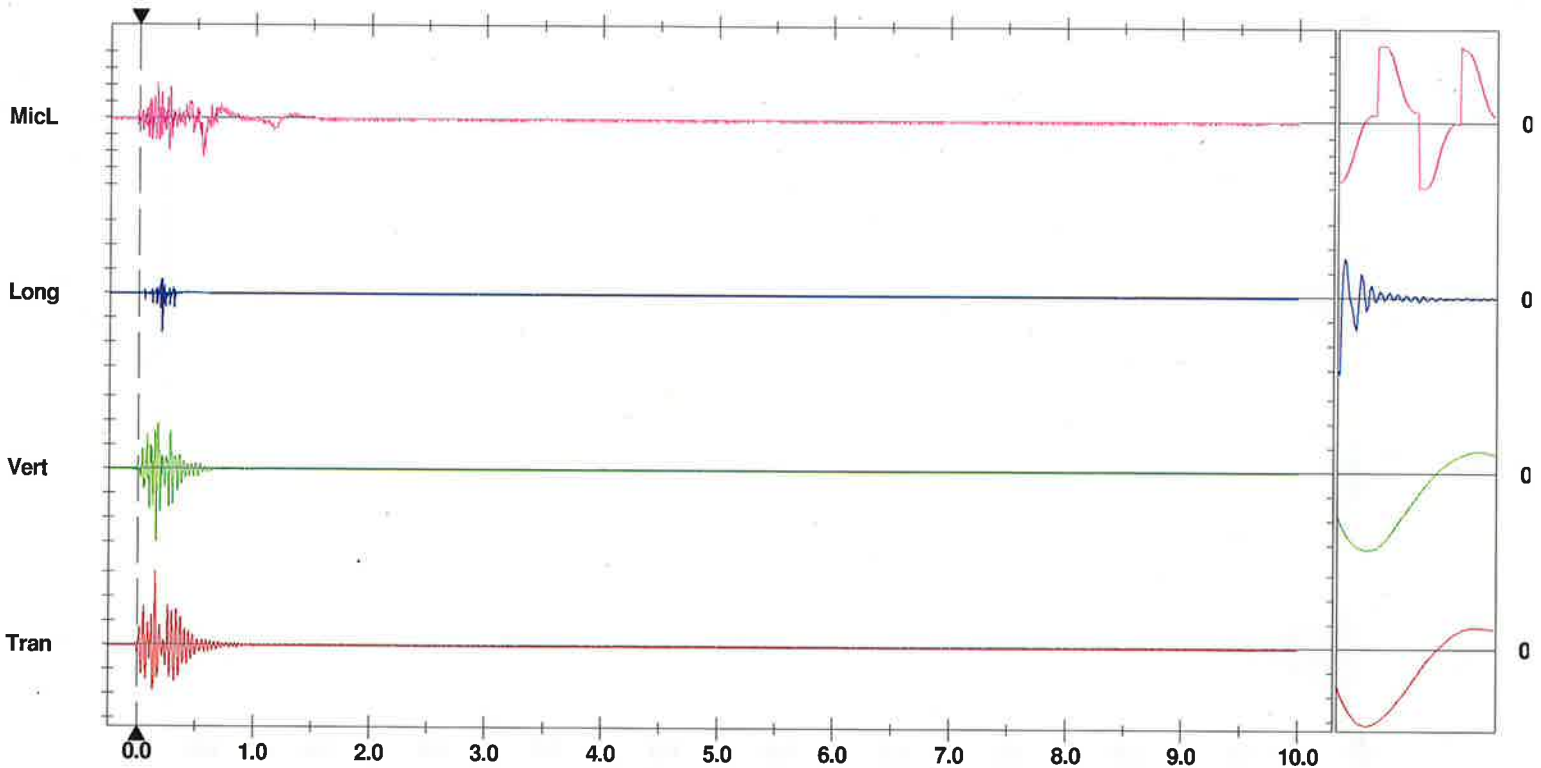
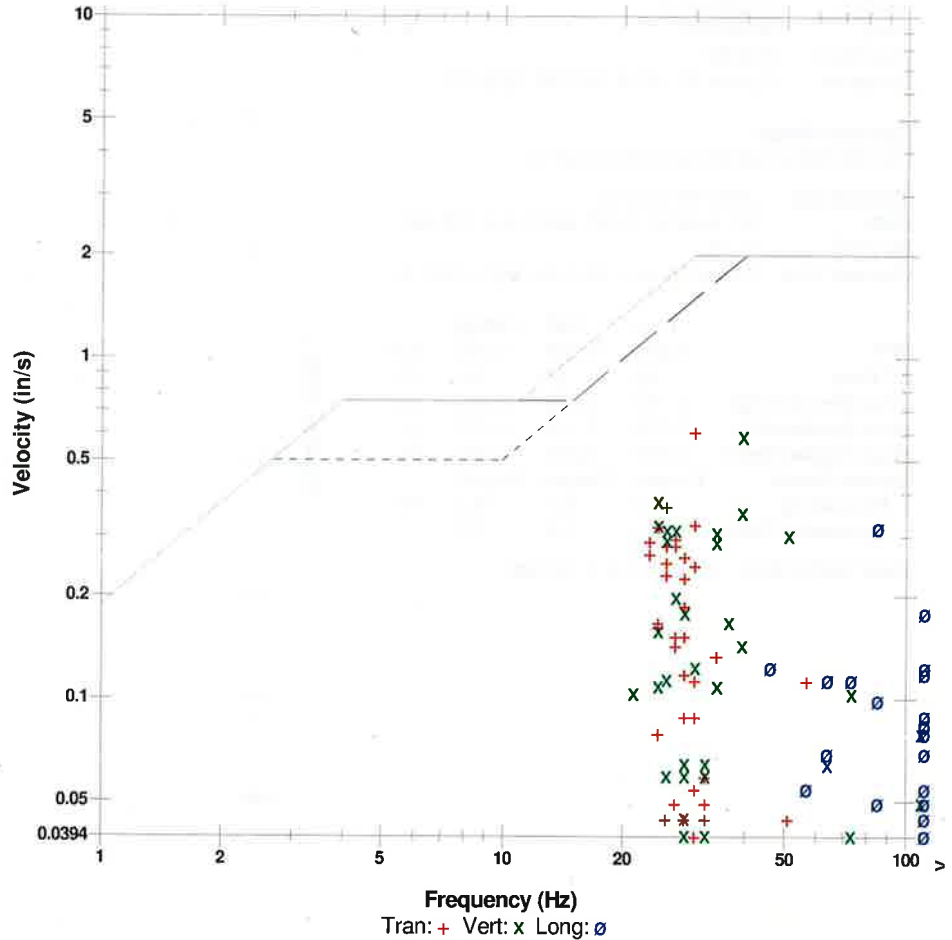
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 112.0 dB(L) 0.001 psi(L) at 0.556 sec
ZC Freq 8.0 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 522 mv)

	Tran	Vert	Long	
PPV	0.615	0.595	0.320	in/s
ZC Freq	30	39	85	Hz
Time (Rel. to Trig)	0.160	0.163	0.206	sec
Peak Acceleration	0.318	0.318	0.597	g
Peak Displacement	0.003	0.002	0.001	in
Sensor Check	Passed	Passed	Check	
Frequency	8.1	8.2	0.0	Hz
Overswing Ratio	3.4	3.3	6549.6	

Peak Vector Sum 0.804 in/s at 0.162 sec

USBM RI8507 And OSMRE



Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/24/2016	Cust. Supt. Name	Eric	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46662	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM Colder weather, snow on ground, muddy

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler,Dean T

License #: 1937

Signature:

(Handwritten signature)

Precautions Taken:

use caution when walking on rough terrain

Weather
Comments:

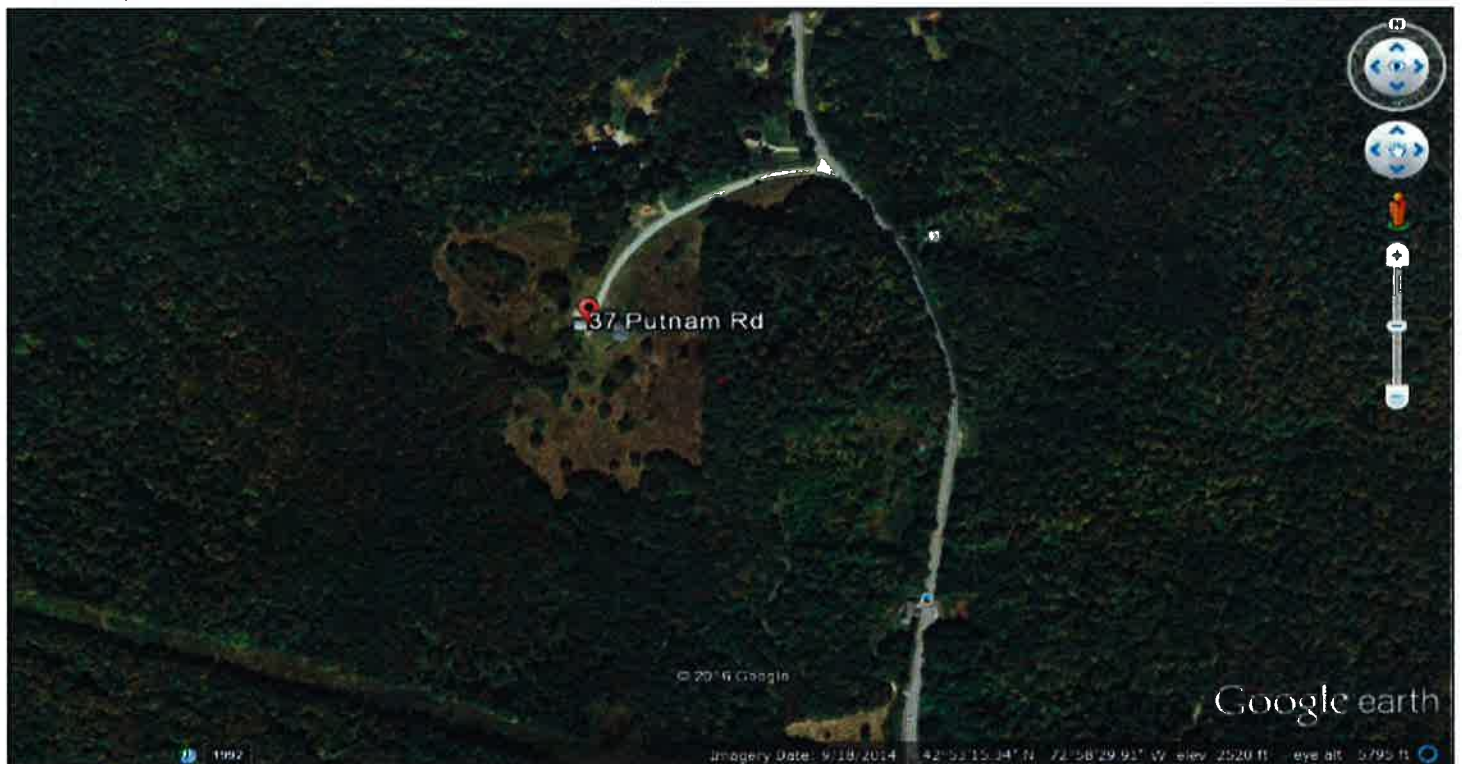
cool cloudy 35-50

No. of Crew Members 2

Crew Members Names :

brian charron	N/A	britt gellenthein	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 7 Shot Time (24hrs) 13:22 Shot VideoTaped: Y **Weather**
Weather Conditions: Cloudy
Temp (°F): 30-50
Wind Direction: South-East
Wind Spd: 0-10 **MPH**

Notes: N/A

Preblast

Blast Direction: South-West **Max Holes/Delay:** 1 **Predicted K Factor:** 160
Blast Location: o/m building **Scale Dist.:** 101.42
Location of Structure: 21 putnam rd **Max Weight/Delay:** 35 **Lbs** **Predicted PPV:** 0.10
Measurement Google Map **Dist. to Closest (Ft)** 600 **Railroad/Highway** N/A **Overhead Util** N/A **Underground Util** N/A

Pay Quantities

Fire Detail # of Hrs: N/A
Pay Square Area 1575 Feet
N/A N/A N/A
N/A N/A N/A

Pay Calculations Notes

25holesx7x9 pattern =1575 sqft

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>300.00</u>	Total SqFt	<u>1575.00</u>	Powder	<u>0.77 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>539</u>
Total Tons	<u>N/A</u>	Total Yards	<u>700.00</u>	Factor	<u>1.30 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>21.56</u>

Cal Method	<u>Pattern</u>	# Holes	<u>25</u>	Cover Used/No	<u>Blast Mats</u>	<u>21</u>			
Drill Depth	<u>12</u>	Min	<u>9</u>	Max	<u>14</u>	Stone Weight	<u>N/A /Cyd</u>	Top Stemming	<u>6</u> Min <u>8</u> Max
Burden(Feet)	<u>7</u> Feet	Min	<u>7</u>	Max	<u>7</u>	Type of Terrian	<u>Flat/Sloped</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>9</u> Feet	Min	<u>9</u>	Max	<u>9</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0</u> Min <u>0</u> Max
Hole Diameter	<u>3.5</u>	Min	<u>3.5</u>	Max	<u>3.5</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>15</u> Min <u>35</u> Max
OverBurden (Ft)	<u>1</u>	Min	<u>0</u>	Max	<u>2</u>	Height of Face	<u>4</u>	Depth of Water	<u>0</u> Min <u>4</u> Max
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>				

Total Pounds 538.71 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	506.00 Lbs
BA BULK Totals:		N/A	506.00 Lbs
Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	3	12.69 Lbs
BAPACKAGED Totals:		3	12.69 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	26	20.02 Lbs
BOOSTERS Totals:		26	20.02 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	26	
DETS DHOLE Totals:		26	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.2	500
LINES Totals:		0.2	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	8	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	27	
SURF DELAY Totals:		35	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	14.00

Stemming Stones	6
1966 Emulsion Blend	8
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	1
Sub Drilling(ft)	4
Total Depth (ft)	13.00

Stemming Stones	6
Blastex 2 3/4 X 16 38LBS/CS 9/STKS	1
1966 Emulsion Blend	6
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	2288	Triggered	0.12	N/A	139	600	195

Date/Time Long at 13:22:20 October 24, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.4 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GLRJ.T80

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 24, 2016 17:00:58 (V10.72)

