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MEMORANDUM REPORT NO. 2044

FLOW IN MODEL ROOMS CAUSED BY AIR SHOCK WAVES

by

George A. Coulter

July 1970

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B A L L I S T I C R E S E A R C H L A B O R A T O R I E S

MEMORANDUM REPORT NO. 2044

JULY 1970

FLOW IN MODEL ROOMS CAUSED BY AIR SHOCK WAVES

George A. Coulter

Terminal Ballistics Laboratory

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This work was supported by Office of Civil Defense, Work Order No. DAHC-20-67-W-0153
(OCD Work Unit Number 1123C)

A B E R D E E N P R O V I N G G R O U N D, M A R Y L A N D

The following conclusions appear to be valid for the shock overpressure range 5-20 psi.

1. A room entrance without a baffle allows the incoming flow to create a high speed flow of several hundred feet per second along the centerline of the entrance. The jet probably does not extend past a half entrance width to either side of the entrance. However, the distance the high speed flow extends into a room varies with the pressure of the external shockwave. For example, an input shock of 20 psi level caused the jet to extend 10 - 15 entrance widths along the centerline with dynamic pressure still above a safe (3.7 psi, Ref. 8) value.

2. An entrance baffle placed one entrance width inside successfully deflected the incoming jet from the centerline of the room without adding to the overall unsafe area.

3. By the addition of an entrance baffle, about the same safe floor space was available in the model when exposed to a shock overpressure of 20 psi as was available when the model was exposed to 5 psi without an entrance baffle.

SUMMARY

A. Introduction:

The work reported here is the third part in a study of the filling processes of rooms when exposed to blast and shockwaves in the range of 5-20 psi overpressure.

The earlier work treated the expansion of the free field blast wave into a room and the increase in the internal pressure caused by pressure falling throughout the entire room volume. The experiments reported here describe a third part of the filling problem - the creation of a high speed air jet caused by the incoming air from the external blast wave. The purpose of this work is to determine the velocity of the air flow in the jet and the area it covers.

Results obtained in the study allow estimates to be given of the unsafe area of a full-size shelter room with and without a baffle inside the extrance. The estimates are given for free field blast waves of 5-20 psi overpressure range.

B. Experiments:

Two- and three-dimensional models were exposed to step shock waves in the BRL Shock Tubes. Two-dimensional air flow was observed inside models by movement of smoke grid tracers photographed by a high speed framing camera. Stagnation and side-on fill pressures were measured with transducers inside three-dimensional models to determine the dynamic pressure inside.

C. Results and Conclusions:

The Appendices of the report contain computer program flow predictions for simple models with and without an entrance baffle, tables of flow calculated from the smoke grid tracer method, and the pressure-time records obtained inside the three-dimensional models.

B A L L I S T I C R E S E A R C H L A B O R A T O R I E S

MEMORANDUM REPORT NO. 2044

JULY 1970

SUMMARY

of

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A B E R D E E N P R O V I N G G R O U N D, M A R Y L A N D

B A L L I S T I C R E S E A R C H L A B O R A T O R I E S

MEMORANDUM REPORT NO. 2044

GACoulter/mba
Aberdeen Proving Ground, Md.
July 1970

FLOW IN MODEL ROOMS CAUSED BY AIR SHOCK WAVES

ABSTRACT

Experimental results and two-dimensional computer code predictions are shown which illustrate the internal air flow inside model rooms when loaded externally by air shock waves in a 5-20 psi range. Stagnation and side-on fill pressure records are presented for three-dimensional models which indicate that flow patterns similar to those observed in the two-dimensional study are present inside the three-dimensional models. Baffles were placed inside the entrances of the models which re-directed the air flow to positions off the entrance centerline and gave more safe floor area.

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LIST OF SYMBOLS

A	Area of entrance to model, in.^{2}
A_F	Area of inside front wall of model, in.^{2}
A_1	Ambient sound speed, ft/sec
L	Length of model, in.
P_{fill}	Pressure to which room fills, psi
P_{max}	Maximum pressure, psi
P_s	Side-on overpressure of external input shock wave, psi
P_{stag}	Stagnation overpressure, psi
Q	Dynamic pressure, $1/2\ \rho u^2$, lb/ft^2
Q_M	Maximum dynamic overpressure, psi
V	Internal volume of model, in.^{3}
W	Width of entrance, in.
X	Distance along model, measured from the inside front wall, in.*
ρ	Density of air, slug/ft^3
$\bar{u}$	Average velocity of air flow, ft/sec
θ	Angle of air flow vector measured from horizontal, deg.
Y	Distance perpendicular to axis of model, measured from inside bottom of model, in.*

* Notation is reversed for Ripple Code data in Appendix A.

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I. INTRODUCTION

The work reported here is the third part in a study of the filling processes of rooms and chambers when exposed to blast and shock waves. The work was sponsored by the Office of Civil Defense under contract, Work Order No. DAHC-20-67-W-0153, with the Ballistic Research Laboratories (BRL).

The purpose of this work is to study the incoming flow field inside a room and the related damage potential of the flow caused by the filling process. The earlier work was reported in References 1-4*.

The present study was broken into two parts. One was done with two-dimensional models in which the flow was monitored photographically with smoke grids as tracers. The second group of experiments was done with three-dimensional models. In this study stagnation and side-on fill pressure-time records were obtained from the outputs of pressure transducers to determine the dynamic pressure of the flow from the jet in the model entrance.

The data from both groups of experiments are placed in the Appendices. The results from the two-dimensional study are in Appendix A, the flow calculations from the smoke grid tracers are listed in Appendix B, and the pressure-time records from the three-dimensional models are given in Appendix C.

II. EXPERIMENTS

High speed air flows have been predicted (Reference 1, 5, and 6) for areas of flow on or near the entrance centerline of a room or shelter which is being filled by the exterior shock overpressure to which the shelter is exposed. Since high speed air flow may cause translation of persons in a room or shelter, it is necessary to determine the magnitude of the flow parameters and the area over which they exist.

References are listed on page 75 **Preceding page blank**

The present experiments were carried out to determine if the predicted flows (several hundred feet per second for an input pressure of P_s = 5 psi) existed, and the distance the flows extended into a room. A second goal was to deflect and reduce, if possible, by an entrance baffle, the incoming flow so a greater "safe" floor space would be available in the room or shelter.

Table I summarizes the type models and orientation of the models to the shock waves used in the experiments. The type of filling (front or side-on) is noted.

A. Two-Dimensional Models

Computer predictions (RIPPLE program, Reference 7) were made by Dr. V. Kucher and Mr. J. Harrison; Applied Mathematics Division, BRL; for the first two models shown in Figure 1. Again, high speed flows were predicted along the centerline of the entrance to the model and near the baffle. No computer predictions were made for the remainder of the two-dimensional models.

Figures 1-C, 1-D, and 1-E show the two-dimensional models used for the present study. Air flow patterns were observed inside each model by smoke grid tracers. Just before the shock tube is fired, smoke grids are established as shown in Figure 2. A high speed framing camera followed smoke grid movement and calculations were made from these data.

B. Three-Dimensional Models

A short coming of the smoke grid tracer method is the fact that the grids move out of the high speed flow area. Less and less information is obtained as the flow continues and the grids leave the areas of interest.

Accordingly, to obtain data in the high speed flow areas near the entrance, for the three-dimensional study, stagnation pressure transducers were placed inside the model rooms to measure the effect of the speed of the jet. The recording system channels consisted of Susquehanna ST-2 ceramic pressure transducers, Kistler 566 charge

Table I. Experimental Models

Model	Size	Type of Filling	Input Pressure psi	A/A_F,%	V/A,Ft	Remarks
Two-Dimensional Models						
XIV-D	4 x 4 in.	Front (Reflection)	5	25	1.33	1 x 4 in. Entrance
35	4 x 4 in.	Side	5	6.25	5.33	1/4 x 4 in. Entryway
35 w/Baffle	4 x 4 in.	Side	5	6.25	5.33	
36	4 x 4 in.	Side	5	6.25	5.33	Two Baffles
Three-Dimensional Models						
27-A	4x3.92x6 in.	Front	5,10,20	2.0	24.5	.32 x 1 in. Entrance
27-A w/Baffle	4x3.92x6 in.	Front	5,10,20	2.0	24.5	.32 x 1 in. Entrance
25-A	15x15x23.4 in.	Side	5,10,20	3.55	54.8	2 x 4 in. Entrance
25-A w/Baffle	15x15x23.4 in.	Side	5,10,20	3.55	54.8	2 x 4 in. Entrance

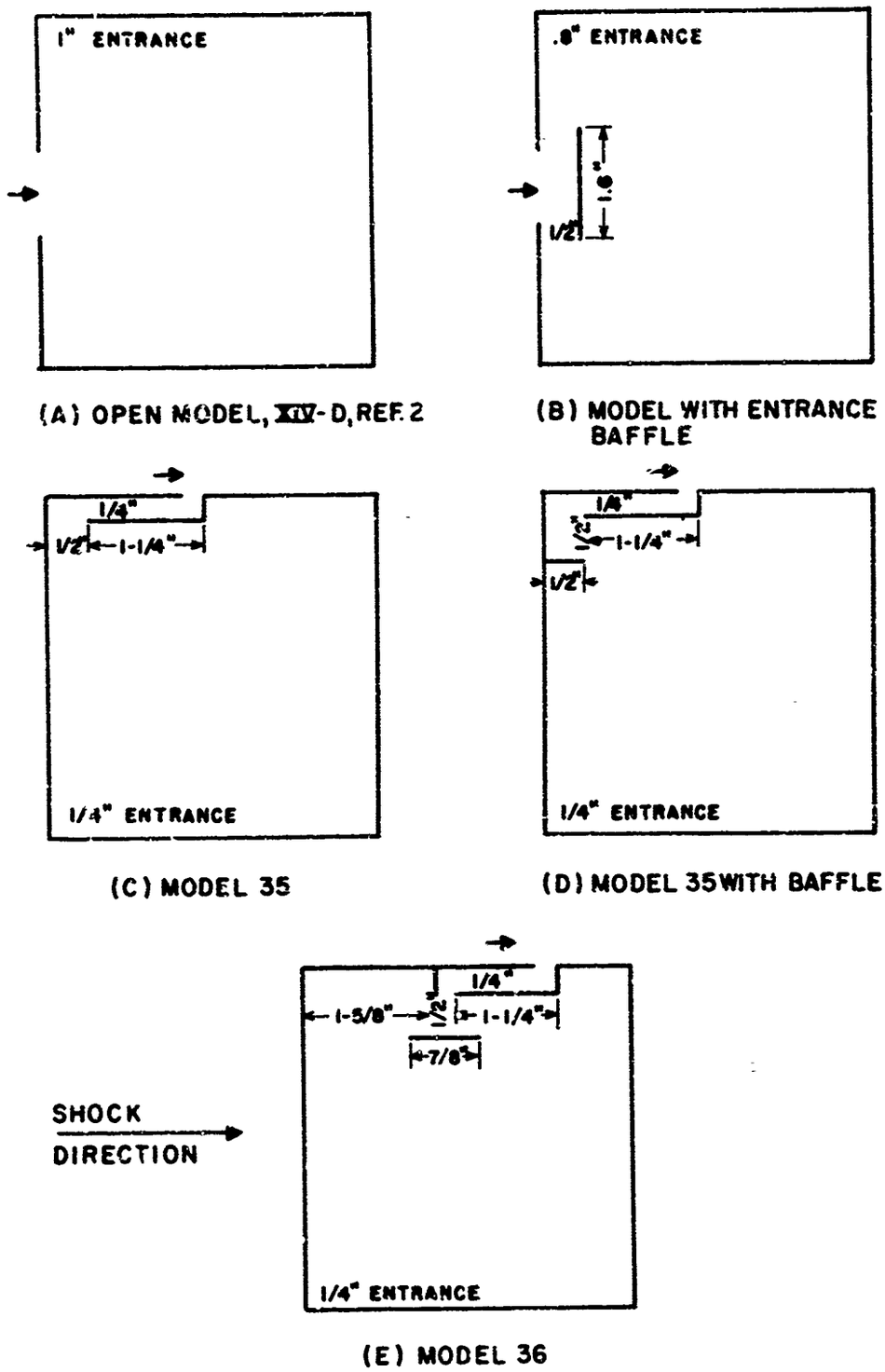


Figure 1. Two-Dimensional Models

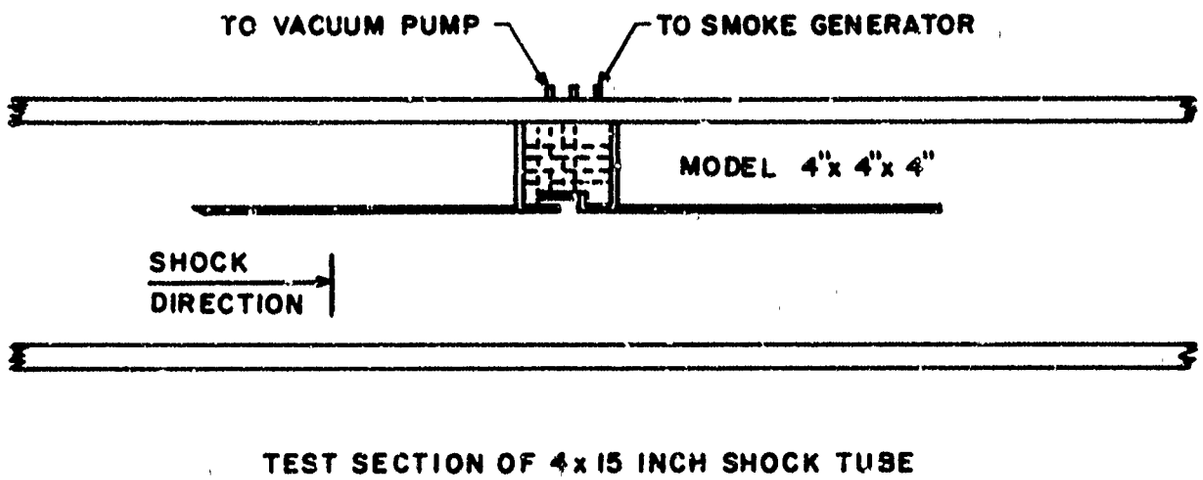


Figure 2. Smoke Grid Technique

amplifiers, Tektronix 502 or 564 oscilloscopes equipped with Polaroid cameras.

Figures 3 - 5 show the three-dimensional models with the transducer locations.

III. RESULTS

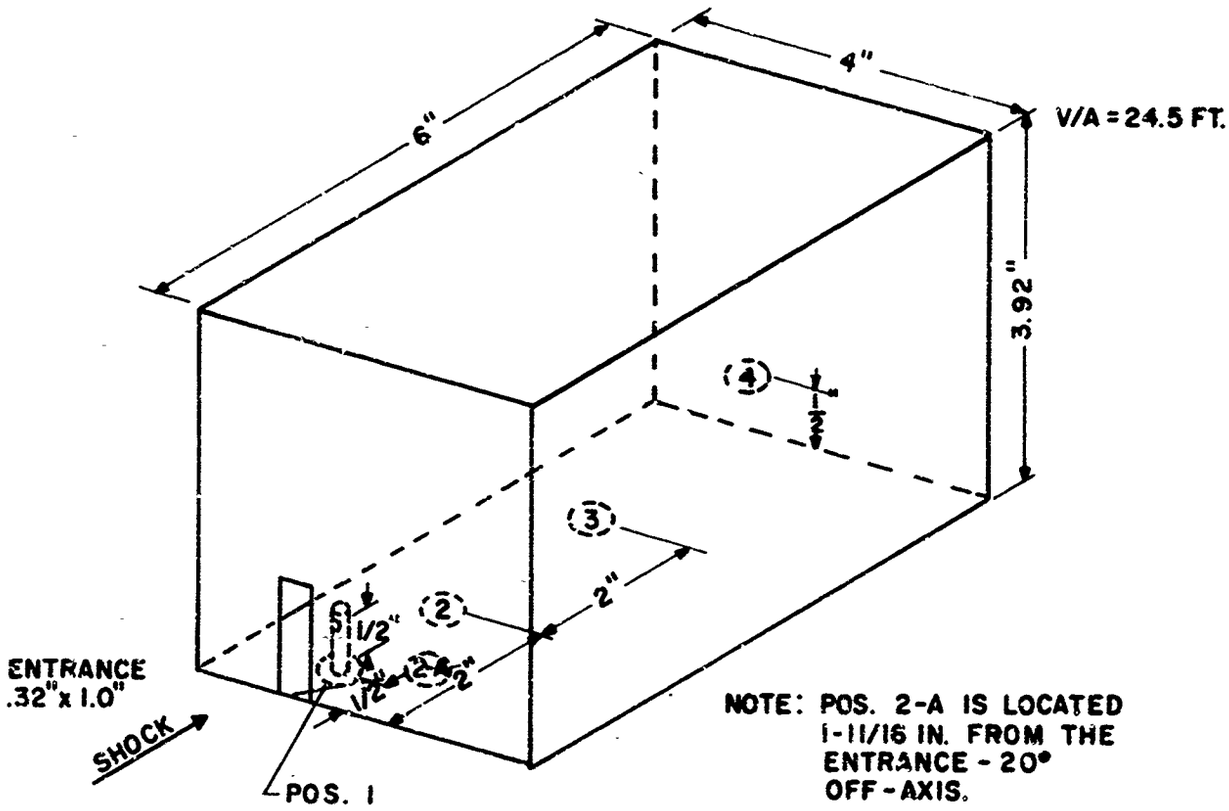
The results are presented in two parts: two-dimensional and three-dimensional models.

A. Two-Dimensional Models

Vector plots of the results of the computer program calculations are shown as Figures 6 - 14. Figures 6 - 10 show the vector flow field generated when an input shock wave of P_s = 5 psi is reflected on the outside front of an entrance to a room. High speed flows of several hundred feet per second are predicted along the axis of the entrance. The flow trying to turn the corner at the entrance causes a rotation of the flow throughout the room. At the edge of the room entrance the result is a vortex.

The second set of the computer plots (Figures 11 - 14) show how a similar model with an entrance baffle re-directs the incoming flow during the time the model is being filled. Large flow velocities (>1000 ft/sec) are predicted to exist between the baffle and the front wall. However, they do not appear to extend beyond the baffle. A listing of axial and radial components of the airflow velocity vectors for both models are given in Appendix A.

Table II presents a numerical comparison of the experimental data (Reference 2, Model XIV-D) with the computer program predictions. A time correction to the computer data was made to adjust time zero to be shock arrival inside the model. This was time zero for the experiments of Reference 2. The overall patterns of flow are similar for the computer program predictions and for the experimental cases. If there is a time or position error in either, large differences in flow-magnitude and direction - may occur at areas of rapid flow changes



MODEL 27-A

Figure 3. Sketch of Model 27-A

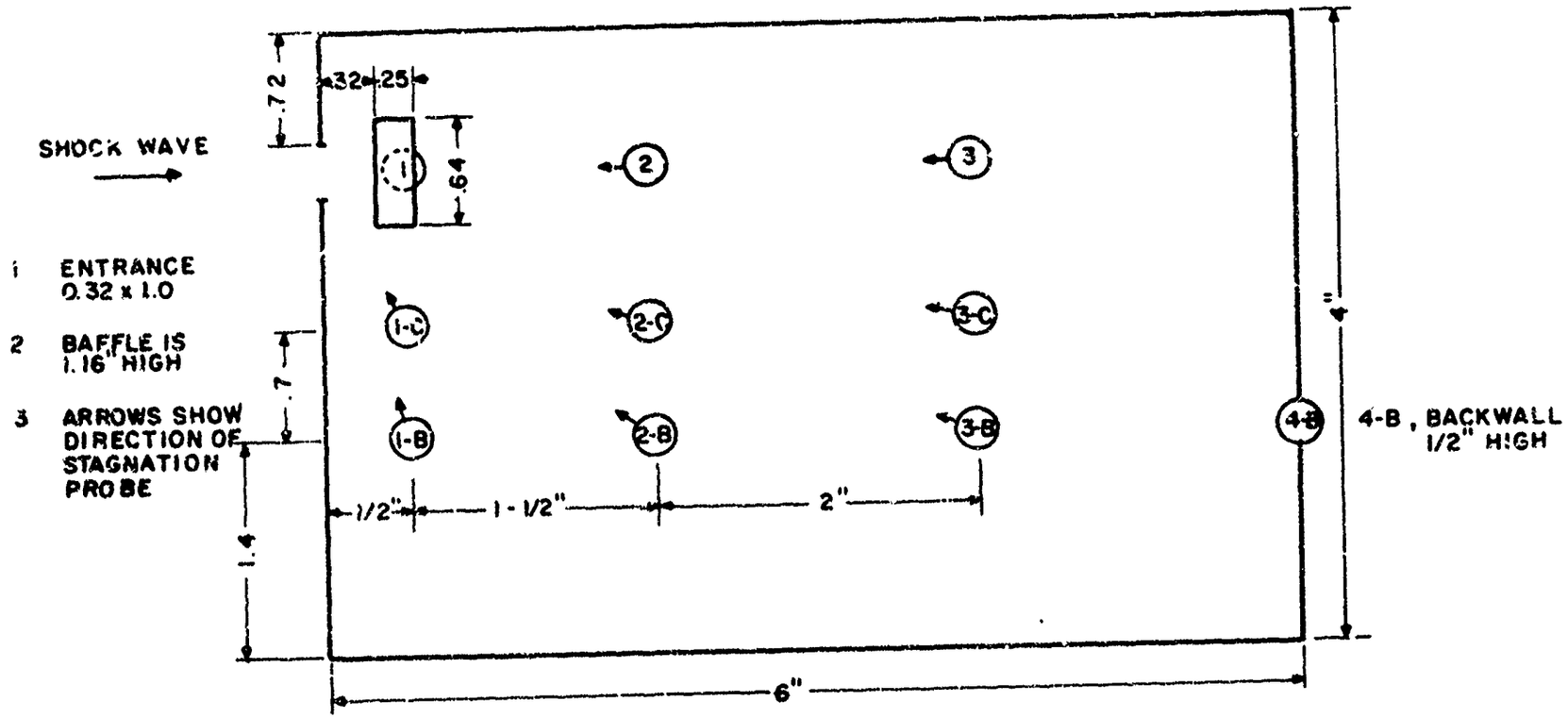


Figure 4. Transducer Positions For Model 27-A, with Baffle

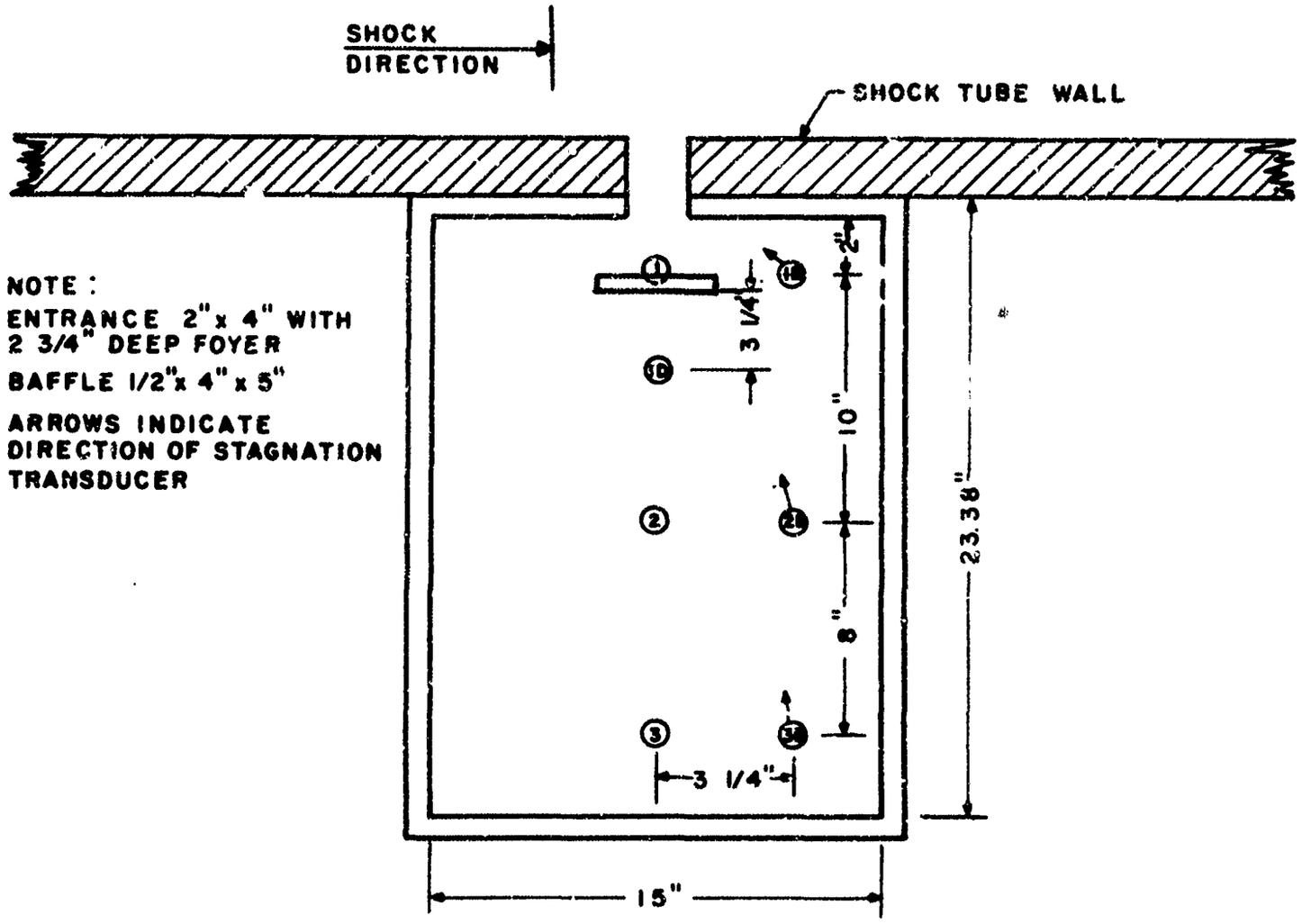


Figure 5. Sketch of Model 25-A, with Baffle

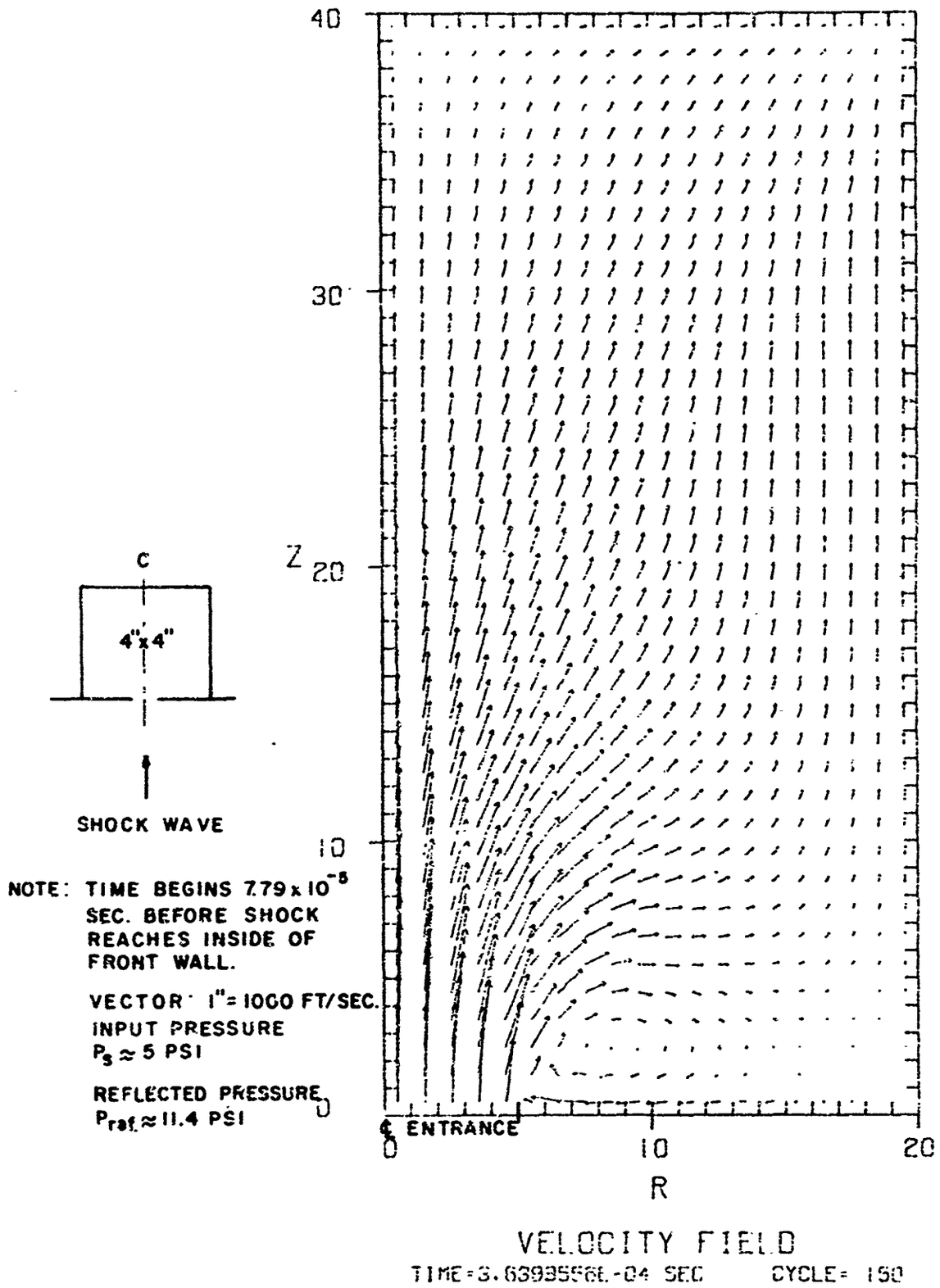


Figure 6. Flow Vectors from Ripple Code-364 Microseconds

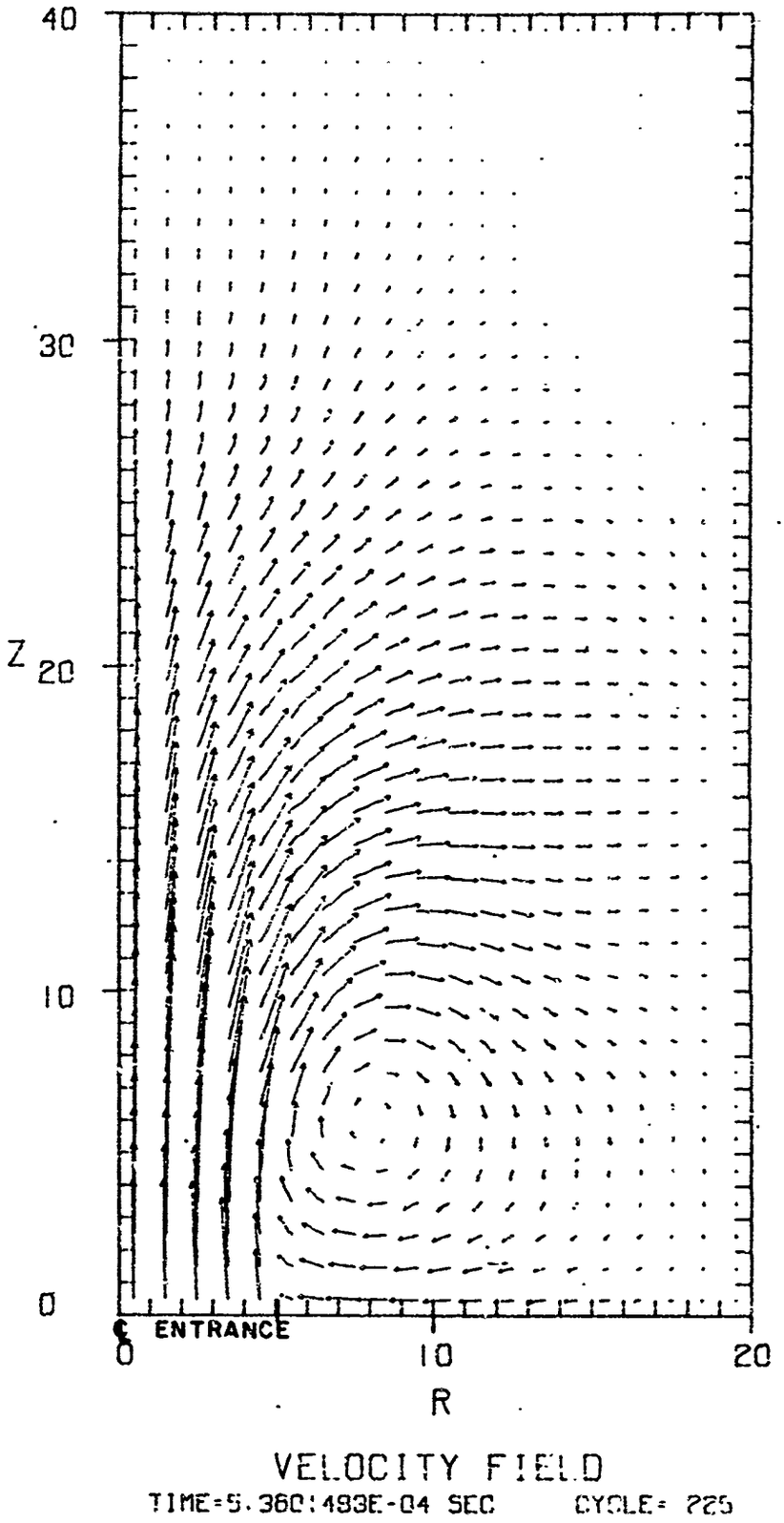
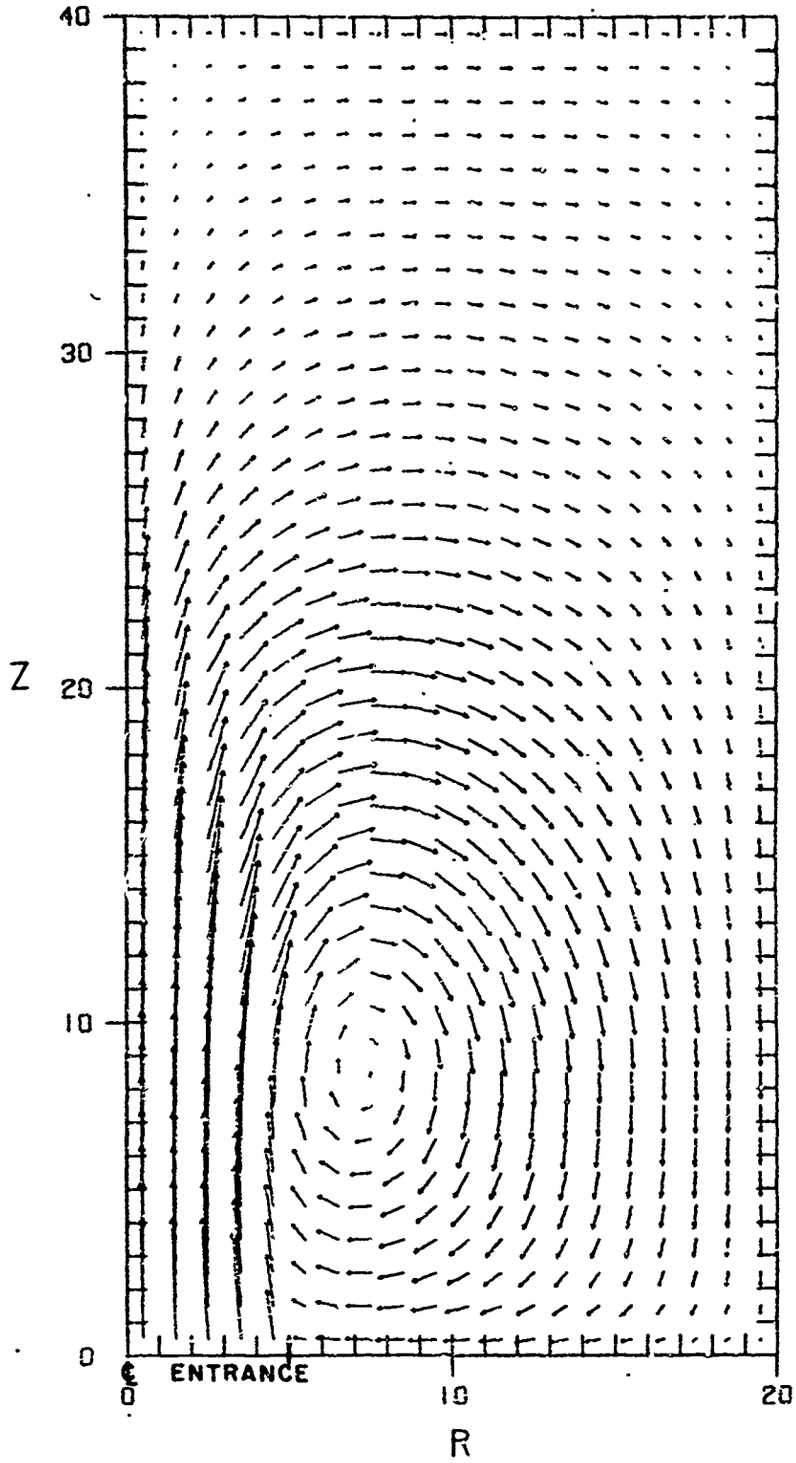


Figure 7. Flow Vectors - 538 Microseconds



VELOCITY FIELD

TIME=6.4967732E-04 SEC CYCLE= 275

Figure 8. Flow Vectors - 650 Microseconds

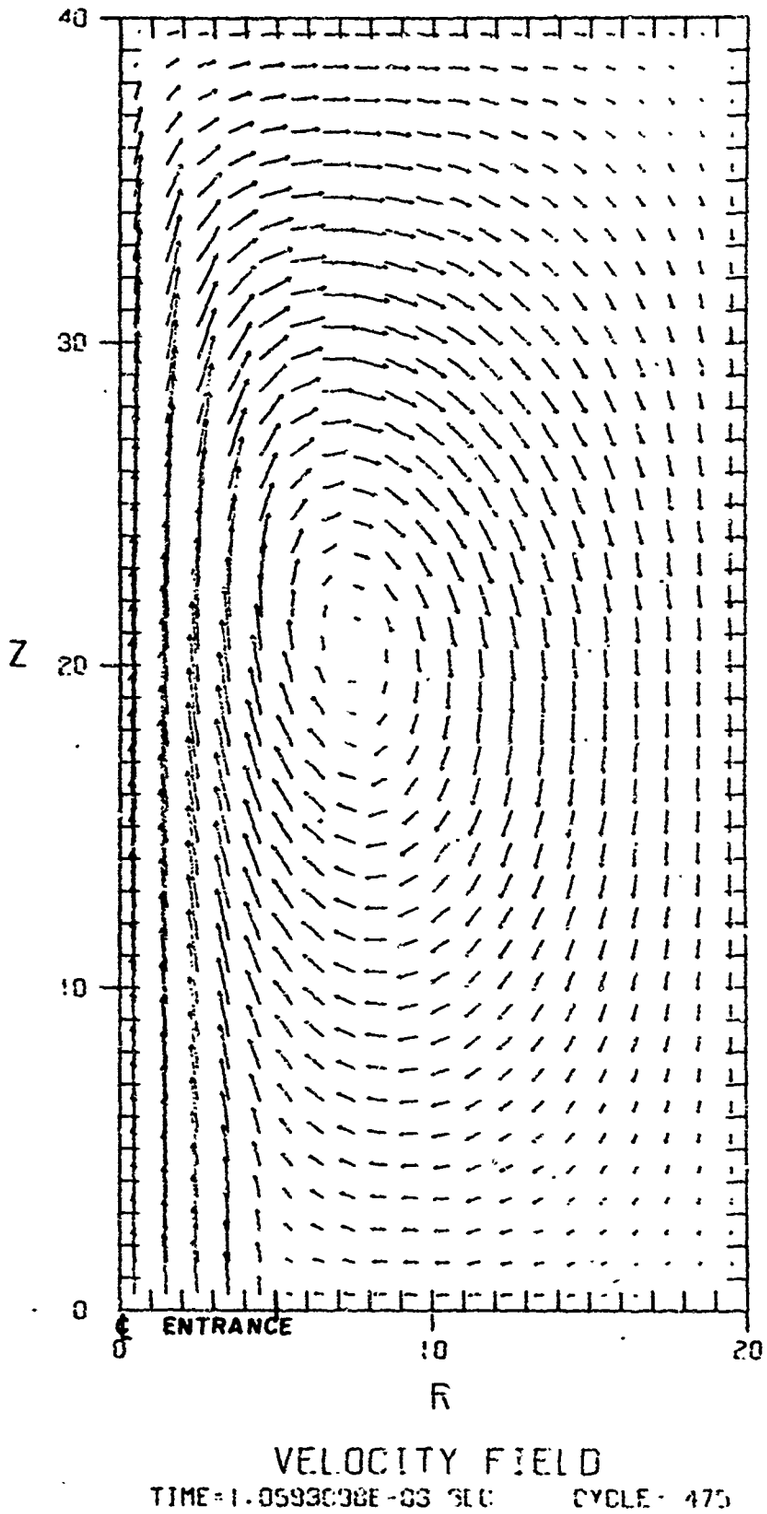
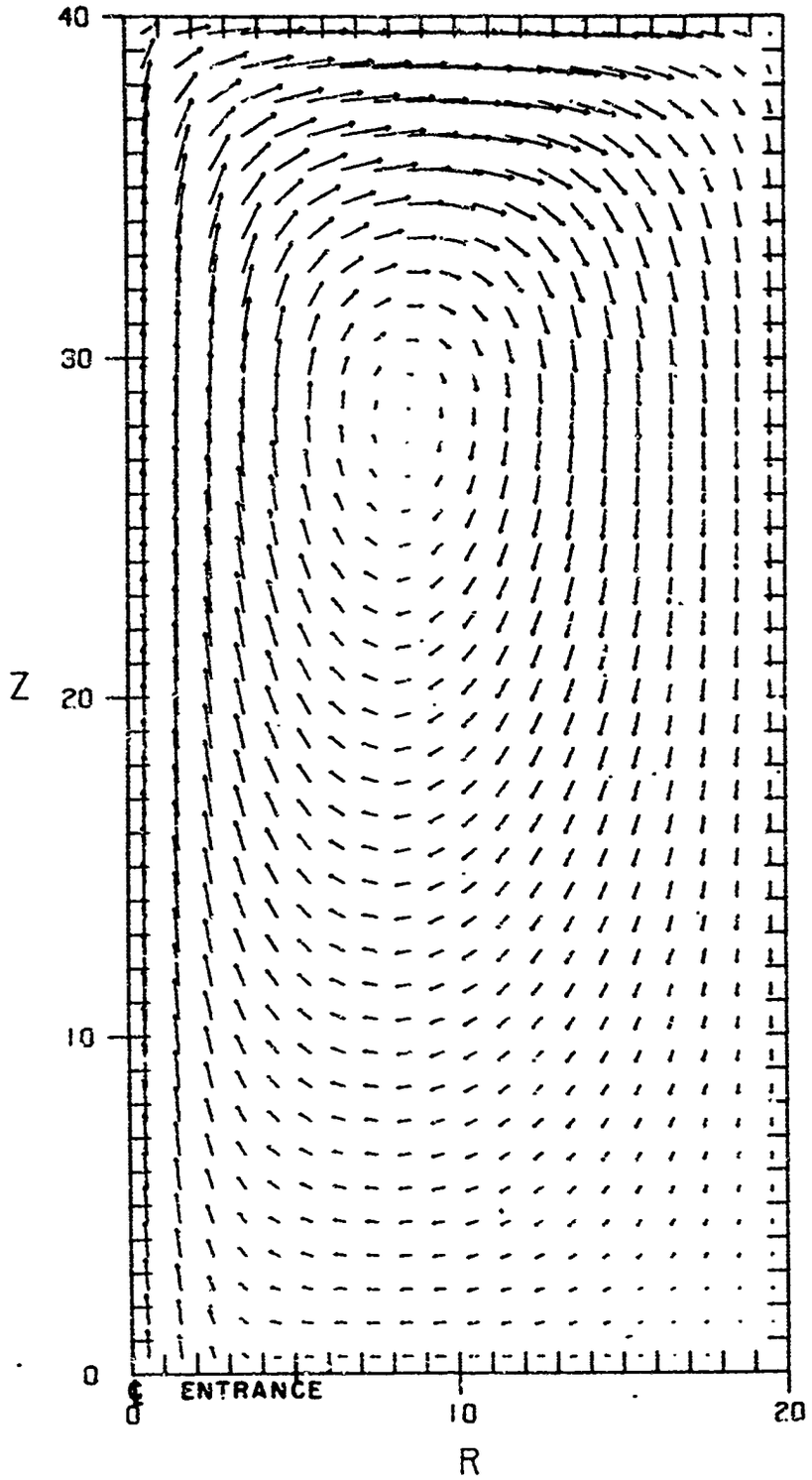


Figure 9. Flow Vectors - 1059 Microseconds



VELOCITY FIELD
TIME=1.5610186E-03 SEC CYCLE= 750

Figure 10. Flow Vectors - 1561 Microseconds

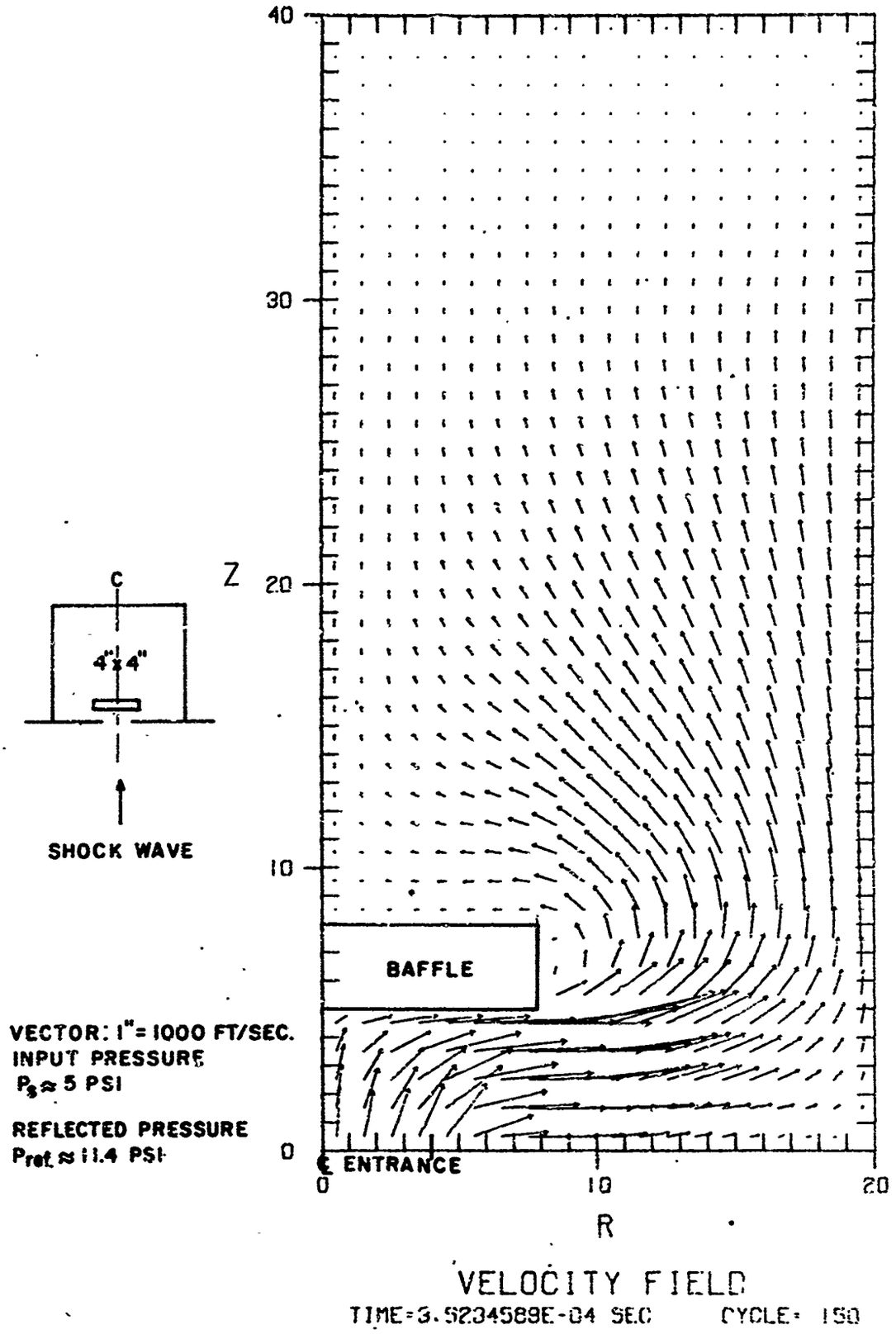
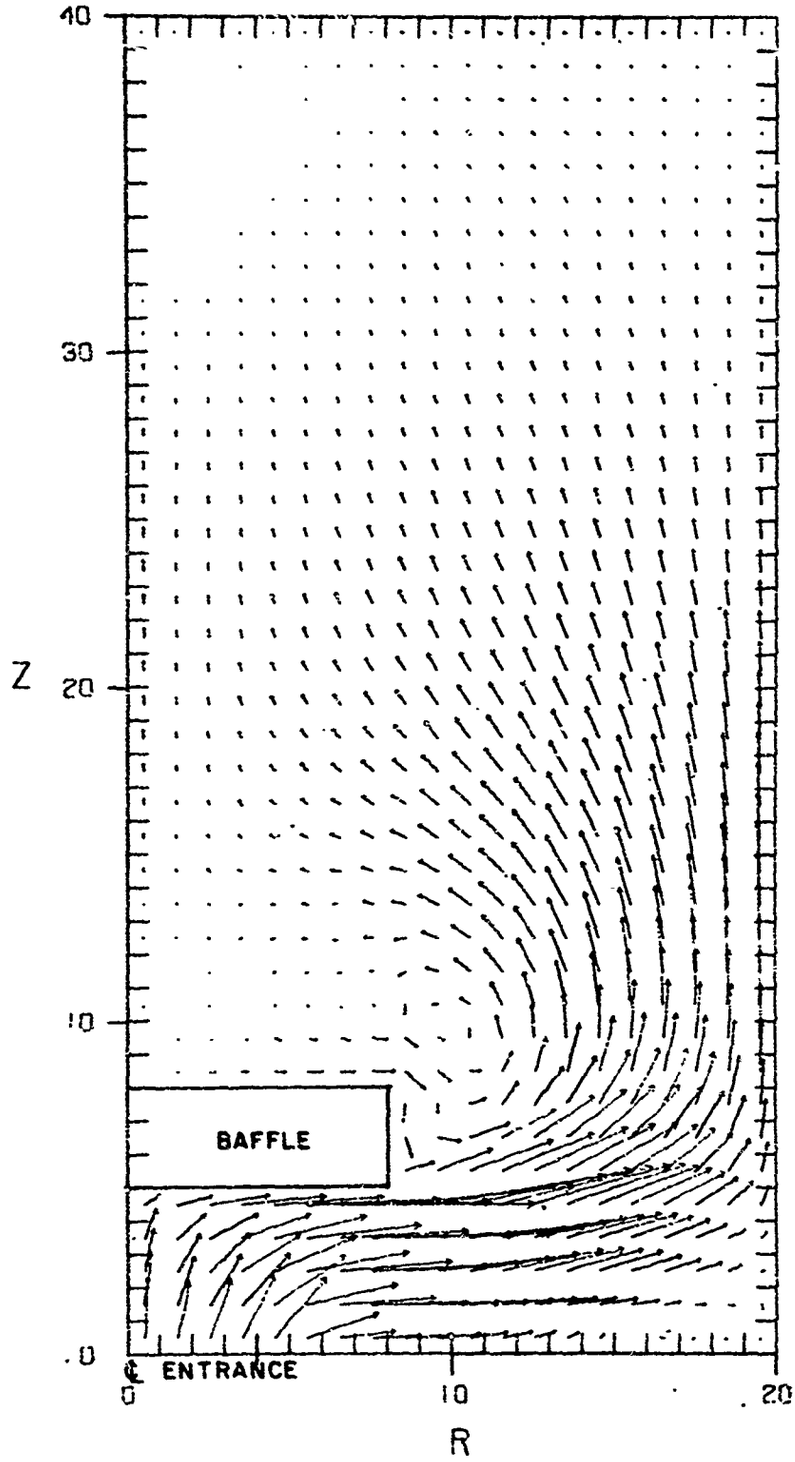


