OSM BLAST LOG EVALUATION PROGRAM
Contact: Ken Eltschlager, (412) 937-2169

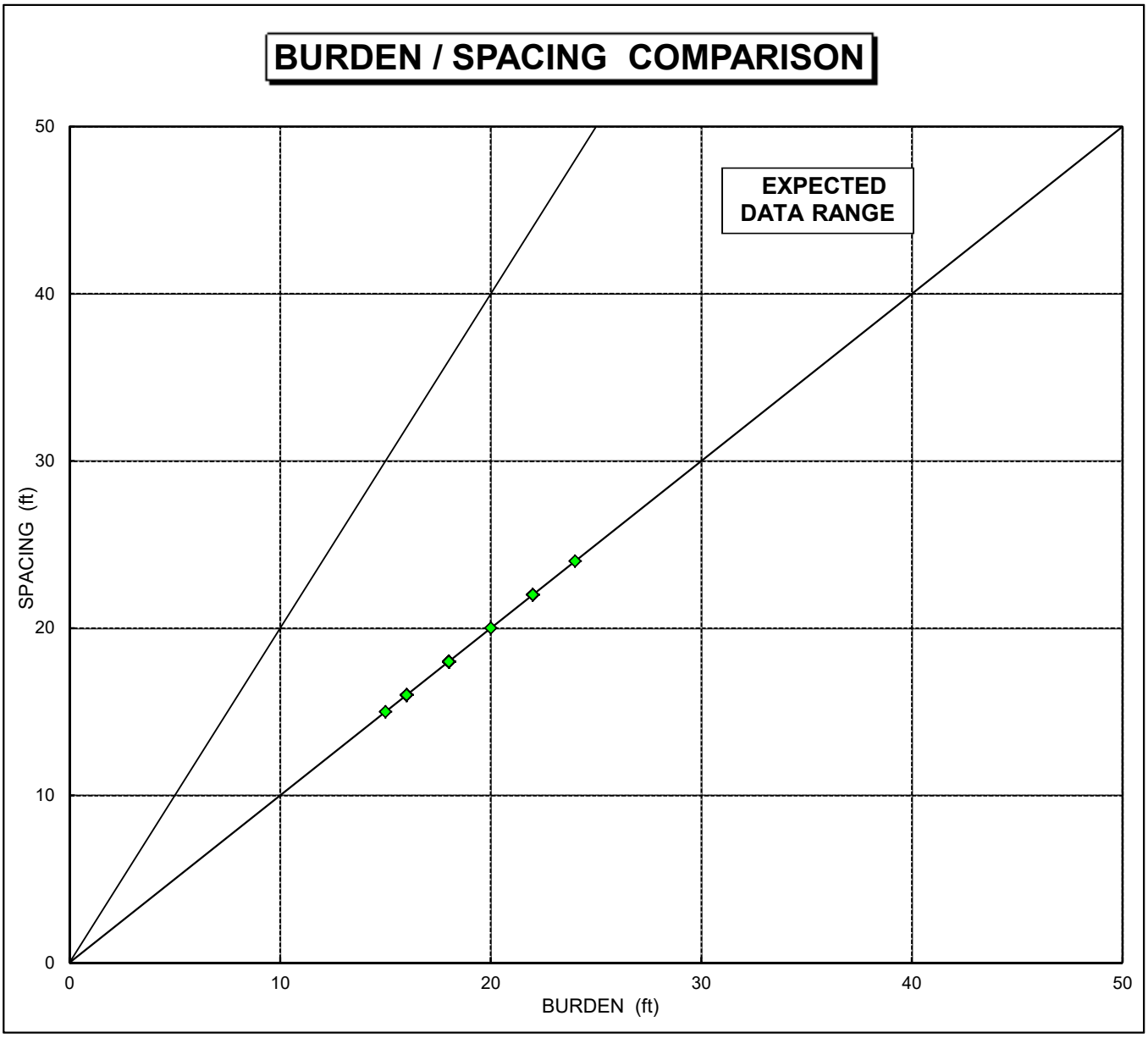
BLAST:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CRITERIA:	UNITS			NAME:	UT Alton			DATE OF REVIEW:		01/14/20					UT Alton					01/14/20	
Date	03/30/00	5/17/2016	5/23/2016	6/2/2016	6/14/2016	6/24/2016	7/7/2016	7/25/2016	8/9/2016	8/19/2016	9/2/2016	9/16/2016	9/28/2016	10/6/2016	10/25/2016	11/1/2016	11/9/2016	11/16/2016	12/1/2016	12/14/2016	1/4/2017
Time	1127	1100	1100	1200	1130	1145	1145	1130	1245	1050	1050	1050	1045	1005	1050	1029	1011	1034	1240	940	1025
Coal	name	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal	coal
Nearest Structure	name	Dam	dam	dam	dam	dam	dam	dam	dam	dam	dam	dam	dam	dam	dam	dam	dam	house	dam	dam	pond
Distance Reported	feet	2433	2799	2705	2561	2892	2784	2626	3762	2941	2785	3258	3161	3093	2989	3510	3431	4317	3276	3219	2868
Distance Measured	feet	2433	2799	2705	2561	2892	2784	2626	3762	2941	2785	3258	3161	3093	2989	3510	3431	4317	3276	3219	2868
Burden	feet	16	16	16	16	16	16	16	16	16	16	16	18	18	18	18	18	18	18	18	18
Spacing	feet	16	16	16	16	16	16	16	16	16	16	16	18	18	18	18	18	18	18	18	18
Hole Depth	feet	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Hole Diameter	in (x.xx)	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.785	7.875	7.875	7.875	7.875
Number of Holes	#	74	108	106	218	261	155	221	255	151	162	169	130	100	80	121	100	170	179	113	99
Stemming	feet	11	11	11	11	11	11	11	11	11	11	11	11	11	11	9	11	11	11	11	11
Backfill	feet																				
Decking	feet																				
Charges per Hole	#	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Explosive Type	ANFO	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel	fortel
Explosive Density	g/cc	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Reported Exp / Hole	pounds	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
Reported Exp / Delay	pounds	122	244	244	244	244	244	244	244	244	244	244	244	244	244	244	244	183	243	243	121.5
Actual Charges/Delay	#	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	2
Rock Type	SH, SS, LS	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh
Reported Total Lbs.	pounds	4580	6588	6594	13850	13642	8830	13565	14655	9121	9523	10260	7935	6105	4890	7390	5985	10380	10882.5	6870	6082.5