Extended Notes

Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting

PSPL 139.0 dB(L) 0.026 psi(L) at 6.499 sec

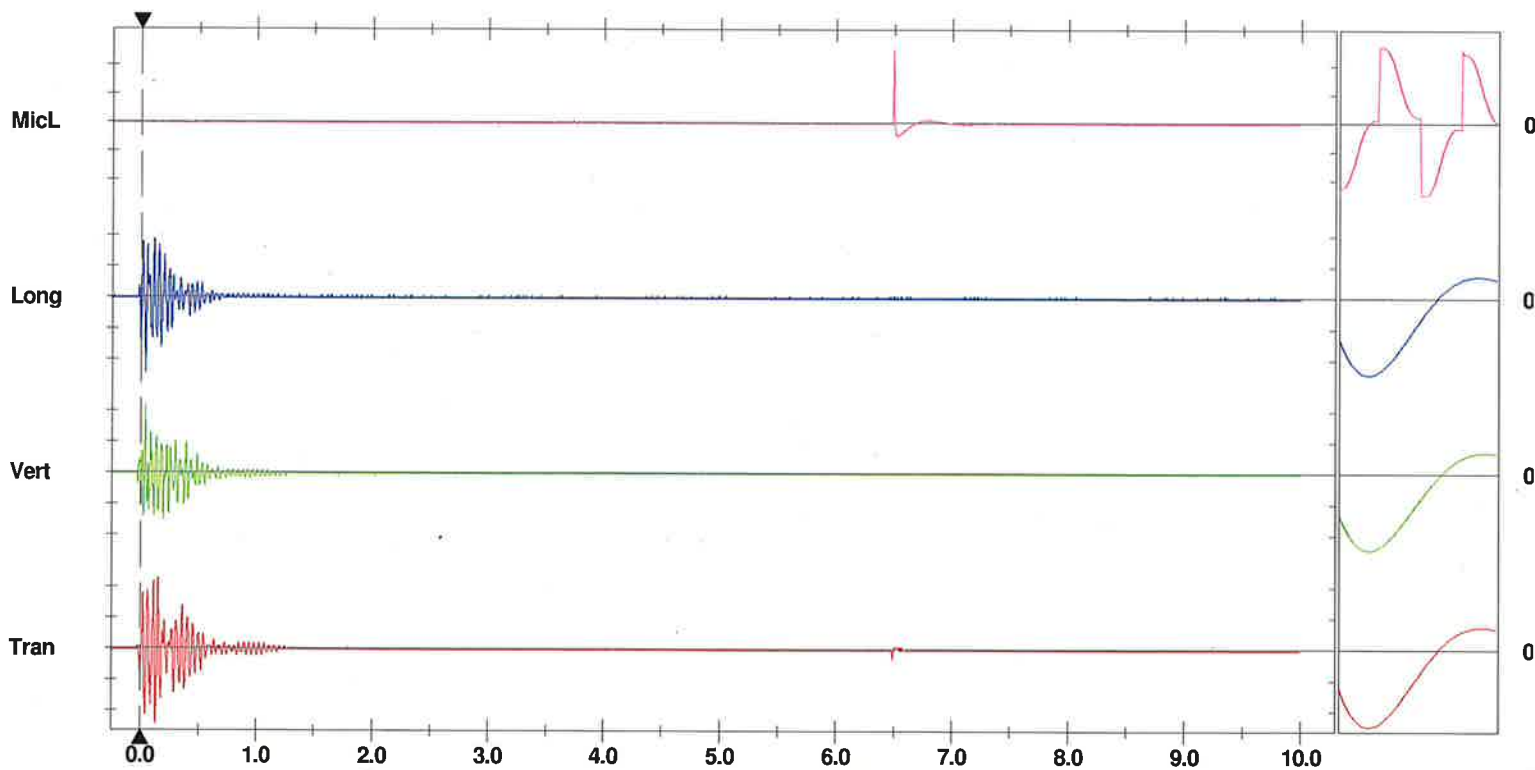
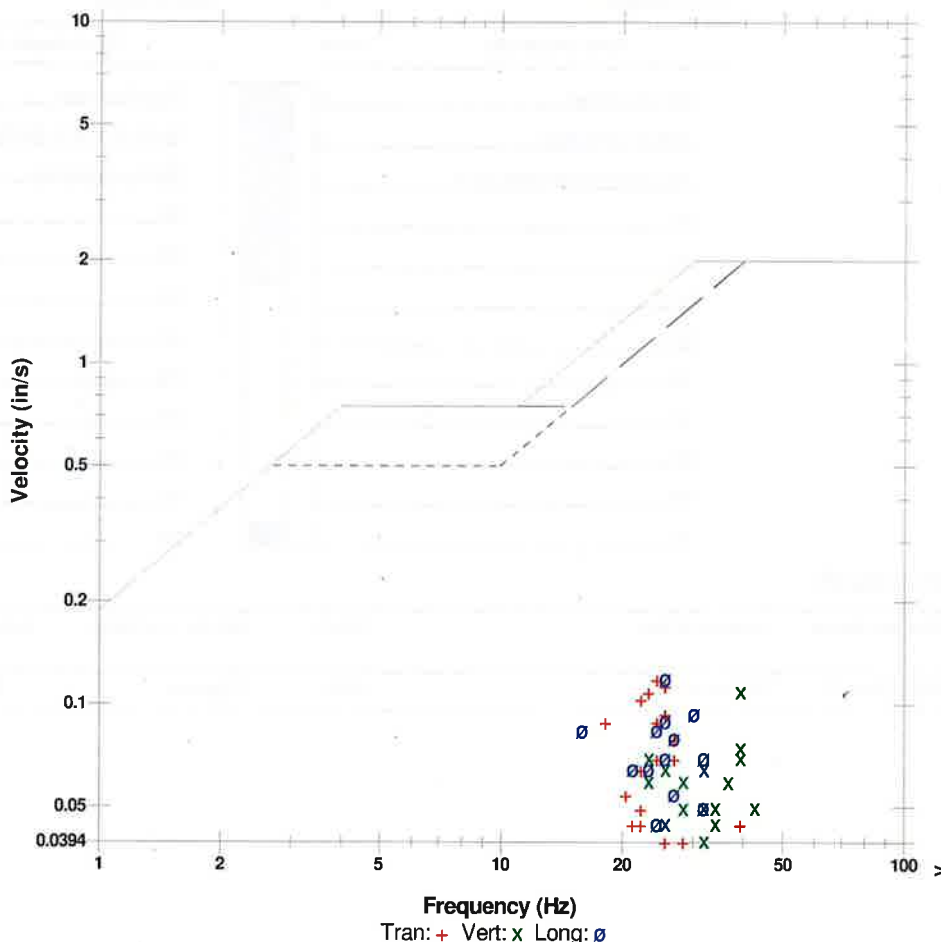
ZC Freq 28 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 501 mv)

	Tran	Vert	Long	
PPV	0.120	0.110	0.120	in/s
ZC Freq	26	39	26	Hz
Time (Rel. to Trig)	0.142	0.045	0.044	sec
Peak Acceleration	0.080	0.066	0.066	g
Peak Displacement	0.001	0.000	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.2	8.0	8.3	Hz
Overswing Ratio	3.3	3.5	3.5	

Peak Vector Sum 0.175 in/s at 0.045 sec

USBM RI8507 And OSMRE



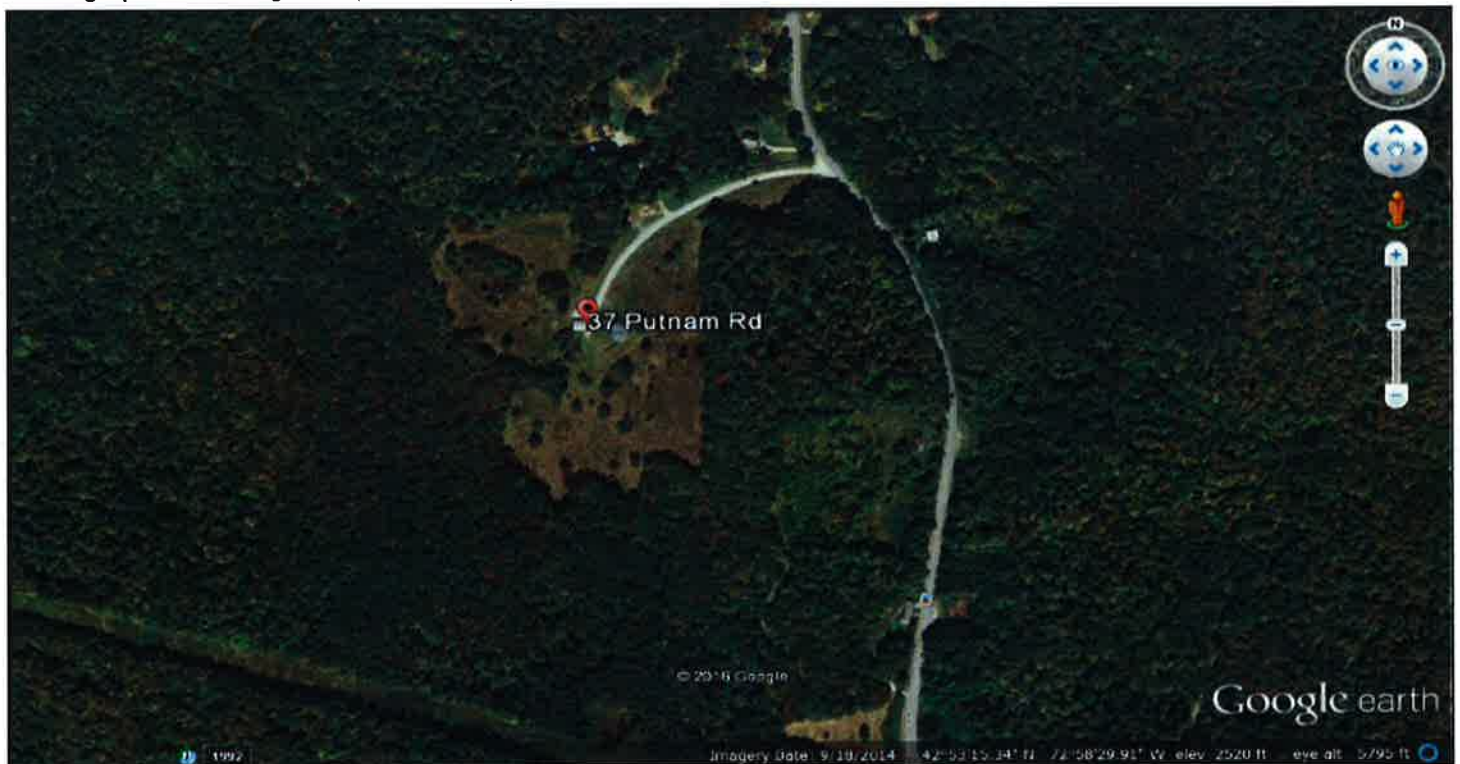
Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.010 psi(L)/div
Trigger = ▶ ◀

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/25/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46728	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	46754	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 PM	Identify Hazards	chilly	
Post Shift Insp.Time (24hrs):	12:00:00 PM			
Blaster :	Butler,Dean T	Precautions Taken:		
License #:	1937		Dress appropriately and use caution when walking on shot, rocks are frozen into ground	
Signature:		Weather Comments:	cold 30*	
No. of Crew Members	2			
Crew Members Names :				
brian charron	britt gellenthein	N/A	N/A	
N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	

Seismograph Monitoring Plan (Not to Scale):



Shot # 8 Shot Time (24hrs) 15:34 Shot VideoTaped: y**Weather**

Notes:

N/A

Weather Conditions: Partly CloudyTemp (°F): 30-40Wind Direction: WestWind Spd: 5-15 MPH**Preblast**Blast Direction: North Max Holes/Delay: 2 Predicted K Factor: 160Blast Location: on building Scale Dist.: 47.43Location of Structure: 21 putnam rd Max Weight/Delay: 160 Lbs Predicted PPV: 0.33Measurement Google Map Dist. to Closest (Ft) 600 Structure 600 Railroad/Highway N/A Overhead Util N/A Underground Util N/A**Pay Quantities**Fire Detail # of Hrs: N/A**Pay Calculations Notes**

80 holesx8x9 pattern =5760 sqft

Pay Square Area 5760 Feet

N/A N/A N/A

N/A N/A N/A

Shot Info**Configuration****1 - Open**Total Drill Depth(Ft) 1280.00 Total SqFt 5760.00 Powder 1.46 Lbs/Cyd Total Product Weight (Lbs) : 4999Total Tons N/A Total Yards 3413.33 Factor 0.68 Cyd/Lbs Avg Weight / Hole (Lbs): 62.49Cal Method Pattern# Holes 80Cover Used/No Blast Mats 21

AVG

Min Max

Drill Depth 1614 23Stone Weight N/A /CydTop Stemming 6 Min 9 MaxBurden(Feet) 8 Feet8 8Type of Terrian Flat/SlopedCharges/Hole 1 Min 1 MaxSpacing (Feet) 9 Feet9 9Type of Rock Mica/SchistDeck Stemming 0 Min 0 MaxHole Diameter 3.53.5 3.5Stemming Type 3/8" Crushed StoneCharge Wgt/Deck 40 Min 80 MaxOverBurden (Ft) 10 3Height of Face 0Depth of Water 0 Min 5 MaxControl Row Taped NAngled Holes /Face Bermed N/NLaser/BoreTracking NTotal Pounds 4999.05 LbsType Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	4874.00 Lbs
BA BULK Totals:		N/A	4874.00 Lbs

Product #	Desc	Qty	Wgt
QD51427516	Blastex 2 3/4 X 16 38LBS/CS 9/STKS	15	63.45 Lbs
BAPACKAGED Totals:		15	63.45 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	80	61.60 Lbs
BOOSTERS Totals:		80	61.60 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	80	

DETS DHOLE Totals:		80	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.2	500

LINES Totals:		0.2	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	14	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	86	

SURF DELAY Totals: 100

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	22.00

Stemming Stones	6	
1966 Emulsion Blend	16	
TROJAN SPARTAN 350G 49/CS	0	
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	2288	Triggered	0.44	N/A	120.6	600	211

Date/Time Long at 15:34:00 October 25, 2016
 Trigger Source Geo: 0.040 in/s
 Range Geo: 9.999 in/s
 Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
 Battery Level 6.3 Volts
 Unit Calibration January 26, 2016 by Instantel
 File Name D288GLTK.KO0

Notes

Location: 21 putnam rd
 Client: McDonald
 User Name: D Butler
 Converted: October 25, 2016 16:21:06 (V10.72)