Figure 11. Flow Vectors from Ripple Code - 4 x 4 Inch Model with Baffle - 352 Microseconds



VELOCITY FIELD
TIME=5.4606138E-04 SEC CYCLE= 250

Figure 12. Flow Vectors - with Baffle - 546 Microseconds

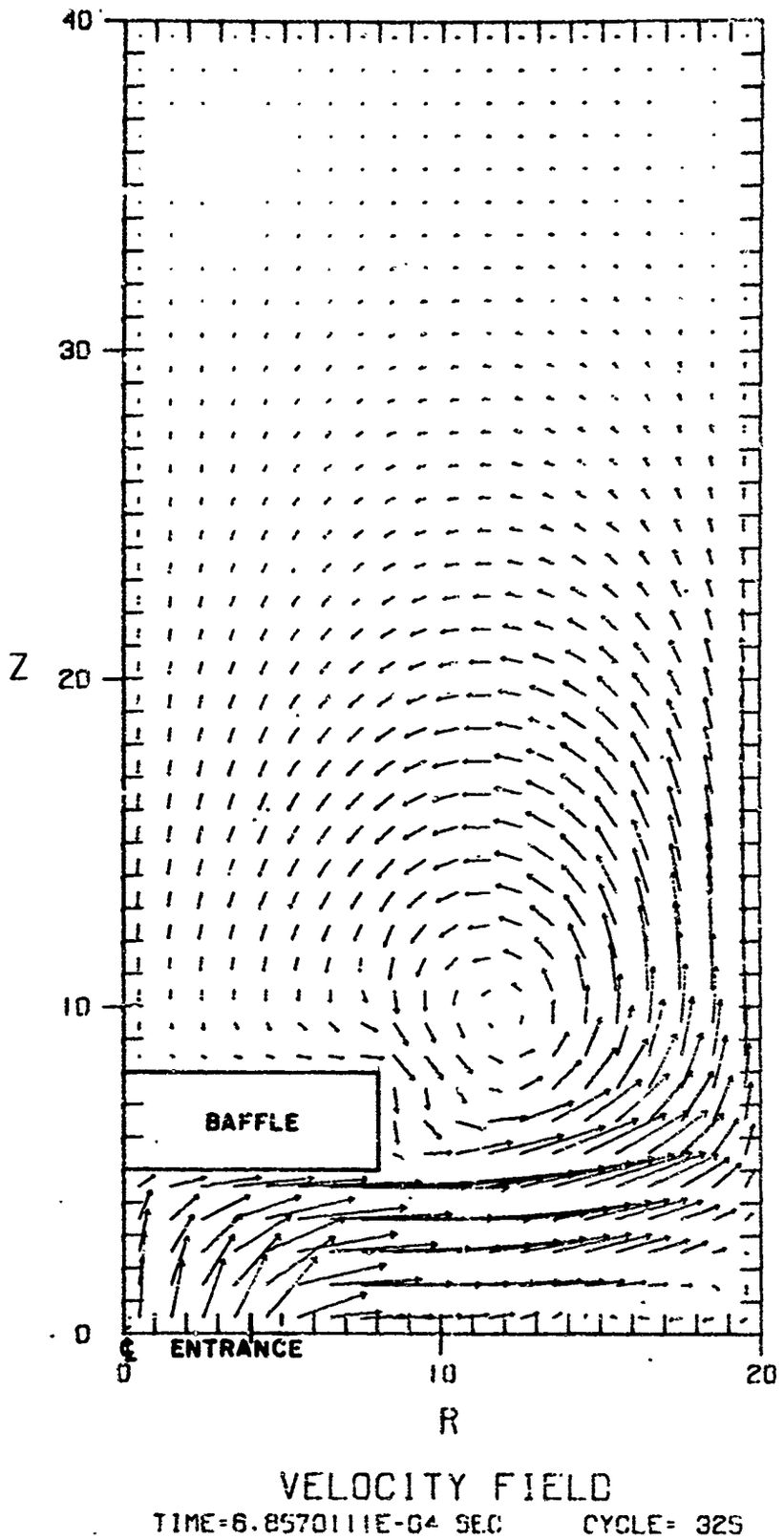


Figure 13. Flow Vectors - with Baffle - 686 Microseconds

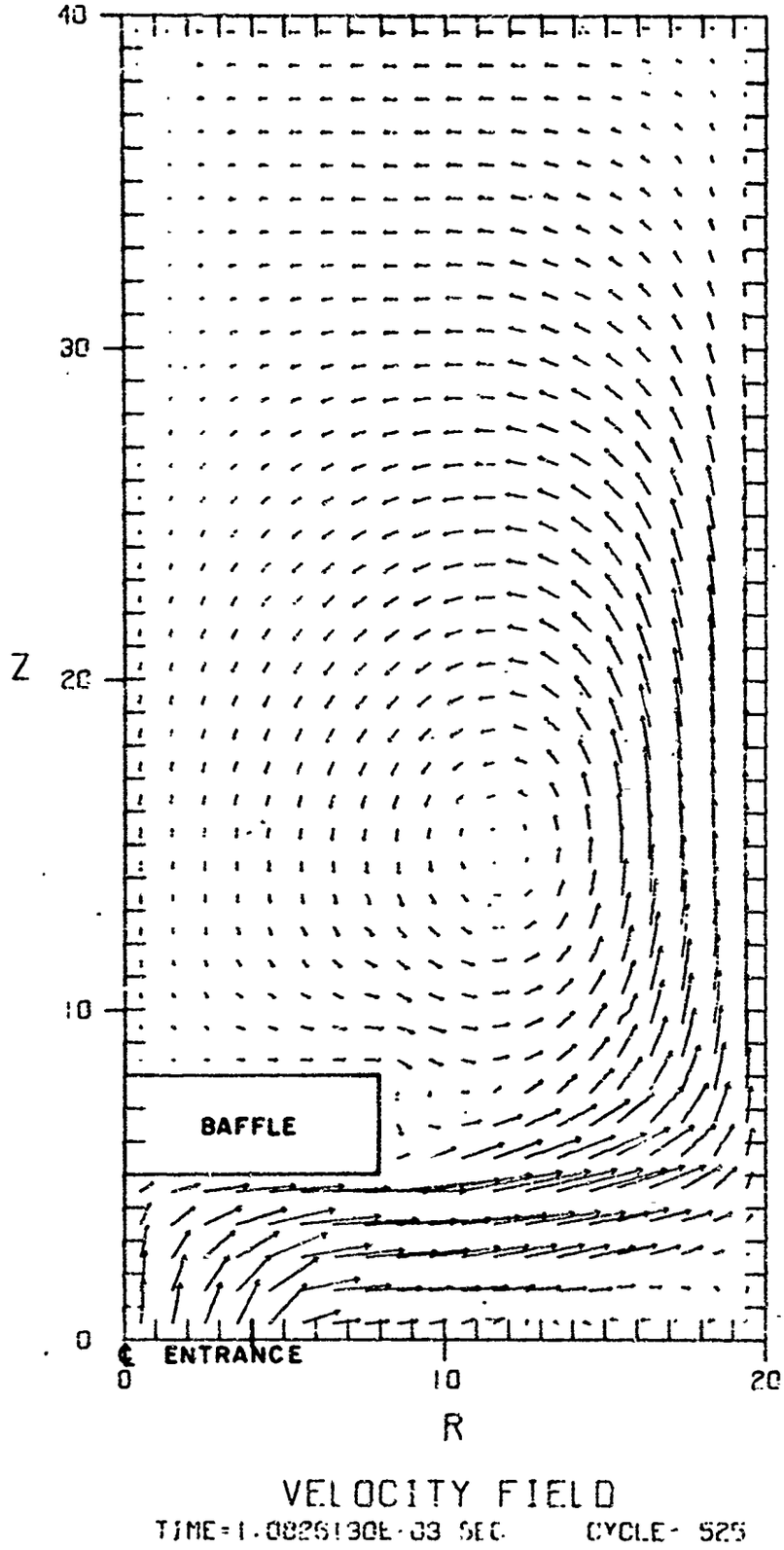


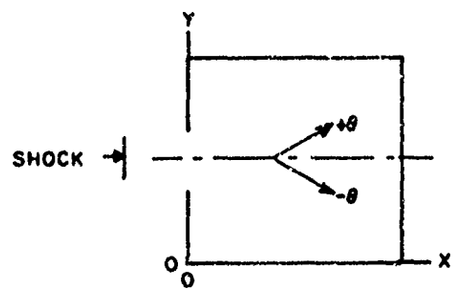
Figure 14. Flow Vectors - with Baffle - 1083 Microseconds

Table II. Comparison of Computer Results with Experiment

EXPERIMENTAL (Ref. 2, Model XIV-D)							RIPPLE CODE							
Time μsec	X In.	Y In.	U Ft/Sec	$1/2\rho u^2$ psi	ρ Slugs/Ft^3	θ Deg	Time μsec	X In.	Y In.	U Ft/Sec	$1/2\rho u^2$ psi	ρ Slugs/Ft^3	θ Deg	Remarks
290	.29	.50	20	.007	.0049	180	286	.25	.55	11	.001	.0025	-152	Shockwave at rear of model.
	.28	.84	42	.013	.0022	-175		.25	1.15	19	.003	.0023	132	
	.89	1.14	221	.434	.0026	-58		.95	1.15	196	.333	.0025	-30	
	.94	.92	137	.173	.0027	-46		.95	1.15	196	.333	.0025	-30	
	1.31	1.92	300	.736	.0024	-1		1.45	1.95	310	.667	.0020	-3	
	1.50	1.50	228	.514	.0028	-21		1.45	1.55	273	.646	.0025	-23	
304	2.43	1.23	185	.324	.0027	1	286	2.45	1.15	146	.185	.0025	-20	
	2.46	1.70	187	.333	.0027	-4		2.45	1.75	164	.224	.0024	-9	
	3.08	.95	120	.129	.0026	5		2.95	1.15	124	.128	.0024	-21	
	3.07	1.78	118	.129	.0027	5		2.95	1.75	130	.141	.0024	-8	
	3.06	2.09	115	.125	.0027	8		2.95	1.95	131	.143	.0024	-4	
444	.24	.50	8	.001	.0057	180	460	.25	.55	48	.019	.0024	129	Shockwave has returned halfway to front.
	.90	.66	148	.183	.0024	-140		.95	.55	73	.044	.0024	-119	
	.78	.52	100	.046	.0013	-160		.95	.55	73	.044	.0024	-119	
	1.46	.57	134	.392	.0062	-49		1.45	.55	91	.075	.0026	-91	
	2.03	1.01	164	.259	.0027	-43		1.95	1.15	168	.583	.0029	-65	
	1.93	1.36	224	.491	.0028	-30		1.95	1.55	246	.854	.0029	-36	
	2.03	1.97	222	.483	.0028	-3		1.95	1.95	315	1.09	.0029	-5	
459	2.38	1.08	51	.030	.0032	-62	460	2.45	1.15	100	.104	.0030	-54	
	2.49	1.65	62	.040	.0031	-37		2.45	1.55	151	.237	.0030	-32	
	2.94	1.21	39	.018	.0033	-93		2.95	1.15	50	.027	.0031	-40	
	2.97	1.72	14	.002	.0032	-16		2.95	1.55	80	.068	.0031	-17	
	2.98	2.08	19	.004	.0033	66		2.95	1.95	98	.104	.0031	-2	

Table II. Comparison of Computer Results With Experiment (Continued)

EXPERIMENTAL (Ref. 2, Model XIV-D)							RIPPLE CODE							
Time μsec	X In.	Y In.	U Ft/Sec	$1/2\rho u^2$ psi	ρ Slugs/Ft^3	θ Deg	Time μsec	X In.	Y In.	U Ft/Sec	$1/2\rho u^2$ psi	ρ Slugs/Ft^3	θ Deg	Remarks
559	.19	.50	50	.033	.0039	180	572	.25	.55	100	.101	.0029	143	Shockwave
	.19	1.20	144	.170	.0024	90		.25	1.15	156	.220	.0026	99	has returned
	2.06	1.24	125	.151	.0028	-52		1.95	1.15	210	.378	.0024	-91	to front of
	2.09	1.98	194	.040	.0003	-1		1.95	1.95	363	1.33	.0029	-4	model.
	2.12	1.98	186	.144	.0011	5		1.95	1.95	363	1.33	.0029	-4	
576	2.39	.98	119	.163	.0033	-103	572	2.45	1.15	141	.200	.0029	-91	
	3.02	2.11	32	.011	.0033	7		2.95	1.95	77	.055	.0027	-8	
	3.18	1.21	15	.003	.0036	-67		2.95	1.15	97	.098	.0030	-88	
	3.21	1.76	30	.010	.0032	4		3.45	1.75	41	.017	.0029	-50	
982	.21	1.28	34	.005	.0023	-45	981	.25	1.15	88	.086	.0032	84	Vortex
	.42	1.10	58	.035	.0030	20		.45	1.15	100	.111	.0032	81	centers
	.54	1.61	218	.445	.0027	-4		.45	1.55	152	281	.0035	15	have passed
	.85	1.15	136	.205	.0032	39		.95	1.15	128	165	.0029	85	middle of
														model.



such as near the vortex. Overall, the computer program probably gives sufficiently accurate predictions for one to understand what flow pattern to expect in a room for a given entrance-baffle combination.

Table III gives a summary of the flow calculations made with the smoke grid method from Models 35, 35 with baffle, and 36. Appendix B contains the more complete flow tables and plots. All three models were exposed to the 5 psi shock wave in a side-on position so as to simulate the entryway flow conditions set up in an underground room such as a basement.

Flows of 200-300 ft/sec were observed near the entryway exit of Model 35 without a baffle. A circular flow continued around the interior of the model, moving away from the entryway exit.

In contrast, Models 35 with baffle and Model 36 seemed to contain the higher flows to an area near the baffles. The flows generally were not as high as for Model 35. Shot 342, Model 36, appears to be an exception to this, with flows of 414-463 ft/sec listed. These appear isolated in the flow tables (Appendix B) and probably do not represent the general flow properties.

B. Three-Dimensional Models

Tables IV, V, and VI summarize the data from Models 27-A, 27-A with baffle, and Model 25-A, respectively. The complete series of pressure-time records from the models are given in Appendix C.

Records from positions on the entrance centerline, typical of all the shots, are shown in Figures 15 and 16. The position numbers refer to locations of transducers as shown in Figure 5, Model 25-A. A great many pressure oscillations may be seen on all the stagnation records obtained in areas of high speed flow such as near the entrance.

Pressure calculations were made from the records by averaging through the oscillations. The dynamic pressure was calculated by a subtraction of the side-on fill overpressure values from the stagnation overpressure values for equal times after arrival at a transducer

Table III. Summary of Results from the Two-Dimensional Models

Model No.	Shot No.	Grid Position	Time μsec	Velocity Ft/Sec	Q LB/Ft^2	Remarks
35	331	Front-Upper	15 - 307	6 - 150	0 - 24	Entryway without Baffle
			349 - 766	6 - 378	0 - 198	
			807 - 1683	2 - 191	0 - 49	
			1725	36 - 233	1 - 68	
	332	Front-Lower	41 - 871	2 - 164	0 - 34	P_s = 5 psi
			912 - 1494	2 - 237	0 - 65	
			1535 - 1910	4 - 244	0 - 16	
	334	Rear-Lower	15 - 222	4 - 210	0 - 56	
			264 - 679	3 - 131	0 - 26	
			721 - 1094	4 - 195	0 - 48	
			1136 - 2132	3 - 345	0 - 160	
	337	Rear-Upper	41 - 577	4 - 122	0 - 18	
			618 - 700	2 - 160	0 - 32	
			742 - 1154	4 - 105	0 - 14	
35/w Baffle	338	Rear-Upper	17 - 1203	4 - 148	0 - 28	Entryway with Baffle
	339	Rear-Lower	51 - 499	4 - 179	0 - 34	
			540 - 948	4 - 65	0 - 5	
			988 - 1152	4 - 107	0 - 20	
	340	Front-Lower	60 - 390	2 - 82	0 - 8	
			431 - 1049	2 - 67	0 - 5	
			1090 - 1502	0 - 116	0 - 17	
	342	Front-Upper	52 - 297	4 - 218	0 - 72	
			338 - 746	10 - 463	0 - 166	
			787 - 1154	12 - 414	0 - 202	
36	343	Front-Upper	25 - 316	2 - 164	0 - 29	Entryway with Two Baffles
			358 - 857	3 - 98	0 - 13	
			899 - 1564	6 - 109	0 - 15	
	345	Front-Lower	25 - 894	4 - 88	0 - 9	
			936 - 1019	3 - 80	0 - 35	
			1060 - 1474	2 - 84	0 - 11	
	348	Rear-Lower	13 - 1541	2 - 78	0 - 8	
	350	Rear-Upper	30 - 1396	2 - 93	0 - 12	

Table IV. Results - Model 27-A

Shot	Position	Type	Input Pressure psi	Max. Fill Pressure psi	Max. AV. Stag. or Refl., psi	Remarks
256	1	Side-on	5.4	4.8		Model 27-A
255			10.7	9.2		Entrance
254			20.9	18.8		0.32" x 1.0"
						See Fig. 3
						for positions
275	1	Stag.	5.3		5.6	Pos. 1
276			10.6		12.9	X = 1/2"
277			20.6		29.5	Centerline
257	2	Side-on	5.3	4.5		Pos. 2
258			10.5	8.4		X = 2"
259			20.5	17.0		Centerline
262	2	Stag.	5.2		5.1	Stagnation
261			10.6		9.8	Pressure Mea-
263			20.8		18.9	sured 1/2"above
						Floor
270	3	Side-on	5.3	4.7		Pos. 3
269			10.8	8.9		X = 4"
271			21.0	17.1		Centerline
264	3	Stag.	5.3		4.8	
265			10.6		9.2	
267			21.0		19.0	
278	4	Reflect.	5.3		4.9	Pos. 4
279			10.6		9.6	X = 6",1/2"
280			20.5		18.5	high on Back
						Wall
281	2-A	Stag.	5.3		4.9	20° Off
282			10.6		10.0	Entrance
283			20.5		18.8	Centerline,
						1-11/16"

Table V. Results - Model 27-A, with Baffle

Shot	Position	Type	Input Pressure psi	Max. Fill Pressure psi	Max. Av. Stag. or Refl., psi	Remarks
411	3	Side-on	5.0	5.1		Pos. 2 @3
412			10.5	10.2		Behind Baffle
413			20.3	20.0		
405	2	Stag.	5.1		5.4	See Fig. 4 for
406			10.4		10.2	all Positions
407			20.5		20.3	
410	3	Stag.	5.1		5.6	
409			10.7		10.9	
408			20.5		21.4	
298	1-B	Side-on	5.2	5.2		Pos. 1-B, 1/2"
297			10.5	10.1		from Front, 1.4"
296			20.7	18.8		from Sidewall
284	1-B	Stag.	5.1		5.0	
285			10.4		10.1	
286			21.0		19.9	
299	2-B	Side-on	5.2	5.2		Pos. 2-B, 2"
400			10.2	9.7		from Front, 1.4"
401			20.6	19.3		from Sidewall
289	2-B	Stag.	5.2		5.6	
288			10.4		10.5	
287			21.0		20.4	
402	3-B	Side-on	5.3	5.2		Pos. 3-B, 4"
403			10.5	9.8		from Front, 1.4"
404			20.7	19.5		From Sidewall
290	3-B	Stag.	5.1		5.4	
291			10.0		10.2	
292			20.6		20.6	
293	4-B	Reflect.	5.3		5.7	Pos. 4-B on
294			10.3		10.6	Rear Wall 1/2"
295			20.5		19.8	high, 1.4" from
419	1-C	Side-on	5.1	5.1		Sidewall
418			10.7	9.9		
417			20.7	20.0		
414	1-C	Stag.	5.1		5.5	Pos. 1-C, 1/2"
415			10.4		10.8	from Front
416			20.7		20.1	

Table VI. Results - Model 25-A

Shot	Position	Input Pressure psi	Max. Fill Pressure psi	Max. AV. Stag., psi	Remarks
470	1	5.0	3.0	5.8	Entrance
420		10.2	5.4	12.0	2" x 4", No
421		21.0	9.6	25.9	Baffle
471	2	4.9	3.0	3.7	Records from
423		9.5	4.7	6.5	Position on
422		20.9	9.8	15.2	Centerline.
472	3	4.9	3.1	3.7	See Fig. 5
424		10.8	5.4	5.8	For Positions
425		20.9	9.7	10.6	
473	1-B	4.9	3.0	3.2	
427		10.6	5.2	5.3	Records from
426		21.0	9.6	9.7	Positions off
474	2-B	4.8	3.0	3.2	Centerline
428		10.6	5.2	5.3	
429		21.0	9.7	9.6	
475	3-B	4.6	3.0	3.2	
431		10.7	5.4	6.0	
430		20.7	9.5	9.6	
479	1-D	5.0	3.2	3.4	
440		10.6	5.4	5.7	1/2x4x5 in. Baffle
441		20.7	9.9	8.1	Records From
480	2	4.7	3.0	3.2	Positions on
443		10.6	5.4	5.7	Centerline.
442		20.7	10.0	10.2	
481	3	4.8	3.0	3.2	
444		10.6	5.7	5.6	
447		20.8	9.7	9.9	
478	1-B	4.8	3.1	3.9	Stag. probe pointed toward entrance.
432		10.6	5.5	6.9	Records positions
433		21.0	10.4	11.3	from off Centerline
435	1-B	10.6	5.3	5.5	Stag.probe pointed
434		21.0	9.9	9.9	toward front wall.
477	2-B	4.8	3.1	3.3	
436		10.5	5.4	5.6	
437		20.9	9.9	10.0	
476	3-B	4.7	3.1	3.2	
439		10.6	5.4	4.8	
438		21.0	9.7	10.1	

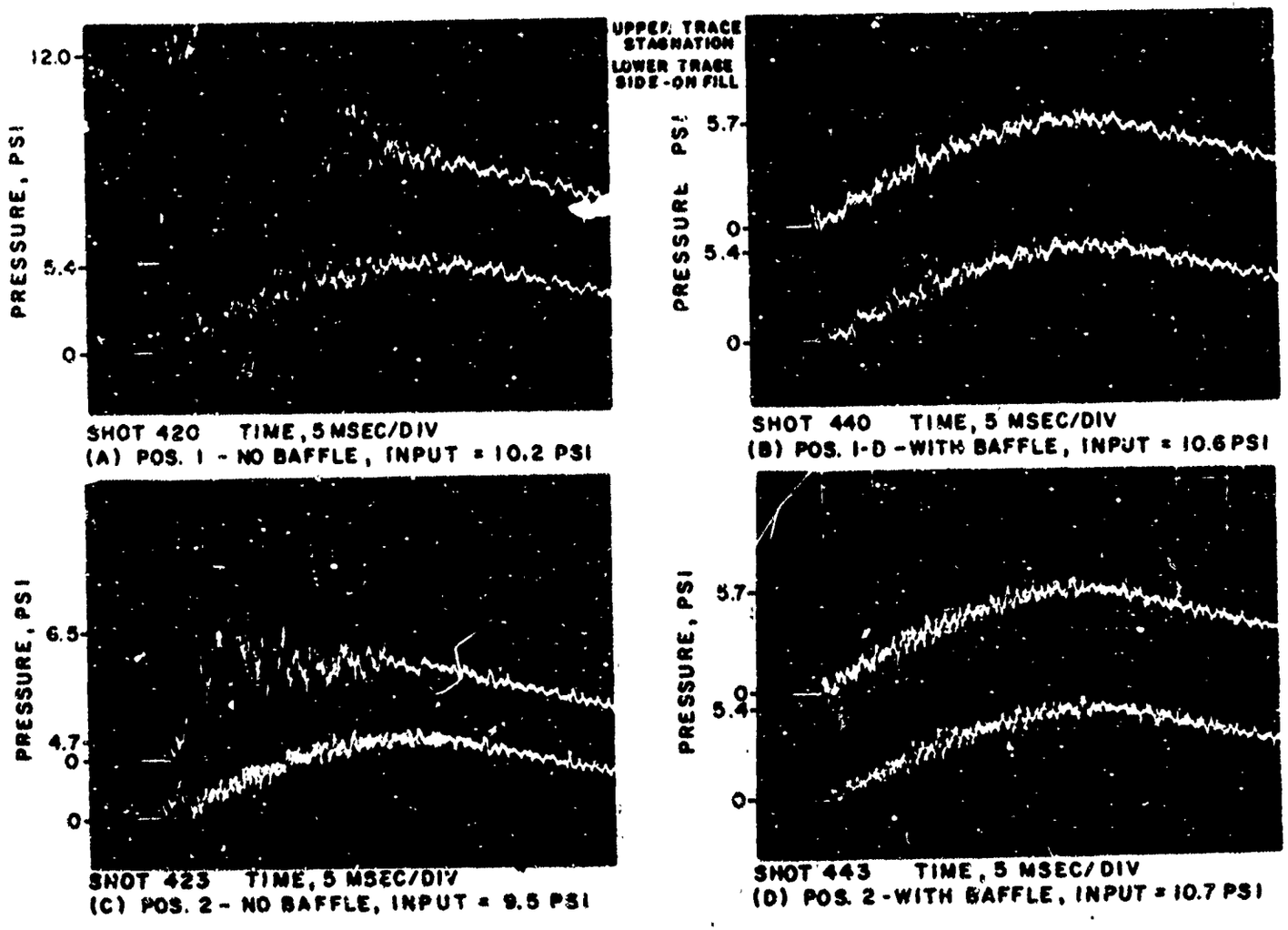
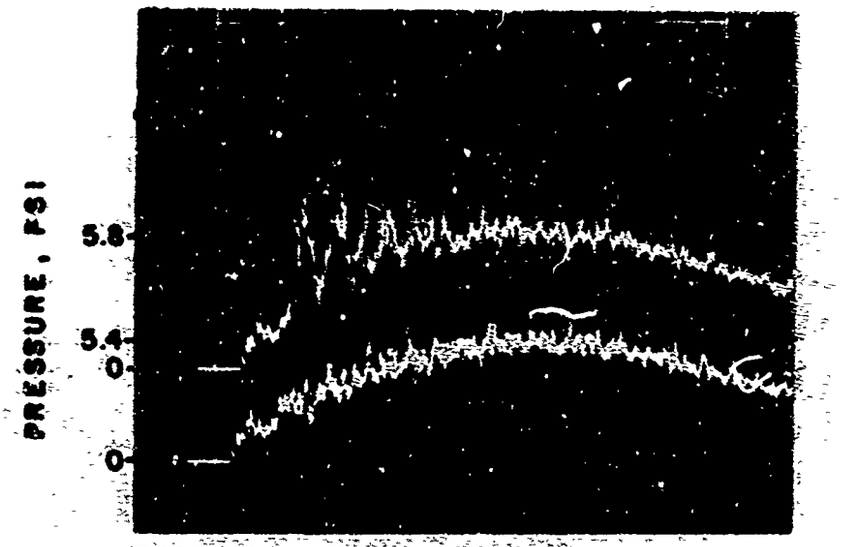
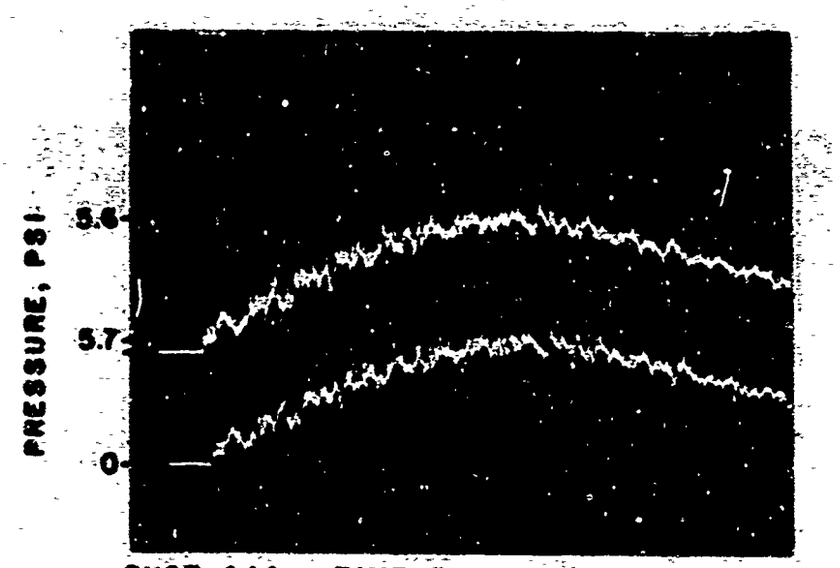


Figure 15. Typical Records from Model 25-A



SHOT 424 TIME, 5 MSEC/DIV
(E) POS. 3-NO BAFFLE, INPUT = 10.8 PSI



SHOT 444 TIME, 5 MSEC/DIV
(F) POS. 3 - WITH BAFFLE, INPUT = 10.8 PSI

Figure 15. (Continued) Typical Records from Model 25-A

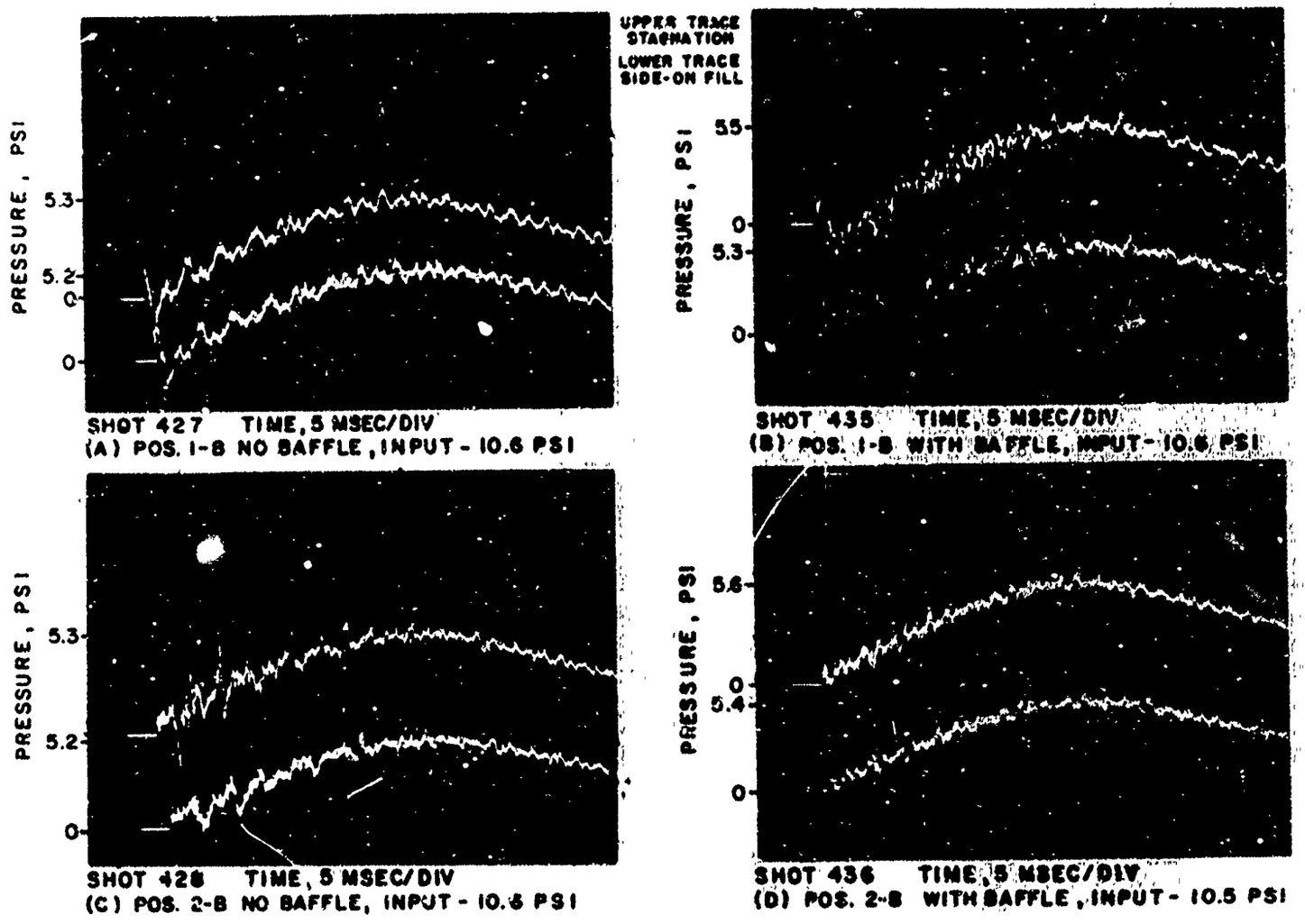


Figure 16. Typical Records from Model 25-A, Positions off Centerline.

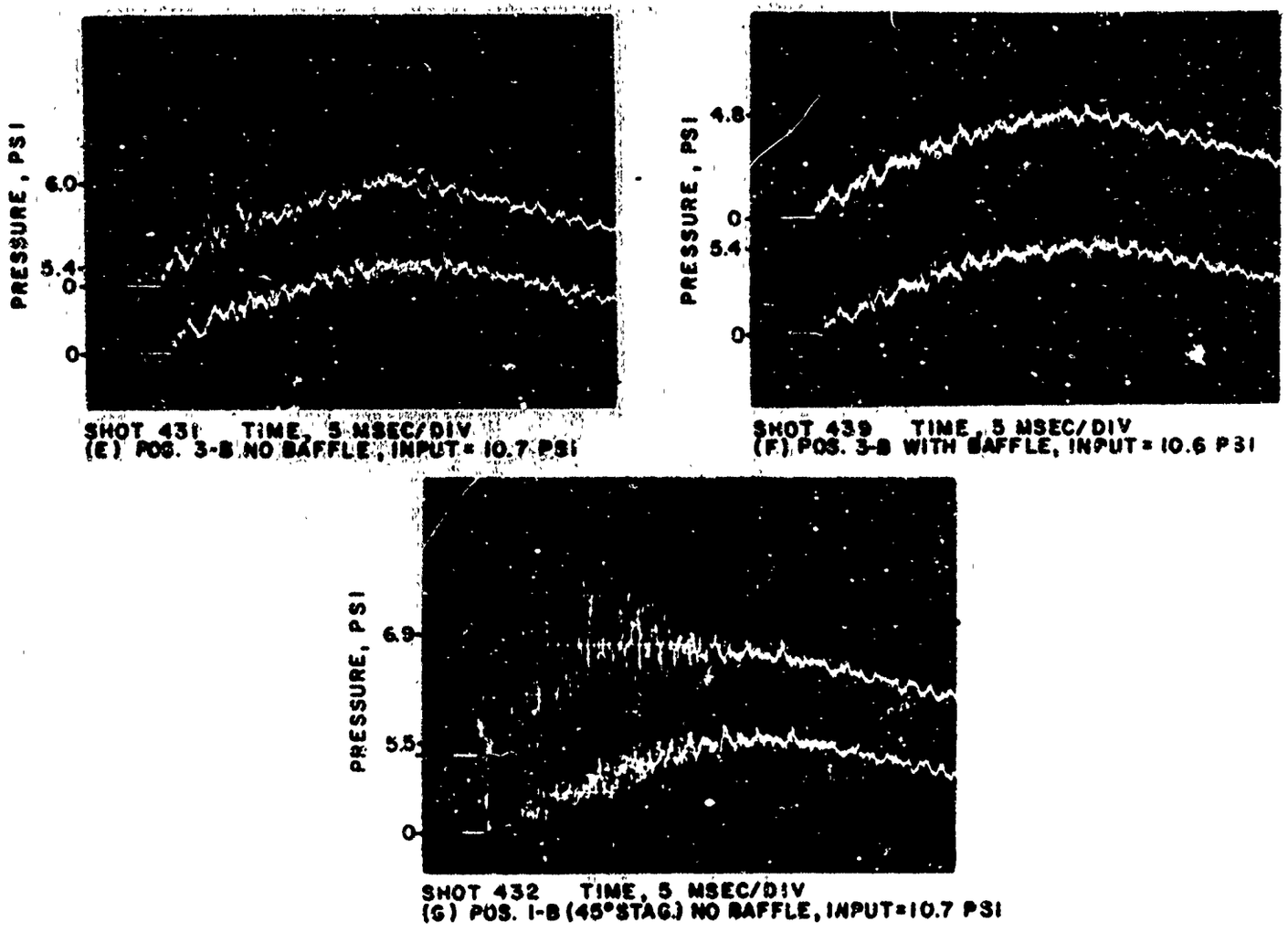


Figure 16. (Continued) Typical Records from Model 25-A, Positions off Centerline.

position. This gives them an indication of the air flows ability to cause translation. For a prototype shelter room, this damage potential can be related to translation of the occupants of the shelter. These calculated pressure differences are shown for Model 27-A (without baffle) in Figures 17 - 19 as a function of the input pressures and the transducer locations. At times early in the filling process, the stagnation pressure is large and the side-on fill is still small. The result is a large dynamic pressure approaching a value equal to the stagnation pressure of the entering flow. As the model fills, the pressure difference becomes less.

The maximum dynamic pressure decreases with distance from the entrance of the model. Position 3 shows perhaps 20% of the maximum dynamic pressure at Position 1. Addition of a baffle one entrance width inside the model causes the incoming flow to be diverted. Figures 20 - 25 show the dynamic pressure curves for positions inside Model 27-A with baffle.

Figure 26 summarizes the maximum values of dynamic pressure from 27-A. For about two entrance widths away from the entrance (no baffle) the dynamic pressure equals that of the stagnation pressure of the shock wave outside. These values decayed in about 12 entrance widths to values equal to the dynamic pressure of the shockwave outside at that time. All values of maximum dynamic pressure were reduced, with the baffle, to values below 3 psi; the majority were below 2 psi. A similar procedure of calculations of the dynamic pressure was followed for the records obtained from inside Model 25-A.

Figures 27 - 29 show the values calculated for the entrance centerline positions (no baffle). Figures 30 - 32 show very much reduced values of dynamic pressure at positions off the centerline. The same result is found for positions on the centerline behind the baffle (Figures 33 - 35).

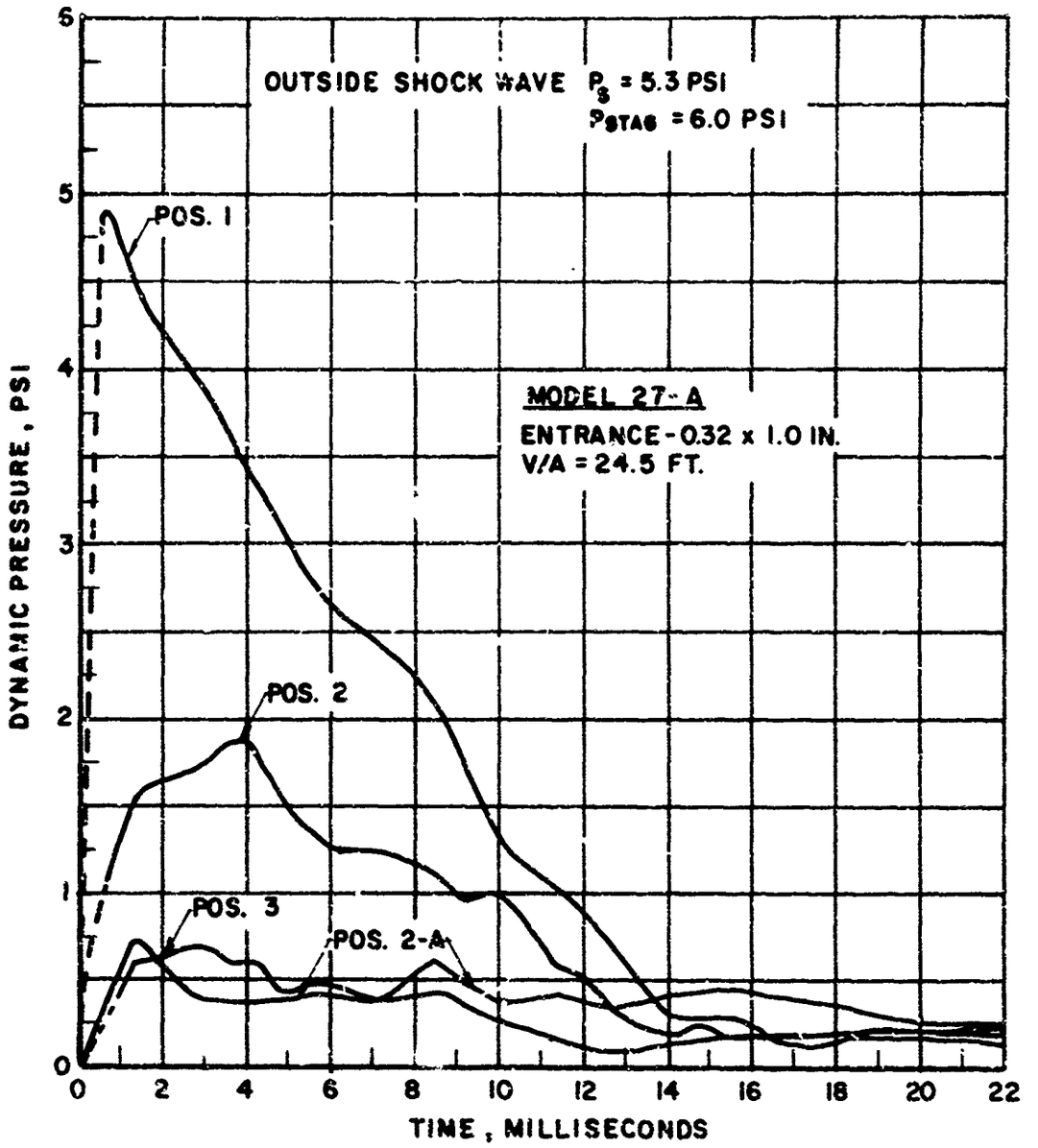


Figure 17. Dynamic Pressure - Model 27-A, P_s = 5.3 psi.

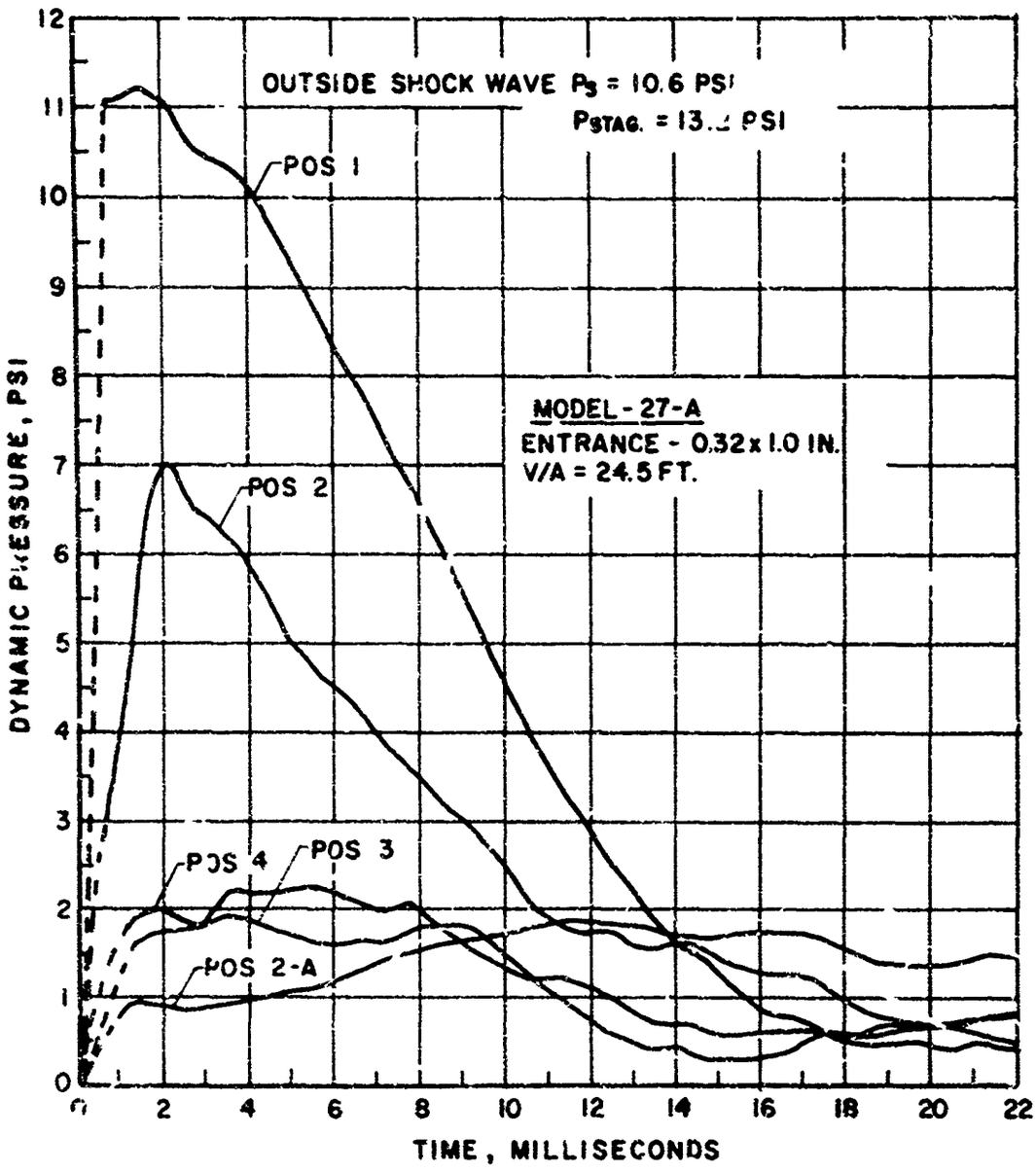


Figure 18. Dynamic Pressure - Model 27-A, P_s = 10.6 psi.

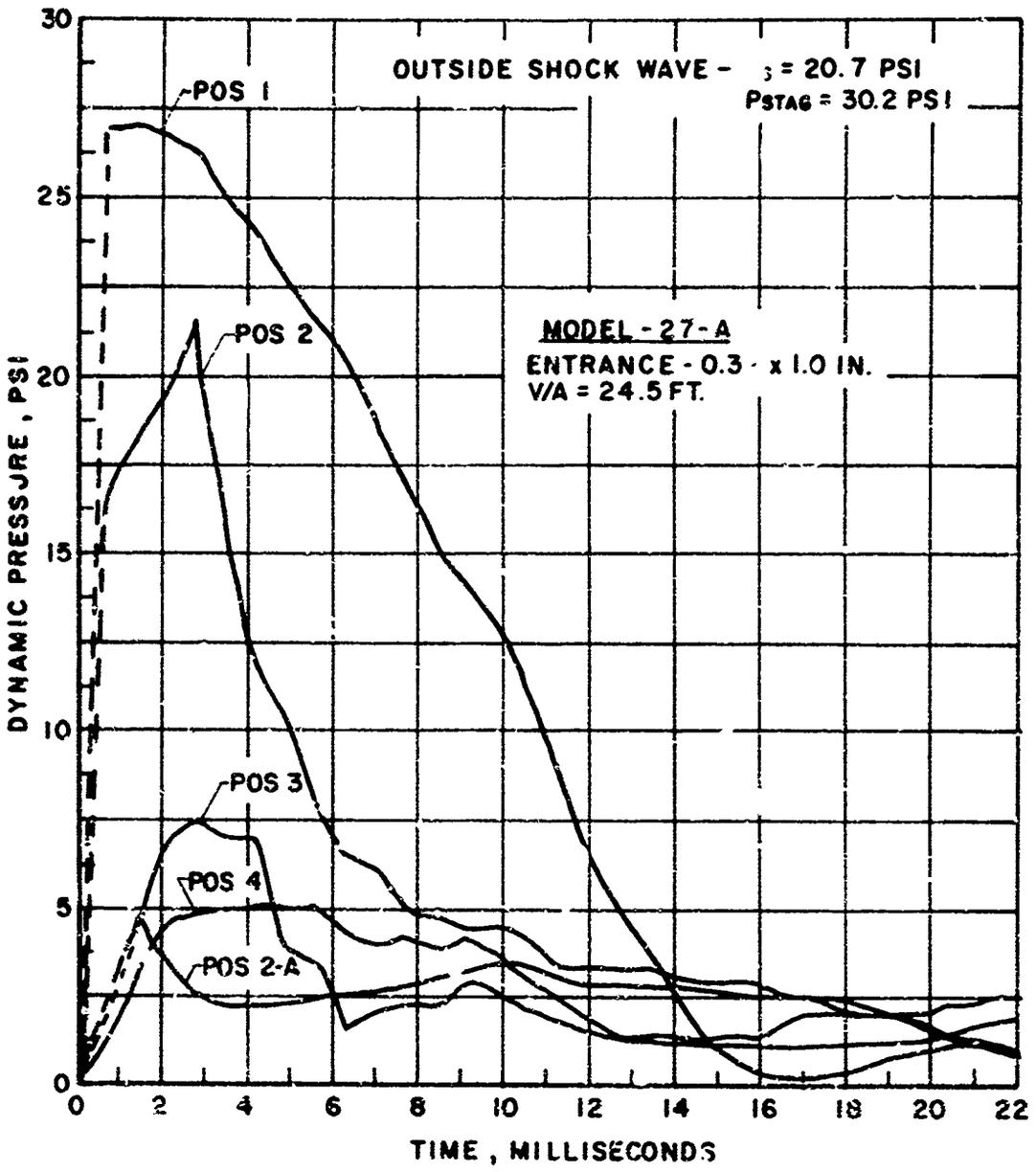


Figure 19. Dynamic Pressure - Model 27-A, P_s = 20.7 psi.