BLAST:	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CRITERIA:				UT Alton					01/14/20					UT Alton					01/14/20	
Date	2/1/2017	2/8/2017	2/22/2017	3/7/2017	3/15/2017	4/5/2017	4/13/2017	4/25/2017	4/27/2017	5/5/2017	5/16/2017	6/1/2017	6/28/2017	7/12/2017	8/2/2017	8/16/2017	10/18/2017	11/1/2017	11/8/2017	12/8/2017
Time	1035	1000	938	1015	1044	955	1040	1010	1105	930	12:00	945	1000	945	950	1045	937	2357	958	1035
Coal	coal	coal	coal	coal	coal	coal	coal	coal	Overburden	coal	coal	coal	coal	coal	coal	coal	coal	Overburden	coal	Overburden
Nearest Structure	pond	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam
Distance Reported	2478	2592	2509	3718	3538	3468	3411	3338	3807	3881	3636	3882	3911	3632	3516	3773	4039	3636	5134	3319
Distance Measured	2478	2592	2509	3718	3538	3468	3411	3338	3807	3881	3636	3882	3911	3632	3516	3773	4039	3636	5134	3319
Burden	18	18	18	18	18	18	18	20	24	18	18	18	18	18	18	18	18	22	18	22
Spacing	18	18	18	18	18	18	18	20	24	18	18	18	18	18	18	18	18	22	18	22
Hole Depth	15	15	15	15	15	15	15	15	30	15	15	15	15	15	15	15	15	30	15	30
Hole Diameter	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875
Number of Holes	99	94	68	73	119	63	94	86	60	62	68	66	125	110	132	130	115	88	96	72
Stemming	11	11	11	11	11	11	11	11	12	11	11	11	11	11	11	11	11	12	11	12
Backfill																				
Decking																				
Charges per Hole	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Explosive Type	fortel	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	ANFO	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	ANFO
Explosive Density	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	0.84	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	0.84
Reported Exp / Hole	61	61.75	60.75	60.75	60.75	53.77	48.67	52.04	168.83	50.85	50.83	53.94	34.41	36.82	50.77	50.75	48.58	204.75	52.9	323.89
Reported Exp / Delay	243	243	243	303.75	243	215.06	243.35	260.22	506.48	152.54	152.48	161.82	137.64	92.66	101.55	304.5	194.3	409.49	211.61	1295.56
Actual Charges/Delay	4	4	4	5	4	4	5	4	2	3	3	3	4	2	2	6	4	2	4	4
Rock Type	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh
Reported Total Lbs.	6018.75	5470.5	4256	4423.75	6690	3387.25	4575	4475.75	10129.6	3152.5	3456.25	3560	4301.25	5096.25	6702	6597.5	5586.25	17927.6	5078.75	23248