Extended Notes

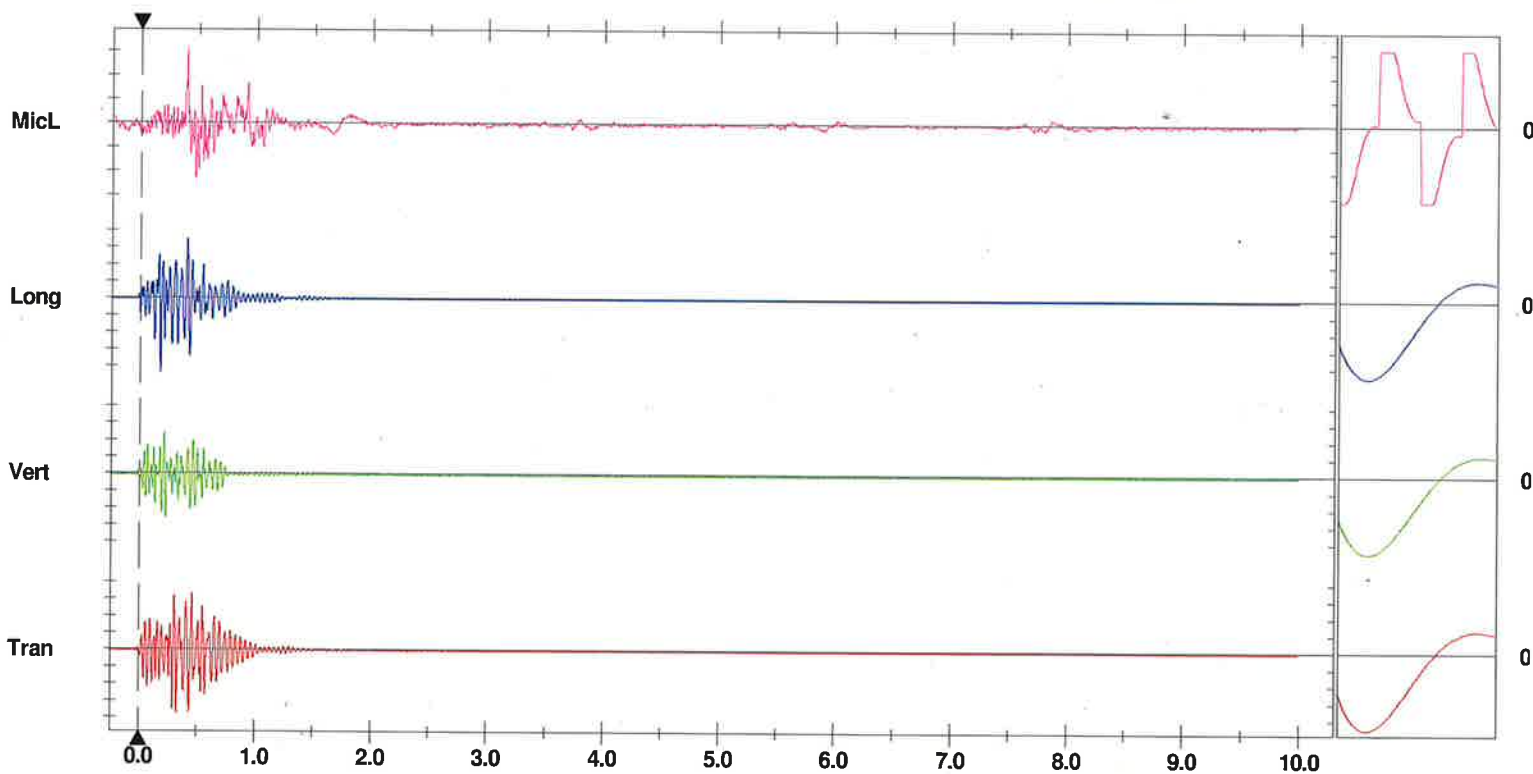
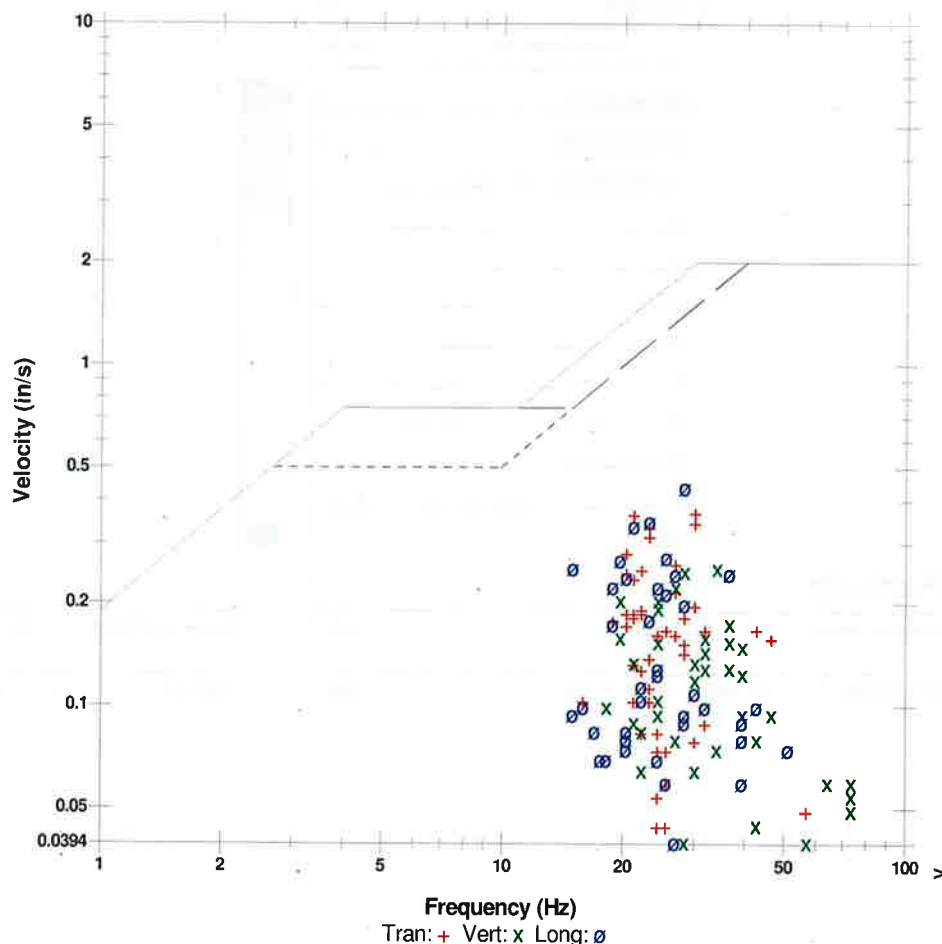
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
 PSPL 120.6 dB(L) 0.003 psi(L) at 0.407 sec
 ZC Freq 12 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 565 mv)

	Tran	Vert	Long	
PPV	0.375	0.255	0.440	in/s
ZC Freq	30	37	30	Hz
Time (Rel. to Trig)	0.341	0.234	0.183	sec
Peak Acceleration	0.239	0.146	0.186	g
Peak Displacement	0.003	0.001	0.002	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.3	8.0	8.2	Hz
Overswing Ratio	3.3	3.5	3.6	

Peak Vector Sum 0.466 in/s at 0.183 sec

USBM RI8507 And OSMRE





Job#	104-04-02718	Cust. PO#	N/A	
Date	10/26/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46801	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards	<u>mud slippery conditions</u>	
Post Shift Insp.Time (24hrs):	12:00:00 AM			
Blaster :	Butler,Dean T	Precautions Taken:		
License #:	1937		<u>Top couple inches of ground frozen, underneath is slippery mud, rocks are slippery also pick appropriate path</u>	
Signature:		Weather Comments:		
			<u>cool partyl cloudy 25-45*</u>	
No. of Crew Members	0			
Crew Members Names :				
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):

Shot # 9 Shot Time (24hrs) 11:16 Shot VideoTaped: y **Weather**

Notes: N/A Weather Conditions: Partly Cloudy

Temp (°F): 25-45

Wind Direction: North

Wind Spd: 5-15 MPH

Preblast

Blast Direction: West Max Holes/Delay: 2.00 Predicted K Factor: 242

Blast Location: access rd towards tower 1 west Scale Dist.: 180.74

Location of Structure: 21 putnam rd Max Weight/Delay: 15 Lbs Predicted PPV: 0.06

Measurement Google Map Dist. to Closest (Ft) 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes

Pay Square Area 2058 Feet 42 holes x7x7 pattern = 2058

N/A N/A N/A

N/A N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>378.00</u>	Total SqFt	<u>2058.00</u>	Powder	<u>1.04 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>714</u>
Total Tons	<u>N/A</u>	Total Yards	<u>686.00</u>	Factor	<u>0.96 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>17.00</u>

Cal Method	<u>Pattern</u>		
# Holes	<u>42</u>	Cover Used/No Blast Mats	<u>21</u>
	<u>AVG</u>	<u>Min</u>	<u>Max</u>
Drill Depth	<u>9.00</u>	<u>8.00</u>	<u>10.00</u>
Burden(Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>
Spacing (Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>
Hole Diameter	<u>3.50</u>	<u>3.50</u>	<u>3.50</u>
OverBurden (Ft)	<u>2.00</u>	<u>0.00</u>	<u>4.00</u>
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/N</u>
		Laser/BoreTracking	<u>N</u>

Total Pounds 714.48 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	696.00 Lbs
BA BULK Totals:		N/A	696.00 Lbs
Product #	Desc	Qty	Wgt
SP0200	TROJAN SPARTAN 1/2 # 200G 72/CS	42.00	18.48 Lbs
BOOSTERS Totals:		42.00	18.48 Lbs

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.4	1000
LINES Totals:		0.4	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	1.00	
SURF DELAY Totals:		8.00	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 1/2 # 200G 72/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 1/2 # 200G 72/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.135	N/A	117.8	700	552

Date/Time Vert at 11:00:16 October 26, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GLV2.KG0

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 26, 2016 15:18:55 (V10.72)

Extended Notes

Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting

PSPL 117.8 dB(L) 0.002 psi(L) at 0.789 sec

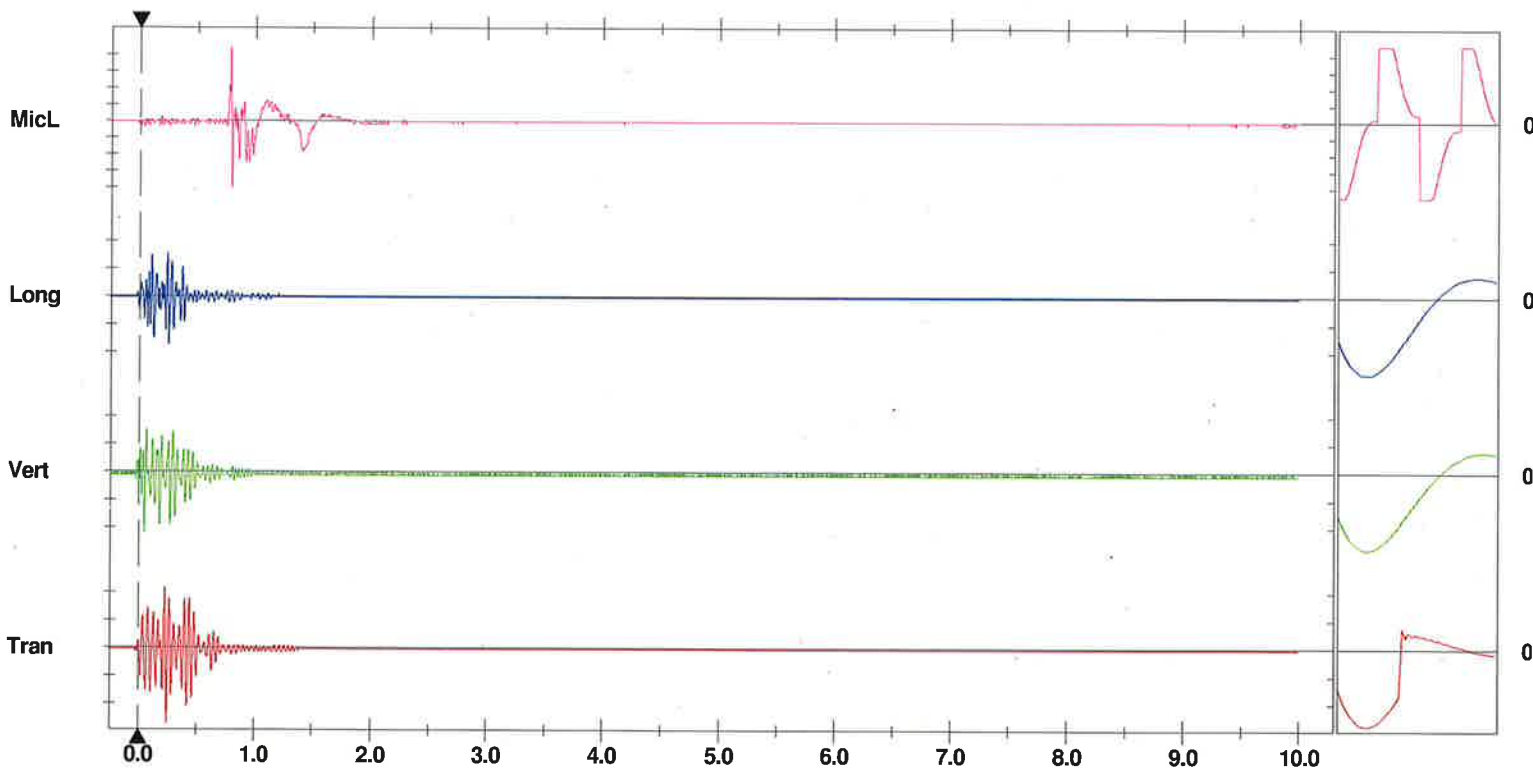
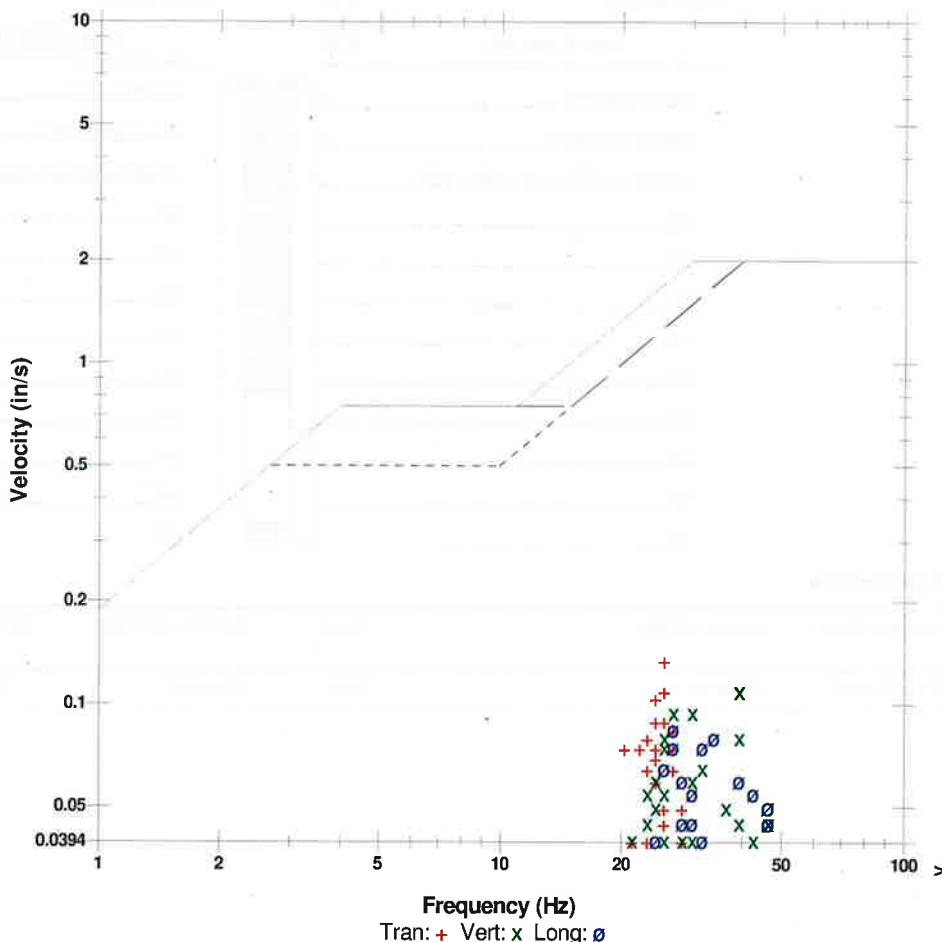
ZC Freq 16 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 564 mv)