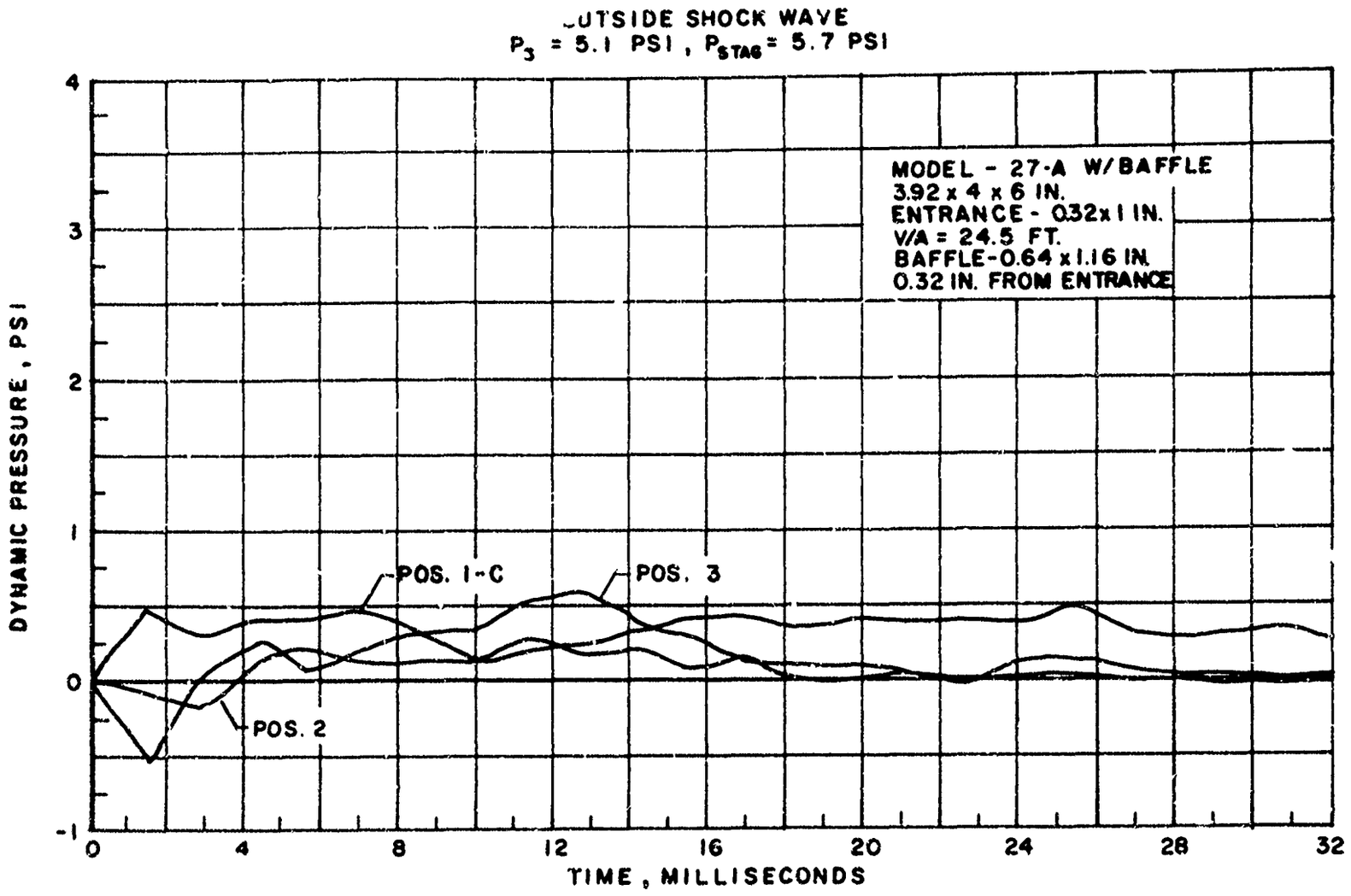


Figure 20. Dynamic Pressure - Model 27-A, with Baffle
P_s = 5.1 psi.

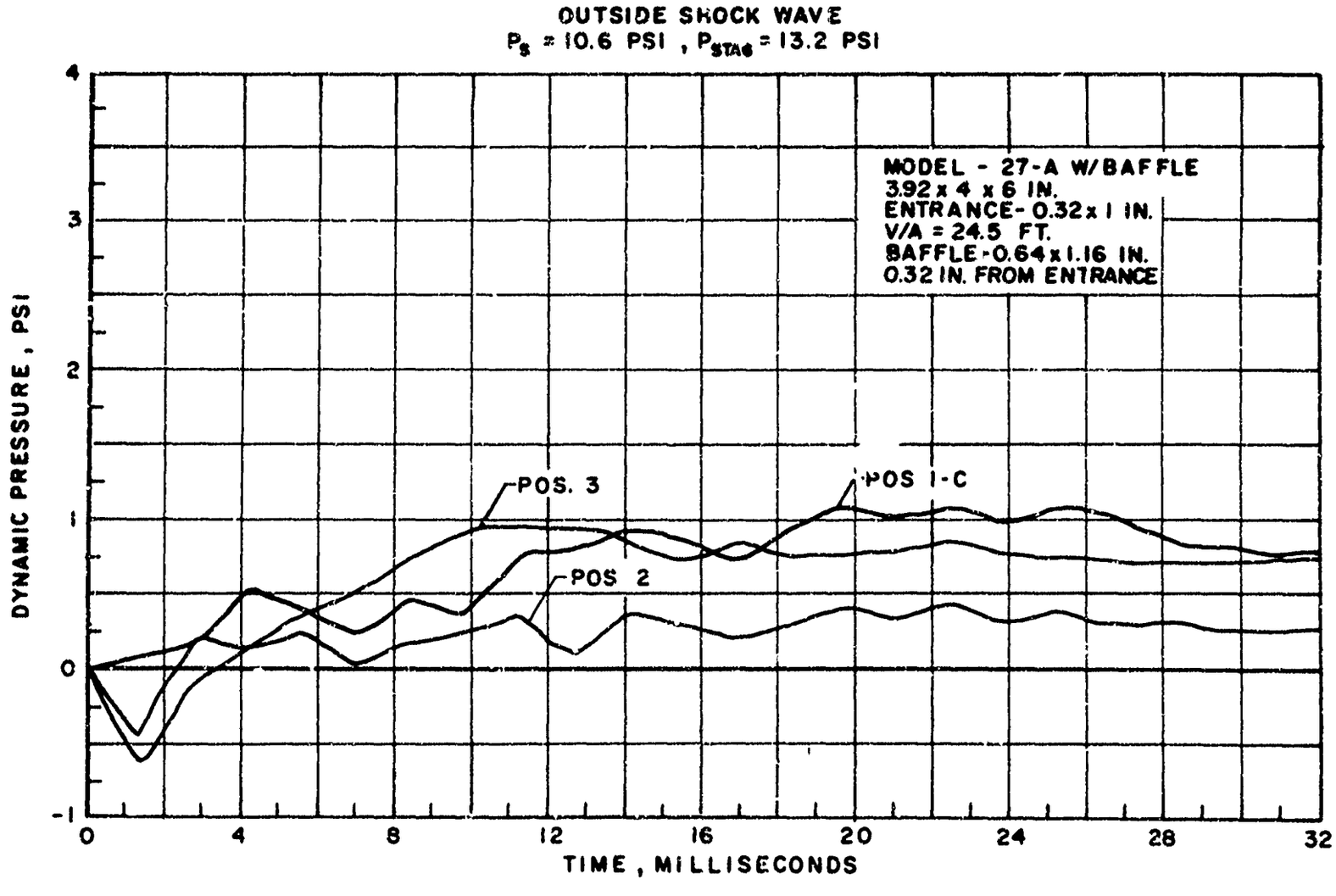


Figure 21. Dynamic Pressure - Model 27-A, with Baffle
P_s = 10.6 psi.

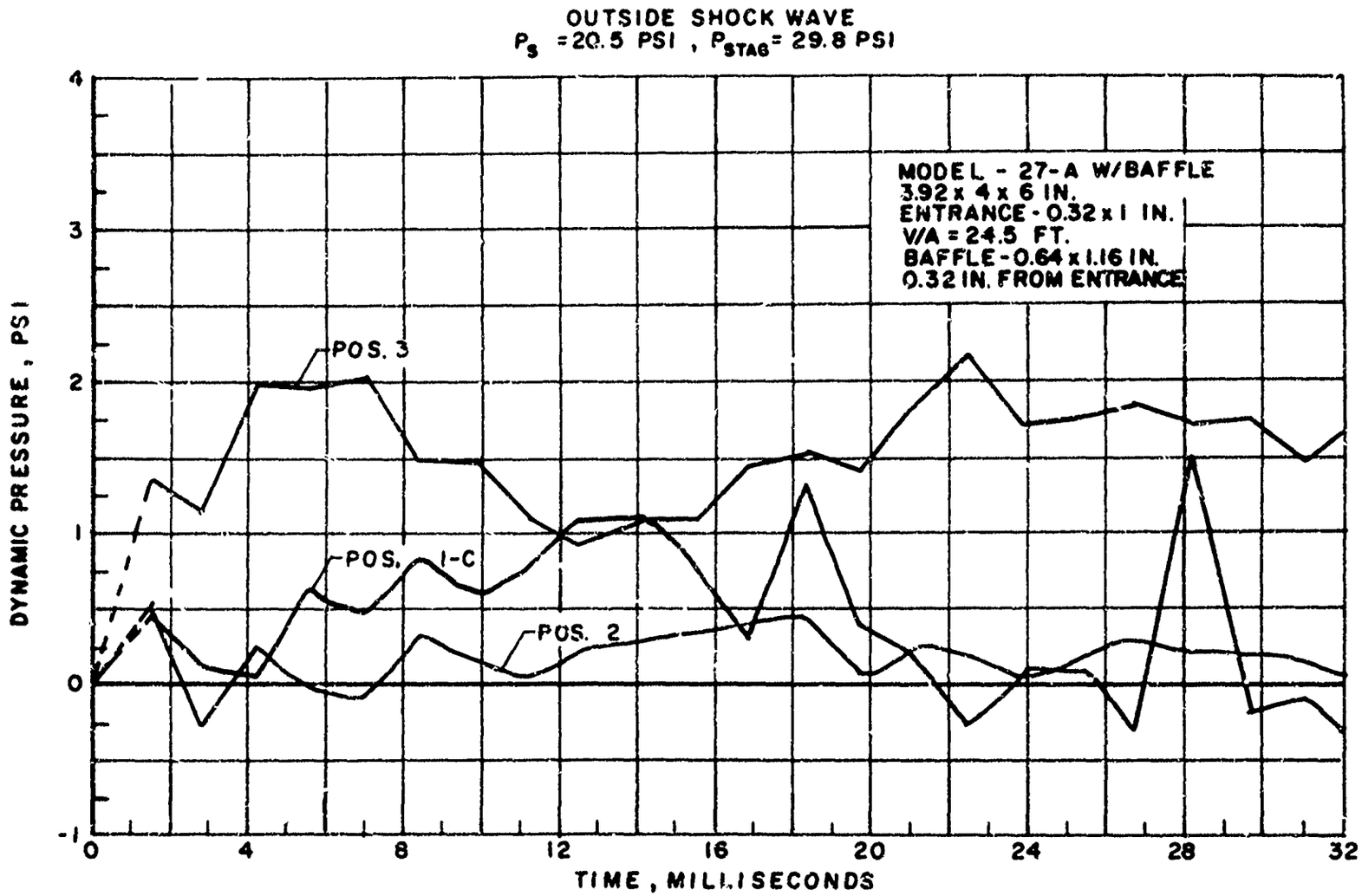


Figure 22. Dynamic Pressure - Model 27-A, with Baffle
P_s = 20.5 psi.

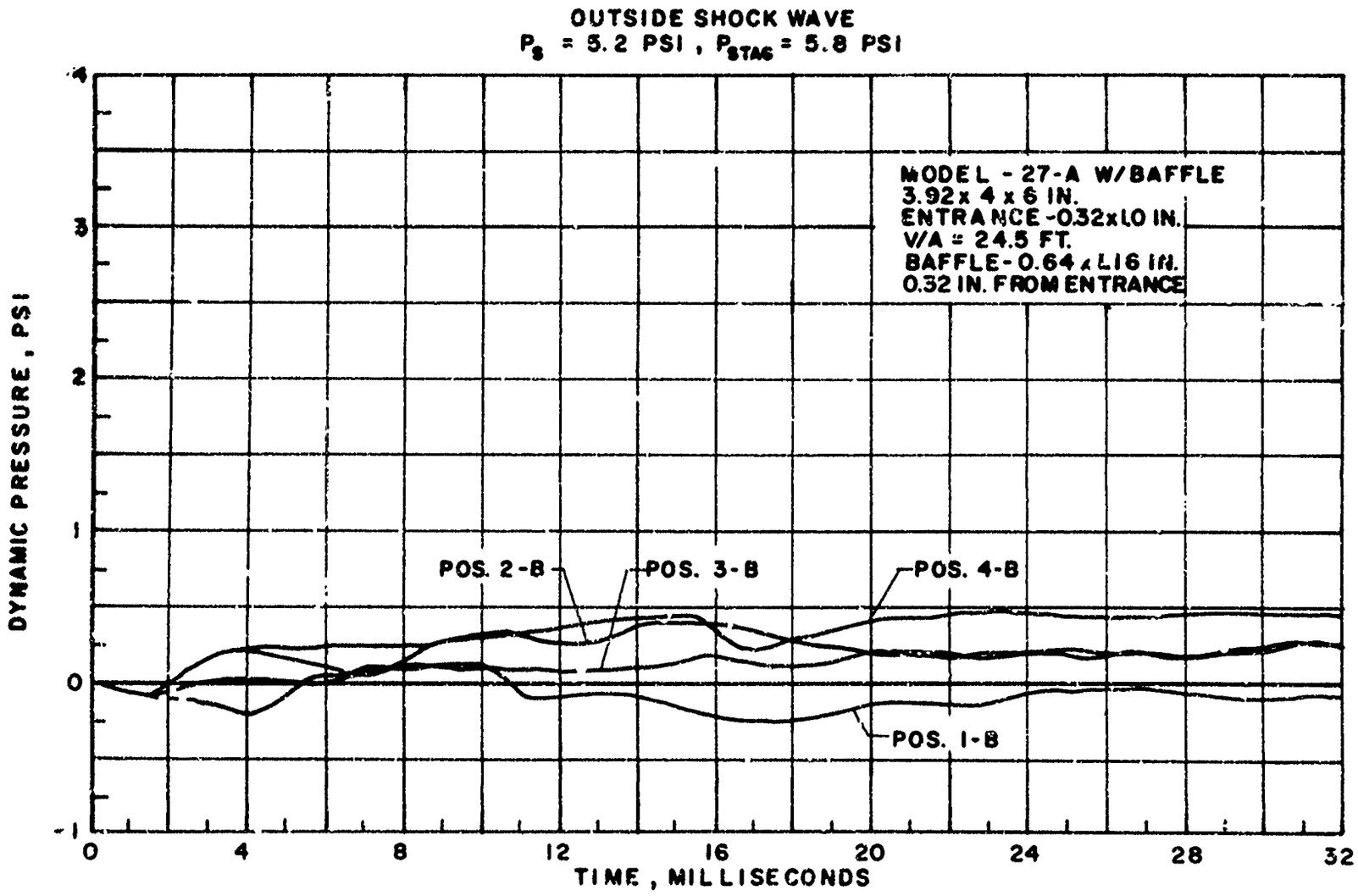


Figure 23. Dynamic Pressure off Centerline - Model 27-A, with Baffle - P_s = 5.2 psi.

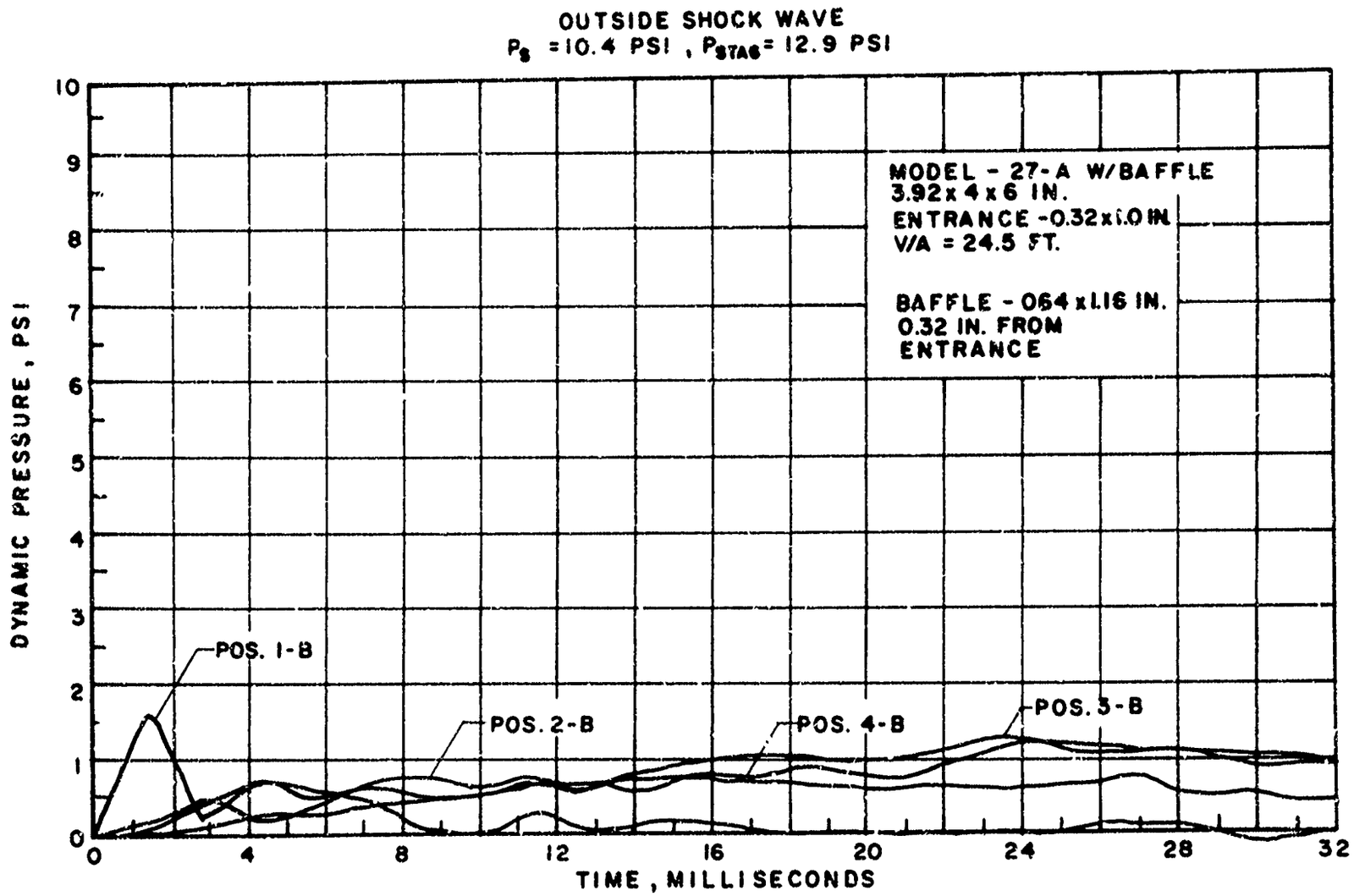


Figure 24. Dynamic Pressure off Centerline - Model 27-A, with Baffle - P_s = 10.4 psi.

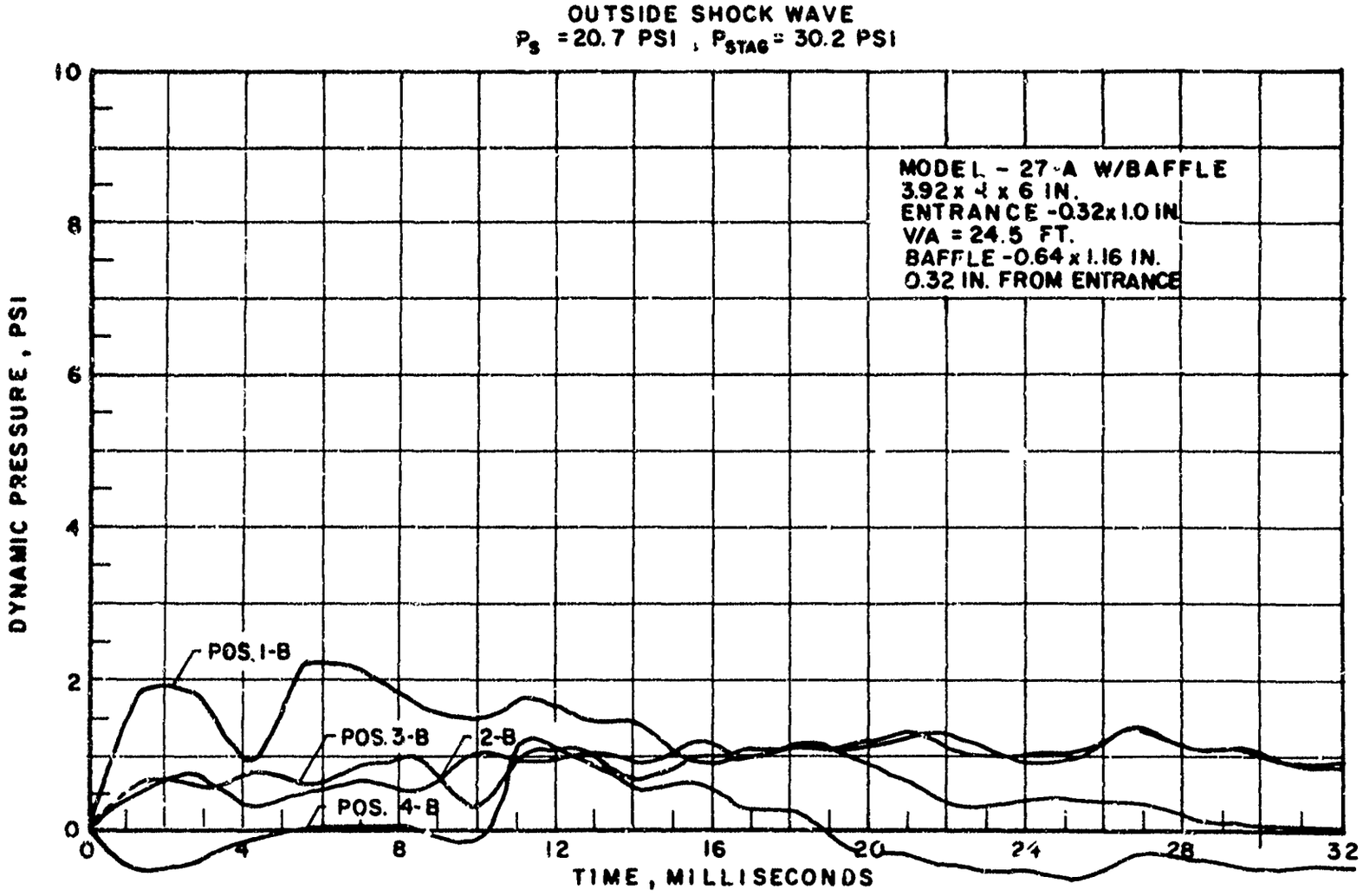


Figure 25. Dynamic Pressure off Centerline - Model 27-A, with Baffle - P_s = 20.7 psi.

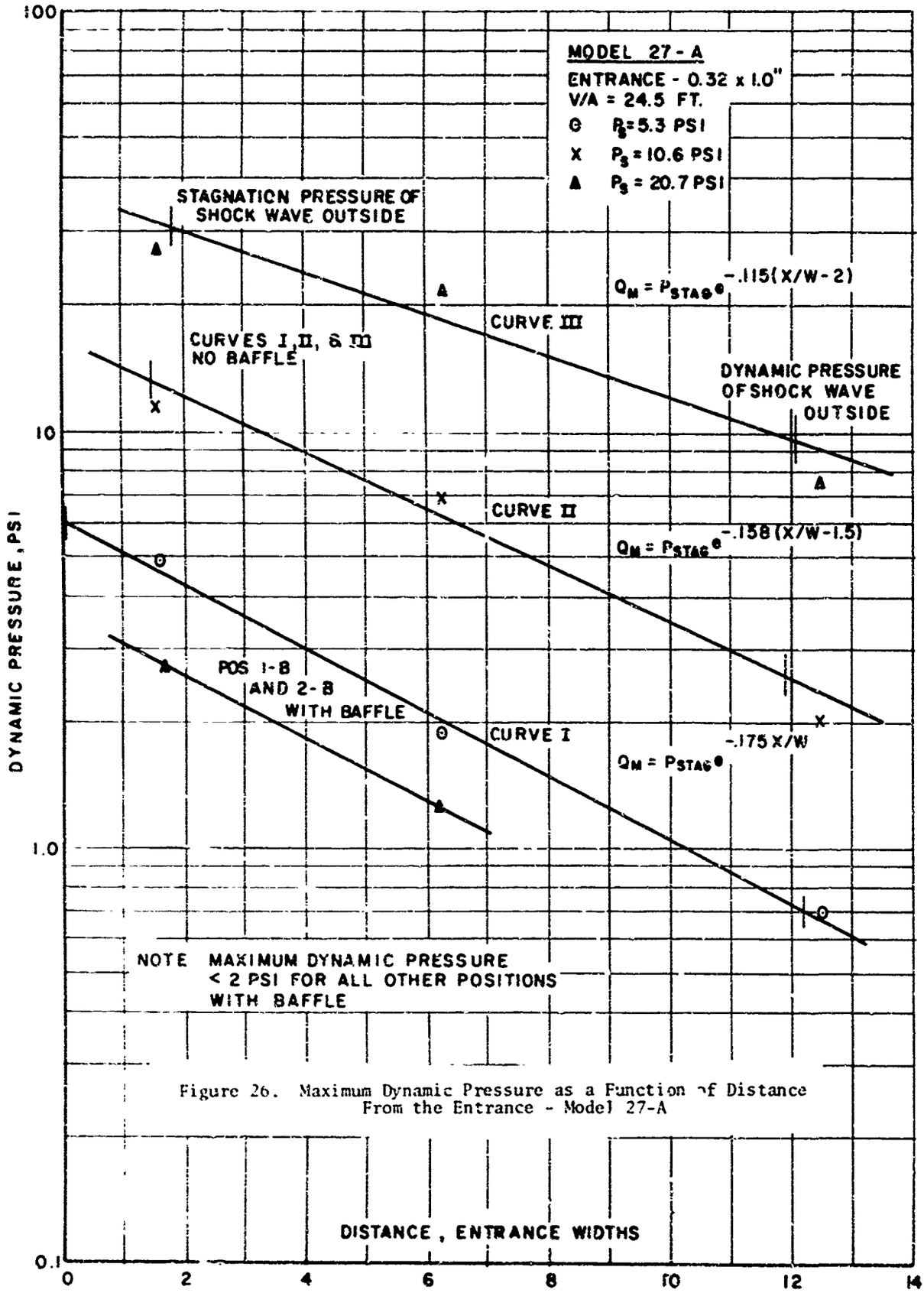


Figure 26. Maximum Dynamic Pressure as a Function of Distance From the Entrance - Model 27-A

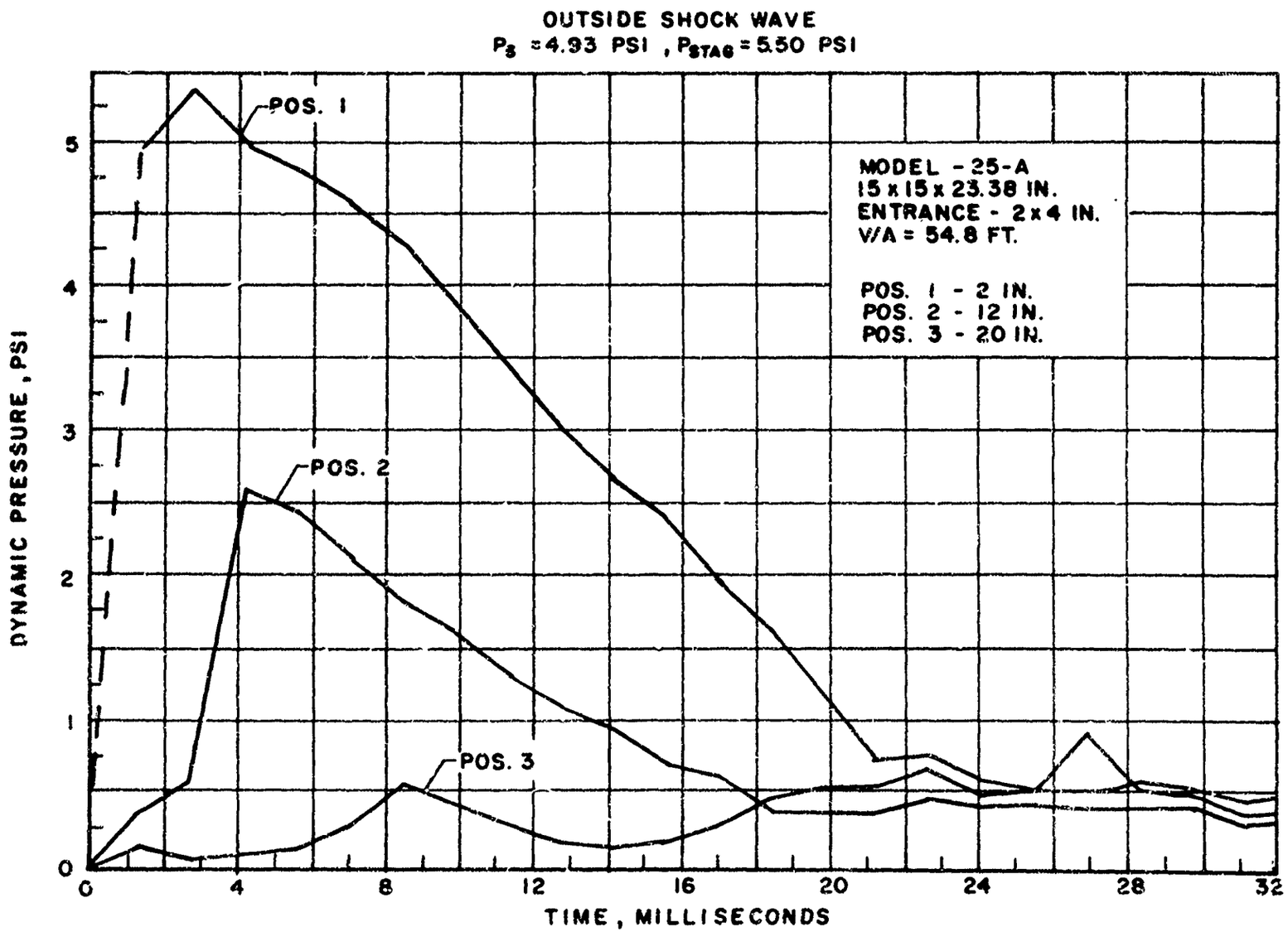


Figure 27. Dynamic Pressure - Model 25-A, P_s = 4.9 psi.

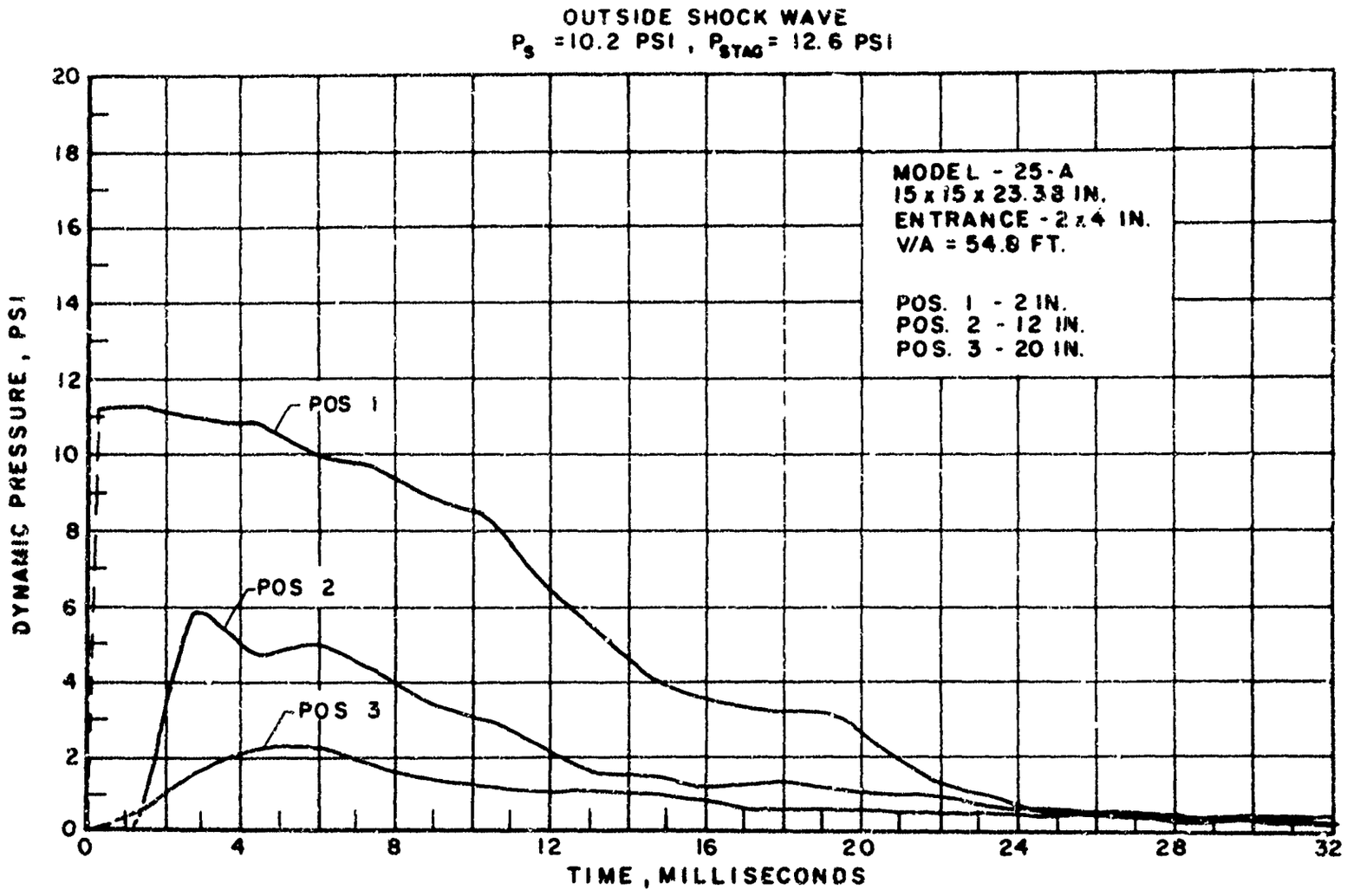


Figure 28. Dynamic Pressure - Model 25-A, P_s = 10.2 psi.

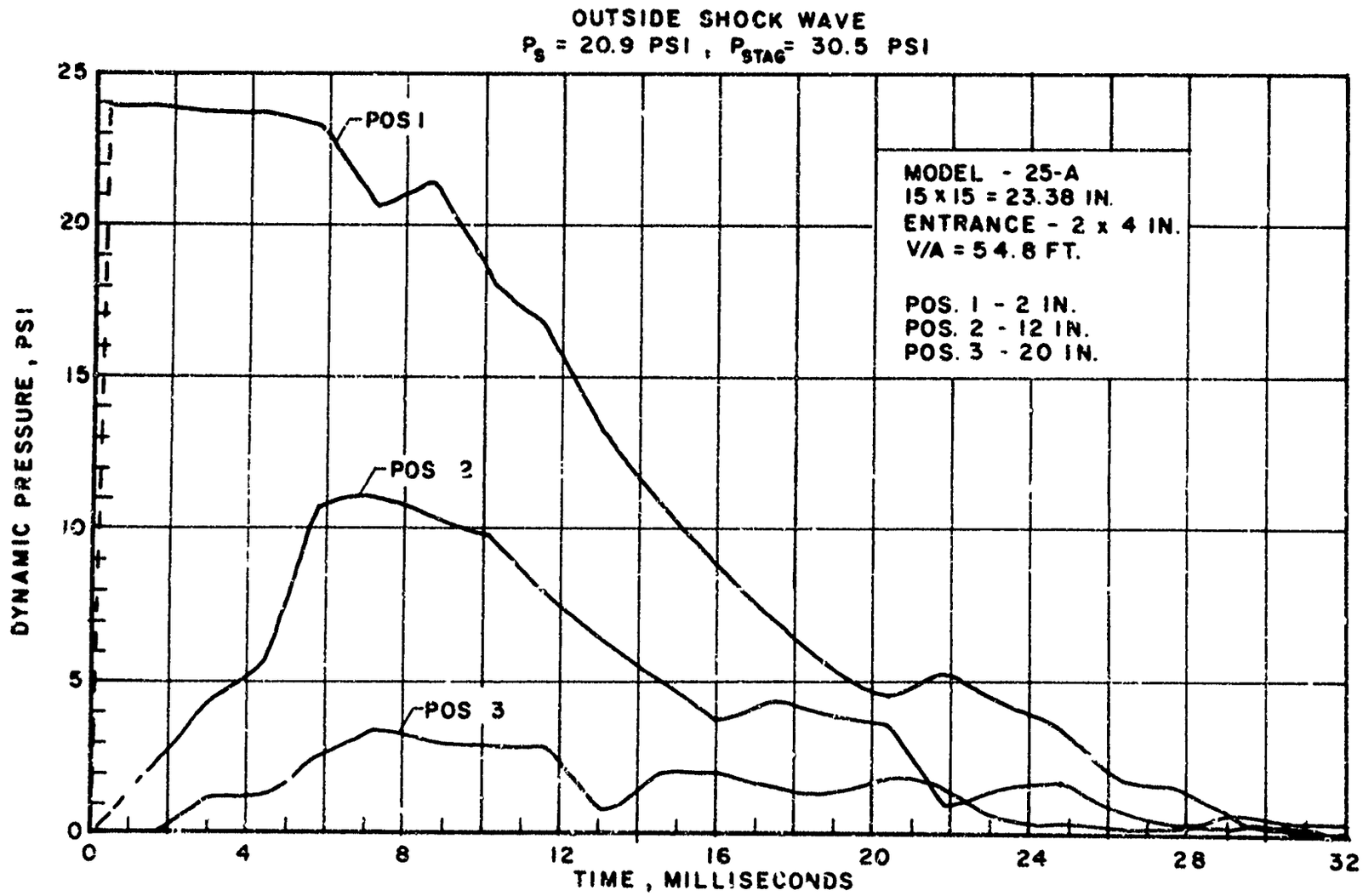


Figure 29. Dynamic Pressure - Model 25-A, P_s = 20.9 psi.

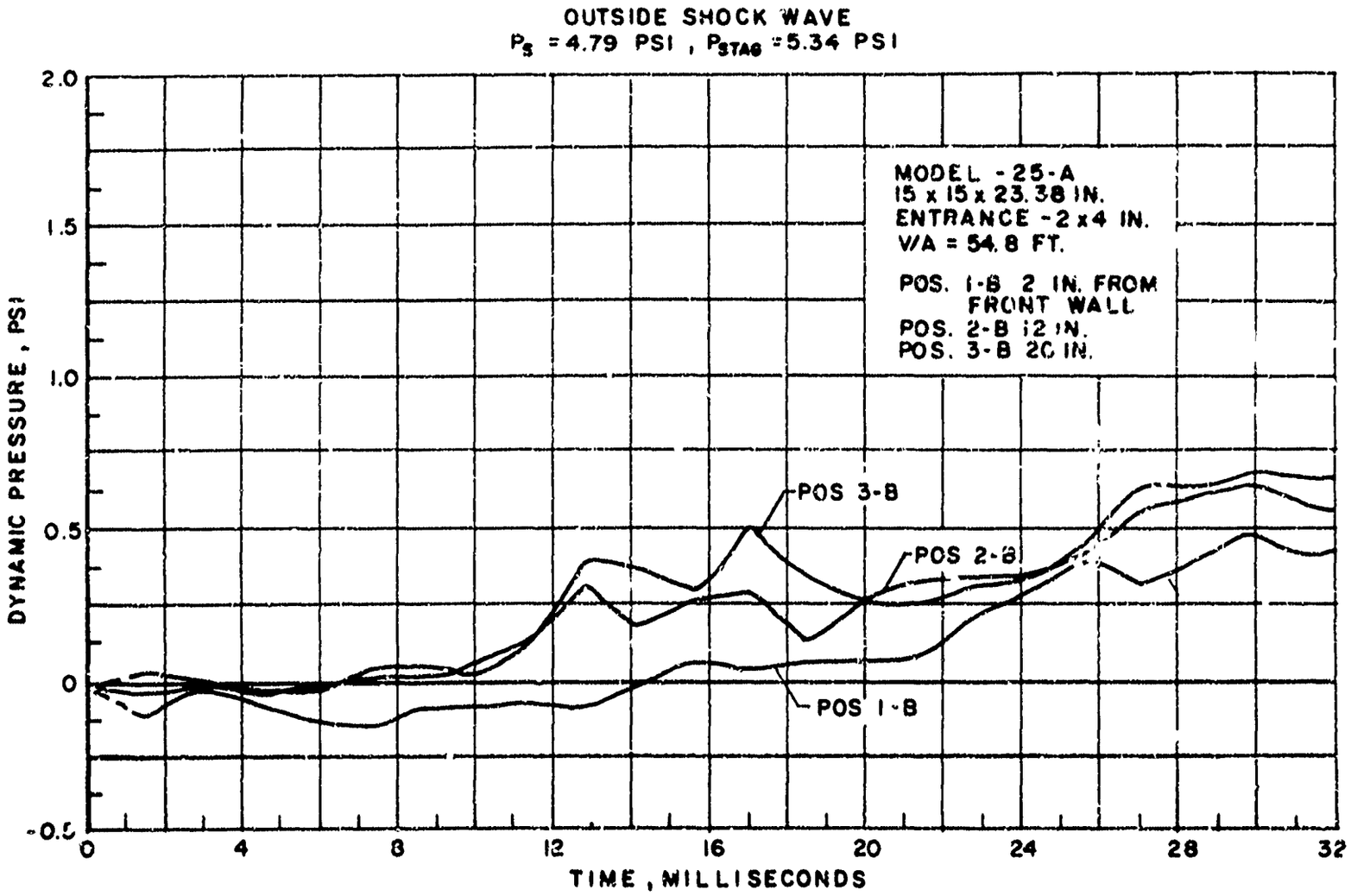


Figure 30. Dynamic Pressure off Centerline - Model 25-A, P_s = 4.8 psi.

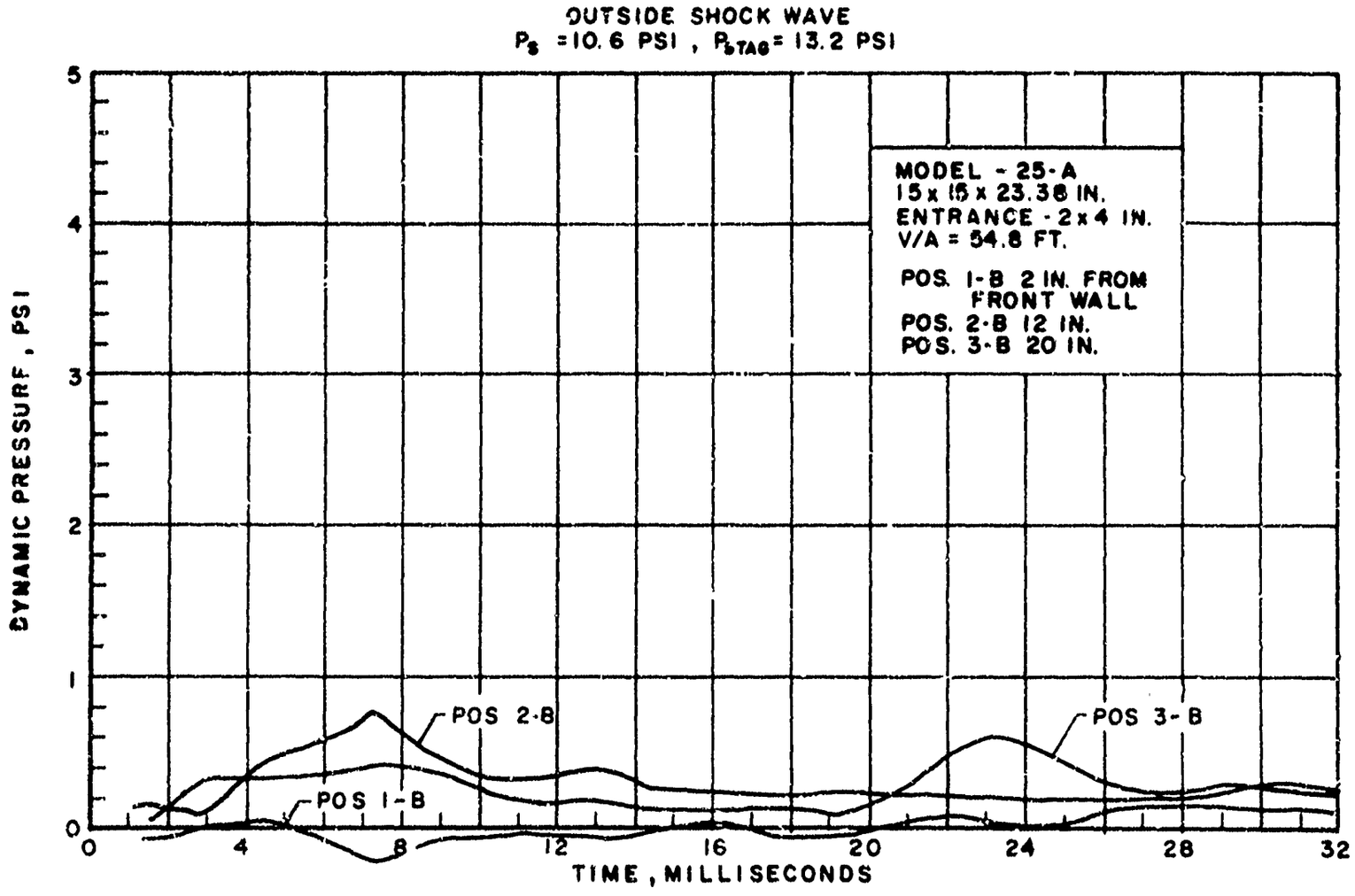


Figure 31. Dynamic Pressure off Centerline - Model 25-A, P_s = 10.6 psi.

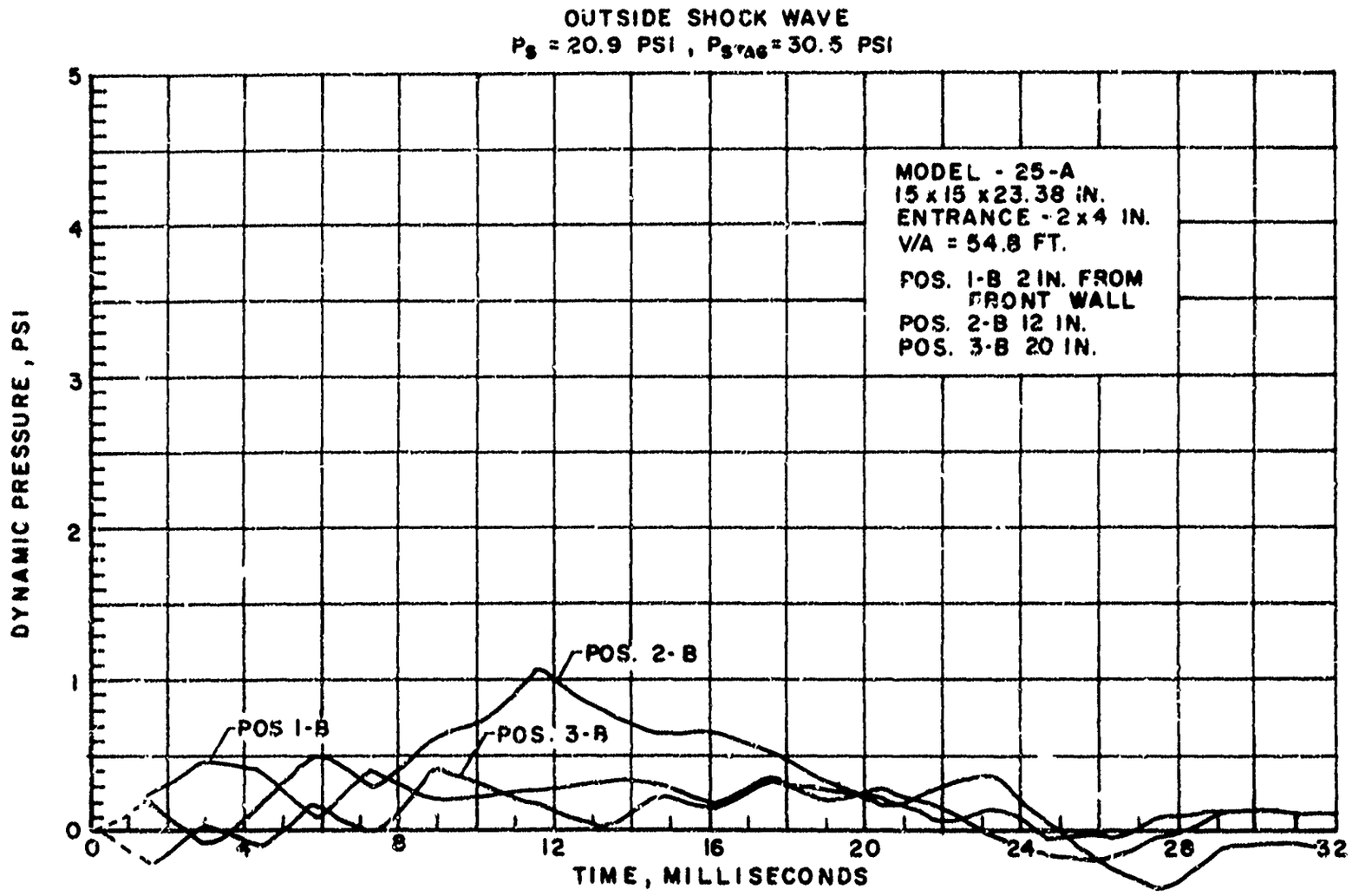


Figure 32. Dynamic Pressure off Centerline - Model 25-A, P_s = 20.9 psi.