BLAST:	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
CRITERIA:				UT Alton					01/14/20														
Date	1/31/2018	5/15/2018	5/23/2018	7/10/2018	7/19/2018	8/7/2018	8/28/2018	9/10/2018	10/1/2018	10/15/2018	12/21/2018	5/7/2019	7/3/2019	7/31/2019	9/19/2019	9/19/2019	9/27/2019	9/27/2019	10/16/2019	10/25/2019	11/12/2019	11/18/2019	1/14/2020
Time	1002	9:08	9:45	10:55	12:38	10:50	11:30	9:08	10:24	12:00	10:24	9:45	9:30	9:55	10:00	10:00	10:25	10:25	9:45	8:45	10:00	8:40	11:35
Coal	coal	coal	coal	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	coal	coal	coal	Overburden	coal	Overburden	coal	Overburden	coal	coal	coal	Overburden
Nearest Structure	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	pond dam	house	house	house	house	house	pond dam	house
Distance Reported	3638	3210	3353	3903	3358	3890	3222	3415	3602	3270	3567	3698	3758	3805	2638	2765	2501	2682	2265	3760	2347	3849	2272
Distance Measured	3638	3210	3353	3903	3358	3890	3222	3415	3602	3270	3567	3698	3758	3805	2638	2765	2501	2682	2265	3760	2347	3849	2272
Burden	18	18	18	15	22	22	22	22	22	22	22	18	18	18	25	18	25	18	25	18	18	18	25
Spacing	18	18	18	15	22	22	22	22	22	22	22	18	18	18	25	18	25	18	25	18	18	18	25
Hole Depth	15	15	15	14	35	25	45	45	30	35	30	14	14	14	30	14	30	14	48	14	15	15	75
Hole Diameter	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875
Number of Holes	80	58	67	69	70	50	44	56	55	46	30	66	55	61	6	26	33	35	20	15	22	30	53
Stemming	11	11	11	12	12	12	12	12	12	12	12	11	11	11	12	11	12	11	12	11	11	11	12
Backfill																							
Decking																							
Charges per Hole	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	1	2	2	2	1
Explosive Type	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	Fortel Plus	ANFO	Fortel Plus	ANFO	Fortel Plus	ANFO	Fortel Plus	Fortel Plus	Fortel Plus	ANFO
Explosive Density	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	2.25	0.84	1.25	0.84	1.25	0.84	1.25	1.25	1.25	0.84
Reported Exp / Hole	45.75	54.01	60.95	45.22	291.54	161.15	452.02	372.33	241.97	301.88	551.067	60.75	66.41	59.82	550.65	60.75	178.13	69.32	677.315	60.85	69.2	65	589.93
Reported Exp / Delay	183	162.03	182.85	226.09	1166.18	644.61	1356.07	1489.31	967.87	1207.53	1102.13	243	199.23	179.45	1101.3	121.5	178.13	207.96	677.315	60.85	69.2	65	1179.86
Actual Charges/Delay	4	3	3	5	4	4	3	4	4	4	2	4	3	3	2	2	1	3	1	2	2	2	2
Rock Type	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh	sh
Reported Total Lbs.	3660	3132.5	4083.75	3120	20408.13	10042.06	20889.16	22850.75	13308.25	14886.74	16532	4009.5	3652.5	3648.75	3303.9	1579.5	5878.35	2426.25	13546.3	912.75	1522.5	1950	31266.35