	Tran	Vert	Long	
PPV	0.135	0.110	0.085	in/s
ZC Freq	27	39	28	Hz
Time (Rel. to Trig)	0.253	0.054	0.257	sec
Peak Acceleration	0.066	0.080	0.053	g
Peak Displacement	0.001	0.001	0.000	in
Sensor Check	Check	Passed	Passed	
Frequency	12.4	8.0	8.2	Hz
Overswing Ratio	4.5	3.6	3.6	

Peak Vector Sum 0.153 in/s at 0.255 sec

USBM RI8507 And OSMRE



Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



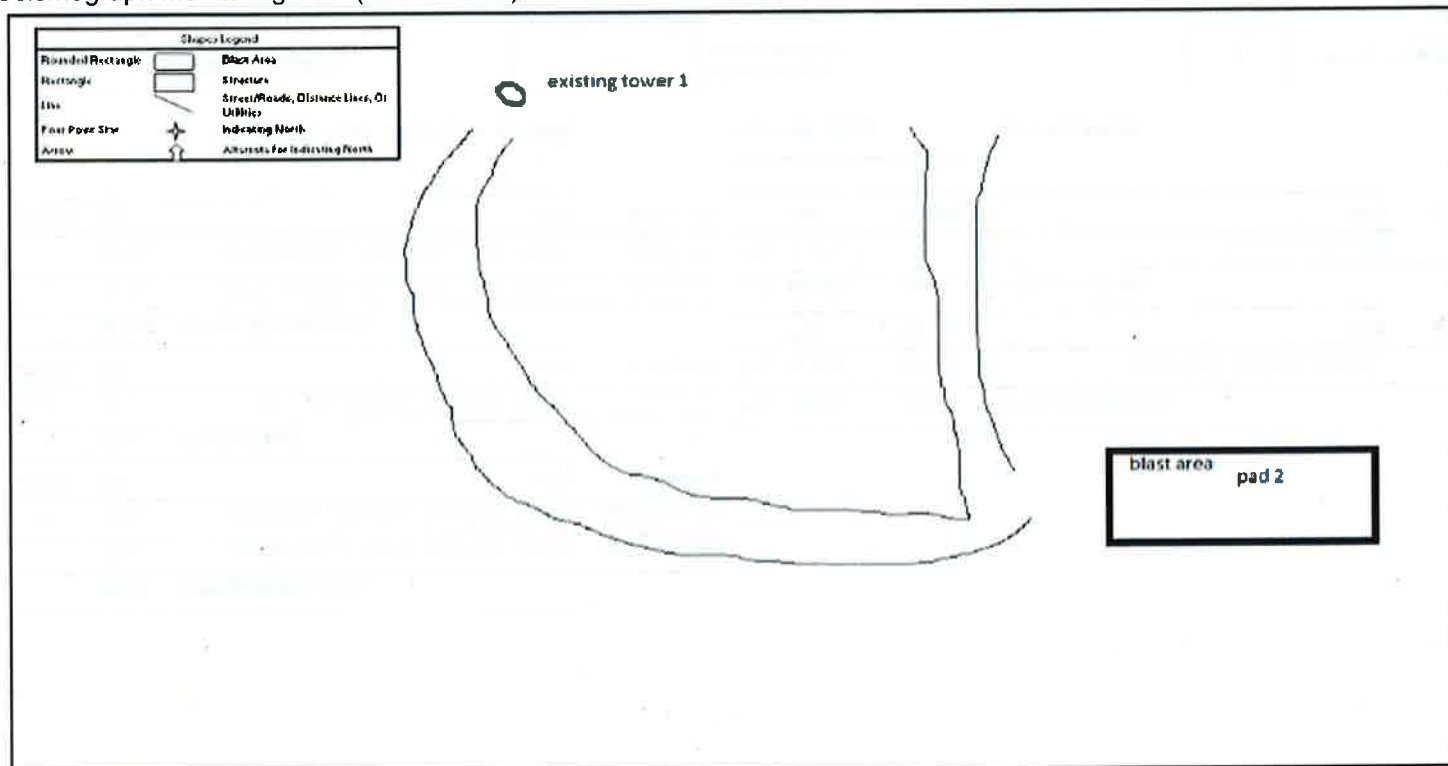
Job#	104-04-02718	Cust. PO#	N/A	
Date	10/26/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46803	N/A
Job Address	Route 8 J.A. McDonald Inc. Deerfield	N/A	N/A	N/A
	Wind	N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards		
Post Shift Insp.Time (24hrs):	12:00:00 AM	Equipment & Personnel		
Blaster :	Charron; Brian J.	Precautions Taken:		
License #:	1132	Moved all out of Blast zone		
Signature:				

Weather
Comments:

Over cast

No. of Crew Members	3		
Crew Members Names :			
Cody B.	Dean B	Britt G	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 8 Shot Time (24hrs) 15:22 Shot VideoTaped: yWeather**Notes:**

Bulk product used in shot on tower 2 is a combination of two pick tickets. East ridge used 14,388 lb bulk emulsion, 277 350g Boosters, 255 30' ez Dets, 22 40' EzDet, 36 17 Ms EZTL, 6 25 ms Eztl. This note is only due to ebr issues related to computer work and working off multiple pick tickets. ticket # 46803,46801

Weather Conditions: CloudyTemp (°F): 30-40Wind Direction: WestWind Spd: 10-15 MPH**Preblast**

Blast Direction: East Max Holes/Delay: 2.00 Predicted K Factor: 242
 Blast Location: Tower pad #2 Scale Dist.: 64.82
 Location of Structure: existing tower 1 Max Weight/Delay: 238.00 Lbs Predicted PPV: 0.31
 Measurement Physical Dist. to Closest (Ft) Structure 1000 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay QuantitiesFire Detail # of Hrs: N/A**Pay Calculations Notes**Pay Square Area 24930.00 Feet

277 holes x 9x10 pattern = 24,930 sqft

N/A N/A N/A

N/A N/A N/A

Shot Info**Configuration****1 - Open**

Total Drill Depth(Ft) 3601.00 Total SqFt 24930.00 Powder 0.64 Lbs/Cyd Total Product Weight (Lbs) : 7637
 Total Tons N/A Total Yards 12003.33 Factor 1.57 Cyd/Lbs Avg Weight / Hole (Lbs): 27.57

Cal Method Pattern# Holes 277Cover Used/No N/A**AVG****Min Max**Drill Depth 13.0010.00 21.00Stone Weight N/A /CydTop Stemming 4.00 Min 5.00 MaxBurden(Feet) 9.00 Feet9.00 9.00Type of Terrian SlopedCharges/Hole 1 Min 1 MaxSpacing (Feet) 10.00 Feet10.00 10.00Type of Rock Mica/SchistDeck Stemming 0.00 Min 0.00 MaxHole Diameter 4.004.00 4.00Stemming Type 3/8" Crushed StoneCharge Wgt/Deck 35.00 Min 119.00 MaxOverBurden (Ft) 1.000.00 3.00Height of Face 0.00Depth of Water 9.00 Min 15.00 MaxControl Row Taped NAngled Holes /Face Bermed N/YLaser/BoreTracking NTotal Pounds 7637.29 LbsType Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		7424.00 Lbs
BA BULK Totals:		N/A	7424.00 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	255.00	
DXABZ641	NONEL EZDET 25/350 40FT ZCOMP 30/CS	22.00	

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	277.00	213.29 Lbs
BOOSTERS Totals:		277.00	213.29 Lbs

Product #	Desc	Qty	Length
DETS DHOLE Totals: 277.00			
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	1.00	2500.00

LINES Totals: 1.00

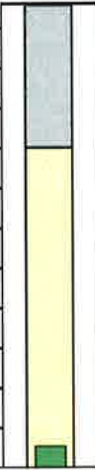
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	36.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	6.00	

SURF DELAY Totals: 42.00

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0.00
Sub Drilling(ft)	4.00
Total Depth (ft)	13.00

Stemming Stones	4.00
1966 Emulsion Blend	9.00
TROJAN SPARTAN 350G 49/CS	0.00
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

**Seismographs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Charron;Brian J.	existing tower 1	3042	Triggered	0.145	N/A	127.6	1000	115

Date/Time Long at 15:22:18 October 26, 2016
 Trigger Source Geo: 0.040 in/s
 Range Geo: 9.999 in/s
 Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
 Battery Level 6.5 Volts
 Unit Calibration January 26, 2016 by Instantel
 File Name D288GLVE.P60

Notes
 Location: Existing Tower 1 East
 Client: McDonald
 User Name: D Butler
 Converted: October 26, 2016 15:37:42 (V10.72)

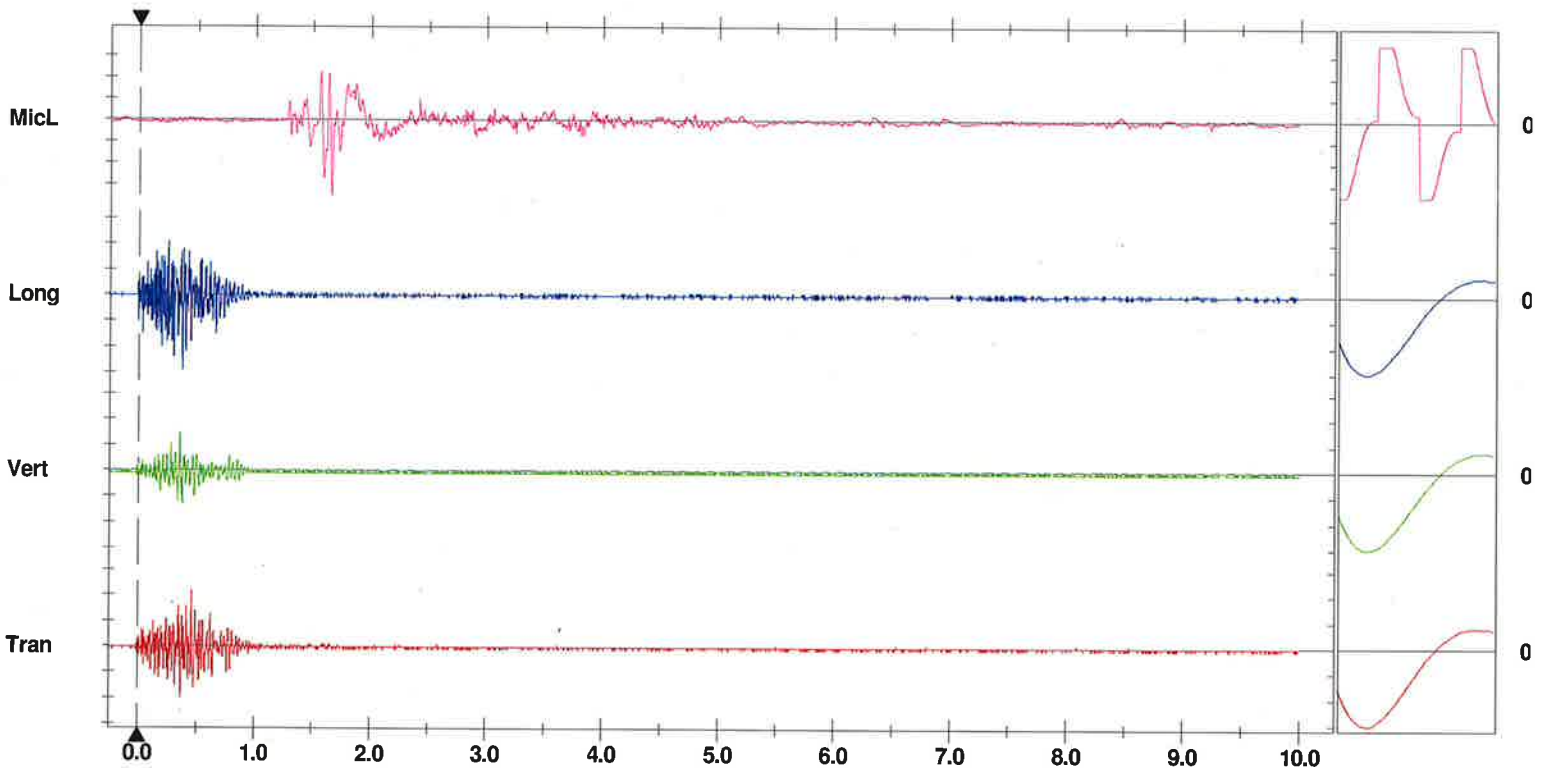
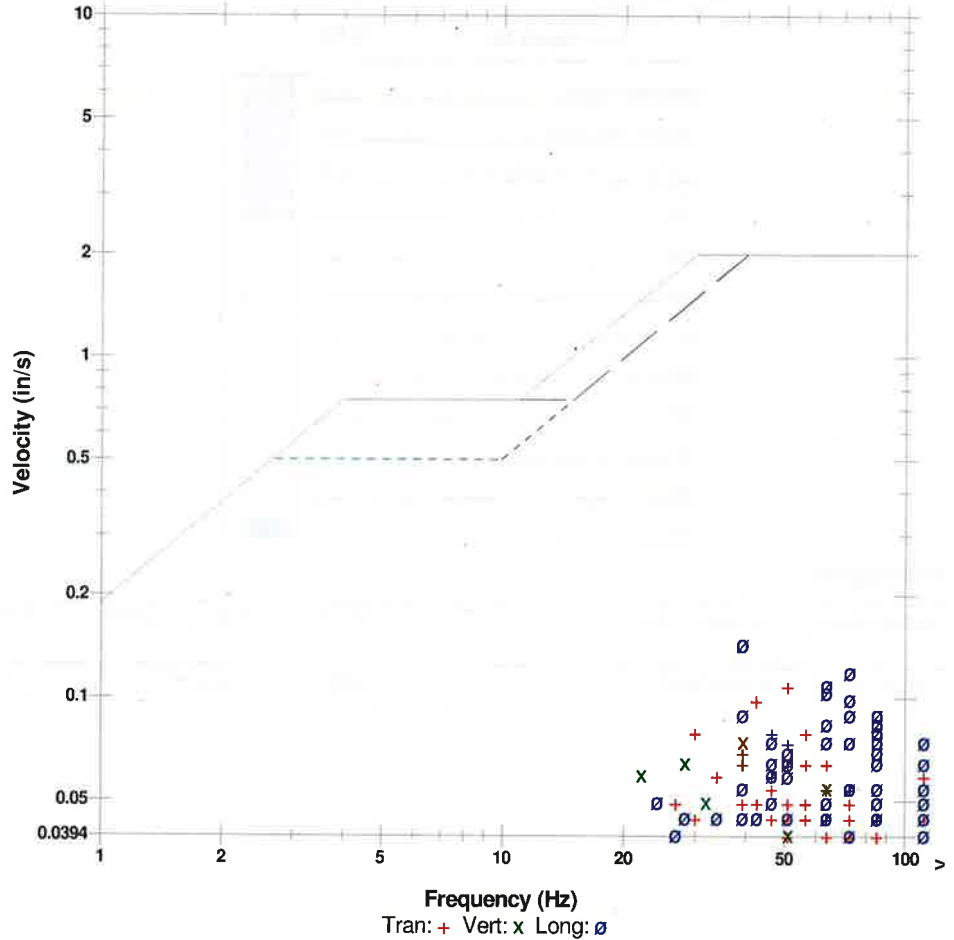
Extended Notes
 Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
 PSPL 127.6 dB(L) 0.007 psi(L) at 1.668 sec
 ZC Freq 11 Hz
 Channel Test Passed (Freq = 20.0 Hz Amp = 565 mv)