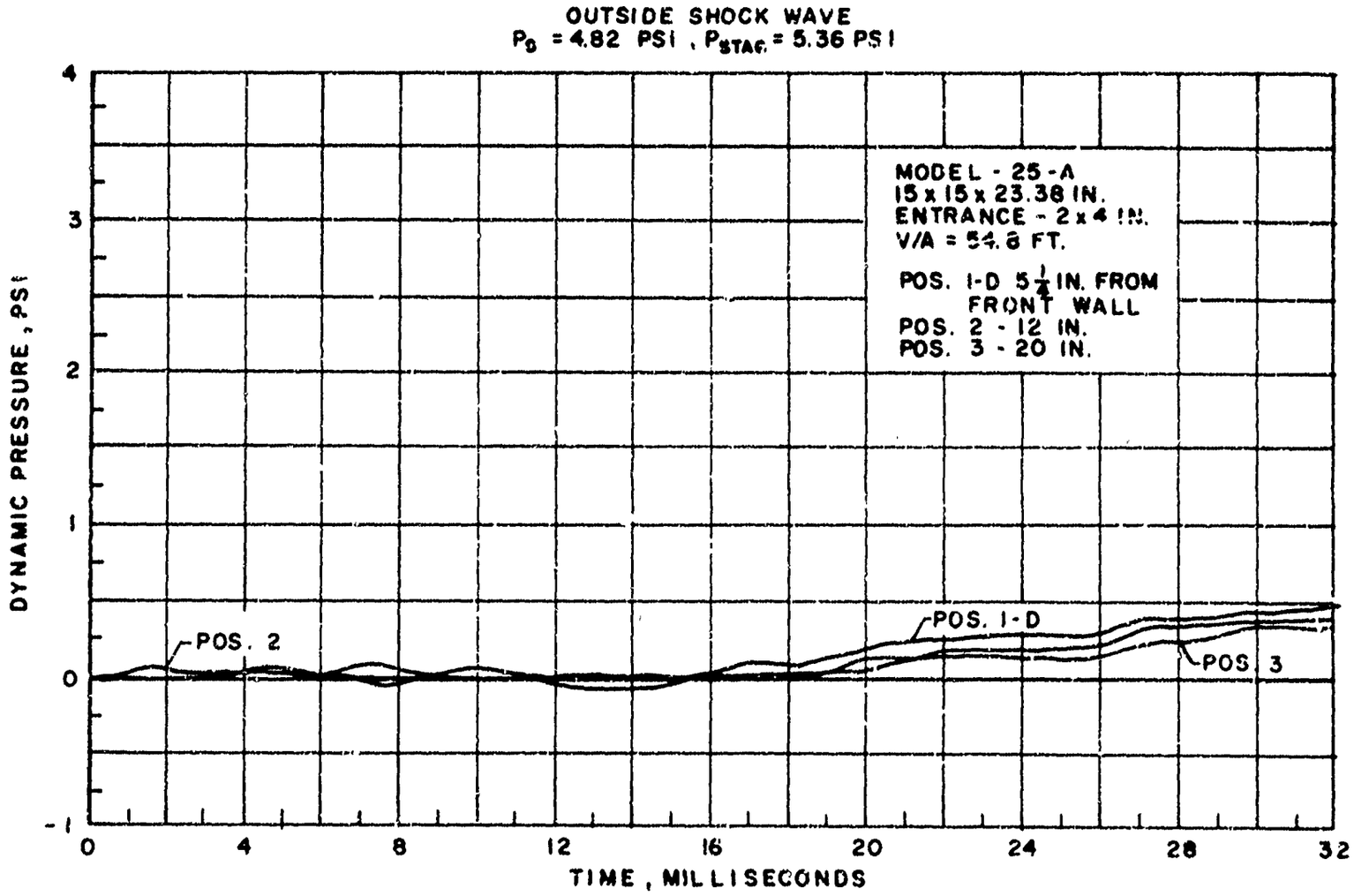


Figure 33. Dynamic Pressure - Model 25-A, with Baffle
P_s = 4.8 psi.

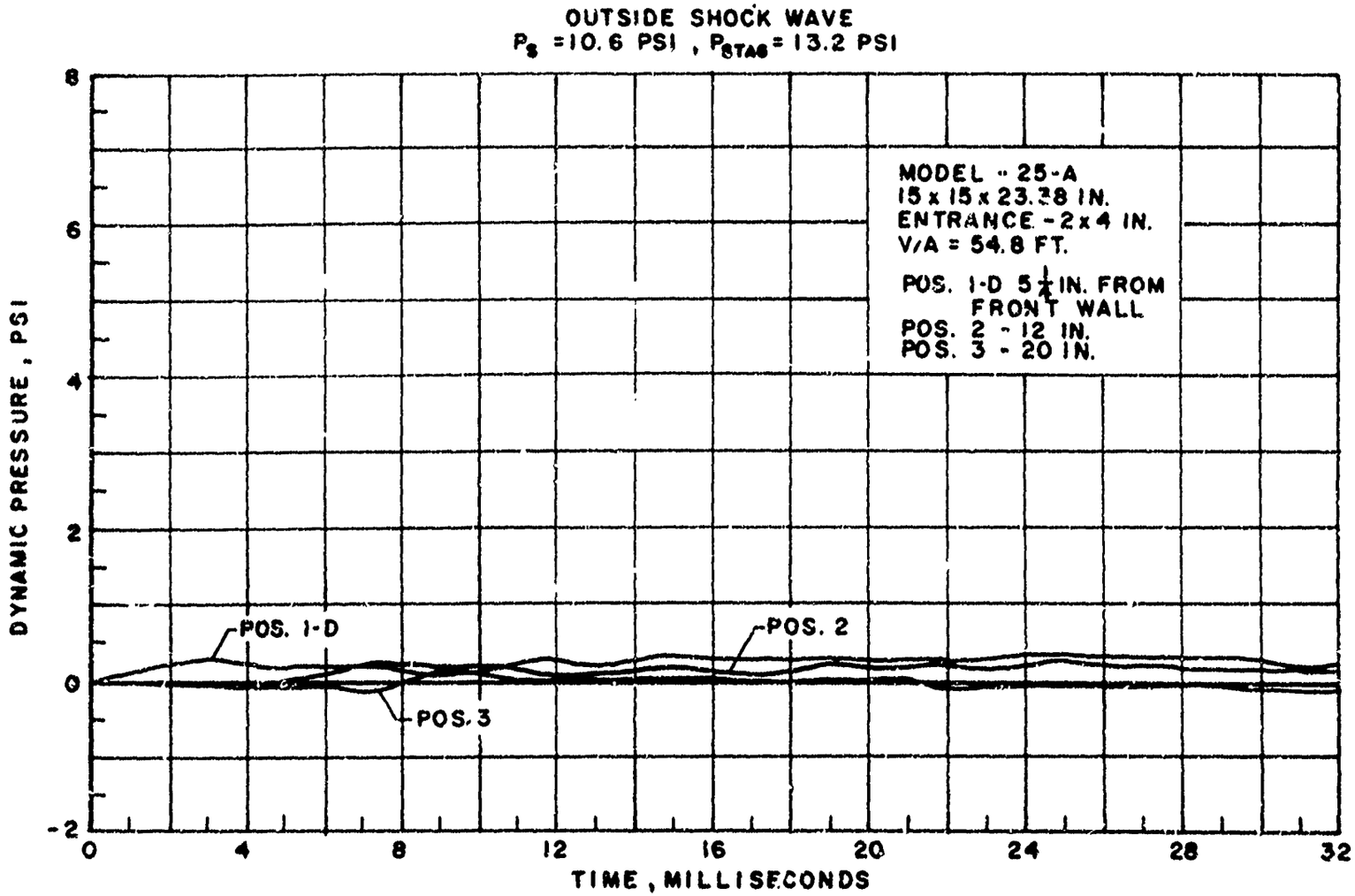


Figure 34. Dynamic Pressure - Model 25-A, with Baffle
P_s = 10.6 psi.

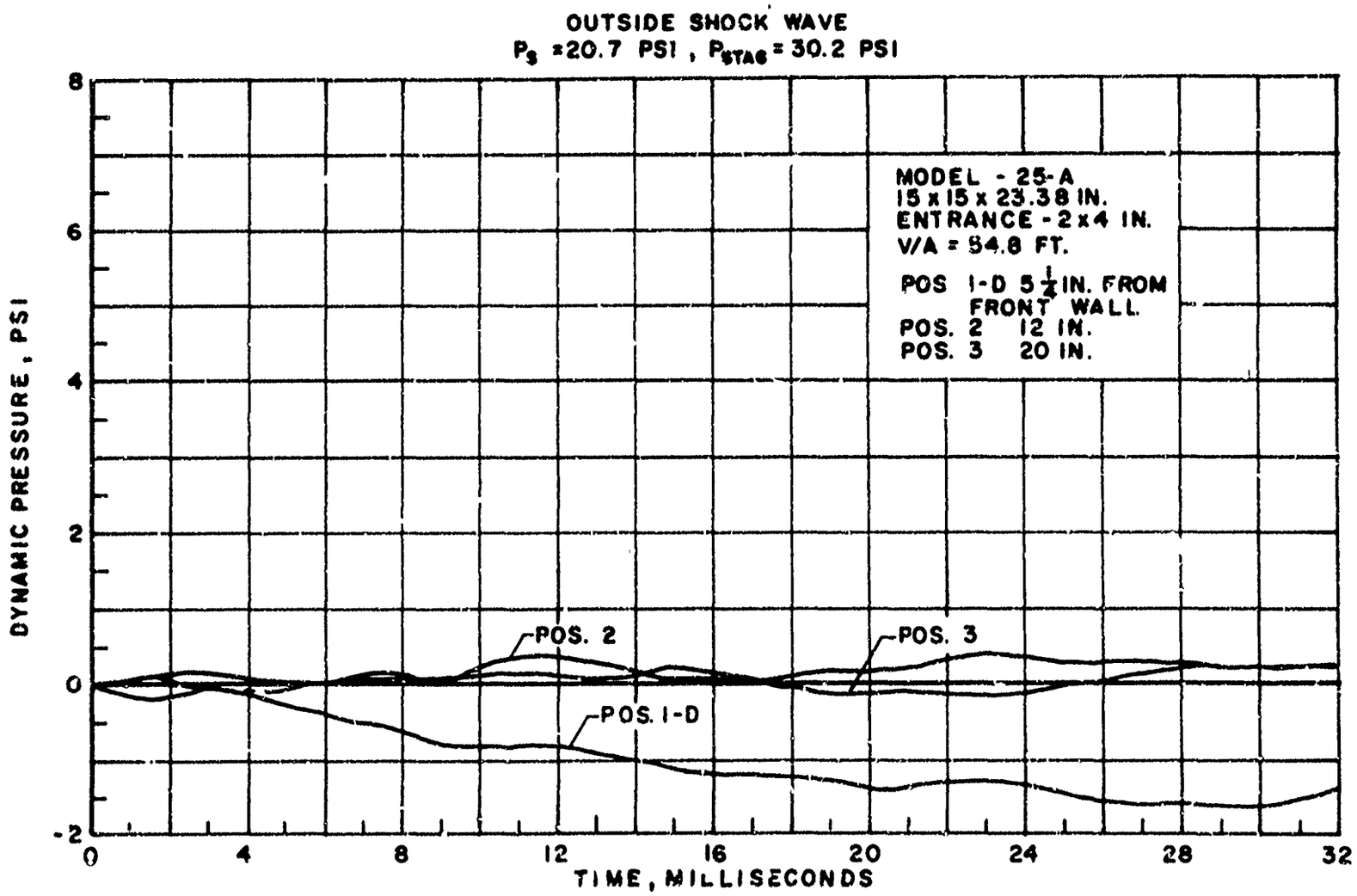


Figure 35. Dynamic Pressure - Model 25-A, with Baffle
P_s = 20.7 psi.

A re-direction of the flow by the baffle causes Pos. 1-B (off centerline) to show an increase in dynamic pressure (Figures 36 - 38) over the pressures calculated from the previous shots without the baffle. At the other positions off the centerline (2-B and 3-B) the dynamic pressure still remains low as before.

Figure 37 shows plots with dynamic pressure apparently going below zero. Since the graph is a plot of stagnation pressure minus side-on fill, a negative value means that there is no component of air flow which strikes the transducer face-on to add a dynamic value to the side-on value the transducer measures. If a time-space fluxuation in side-on fill pressure occurs at the probe and gives less pressure than the flush mounted side-on fill transducer, then the subtraction will appear to give a negative dynamic pressure.

Figure 39 summarizes the maximum values of dynamic pressure for Model 25-A. Again, the curves are similar to those obtained from Model 27-A. After about two entrance widths, all positions with the baffle in place showed pressure below a safe level of 3.7 psi (Reference 8).

IV. SUMMARY AND CONCLUSIONS

A. Model Study

The authors of References 2, 6, and 8 have predicted areas of high speed flows on or near the centerline of the entrance of a room or shelter in which an exterior blast or shock wave is causing the air flow. Similar predictions were obtained from the two-dimensional computer program (RIPPLE) at BRL.

The results from the BRL computer program indicated high speed flows of several hundred feet per second were predicted along the entrance centerline. For the 5 psi input used, the high speed flows rapidly decay below 200 - 300 ft/sec at a distance of about two entrance widths into the model. The high speed flow does not appear to exist much past the entrance edges in a side direction off-axis.

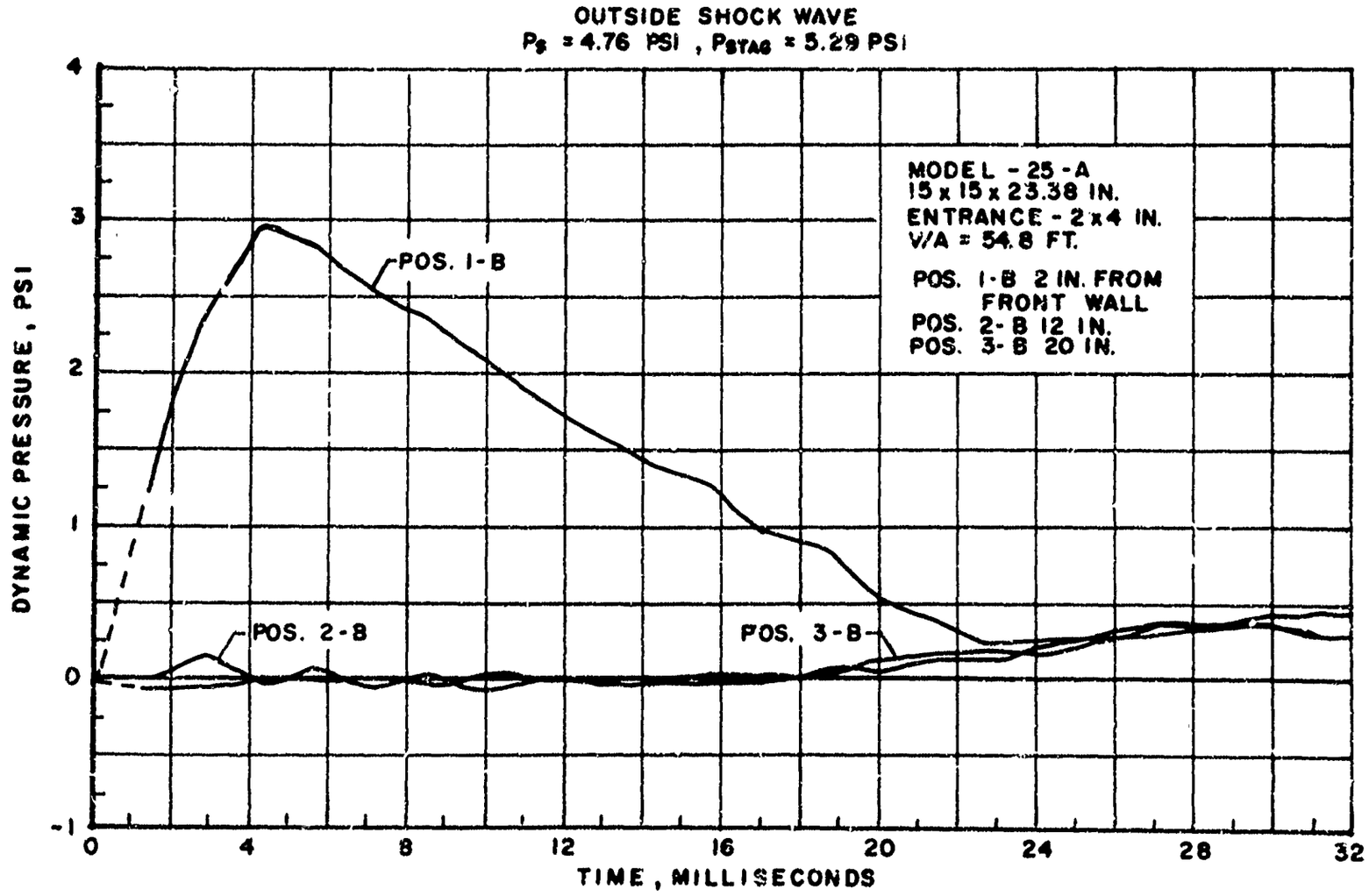


Figure 36. Dynamic Pressure off Centerline - Model 25-A, with Baffle - P_s = 4.8 psi.

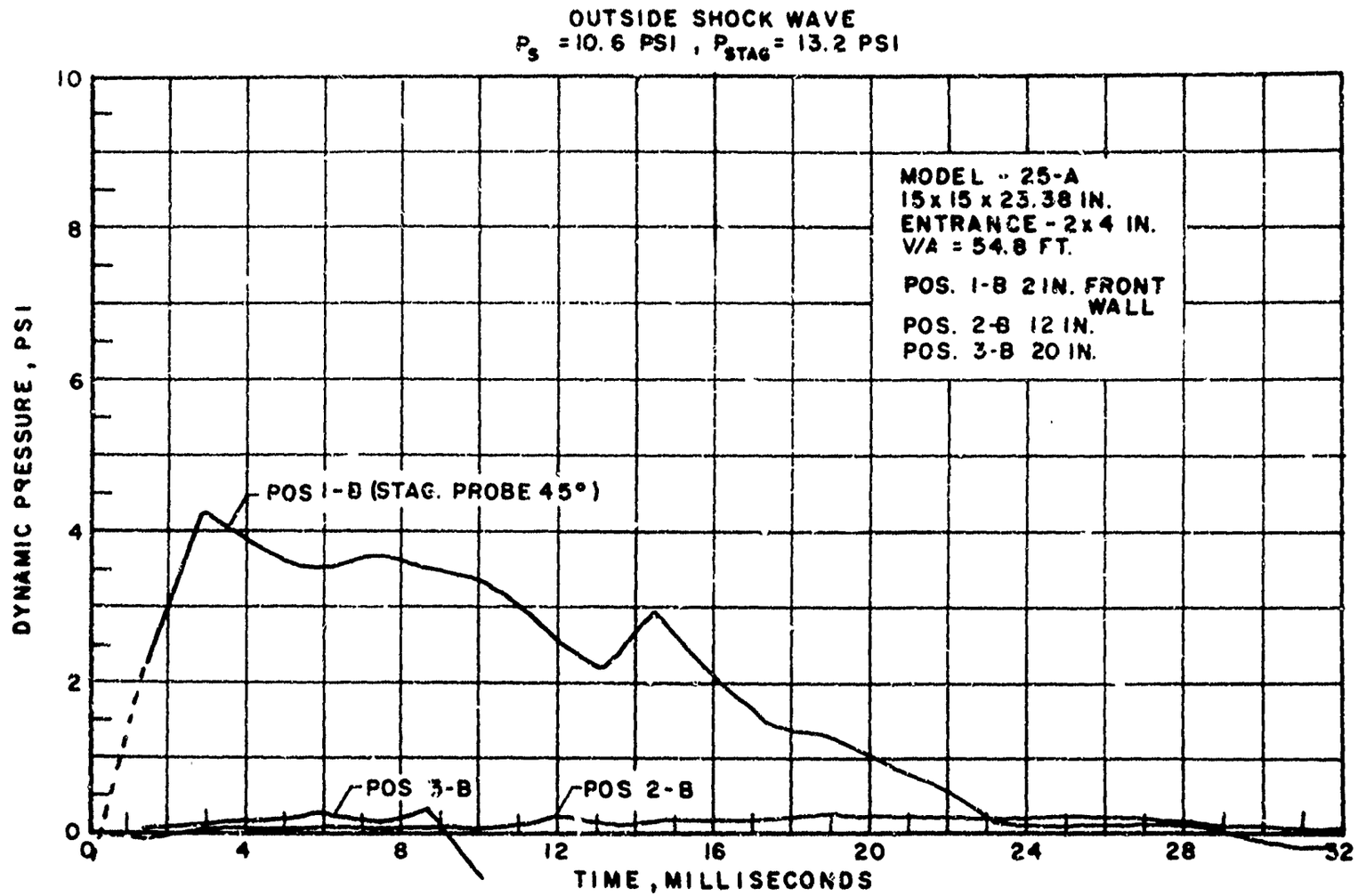


Figure 37. Dynamic Pressure off Cen[illegible]ne - Model 25-A, with Baffle - P_s = 10.6 psi.

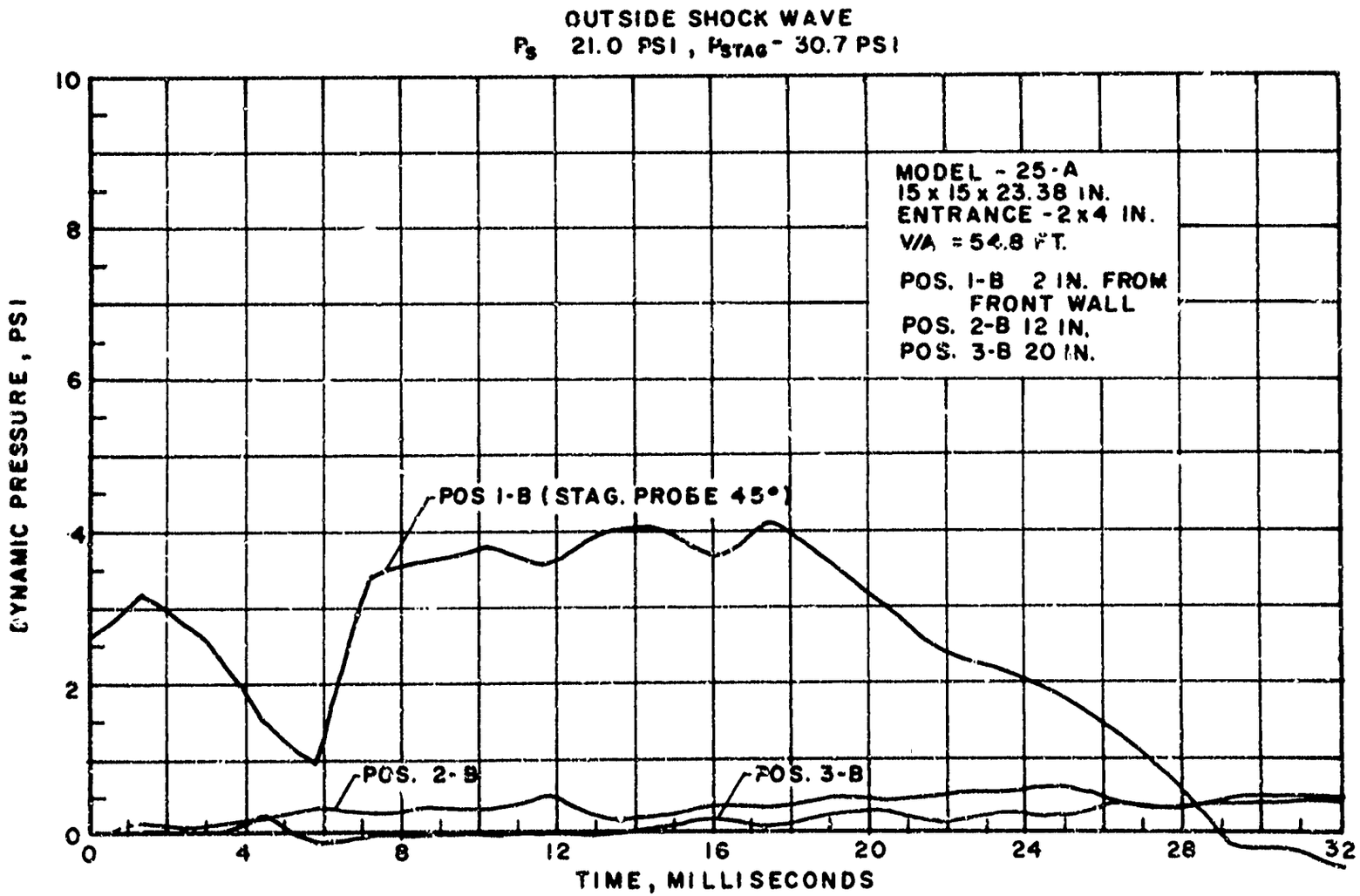


Figure 38. Dynamic Pressure off Centerline - Model 25-A, with Baffle - P_s = 21 psi.

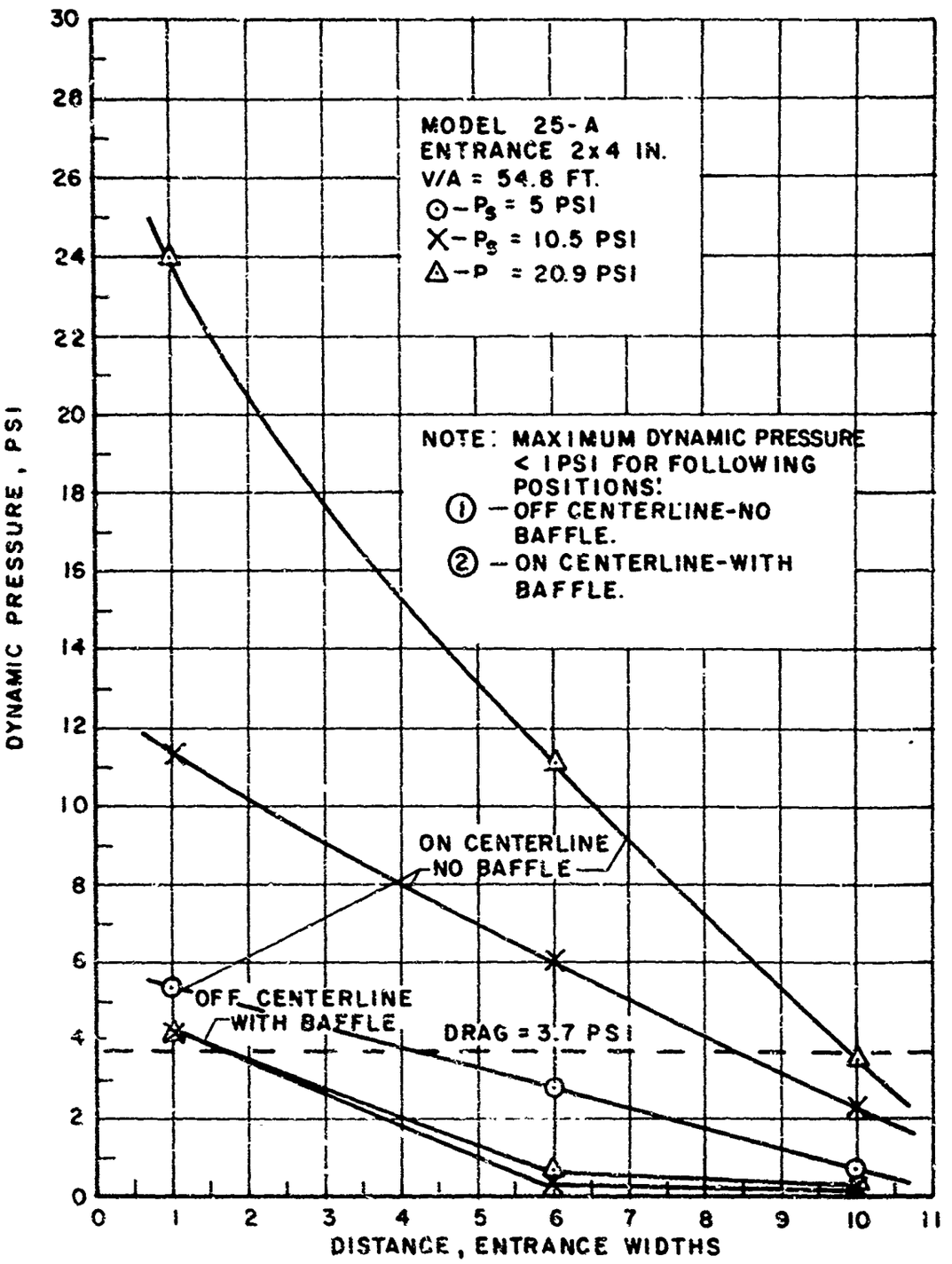


Figure 39. Maximum Dynamic Pressure as a Function of Distance From the Entrance - Model 25-A

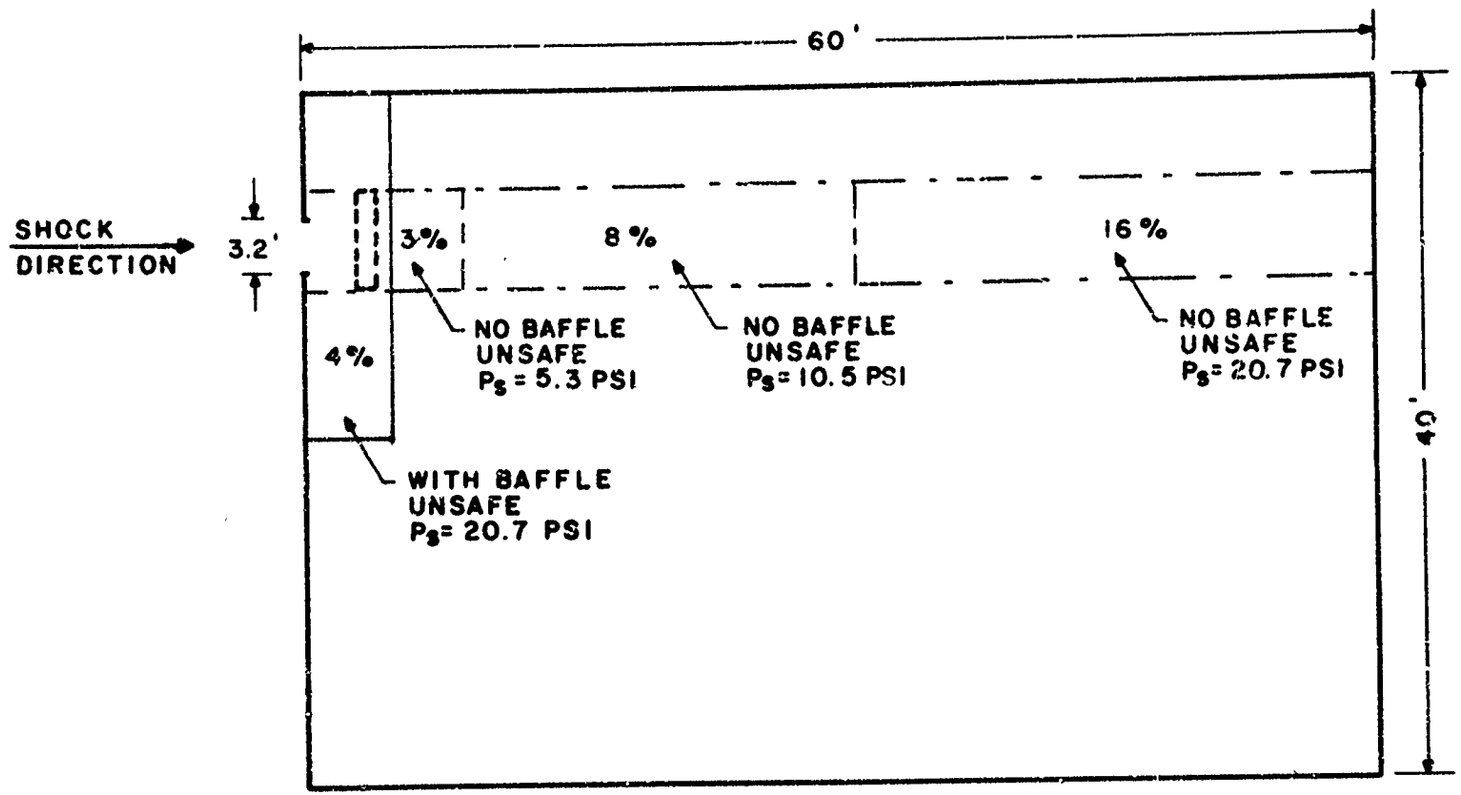
The limit might extend to a half entrance width either side of the entrance. With the baffle inside the entrance (one entrance width away), the computer program predicts high speed flows of several hundred feet per second between the front wall and the baffle. Again, the high speed does not appear to extend much beyond the baffle.

Experimentally, both Models 27-A and 25-A showed flows existed of the predicted configuration and magnitude. Dynamic pressures were measured in both models without baffles which approached stagnation pressure values of 5.8, 13.0, and 30 psi for average input shock overpressures of 5.2, 10.5, and 20.8 psi. The maximum dynamic pressure approximately equaled the stagnation pressure of the external shock wave used in each shot. If densities of about 0.003 slugs/ft^3 are used as predicted in the two-dimensional experiments (Reference 2), then air flow speeds corresponding to dynamic pressures of 5.8, 13.0, and 30 psi would be 746, 1120, and 1700 ft/sec. The value 746 ft/sec compares favorably with the trends shown in Figure A-2, Appendix A. The axial velocities shown for the open model range from 723 - 625 ft/sec near the entrance for the 5 psi input shock wave. The transducer measurements are consistent with the smoke tracer experiments and the predicted flow trends of the computer program.

B. Application to Full-Size Rooms

The curves of Figures 26 and 39 may be used to predict the unsafe area in the corresponding full-size shelter rooms. For example, if a safe value of dynamic pressure is chosen to be <3.7 psi (Reference 8), points on the curves may be found corresponding to positions in entrance widths which represent pressure values below 3.7 psi.

It should be noted this limiting value of dynamic pressure from Reference 8 is based upon statistics obtained from pilots that were ejected from their aircraft into the airstream. Long duration flow is assumed and the damage is probably caused by the high rate of acceleration when the airstream hits.



ROOM - 40'x 60', 10 FT. HIGH
ENTRANCE - 3.2 x 8 FT.
V/A = 938 FT.
$2L/A_1$ = 106 MSEC.

NOTE: PERCENTAGES SHOWN REFER TO PERCENT OF TOTAL FLOOR SPACE.

Figure 40. Full-Size Room for Model 27-A

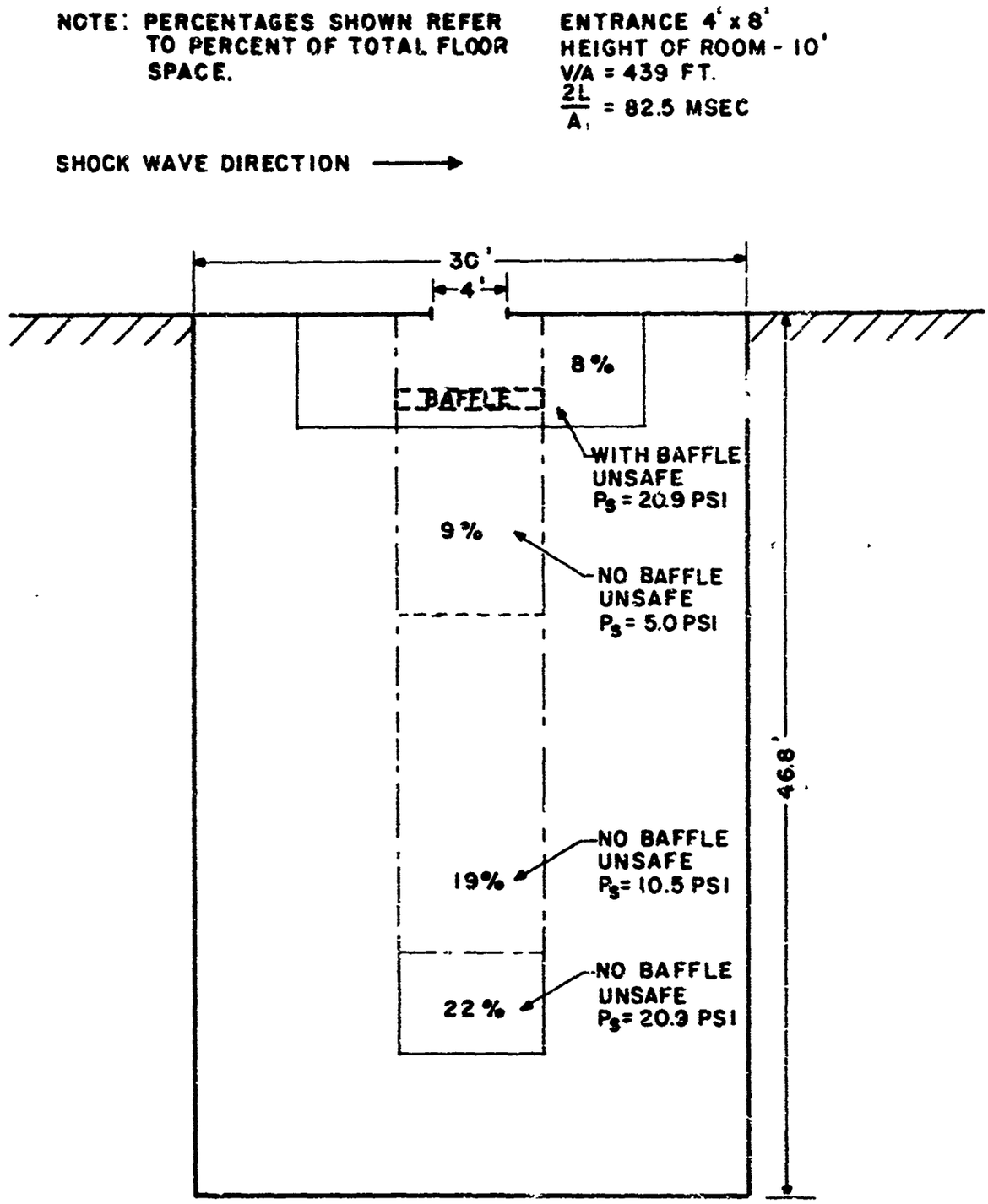


Figure 41. Full-Size Room for Model 25-A

To illustrate the use of Figure 39 for this given limiting value, a line is drawn across the graph at 3.7 psi. The line crosses the 5, 10.5, and 20.9 psi input curves at distances of 4, 8.5, and 10 entrance widths, respectively. These are the axial limits for the 3.7 dynamic pressure level into the room. If the influence to the side of the jet is bounded by about one-half entrance width to each side, unsafe areas are defined for the room. For quick comparison, the unsafe areas are given in percentages of total available floor space. Figures 40 and 41 illustrate the use of this procedure from the curves of Figures 26 and 39.

The addition of a baffle inside the entrance allows the external shock wave pressure to be increased from 5.2 to 20.8 psi while still maintaining the approximate same safe area.

The room volume to entrance area ratio, V/A, in Figures 40 and 41 largely determines the total room filling time and therefore, the total duration of the incoming flow with its potential for damage by translation. The factor $2L/A_1$ shown represents approximately two shock wave crossing times (for the weak internal shock wave). This factor represents an approximate time one may expect high dynamic pressure (about equal to a stagnation value) since very little over all side-on pressure increase has occurred as yet during this period.

To summarize, the initial high values of dynamic pressure continues with little decrease until the side-on pressure increase causes the difference between stagnation and side-on pressure to become smaller and smaller. At the time the entire room volume is filled to the maximum value of side-on pressure, the dynamic pressure approaches a minimum value. The dynamic pressure apparently follows the outside conditions pretty much for the remaining shock wave duration.

ACKNOWLEDGEMENTS

The author wishes to thank Dr. V. Kucher and Mr. J. T. Harrison for their expert programming of the two-dimensional models with the RIPPLE Code, and also to thank Mr. W. T. Matthews for the design of the intricate models used with the smoke grid technique.

REFERENCES

1. Joseph Melichar, "The Propagation of Blast Waves Into Chambers," Ballistic Research Laboratories Memorandum Report No. 1920, March 1968.

2. George A. Coulter, "The Air Shock Filling of Model Rooms," Ballistic Research Laboratories Memorandum Report No. 1916, March 1968.

3. George A. Coulter, "Air Shock and Flow In Model Rooms," Ballistic Research Laboratories Memorandum Report No. 1987, June 1969.

4. G. A. Coulter and R. L. Peterson, "Blast Fill Time of A One-Room Structure," Operation Prarie Flat, Project Officers Report - Project LN111, Defense Atomic Support Agency, Washington, D.C. 20305, POR-2102 (WT-2102), November 17, 1969.

5. Joseph F. Melichar, "Air-Blast-Induced Aerodynamic Effects in Blast-Slanted Basement Shelters," URS Research Company, 1811 Trousdale Drive, Burlingame, California 94010, URS 692-3, January 1969.

6. Joseph F. Melichar, "The Air-Blast-Induced Environment with Civil Defense Blast-Slanted Shelters," URS Research Company, 1811 Trousdale Drive, Burlingame, California 94010, URS 755-3, November 1969.

7. "RIPPLE - A Two-Dimensional Eulerion Computer Program for Calculating Compressible Flow and Detonation Problems," Prepared for Ballistic Research Laboratories under Contract No. DA 04495 AMC 148(X) with General Dynamics, General Atomic Division.

8. H. M. Childers and others, "Final Report - Protective Capability of The National Fallout Shelter System," The Vertex Corporation, 10400 Connecticut Avenue, Kensington, Maryland 20795, Vertex TR No. 68-2, November 1968.

APPENDIX A

RIPPLE PROGRAM VELOCITY PREDICTIONS FOR TWO-DIMENSIONAL MODELS

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USE OF APPENDIX A

Comparisons of air flow components, predicted by the BRL RIPPLE computer program, are given for a 4 x 4-inch two-dimensional model with and without a baffle inside the entrance. Radial and axial components of flow are shown in separate figures. The values shown are for discrete readout times beginning when the input shock wave (P_s = 5 psi) was about 78 μsec away from the outside of the front of the model. The sign convention for the flow components is shown on each figure.