Mine Name: UT Alton

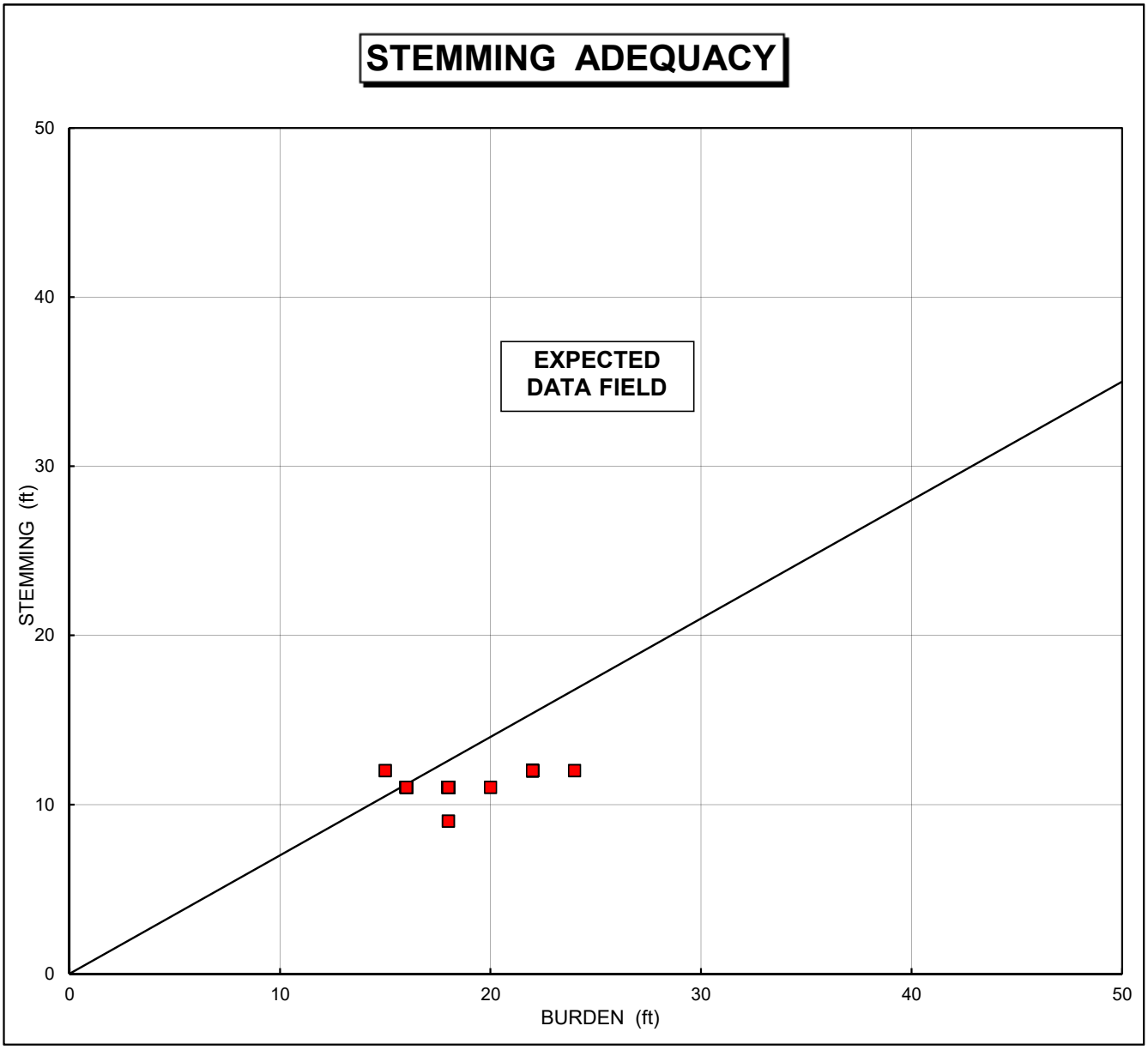
Date: 1/14/2020



Data should fall within the expected range.
Notes:

Mine Name: UT Alton

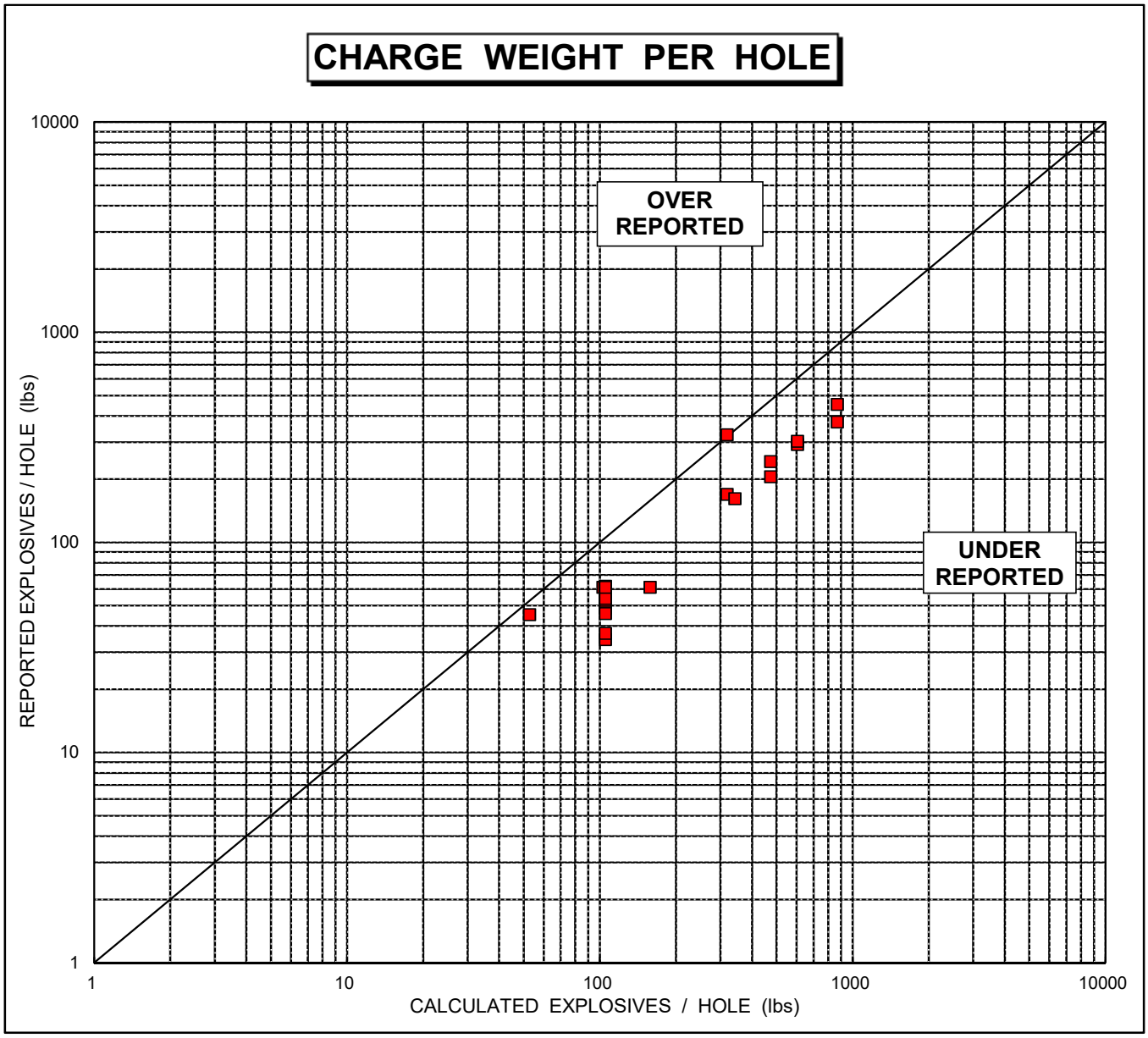
Date: 1/14/2020



Data outside the expected data field indicates a possibly of elevated airblast.and flyrock.
Notes:

Mine Name: UT Alton

Date: 1/14/2020

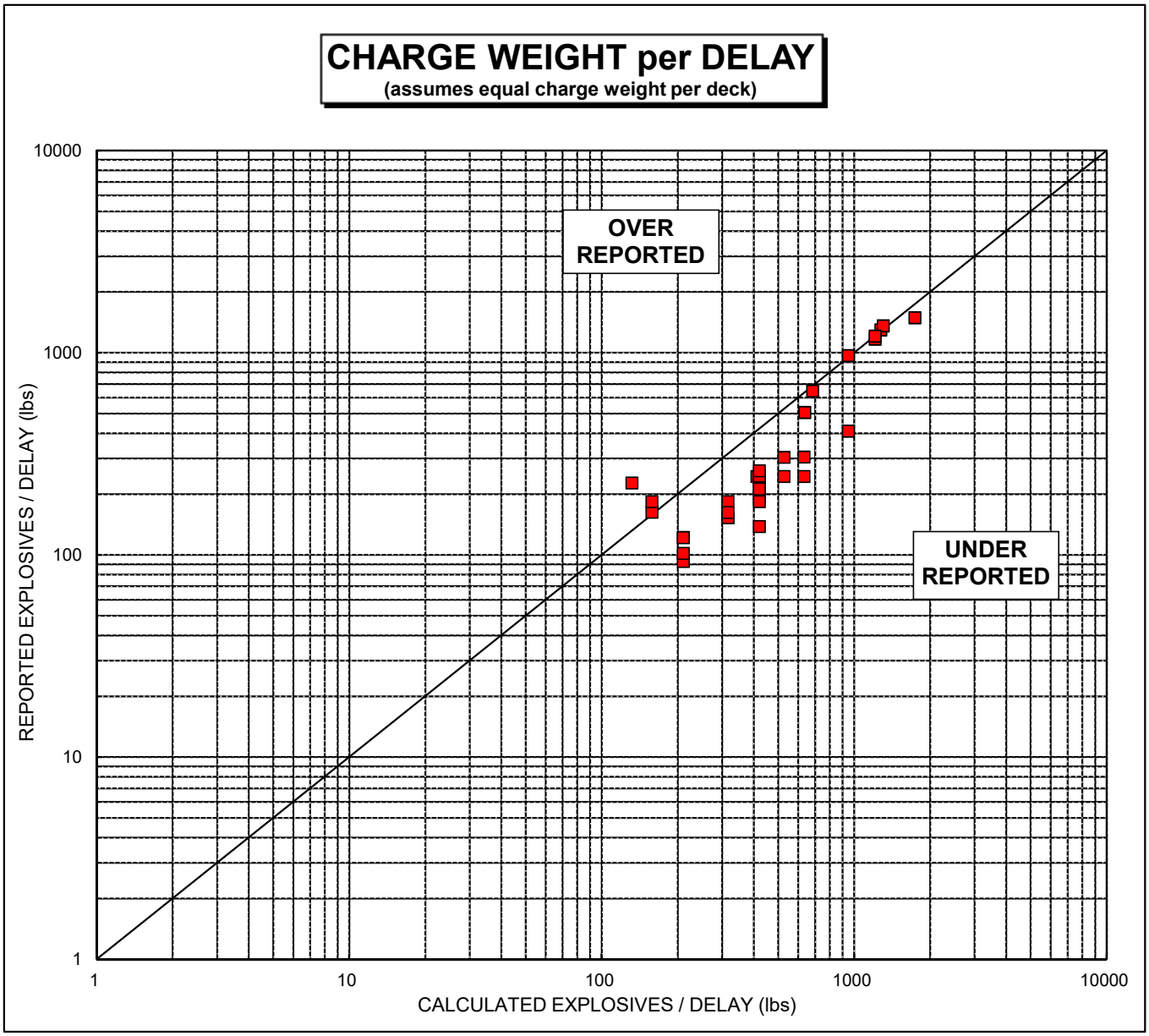


The Calculated Explosive per hole should match the Reported Explosives per hole. If a block touches the reference line, the variation is less than 10% between the reported explosives in each hole and the calculated explosives in a hole.