	Tran	Vert	Long	
PPV	0.110	0.075	0.145	in/s
ZC Freq	47	39	39	Hz
Time (Rel. to Trig)	0.469	0.361	0.381	sec
Peak Acceleration	0.093	0.053	0.146	g
Peak Displacement	0.000	0.000	0.000	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.2	7.8	8.0	Hz
Overswing Ratio	3.4	3.6	3.8	

Peak Vector Sum 0.153 in/s at 0.381 sec

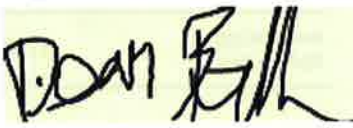
USBM RI8507 And OSMRE



Time Scale: 0.50 sec/div Amplitude Scale: Geo: 0.050 in/s/div Mic: 0.002 psi(L)/div
 Trigger =

Sensor Check



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/26/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46801	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards	mud slippery conditions	
Post Shift Insp.Time (24hrs):	12:00:00 AM			
Blaster :	Butler;Dean T	Precautions Taken:	Top couple inches of ground frozen, underneath is slippery mud, rocks are slippery also pick appropriate path	
License #:	1937	Weather Comments:	cool partyl cloudy 25-45*	
Signature:				
No. of Crew Members	0			
Crew Members Names :				
N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	

Seismograph Monitoring Plan (Not to Scale):

Shot # 9 Shot Time (24hrs) 11:16 Shot VideoTaped: Y **Weather**
 Notes: N/A Weather Conditions: Partly Cloudy
 Temp (°F): 25-45
 Wind Direction: North
 Wind Spd: 5-15 MPH

Preblast

Blast Direction: West Max Holes/Delay: 2.00 Predicted K Factor: 242
 Blast Location: access rd towards tower 1 west Scale Dist.: 180.74
 Location of Structure: 21 putnam rd Max Weight/Delay: 15 Lbs Predicted PPV: 0.06
 Measurement Google Map Dist. to Closest (Ft) 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A
 Pay Square Area 2058 Feet
 N/A N/A N/A
 N/A N/A N/A

Pay Calculations Notes

42 holes x7x7 pattern = 2058

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>378.00</u>	Total SqFt	<u>2058.00</u>	Powder	<u>1.04</u> Lbs/Cyd	Total Product	<u>714</u>
Total Tons	<u>N/A</u>	Total	<u>686.00</u>	Factor	<u>0.96</u> Cyd/Lbs	Avg Weight /	<u>17.00</u>
		Yards				Hole (Lbs):	

Cal Method	Pattern						
# Holes	<u>42</u>	Cover Used/No	Blast Mats	<u>21</u>			
	<u>AVG</u>	<u>Min</u>	<u>Max</u>				
Drill Depth	<u>9.00</u>	<u>8.00</u>	<u>10.00</u>	Stone Weight	<u>N/A</u> /Cyd	Top Stemming	<u>6.00</u> Min <u>8.00</u> Max
Burden(Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>	Type of Terrian	<u>Flat/Sloped</u>	Charges/Hole	<u>1</u> Min <u>1</u> Max
Spacing (Feet)	<u>7.00</u> Feet	<u>7.00</u>	<u>7.00</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0.00</u> Min <u>0.00</u> Max
Hole Diameter	<u>3.50</u>	<u>3.50</u>	<u>3.50</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>15.00</u> Min <u>20.00</u> Max
OverBurden (Ft)	<u>2.00</u>	<u>0.00</u>	<u>4.00</u>	Height of Face	<u>0.00</u>	Depth of Water	<u>0.00</u> Min <u>6.00</u> Max
Control Row Taped	<u>N</u>	Angled Holes	/Face Bermed	<u>N/N</u>	Laser/BoreTracking	<u>N</u>	

Total Pounds 714.48 Lbs

Type Of Initiation: Non-Electric

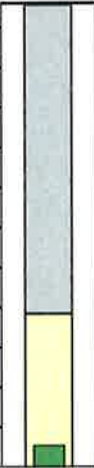
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend	1.26	696.00 Lbs
BA BULK Totals:		N/A	696.00 Lbs
Product #	Desc	Qty	Wgt
SP0200	TROJAN SPARTAN 1/2 # 200G 72/CS	42.00	18.48 Lbs
BOOSTERS Totals:		42.00	18.48 Lbs

Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	0.4	1000
LINES Totals:		0.4	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	7	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	1.00	
SURF DELAY Totals:		8.00	

Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 1/2 # 200G 72/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	


Description: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	9.00

Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 1/2 # 200G 72/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.135	N/A	117.8	700	552

Date/Time Vert at 11:00:16 October 26, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by Instantel
File Name D288GLV2.KG0

Notes

Location: 21 putnam rd
Client: McDonald
User Name: D Butler
Converted: October 26, 2016 15:18:55 (V10.72)

Extended Notes

Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting

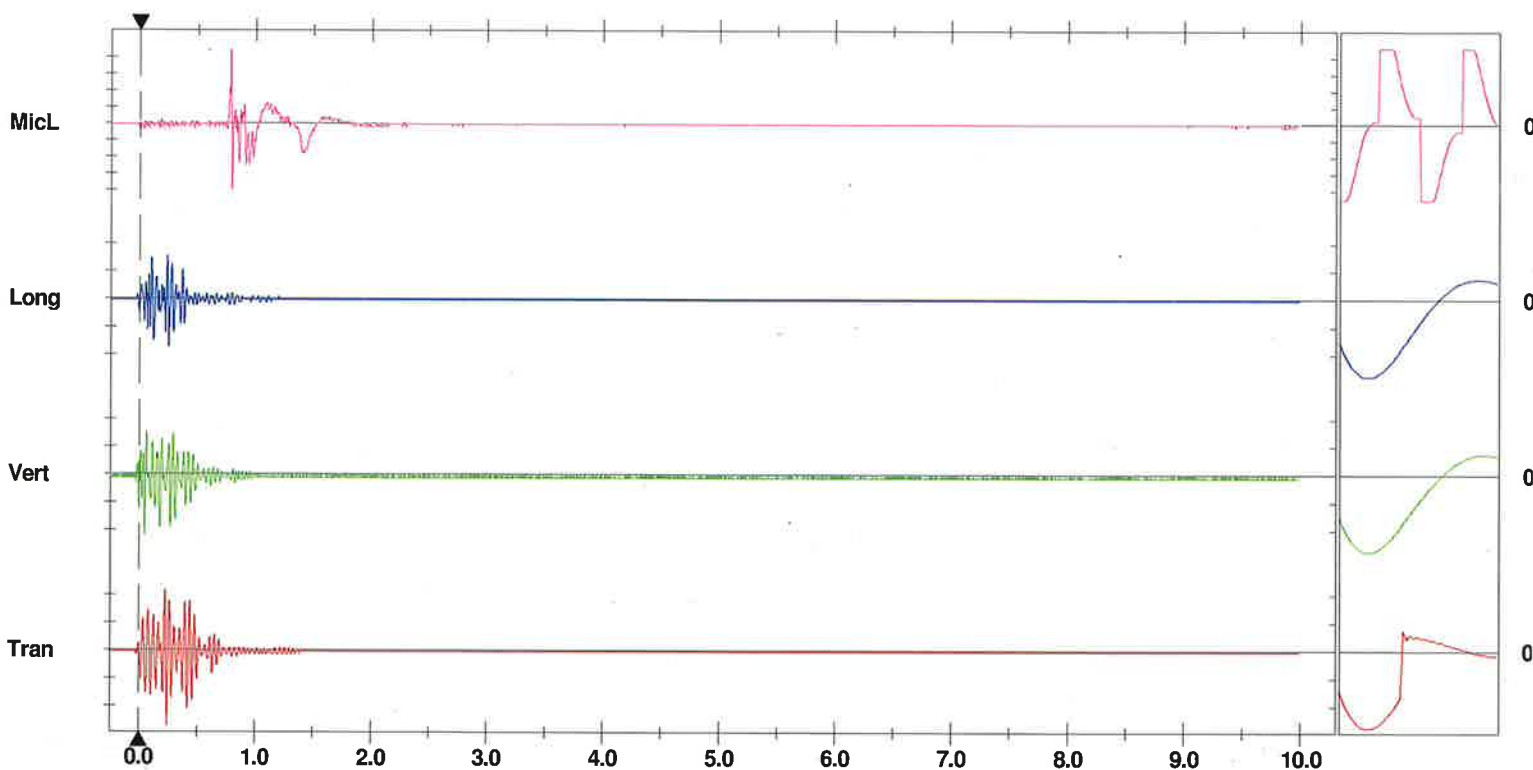
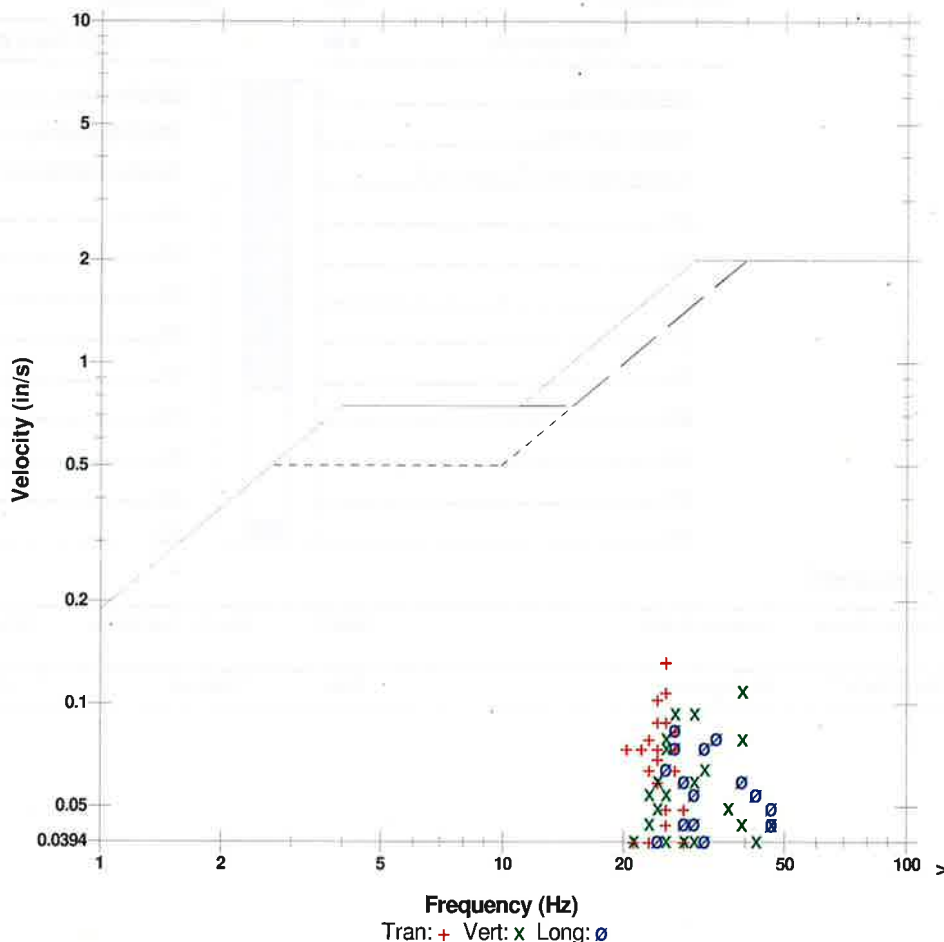
PSPL 117.8 dB(L) 0.002 psi(L) at 0.789 sec

ZC Freq 16 Hz

Channel Test Passed (Freq = 20.0 Hz Amp = 564 mv)

	Tran	Vert	Long	
PPV	0.135	0.110	0.085	in/s
ZC Freq	27	39	28	Hz
Time (Rel. to Trig)	0.253	0.054	0.257	sec
Peak Acceleration	0.066	0.080	0.053	g
Peak Displacement	0.001	0.001	0.000	in
Sensor Check	Check	Passed	Passed	
Frequency	12.4	8.0	8.2	Hz
Overswing Ratio	4.5	3.6	3.6	

Peak Vector Sum 0.153 in/s at 0.255 sec

USBM RI8507 And OSMRE



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/27/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46864	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 PM snow