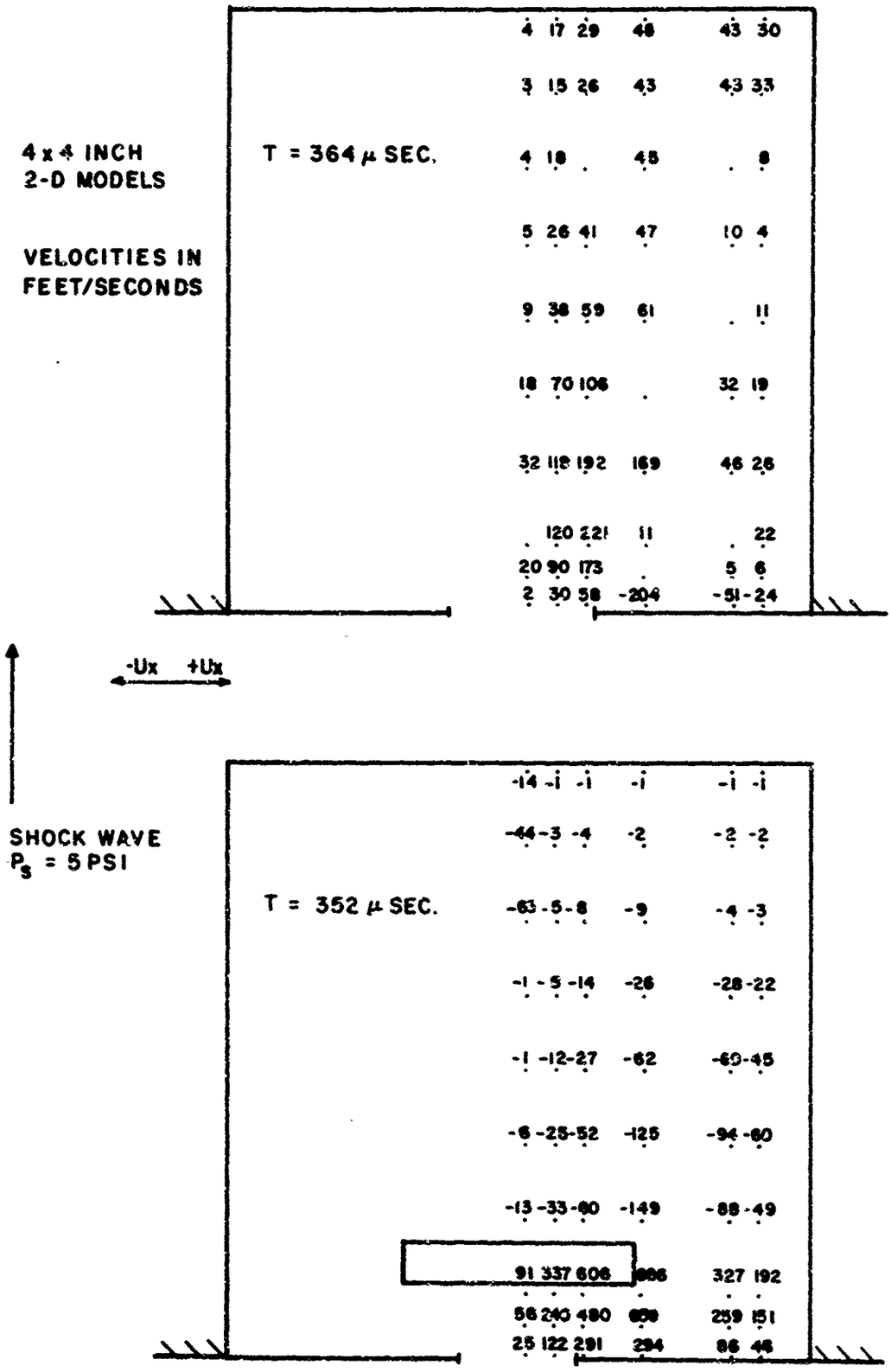

Figure A-1. Radial Velocities - 358 Microseconds

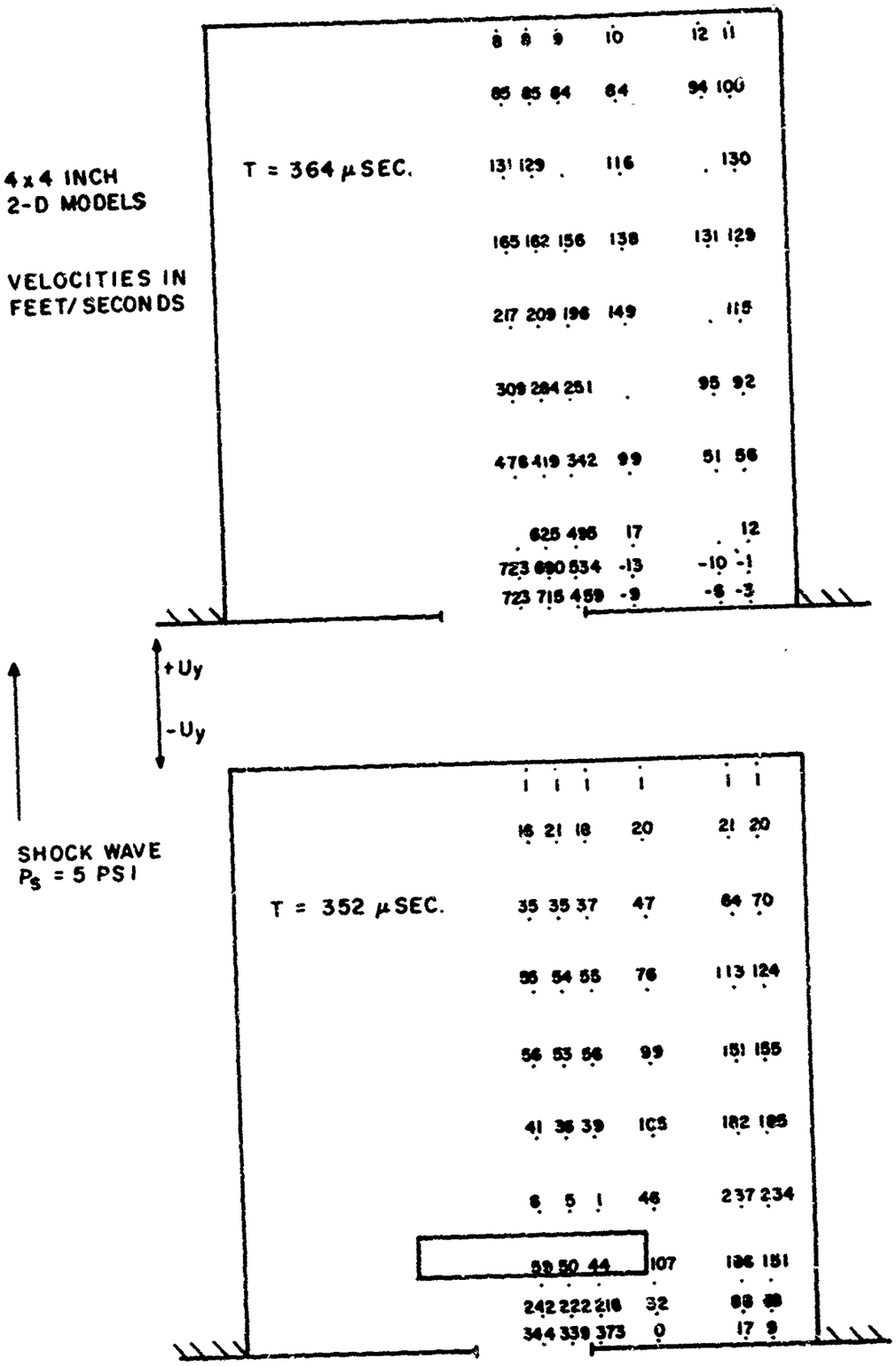

Figure A-2. Axial Velocities - 358 Microseconds

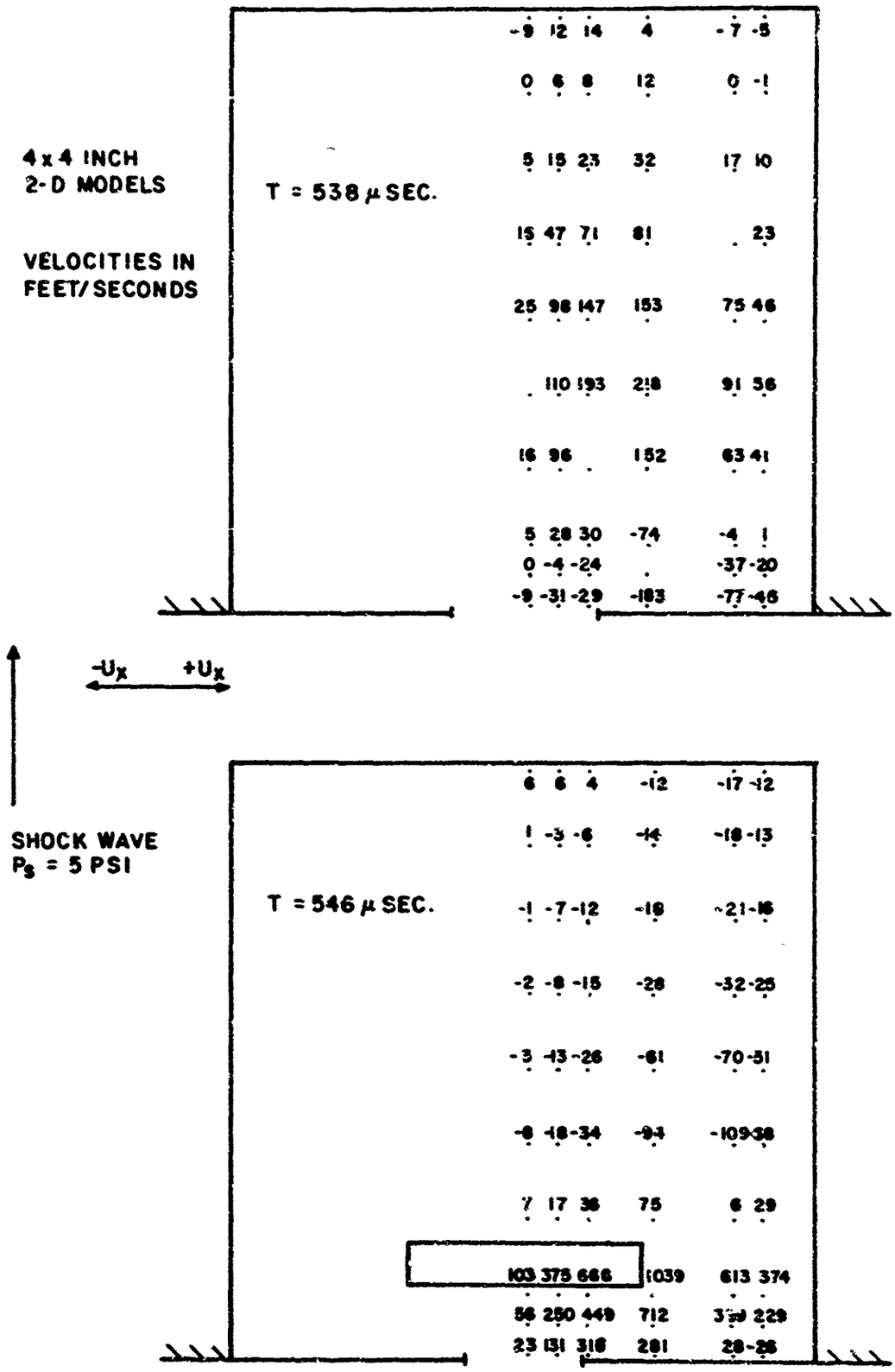

Figure A-3. Radial Velocities - 542 Microseconds

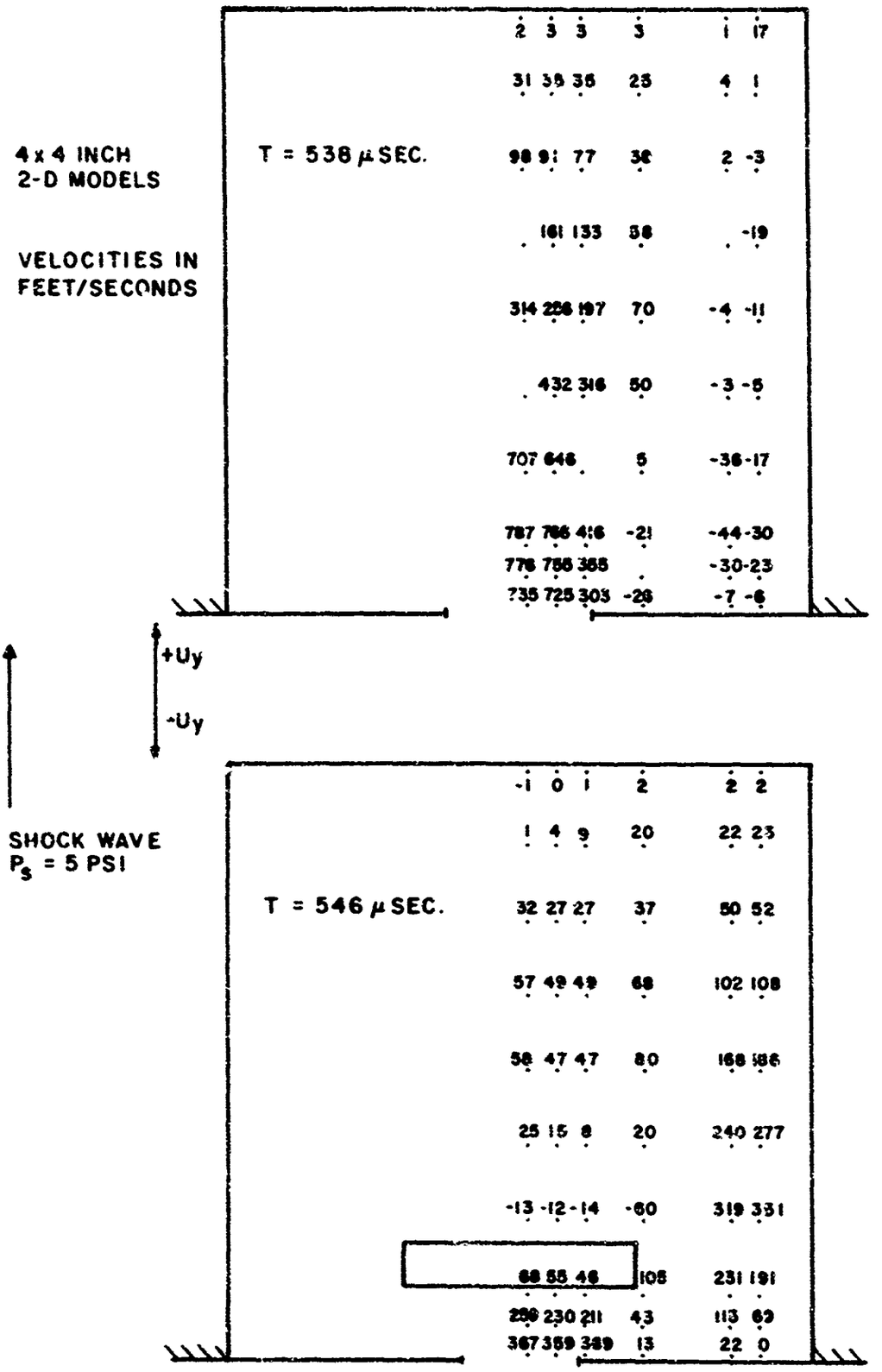

Figure A-4. Axial Velocities - 542 Microseconds

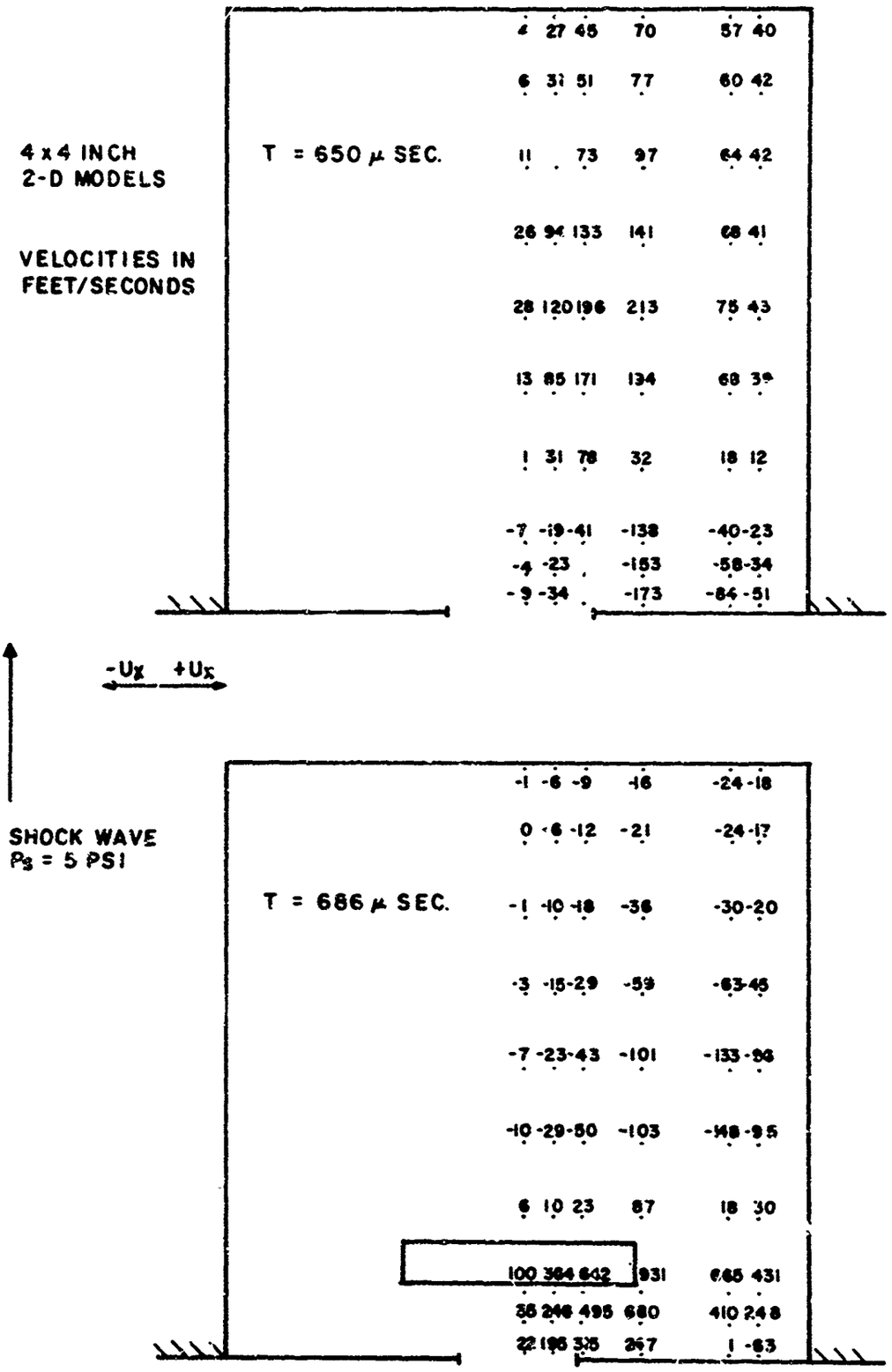

Figure A-5. Radial Velocities - 668 Microseconds

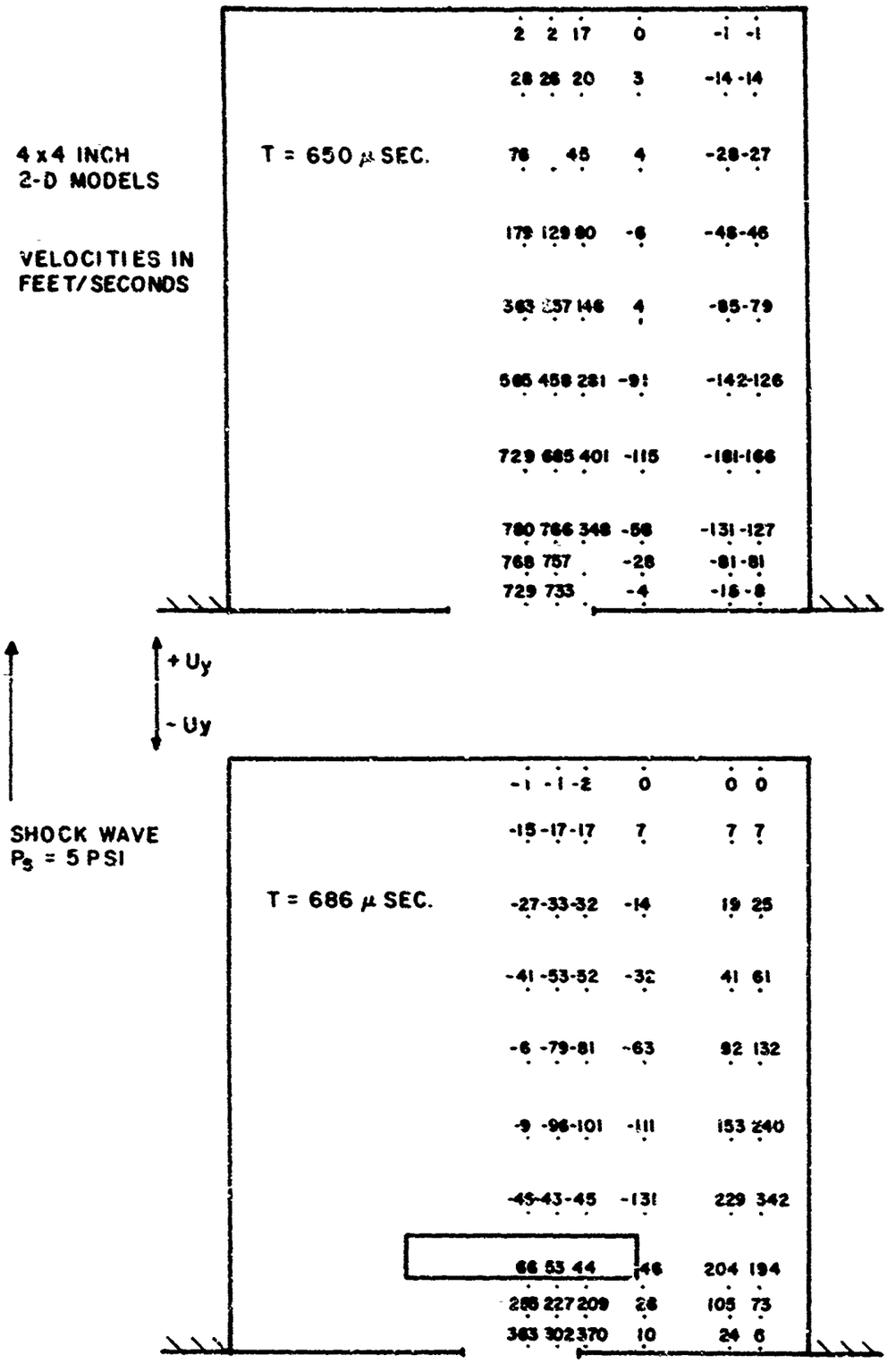

Figure A-6. Axial Velocities - 668 Microseconds

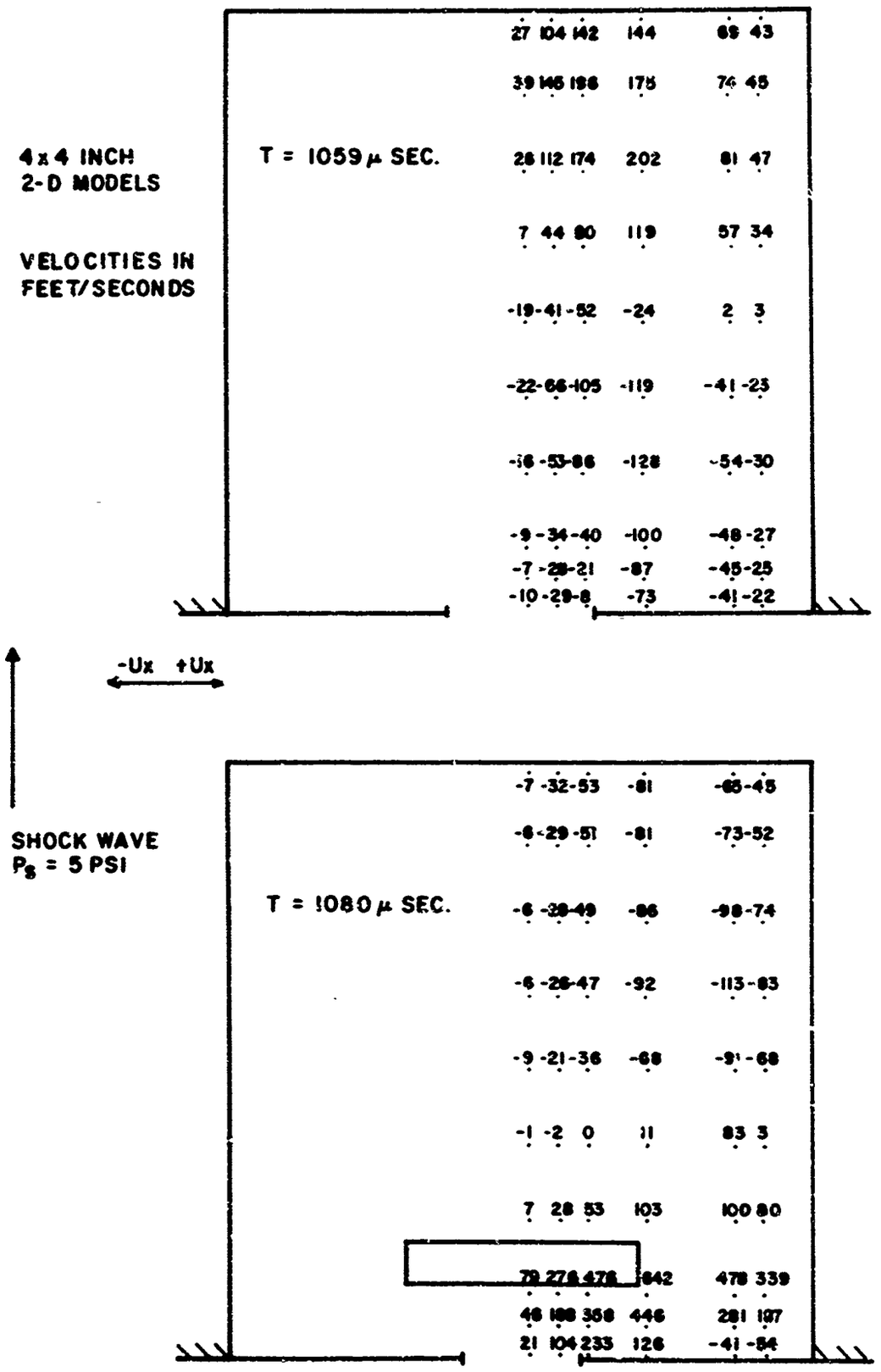

Figure A-7. Radial Velocities - 1070 Microseconds

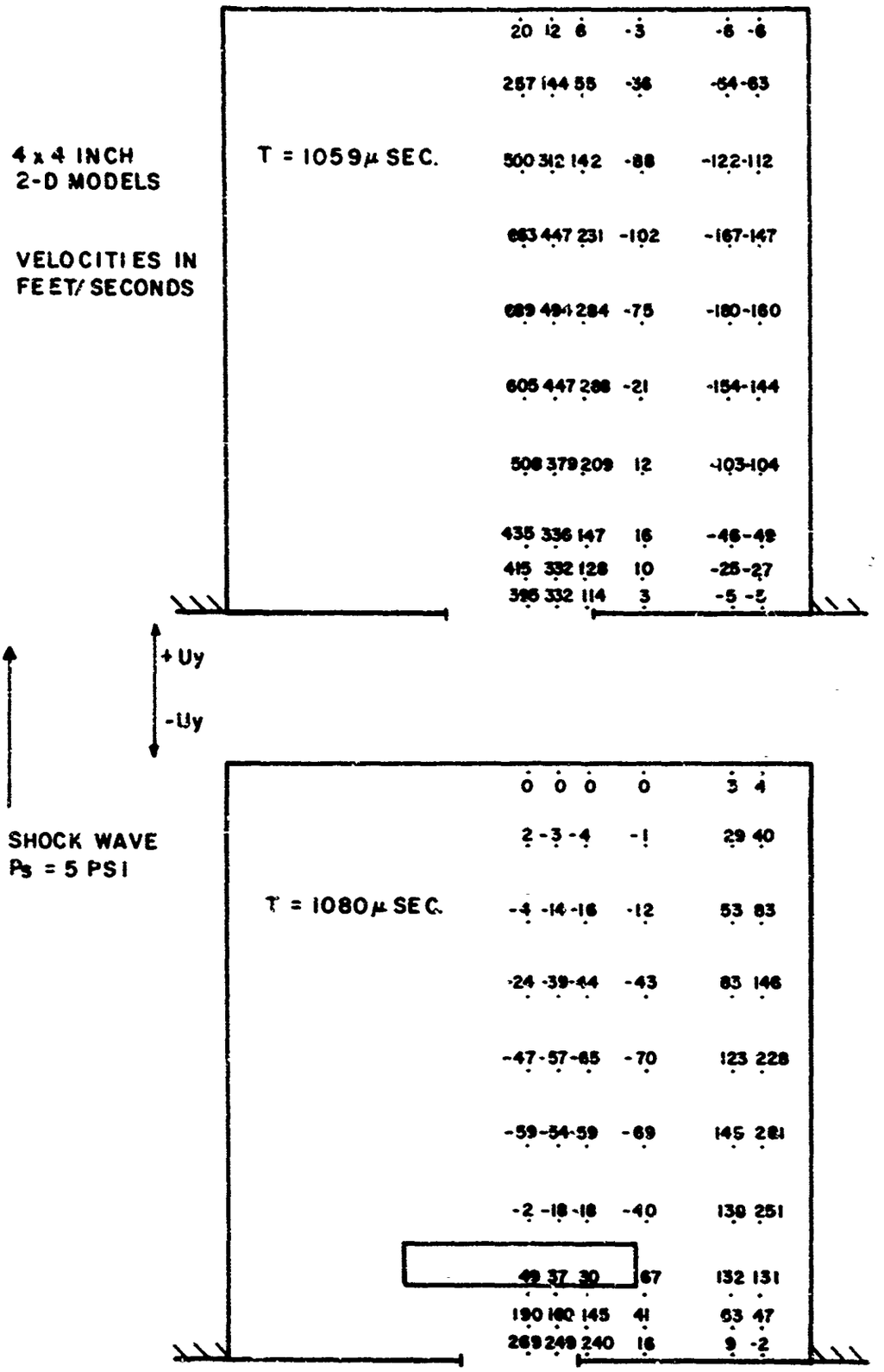

Figure A-8. Axial Velocities - 1070 Microseconds

APPENDIX B

AIR FLOW TABLES AND VECTOR PLOTS

USE OF APPENDIX B

The first part of Appendix B consists of tables of calculations made from the smoke grids and the second part consists of plots of air flow vectors (scale 1 in. = 200 ft/sec) computed for several grid intersections for discrete frame times which illustrate the many flow directions. Also given, is a time-space plot of the first row of four grid intersections. These start at an initial time labeled "start" to end times "T".

The tables list the frame time in microseconds measured from time of shock exit from entryway, the x - y coordinates in inches as measured from an origin at the inside, lower left bottom of the model, the average velocity of a particular smoke grid intersection (positions in frames behind and ahead of the given frame in time are used to find the average for the known camera framing speed), average angle of flow direction measured from a horizontal axis, the density obtained from the grid size and undisturbed grid area (density), and Q (equal to one-half the density times the velocity squared.

APPENDIX B

I. AIR FLOW TABLES

Table B-1. Front-Upper Grid Calculations - Model 35

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
15.00	.5546	3.0777	20.0	.0	.002342	.47
	.5428	2.6706	18.9	- 32.0	.002156	.38
	.5270	2.4346	26.1	- 57.5	.002198	.75
	.5015	2.0118	17.1	- 69.4	.002254	.33
	.4838	1.6441	14.4	- 33.7	.002254	.23
	.9282	3.0993	26.3	8.7	.002331	.81
	.9322	2.6116	28.8	- 33.7	.002109	.88
	.9263	2.4444	33.3	- 57.3	.002175	1.20
	.8751	2.0157	41.0	- 47.0	.002226	1.87
	.8653	1.6421	14.1	- 81.9	.002226	.22
	1.3117	3.1131	46.1	- 5.0	.002357	2.51
	1.2881	2.5546	16.5	- 14.0	.002126	.29
	1.2822	2.4248	41.7	16.7	.002342	2.04
	1.2212	1.9843	30.4	- 23.2	.002340	1.08
	1.1603	1.6303	24.1	- 41.6	.002340	.68
	1.6971	3.1091	17.2	54.5	.002357	.35
	1.6912	2.5192	6.3	-108.4	.002126	.04
	1.6755	2.4267	11.3	- 45.0	.002342	.15
	1.6342	1.9843	12.2	- 80.5	.002340	.17
	1.5851	1.6146	8.0	.0	.002340	.07
56.70	.6020	3.1240	116.6	32.6	.002208	15.03
	.5700	2.7060	59.0	1.9	.002148	3.74
	.5580	2.4660	47.5	- 7.1	.002254	2.55
	.5360	2.0600	36.1	60.6	.002361	1.54
	.5200	1.6880	53.7	66.3	.002361	3.40
	.9820	3.1400	70.8	33.7	.002240	5.62
	.9620	2.6240	52.3	34.3	.002346	3.21
	.9540	2.4600	30.7	39.8	.002206	1.04
	.9180	2.0440	61.5	16.7	.002304	4.36
	.8820	1.6980	32.0	42.5	.002304	1.18
	1.3680	3.1240	53.1	39.0	.002450	3.45
	1.3300	2.5760	58.9	36.9	.002672	4.64
	1.3180	2.4800	50.1	41.8	.002412	3.03
	1.2540	2.0280	57.8	54.7	.002462	4.11
	1.1860	1.6720	32.2	37.6	.002462	1.28
	1.7380	3.1560	41.8	48.8	.002450	2.14
	1.7120	2.5440	25.2	51.3	.002672	.85
	1.6960	2.4560	16.7	45.0	.002412	.34
	1.6460	2.0160	32.5	65.0	.002462	1.30
	1.6020	1.6600	33.8	54.5	.002462	1.41

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
98.40	.6529	3.1406	139.9	.8	.002333	22.84
	.6018	2.6726	144.6	- 49.5	.002182	22.81
	.5742	2.4287	120.7	- 61.3	.002245	16.36
	.5192	2.0433	85.4	- 79.2	.002187	7.98
	.5054	1.6932	36.0	- 93.2	.002187	1.42
	.9872	3.1386	52.1	- 32.5	.002356	3.20
	.9754	2.6411	60.9	- 41.0	.001967	3.65
	.9499	2.4641	60.9	- 66.8	.002261	4.19
	.9341	2.0334	43.0	- 68.2	.002244	2.08
	.8889	1.6637	62.2	- 95.5	.002244	4.35
	1.3530	3.1465	28.6	- 24.8	.002476	1.01
	1.3353	2.5900	26.8	- 26.6	.002170	.78
	1.3196	2.4582	58.2	- 74.1	.002557	4.33
	1.2547	2.0315	34.5	- 80.0	.002315	1.38
	1.1858	1.6500	20.4	-101.3	.002315	.48
	1.7247	3.1406	37.5	-115.2	.002476	1.75
	1.7070	2.5388	26.7	- 77.0	.002170	.77
	1.6873	2.4385	30.6	- 78.7	.002557	1.19
	1.6480	2.0138	17.9	- 63.4	.002315	.37
	1.6047	1.6421	40.4	- 98.5	.002315	1.89
140.10	.7420	3.1260	141.8	- 4.0	.002399	24.13
	.6640	2.5960	120.0	- 39.7	.002362	17.01
	.6160	2.3600	104.7	- 50.3	.002510	13.75
	.5520	1.9760	98.7	- 44.2	.002469	12.02
	.5180	1.6520	78.5	- 67.9	.002469	7.60
	1.0260	3.1120	82.6	- 2.7	.002346	8.01
	1.0080	2.5840	113.4	- 33.7	.001993	12.81
	.9780	2.4040	115.6	- 31.8	.002371	15.85
	.9340	2.0040	76.9	- 57.5	.002333	6.89
	.8760	1.6360	50.0	- 45.0	.002333	2.92
	1.3940	3.1120	77.3	- 7.3	.002676	7.99
	1.3540	2.5640	82.6	- 38.2	.002204	7.51
	1.3340	2.4240	77.3	- 27.2	.002559	7.65
	1.2600	1.9940	62.1	- 55.3	.002424	4.68
	1.1820	1.6520	34.8	- 47.3	.002424	1.47
	1.7220	3.1220	61.7	- 9.2	.002676	5.09
	1.7180	2.5180	63.3	- 25.8	.002204	4.41
	1.7020	2.4260	72.9	- 14.0	.002559	6.80
	1.6540	2.0000	51.1	- 22.6	.002424	3.16
	1.5960	1.6200	43.1	- 46.8	.002424	2.25

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
181.80	.7945	3.1308	66.0	- 1.7	.002248	4.89
	.6942	2.5959	100.9	- 33.7	.002096	10.66
	.6411	2.3481	78.0	- 50.2	.002277	6.93
	.5900	1.9744	52.1	- 57.5	.002347	3.19
	.5349	1.6205	64.4	- 60.3	.002347	4.87
	1.0698	3.1347	10.2	- 78.7	.002262	.12
	1.0698	2.5782	28.3	- 45.0	.002286	.91
	1.0482	2.4031	28.6	- 24.8	.002354	.96
	.9754	1.9685			.002509	
	.9243	1.6283			.002509	
	1.4297	3.1367			.002434	
	1.4002	2.5388			.002486	
	1.3884	2.4228			.002482	
	1.2901	1.9803			.002319	
	1.2094	1.6244			.002319	
	1.7856	3.1308			.002434	
	1.7640	2.5113			.002486	
	1.7581	2.4208			.002482	
	1.6952	1.9941			.002319	
	1.6342	1.6106			.002319	
223.50	.8080	3.1240	82.6	- 1.4	.002853	9.72
	.7480	2.5400	111.9	- 30.6	.002838	17.76
	.6660	2.3000	83.6	- 48.8	.002732	9.53
	.5800	1.9320	51.0	- 62.4	.003032	3.94
	.5500	1.5960	75.3	- 74.9	.003032	8.60
	1.0280	3.1020	102.7	5.5	.002873	15.14
	1.0280	2.5640	82.6	- 25.3	.002753	9.40
	1.0040	2.3920	56.6	- 20.3	.002748	4.40
	.9200	1.9520	40.5	- 22.8	.002771	2.27
	.8360	1.6160	36.9	- 64.8	.002771	1.89
	1.3240	3.1080	43.9	10.3	.002575	2.49
	1.3040	2.5480	82.6	28.4	.002570	8.78
	1.2800	2.4240	62.9	1.8	.002570	5.09
	1.2000	1.9720	55.5	- 22.9	.002448	3.77
	1.0980	1.6080	56.2	- 36.5	.002448	3.87
	1.6800	3.1400	9.8	89.9	.002575	.12
	1.6400	2.5020	25.2	141.3	.002570	.81
	1.6280	2.4140	43.1	-155.8	.002570	2.39
	1.5760	1.9720	36.1	-150.6	.002448	1.59
	1.5100	1.6000	42.5	-146.3	.002448	2.21

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
265.20	.8771	3.1268	34.1	- 20.6	.002075	1.21
	.7906	2.5388	62.8	- 99.2	.002297	4.52
	.6962	2.2852	60.8	- 99.5	.002361	4.36
	.6136	1.9292	61.0	-121.6	.002210	4.11
	.5546	1.5477	81.5	-144.0	.002210	7.35
	1.1721	3.1445	68.7	171.6	.002459	5.80
	1.1445	2.5428	53.6	-153.4	.002161	3.18
	1.1013	2.3835	102.1	-156.9	.002236	11.65
	1.0128	1.9528	131.5	-160.5	.002241	19.37
	.9400	1.5949	149.7	-145.9	.002241	25.09
	1.4730	3.1445	117.0	172.1	.003091	21.16
	1.4730	2.5782	68.8	-144.5	.002472	5.84
	1.4513	2.4248	89.5	-150.6	.003161	12.65
	1.3412	1.9587	105.5	-155.4	.002831	15.76
	1.2547	1.5910	91.7	-159.6	.002831	11.90
	1.7856	3.1406	78.0	-177.1	.003091	9.41
	1.7443	2.5270	62.0	180.0	.002472	4.74
	1.7188	2.4031	76.2	-175.5	.003161	9.17
	1.6637	1.9764	73.7	-167.5	.002831	7.69
	1.5988	1.5870	91.3	-169.9	.002831	11.81
306.90	.8400	3.1120	112.3	4.0	.003708	23.37
	.7380	2.4780	110.2	- 50.1	.003720	22.59
	.6560	2.2400	91.7	- 45.0	.003877	16.30
	.5480	1.8800	74.4	- 77.8	.003764	10.41
	.4840	1.5480	40.5	- 50.9	.003764	3.09
	.9600	3.1120	63.4	- 7.1	.002951	5.92
	.9800	2.5400	89.1	- 48.6	.002524	10.02
	.9100	2.3520	54.2	- 43.5	.002540	3.73
	.7960	1.9080	72.5	- 57.2	.002423	6.37
	.7120	1.5320	60.9	- 69.2	.002423	4.50
	1.2080	3.1240	96.4	- 16.6	.002361	10.96
	1.2480	2.5080	74.6	- 71.6	.002529	7.03
	1.2020	2.3800	48.8	- 40.1	.002489	2.96
	1.1040	1.9280	47.3	- 41.6	.002459	2.75
	1.0120	1.5760	28.1	- 65.2	.002459	.97
	1.6020	3.1360	85.1	- 18.9	.002361	8.56
	1.5780	2.5020	83.9	- 16.3	.002529	8.91
	1.5520	2.4080	74.8	3.0	.002489	6.96
	1.5040	1.9560	62.1	- 34.7	.002459	4.75
	1.4200	1.5840	73.4	- 20.4	.002459	6.62

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
348.60	.9892	3.1367	133.9	.0	.002035	18.24
	.8614	2.4543	180.0	- 1.9	.002883	46.69
	.7611	2.2203	145.0	- 29.7	.002326	24.46
	.6293	1.8564	125.5	- 37.2	.002292	18.05
	.5801	1.5162	100.2	- 23.5	.002292	11.52
	1.2350	3.1367	291.9	1.6	.002283	97.24
	1.2035	2.4759	257.8	- 7.1	.002970	98.68
	1.1406	2.3461	284.1	- 7.3	.002224	89.71
	1.0521	1.8918	261.8	- 7.0	.002387	81.76
	.9617	1.5379	243.9	- 1.9	.002387	71.01
	1.5654	3.1170	377.7	.0	.002782	198.44
	1.4966	2.5074	273.8	1.3	.002843	106.62
	1.4887	2.3933	284.6	- 4.4	.002805	113.63
	1.3766	1.9272	296.4	- 3.9	.002603	114.36
	1.2665	1.5654	280.8	- 4.9	.002603	102.62
	1.8663	3.1131	283.6	- 6.5	.002782	111.87
	1.8250	2.5034	277.8	.4	.002843	109.71
	1.7935	2.4071	258.6	- 4.4	.002805	93.78
	1.7148	1.9410	249.0	- 5.5	.002603	80.66
	1.6676	1.5615	260.3	- 3.5	.002603	88.17
390.30	.9740	3.1120	32.7	-122.7	.002153	1.15
	.9180	2.4720	68.4	- 39.2	.002097	4.91
	.7820	2.1680	86.1	- 62.9	.002414	8.95
	.6480	1.8040	81.8	- 65.9	.002547	8.52
	.5760	1.5080	77.3	- 82.7	.002547	7.60
	1.2520	3.1200	49.2	- 2.3	.002385	2.88
	1.2360	2.5080	82.6	38.2	.002261	7.71
	1.1920	2.3160	74.8	- 29.9	.002429	6.80
	1.0560	1.8760	36.2	- 40.6	.002228	1.46
	.9560	1.5240	33.5	- 49.8	.002228	1.25
	1.5860	3.1240	26.2	13.0	.002785	.96
	1.5220	2.5140	62.9	1.8	.002130	4.22
	1.4860	2.3580	42.1	- 37.4	.002757	2.44
	1.4000	1.9060	43.5	- 63.4	.002707	2.61
	1.2920	1.5520	36.2	- 49.4	.002707	1.78
	1.8840	3.1040	10.0	78.7	.002785	.14
	1.8560	2.5040	11.5	- 59.0	.002130	.14
	1.8100	2.3880	26.7	- 36.0	.002757	.98
	1.7520	1.9320	21.2	-111.8	.002707	.61
	1.6800	1.5680	8.1	- 76.0	.002707	.09

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
432.00	.9715	3.1091	26.1	- 85.6	.001860	.63
	.9145	2.4110	80.6	- 44.0	.002156	7.00
	.8004	2.1436	86.1	- 4.0	.002435	9.03
	.6627	1.7817	57.6	- 33.7	.002342	3.89
	.5900	1.4395	49.6	- 49.9	.002342	2.89
	1.2842	3.1347	53.1	- 19.8	.002468	3.48
	1.2684	2.5270	56.0	- 2.0	.002087	3.27
	1.2055	2.3088	59.4	- 19.7	.002379	4.20
	1.0796	1.8682	62.1	- 33.2	.002425	4.67
	.9833	1.5123	43.9	- 30.1	.002425	2.33
	1.5910	3.1229	48.0	- 2.4	.003129	3.61
	1.5595	2.5093	59.9	- 25.7	.002753	4.94
	1.5221	2.3677	50.3	- 6.8	.002976	3.77
	1.3963	1.8879	38.4	- 51.3	.002913	2.15
	1.2901	1.5379	36.0	- 19.4	.002913	1.8[illegible]
	1.9682	3.1229	37.3	15.5	.003129	2.18
	1.8309	2.4936	31.6	- 55.3	.002753	1.37
	1.8151	2.3913	56.0	.0	.002976	4.66
	1.7070	1.9213	51.9	- 15.6	.002913	3.92
	1.6696	1.5536	48.8	- 35.0	.002913	3.47
473.70	.9760	3.0860	13.9	8.1	.001971	.19
	.9760	2.4160	96.6	4.7	.002380	11.11
	.8680	2.1620	92.5	3.7	.002388	10.23
	.6960	1.7720	65.3	- 21.2	.002566	5.47
	.6080	1.4700	60.7	24.9	.002566	4.72
	1.3020	3.1020	54.0	-146.9	.002383	3.47
	1.2920	2.5060	64.8	.0	.002300	4.83
	1.2480	2.2960	80.2	- 11.3	.002493	8.01
	1.1080	1.8420	64.0	- 17.9	.002467	5.05
	.9940	1.5020	56.7	- 14.0	.002467	3.97
	1.6340	3.1220	72.8	- 3.1	.002874	7.62
	1.5760	2.4880	49.1	.0	.002685	3.24
	1.5360	2.3520	84.5	.0	.002545	9.08
	1.4240	1.8780	76.3	11.9	.002608	7.59
	1.3260	1.5400	61.0	- 14.9	.002608	4.85
	1.9200	3.1140	138.9	- 8.1	.002874	27.74
	1.8740	2.4780	105.3	- 8.6	.002685	14.90
	1.8660	2.3880	112.3	- 4.0	.002545	16.04
	1.8020	1.9180	159.8	4.9	.002608	33.28
	1.7200	1.5400	100.2	.0	.002608	13.10

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
515.40	.9853	3.1111	102.3	12.4	.002150	11.25
	1.0108	2.4189	21.2	- 41.2	.002167	.49
	.8928	2.1495	30.0	- 53.1	.002398	1.08
	.7237	1.7581	30.0	- 36.9	.002531	1.14
	.6450	1.4651	38.8	- 55.5	.002531	1.90
	1.2389	3.1052	30.2	- 7.6	.002171	.99
	1.3333	2.5270	44.0	- 92.6	.002020	1.96
	1.2842	2.2930	8.0	- 89.9	.002405	.08
	1.1406	1.8486	12.6	- 18.4	.002315	.18
	1.0383	1.4985	34.2	- 6.7	.002315	1.35
	1.6637	3.1190	26.7	-103.0	.002570	.91
	1.6087	2.5093	75.6	-102.2	.002472	7.07
	1.6067	2.3677			.002589	
	1.4710	1.9036			.002336	
	1.3491	1.5221			.002336	
	2.0059	3.1032			.002570	
	1.9351	2.4779			.002472	
	1.9272	2.3835			.002589	
	1.8663	1.9351			.002336	
	1.7699	1.5536			.002336	
557.10	1.0760	3.1080			.002170	
	.9920	2.4020	114.0	46.4	.002666	17.31
	.8860	2.1380	41.5	5.4	.002549	2.19
	.7200	1.7540	41.5	5.4	.002537	2.18
	.6300	1.4380	27.3	- 59.7	.002537	.95
	1.3320	3.0980	32.0	47.5	.002402	1.23
	1.2900	2.4620	6.2	18.4	.005531	.11
	1.2480	2.2880	54.1	70.9	.011303	16.52
	1.1200	1.8340	41.3	25.3	.012508	10.67
	1.0280	1.4980	33.5	3.4	.012508	7.00
	1.6280	3.0960	32.0	79.4	.011552	5.91
	1.5600	2.4140	37.5	47.1	.008577	6.04
	1.3240	2.3460	32.4	104.0	.002739	1.44
	1.2000	1.8780	10.0	- 11.3	.002506	.13
	1.0860	1.5200	28.1	24.8	.002506	.99
	1.6900	3.0740	37.3	108.4	.011552	8.03
	1.6480	2.4860	44.2	69.1	.008577	8.36
	1.6340	2.3780	45.2	92.5	.002739	2.80
	1.5680	1.9260	25.5	112.6	.002506	.82
	1.4860	1.5330	19.7	84.3	.002506	.49

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
598.80	.9774	3.1209	97.9	-178.8	.002437	11.69
	1.0895	2.5015	113.2	42.1	.002396	15.35
	.9341	2.1534	46.7	- 9.9	.002439	2.65
	.7650	1.7620	48.6	- 80.5	.002371	2.80
	.6588	1.4415	36.2	- 96.3	.002371	1.55
	1.2606	3.1288	80.3	-174.3	.002110	6.81
	1.3392	2.5290	57.6	56.3	.002403	3.99
	1.3019	2.3441	24.7	14.0	.002379	.73
	1.1780	1.8663	39.4	- 30.5	.002432	1.89
	1.0718	1.5035	28.6	- 77.9	.002432	1.00
	1.6696	3.1504	17.2	- 54.5	.002696	.40
	1.6342	2.5369	90.5	68.0	.002588	10.61
	1.5988	2.3992			.002514	[illegible]
	1.4808	1.9017			.002524	
	1.3746	1.5339			.002524	
	1.9941	3.1386			.002696	
	1.9508	2.5192			.002588	
	1.9253	2.4287			.002514	
	1.8564	1.9587			.002524	
	1.7719	1.5733			.002524	
640.50	.9780	3.1060	34.8	- 16.4	.002536	1.54
	1.0760	2.4780	60.1	-141.6	.002351	4.25
	.9320	2.1300	25.8	- 8.7	.002405	.80
	.7280	1.7060	71.2	-114.4	.002504	6.35
	.6260	1.4020	63.5	-111.8	.002504	5.05
	1.2520	3.0900	26.7	-162.9	.002358	.84
	1.3220	2.5100	47.2	163.1	.002108	2.35
	1.2720	2.2940	14.3	164.1	.002613	.27
	1.1540	1.8180	29.0	-118.3	.002715	1.14
	1.0340	1.4700	53.1	-141.0	.002715	3.83
	1.6380	3.0820	58.6	-166.4	.003823	6.57
	1.5940	2.4980	34.3	-166.8	.002882	1.70
	1.5680	2.3360	18.1	167.5	.003142	.52
	1.4280	1.8700	58.6	-166.4	.002736	4.70
	1.3200	1.4980	46.7	-165.4	.002736	2.98
	1.8660	3.0820	55.9	169.9	.003823	5.97
	1.8400	2.4880	32.0	-169.4	.002882	1.47
	1.8320	2.3900	27.5	180.0	.003142	1.19
	1.7720	1.9420	37.8	-152.1	.002736	1.95
	1.6880	1.5500	43.1	-155.8	.002736	2.54

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
682.20	1.0108	3.1111	100.0	- 2.3	.002707	13.53
	1.0423	2.4641	46.7	133.3	.002538	2.76
	.9597	2.1495	50.0	16.3	.002378	2.97
	.7355	1.6971	57.2	- 12.1	.002456	4.02
	.6352	1.3829	39.7	- 40.9	.002456	1.93
	1.2350	3.1209	38.8	34.5	.002224	1.67
	1.2940	2.5428	55.3	139.4	.002342	3.58
	1.2881	2.3481	66.0	88.3	.002498	5.44
	1.1642	1.8407	45.3	48.6	.002682	2.75
	1.0305	1.4671	30.2	7.6	.002682	1.23
	1.6126	3.1367	41.2	112.8	.002665	2.26
	1.6008	2.5290	38.4	81.0	.002835	2.09
	1.5811	2.4031	46.4	82.6	.002382	2.56
	1.4238	1.8879	59.0	61.7	.002425	4.22
	1.3294	1.5221	41.1	29.1	.002425	2.05
	1.9390	3.1485	26.7	103.0	.002665	.95
	1.9194	2.5133	40.2	84.3	.002835	2.29
	1.8977	2.4287	38.4	81.0	.002382	1.76
	1.8230	1.9410	18.4	77.5	.002425	.41
	1.7325	1.5556	28.0	90.0	.002425	.95
723.90	1.0780	3.1020	52.2	-160.2	.003142	4.28
	1.0440	2.5120	47.8	80.5	.002491	2.85
	.9800	2.1440	102.0	27.6	.002589	13.46
	.7840	1.6940	66.5	- 55.8	.002529	5.59
	.6560	1.3760	48.0	- 35.0	.002529	2.91
	1.2840	3.1120	77.0	- 37.7	.002385	7.08
	1.2800	2.5400	26.4	26.6	.002128	.74
	1.2740	2.3600	24.3	- 14.0	.002506	.74
	1.1840	1.8520	52.2	- 19.8	.002512	3.42
	1.0640	1.4740	48.2	- 11.8	.002512	2.92
	1.6220	3.1200	53.6	- 61.6	.003804	5.47
	1.6000	2.5360	16.8	20.6	.002956	.42
	1.5740	2.3820	6.2	18.4	.003164	.06
	1.4560	1.9220	70.2	17.9	.002880	7.10
	1.3560	1.5160	46.7	- 22.2	.002880	3.14
	1.8600	3.1080	78.5	- 58.3	.003804	11.73
	1.8440	2.5280	33.6	- 6.7	.002956	1.67
	1.8380	2.4280	41.8	- 41.2	.003164	2.76
	1.7760	1.9600	33.4	.0	.002880	1.61
	1.6880	1.5780	39.5	5.7	.002880	2.25

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
765.60	.9617	3.0934	185.9	180.0	.002405	41.53
	1.0501	2.5113	103.7	64.9	.002477	13.32
	1.0501	2.1967	95.8	23.4	.002288	10.50
	.7729	1.6421	107.6	- 15.1	.002604	15.08
	.6745	1.3550	84.1	- 28.4	.002604	9.20
	1.2960	3.0737	34.0	-139.8	.002622	1.52
	1.3176	2.5546	58.8	17.8	.002297	3.97
	1.3117	2.3422	64.1	- 3.6	.002520	5.17
	1.2134	1.8230	57.3	- 29.2	.002566	4.21
	1.0777	1.4572	58.8	- 35.3	.002566	4.43
	1.6382	3.0895	20.0	-126.9	.002789	.56
	1.6165	2.5349	40.2	- 95.7	.002318	1.87
	1.5870	2.4051	22.3	- 26.6	.002481	.62
	1.4907	1.9095	66.5	- 32.7	.002435	5.39
	1.3727	1.5044	48.3	- 24.4	.002435	2.84
	1.9803	3.0816			.002789	
	1.9528	2.5093			.002318	
	1.9292	2.4012			.002481	
	1.8564	1.9410			.002435	
	1.7719	1.5595			.002435	
807.30	.8920	3.1020	10.0	- 78.7	.002611	.13
	1.0880	2.6060	108.4	85.8	.002116	12.42
	1.0680	2.1820	45.9	46.7	.002620	2.76
	.8880	1.6660	124.0	- 3.6	.002826	21.74
	.7300	1.3360	68.5	- 27.3	.002826	6.64
	1.2580	3.0900	22.4	127.9	.002614	.66
	1.3360	2.5640	45.9	80.1	.002614	2.75
	1.3380	2.3560	39.2	72.5	.002532	1.94
	1.2340	1.8240	67.2	15.3	.002556	5.77
	1.1120	1.4400	75.8	- 16.6	.002556	7.35
	1.6100	3.1040	36.6	126.3	.020192	13.49
	1.5960	2.4960	20.2	119.1	.011750	2.40
	1.5940	2.3720	20.5	16.7	.011605	2.44
	1.5120	1.8860	45.6	7.4	.019578	20.33
	1.4000	1.4980	54.0	- 10.5	.019578	28.50
	1.5960	3.0840	20.0	101.3	.020192	4.05
	1.5200	2.4920	9.8	126.9	.011750	.57
	1.5200	2.4020	27.5	90.0	.011605	4.39
	1.4480	1.9320	19.5	45.0	.019578	3.70
	1.3900	1.5400	48.8	- 49.9	.019578	23.32