Notes:

Mine Name: UT Alton

Date: 1/14/2020

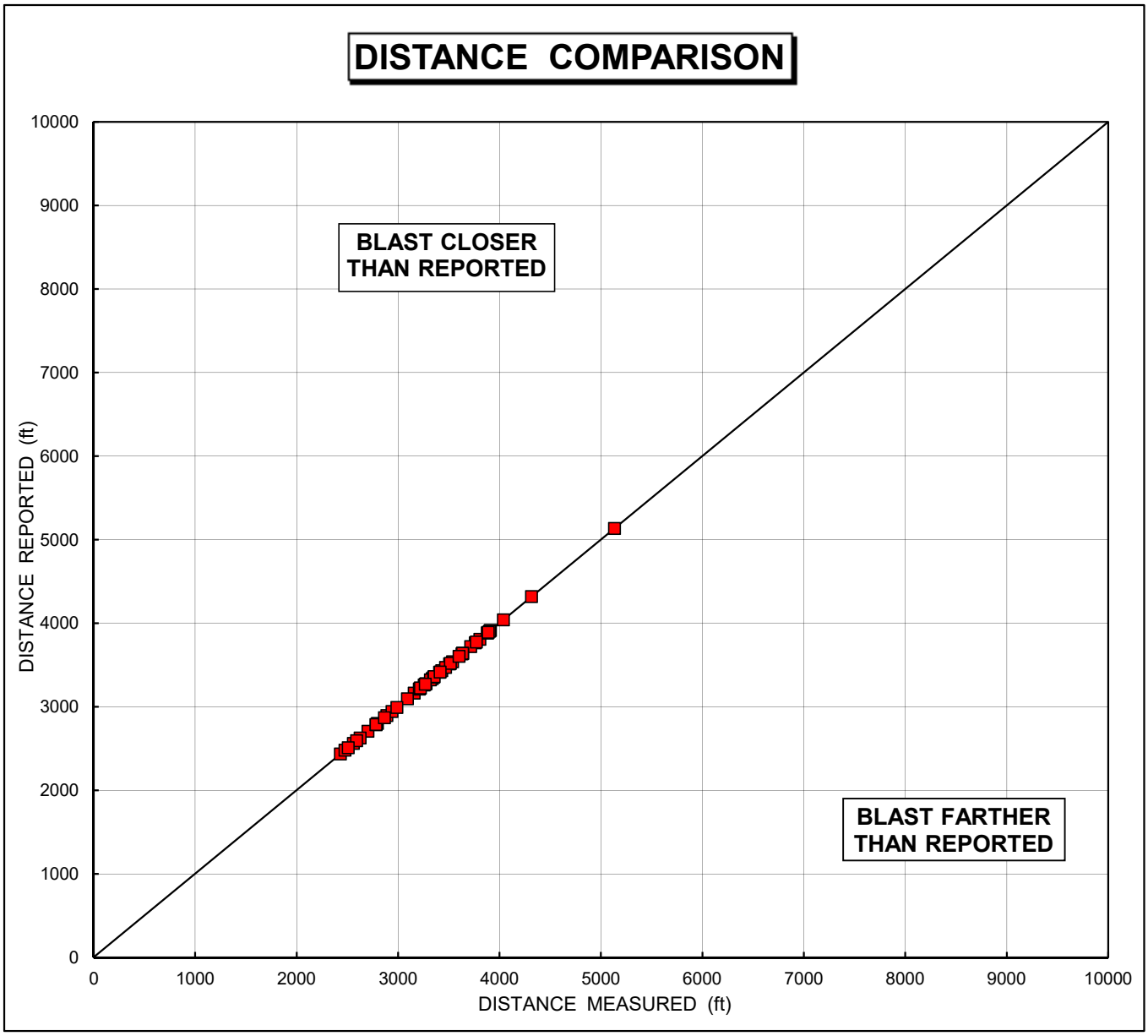


Data are only plotted if the Actual Charges per Delay are determined based on the hole timing. If a block touches the reference line, the variation is less than 10%.

Notes:

Mine Name: UT Alton

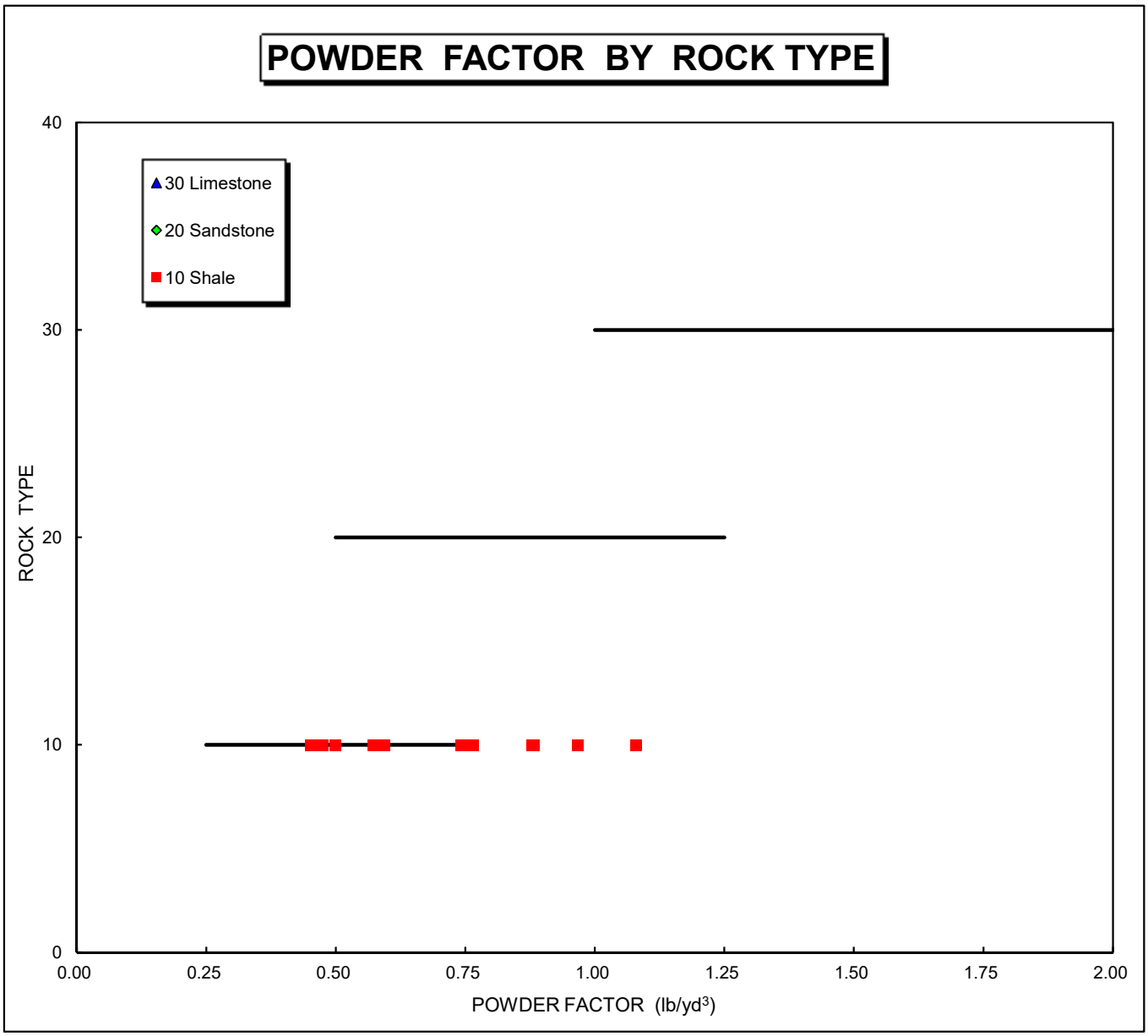
Date: 1/14/2020



Reported and Measured distances should be the same.
Notes:

Mine Name: UT Alton

Date: 1/14/2020

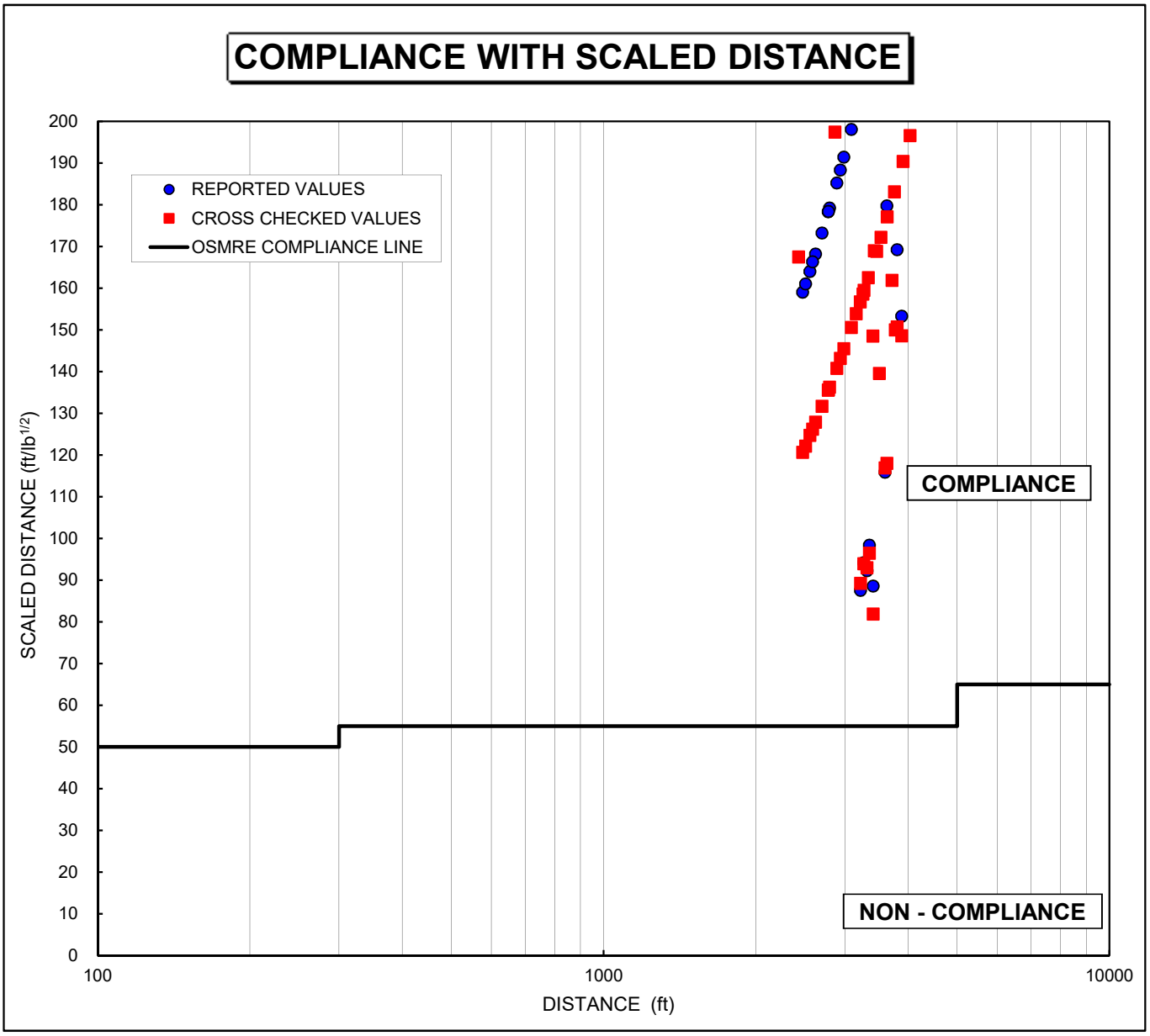


Lines represent acceptable powder factor ranges for each rock type. Top line is LS, middle is SS and bottom is SH.

Notes:

Mine Name: UT Alton

Date: 1/14/2020



Compliance lines are based on 30 CFR 816.67.
Notes:

			NAME:	UT Alton		DATE OF REVIEW:			01/14/20					UT Alton					01/14/20
	BLAST:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
									2/2/2017										
ROCK VOLUME		142	142	142	142	142	142	142	142	142	142	142	180	180	180	180	180	180	180
CALC POWDER FACTOR		0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.59	0.59	0.59	0.88	0.57	0.59	0.59
Is calculated CW more than 10% of reported?		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Do overlaps occur?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Is calculated CW more than 10% of reported?		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
SD2 REPORTED		220	179	173	164	185	178	168	241	188	178	209	202	198	191	225	220	319	210
SD2 CROSS CHECKED		167	136	132	125	141	135	128	183	143	136	159	154	151	145	139	169	243	159
Reported value above reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Revised value above the reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Reported value above reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Revised value above the reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

						UT Alton					01/14/20					UT Alton					01/14/20		
	BLAST:	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
ROCK VOLUME		180	180	180	180	180	180	180	180	180	222	640	180	180	180	180	180	180	180	180	538	180	538
CALC POWDER FACTOR		0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.48	0.50	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.88	0.59	0.59
Is calculated CW more than 10% of reported?		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	----
Do overlaps occur?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Is calculated CW more than 10% of reported?		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	----
SD2 REPORTED		206	260	159	166	161	213	227	236	219	207	169	314	294	305	333	377	349	216	290	180	353	92
SD2 CROSS CHECKED		157	197	121	126	122	162	172	169	148	162	151	218	204	218	190	250	242	150	197	118	250	93
Reported value above reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Revised value above the reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Reported value above reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Revised value above the reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

				UT Alton					01/14/20															
	BLAST:	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
ROCK VOLUME		180	180	180	117	627	448	807	807	538	627	538	168	168	168	694	168	694	168	1111	168	180	180	1736
CALC POWDER FACTOR		0.59	0.59	0.59	0.45	0.97	0.77	1.08	1.08	0.88	0.97	0.88	0.47	0.47	0.85	0.46	0.47	0.46	0.47	0.57	0.47	0.59	0.59	0.64
Is calculated CW more than 10% of reported?		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	----	YES	YES	YES	----	YES	YES	YES	----	YES	YES	YES	YES
Do overlaps occur?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Is calculated CW more than 10% of reported?		YES	----	----	----	----	----	----	YES	----	----	----	----	----	YES	----	----	YES	----	----	YES	YES	YES	YES
SD2 REPORTED		269	252	248	260	98	153	87	88	116	94	107	237	266	284	79	251	187	186	87	482	282	477	66
SD2 CROSS CHECKED		177	255	266	340	96	148	89	82	117	94	164	294	345	260	104	311	140	246	90	423	228	375	48
Reported value above reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Revised value above the reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Reported value above reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Revised value above the reference line?		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----