Post Shift Insp.Time (24hrs): 12:00:00 PM

Blaster : Butler,Dean T

License #: 1937

Signature:

DB

Precautions Taken:

chain trucks up, very slippery caregul when walking

Weather
Comments:

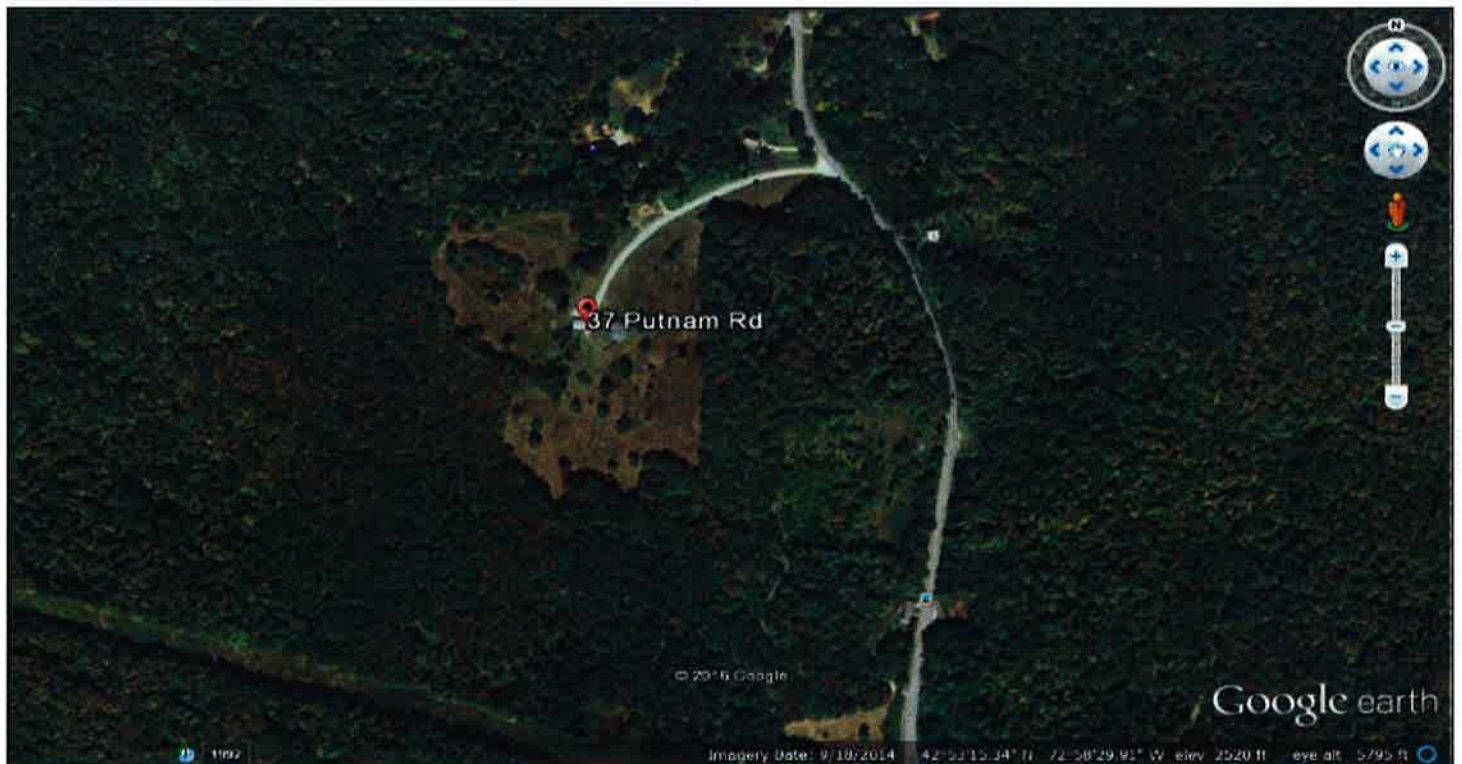
snowy 24-30

No. of Crew Members 2

Crew Members Names :

ritt gellenthien	brian charron	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 10 Shot Time (24hrs) 2:30 Shot VideoTaped: Y Weather
 Notes: N/A Weather Conditions: Rain
 Temp (°F): 30-40
 Wind Direction: South-East
 Wind Spd: 5-10 MPH

Preblast

Blast Direction: West Max Holes/Delay: 1 Predicted K Factor: 160
 Blast Location: access rd towards towers Scale Dist.: 180.74
 Location of Structure: 21 putnam rd Max Weight/Delay: 15 Lbs Predicted PPV: 0.04
 Measurement Google Map Dist. to Closest (Ft) 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A Pay Calculations Notes
 Pay Square Area 637 Feet 13x7x7=637 sqft
 N/A N/A
 N/A N/A

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>108.00</u>	Total SqFt	<u>588.00</u>	Powder	<u>0.87 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>170</u>
Total Tons	<u>N/A</u>	Total Yards	<u>196.00</u>	Factor	<u>1.15 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>14.17</u>

Cal Method	Pattern								
# Holes	<u>12</u>	Cover Used/No	<u>N/A</u>						
	AVG	Min	Max						
Drill Depth	<u>9</u>	<u>9</u>	<u>12</u>	Stone Weight	<u>N/A /Cyd</u>	Top Stemming	<u>6</u> Min	<u>8</u> Max	
Burden(Feet)	<u>7</u> Feet	<u>7</u>	<u>7</u>	Type of Terrian	<u>Flat</u>	Charges/Hole	<u>1</u> Min	<u>2</u> Max	
Spacing (Feet)	<u>7</u> Feet	<u>7</u>	<u>7</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0</u> Min	<u>0</u> Max	
Hole Diameter	<u>3.5</u>	<u>3.5</u>	<u>3.5</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>3.33</u> Min	<u>15</u> Max	
OverBurden (Ft)	<u>1</u>	<u>0</u>	<u>5</u>	Height of Face	<u>0</u>	Depth of Water	<u>0</u> Min	<u>5</u> Max	
Control Row Taped	<u>N</u>	Angled Holes /Face Bermed	<u>N/Y</u>	Laser/BoreTracking	<u>N</u>				

Total Pounds 170.00 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		150.00 Lbs
BA BULK Totals:		N/A	150.00 Lbs
Product #	Desc	Qty	Wgt
QD51425016	Blastex 2 1/2 X 16 40LBS/CS 12/STKS	3	9.99 Lbs
BAPACKAGED Totals:		3	9.99 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	13	10.01 Lbs
BOOSTERS Totals:		13	10.01 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	13	
DETS DHOLE Totals:		13	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	3	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS		
SURF DELAY Totals:		3	

Descriptor: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	9.00

Stemming Stones	6	
1966 Emulsion Blend	3	
TROJAN SPARTAN 350G 49/CS	0	
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		

Seismographs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
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Job#	104-04-02718	Cust. PO#	N/A	
Date	10/28/2016	Cust. Supt. Name	Buddy Bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	68463	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM snow

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler;Dean T

License #: 1937

Signature:

08

Precautions Taken:

very slippery, walk with caution

Weather
Comments:

snowy cool 25-40

No. of Crew Members 3

Crew Members Names :

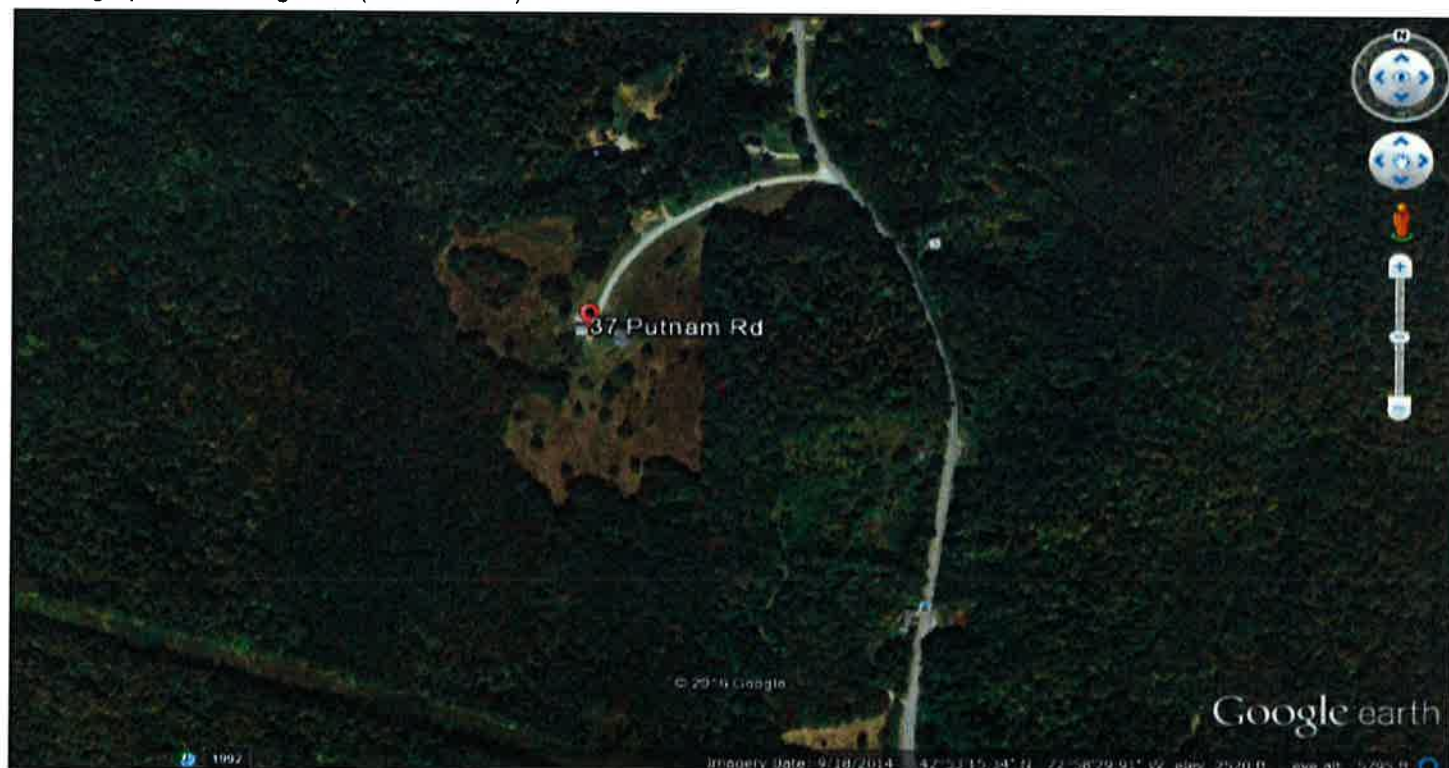
Britt Gellenthien Brad morehouse

N/A N/A Mike warrington N/A

N/A N/A N/A N/A

N/A N/A N/A N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 11 Shot Time (24hrs) 14:24 Shot VideoTaped: y

Weather**Notes:**

N/A

Weather Conditions: Cloudy

Temp (°F): 25-40

Wind Direction: South-East

Wind Spd: 5-10 MPH

Preblast

Blast Direction: West

Max Holes/Delay: 2.00

Predicted K Factor: 160

Blast Location: access rd to tower 1 wes t

Scale Dist.: 127.80

Location of Structure: 21 putnam rd

Max Weight/Delay: 30.00 Lbs

Predicted PPV: 0.07

Measurement Google Map Dist. to Closest (Ft) Structure 700 Railroad/Highway N/A Overhead Util N/A Underground Util N/A

Pay Quantities

Fire Detail # of Hrs: N/A

Pay Calculations Notes

Pay Square Area 2303.00 Feet

N/A N/A N/A

N/A N/A N/A

47x7x7=2303 sqft

Shot Info**Configuration****1 - Open**

Total Drill Depth(Ft) 423.00

Total SqFt 2303.00

Powder 0.85 Lbs/Cyd

Total Product Weight (Lbs) : 654

Total Tons N/A

Total Yards 767.67

Factor 1.17 Cyd/Lbs

Avg Weight / Hole (Lbs): 13.91

Cal Method Pattern

Holes 47

Cover Used/No N/A

AVG**Min Max**

Drill Depth 9.00

8.00 12.00

Stone Weight N/A /Cyd

Top Stemming 6.00 Min 8.00 Max

Burden(Feet) 7.00 Feet

7.00 7.00

Type of Terrian Flat

Charges/Hole 1 Min 1 Max

Spacing (Feet) 7.00 Feet

7.00 7.00

Type of Rock Mica/Schist

Deck Stemming 0.00 Min 0.00 Max

Hole Diameter 3.50

3.50 3.50

Stemming Type 3/8" Crushed Stone

Charge Wgt/Deck 15.00 Min 20.00 Max

OverBurden (Ft) 0.00

0.00 3.00

Height of Face 0.00

Depth of Water 7.00 Min 9.00 Max

Control Row Taped N

Angled Holes /Face Bermed N/N

Laser/BoreTracking N

Total Pounds 654.19 Lbs

Type Of Initiation: Non-Electric

Product #	Desc	Density	Wgt
405	Bulk Powernel 1500 Emulsion		618.00 Lbs
BA BULK Totals:		N/A	618.00 Lbs

Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	47.00	36.19 Lbs
BOOSTERS Totals:		47.00	36.19 Lbs

Product #	Desc	Qty	Length
DXABZ623	NONEL EZDET 25/350 24FT ZCOMP 60/CS	47.00	
DETS DHOLE Totals:		47.00	

Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	11.00	
DY25Z812ME	NONEL EZTL CPZ 25 MS 12FT 90/180/CS	6.00	
SURF DELAY Totals:		17.00	

Descripton: typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2.00
Sub Drilling(ft)	4.00
Total Depth (ft)	9.00

Stemming Stones	6.00	
Bulk Powernel 1500 Emulsion	3.00	
TROJAN SPARTAN 350G 49/CS	0.00	
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		
N/A		

Seismograhs

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq.	Actual db	Actual Dist. (ft)	Actual K Factor
Butler,Dean T	21 putnam rd	2288	Triggered	0.145	N/A	111.5	700	340

Date/Time Vert at 14:24:58 October 28, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by Instantel
File Name D288GLZ1.DM0

Notes

Location: 21 Putnam Rd.
Client: McDonald
User Name: D Butler
Converted: October 31, 2016 06:45:47 (V10.72)