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
849.00	.9636	3.0846	21.5	-158.2	.002865	.66
	1.0580	2.6195			.002195	
	1.0816	2.2301			.002309	
	.8968	1.6342	59.3	32.6	.002640	4.64
	.7355	1.3235	19.8	- 45.0	.002640	.52
	1.2822	3.0914	25.3	161.6	.002775	.89
	1.3235	2.5998			.002192	
	1.3235	2.3735			.002449	
	1.2783	1.8407	53.1	70.2	.002559	3.61
	1.1504	1.4356	22.8	52.1	.002559	.66
	1.6165	3.1190			.002647	
	1.6067	2.5526			.002472	
	1.6067	2.4110			.002648	
	1.5359	1.9154			.002388	
	1.4258	1.4946			.002388	
	1.9764	3.1013			.002647	
	1.9469	2.5172			.002472	
	1.9292	2.4237			.002648	
	1.8702	1.9548			.002388	
	1.9033	1.5221			.002388	
890.70	.9720	3.0940	153.7	175.6	.002657	31.40
	1.0100	2.6220	89.0	173.7	.002317	9.17
	1.0660	2.2660	98.2	106.3	.002481	11.98
	.9380	1.6980	94.1	28.7	.002795	12.37
	.7440	1.3220	45.9	- 80.1	.002795	2.94
	1.2340	3.0980	63.0	176.4	.003484	6.92
	1.2880	2.6340	50.1	168.7	.003486	4.37
	1.3140	2.4300	45.8	121.0	.003178	3.34
	1.2520	1.8740	5.6	45.0	.003380	.05
	1.1260	1.4560	13.2	- 63.4	.003380	.29
	1.5160	3.1160	25.5	180.0	.005503	1.80
	1.5160	2.5580	24.6	151.4	.006188	1.88
	1.5120	2.4560	32.2	142.4	.005166	2.68
	1.4460	1.9160	13.2	-116.6	.004819	.42
	1.3380	1.5140	23.7	- 94.8	.004819	1.35
	1.7020	3.1160	48.2	-168.2	.005503	6.38
	1.6700	2.5340	35.6	173.7	.006188	3.92
	1.6640	2.4360	34.8	-163.6	.005166	3.13
	1.6160	1.9660				
	1.5500	1.5540				

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
932.40	.8102	3.0954	64.2	-174.6	.002363	4.87
	.9695	2.6293	60.8	117.4	.002439	4.51
	1.0541	2.3245	84.3	76.3	.002240	7.96
	.9794	1.6794	86.1	4.0	.002651	9.83
	.7434	1.2783	64.5	- 73.8	.002651	5.52
	1.2193	3.0954	21.5	-158.2	.002554	.59
	1.2763	2.6096	11.7	-149.0	.002347	.16
	1.2999	2.4189	26.7	77.0	.002319	.82
	1.2822	1.8446	74.3	23.8	.002518	6.94
	1.1563	1.4238	92.3	- 5.0	.002518	10.72
	1.5910	3.1190	29.7	- 19.7	.002852	1.26
	1.5851	2.5644	55.0	19.1	.002479	3.75
	1.5811	2.4307	52.1	- 4.4	.000879	1.19
	1.5300	1.9036	80.4	26.6	.000543	1.76
	1.4238	1.4710	85.8	- 12.1	.000543	2.00
	1.9292	3.0914	101.9	- 25.6	.002852	14.81
	1.9115	2.5211	98.4	- 5.8	.002479	12.01
	1.8958	2.4189	85.4	- 10.8	.000879	3.21
	3.1760	2.0846	90.3	- 5.1	.000543	2.21
	3.1603	1.7266	104.4	- 5.5	.000543	2.96
974.10	.8080	3.0880	43.6	144.2	.002655	2.53
	.9820	2.6760	105.3	126.7	.002643	14.66
	1.0860	2.3680	96.8	95.8	.002305	10.80
	1.0240	1.7040	141.8	47.2	.002366	23.80
	.7620	1.2600	67.2	- 37.9	.002366	5.34
	1.2140	3.0900	32.2	142.4	.002950	1.53
	1.2780	2.6280	80.6	90.0	.002890	9.38
	1.3200	2.4560	69.8	80.3	.002889	7.03
	1.3200	1.9040	88.0	66.3	.003010	11.65
	1.2180	1.4500	83.5	26.6	.003010	10.49
	1.5440	3.1060	18.1	- 40.6	.004404	.72
	1.5680	2.5760	31.5	86.4	.004252	2.11
	1.5640	2.4540	49.5	83.2	.004616	5.65
	1.5180	1.9520	73.1	59.3	.003981	10.65
	1.4220	1.4960	77.9	43.0	.003981	12.07
	1.7940	3.0720	33.6	20.6	.004404	2.48
	1.7680	2.5240	50.3	51.3	.004252	5.39
	1.7480	2.4200	51.9	37.3	.004616	6.21
	1.7060	1.9580				
	1.6540	1.5440				

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1015.80	.7748	3.1209	32.8	142.4	.002463	1.32
	.9066	2.7139	79.3	146.3	.002127	6.68
	1.0442	2.4208	72.1	109.4	.002334	6.06
	1.0757	1.7837	134.3	43.2	.002294	20.69
	.7965	1.2370	100.1	- 26.1	.002294	11.49
	1.1937	3.1150	18.1	-173.7	.002698	.44
	1.2763	2.6903	41.7	73.3	.002446	2.13
	1.3117	2.4877	41.1	119.1	.002374	2.01
	1.3176	1.9253	48.8	35.0	.002403	2.86
	1.2311	1.4612	48.0	.0	.002403	2.76
	1.6047	3.1072	31.0	14.9	.002843	1.37
	1.5870	2.5959	40.2	95.7	.002360	1.90
	1.5870	2.4798	33.0	104.0	.002539	1.38
	1.5674	1.9666	43.9	30.1	.002468	2.38
	1.4808	1.5241	58.0	2.0	.002468	4.15
	1.9607	3.1032	40.4	98.5	.002843	2.32
	1.9430	2.5605	48.7	70.8	.002360	2.80
	1.9371	2.4503	57.6	56.3	.002539	4.22
	1.8958	1.9961	54.4	36.0	.002468	3.65
	1.8289	.5693	45.7	23.2	.002468	2.57
1057.50	.7820	3.1080	71.2	- 24.4	.002579	6.54
	.9160	2.7200	12.6	-141.3	.002437	.19
	1.0620	2.4360	32.5	115.0	.002431	1.29
	1.1220	1.7960	115.3	45.7	.002262	15.05
	.8520	1.2160	100.2	- 1.1	.002262	11.36
	1.1960	3.0880	43.1	-120.1	.003027	2.82
	1.2900	2.6680	33.6	- 96.7	.002763	1.56
	1.3000	2.4920	21.2	111.8	.002752	.62
	1.3600	1.9320	58.9	25.7	.002768	4.80
	1.2660	1.4500	62.4	- 12.7	.002768	5.40
	1.5740	3.1140	25.5	-112.6	.004728	1.54
	1.5640	2.6160	16.8	69.4	.003640	.51
	1.5560	2.4860	6.2	71.6	.004027	.08
	1.5560	1.9740	20.2	29.1	.003950	.81
	1.4800	1.4980	38.6	- 14.7	.003950	2.94
	1.7880	3.1120	18.6	- 71.6	.004728	.82
	1.7840	2.5700	5.9	180.0	.003640	.06
	1.7800	2.4680	2.0	89.7	.004027	.01
	1.7500	1.9900	20.9	- 41.2	.003950	.86
	1.6960	1.5620	11.8	.0	.003950	.27

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1099.20	.8397	3.0914	25.6	-128.7	.002852	.93
	.8968	2.7060	54.4	-162.9	.002603	3.85
	1.0305	2.4503	95.9	144.3	.002475	11.39
	1.1563	1.8663	144.9	74.8	.002134	22.42
	.8968	1.2350	106.1	42.7	.002134	12.00
	1.1721	3.0777	67.0	162.6	.002736	6.14
	1.2724	2.6568	58.8	162.2	.002715	4.69
	1.3038	2.5074	58.1	116.6	.002515	4.24
	1.3707	1.9508	76.4	96.0	.002537	7.40
	1.2920	1.4474	79.2	47.0	.002537	7.95
	1.5949	3.0836	19.0	-161.6	.002988	.54
	1.5929	2.6116	31.0	75.1	.002327	1.12
	1.5890	2.4857	36.0	70.6	.002520	1.64
	1.5851	1.9764	51.4	76.5	.002543	3.36
	1.5182	1.5143	85.0	60.4	.002543	9.19
	1.9666	3.0855	94.3	- 4.9	.002988	13.27
	1.9371	2.5605	77.1	16.6	.002327	6.92
	1.9371	2.4523	76.9	9.0	.002520	7.45
	1.9115	1.9823	99.2	18.8	.002543	12.52
	1.8407	1.5693	123.3	19.9	.002543	19.32
1140.90	.7660	3.0880	64.4	167.7	.002695	5.58
	.8640	2.7040	36.1	135.0	.002877	1.88
	.9840	2.4920	94.5	136.7	.002589	11.57
	1.1600	1.9360	121.9	88.2	.002133	15.84
	.9300	1.2880	78.3	28.5	.002133	6.53
	1.1320	3.1080	42.5	146.3	.002699	2.44
	1.2340	2.6860	92.4	128.1	.002680	11.44
	1.2740	2.5440	75.2	123.3	.002548	7.21
	1.3520	2.0080	102.9	83.4	.002668	14.11
	1.3200	1.5080	91.7	45.0	.002668	11.22
	1.5560	3.1080	43.6	144.2	.003582	3.41
	1.5720	2.6460	52.9	121.3	.002754	3.85
	1.5680	2.5200	59.8	117.4	.003095	5.53
	1.5680	2.0240	78.6	91.4	.002903	8.97
	1.5220	1.5720	72.7	71.1	.002903	7.67
	1.8820	3.1040	20.0	78.7	.003582	.72
	1.8580	2.5920	41.3	92.7	.002754	2.35
	1.8560	2.4800	52.9	105.1	.003095	4.33
	1.8440	2.0220	73.4	82.3	.002903	7.81
	1.8120	1.6040	47.3	48.4	.002903	3.25

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1182.60	.7768	3.1052	130.6	173.9	.003055	26.07
	.8712	2.7316	92.1	152.9	.002755	11.67
	.9617	2.5152	93.8	153.4	.002471	10.88
	1.1603	1.9892	86.6	108.9	.001793	6.72
	.9656	1.2724	69.8	- 13.2	.001793	4.37
	1.1367	3.1013	50.9	-168.7	.002859	3.71
	1.2153	2.7296	80.9	140.0	.002552	8.34
	1.2625	2.5703	48.3	172.9	.002702	3.16
	1.3825	2.0531	73.3	107.4	.002711	7.29
	1.3569	1.5123	50.9	41.8	.002711	3.52
	1.5595	3.1091	62.8	170.8	.002857	5.63
	1.5654	2.6568	36.8	167.5	.002366	1.61
	1.5615	2.5388	50.9	131.8	.002557	3.32
	1.5831	2.0551	58.3	95.9	.002315	3.93
	1.5418	1.5831	40.5	57.1	.002315	1.89
	1.9705	3.1052	8.9	153.4	.002857	.11
	1.9351	2.6018	25.0	61.4	.002366	.74
	1.9233	2.5034	43.1	76.6	.002557	2.38
	1.9213	2.0551	31.3	63.4	.002315	1.13
	1.8722	1.6047	40.8	78.7	.002315	1.92
1224.30	.6360	3.1020	190.9	177.0	.002686	48.92
	.7820	2.7460	148.0	174.7	.002390	26.18
	.9000	2.5340	124.4	158.7	.002659	20.58
	1.1320	2.0180	100.7	128.7	.001855	9.39
	.9980	1.2720	24.0	- 55.0	.001855	.53
	1.0820	3.0980	76.3	-168.1	.002861	8.33
	1.1720	2.7380	64.0	-162.1	.002396	4.91
	1.2260	2.5500	92.9	173.9	.002609	11.25
	1.3300	2.0780	101.4	135.8	.002466	12.69
	1.3580	1.5420	73.7	80.8	.002466	6.69
	1.4940	3.1180	106.0	169.3	.003133	17.60
	1.5360	2.6540	82.6	178.6	.003006	10.74
	1.5340	2.5580	86.3	149.9	.002806	10.45
	1.5620	2.0820	71.4	148.5	.002822	7.20
	1.5440	1.6060	53.1	90.0	.002822	3.97
	1.8740	3.1080	71.4	172.1	.003133	7.99
	1.8700	2.6140	69.0	175.1	.003006	7.16
	1.8660	2.5220	61.5	163.3	.002806	5.31
	1.8580	2.0500	59.7	162.8	.002822	5.02
	1.8200	1.6440	44.8	127.9	.002822	2.83

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1266.00	.5860	3.1150	51.9	-164.4	.002421	3.26
	.7237	2.7453	98.7	-173.0	.002921	14.21
	.8456	2.5605	93.9	-178.8	.002675	11.81
	1.0973	2.0669	74.8	124.1	.001595	4.46
	.9794	1.2527	38.0	.0	.001595	1.15
	1.0619	3.0855	97.9	-178.8	.002962	14.21
	1.1544	2.7099	97.5	-164.5	.003386	16.08
	1.1701	2.5801	99.5	157.6	.002705	13.38
	1.3097	2.1239	55.3	130.6	.002714	4.15
	1.3687	1.5851	32.8	52.4	.002714	1.46
	1.4553	3.1288	38.2	-132.9	.002640	1.92
	1.4828	2.6588	62.8	-170.8	.003047	6.00
	1.4867	2.5821	71.7	-167.1	.002479	6.38
	1.5221	2.0924	25.4	135.0	.002482	.80
	1.5418	1.6362	17.2	35.5	.002482	.37
	1.8997	3.1150	30.5	-121.6	.002640	1.23
	1.8663	2.6077	32.3	-111.8	.003047	1.59
	1.8643	2.5211	27.2	-107.1	.002470	.92
	1.8643	2.0728	20.0	90.0	.002482	.50
	1.8446	1.6401	28.0	- 4.1	.002482	.98
1307.70	.5860	3.0880	40.1	-101.3	.002750	2.21
	.6840	2.7340	97.7	-164.8	.002849	13.60
	.8060	2.5320	108.1	180.0	.002715	15.85
	1.0900	2.0800	78.3	128.9	.001676	5.13
	1.0360	1.2720	75.3	- 15.1	.001676	4.75
	.9840	3.0960	79.8	-170.1	.002497	7.95
	1.0780	2.7120	92.7	175.1	.002819	12.11
	1.1340	2.5880	87.0	173.5	.002617	9.91
	1.2940	2.1200	62.9	165.5	.002332	4.6[illegible]
	1.3780	1.5680	61.4	7.4	.002332	4.40
	1.4680	3.0900	47.9	-109.2	.002927	3.35
	1.4740	2.6440	36.7	-164.5	.002538	1.71
	1.4640	2.5420	43.1	-149.9	.002739	2.55
	1.5440	2.1000	13.9	45.0	.002583	.25
	1.5580	1.6160	37.5	- 47.1	.002583	1.82
	1.8580	3.0820	59.4	-124.2	.002927	5.16
	1.8580	2.5840	17.8	- 96.3	.002538	.40
	1.8580	2.4960	42.3	-111.8	.002739	2.45
	1.8580	2.0700	20.5	- 73.3	.002583	.54
	1.8480	1.6420	29.9	- 66.8	.002583	1.16

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1349.40	.5782	3.0757	91.0	-171.2	.002694	11.16
	.6293	2.7198	106.1	-176.8	.003027	17.03
	.7375	2.5605	113.4	165.7	.002875	18.49
	1.0482	2.1278	187.3	146.3	.001399	24.54
	1.0521	1.2330	28.6	- 56.3	.001399	.58
	.9833	3.0718	59.0	-156.0	.002740	4.78
	1.0619	2.7178	62.0	159.2	.002795	5.37
	1.0836	2.5900	95.4	160.4	.002338	10.65
	1.2488	2.1396	101.5	143.8	.002413	12.43
	1.4297	1.5929	READINGS	INVALID		
	1.4395	3.0836	77.2	-169.6	.002784	8.30
	1.4474	2.6490	86.1	158.2	.002326	8.62
	1.4494	2.5605	79.9	148.3	.002601	8.30
	1.5320	2.1023	51.2	128.7	.002432	3.19
	1.5674	1.6087	44.0	87.4	.002432	2.36
	1.8663	3.0659	16.1	7.1	.002784	.36
	1.8643	2.5900	54.9	146.9	.002326	3.50
	1.8486	2.4818	46.0	145.6	.002601	2.75
	1.8702	2.0531	32.2	119.7	.002432	1.26
	1.8564	1.6126	11.7	121.0	.002432	.17
1391.10	.4960	3.0740	82.1	159.0	.002667	8.99
	.5780	2.7280	75.8	163.4	.002962	8.52
	.6960	2.5600	59.9	156.8	.002707	4.85
	.9340	2.1840	172.5	137.8	READINGS	INVALID
	1.0520	1.2480	37.1	58.0	READINGS	INVALID
	.9300	3.0720	51.9	155.4	.002950	3.97
	1.0200	2.7340	74.0	140.4	.003044	8.33
	1.0440	2.6200	69.5	137.3	.002415	5.84
	1.2120	2.1800	151.4	119.6	READINGS	INVALID
	NO READING		READINGS	INVALID		
	1.3920	3.0760	58.4	132.3	.002718	4.64
	1.3940	2.6760	74.8	119.9	.002458	6.88
	1.3960	2.5840	58.3	122.6	.002604	4.43
	1.5120	2.1400	97.3	98.1	.002521	11.93
	1.5600	1.6600	105.8	68.2	.002521	14.12
	1.8740	3.0840	31.1	108.4	.002718	1.31
	1.8120	2.6140	50.1	115.6	.002458	3.08
	1.8200	2.5220	75.3	97.5	.002604	7.39
	1.8420	2.0980	73.7	99.2	.002521	6.84
	1.8420	1.6520	79.2	82.9	.002521	7.91

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1432.80	.5015	3.1052	98.0	177.7	.002611	12.54
	.5565	2.7414	68.8	-144.5	.002872	6.79
	.6824	2.5841	50.6	-161.6	.003162	4.04
	.9204	2.2439	44.9	147.7	READINGS	INVALID
	1.0718	1.2645	40.5	- 20.2	READINGS	INVALID
	.9361	3.0934	40.2	153.4	.002807	2.27
	1.0049	2.7650	42.0	154.7	.002478	2.19
	1.0324	2.6372	39.4	156.0	.002469	1.91
	1.1740	2.2714	83.4	134.0	READINGS	INVALID
	NO READING		READINGS	INVALID		
	1.4002	3.1268	46.0	180.0	.002752	2.91
	1.4100	2.7139	26.8	116.6	.002428	.87
	1.4179	2.6096	18.9	122.0	.002665	.47
	1.5182	2.1986	40.5	110.2	.002601	2.13
	1.6067	1.7070	48.8	35.0	.002601	3.10
	1.8564	3.0954	76.0	177.0	.002752	7.96
	1.8427	2.6352	19.0	18.4	.002428	.44
	1.8387	2.5565	22.1	95.2	.002665	.65
	1.8584	2.1259	8.2	14.0	.002601	.09
	1.3663	1.6912	29.5	61.7	.002601	1.13
1474.50	.3980	3.0780	29.5	176.2	.002247	.98
	.5220	2.6880	68.2	- 78.4	.002903	6.75
	.6480	2.5440	71.2	-118.0	.002882	7.31
	.8960	2.2080	95.3	-171.7	READINGS	INVALID
	1.0900	1.2340	140.2	31.2	READINGS	INVALID
	.8940	3.0900	10.0	78.7	.003008	.15
	.9820	2.7520	38.2	- 55.5	.002707	1.97
	1.0080	2.6360	14.2	-123.7	.002370	.24
	1.1540	2.2400	20.2	150.9	READINGS	INVALID
	NO READING		READINGS	INVALID		
	1.3460	3.0760	36.7	- 74.5	.002831	1.91
	1.3820	2.7000	8.1	- 76.0	.002422	.08
	1.3860	2.6000	13.9	- 98.1	.002527	.24
	1.4980	2.1780	24.3	76.0	.002611	.77
	1.6000	1.6880	52.0	10.9	.002611	3.53
	1.7980	3.0880	40.1	-168.7	.002831	2.27
	1.8300	2.6200	35.9	9.5	.002422	1.56
	1.8180	2.5440	31.7	- 21.8	.002527	1.27
	1.8500	2.1000	41.7	8.1	.002611	2.27
	1.8560	1.6780	46.7	14.6	.002611	2.85

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1516.20	.4720	3.1072	30.0	- 3.8	.002132	.96
	.5703	2.6745	65.1	-132.5	.002989	6.33
	.6490	2.5211	117.5	-131.6	.002[illegible]10	20.09
	.8260	2.2301	167.9	-179.3	READINGS	INVALID
	1.1917	1.3373	READINGS	INVALID		
	.9381	3.1032	30.2	172.4	.002803	1.28
	1.0265	2.7335	64.4	172.9	.002642	5.49
	1.0246	2.6254	57.3	-150.8	.002558	4.19
	1.1563	2.2812	58.1	176.1	READINGS	INVALID
	NO READING		READINGS	INVALID		
	1.4100	3.0914	25.0	151.4	.002960	.93
	1.4120	2.7060	59.2	-168.3	.001985	3.48
	1.4159	2.5959	50.0	180.0	.002640	3.29
	1.5241	2.2222	31.6	124.7	.002485	1.24
	1.6578	1.7168	34.4	54.5	.002485	1.47
	1.8171	3.0875	11.7	-149.0	.002960	.20
	1.8781	2.6411	6.0	180.0	.001985	.04
	1.8682	2.5447	7.2	33.7	.002640	.07
	1.8997	2.1318	16.1	29.7	.002485	.32
	1.9115	1.7030	18.1	6.3	.002485	.41
1557.90	.4280	3.0760	31.7	-172.9	.002323	1.17
	.4780	2.6400	73.9	-151.4	.002189	5.97
	.5700	2.4560	72.3	-157.6	.002776	7.24
	.7280	2.2060	137.9	-147.2	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.8640	3.0940	72.1	169.0	.002859	7.42
	.9180	2.7600	89.6	154.0	.002434	9.78
	.9580	2.6080	71.5	159.1	.002369	6.06
	1.0960	2.2440	115.0	146.9	.000835	5.52
	1.1640	1.3280	READINGS	INVALID		
	1.3240	3.0880	43.1	155.8	.002580	2.40
	1.3240	2.6880	50.1	131.8	.002412	3.03
	1.3360	2.6000	54.5	115.6	.002375	3.53
	1.4800	2.2040	63.5	111.8	.002520	5.08
	1.6200	1.7160	65.3	83.1	.002520	5.38
	1.7880	3.0820	105.3	8.6	.002580	14.31
	1.8240	2.6200	4[illegible].2	135.0	.002412	2.69
	1.8240	2.5480	41.5	121.4	.002375	2.04
	1.8640	2.1080	43.4	84.8	.002520	2.37
	1.8740	1.6800	39.5	84.3	.002520	1.97

Table B-1. Front-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1599.60	.4405	3.1032	37.9	108.4	.002216	1.59
	.5054	2.6391	4.5	116.6	.002818	.03
	.5821	2.4936	30.5	-121.6	.002637	1.23
	.7099	2.1554	75.3	-169.3	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.8673	3.1170	16.1	-172.9	.002730	.35
	.9459	2.7729	20.0	- 36.9	.002355	.47
	.9577	2.6509	22.8	105.3	.002340	.61
	1.0600	2.3441	107.4	135.0	READINGS	INVALID
	NO READING					
	1.3707	3.1091	12.0	90.0	.002629	.19
	1.3786	2.7434	57.2	65.2	.002155	3.53
	1.3923	2.6450	61.1	78.7	.002641	4.94
	1.5005	2.2812	84.0	88.6	.002441	8.60
	1.6657	1.7817	111.9	71.2	.002441	15.27
	1.9213	3.1032	36.7	22.4	.002629	1.77
	1.8446	2.6745	44.0	90.0	.002155	2.08
	1.8466	2.5801	44.4	82.2	.002641	2.60
	1.9036	2.1750	71.0	57.7	.002441	6.15
	1.9154	1.7424	113.6	61.6	.002441	15.74
1641.30	.4160	3.1120	111.2	-162.5	.002177	13.47
	.4760	2.6440	80.7	-177.2	.002195	7.14
	.5540	2.4300	94.0	-169.2	.003049	13.48
	.6540	2.1920	144.8	161.8	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.8480	3.0920	74.8	-150.1	.002881	8.07
	.9340	2.7480	67.8	-170.0	.002785	6.41
	.9520	2.6300	55.0	180.0	.002291	3.47
	1.0200	2.3200	92.0	160.0	.000761	3.22
	1.2220	1.4120	READINGS	INVALID		
	1.3240	3.1000	41.5	-148.6	.002778	2.39
	1.3480	2.7400	43.9	169.7	.002610	2.52
	1.3480	2.6600	57.8	162.2	.002454	4.10
	1.4820	2.2880	47.3	131.6	.002547	2.85
	1.6560	1.8220	23.9	99.5	.002547	.73
	1.8220	3.0960	69.2	-145.4	.002778	6.66
	1.8240	2.6640	19.6	180.0	.002610	.50
	1.8300	2.5920	29.2	137.7	.002454	1.05
	1.9020	2.1680	46.0	129.8	.002547	2.70
	1.9280	1.7800	39.5	84.3	.002547	1.99

Table B-1. Front Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 331

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1683.00	.3343	3.0698	33.0	-104.0	.002230	1.21
	.4248	2.6352	72.6	- 97.9	.002642	6.97
	.4897	2.4759	63.8	-122.2	.002877	5.85
	.5723	2.2036	14.4	146.3	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.8024	3.0796	27.8	- 69.0	.002787	1.08
	.8791	2.7611	28.3	171.9	.002530	1.01
	.9027	2.6509	44.0	2.6	.002356	2.28
	.9735	2.3756	16.1	97.1	.000717	.09
	1.2350	1.4513	152.2	66.8	.000717	8.30
	1.3353	3.0875	28.8	- 33.7	.002876	1.19
	1.3353	2.7512	17.9	- 26.6	.002372	.38
	1.3373	2.6627	32.2	- 7.1	.002662	1.38
	1.4690	2.3166	22.8	74.7	.002403	.62
	1.6618	1.8053	READINGS	INVALID		
	1.8643	3.0639	31.0	-165.1	.002876	1.38
	1.8250	2.6745	20.0	53.1	.002372	.47
	1.8250	2.5998	40.8	11.3	.002662	2.21
	1.8741	2.2104	44.9	32.3	.002403	2.42
	1.9194	1.7817	32.2	29.7	.002403	1.25
1724.70	.4080	3.0800	36.1	112.4	.002136	1.39
	.4660	2.5720	65.7	-141.1	.001952	4.21
	.5200	2.3760	126.9	-106.2	.003150	25.35
	.6420	2.2000	56.7	-146.3	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.8580	3.0660	107.7	165.2	.002860	16.59
	.9060	2.7520	159.3	177.9	.002706	34.33
	.9960	2.6320	169.1	178.0	.002444	34.95
	1.0180	2.3360	232.9	-174.7	READINGS	INVALID
	1.2820	1.5520	196.3	138.7	READINGS	INVALID
	1.3480	3.0840	209.9	173.0	.003083	67.87
	1.3640	2.7320	184.9	177.6	.002611	44.63
	1.3800	2.6560	187.0	176.4	.002454	42.92
	1.4880	2.3100	180.4	168.7	READINGS	INVALID
	NO READING					
	1.7920	3.0880	200.2	166.4	.003083	61.76
	1.8360	2.6800	167.2	177.3	.002611	36.50
	1.8700	2.6000	152.8	171.9	.002454	28.66
	1.9400	2.1920	145.5	163.5	READINGS	INVALID
	1.9560	1.7960	142.2	168.8	READINGS	INVALID

Table B-II. Front-Lower Grid Calculations - Model 35

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
41.00	.6868	1.2644	8.9	- 63.4	.002117	.08
	.6693	.8800	12.6	- 71.6	.002525	.20
	.6322	.5268	24.4	55.0	.002032	.60
	.6088	.1795	25.0	28.6	.001760	.55
	.5932	.0137	18.1	- 83.7	.001760	.29
	1.2059	1.2644	22.8	15.3	.002119	.55
	1.1805	.9249	50.0	- 87.7	.002184	2.73
	1.0985	.5190	36.8	- 12.5	.002224	1.51
	1.0751	.1990	27.8	- 69.0	.002569	.99
	1.1024	.0273	36.5	- 9.5	.002569	1.71
	1.4829	1.2605	15.2	- 23.2	.002761	.32
	1.4673	.9327	21.6	- 33.7	.002620	.61
	1.4361	.5249	43.8	- 24.2	.002704	2.60
	1.3873	.2263	30.9	11.3	.002437	3.16
	1.3717	.0078	42.7	- 10.8	.002437	2.22
	1.7834	1.2722	17.2	- 54.5	.002761	.41
	1.7600	.9307	20.0	-126.9	.002620	.52
	1.7444	.5307	28.6	- 24.8	.002704	1.11
	1.7151	.2849	18.8	- 32.0	.002437	.43
	1.7054	.0156	23.4	- 70.0	.002437	.67
82.50	.7204	1.2517	31.6	- 60.3	.002100	1.05
	.7085	.8796	18.1	- 49.4	.002468	.40
	.6965	.5075	47.7	- 80.5	.002190	2.49
	.6806	.1692	35.7	- 99.5	.002184	1.40
	.6607	.0020	11.4	- 31.0	.002184	.14
	1.2478	1.2557	56.1	- 77.9	.002095	3.30
	1.2179	.9035	52.7	- 58.7	.002360	3.28
	1.1582	.4975	54.4	- 30.3	.002226	3.30
	1.0886	.1731	47.2	- 4.8	.002195	2.44
	1.0786	.0179	33.7	-125.5	.002195	1.25
	1.5164	1.2557	44.0	- 57.7	.002420	2.35
	1.4945	.9095	40.4	- 76.0	.002477	2.02
	1.4647	.5114	38.0	-101.9	.002631	1.90
	1.4567	.2368	27.7	- 81.9	.002387	.92
	1.4169	.0119	12.4	18.4	.002387	.18
	1.8448	1.2756	60.0	-128.4	.002420	4.35
	1.8030	.9095	40.2	-137.0	.002477	2.00
	1.8030	.5114	55.7	-129.3	.002631	4.08
	1.7891	.2607	40.3	-119.1	.002387	1.94
	1.7731	.0080	42.8	-164.1	.002387	2.18

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
124.00	.7024	1.2371	26.7	-103.0	.002157	.77
	.6810	.8663	42.0	180.0	.002337	2.06
	.6400	.4800	47.0	-167.7	.001962	2.17
	.6029	.1444	42.3	-160.7	.001760	1.58
	.6029	.0078	64.0	-178.2	.001760	3.60
	1.2176	1.2098	55.0	-160.9	.002172	3.28
	1.2078	.8800	40.0	180.0	.002529	2.02
	1.1454	.4917	66.4	-173.1	.002748	6.06
	1.1220	.1951	49.0	168.2	.002685	3.22
	1.0829	.0000	50.0	-163.7	.002685	3.35
	1.5063	1.2234	17.1	-159.4	.003409	.50
	1.4771	.8937	36.7	-157.6	.002900	1.96
	1.4283	.4878	54.9	-169.5	.003017	4.54
	1.3912	.1990	65.3	-156.6	.003106	6.63
	1.3834	.0117	40.8	-168.7	.003106	2.58
	1.7463	1.2254	26.3	171.3	.003409	1.18
	1.7307	.9034	2.0	- 89.7	.002900	.01
	1.7093	.4878	42.4	-171.9	.003017	2.71
	1.6956	.2498	38.0	177.0	.003106	2.24
	1.6644	.0039	26.0	180.0	.003106	1.05
165.50	.7144	1.2259	60.4	- 54.2	.002339	4.26
	.6667	.8796	56.9	- 49.2	.002460	3.99
	.6507	.4975	78.4	- 1.4	.002319	7.12
	.6408	.1552	96.1	- 11.8	.002094	9.66
	.5970	.0000	57.7	9.8	.002094	3.48
	1.1960	1.2378	36.0	- 45.0	.001973	1.28
	1.1781	.9035	12.4	- 71.6	.002273	.17
	1.0925	.4896	39.2	- 90.0	.002214	1.70
	1.0408	.1831	65.2	-138.7	.002157	4.59
	1.0308	.0040	42.1	152.2	.002157	1.91
	1.5005	1.2498	35.0	- 26.6	.002293	1.41
	1.4607	.8955	36.0	- 60.6	.002319	1.50
	1.4129	.5015	19.6	- 90.0	.002472	.47
	1.3970	.2109	25.5	.0	.002348	.76
	1.3771	.0040	26.6	- 17.1	.002348	.83
	1.8189	1.2796	73.8	10.7	.002293	6.24
	1.8030	.9075	55.2	- 27.5	.002319	3.53
	1.7612	.5055	42.4	33.7	.002472	2.22
	1.7512	.2627	42.8	- 15.9	.002348	2.15
	1.7473	.0080	77.5	20.7	.002348	7.05

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
207.00	.7376	1.1883	35.6	- 51.8	.002322	1.47
	.7180	.8234	50.4	- 33.7	.002662	5.39
	.7180	.4780	54.5	- 61.6	.002405	3.58
	.6966	.1249	20.0	- 53.1	.003202	.64
	.6595	.0176	48.0	.0	.003202	3.68
	1.2429	1.1844	96.7	- 29.7	.002094	9.78
	1.2117	.8683	64.3	- 25.8	.002421	5.01
	1.1454	.4527	44.0	.0	.002526	2.44
	1.0732	.1522	22.8	15.3	.002531	.66
	1.0459	.0195	12.6	108.4	.002531	.20
	1.5376	1.2078	48.1	- 41.6	.002766	3.20
	1.4946	.8624	43.0	- 21.8	.002817	2.61
	1.4283	.4683	40.8	11.3	.002687	2.23
	1.4166	.1990	24.3	9.5	.003010	.89
	1.4088	.0039	41.6	35.2	.003010	2.60
	1.8185	1.2390	64.0	- 51.3	.002766	5.66
	1.7795	.8780	29.1	- 15.9	.002817	1.19
	1.7644	.5112	43.6	15.9	.002687	2.56
	1.7366	.2380	28.0	4.1	.003010	1.18
	1.7366	.0312	33.5	17.4	.003010	1.69
248.50	.7363	1.1980	34.3	- 59.0	.002230	1.31
	.7085	.8517	5.5	135.0	.002420	.04
	.6766	.4498	39.7	-122.9	.002418	1.90
	.6527	.1393	54.6	-159.0	.002372	3.53
	.6448	.0000	37.3	177.0	.002372	1.65
	1.2796	1.1900	56.1	60.8	.002360	3.72
	1.2358	.8756	31.3	.0	.002538	1.25
	1.1363	.4896	14.3	15.9	.002240	.23
	1.0627	.1891	23.6	41.6	.002195	.61
	1.0269	.0159	38.6	24.0	.002195	1.63
	1.5363	1.2179	17.7	- 6.3	.002521	.40
	1.5005	.8796	48.2	63.4	.002494	2.90
	1.4527	.5095	65.2	41.3	.002400	5.11
	1.4209	.2149	36.8	25.2	.002486	1.68
	1.4109	.0279	47.4	51.7	.002486	2.80
	1.8587	1.2299	60.8	1.8	.002521	4.65
	1.8308	.8995	75.6	31.2	.002494	7.13
	1.8030	.5174	85.3	- 9.2	.002400	8.74
	1.7791	.2647	82.7	13.7	.002486	8.49
	1.7791	.0179	64.8	3.5	.002486	5.21

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
290.00	.7551	1.1590	60.5	- 82.4	.002190	4.00
	.7141	.8273	52.1	- 85.6	.002382	3.23
	.6966	.4449	4.5	63.4	.002251	.02
	.6459	.1054	20.0	36.9	.002978	.59
	.6224	.0195	19.0	18.4	.002978	.53
	1.2702	1.2332	28.6	- 77.9	.002151	.83
	1.2429	.8683	40.2	- 84.3	.002378	1.92
	1.1590	.4566	37.9	- 71.6	.002298	1.65
	1.0907	.1678	38.6	- 21.3	.002672	1.99
	1.0810	.0351	50.6	9.1	.002672	3.42
	1.5551	1.2059	41.6	- 35.2	.002714	2.35
	1.5161	.9054	40.0	- 53.1	.002301	1.84
	1.4771	.5112	44.4	- 54.2	.002402	2.36
	1.4498	.2146	16.5	- 14.0	.002716	.37
	1.4380	.0410	26.9	- 48.0	.002716	.98
	1.8790	1.2410	33.3	- 32.7	.002714	1.50
	1.8439	.9171	46.6	- 59.0	.002301	2.50
	1.8283	.4976	36.0	- 90.0	.002402	1.55
	1.8166	.2576	36.0	- 70.6	.002716	1.76
	1.8010	.0351	11.7	31.0	.002716	.18
331.50	.7443	1.1383	45.6	- 64.5	.002232	2.32
	.7124	.8000	57.7	- 80.2	.002581	4.29
	.6786	.4537	40.4	- 67.2	.002424	1.98
	.6687	.1512	47.4	29.7	.002330	2.62
	.6627	.0060	44.8	- 23.2	.002330	2.33
	1.2856	1.1622	83.7	- 73.7	.002104	7.37
	1.2398	.8358	69.0	- 87.7	.002401	2.88
	1.1483	.4537	25.5	22.6	.002489	.81
	1.0985	.1751	36.6	- 15.5	.002390	1.60
	1.0766	.0239	32.4	- 25.0	.002390	1.26
	1.5701	1.1940	53.8	- 56.9	.002436	3.53
	1.5244	.8478	45.6	- 64.5	.002592	2.69
	1.4786	.4736	44.0	- 57.7	.002660	2.58
	1.4368	.2109	32.1	- 52.4	.002674	1.38
	1.4289	.0080	48.5	- 43.4	.002674	3.15
	1.8866	1.2119	41.9	- 37.6	.002436	2.14
	1.8547	.8597	38.8	- 45.0	.002592	1.95
	1.8030	.4816	18.5	- 58.0	.002660	.45
	1.7910	.2308	18.5	- 32.0	.002674	.46
	1.7891	.0239	31.0	- 34.7	.002674	1.28

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
373.00	.7746	1.1180	56.5	- 45.0	.002250	3.59
	.7239	.7707	37.5	- 25.2	.002654	1.87
	.7122	.4078	76.0	- 63.4	.002398	6.92
	.6868	.1288	52.1	- 94.4	.002507	3.40
	.6634	.0020	22.0	180.0	.002507	.61
	1.2937	1.1532	55.5	- 30.3	.002206	3.40
	1.2449	.8195	42.8	- 52.6	.002472	2.26
	1.1824	.4663	39.4	- 30.5	.002284	1.77
	1.1259	.1580	36.8	- 49.4	.002598	1.76
	1.1102	.0215	38.4	- 38.7	.002598	1.91
	1.5844	1.1610	60.0	- 60.0	.002699	4.85
	1.5356	.8644	36.0	- 19.4	.002377	1.54
	1.5005	.4741	25.3	- 18.4	.002555	.82
	1.4693	.1893	43.8	- 65.8	.002655	2.55
	1.4732	.0078	13.4	- 26.6	.002655	.24
	1.9122	1.2156	55.6	- 37.7	.002699	4.16
	1.8712	.8898	52.1	- 32.5	.002377	3.23
	1.8380	.4820	48.0	.0	.002555	2.94
	1.8322	.2478	38.8	- 11.9	.002655	2.00
	1.8263	.0176	44.9	- 20.9	.002655	2.68
414.50	.7841	1.0985	49.9	- 41.8	.002298	2.87
	.7463	.7841	43.3	- 5.2	.002483	2.33
	.7124	.3861	16.9	- 54.5	.002424	.34
	.6647	.0995	53.8	- 79.5	.002629	3.80
	.6408	.0060	28.9	28.3	.002629	1.10
	1.3333	1.1343	85.5	- 20.1	.002261	8.27
	1.2657	.8020	70.6	- 19.4	.002495	6.22
	1.1821	.4338	49.9	- 41.8	.002380	2.97
	1.1224	.1473	56.8	- 46.4	.002775	4.48
	1.1065	.0000	27.8	- 39.3	.002775	1.08
	1.6000	1.1423	60.5	- 24.9	.002515	4.60
	1.5582	.8358	67.9	- 33.2	.002570	5.93
	1.5025	.4657	65.1	- 43.8	.002336	4.95
	1.4547	.1711	50.1	- 30.6	.002672	3.35
	1.4408	.0020	39.2	.0	.002672	2.05
	1.9303	1.1781	164.2	- 70.5	.002515	33.90
	1.8985	.8318	82.3	- 38.2	.002570	8.70
	1.8507	.4816	61.5	- 30.7	.002336	4.42
	1.8289	.2229	52.6	- 45.0	.002672	3.70
	1.8308	.0080	25.5	- 22.6	.002672	.87

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
456.00	.8117	1.0849	20.1	5.7	.002227	.45
	.7668	.7668	10.2	11.3	.002460	.13
	.7220	.3941	34.9	76.8	.002085	1.27
	.6966	.0761	54.9	33.1	.003695	5.56
	.6888	.0156	38.2	- 6.0	.003695	2.69
	1.3737	1.1239	8.0	.0	.002325	.07
	1.3112	.7961	51.2	38.7	.002407	3.15
	1.2195	.4332	15.6	39.8	.002285	.28
	1.1649	.1171	41.0	47.0	.003002	2.52
	1.1317	.0039	41.2	39.1	.003002	2.55
	1.6390	1.1356	44.0	50.5	.003033	2.94
	1.5922	.8273	16.1	29.7	.002367	.31
	1.5473	.4293	11.7	- 31.0	.002635	.18
	1.5122	.1639	35.4	16.4	.003148	1.97
	1.5122	.0078	35.3	47.3	.003148	1.97
	1.9668	1.0615	41.2	50.9	.003033	2.57
	1.9356	.8390	35.7	63.4	.002367	1.51
	1.8907	.4507	24.7	- 14.0	.002635	.80
	1.8693	.2107	27.2	36.0	.003148	1.16
	1.8498	.0078	18.8	58.0	.003148	.56
497.50	.8040	1.1005	59.7	-113.2	.002382	4.24
	.7562	.7861	57.7	- 99.8	.002441	4.06
	.7204	.4199	41.2	-115.3	.002501	2.12
	.7104	.1294	44.4	-138.6	.002345	2.31
	.6786	.0020	52.2	124.3	.002345	3.19
	1.3413	1.1343	36.1	-167.5	.002308	1.51
	1.3055	.8338	40.9	-163.3	.002466	2.06
	1.1940	.4438	40.8	-125.2	.002490	2.07
	1.1502	.1771	47.2	-175.2	.002885	3.21
	1.1383	.0259	43.1	180.0	.002885	2.68
	1.6279	1.1761	36.4	-126.3	.002434	1.62
	1.5721	.8438	45.9	-129.8	.002353	2.48
	1.5124	.4597	65.8	-143.5	.002495	5.41
	1.4886	.1811	48.5	-133.4	.002897	3.41
	1.4647	.0279	20.0	168.7	.002897	.58
	1.9562	1.2100	90.6	111.6	.002434	9.99
	1.9144	.8637	47.4	-141.7	.002353	2.65
	1.8746	.4756	25.5	-157.4	.002495	.81
	1.8507	.2388	28.3	-146.3	.002897	1.16
	1.8408	.0239	16.2	166.0	.002897	.38

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFX	Q LB/SQFT
539.00	.7883	1.0302	18.4	-130.6	.002321	.39
	.7571	.7102	12.2	- 99.5	.002560	.19
	.7044	.3571	19.7	-156.0	.002289	.44
	.6634	.0468	41.2	-140.9	.005521	4.68
	.6595	.0585	20.1	174.3	.005521	1.11
	1.3385	1.1161	20.0	-126.9	.002165	.43
	1.2722	.7844	61.3	-109.0	.002386	4.48
	1.1961	.4000	34.0	-139.8	.002460	1.42
	1.1180	.1132	50.4	-123.7	.003376	4.29
	1.0888	.0039	37.7	-148.0	.003376	2.40
	1.6176	1.1063	21.5	-111.8	.002617	.61
	1.5629	.7922	13.4	-116.6	.002359	.21
	1.4946	.3902	14.4	-146.3	.002488	.26
	1.4790	.1288	12.8	-141.3	.003673	.30
	1.4927	.0117	21.2	- 48.8	.003673	.83
	1.9337	1.1454	32.3	-158.2	.002617	1.36
	1.8985	.8098	25.3	-161.6	.002359	.75
	1.8673	.4410	20.1	-174.3	.002488	.50
	1.8459	.1951	41.7	-163.3	.003673	3.20
	1.8341	.0117	READINGS	INVALID		
580.50	.7920	1.0866	28.5	15.9	.002260	.92
	.7542	.7741	2.0	- 89.7	.002615	.01
	.7025	.4119	41.2	154.7	.002347	1.99
	.6786	.1035	76.3	131.9	.002861	8.33
	.6587	.0040	100.7	-166.5	.002861	14.51
	1.3294	1.1164	12.4	- 71.6	.002145	.16
	1.2856	.7761	11.8	- 90.0	.002546	.18
	1.1682	.4219	23.6	131.6	.002310	.64
	1.1224	.1353	12.4	-108.4	.002765	.21
	1.1065	.0060	8.8	63.4	.002765	.11
	1.6199	1.1562	31.4	93.6	.002641	1.30
	1.5662	.8318	19.7	95.7	.002481	.48
	1.5005	.4517	36.1	77.5	.002594	1.69
	1.4786	.1731	25.8	98.7	READINGS	INVALID
	1.4786	.0119	21.2	-146.3	READINGS	INVALID
	1.9264	1.1980	52.6	63.4	.002641	3.65
	1.8905	.8557	42.3	103.4	.002481	2.22
	1.8547	.4736	30.7	116.6	.002594	1.22
	1.8109	.2269	25.5	112.6	READINGS	INVALID
	NO READING					

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
622.00	.8156	1.0380	70.6	- 64.9	.002342	5.84
	.7571	.7083	59.9	- 90.0	.002704	4.06
	.6673	.3746	68.1	- 93.4	.002138	4.95
	.6127	.1034	35.6	-128.2	.003517	2.23
	.5620	.0351	16.1	150.3	.003517	.46
	1.3424	1.1044	22.6	- 45.0	.002211	.57
	1.2722	.7727	14.5	74.1	.002481	.26
	1.1805	.4176	30.6	- 78.7	.002246	1.05
	1.1141	.1015	4.0	89.9	.003232	.03
	1.0927	.0117	10.2	- 11.3	.003232	.17
	1.6156	1.1376	49.0	-101.8	.002517	3.02
	1.5610	.8117	12.0	- 90.0	.002472	.18
	1.5024	.4254	17.2	-125.5	.002520	.37
	1.4751	.1541	40.5	-122.9	.003049	2.49
	1.4751	.0000	58.3	-174.1	.003049	5.17
	1.9571	1.1922	24.0	- 90.0	.002517	.72
	1.8888	.3507	33.0	- 76.0	.002472	1.34
	1.8537	.4683	37.2	-119.7	.002520	1.31
	1.8361	.2185	16.1	- 97.1	.003049	.40
	1.8205	.0078	READINGS	INVALID		
663.50	.8219	1.0229	52.1	-109.8	.002468	3.34
	.7542	.7144	45.1	-145.6	.002465	2.51
	.6985	.3443	63.5	- 98.9	.002630	5.29
	.6567	.0756	READINGS	INVALID		
	.6448	.0119	READINGS	INVALID		
	1.3453	1.1025	13.2	- 14.0	.002478	.32
	1.2896	.7900	13.7	- 90.0	.002468	.23
	1.1741	.3920	43.1	-140.5	.002504	2.33
	1.1224	.1393	35.3	-160.6	.003400	2.12
	1.1164	.0040	35.5	173.7	.003400	2.14
	1.6100	1.1085	23.9	- 55.0	.002675	.76
	1.5652	.8199	25.5	- 90.0	.002465	.80
	1.4905	.4378	38.6	-149.5	.002504	1.87
	1.4567	.1393	43.5	-144.2	.003250	3.07
	1.4209	.0060	57.7	170.2	.003250	5.40
	1.9254	1.1741	43.5	-172.2	.002675	2.53
	1.8985	.6239	25.5	-112.6	.002465	.80
	1.8388	.4458	35.5	- 83.7	.002504	1.58
	1.8090	.2109	41.7	-131.2	.003250	2.82
	1.7990	.0100	23.5	180.0	.003250	.90

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
705.00	.7980	.9893	22.1	- 84.8	.002283	.56
	.7200	.6829	12.8	-128.7	.002511	.21
	.6576	.3122	30.5	58.4	READINGS INVALID	
	NO READING					
	NO READING					
	1.3580	1.1005	25.6	38.7	.002154	.71
	1.2722	.7590	17.2	35.5	.002467	.36
	1.1473	.3902	37.5	64.8	.002289	1.61
	1.0810	.0898	7.2	56.3	.004238	.11
	1.0576	.0156	20.0	90.0	.004238	.85
	1.6293	1.1180	48.4	51.7	.002703	3.16
	1.5410	.7863	12.8	38.7	.002357	.19
	1.4693	.4059	20.0	.0	.002371	.47
	1.4400	.1288	54.5	98.4	.003536	5.26
	1.4185	.0098	38.2	47.1	.003536	2.58
	1.9141	1.1863	58.0	88.0	.002703	4.54
	1.8790	.8273	51.9	112.6	.002357	3.18
	1.8576	.4332	44.7	100.3	.002371	2.37
	1.8088	.1873	36.5	99.5	.003536	2.35
	1.7971	.0078	35.4	106.4	.003536	2.22
746.50	.8239	1.0010	11.4	-149.0	.002439	.16
	.7463	.7045	29.8	156.8	.002624	1.17
	.7144	.3701	30.6	129.8	.002513	1.18
	.6846	.0915	READINGS INVALID			
	.5627	.0100	READINGS INVALID			
	1.3652	1.1184	33.4	176.6	.002334	1.30
	1.3035	.8000	32.3	-166.0	.002480	1.29
	1.1900	.4259	15.8	97.1	.002690	.34
	1.1264	.1453	21.9	- 79.7	.003196	.77
	1.1164	.0239	3.9	180.0	.003196	.02
	1.6398	1.1463	43.0	155.8	.002834	2.62
	1.5761	.8279	33.4	176.6	.002705	1.51
	1.5104	.4378	14.9	156.8	.002888	.32
	1.4488	.1930	36.1	130.6	.003113	2.03
	1.4468	.0338	15.8	-172.9	.003113	.39
	1.9284	1.2318	37.2	-161.6	.002834	1.96
	1.8786	.3716	49.1	-175.4	.002705	3.26
	1.8308	.4896	59.7	156.8	.002888	5.14
	1.8030	.2468	47.4	119.7	.003113	3.50
	1.7891	.0438	26.6	162.9	.003113	1.11

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
788.00	.7883	.9834	65.4	- 31.3	.002376	5.09
	.6927	.6946	73.4	- 60.6	.002571	6.92
	.6380	.3356	14.5	- 15.9	.002096	.22
	.5854	.0663	24.3	- 99.5	.005512	1.63
	.5698	.0117	11.3	45.0	.005512	.35
	1.3249	1.1024	53.8	- 21.8	.002123	3.07
	1.2410	.7512	59.3	- 57.4	.002610	4.59
	1.1454	.4059	58.8	- 35.3	.002391	4.13
	1.0849	.0683	26.7	-103.0	.004376	1.55
	1.0537	.0156	5.7	-135.0	.004376	.07
	1.5902	1.1356	57.3	- 29.2	.002706	4.43
	1.5278	.7883	55.3	- 40.6	.002677	4.09
	1.4556	.4117	45.3	- 41.4	.002715	2.79
	1.4166	.1561	72.2	- 41.6	.002963	7.72
	1.4029	.0078	49.3	- 21.4	.002963	3.61
	1.8790	1.1746	76.5	- 40.8	.002706	7.92
	1.8302	.8234	84.3	- 36.3	.002677	9.52
	1.8029	.4506	85.4	- 57.4	.002715	9.89
	1.7854	.2283	61.7	- 29.1	.002963	5.64
	1.7717	.0156	69.9	- 36.9	.002963	7.24
829.50	.8796	.9672	29.4	- 36.9	.002277	.98
	.7821	.6408	28.0	- 24.8	.002856	1.12
	.7284	.3662	20.0	101.3	.002387	.48
	.6806	.0677	30.7	-116.6	.004442	2.09
	.6706	.0179	6.2	71.6	.004442	.09
	1.4149	1.0985	24.9	- 45.0	.002175	.68
	1.3353	.7502	37.7	27.9	.002588	1.84
	1.2378	.3920	27.5	4.1	.002454	.93
	1.1204	.1194	54.9	90.0	.003351	5.04
	1.1124	.0199	14.3	15.9	.003351	.34
	1.6896	1.1184	37.7	27.9	.002616	1.86
	1.6179	.7920	41.9	52.6	.002469	2.17
	1.5443	.4080	21.6	- 5.2	.002945	.69
	1.5025	.1453	43.8	10.3	.003233	3.10
	1.4925	.0159	49.0	16.3	.003233	3.88
	1.9861	1.1821	32.8	17.4	.002616	1.41
	1.9463	.8219	67.6	29.5	.002469	5.63
	1.8766	.4179	33.3	28.1	.002945	1.63
	1.8567	.2169	21.1	- 21.8	.003233	.72
	1.8448	.0020	17.6	.0	.003233	.50

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
871.00	.8117	.9659	61.7	- 24.9	.002549	4.85
	.7180	.6829	34.0	- 40.2	.002557	1.48
	.6341	.3551	57.2	- 65.2	.002066	3.38
	.5717	.0390	50.1	- 28.6	.004662	5.84
	.5717	.0176	44.9	- 20.9	.004662	4.70
	1.3424	1.0849	74.8	- 34.1	.002304	6.45
	1.2741	.7688	52.7	- 24.6	.002508	3.49
	1.1727	.4078	67.4	- 78.0	.002496	5.67
	1.0849	.1229	56.8	- 10.1	.003153	5.09
	1.0673	.0195			.003153	
	1.6234	1.153	46.3	7.4	.002708	2.91
	1.5532	.821[illegible]	42.0	- 2.7	.002368	2.09
	1.4771	.4098	34.0	- 40.2	.002689	1.56
	1.4595	.1639	32.5	10.6	.003307	1.75
	1.4498	.0215	33.1	- 25.0	.003307	1.81
	1.9102	1.1844	22.8	- 15.3	.002708	.70
	1.8888	.8566	48.1	4.8	.002368	2.74
	1.8322	.4722	34.9	- 13.2	.002689	1.64
	1.8049	.2205	39.8	- 17.5	.003307	2.62
	1.7893	.0156	51.4	13.5	.003307	4.36
912.50	.9353	.9413	126.1	- 46.9	.002327	18.51
	.8080	.6189	103.5	- 18.8	.002529	13.53
	.7522	.3144	199.4	- 10.8	.002772	55.12
	.7244	.0438	237.4	8.1	.000031	.88
	.7124	.0020	229.3	- 2.0	.000031	.82
	1.4766	1.0567	76.5	2.9	.002395	7.01
	1.3831	.7284	64.0	- 40.0	.002443	5.00
	1.2517	.3264	66.3	- 71.0	.003018	6.63
	1.1761	.1095	65.2	- 57.3	.000042	.09
	1.1602	.0025	46.6	- 22.2	.000042	.05
	1.7353	1.1244	76.2	- 18.0	.002686	7.80
	1.6597	.7900	80.0	- 21.5	.002343	7.50
	1.5701	.3861	50.4	- 13.5	.003035	3.85
	1.5343	.1512	61.0	- 45.0	.003149	5.85
	1.5224	.0020	57.1	- 22.2	.003149	5.14
	2.0080	1.1761	73.4	- 9.2	.002686	7.24
	1.9940	.8259	54.2	- 40.6	.002343	3.44
	1.9104	.4100	66.6	- 65.7	.003035	6.74
	1.0945	.2050	59.7	- 41.0	.003149	5.61
	1.8945	.0139	52.3	- 13.0	.003149	4.30

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
954.00	.8976	.8741	66.0	- 35.1	.002864	6.23
	.8156	.6498	60.2	- 5.7	.003049	5.53
	.8293	.3180	18.8	- 58.0	.003581	.64
	.8059	.0722	21.5	68.2	.007199	1.67
	.8000	.0098	10.0	143.1	.007199	.36
	1.4185	1.0888	63.5	28.2	.002050	4.13
	1.3229	.7278	54.6	23.7	.002369	3.53
	1.1941	.3454	82.0	43.0	.002305	7.75
	1.1200	.0683	48.0	2.4	.004033	4.64
	1.1102	.0020			.004033	
	1.6956	1.1298	52.9	10.9	.002757	3.86
	1.6273	.7922	48.0	16.9	.002523	2.91
	1.5259	.3980	69.6	50.8	.002690	6.51
	1.5024	.1210	38.8	34.5	.003838	2.89
	1.5024	.0000	22.8	52.1	.003838	1.00
	1.9824	1.1727	72.6	31.5	.002757	7.28
	1.9298	.8215	36.7	22.4	.002523	1.70
	1.8595	.4117	77.7	64.1	.002690	8.13
	1.8498	.1815	34.0	40.2	.003838	2.22
	1.8400	.0039	27.8	21.0	.003838	1.49
995.50	.9891	.9035	84.6	5.3	.002524	9.03
	.8677	.6129	87.5	- 74.4	.002621	10.02
	.7622	.2985	89.9	-159.6	.002474	9.99
	.7323	.0637	105.0	-166.0	.004163	22.95
	.7045	.0080	127.4	-178.2	.004163	33.78
	1.5323	1.0866	117.6	1.9	.002393	16.55
	1.4328	.7502	90.2	- 27.1	.002783	11.33
	1.3114	.3821	38.0	34.5	.002690	1.95
	1.2239	.1114	90.3	24.3	.003663	14.94
	1.2060	.0239	92.1	1.2	.003663	15.53
	1.7871	1.1343	93.1	22.2	.002658	11.53
	1.7055	.8040	62.6	- 20.1	.002767	5.42
	1.6139	.4398	66.1	- 12.0	.002645	5.78
	1.5662	.1731	60.8	20.8	.002994	5.53
	1.5363	.0199	49.1	4.6	.002994	3.61
	2.0697	1.2139	89.9	11.3	.002658	10.74
	2.0279	.8398	80.8	14.0	.002767	9.03
	1.9443	.4796	76.2	25.9	.002645	7.68
	1.9204	.2269	76.6	32.5	.002994	8.79
	1.9204	.0239	56.7	3.4	.002994	6.66

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1037.00	.9815	.8820	59.9	.0	.002200	3.95
	.8390	.5659	44.4	- 54.2	.003263	3.21
	.7454	.2868	52.9	- 10.9	.002625	3.67
	.7044	.0468	27.2	- 72.9	.004017	1.48
	.6732	.0059	24.0	.0	.004017	1.15
	1.5356	1.0927	53.8	31.3	.002058	2.98
	1.4029	.6868	26.7	- 13.0	.002573	.91
	1.2254	.3668	36.2	6.3	.002464	1.61
	1.2020	.1054	16.5	- 76.0	.003446	.47
	1.2020	.0039	24.7	- 76.0	.003446	1.05
	1.7815	1.1649	43.8	65.8	.002495	2.40
	1.6859	.7707	42.1	- 5.4	.002579	2.29
	1.5902	.3844	22.8	- 52.1	.002926	.76
	1.5590	.1424	38.2	- 84.0	.003135	2.28
	1.5512	.0039	35.0	- 31.0	.003135	1.91
	2.0702	1.1902	21.2	131.2	.002495	.56
	2.0078	.8410	22.8	105.3	.002579	.67
	1.9278	.4449	20.0	.0	.002926	.58
	1.9141	.2224	36.8	12.5	.003135	2.13
	1.9063	.0078	37.5	- 25.2	.003135	2.21
1078.50	1.0488	.9035	32.1	-142.4	.002392	1.23
	.8935	.5771	30.6	129.8	.002822	1.32
	.8139	.2886	104.0	-132.7	.002417	13.07
	.7403	.0378	READINGS	INVALID		
	.7284	.0080	56.8	178.0	.004820	7.79
	1.5781	1.1144	62.2	151.8	.002195	4.25
	1.4587	.7443	58.8	120.0	.002780	4.81
	1.3473	.3861	23.8	9.5	.002567	.73
	1.2279	.0955	55.2	-173.9	.003678	5.60
	1.2119	.0000	75.7	158.7	.003678	10.53
	1.8050	1.1741	77.5	159.3	.002888	8.67
	1.7473	.8000	67.9	123.2	.002868	6.62
	1.6279	.4219	56.1	155.2	.002470	3.89
	1.5701	.1353	72.7	-175.4	.002812	7.44
	1.5662	.0020	67.6	163.1	.002812	6.42
	2.0557	1.2299	115.1	137.1	.002888	19.11
	2.0219	.8617	84.1	152.2	.002868	10.15
	1.9642	.4796	57.9	151.7	.002470	4.13
	1.9562	.2348	68.4	166.8	.002812	6.58
	1.9542	.0080	92.2	167.7	.002812	11.96

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1120.00	.9561	.8624	52.8	- 29.5	.002582	3.60
	.8195	.5893	67.9	.0	.002458	5.67
	.6751	.2107	43.1	- 76.6	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.6166	.0078	21.2	131.2	READINGS	INVALID
	1.4810	1.1220	28.3	45.0	.002275	.91
	1.3737	.7376	28.8	- 33.7	.002664	1.11
	1.2488	.3707	33.5	-107.4	.002688	1.51
	1.1473	.0995	38.8	-124.5	.004643	3.49
	1.1317	.0312	18.4	167.5	.004643	.79
	1.7093	1.1922	37.7	32.0	.002680	1.90
	1.6488	.8273	26.8	63.4	.002566	.92
	1.5395	.4078	41.2	- 39.1	.002718	2.31
	1.4868	.1366	22.1	- 5.2	.003549	.86
	1.4868	.0234	14.1	45.0	.003549	.35
	1.9863	1.2683	41.6	35.2	.002680	2.32
	1.9337	.8800	39.3	14.7	.002566	1.98
	1.8771	.4722	34.0	- 61.9	.002718	1.57
	1.8478	.2380	27.2	- 72.9	.003549	1.31
	1.8166	.0273	6.0	180.0	.003549	.06
1161.50	1.0945	.8776	50.9	22.6	.002530	3.28
	.9612	.5771	86.7	-108.4	.002839	10.68
	.8239	.2468	83.1	55.6	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.7144	.0239	READINGS	INVALID		
	1.5980	1.1343	23.6	48.4	.002154	.60
	1.4826	.7284	19.3	-114.0	.002476	.46
	1.3373	.3542	47.1	-135.0	.002402	2.66
	1.2060	.0637	77.2	-144.3	.004258	12.69
	1.1940	.0040	67.0	-159.4	.004258	9.54
	1.8368	1.1940	30.0	78.7	.002706	1.22
	1.7592	.8239	31.0	-124.7	.002496	1.20
	1.6597	.3960	12.5	-141.3	.002731	.21
	1.5920	.1333	37.3	-177.0	.003292	2.29
	1.5761	.0119	49.0	-163.7	.003292	3.95
	2.0896	1.2537	20.2	150.9	.002706	.55
	2.0597	.8716	23.5	- 90.0	.002496	.69
	1.9801	.4498	14.9	-156.8	.002731	.30
	1.9642	.2090	41.9	-100.8	.003292	2.89
	1.9483	.0080	22.3	- 37.9	.003292	.82

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1203.00	1.0029	.8820	81.9	12.7	.002293	7.69
	.7922	.5073	40.0	- 92.9	.003146	2.52
	.7220	.2790	41.2	50.9	READINGS	INVALID
	NO READING		READINGS	INVALID		
	NO READING					
	1.4966	1.1395	69.6	39.2	.002150	5.21
	1.3659	.7200	53.3	13.0	.002645	3.76
	1.2156	.3376	55.7	21.0	.002595	4.02
	1.0849	.0546	97.6	10.6	.004694	22.35
	1.0693	.0078	100.6	6.8	.004694	23.76
	1.7151	1.2215	52.4	40.4	.002410	3.31
	1.6312	.8020	47.5	14.6	.002632	2.97
	1.5298	.4000	64.0	38.7	.002469	5.05
	1.4498	.1346	85.4	20.6	.003249	11.84
	1.4400	.0098	48.0	.0	.003249	3.74
	1.9688	1.2780	52.4	49.6	.002410	3.31
	1.9337	.8566	42.3	70.7	.002632	2.36
	1.8634	.4663	77.1	36.6	.002469	7.34
	1.8400	.1971	71.5	35.9	.003249	8.31
	1.8341	.0137	38.4	9.0	.003249	2.40
1244.50	1.1741	.8955	71.8	- 11.0	.002328	6.01
	.9592	.5373	146.3	7.7	.003002	32.12
	.8498	.2786	63.8	- 42.5	.002275	4.63
	.7920	.0199	READINGS	INVALID		
	.7920	.0060	READINGS	INVALID		
	1.6517	1.1781	46.1	102.3	.002077	2.21
	1.5343	.7403	44.7	52.1	.002666	2.66
	1.3891	.3741	29.1	-137.7	.002386	1.01
	1.3015	.0816	21.5	90.0	.003950	.92
	1.2935	.0159	2.0	- 89.7	.003950	.01
	1.8766	1.2279	20.8	131.2	.002868	.62
	1.8050	.8358	31.3	90.0	.002688	1.32
	1.7095	.4358	23.7	65.6	.002677	.75
	1.6716	.1632	26.4	- 48.0	.002908	1.01
	1.6239	.0119	18.5	- 32.0	.002908	.50
	2.1234	1.2935	23.8	170.5	.002868	.81
	2.0736	.9114	50.1	120.6	.002688	3.37
	2.0418	.4955	2.0	.0	.002677	.01
	2.0219	.2507	20.2	119.1	.002908	.59
	1.9861	.0139	26.6	-162.9	.002908	1.03

Table B-11. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFX	Q LB/SQFT
1286.00	1.0732	.8683	82.4	- 76.0	.002888	9.80
	.9366	.5268	62.4	- 39.8	.003527	6.87
	.7688	.2361	82.9	- 74.6	READINGS	INVALID
	NO READING		READINGS	INVALID		
	NO READING					
	1.4868	1.1844	33.9	45.0	.002241	1.29
	1.3932	.7551	57.2	12.1	.002500	4.09
	1.1941	.3180	34.1	- 69.4	.002380	1.39
	1.0849	.0751	30.6	- 78.7	.004119	1.92
	1.0693	.0059	8.9	116.6	.004119	.15
	1.7015	1.2371	31.6	55.3	.002753	1.37
	1.6312	.8332	29.1	15.9	.002572	1.09
	1.5395	.4215	41.2	- 76.0	.002501	2.12
	1.4673	.1151	33.9	- 45.0	.003424	1.97
	1.4556	.0000	32.2	- 7.1	.003424	1.78
	1.9454	1.2820	28.8	123.7	.002753	1.14
	1.9083	.8993	10.0	.0	.002572	.13
	1.8654	.4663	36.5	- 99.5	.002501	1.66
	1.8302	.2146	44.4	- 82.2	.003424	3.37
	1.8088	.0059	35.4	- 16.4	.003424	2.15
1327.50	1.1940	.8159	76.6	- 85.6	.002449	7.19
	1.0070	.4975	74.9	-132.9	.002826	7.92
	.8716	.1990	40.4	-104.0	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.8199	.0159	READINGS	INVALID		
	1.6756	1.2020	116.6	24.8	.002121	14.41
	1.5900	.7522	121.4	17.9	.002529	18.65
	1.4010	.3423	110.6	7.1	.002401	14.67
	1.3075	.0517	READINGS	INVALID		
	1.2896	.0239	125.5	2.7	.005030	39.62
	1.8945	1.2537	89.3	15.3	.002983	11.91
	1.8328	.8438	110.3	12.3	.002600	15.81
	1.7194	.3960	86.6	- 5.2	.002828	10.59
	1.6955	.1393	103.4	9.8	.003404	18.19
	1.6557	.0080	102.0	3.3	.003404	17.72
	2.1075	1.3174	72.9	6.2	.002983	7.93
	2.0836	.9114	90.3	3.7	.002600	10.60
	2.0358	.4597	67.3	- 8.4	.002828	6.41
	2.0279	.2070	86.8	6.5	.003404	12.81
	2.0199	.0040	96.0	.0	.003404	15.68

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1369.00	1.0790	.7922	223.4	51.9	.002411	60.18
	.8859	.4722	100.9	- 98.0	.002632	13.39
	.7590	.1971	46.6	43.3	READINGS	INVALID
	NO READING		READINGS	INVALID		
	NO READING					
	1.5922	1.2332	78.7	54.3	.002296	7.12
	1.5083	.7922	94.7	45.9	.002446	10.96
	1.3034	.3317	50.6	9.1	READINGS	INVALID
	NO READING					
	1.1941	.0117	78.3	5.9	READINGS	INVALID
	1.7873	1.2605	72.7	69.1	.002876	7.61
	1.7385	.8566	50.1	23.5	.002605	3.27
	1.6254	.4137	55.1	43.5	.002833	4.30
	1.5668	.1327	28.8	56.3	.003290	1.37
	1.5571	.0059	42.9	27.8	.003290	3.03
	2.0176	1.2898	61.2	38.4	.002876	5.38
	1.9980	.9054	65.2	40.0	.002605	5.54
	1.9317	.4566	56.0	34.8	.002833	4.44
	1.9161	.2244	42.0	64.7	.003290	2.90
	1.9044	.0059	32.3	68.2	.003290	1.71
1410.50	1.3313	.9910	223.0	44.6	.001939	48.23
	.9930	.3980	112.8	17.2	.003049	19.39
	.9055	.2308	83.1	-135.0	READINGS	INVALID
	NO READING		READINGS	INVALID		
	.8697	.0239	READINGS	INVALID		
	1.7214	1.2657	101.7	154.9	.002152	11.12
	1.6557	.8199	89.2	-171.2	.002533	10.08
	1.4507	.3502	65.1	173.1	.002637	5.59
	1.3692	.0677	READINGS	INVAPID		
	1.3672	.0318	109.8	-178.0	.005179	31.20
	1.9204	1.3214	109.8	145.2	.002651	15.98
	1.8786	.8637	92.9	161.6	.002599	11.22
	1.7592	.4338	88.2	180.0	.002812	10.93
	1.7114	.1632	102.2	-175.6	.003399	17.74
	1.6935	.0279	90.3	176.3	.003399	13.86
	2.1552	1.3552	109.9	148.9	.002651	16.00
	2.1333	.9532	100.8	153.4	.002599	13.19
	2.0816	.4915	84.4	158.2	.002812	10.01
	2.0458	.2448	87.3	-171.0	.003399	12.95
	2.0318	.0338	82.3	178.6	.003399	11.51

Table B-11. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1452.00	1.2371	.9483	272.9	42.9	.003462	128.87
	.9932	.5054	221.8	35.8	.003365	82.78
	.7005	.1385	55.7	-111.0	READINGS	INVALID
	NO READING		READINGS	INVALID		
	NO READING					
	1.5005	1.2761	61.1	78.7	.002099	3.92
	1.4205	.7785	16.5	- 14.0	.002582	.35
	1.2390	.3395	14.5	- 74.1	READINGS	INVALID
	NO READING					
	1.0849	.0078	32.2	-150.3	READINGS	INVALID
	1.6976	1.3229	53.8	74.9	.002754	3.98
	1.6507	.8859	50.9	64.4	.002479	3.22
	1.5376	.4137	18.4	40.6	.002499	.42
	1.4673	.1249	21.2	48.8	.003456	.78
	1.4673	.0117	10.8	-111.8	.003456	.20
	1.9239	1.3463	37.9	108.4	.002754	1.98
	1.9083	.9502	22.8	74.7	.002479	.64
	1.8537	.4878	39.4	59.5	.002499	1.94
	1.8302	.2107	22.3	63.4	.003456	.86
	1.8224	.0078	20.0	- 36.9	.003456	.69
1493.50	1.5303	1.1761	227.2	32.3	.002501	64.54
	1.1721	.5274	155.0	- 2.9	.002821	33.87
	.8856	.1791	READINGS	INVALID		
	NO READING		READINGS	INVAPID		
	.8219	.0020	READINGS	INVAPID		
	1.7333	1.3254	158.2	21.8	.001969	24.66
	1.6716	.8159	173.9	22.5	.002478	37.48
	1.4547	.3363	136.1	6.6	.002665	24.68
	1.3572	.0716	READINGS	INVAPID		
	1.3393	.0159	168.5	- 1.3	.003889	55.23
	1.9343	1.3731	141.3	19.4	.002803	27.97
	1.9005	.9095	146.8	18.7	.002574	27.74
	1.7731	.4458	145.4	14.0	.002780	29.38
	1.7254	.1791	165.4	13.7	.002853	39.00
	1.6896	.0179	143.0	.8	.002853	29.18
	2.1433	1.3910	133.3	24.3	.002803	24.89
	2.1393	.9751	125.0	13.6	.002574	20.10
	2.1015	.5254	148.2	7.6	.002780	30.54
	2.0557	.2647	147.3	13.9	.002853	30.94
	2.0478	.0219	147.6	5.3	.002853	31.06

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1535.00	1.4283	1.0693	28.4	129.3	.002288	1.33
	1.1473	.4976	66.4	- 15.7	READINGS	INVALID
	NO READING					
	NO READING		READINGS	INVAPID		
	NO READING					
	1.6468	1.3346	56.3	62.5	.002276	3.61
	1.5805	.8449	38.2	6.0	.002503	1.82
	1.3737	.3551	81.1	38.0	READINGS	INVALID
	NO READING					
	1.2527	.0039	12.2	170.5	READINGS	INVALID
	1.8302	1.3698	48.0	87.6	.002838	3.27
	1.7893	.9327	39.7	49.1	.002434	1.91
	1.6780	.4488	46.8	20.0	.002609	2.85
	1.6273	.1639	59.3	- 45.0	.002986	5.26
	1.6098	.0137	44.1	- 5.2	.002986	2.91
	2.0449	1.4010	35.4	73.6	.002838	1.78
	2.0293	.9795	31.0	75.1	.002434	1.17
	2.0000	.5073	43.2	33.7	.002609	2.44
	1.9727	.2459	63.5	12.7	.002986	6.02
	1.9688	.0215	48.0	.0	.002986	3.43
1576.50	1.5124	1.1980	114.7	110.0	.002137	14.05
	1.2358	.5095	137.1	-134.4	.003188	29.98
	.9055	.1373	READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.8915	.0080	READINGS	INVAPID		
	1.7592	1.3751	45.4	97.4	.002000	2.06
	1.7095	.8199	41.9	- 10.8	.002690	2.36
	1.5184	.3861	64.1	- 66.6	.002048	4.20
	1.3592	.0478	READINGS	INVALID		
	1.3274	.0179	33.[illegible]	49.8	.004896	2.72
	1.9363	1.4209	4[illegible]	80.1	.002732	2.91
	1.9264	.9393	13.[illegible]	45.0	.002611	.25
	1.8169	.4617	53.8	- 10.5	.002408	3.48
	1.7672	.1373	33.4	- 49.8	.002980	1.66
	1.7333	.0139	10.5	-158.2	.002980	.17
	2.1532	1.4249	36.6	105.5	.002782	1.86
	2.1473	1.0050	20.8	48.8	.002611	.57
	2.1373	.5493	19.7	95.7	.002408	.47
	2.1174	.2786	20.8	- 48.8	.002980	.65
	2.0955	.0219	17.7	- 81.7	.002980	.47

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1618.00	1.3893	1.1766	199.3	68.6	.001842	36.57
	1.0517	.4000	READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.6410	1.3795	68.4	96.7	.002144	5.01
	1.6215	.2371	60.0	60.0	.002407	4.33
	1.3990	.2966	55.7	- 75.5	READINGS	INVALID
	NO READING					
	1.2741	.0293	78.3	- 5.9	READINGS	INVALID
	1.8380	1.4146	46.1	85.0	.002735	2.91
	1.7990	.9424	47.5	75.4	.002644	2.98
	1.7307	.4390	55.6	37.7	.002680	4.15
	1.6488	.1385	56.0	34.8	.003180	4.98
	1.6000	.0098	58.1	3.9	.003180	5.36
	2.0351	1.4361	46.6	99.9	.002735	2.98
	2.0429	.9951	48.0	90.0	.002644	3.04
	1.9980	.5268	18.4	77.5	.002680	.45
	1.9863	.2302	8.2	-166.0	.003180	.11
	1.9707	.0039	4.5	63.4	.003180	.03
1659.50	1.5841	1.3831	244.5	61.8	READINGS	INVALID
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.7512	1.4428	119.5	79.6	.001961	14.00
	1.7393	.8716	107.8	65.3	.002385	13.86
	1.5323	.3323	83.2	46.9	.002231	7.71
	1.4209	.0418	READINGS	INVAPID		
	1.4050	.0100	68.6	.0	.004246	9.98
	1.9403	1.4667	93.1	81.5	.002941	12.74
	1.9383	.9851	77.8	49.1	.002730	8.26
	1.8607	.4955	68.4	66.4	.002700	6.32
	1.8123	.1692	63.1	25.8	.003280	6.53
	1.7910	.0179	76.1	11.9	.003280	9.49
	2.1453	1.4706	62.6	69.9	.002941	5.76
	2.1473	1.0527	57.1	67.8	.002730	4.45
	2.1413	.5672	71.0	39.4	.002700	6.80
	2.1095	.2766	87.8	51.3	.003280	12.65
	2.0975	.0259	54.6	14.5	.003280	4.90

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1701.00	1.5044	1.3912	READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.6624	1.4966	78.7	66.0	.002003	6.21
	1.6663	.9346	115.3	56.3	.002407	15.99
	1.4556	.3571	90.3	24.9	.002307	9.40
	1.3424	.0488	71.6	23.0	.005419	13.90
	1.3424	.0293	48.0	16.9	.005419	6.25
	1.8517	1.5063	45.6	61.2	.002740	2.85
	1.8498	1.0010	71.0	32.3	.002623	6.60
	1.7580	.5015	34.1	20.6	.002490	1.45
	1.7054	.1659	23.4	20.0	.002769	.76
	1.6741	.0254	36.0	3.2	.002769	1.80
	2.0566	1.4946	39.4	66.0	.002740	2.12
	2.0644	1.0478	50.9	48.2	.002623	3.40
	2.0527	.5717	39.7	40.9	.002490	1.96
	2.0410	.2985	57.9	46.4	.002769	4.65
	2.0234	.0176	28.6	- 12.1	.002769	1.13
1742.50	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.9473	.0020	READINGS	INVALID		
	1.7831	1.5144	9.8	143.1	.002053	.10
	1.8030	.9672	36.1	- 12.5	.002353	1.54
	1.6139	.3701	45.9	- 20.0	.002537	2.67
	1.4866	.0697	READINGS	INVALID		
	1.4507	.0239	27.8	- 39.3	.004092	1.59
	1.9622	1.5065	23.6	85.2	.003152	.88
	1.9980	1.0229	66.6	42.6	.002826	6.26
	1.8925	.5075	43.8	10.3	.002708	2.60
	1.8348	.1771	40.4	14.0	.002846	2.32
	1.8269	.0199	58.9	- 21.4	.002846	4.94
	2.1612	1.5065	33.5	96.7	.003152	1.77
	2.1811	1.0905	63.6	56.3	.002826	5.71
	2.1711	.5930	40.9	16.7	.002708	2.27
	2.1493	.3184	42.3	13.4	.002846	2.55
	2.1254	.0199	25.5	- 22.6	.002846	.92

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1784.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.6546	1.5024	56.5	148.0	.001841	2.94
	1.7015	.9268	24.7	- 14.0	.002333	.71
	1.4985	.3415	28.6	- 65.2	READINGS	INVALID
	NO READING					
	1.3639	.0117	23.3	- 59.0	READINGS	INVALID
	1.8537	1.5298	38.4	99.0	.002965	2.19
	1.8985	1.0459	50.0	106.3	.002520	3.14
	1.8010	.5093	50.0	- 36.9	.002502	3.12
	1.7444	.1756	35.0	- 59.0	.002585	1.58
	1.7288	.0039	24.1	- 41.6	.002585	.75
	2.0527	1.5278	22.8	142.1	.002965	.77
	2.0995	1.1005	16.1	82.9	.002520	.33
	2.09[illegible]	.583[illegible]	8.9	- 63.4	.002502	.10
	2.0820	.3083	32.8	- 37.6	.002585	1.39
	2.0468	.0078	36.0	- 19.4	.002585	1.68
1825.50	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.7353	1.5443	38.8	135.0	.001932	1.45
	1.8269	.9612	29.5	93.3	.002214	.96
	1.6259	.3443	35.3	- 70.6	.002381	1.48
	1.4826	.0458	READINGS	INVALID		
	1.4627	.0040	66.1	168.0	.004276	9.34
	1.9562	1.5443	100.4	159.4	.003188	16.08
	1.9841	1.0706	80.3	178.6	.002628	8.48
	1.9323	.4776	75.6	-148.8	.002[illegible]13	8.04
	1.8527	.1473	57.9	-151.7	.002870	4.80
	1.8448	.0040	43.1	180.0	.002870	2.67
	2.1433	1.5204	76.6	175.6	.003188	9.36
	2.1831	1.1065	81.8	-163.3	.002628	8.80
	2.1751	.5851	74.9	-174.0	.002813	7.88
	2.1751	.2985	94.6	-152.9	.002870	12.85
	2.1592	.0080	60.9	-176.3	.002870	5.31

Table B-II. Front-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 332

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1867.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.6273	1.5298	6.3	-161.6	.002738	.05
	1.6995	.9561	27.2	107.1	.003121	1.15
	1.5102	.3083	66.0	- 54.9	.002945	6.41
	1.3151	.0156	READINGS	INVALID		
	1.2995	.0254	74.0	3.1	.005111	14.01
	1.7600	1.5649	44.4	144.2	.002682	2.64
	1.8185	1.0478	36.8	49.4	.002490	1.69
	1.7366	.4702	18.8	58.0	.002591	.46
	1.6907	.1483	77.1	31.2	.003217	9.56
	1.6859	.0039	46.1	- 5.0	.003217	3.42
	1.9766	1.5337	61.7	114.9	.002682	5.10
	2.0215	1.0771	23.4	- 20.0	.002490	.68
	2.0176	.5756	18.8	- 58.0	.002591	.46
	1.9980	.2654	32.0	- 90.0	.003217	1.64
	1.9863	.0039	8.0	- 89.9	.003217	.10
1908.50	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.7294	1.5423	124.4	116.2	.001921	14.87
	1.8189	.9871	70.8	75.6	.002052	5.14
	1.6637	.2965	26.3	63.4	READINGS	INVALID
	NO READING		READINGS	INVALID		
	1.5363	.0080	58.0	- 11.7	READINGS	INVALID
	1.9204	1.5701	81.9	159.0	.002920 +	9.78
	2.0080	1.0985	80.4	124.1	.002582	8.35
	1.9423	.4935	68.4	103.2	.003087	7.23
	1.9184	.1871	67.9	133.8	.003330	7.68
	1.8905	.0000	53.8	169.5	.003330	4.82
	2.1174	1.5761	94.5	146.0	.002920	13.05
	2.2050	1.0985	73.7	129.6	.002582	7.02
	2.1851	.5692	71.9	119.4	.003087	7.98
	2.1751	.2667	63.6	123.7	.003330	6.73
	2.1592	.0000				

Table B-III Rear-Lower Grid Calculations - Model 35

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
15.00	2.1307	1.4224	39.7	49.1	.002501	1.97
	2.1171	1.0888	44.9	57.7	.001981	2.00
	2.1151	.5698	41.2	- 22.8	.002359	2.00
	2.0956	.2946	47.0	- 12.3	.002339	2.59
	2.0956	.0000	38.0	.0	.002339	1.69
	2.5346	1.3502	30.6	- 11.3	.002437	1.14
	2.5327	1.0166	33.0	14.0	.002272	1.23
	2.5171	.5756	38.2	- 47.1	.002218	1.62
	2.5112	.2751	56.0	- 55.2	.002390	3.75
	2.5093	.0117	32.5	- 10.6	.002390	1.26
	2.8722	1.3151	22.8	- 15.3	.002112	.55
	2.8722	.9483	24.3	9.5	.002470	.73
	2.8605	.5541	27.8	- 30.3	.002225	.86
	2.8605	.2380	37.2	- 36.3	.002558	1.77
	2.8605	.0078	32.3	21.8	.002558	1.33
	3.2820	1.2800	28.3	8.1	.002112	.84
	3.2624	.9093	52.3	- 46.5	.002470	3.38
	3.2488	.5034	29.7	19.7	.002225	.98
	3.2429	.1912	209.7	- 82.3	.002558	56.23
	3.2351	.0039	28.3	- 45.0	.002558	1.02
56.50	2.1652	1.4209	8.1	- 14.0	.002354	.08
	2.1552	1.0786	29.4	- 53.1	.002112	.91
	2.1532	.5891	32.1	52.4	.002356	1.22
	2.1532	.3025	40.4	14.0	.002613	2.13
	2.1532	.0159	39.2	.0	.002613	2.01
	2.5672	1.3811	26.3	26.6	.002462	.85
	2.5552	.9990	23.8	9.5	.002214	.63
	2.5473	.5612	25.5	- 32.5	.002241	.73
	2.5552	.2547	29.8	- 66.8	.002730	1.22
	2.5552	.0259	71.5	- 9.5	.002730	6.98
	2.8876	1.3234	51.3	- 6.6	.002174	2.86
	2.8876	.9871	72.0	22.4	.002359	6.12
	2.8876	.5512	75.1	- 15.1	.001695	4.78
	2.8995	.2388	74.2	- 12.2	.004534	12.47
	2.8995	.0279	70.6	- 3.2	.004534	11.31
	3.2856	1.3134	71.0	6.3	.002174	5.47
	3.2876	.9294	87.4	19.7	.002359	9.00
	3.2796	.5393	85.1	7.9	.001695	6.13
	3.2796	.0239	98.4	31.2	.004534	21.97
	3.2716	.0000	86.3	- 2.6	.004534	16.88

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
98.00	2.1385	1.4205	4.0	.0	.002342	.02
	2.1346	1.0654	30.5	-121.6	.002028	.94
	2.1346	.5951	26.9	138.0	.002311	.84
	2.1346	.3044	23.4	160.0	.002370	.65
	2.1346	.0000	25.0	151.4	.002370	.74
	2.5580	1.3620	29.1	-105.9	.002298	.97
	2.5561	1.0205	7.2	-146.3	.001858	.05
	2.5385	.5620	4.0	180.0	.001880	.02
	2.5229	.2478	17.9	153.4	.002337	.37
	2.5795	.0000	28.8	-123.7	.002337	.97
	2.9229	1.3093	14.1	98.1	.002193	.22
	2.9385	.9756	13.4	63.4	.002214	.20
	2.9327	.5346	16.1	60.3	.002321	.30
	2.9327	.2224	10.8	111.8	.002242	.13
	2.9307	.0039	26.3	- 98.7	.002242	.77
	3.3522	1.2878	22.3	-116.6	.002193	.55
	3.3444	.9385	38.8	145.5	.002214	1.67
	3.3327	.5151	44.2	161.6	.002321	2.27
	3.3268	.2420	186.6	103.0	.002242	39.04
	3.3210	.0000	32.0	176.4	.002242	1.15
139.50	2.1692	1.4209	36.6	- 74.5	.002344	1.57
	2.1393	1.0527	58.2	- 45.0	.002156	3.65
	2.1333	.6070	49.9	- 48.2	.002280	2.84
	2.1313	.3104	33.3	- 28.1	.002442	1.35
	2.1313	.0279	29.6	7.6	.002442	1.07
	2.5592	1.3532	50.2	- 51.3	.002476	3.12
	2.5493	.9950	15.8	7.1	.002153	.27
	2.5433	.5612	18.1	- 49.4	.002176	.35
	2.5393	.2627	31.4	86.4	.002287	1.13
	2.5393	.0020	54.9	178.0	.002287	3.44
	2.8856	1.3373	26.6	126.0	.002435	.86
	2.8935	.9990	42.2	-158.2	.002631	2.34
	2.8955	.5652	47.1	135.0	.002371	2.63
	2.8955	.2488	43.1	140.5	.002623	2.44
	2.8955	.0020	31.3	180.0	.002623	1.29
	3.2756	1.2935	45.7	170.1	.002435	2.55
	3.2557	.9512	58.4	166.4	.002631	4.49
	3.2378	.5532	60.9	176.3	.002371	4.39
	3.2378	.2050	72.9	-143.7	.002623	6.97
	3.2398	.0020	53.5	171.6	.002623	3.75

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
181.00	2.1483	1.3854	58.1	- 93.9	.002483	4.19
	2.1756	1.0244	39.7	- 49.1	.002126	1.67
	2.1678	.5580	64.6	- 68.2	.002771	5.77
	2.1639	.2888	38.4	- 81.0	.002669	1.97
	2.1639	.0039	22.1	- 84.8	.002669	.65
	2.5893	1.3229	30.0	- 53.1	.002669	1.19
	2.5717	1.0224	28.8	- 56.3	.002215	.92
	2.5502	.5483	26.0	- 90.0	.002229	.75
	2.5249	.2790	14.0	- 90.0	.002110	.21
	2.5249	.0020	32.2	60.3	.002110	1.10
	2.8073	1.3307	34.0	- 86.6	.002215	1.28
	2.8995	.9600	77.9	- 88.5	.002455	7.46
	2.8995	.5678	31.0	-104.9	.002278	1.10
	2.8995	.2498	44.1	- 95.2	.002512	2.45
	2.8995	.0039	4.0	180.0	.002512	.02
	3.3073	1.2956	46.5	- 64.5	.002215	2.39
	3.2878	.9522	45.3	- 48.6	.002455	2.52
	3.2722	.5190	62.7	- 59.3	.002278	4.48
	3.2683	.1990	16.0	.0	.002512	.32
	3.2683	.0078	14.5	15.9	.002512	.27
222.50	2.1652	1.3632	179.8	- 11.3	.002417	39.08
	2.1652	1.0229	143.3	- 10.2	.002168	22.27
	2.1572	.5473	137.1	- .8	.002507	23.58
	2.1373	.2726	142.6	- 15.9	.002706	27.52
	2.1333	.0060	137.1	.0	.002706	25.45
	2.5771	1.3294	155.2	10.2	.002436	29.36
	2.5652	.9711	160.7	- 15.6	.002341	30.21
	2.5433	.5353	135.5	4.1	.002207	20.27
	2.5393	.2488	157.0	- 3.6	.002857	35.23
	2.5552	.0299	158.7	.7	.002857	35.98
	2.8876	1.3035	143.1	1.6	.002185	22.36
	2.8955	.9214	156.0	- 7.2	.002484	30.22
	2.8876	.5353	151.1	- 13.5	.002317	26.46
	2.8915	.2050	145.3	- 10.1	.002781	29.34
	2.8915	.0020	143.0	.0	.002781	28.43
	3.2955	1.2517	129.7	- 4.3	.002185	18.37
	3.2856	.9174	143.3	- 10.2	.002484	25.51
	3.2697	.4995	153.1	3.7	.002317	27.17
	3.2537	.2050	152.9	- 1.5	.002781	32.48
	3.2537	.0060	148.9	- 1.5	.002781	30.84

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
264.00	2.3239	1.3502	51.4	- 13.5	.002298	3.03
	2.3161	.9990	34.5	- 10.0	.002277	1.35
	2.3044	.5561	29.1	- 15.9	.002454	1.04
	2.3005	.2498	50.1	28.6	.002776	3.48
	2.3005	.0039	48.1	- 4.8	.002776	3.21
	2.7415	1.3502	63.7	- 57.8	.002374	4.02
	2.7259	.9795	40.2	- 5.7	.002266	1.83
	2.6849	.5580	62.4	- 39.8	.002197	4.28
	2.6810	.2693	51.2	- 38.7	.002364	3.10
	2.6829	.0039	36.8	- 49.4	.002364	1.60
	3.0498	1.3346	65.2	- 40.0	.002179	4.64
	3.0537	.9405	30.0	.0	.002543	1.14
	3.0459	.5327	55.1	- 46.5	.002219	3.37
	3.0420	.2244	36.7	- 29.4	.002610	1.76
	3.0420	.0039	36.8	12.5	.002610	1.77
	3.4361	1.2859	50.1	-113.5	.002179	2.74
	3.4283	.9268	54.1	- 94.2	.002543	3.72
	3.4244	.5288	14.4	- 33.7	.002219	.23
	3.4205	.1951	48.8	- 55.0	.002610	3.11
	3.4166	.0039	28.6	- 12.1	.002610	1.07
305.50	2.2149	1.3512	94.1	- 12.0	.002650	11.74
	2.1990	1.0169	88.2	2.5	.002014	7.84
	2.1851	.5393	97.0	8.1	.002638	12.40
	2.1811	.2965	103.8	31.9	.002670	14.39
	2.1811	.0020	88.2	- 2.5	.002670	10.39
	2.6109	1.2756	68.3	- 27.3	.002749	6.42
	2.6050	.9672	60.9	3.7	.002212	4.10
	2.5910	.4955	91.2	- 8.7	.002378	9.88
	2.5791	.2169	100.8	- 29.1	.003046	15.49
	2.5791	.0020	84.2	.0	.003046	10.81
	2.9373	1.2617	75.6	- 53.4	.002632	7.53
	2.9254	.9214	65.1	- 21.2	.002716	5.76
	2.9254	.4955	73.8	- 21.8	.002378	6.49
	2.9234	.1871	75.6	- 16.6	.003322	9.50
	2.9274	.0100	72.5	- 1.5	.003322	8.73
	3.2756	1.2060	89.1	- 56.7	.002632	10.45
	3.2816	.8637	70.1	- 35.9	.002716	6.68
	3.2816	.4915	53.8	- 10.5	.002378	3.44
	3.2816	.1652	58.2	- 47.7	.003322	5.64
	3.2816	.0000	43.3	- 5.2	.003322	3.11

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
347.00	2.4156	1.3307	15.2	- 23.2	.002689	.31
	2.4039	1.0029	34.0	- 61.9	.002356	1.36
	2.4000	.5698	20.6	- 29.1	.002486	.53
	2.3883	.3044	42.4	- 98.1	.002737	2.46
	2.3883	.0000	14.1	-171.9	.002737	.27
	2.8020	1.3190	20.6	60.9	.002693	.57
	2.7863	.9834	26.0	- 90.0	.002287	.77
	2.7746	.5444	26.1	122.5	.002209	.75
	2.7688	.2205	6.3	-108.4	.002858	.06
	2.7668	.0039	8.5	135.0	.002858	.10
	3.0946	1.2741	29.1	-105.9	.0024[illegible]	1.02
	3.1141	.9171	11.7	-121.0	.00270	.18
	3.1141	.5054	18.1	173.7	.002273	.37
	3.1141	.2029	28.8	123.7	.003319	1.38
	3.1141	.0020	20.1	-174.3	.003319	.67
	3.4849	1.2117	57.2	- 65.2	.002413	3.95
	3.4849	.8859	19.0	71.6	.002703	.49
	3.4771	.5190	8.2	166.0	.002273	.08
	3.4595	.1522	22.8	127.9	.003319	.86
	3.4595	.0000	18.4	139.4	.003319	.56
388.50	2.2289	1.3453	40.9	73.3	.002459	2.06
	2.2149	.9871	31.6	60.3	.002304	1.15
	2.2030	.5294	8.1	76.0	.002455	.08
	2.1751	.2547	19.3	- 66.0	.002924	.54
	2.1672	.0000	7.8	.0	.002924	.09
	2.6209	1.2935	94.4	-175.2	.002737	12.18
	2.6050	.9413	103.9	177.8	.002400	12.96
	2.5771	.5174	106.4	173.7	.002420	13.71
	2.5771	.2109	130.7	156.1	.003064	26.16
	2.5731	.0080	117.5	180.0	.003064	21.16
	2.9294	1.2338	90.8	166.3	.002829	11.65
	2.9194	.9114	123.7	156.7	.002618	20.04
	2.9075	.4975	123.0	157.5	.002487	18.80
	2.9075	.2109	117.9	164.6	.003004	20.87
	2.9075	.0080	113.6	179.0	.003004	19.40
	3.2995	1.1542	100.1	149.4	.002829	14.18
	3.2876	.8816	88.9	166.0	.002618	10.33
	3.2736	.4935	90.9	172.6	.002487	10.27
	3.2677	.1831	87.5	146.0	.003004	11.50
	3.2677	.0119	72.5	180.0	.003004	7.89

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
430.00	2.4273	1.3698	23.4	20.0	.003768	1.03
	2.4195	1.0302	37.2	36.3	.003305	2.28
	2.4020	.5776	46.6	43.3	.003706	4.03
	2.3961	.2868	41.2	14.0	.003838	3.26
	2.3961	.0000	35.0	31.0	.003838	2.34
	2.7083	1.3112	21.2	48.8	.002861	.65
	2.6829	.9873	21.2	48.8	.002369	.53
	2.6693	.5561	20.4	11.3	.002306	.48
	2.6498	.2732	20.1	5.7	.002356	.48
	2.6498	.0039	24.3	9.5	.002356	.70
	3.0068	1.2956	42.0	90.0	.002306	2.03
	3.0010	.9659	10.2	78.7	.002487	.13
	3.0010	.5522	44.2	71.6	.002155	2.11
	3.0010	.2341	21.2	- 48.8	.002430	.55
	3.0010	.0039	15.2	- 23.2	.002430	.28
	3.3990	1.2624	50.6	99.1	.002306	2.95
	3.3990	.9073	56.0	92.0	.002487	3.90
	3.3873	.5307	12.6	- 18.4	.002155	.17
	3.3873	.2010	21.6	33.7	.002430	.57
	3.3873	.0000	20.6	- 29.1	.002430	.51
471.50	2.2507	1.3532	21.1	- 21.8	.002591	.58
	2.2448	1.0090	28.3	- 56.3	.002390	.95
	2.2368	.5612	29.1	- 42.3	.002463	1.04
	2.2149	.2647	29.1	- 19.7	.003083	1.31
	2.1970	.0179	27.4	.0	.003083	1.16
	2.6348	1.3095	38.0	11.9	.002731	1.98
	2.6189	.9572	51.5	- 30.7	.002536	4.79
	2.5970	.5214	59.6	- 9.5	.002239	3.97
	2.5970	.2129	58.2	- 19.7	.003234	5.49
	2.5970	.0119	54.9	2.0	.003234	4.87
	2.9294	1.2756	60.9	3.7	.002766	5.12
	2.9214	.9214	70.0	- 17.9	.002555	6.26
	2.9214	.5393	62.3	- 24.1	.002319	4.49
	2.9214	.1950	64.0	- 27.3	.002879	5.89
	2.9214	.0020	57.4	7.9	.002879	4.74
	3.2915	1.2040	50.9	.0	.002766	3.59
	3.2856	.9373	44.7	15.3	.002555	2.55
	3.2856	.4896	26.6	17.1	.002319	.82
	3.2856	.1950	34.7	- 47.3	.002879	1.73
	3.2856	.0020	26.3	26.6	.002879	.99

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
513.00	2.4468	1.3620	32.0	- 90.0	.003178	1.62
	2.4351	1.0068	29.5	151.7	.002992	1.30
	2.4234	.5580	40.4	-171.5	.003300	2.69
	2.4234	.2771	31.3	153.4	.003671	1.80
	2.4234	.0000	18.8	-148.0	.003671	.65
	2.7454	1.3190	32.0	93.6	.002462	1.26
	2.7356	.9561	26.3	98.7	.002376	.82
	2.7278	.5463	12.8	141.3	.002250	.18
	2.7044	.2537	23.3	121.0	.002654	.72
	2.7044	.0059	21.6	146.3	.002654	.62
	3.0673	1.2995	31.6	108.4	.002361	1.18
	3.0673	.9444	19.7	114.0	.002649	.51
	3.0576	.5268	10.2	168.7	.002224	.12
	3.0576	.2049	11.3	135.0	.003210	.21
	3.0576	.0117	2.0	89.7	.003210	.01
	3.4498	1.2624	73.9	90.0	.002361	6.45
	3.4420	.9190	6.3	71.6	.002649	.05
	3.4127	.5385	56.0	92.0	.002224	3.48
	3.4107	.1756	4.5	-116.6	.003210	.03
	3.4107	.0117	2.8	135.0	.003210	.01
554.50	2.2507	1.3214	92.2	2.4	.002683	11.39
	2.2189	1.0229	84.6	- 5.3	.002140	7.66
	2.1970	.5552	82.5	4.1	.002455	8.35
	2.1871	.2786	79.3	- 20.2	.002833	8.92
	2.1811	.0080	74.5	3.0	.002833	7.87
	2.6328	1.3413	102.5	- 6.6	.002716	14.28
	2.6149	.9831	77.3	8.7	.002448	7.32
	2.5871	.5294	69.6	- 9.7	.002288	5.54
	2.5851	.2328	72.9	- 6.2	.003023	8.03
	2.5791	.0239	72.6	3.1	.003023	7.96
	2.9194	1.3055	84.3	- 2.7	.002389	8.50
	2.9134	.9393	72.6	- 3.1	.002600	6.85
	2.9114	.5413	71.0	6.3	.002099	5.28
	2.9134	.2030	77.5	20.7	.002865	8.60
	2.9214	.0040	72.9	- 6.2	.002865	7.61
	3.2915	1.2776	109.9	- 11.3	.002389	14.42
	3.2876	.9433	78.0	- 11.6	.002600	7.91
	3.2836	.5453	111.5	- 18.4	.002099	13.05
	3.2836	.1910	85.1	7.9	.002865	10.36
	3.2836	.0040	76.8	- 5.9	.002865	8.45