Extended Notes

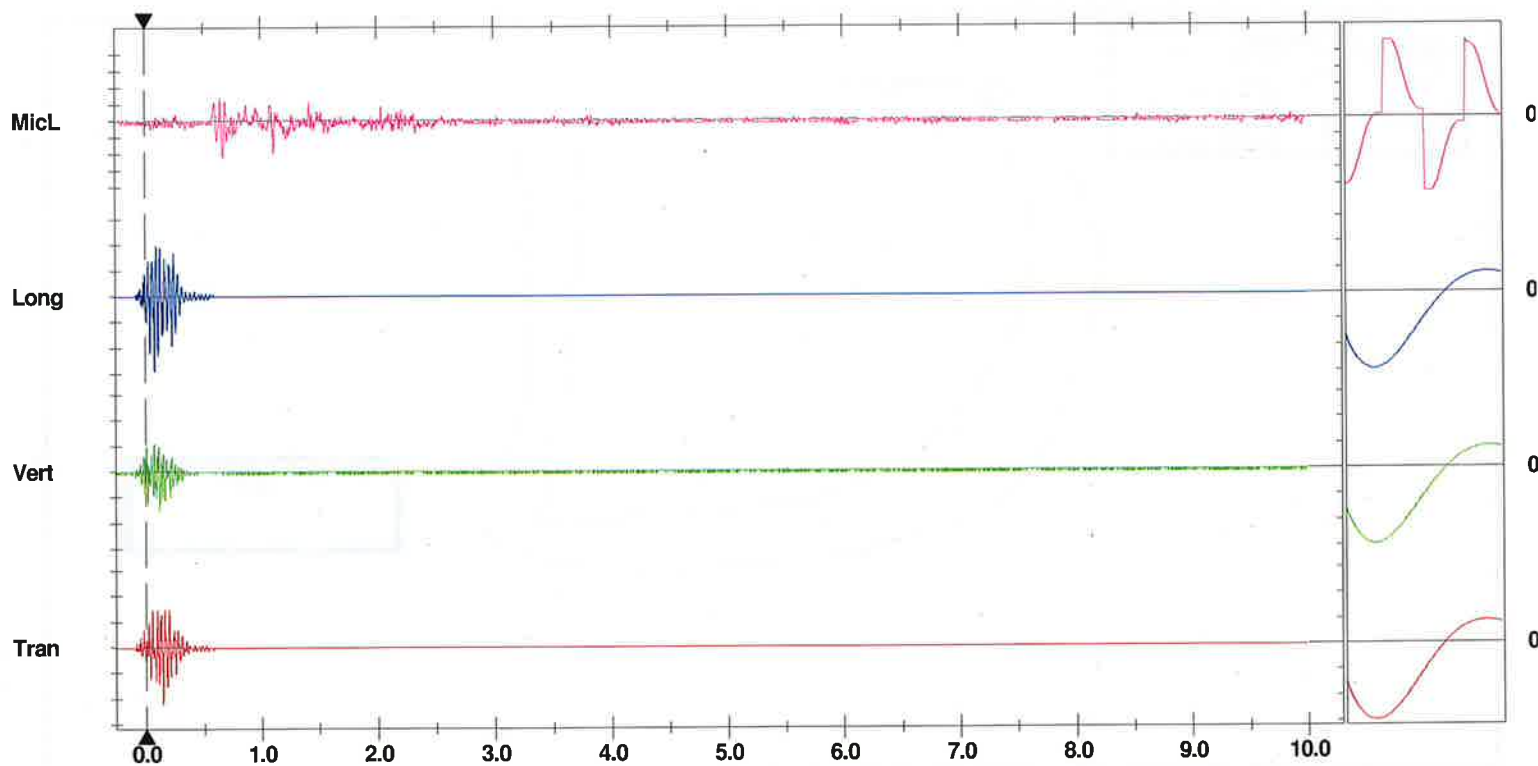
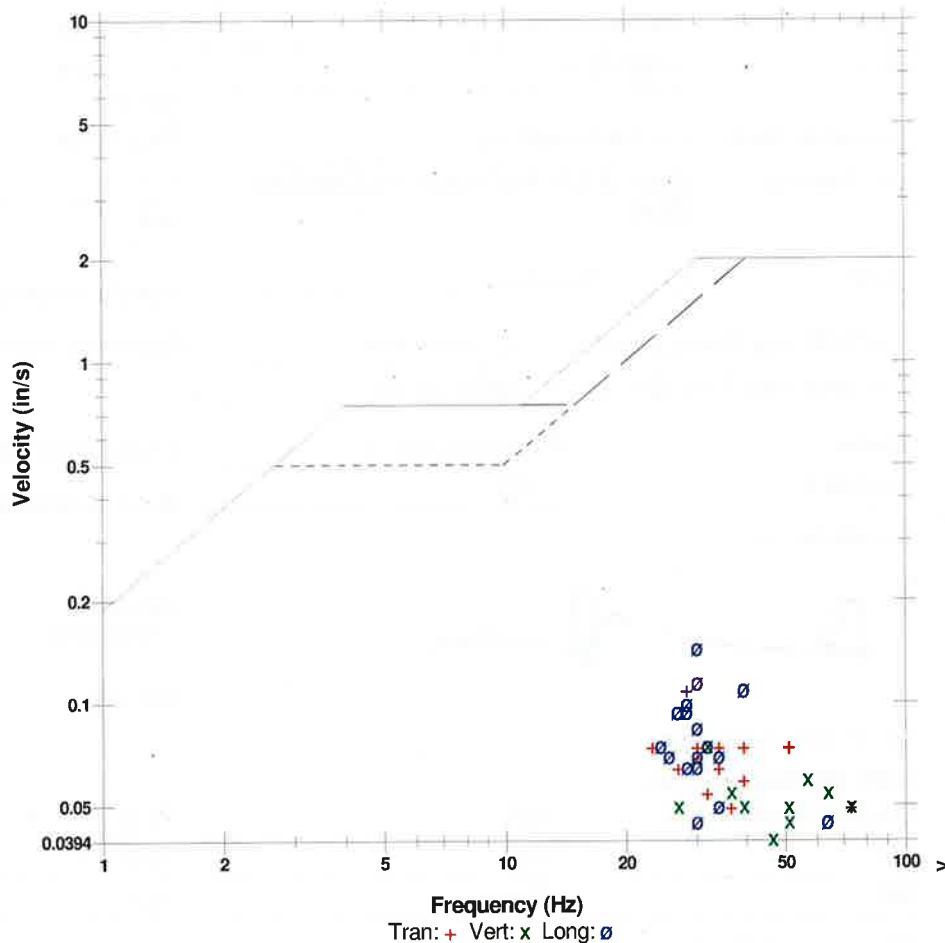
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 111.5 dB(L) 0.001 psi(L) at 0.684 sec
ZC Freq 20 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 520 mv)

	Tran	Vert	Long	
PPV	0.110	0.075	0.145	in/s
ZC Freq	28	34	30	Hz
Time (Rel. to Trig)	0.155	0.128	0.086	sec
Peak Acceleration	0.093	0.066	0.119	g
Peak Displacement	0.000	0.000	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.1	8.0	8.0	Hz
Overswing Ratio	3.4	3.6	3.7	

Peak Vector Sum 0.146 in/s at 0.086 sec

USBM RI8507 And OSMRE



Sensor Check



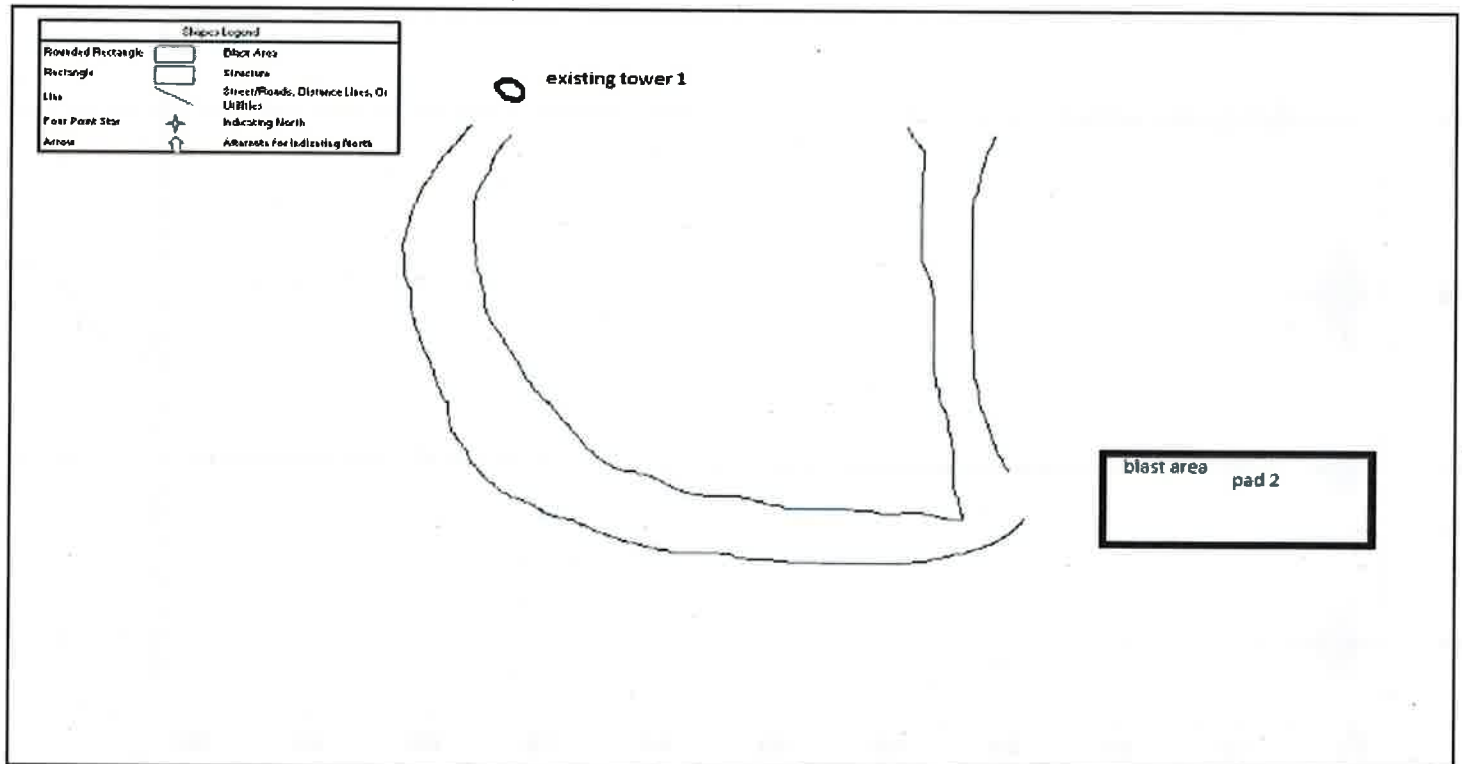
Job#	104-04-02718	Cust. PO#	N/A	
Date	10/28/2016	Cust. Supt. Name	Buddy	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46902	N/A
Job Address	Route 8 J.A. McDonald Inc. Deerfield Wind	N/A	N/A	N/A
		N/A	N/A	N/A
State	VT	Permit No.		
Pre Shift Insp.Time (24hrs) :	12:00:00 AM	Identify Hazards		
Post Shift Insp.Time (24hrs):	12:00:00 AM	Equipment & Personnel		
Blaster :	Charron;Brian J.	Precautions Taken:		
License #:	1132	Moved all out of blast zone		
Signature:				

Weather
Comments:

over cast

No. of Crew Members	1		
Crew Members Names :			
Morgan Putvain	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Seismograph Monitoring Plan (Not to Scale):



Shot # 9 Shot Time (24hrs) 13:22 Shot VideoTaped: Y **Weather**
 Notes: N/A Weather Conditions: Cloudy
 Temp (°F): 35-40
 Wind Direction: South-West
 Wind Spd: 10-20 MPH

Preblast

Blast Direction: East Max Holes/Delay: 2 Predicted K Factor: 240
 Blast Location: road way to T 3 Scale Dist.: 204.12
 Location of Structure: Existing tower 1 Max Weight/Delay: 150 Lbs Predicted PPV: 0.05
 Measurement Physical Dist. to Closest (Ft) Structure 2500 Railroad/Highway N/A Overhead Util N/A Underground Util N/A
 Measurement

Pay Quantities

Fire Detail # of Hrs: N/A
 Pay Square Area 10125 Feet
 N/A N/A N/A
 N/A N/A N/A

Pay Calculations Notes

9x9x125=10,125

Shot Info

Configuration

1 - Open

Total Drill Depth(Ft)	<u>1625.00</u>	Total SqFt	<u>10125.00</u>	Powder	<u>1.78 Lbs/Cyd</u>	Total Product Weight (Lbs) :	<u>8677</u>
Total Tons	<u>N/A</u>	Total Yards	<u>4875.00</u>	Factor	<u>0.56 Cyd/Lbs</u>	Avg Weight / Hole (Lbs):	<u>69.42</u>

Cal Method

Pattern

Holes

125

Cover Used/No N/A

AVG

Min

Max

Drill Depth	<u>13</u>		<u>10</u>	<u>17</u>	Stone Weight	<u>N/A /Cyd</u>	Top Stemming	<u>3</u> Min	<u>4</u> Max
Burden(Feet)	<u>9</u> Feet		<u>9</u>	<u>9</u>	Type of Terrian	<u>Flat/Sloped</u>	Charges/Hole	<u>1</u> Min	<u>1</u> Max
Spacing (Feet)	<u>9</u> Feet		<u>9</u>	<u>9</u>	Type of Rock	<u>Mica/Schist</u>	Deck Stemming	<u>0</u> Min	<u>0</u> Max
Hole Diameter	<u>4</u>		<u>4</u>	<u>4</u>	Stemming Type	<u>3/8" Crushed Stone</u>	Charge Wgt/Deck	<u>55</u> Min	<u>75</u> Max
OverBurden (Ft)	<u>0</u>		<u>0</u>	<u>1</u>	Height of Face	<u>0</u>	Depth of Water	<u>0</u> Min	<u>5</u> Max

Control Row Taped

N

Angled Holes /Face Bermed

N/Y

Laser/BoreTracking

N

Total Pounds 8677.25 Lbs

Type Of Initiation: Non-Electric

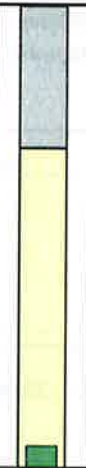
Product #	Desc	Density	Wgt
1966	1966 Emulsion Blend		8581.00 Lbs
BA BULK Totals:		N/A	8581.00 Lbs
Product #	Desc	Qty	Wgt
SP0350	TROJAN SPARTAN 350G 49/CS	125	96.25 Lbs
BOOSTERS Totals:		125	96.25 Lbs

Product #	Desc	Qty	Length
DXABZ629	NONEL EZDET 25/350 30FT ZCOMP 40/CS	125	
DETS DHOLE Totals:		125	
Product #	Desc	Qty	Length
DJ25025	NONEL LEADLINE 2500FT/762M 2/CS	1	2500
LINES Totals:		1	
Product #	Desc	Qty	Length
DY17Z820ME	NONEL EZTL CPZ 17 MS 20/FT 60/120/CS	9	
SURF DELAY Totals:		9	

Descripton: Typical

Elevation	Feet
Brench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	0
Sub Drilling(ft)	4
Total Depth (ft)	13.00

N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
Stemming Stones	4
1966 Emulsion Blend	9
TROJAN SPARTAN 350G 49/CS	0

**Seismograhs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Charron;Brian J.	Existing tower 1	3042	Threshold Not Met	0	0	0	2500	N/A



Job#	104-04-02718	Cust. PO#	N/A	
Date	10/31/2016	Cust. Supt. Name	buddy bancroft	
Customer Name	J.A. McDonald Inc.	Pick Tkts#	46967	N/A
Job Address	Route 8 J.A. McDonald Inc. Various	N/A	N/A	N/A
		N/A	N/A	N/A

State VT Permit No. _____ Identify Hazards

Pre Shift Insp.Time (24hrs) : 12:00:00 AM mud, wet holws

Post Shift Insp.Time (24hrs): 12:00:00 AM

Blaster : Butler,Dean T

License #: 1937

Signature:

DB

Precautions Taken:

load accordingly, watch footing on mud stay out of deep watery areas to avoid getting stuck

Weather
Comments:

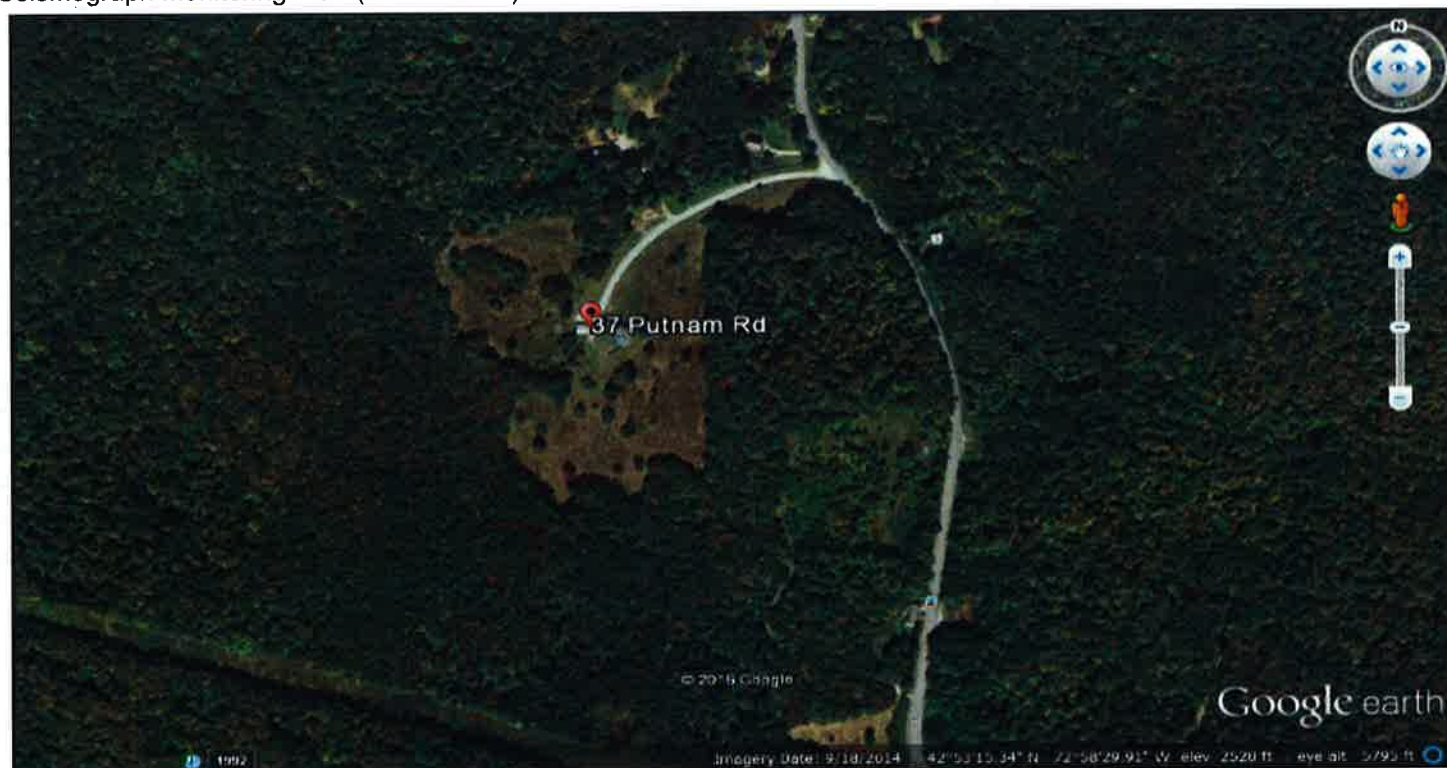
beautiful weather sun shining 30-50

No. of Crew Members 2

Crew Members Names :

britt	pat	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

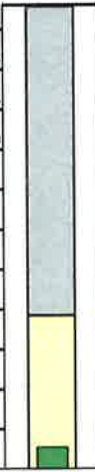
Seismograph Monitoring Plan (Not to Scale):



Description: typical

Elevation	Feet
Bench (ft)	N/A
Floor (ft)	N/A
Overburden (ft)	2
Sub Drilling(ft)	4
Total Depth (ft)	9.00

N/A	
Stemming Stones	6
1966 Emulsion Blend	3
TROJAN SPARTAN 350G 49/CS	0
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

**Seismographs**

Operator Name	Location of Seis	Seis #	Monitor Log Status	Actual PPV	Actual PPV Freq,	Actual db	Actual Dist. (ft)	Actual K Factor
Butler;Dean T	21 putnam rd	2288	Triggered	0.135	N/A	116.9	700	317

Date/Time Vert at 14:23:44 October 31, 2016
Trigger Source Geo: 0.040 in/s
Range Geo: 9.999 in/s
Record Time 10.0 sec at 1024 sps

Serial Number 2288 V 5.52 BlastMate II/477
Battery Level 6.3 Volts
Unit Calibration January 26, 2016 by InstanTel
File Name D288GM4L.BK0

Maine Drilling & Blasting

Notes

Location: 21 Putnam Rd.
Client: McDonald
User Name: D Butler
Converted: November 1, 2016 06:24:49 (V10.72)

Extended Notes

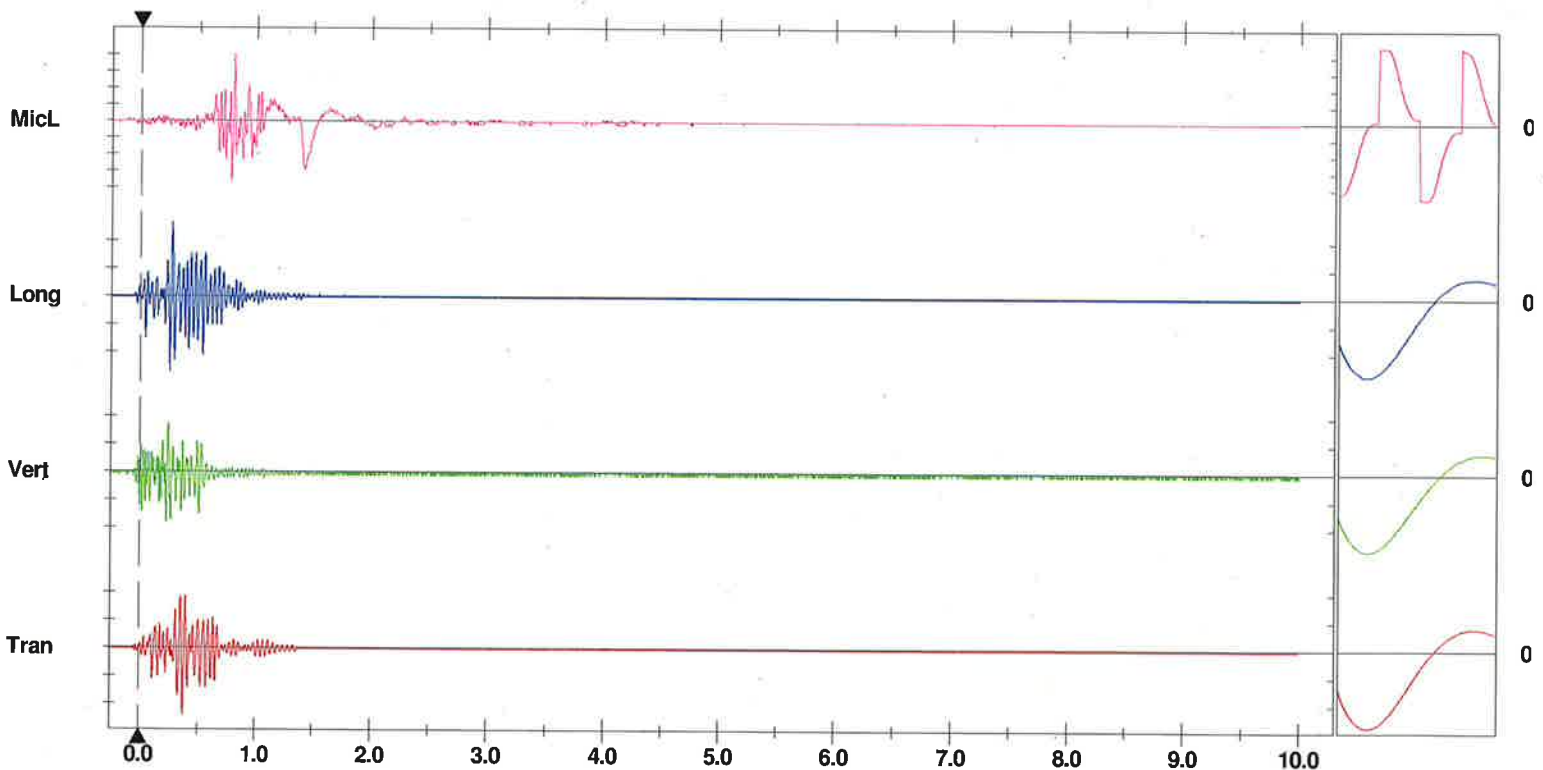
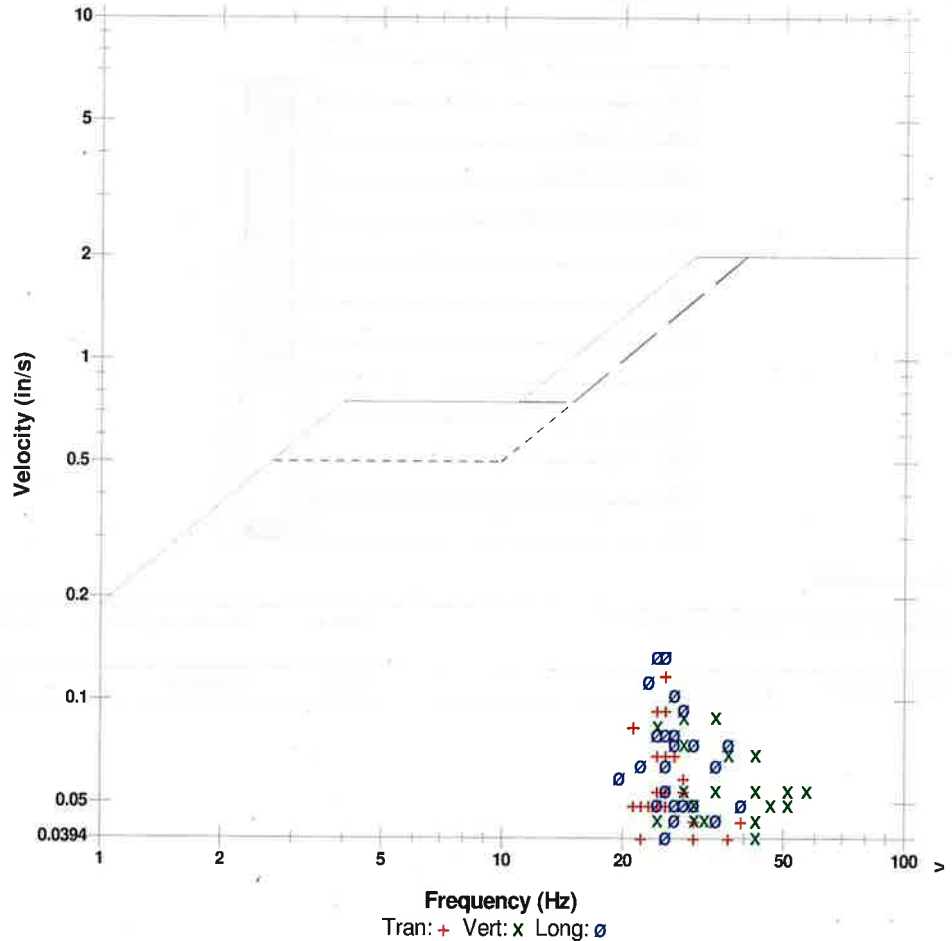
Deerfield Wind searsburg vt 104-04-02718

Microphone Linear Weighting
PSPL 116.9 dB(L) 0.002 psi(L) at 0.809 sec
ZC Freq 27 Hz
Channel Test Passed (Freq = 20.0 Hz Amp = 528 mv)

	Tran	Vert	Long	
PPV	0.120	0.090	0.135	in/s
ZC Freq	26	34	24	Hz
Time (Rel. to Trig)	0.386	0.234	0.259	sec
Peak Acceleration	0.066	0.066	0.066	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	8.5	8.0	8.5	Hz
Overswing Ratio	3.3	3.6	3.6	

Peak Vector Sum 0.153 in/s at 0.275 sec

USBM R18507 And OSMRE



Time Scale: 0.50 sec/div **Amplitude Scale:** Geo: 0.050 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check



NOTES:
 1. CLOSEST BLASTING AREA LOCATED BY GPS SURVEY AND AUTOCAD FILE PRODUCED BY VHB.
 2. HOUSE LOCATION IS DERIVED FROM GOOGLE EARTH MAP WITH ALIGNMENT OF AUTOCAD EXISTING FEATURES.
 3. EXPECTED ACCURACY +/- 10'

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REV	DATE	DESCRIPTION

DEERFIELD WIND ROUTE 8 SEARSBURG, VT

LOCATION
DRAWING

MaineDrilling
&Blasting

DATE: 1/17

DATE: 4/20/17

SCALE: 1" = 200'