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
596.00	2.5385	1.3659	51.8	27.6	.003199	4.30
	2.5190	.9990	49.3	- 31.8	.003063	3.73
	2.5054	.5639	73.5	- 47.2	.003225	8.72
	2.4976	.2498	49.4	- 14.0	.004026	4.92
	2.4976	.0039	48.1	- 4.8	.004026	4.66
	2.8468	1.3073	51.2	- 38.7	.002622	3.43
	2.8117	.9678	36.2	6.3	.002349	1.54
	2.7961	.5346	41.6	- 35.2	.002340	2.02
	2.7766	.2459	28.0	.0	.002520	.99
	2.7766	.0098	41.6	- 35.2	.002520	2.18
	3.1512	1.2956	52.8	- 29.5	.002280	3.18
	3.1395	.9405	40.0	.0	.002489	1.99
	3.1278	.5346	48.8	- 35.0	.002302	2.74
	3.1298	.2322	26.8	- 26.6	.002721	.98
	3.1298	.0039	38.0	- 3.0	.002721	1.97
	3.5571	1.2410	36.0	- 19.4	.002280	1.48
	3.5180	.9034	49.6	- 40.1	.002489	3.07
	3.5180	.5034	76.5	- 56.7	.002302	6.73
	3.4946	.1873	44.9	- 20.9	.002721	2.74
	3.4868	.0039	30.2	7.6	.002721	1.24
637.50	2.2965	1.3453	29.1	- 42.3	.002659	1.13
	2.2607	.9970	36.8	25.2	.002085	1.41
	2.2468	.5015	14.3	15.9	.002905	.30
	2.2348	.2667	24.5	61.4	.002865	.86
	2.2289	.0040	14.1	33.7	.002865	.29
	2.6726	1.3095	108.1	22.4	.002913	17.01
	2.6507	.9871	115.6	1.0	.002261	15.11
	2.6209	.5055	115.7	10.7	.002429	16.25
	2.6129	.2328	118.3	- 6.7	.002931	20.52
	2.6129	.0000	117.7	- 2.9	.002931	20.30
	2.9652	1.2796	119.6	2.8	.002454	17.57
	2.9532	.9393	118.4	16.3	.002418	16.95
	2.9512	.5134	115.6	.0	.002248	15.01
	2.9373	.1910	113.6	- 15.0	.003063	19.76
	2.9592	.0020	109.7	- 1.0	.003063	18.44
	3.3254	1.2657	82.7	13.7	.002454	8.39
	3.3254	.9114	108.5	20.1	.002418	14.22
	3.3254	.4816	87.5	15.6	.002248	8.60
	3.3254	.1751	110.1	- 5.1	.003063	18.58
	3.3134	.0080	117.6	- 1.0	.003063	21.17

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
679.00	2.5600	1.3463	18.8	148.0	.002536	.45
	2.5522	1.0146	18.0	90.0	.002356	.38
	2.5190	.5678	60.1	105.4	.002305	4.16
	2.5093	.2712	18.0	180.0	.002887	.47
	2.5093	.0117	10.8	-158.2	.002887	.17
	2.9463	1.3483	50.0	126.9	.002511	3.13
	2.9268	.9698	26.8	153.4	.002312	.83
	2.9093	.5561	45.6	113.2	.002125	2.21
	2.8937	.2322	17.1	159.4	.002788	.41
	2.8937	.0039	20.0	143.1	.002788	.56
	3.2702	1.3015	37.9	108.4	.002615	1.88
	3.2527	.9737	44.0	92.6	.002490	2.41
	3.2429	.5346	27.8	120.3	.002188	.84
	3.2390	.20[illegible]	36.0	90.0	.002946	1.91
	3.2390	.002[illegible]	22.0	180.0	.002946	.71
	3.6371	1.2605	18.8	-148.0	.002615	.46
	3.6195	.9405	20.0	180.0	.002490	.50
	3.6020	.5268	33.9	135.0	.002188	1.26
	3.6039	.1776	41.7	-163.3	.002946	2.56
	3.6039	.0020	34.2	-173.3	.002946	1.72
720.50	2.2806	1.3552	150.4	171.8	.002727	30.85
	2.2607	1.0149	176.3	180.0	.002319	36.05
	2.2308	.5592	159.7	-173.7	.002453	31.26
	2.2169	.2667	152.8	179.3	.002894	33.79
	2.2189	.0000	147.3	-176.2	.002894	31.37
	2.6428	1.3493	157.5	-169.2	.002663	33.05
	2.6269	.9990	151.0	-177.8	.002198	25.04
	2.6030	.5473	156.7	179.3	.002270	27.89
	2.5970	.2388	154.5	164.6	.002689	32.08
	2.5970	.0119	148.9	-178.5	.002689	29.82
	2.9532	1.3154	188.1	-179.4	.002595	45.90
	2.9512	.9831	183.5	-163.9	.002516	42.37
	2.9373	.5373	165.5	180.0	.002312	32.06
	2.9373	.2269	162.9	176.6	.003049	40.45
	2.9373	.0020	162.6	179.3	.003049	40.31
	3.3095	1.2557	180.2	-179.4	.002595	42.16
	3.3055	.9114	194.7	-159.4	.002516	47.67
	3.3015	.5055	176.2	-171.7	.002312	35.90
	3.2856	.1632	176.6	176.8	.003049	47.53
	3.2796	.0040	176.3	-179.4	.003049	47.39

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
762.00	2.4117	1.3678	52.3	43.5	.002462	3.37
	2.3766	1.0146	42.0	- 25.3	.002253	1.99
	2.3610	.5502	53.8	- 21.8	.002533	3.67
	2.3571	.2732	48.4	38.3	.002580	3.02
	2.3629	.0020	32.2	7.1	.002580	1.34
	2.7922	1.3190	26.9	- 42.0	.002665	.96
	2.7766	.9639	31.2	- 39.8	.002616	1.27
	2.7532	.5580	45.1	- 12.[illegible]	.002379	2.42
	2.7454	.2732	19.7	24.[illegible]	.002586	.50
	2.7454	.0000	10.0	.0	.002586	.13
	3.0829	1.2995	12.2	- 80.5	.002217	.16
	3.0771	.9229	45.6	- 74.7	.002852	2.96
	3.0771	.5346	26.3	- 8.7	.002414	.83
	3.0771	.2127	26.7	- 13.0	.002910	1.03
	3.0771	.0039	26.1	4.4	.002910	.99
	3.4576	1.2585	27.2	17.1	.002217	.82
	3.4380	.8722	16.1	- 7.1	.002852	.37
	3.4283	.5015	28.3	45.0	.002414	.96
	3.4283	.1873	31.6	34.7	.002910	1.45
	3.4283	.0000	32.0	- 3.6	.002910	1.49
803.50	2.3184	1.3910	43.0	- 24.2	.002630	2.43
	2.2985	.9970	67.6	- 16.9	.002408	5.49
	2.2806	.5393	92.5	- 36.4	.002845	12.17
	2.2547	.2965	79.6	- 9.9	.002862	9.06
	2.2507	.0040	72.5	- 1.5	.002862	7.52
	2.6627	1.3313	49.9	45.0	.002666	3.32
	2.6507	.9791	49.9	25.6	.002440	3.04
	2.6468	.5573	95.6	- 44.2	.002360	10.78
	2.6149	.2468	83.2	- 46.9	.002596	8.98
	2.6070	.0119	56.8	.0	.002596	4.19
	2.9552	1.3035	98.7	6.8	.002354	11.46
	2.9632	.9393	92.7	13.4	.002728	11.71
	2.9632	.5333	89.5	- 23.2	.002323	9.31
	2.9632	.2209	79.6	- 9.9	.002935	9.29
	2.9632	.0040	80.3	- 1.4	.002935	9.47
	3.3353	1.2637	71.3	- 15.9	.002354	5.99
	3.3214	.9095	80.0	21.5	.002728	8.74
	3.3214	.5254	73.2	- 15.5	.002323	6.22
	3.3114	.1811	65.7	10.3	.002935	6.34
	3.3114	.0020	64.6	.0	.002935	6.13

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
845.00	2.4507	1.3502	30.5	- 58.4	.002506	1.17
	2.4410	.9951	14.1	- 3.1	.002044	.20
	2.4351	.4956	14.1	- 8.1	.002856	.29
	2.4351	.2595	33.1	- 65.0	.003125	1.71
	2.4351	.0000	20.4	- 11.3	.003125	.65
	2.8273	1.3541	16.5	- 14.0	.002243	.30
	2.8215	.9854	11.3	- 45.0	.002030	.13
	2.8215	.4917	16.5	-104.0	.002368	.32
	2.8020	.2127	27.8	- 59.7	.002849	1.10
	2.8020	.0000	15.1	7.1	.002849	.37
	3.1805	1.3112	34.5	10.0	.002552	1.52
	3.1668	.9444	8.2	- 76.0	.002603	.09
	3.1590	.4995	20.6	- 29.1	.002730	.58
	3.1551	.1990	15.2	- 23.2	.003037	.35
	3.1571	.0020	14.1	- 8.1	.003037	.30
	3.5259	1.2390	17.0	135.0	.002552	.37
	3.5122	.9015	16.0	90.0	.002603	.33
	3.4985	.4820	26.0	- 90.0	.002730	1.07
	3.4927	.1 90	10.2	- 11.3	.003037	.16
	3.4927	.0000	10.2	- 11.3	.003037	.16
886.50	2.3343	1.3652	120.0	26.1	.002724	19.63
	2.3124	.9950	110.5	37.1	.002465	15.05
	2.2945	.5373	98.4	45.8	.002739	13.25
	2.2687	.2667	76.2	25.9	.003194	9.28
	2.2706	.0000	69.0	6.5	.003194	7.61
	2.6786	1.3274	12.4	- 71.6	.002539	.19
	2.6587	.9711	21.6	95.2	.002353	.55
	2.6428	.5214	77.0	104.7	.002275	6.74
	2.6289	.2229	82.5	94.1	.002788	9.49
	2.6229	.0139	4.4	116.6	.002788	.03
	2.9891	1.3095	153.0	-177.1	.002479	29.02
	2.9652	.9313	163.1	164.0	.002655	35.30
	2.9811	.5234	173.2	158.1	.002512	37.67
	2.9771	.2149	156.4	167.8	.002999	41.52
	2.9771	.0020	147.0	177.7	.002999	32.43
	3.3234	1.2756	159.0	157.5	.002479	31.33
	3.3214	.9254	159.5	155.3	.002655	33.79
	3.3214	.4975	144.9	166.7	.002512	26.39
	3.3214	.1791	141.1	180.0	.002999	29.84
	3.3214	.0000	141.1	178.4	.002999	29.86

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
928.00	2.5580	1.4029	72.0	109.4	.003554	9.22
	2.5288	1.0615	86.1	111.8	.002810	10.41
	2.5034	.5659	48.0	106.5	.003451	3.98
	2.5034	.2927	65.1	79.4	.003192	6.75
	2.5034	.0078	12.8	38.7	.003192	.26
	2.8312	1.3424	62.7	99.2	.004554	8.96
	2.8195	1.0068	75.9	90.0	.003862	11.13
	2.8020	.5659	76.0	87.0	.003991	11.53
	2.7961	.2946	32.0	93.6	.003943	2.02
	2.8000	.0039	4.5	- 26.6	.003943	.04
	3.0283	1.3034	21.5	111.8	.002727	.63
	3.0107	.9893	56.0	88.0	.002450	3.84
	2.9990	.5639	63.5	118.2	.002321	4.68
	2.9932	.2341	53.8	121.3	.002749	3.98
	3.0107	.0078	30.0	180.0	.002749	1.23
	3.3795	1.2995	65.1	72.1	.002727	5.78
	3.3678	.9678	58.1	93.9	.002450	4.13
	3.3580	.5151	28.3	98.1	.002321	.93
	3.3522	.1990	26.7	103.0	.002749	.98
	3.3522	.0039	6.0	180.0	.002749	.05
969.50	2.3104	1.4328	122.7	171.7	.002648	19.95
	2.2806	1.0746	130.0	-173.9	.002222	18.78
	2.2806	.5831	123.7	176.4	.002613	19.98
	2.2806	.3303	121.6	-177.2	.002766	20.45
	2.2806	.0080	113.8	-177.0	.002766	17.90
	2.6687	1.3891	135.6	169.2	.002703	24.86
	2.6587	1.0468	138.3	-172.7	.002465	23.56
	2.6468	.5970	124.7	-171.9	.002288	17.78
	2.6269	.2547	140.2	-153.4	.002565	25.20
	2.6269	.0119	129.3	180.0	.002565	21.44
	2.9811	1.3294	151.7	174.1	.002519	28.97
	2.9672	.9871	133.9	-174.1	.002486	22.29
	2.9512	.5791	128.9	-160.5	.002304	19.13
	2.9493	.2607	118.3	-173.3	.002377	16.65
	2.9473	.0020	133.3	-177.5	.002377	21.13
	3.3433	1.3373	135.3	-177.5	.002519	23.06
	3.3174	.9831	149.3	-160.9	.002486	27.71
	3.3174	.5254	131.4	-177.4	.002304	19.89
	3.3154	.2050	135.2	-179.2	.002377	21.72
	3.3154	.0000	133.2	-179.2	.002377	21.10

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1011.00	2.4371	1.4205	38.8	- 11.9	.003311	2.49
	2.4000	1.0478	92.0	- 55.6	.002916	12.34
	2.3805	.5737	29.1	- 15.9	.003133	1.33
	2.3824	.2868	40.8	- 78.7	.003708	3.08
	2.3902	.0020	10.0	- 36.9	.003708	.19
	2.6985	1.3678	38.4	- 9.0	.004260	3.15
	2.6829	.9893	29.1	- 15.9	.003685	1.56
	2.6790	.5483	47.5	-104.6	.003802	4.29
	2.6712	.2322	24.0	- 90.0	.004495	1.29
	2.6712	.0039	4.0	- 89.9	.004495	.04
	2.8780	1.3190	21.5	68.2	.002423	.56
	2.8780	.9756	18.4	- 40.6	.002557	.43
	2.8780	.5210	55.3	- 77.5	.002547	3.89
	2.8761	.2205	39.7	- 49.1	.002867	2.25
	2.8780	.0020	28.0	4.1	.002867	1.13
	3.2449	1.2937	12.2	170.5	.002423	.18
	3.2273	.9190	52.3	- 83.4	.002557	3.50
	3.2273	.5093	32.0	86.4	.002547	1.31
	3.2176	.1971	14.1	- 81.9	.002867	.29
	3.2195	.0020	16.1	82.9	.002867	.37
1052.50	2.3483	1.4249	40.4	129.1	.002503	2.04
	2.3323	.9990	12.4	108.4	.002515	.19
	2.3085	.5751	12.5	141.3	.002746	.22
	2.2886	.2905	52.7	-121.3	.003129	4.35
	2.2886	.0020	33.4	176.6	.003129	1.74
	2.7065	1.3831	18.6	161.6	.002771	.48
	2.6866	1.0388	22.8	121.0	.002205	.58
	2.6348	.5512	22.3	127.9	.002280	.57
	2.6269	.2308	16.9	144.5	.002639	.37
	2.6269	.0080	11.9	170.5	.002639	.19
	2.9891	1.3493	26.1	77.0	.002330	.80
	2.9811	.9751	17.6	180.0	.002682	.42
	2.9632	.5254	11.1	135.0	.002338	.14
	2.9751	.2308	4.4	-153.4	.002942	.03
	2.9751	.0040	5.9	180.0	.002942	.05
	3.3313	1.3393	18.5	58.0	.002330	.40
	3.3234	.9313	34.7	106.4	.002682	1.62
	3.3194	.5572	29.8	113.2	.002338	1.04
	3.3174	.1910	13.9	-171.9	.002942	.28
	3.3174	.0159	11.9	170.5	.002942	.21

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1094.00	2.4117	1.4517	8.9	- 63.4	.003306	.13
	2.3961	1.0595	40.0	92.9	.002956	2.37
	2.3707	.5815	20.6	- 29.1	.002802	.59
	2.3551	.2420	57.5	- 20.3	.003775	6.25
	2.3571	.0039	54.1	4.2	.003775	5.52
	2.6810	1.3737	27.8	-149.7	.003990	1.54
	2.6712	1.0088	55.0	-109.1	.003714	5.61
	2.6654	.5659	36.0	- 33.7	.003560	2.31
	2.6576	.2420	22.0	.0	.004275	1.03
	2.6595	.0059	14.1	- 8.1	.004275	.43
	2.8839	1.3444	37.3	-105.5	.002350	1.64
	2.8605	.9756	12.2	99.5	.002549	.19
	2.8702	.5288	20.9	73.3	.002444	.53
	2.8722	.2185	25.6	-128.7	.002976	.97
	2.8722	.0020	16.1	-172.9	.002976	.39
	3.2546	1.3093	58.3	- 95.9	.002350	3.99
	3.2176	.9522	15.2	156.8	.002549	.30
	3.2156	.5366	43.0	-111.8	.002444	2.26
	3.2039	.1951	28.6	155.2	.002976	1.22
	3.2078	.0039	27.2	-162.9	.002976	1.10
1135.50	2.3522	1.4169	157.3	- 5.0	.002683	33.21
	2.3303	1.0388	151.2	- 3.7	.002474	28.26
	2.3264	.5652	159.3	4.9	.002895	36.72
	2.3423	.2706	167.9	7.4	.003652	51.48
	2.3423	.0060	166.6	2.0	.003652	50.69
	2.6826	1.3692	221.5	1.5	.002684	65.82
	2.6687	.9871	217.5	1.0	.002359	55.79
	2.6647	.5313	219.4	.0	.002428	58.45
	2.6488	.2308	211.8	2.7	.003028	67.92
	2.6408	.0060	201.8	- .6	.003028	61.65
	2.9791	1.3134	333.2	- 2.0	.002746	152.46
	2.9791	.9871	344.8	.3	.002690	159.91
	2.9692	.5453	312.9	5.4	.002490	121.86
	2.9592	.2109	301.7	.4	.003015	137.24
	2.9592	.0020	303.7	.0	.003015	139.02
	3.3254	1.2816	308.0	- 2.9	.002746	130.21
	3.3095	.9373	327.4	2.4	.002690	144.23
	3.3035	.5174	329.3	2.0	.002490	135.02
	3.2915	.2030	321.3	.0	.003015	155.63
	3.2915	.0080	319.5	1.8	.003015	153.88

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1177.00	2.5678	1.4380	74.7	74.5	.002677	7.46
	2.5463	1.0498	76.3	84.0	.002474	7.21
	2.5288	.5951	8.9	- 26.6	.002443	.10
	2.5210	.2634	61.7	114.9	.003151	5.99
	2.5229	.0098	36.8	130.6	.003151	2.14
	2.9015	1.3795	69.4	78.4	.002530	6.09
	2.8878	1.0127	90.4	72.0	.002446	9.99
	2.8839	.5659	49.3	68.6	.002415	2.94
	2.8683	.2517	51.9	67.4	.002864	3.86
	2.8605	.0039	28.6	12.1	.002364	1.17
	3.2156	1.3327	78.3	84.1	.002663	8.17
	3.2039	.9776	23.4	70.0	.002624	.72
	3.1805	.5580	30.5	31.6	.002183	1.02
	3.1727	.2205	49.5	46.6	.002882	3.52
	3.1746	.0020	34.0	- 3.4	.002882	1.67
	3.5610	1.2937	75.8	71.6	.002663	7.65
	3.5434	.9659	50.9	48.2	.002624	3.40
	3.5434	.5483	56.0	55.2	.002183	3.42
	3.5239	.1951	43.6	15.9	.002882	2.74
	3.5259	.0137	42.4	- 8.1	.002882	2.59
1218.50	2.3721	1.4886	57.7	- 9.8	.002708	4.50
	2.3383	1.1144	95.7	35.0	.002100	9.61
	2.3343	.5612	88.4	3.8	.002965	11.57
	2.3164	.3264	80.8	22.8	.002757	8.99
	2.3184	.0338	73.1	- 7.7	.002757	7.38
	2.6965	1.4368	80.3	12.7	.002667	8.60
	2.6965	1.0726	6[illegible].4	28.4	.002286	7.76
	2.6826	.5771	61.5	22.5	.002425	4.58
	2.6687	.2786	67.6	15.9	.002482	5.66
	2.6687	.0119	76.4	- 1.5	.002482	7.25
	2.9871	1.3910	64.1	23.4	.002286	4.69
	2.9871	1.0090	74.6	23.2	.002579	7.18
	2.9950	.5612	92.8	7.3	.002391	10.30
	2.9930	.2468	102.2	- 12.2	.002588	13.52
	2.9930	.0000	98.0	1.1	.002588	12.42
	3.3493	1.3532	63.5	- 8.9	.002286	4.60
	3.3433	.9751	74.6	- 13.7	.002579	7.18
	3.3353	.5632	64.2	- 12.3	.002391	4.92
	3.3333	.2149	74.6	- 13.7	.002588	7.20
	3.3333	.0020	73.4	- 9.2	.002588	6.98

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1260.00	2.6244	1.4283	23.4	160.0	.002961	.81
	2.6244	1.1044	14.5	- 15.9	.002438	.26
	2.6166	.6010	56.5	81.9	.002683	4.28
	2.5951	.2946	21.5	21.8	.002823	.65
	2.5951	.0000	31.3	- 63.4	.002328	1.38
	2.9795	1.3971	34.5	- 80.0	.002724	1.62
	2.9600	1.0517	6.3	- 18.4	.002242	.04
	2.9405	.5893	12.8	38.7	.002048	.17
	2.9327	.2712	18.4	12.5	.002639	.45
	2.9366	.0020	19.0	- 18.4	.002639	.47
	3.2741	1.3580	10.0	- 53.1	.002619	.13
	3.2722	1.0068	30.6	78.7	.002677	1.25
	3.2722	.5698	16.1	97.1	.002252	.29
	3.2722	.1990	8.0	- 89.9	.003362	.11
	3.2722	.0039	16.0	90.0	.003362	.43
	3.6234	1.2839	10.8	68.2	.002619	.15
	3.6156	.9483	34.2	83.3	.002677	1.57
	3.6059	.5346	12.6	- 71.6	.002252	.18
	3.5961	.1776	43.6	-105.9	.003362	3.20
	3.5980	.0020	12.2	-170.5	.003362	.25
1301.50	2.3502	1.4965	101.1	121.5	.002723	13.93
	2.3522	1.1104	54.3	-154.4	.002266	3.34
	2.3423	.6169	47.0	180.0	.002704	2.99
	2.3363	.3343	32.8	162.6	.002539	1.37
	2.3323	.0060	31.6	172.9	.002539	1.27
	2.7025	1.4030	54.3	154.4	.002941	4.34
	2.7025	1.0706	45.1	-177.5	.002323	2.36
	2.6925	.5851	49.6	-161.6	.002436	2.99
	2.6866	.2826	41.2	-177.3	.002700	2.29
	2.6866	.0060	41.2	-177.3	.002700	2.29
	2.9930	1.3831	59.1	-174.3	.002502	4.36
	2.9930	1.0388	68.6	180.0	.002396	5.63
	2.9930	.5771	60.9	-176.3	.002225	4.12
	2.9930	.2388	61.9	169.0	.003113	5.96
	2.9930	.0159	58.8	-178.1	.003113	5.38
	3.3532	1.3632	76.8	174.1	.002502	7.38
	3.3473	1.0090	68.6	178.4	.002396	5.64
	3.3393	.5512	74.3	161.6	.002225	6.15
	3.3214	.1731	56.8	178.0	.003113	5.03
	3.3214	.0000	58.8	180.0	.003113	5.38

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	C LB/SQFT
1343.00	2.5717	1.5141	46.6	43.3	.002440	2.65
	2.5756	1.0810	34.1	20.6	.002449	1.43
	2.5698	.6010	38.2	6.0	.002833	2.06
	2.5639	.3044	54.4	- 36.0	.002882	4.26
	2.5639	.0039	47.0	12.3	.002882	3.19
	2.9307	1.4205	55.3	49.4	.002794	4.27
	2.9151	1.0498	26.8	26.6	.002336	.84
	2.8937	.5737	26.1	57.5	.002253	.76
	2.8917	.2693	25.0	- 28.6	.002713	.85
	2.8956	.0000	24.1	24.4	.002713	.79
	3.2156	1.3522	25.4	45.0	.002687	.87
	3.2039	1.0068	20.6	- 29.1	.002776	.59
	3.2117	.5659	21.6	33.7	.002257	.53
	3.2117	.2107	18.4	12.5	.003207	.54
	3.2137	.0020	19.7	- 24.0	.003207	.62
	3.5473	1.2917	8.9	26.6	.002687	.11
	3.5473	.9502	52.3	- 83.4	.002776	3.80
	3.5356	.5580	26.1	- 57.5	.002257	.77
	3.5395	.1795	66.2	61.1	.003207	7.02
	3.5395	.0020	32.2	7.1	.003207	1.66
1384.50	2.3841	1.5284	103.1	-171.3	.002560	13.60
	2.3841	1.1224	114.7	146.9	.002379	15.63
	2.3801	.6209	78.9	165.6	.002592	8.06
	2.3801	.3025	81.8	163.3	.003036	10.16
	2.3781	.0159	78.4	180.0	.003036	9.32
	2.7383	1.4448	128.6	172.1	.002818	23.29
	2.7264	1.0826	117.4	165.5	.002407	16.58
	2.7065	.6070	73.4	170.8	.002289	6.17
	2.7085	.2706	72.5	-178.5	.002791	7.34
	2.7085	.0159	76.5	177.1	.002791	8.17
	3.0109	1.4010	132.1	144.7	.002303	20.09
	3.0109	1.0289	99.8	164.1	.002600	12.96
	3.0109	.5891	107.4	165.2	.002444	14.09
	3.0109	.2428	114.4	142.0	.002562	16.77
	3.0109	.0080	92.2	177.6	.002562	10.88
	3.3612	1.3672	110.9	136.4	.002303	14.15
	3.3532	.9572	101.1	158.4	.002600	13.29
	3.3532	.5294	90.9	-172.6	.002444	10.09
	3.3532	.2308	105.0	166.0	.002562	14.12
	3.3532	.0040	101.9	178.9	.002562	13.30

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1426.00	2.4702	1.4985	73.5	112.4	.002940	7.93
	2.4800	1.1434	69.8	113.6	.002369	5.77
	2.4937	.6205	36.5	80.5	.002742	1.82
	2.4859	.3278	76.5	123.3	.002762	8.08
	2.4859	.0039	60.1	-176.2	.002762	4.98
	2.8039	1.4380	64.4	119.7	.002513	5.22
	2.8020	1.0790	19.7	114.0	.002350	.46
	2.8215	.5854	12.2	9.5	.002551	.19
	2.8195	.2673	50.0	106.3	.002538	3.17
	2.8195	.0039	31.0	-165.1	.002538	1.22
	3.1083	1.4283	50.5	108.4	.002284	2.92
	3.1083	1.0341	64.5	106.2	.002561	5.33
	3.1083	.5932	32.5	100.6	.002529	1.34
	3.1220	.2810	30.6	101.3	.002690	1.26
	3.1220	.0059	6.3	71.6	.002690	.05
	3.4673	1.3678	81.9	91.4	.002284	7.67
	3.4537	.9873	72.4	96.3	.002561	6.71
	3.4459	.5463	46.8	110.0	.002529	2.77
	3.4380	.2049	21.5	-158.2	.002690	.62
	3.4380	.0039	20.4	-168.7	.002690	.56
1467.50	2.3562	1.5960	47.2	41.6	.002389	2.66
	2.3562	1.1861	34.7	42.7	.002209	1.33
	2.3861	.6567	31.9	10.6	.002729	1.39
	2.3383	.3662	33.4	- 3.4	.002265	1.26
	2.3184	.0119	33.3	.0	.002265	1.26
	2.7065	1.5005	64.0	- 40.0	.002712	5.55
	2.7184	1.1005	49.9	25.6	.002412	3.01
	2.7184	.6090	46.7	57.0	.002481	2.71
	2.6945	.3184	49.4	56.3	.002251	2.75
	2.6786	.0080	29.4	.0	.002251	.97
	2.9950	1.4488	38.6	- 24.0	.002238	1.67
	2.9930	1.0905	25.8	8.7	.002439	.81
	3.0050	.6209	34.7	42.7	.002336	1.40
	3.0050	.2726	91.2	- 75.1	.002596	10.80
	3.0129	.0139	23.6	4.8	.002596	.72
	3.3592	1.4488	20.5	16.7	.002238	.47
	3.3453	1.0289	27.7	45.0	.002439	.94
	3.3373	.5731	41.3	58.6	.002336	1.99
	3.3333	.2229	34.3	31.0	.002596	1.52
	3.3333	.0000	35.3	.0	.002596	1.61

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1509.00	2.5054	1.5298	59.4	- 70.3	.003016	5.32
	2.5054	1.1668	46.6	- 43.3	.002314	2.52
	2.5249	.6263	43.0	- 68.2	.002772	2.57
	2.5190	.3259	47.5	- 14.6	.002629	2.96
	2.5190	.0039	61.9	.0	.002629	5.04
	2.8527	1.3971	47.2	-126.4	.002977	3.31
	2.8468	1.1005	30.0	126.9	.002527	1.14
	2.8468	.6244	26.3	-171.3	.002198	.76
	2.8468	.3083	54.5	-118.4	.002838	4.22
	2.8488	.0039	38.8	-168.1	.002838	2.14
	3.1434	1.4127	46.6	- 99.9	.002460	2.68
	3.1337	1.0380	39.3	- 75.3	.002707	2.09
	3.1337	.6166	30.0	-126.9	.002103	.94
	3.1454	.1932	15.1	172.9	.003084	.40
	3.1454	.0078	27.8	-149.7	.003084	1.19
	3.4868	1.3737	70.8	-106.4	.002460	6.17
	3.4732	1.0068	19.7	-156.0	.002707	.52
	3.4673	.5815	36.0	-123.7	.002103	1.36
	3.4673	.2224	27.8	120.3	.003084	1.19
	3.4732	.0039	14.5	164.1	.003084	.33
1550.50	2.3761	1.5403	84.4	94.0	.003121	11.13
	2.3900	1.1542	50.1	59.4	.002453	3.07
	2.4020	.6169	24.2	76.0	.003198	.94
	2.3841	.3542	15.3	39.8	.003210	.38
	2.3801	.0119	11.8	.0	.003210	.22
	2.6786	1.4627	105.9	87.9	.002782	15.59
	2.7005	1.1244	33.5	69.4	.002228	1.25
	2.6925	.6050	19.6	- 53.1	.002348	.45
	2.6687	.2706	37.2	- 71.6	.002268	1.57
	2.6408	.0000	9.8	.0	.002268	.11
	2.9871	1.4030	17.6	90.0	.002601	.40
	3.0030	1.0527	40.4	67.2	.002518	2.05
	2.9871	.5970	45.9	- 70.0	.002640	2.78
	2.9891	.2746	80.4	87.2	.002369	7.66
	2.9891	.0000	5.5	- 45.0	.002369	.04
	3.3393	1.3811	7.8	- 89.9	.002601	.08
	3.3274	1.0209	15.8	- 82.9	.002518	.31
	3.3174	.5433	18.5	- 58.0	.002640	.45
	3.3194	.2468	21.9	63.4	.002369	.57
	3.3194	.0040	2.8	45.0	.002369	.01

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1592.00	2.4995	1.6137	111.8	108.8	.002620	16.38
	2.5307	1.2098	38.6	111.3	.002193	1.63
	2.5307	.6498	59.6	76.4	.002608	4.63
	2.5307	.3356	15.6	50.2	.002748	.33
	2.5307	.0039	7.2	123.7	.002748	.07
	2.8566	1.5024	40.0	53.1	.002765	2.21
	2.8585	1.1317	24.7	14.0	.002185	.67
	2.8585	.6088	52.8	60.5	.002564	3.57
	2.8585	.2732	57.1	53.5	.002640	4.31
	2.8585	.0039	104.0	2.2	.002640	14.27
	3.1434	1.4302	48.3	82.9	.002554	2.98
	3.1493	1.0751	34.4	54.5	.002550	1.51
	3.1493	.5737	40.2	- 26.6	.002635	2.13
	3.1493	.2732	39.4	24.0	.002451	1.90
	3.1493	.0039	36.0	3.2	.002451	1.59
	3.4868	1.3659	25.6	-128.7	.002554	.84
	3.4751	.9912	2.0	89.7	.002550	.01
	3.4771	.5659	60.8	80.5	.002635	4.87
	3.4771	.2420	11.3	45.0	.002451	.16
	3.4751	.0059	10.0	36.9	.002451	.12
1633.50	2.3403	1.6458	80.3	167.3	.002408	7.77
	2.3761	1.1900	54.9	-178.0	.002415	3.64
	2.4159	.6746	52.7	148.7	.002809	3.91
	2.3940	.3662	59.7	139.0	.002430	4.33
	2.3761	.0179	45.1	180.0	.002430	2.47
	2.7025	1.4945	80.8	166.0	.002704	8.82
	2.7244	1.1303	69.6	-170.3	.002197	5.32
	2.7184	.6507	69.8	141.8	.002420	5.89
	2.7025	.3164	77.6	135.0	.002289	6.89
	2.7443	.0040	56.8	-178.0	.002289	3.70
	2.9930	1.4507	75.8	160.6	.002809	8.29
	3.0229	1.0806	72.7	-166.0	.002752	7.27
	3.0229	.5791	101.9	142.0	.002791	14.49
	3.0249	.2905	68.0	-168.4	.002509	5.80
	3.0249	.0020	66.6	180.0	.002509	5.57
	3.3234	1.3612	68.7	176.7	.002809	6.63
	3.3274	1.0229	76.8	142.3	.002752	8.12
	3.3274	.6030	66.3	161.0	.002791	6.13
	3.3274	.2547	63.2	172.9	.002509	5.01
	3.3274	.0100	60.8	-178.2	.002509	4.63

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1675.00	2.4215	1.6312	69.6	- 50.8	.002539	6.15
	2.4761	1.2078	31.2	50.2	.002476	1.21
	2.4859	.6771	26.[illegible]	147.5	.002788	.95
	2.4859	.3746	12.6	- 18.4	.002450	.20
	2.4859	.0039	33.1	- 25.0	.002450	1.34
	2.7785	1.5220	36.7	112.4	.002499	1.69
	2.7902	1.1200	20.1	174.3	.002641	.53
	2.8039	.6517	13.4	-116.6	.002494	.22
	2.8039	.3278	12.8	- 51.3	.002538	.21
	2.8020	.0020	33.0	166.0	.002538	1.38
	3.0712	1.4556	38.0	- 90.0	.002509	1.81
	3.0790	1.0576	22.3	153.4	.002597	.65
	3.0693	.6361	34.4	125.5	.002235	1.32
	3.0829	.2595	25.0	-151.4	.002434	.76
	3.0829	.0039	8.0	89.9	.002434	.08
	3.4185	1.3698	15.1	29.7	.002509	.33
	3.4146	1.0380	37.3	74.5	.002597	1.81
	3.4146	.5873	8.2	166.0	.002235	.08
	3.4146	.2498	35.7	-116.6	.002434	1.55
	3.4146	.0039	16.5	-166.0	.002434	.33
1716.50	2.3841	1.5920	5.9	180.0	.002920	.05
	2.3960	1.2139	46.2	128.4	.002441	2.61
	2.3940	.6886	18.1	139.4	.002714	.44
	2.4060	.3622	2.0	180.0	.002716	.01
	2.4060	.0040	2.0	180.0	.002716	.01
	2.6886	1.5284	34.7	106.4	.002695	1.62
	2.7045	1.1323	28.0	102.1	.002263	.89
	2.7124	.6388	16.9	-125.5	.002461	.35
	2.7104	.3065	22.9	-110.0	.002431	.64
	2.7124	.0119	6.2	-161.6	.002431	.05
	2.9930	1.4129	20.8	- 48.8	.002915	.63
	3.0030	1.0905	32.8	72.6	.002529	1.36
	3.0030	.6070	27.8	- 50.7	.002428	.94
	3.0030	.2786	13.9	45.0	.002815	.27
	3.0249	.0100	10.0	- 11.3	.002815	.14
	3.3373	1.3692	15.3	50.2	.002915	.34
	3.3373	1.0587	16.6	- 45.0	.002529	.35
	3.3194	.6050	20.2	60.9	.002428	.49
	3.3114	.2229	29.5	- 86.2	.002815	1.22
	3.3114	.0060	4.4	- [illegible].4	.002815	.03

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1758.00	2.4156	1.6312	46.6	121.0	.002551	2.77
	2.4488	1.2449	34.0	49.8	.002239	1.30
	2.4722	.6888	25.3	- 18.4	.002723	.87
	2.4839	.3746	23.3	- 59.0	.002561	.70
	2.4839	.0039	12.0	.0	.002561	.18
	2.7688	1.5551	34.0	- 28.1	.002473	1.43
	2.7844	1.1473	29.7	19.7	.002219	.98
	2.7941	.6380	26.7	13.0	.002379	.85
	2.7961	.3063	43.0	- 21.8	.002429	2.25
	2.7961	.0000	38.0	.0	.002429	1.75
	3.0849	1.4400	67.0	72.6	.002599	5.83
	3.0888	1.0888	24.1	41.6	.002553	.74
	3.0868	.6146	15.2	23.2	.002234	.26
	3.0927	.2693	24.4	55.0	.002562	.76
	3.0927	.0020	8.2	-166.0	.002562	.09
	3.4283	1.3815	30.0	- 53.1	.002599	1.17
	3.4263	1.0263	22.0	.0	.002553	.62
	3.4244	.6049	40.0	.0	.002234	1.78
	3.4166	.2205	50.5	18.4	.002562	3.27
	3.4166	.0000	48.0	2.4	.002562	2.95
1799.50	2.3602	1.6318	21.1	- 68.2	.002763	.62
	2.4179	1.2398	29.5	3.8	.002324	1.01
	2.4179	.6806	54.9	- 2.0	.002463	3.71
	2.4179	.3423	58.0	11.7	.002640	4.44
	2.4179	.0040	56.8	.0	.002640	4.26
	2.7184	1.5124	18.5	- 32.0	.002689	.46
	2.7323	1.1423	15.3	50.2	.002316	.27
	2.7383	.6448	18.1	49.4	.002603	.42
	2.7502	.2905	13.9	- 45.0	.002723	.26
	2.7502	.0119	10.0	11.3	.002723	.14
	3.0129	1.4766	56.1	102.1	.002809	4.42
	3.0209	1.1065	13.7	.0	.002394	.23
	3.0169	.6129	16.7	- 20.6	.002315	.32
	3.0169	.2985	9.8	.0	.002268	.11
	3.0169	.0080	10.5	21.8	.002268	.13
	3.3552	1.3453	26.3	63.4	.002809	.97
	3.3592	1.0587	11.1	45.0	.002394	.15
	3.3592	.6050	20.2	- 60.9	.002315	.47
	3.3592	.2388	27.8	50.7	.002268	.88
	3.3592	.0080	18.1	12.5	.002268	.37

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1841.00	2.4234	1.6117	24.7	- 14.0	.002754	.84
	2.4780	1.2468	72.6	- 31.5	.002481	6.55
	2.5268	.6868	72.7	15.9	.003127	8.27
	2.5405	.3863	80.8	40.0	.003013	9.85
	2.5405	.0039	62.1	3.7	.003013	5.80
	2.7844	1.5454	24.3	- 9.5	.002470	.73
	2.7941	1.1590	25.6	51.3	.002184	.71
	2.8059	.6517	24.3	- 9.5	.002301	.68
	2.8059	.2966	22.8	52.1	.002497	.65
	2.8059	.0020	14.1	- 45.0	.002497	.25
	3.0732	1.4946	26.8	- 63.4	.002318	.83
	3.1024	1.0888	12.6	71.6	.002511	.20
	3.1024	.6088	17.9	- 26.6	.002374	.38
	3.1024	.2693	35.7	- 63.4	.002434	1.55
	3.1024	.0059	48.3	- 7.1	.002434	2.84
	3.4400	1.4049	52.6	81.3	.002318	3.20
	3.4341	1.0341	24.3	- 80.5	.002511	.74
	3.4341	.5873	34.2	- 83.3	.002374	1.39
	3.4341	.2420	38.2	- 84.0	.002434	1.77
	3.4341	.0039	7.2	- 56.3	.002434	.06
1882.50	2.3841	1.6259	112.1	36.5	.002942	18.47
	2.4796	1.2020	111.0	20.7	.002813	17.32
	2.4876	.7005	95.7	35.0	.003102	14.19
	2.4796	.3940	65.1	12.0	.002764	6.03
	2.4796	.0080	64.7	- 1.7	.002764	5.78
	2.7423	1.5085	103.8	35.8	.003043	16.41
	2.7483	1.1622	73.2	15.5	.002305	6.17
	2.7622	.6408	120.1	28.2	.002623	18.91
	2.7642	.3085	131.7	36.5	.002535	21.96
	2.7602	.0020	105.8	1.1	.002535	14.19
	3.0249	1.4527	107.2	- 30.8	.002651	15.23
	3.0249	1.1184	71.8	25.9	.002367	6.11
	3.0328	.6050	110.4	27.5	.002305	14.05
	3.0328	.2667	103.1	8.7	.002797	14.86
	3.0647	.0020	103.8	- 1.1	.002797	15.08
	3.3632	1.3970	69.6	9.7	.002651	6.42
	3.3632	1.0348	80.8	22.8	.002367	7.72
	3.3632	.5711	78.1	17.5	.002305	7.02
	3.3632	.2010	74.9	- 6.0	.002797	7.84
	3.3632	.0020	74.4	.0	.002797	7.75

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1924.00	2.5132	1.6780	32.0	- 90.0	.002686	1.37
	2.5815	1.2859	56.6	132.1	.002648	4.24
	2.6049	.7415	35.7	-153.4	.002685	1.72
	2.6049	.4000	34.2	- 96.7	.002299	1.34
	2.6049	.0020	12.6	108.4	.002299	.18
	2.8683	1.6059	33.0	166.0	.002581	1.40
	2.8644	1.1785	17.0	135.0	.002402	.35
	2.9112	.7083	29.7	109.7	.002305	1.02
	2.9112	.3746	32.3	111.8	.002161	1.13
	2.9112	.0039	23.4	110.0	.002161	.59
	3.1649	1.4600	38.2	132.9	.002719	1.98
	3.1668	1.1200	44.0	- 90.0	.002612	2.52
	3.2000	.6595	36.8	40.6	.002346	1.59
	3.2039	.2849	28.0	.0	.002611	1.02
	3.2059	.0039	10.8	111.8	.002611	.15
	3.5083	1.4166	18.8	32.0	.002719	.48
	3.5083	1.0654	17.1	- 20.6	.002612	.38
	3.5083	.6107	15.1	- 7.1	.002346	.30
	3.5083	.2341	18.8	- 32.0	.002611	.46
	3.5083	.0039	16.1	7.1	.002611	.34
1965.50	2.3841	1.5940	28.5	- 15.9	.003288	1.34
	2.4418	1.2438	21.2	56.3	.002485	.56
	2.4557	.6846	58.0	- 11.7	.002966	4.99
	2.4756	.3602	58.0	11.7	.002989	5.03
	2.4756	.0199	58.8	1.9	.002989	5.17
	2.7104	1.5164	8.3	- 45.0	.002722	.09
	2.7363	1.1741	60.9	- 3.7	.002321	4.30
	2.7522	.6687	49.0	- 16.3	.002219	2.66
	2.7522	.3383	50.9	- 22.6	.002354	3.05
	2.7522	.0239	47.2	- 4.8	.002354	2.62
	2.9990	1.4806	96.5	77.1	.002182	10.15
	3.0249	1.0746	45.6	- 25.5	.002551	2.65
	3.0607	.6289	18.5	32.0	.002288	.39
	3.0607	.2667	38.6	30.5	.002878	2.15
	3.0607	.0119	37.4	- 6.0	.002878	2.02
	3.3791	1.4070	23.6	41.6	.002182	.61
	3.3791	1.0239	28.5	15.9	.002551	1.04
	3.3791	.5692	25.5	32.5	.002288	.75
	3.3791	.1910	41.3	58.6	.002878	2.46
	3.3791	.0040	23.8	- 9.5	.002878	.82

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
2007.00	2.5405	1.6702	144.1	106.9	.002712	28.16
	2.5932	1.3034	101.8	74.1	.002413	12.51
	2.6615	.7298	77.2	68.7	.002848	8.48
	2.6615	.4117	75.5	37.5	.002401	6.85
	2.6634	.0039	81.9	- 12.7	.002401	8.06
	2.8741	1.6000	68.3	69.4	.002309	5.38
	2.9249	1.1746	28.4	50.7	.002664	1.07
	2.9580	.6946	50.9	48.2	.002520	3.27
	2.9580	.3551	41.6	35.2	.002225	1.92
	2.9580	.0000	34.0	.0	.002225	1.28
	3.1863	1.5337	11.7	31.0	.002382	.16
	3.2078	1.1005	48.6	80.5	.002734	3.23
	3.2156	.6693	24.4	145.0	.002479	.74
	3.2371	.3044	28.0	90.0	.002429	.95
	3.2429	.0000	5.0	- 89.9	.002429	.04
	3.5259	1.4322	28.6	-155.2	.002382	.97
	3.5356	1.0732	36.8	130.6	.002734	1.86
	3.5298	.6244	104.7	103.2	.002479	13.58
	3.5290	.2693	75.8	108.4	.002429	6.98
	3.5317	.0000	24.0	180.0	.002429	.70
2048.50	2.3423	1.7313	37.7	99.0	.002861	2.03
	2.4697	1.3413	49.6	9.1	.002504	3.08
	2.4836	.7562	51.1	32.5	.002928	3.82
	2.5353	.4060	43.5	- 7.8	.003032	2.87
	2.5552	.0020	37.4	- 6.0	.003032	2.12
	2.7343	1.5801	49.4	33.7	.002844	3.48
	2.7542	1.1960	62.7	38.7	.002545	5.00
	2.7861	.7065	21.1	- 21.8	.002605	.58
	2.7861	.3622	51.5	- 8.7	.002401	3.19
	2.7861	.0239	35.5	6.3	.002401	1.51
	3.0090	1.4866	41.1	.0	.002691	2.28
	3.0328	1.1224	64.3	37.6	.002803	5.79
	3.0408	.6428	44.7	- 15.3	.002343	2.34
	3.0607	.2945	40.2	- 43.0	.002512	2.03
	3.0607	.0060	34.7	42.7	.002512	1.51
	3.3532	1.3950	56.6	- 43.6	.002691	4.34
	3.3552	1.0567	28.5	- 15.9	.002803	1.14
	3.3552	.6706	44.7	- 15.3	.002343	2.34
	3.3552	.2627	53.1	- 25.8	.002512	5.00
	3.3552	.0040	54.9	2.0	.002512	3.78

Table B-III. Rear-Lower Grid Calculations - Model 35 (Continued)

Model 35, Shot 334

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
2090.00	2.5346	1.7073	40.0	53.1	.002510	2.00
	2.6420	1.3112	33.3	-122.7	.002423	1.34
	2.7044	.7571	67.8	13.6	.002813	6.47
	2.7044	.4059	65.1	- 10.6	.002414	5.11
	2.7005	.0000	49.0	11.8	.002414	2.90
	2.9151	1.6273	26.3	81.3	.002475	.85
	2.9737	1.2137	17.2	54.5	.002281	.34
	2.9776	.6868	8.5	45.0	.002470	.09
	3.0088	.3473	50.1	- 28.6	.002594	3.25
	2.9932	.0039	48.3	- 24.4	.002594	3.02
	3.2273	1.5337	60.5	97.6	.002722	4.98
	3.2585	1.1395	40.2	5.7	.002676	2.16
	3.2585	.6576	44.0	39.5	.002273	2.20
	3.2653	.2771	43.0	21.8	.002572	2.38
	3.2683	.0234	40.0	- 2.9	.002572	2.06
	3.5668	1.3932	57.7	76.0	.002722	4.53
	3.5629	1.0654	26.8	26.6	.002676	.96
	3.5727	.6127	53.6	- 63.4	.002273	3.27
	3.5863	.2420	16.0	.0	.002572	.33
	3.5863	.0020	10.2	- 11.3	.002572	.13
2131.50	2.3662	1.7632	139.4	156.0	.002498	24.28
	2.4517	1.3134	157.4	161.1	.002799	34.66
	2.5493	.7721	163.4	166.1	.003209	42.86
	2.5990	.3940	141.5	175.2	.003304	33.10
	2.6030	.0119	137.2	178.4	.003304	31.10
	2.7383	1.6060	168.7	177.3	.002558	36.39
	2.7642	1.2100	190.3	163.2	.002325	42.09
	2.7920	.7124	157.4	161.1	.002360	29.22
	2.8299	.3383	176.5	171.1	.002383	37.12
	2.8299	.0040	160.6	180.0	.002383	30.75
	3.0010	1.5463	173.0	-166.9	.002373	35.49
	3.0726	1.1264	192.8	174.8	.002805	52.13
	3.0746	.6706	158.5	171.5	.002615	32.83
	3.1005	.3104	149.3	160.9	.002664	29.70
	3.1005	.0040	146.0	-173.1	.002664	28.41
	3.3672	1.4507	166.7	162.2	.002373	32.95
	3.3791	1.0687	154.6	171.3	.002805	33.52
	3.3791	.6229	154.1	168.3	.002615	31.03
	3.3711	.2627	166.8	170.5	.002664	37.08
	3.3652	.0020	164.6	-179.3	.002664	36.08

Table B-IV. Rear-Upper Grid Calculations - Model 35

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
41.20	2.1271	3.6070	39.0	68.7	.002310	1.75
	2.1329	2.7722	12.1	- 90.0	.002405	.18
	2.1329	2.4888	29.4	105.9	.002182	.94
	2.1349	2.1681	8.3	-166.0	.002298	.08
	2.1095	1.7849	4.5	-116.6	.002298	.02
	2.5064	3.6109	29.4	- 74.1	.002512	1.08
	2.4829	2.7586	9.0	63.4	.002425	.10
	2.4829	2.4536	6.4	71.6	.002279	.05
	2.4829	2.1212	10.9	- 21.8	.002292	.14
	2.4829	1.7458	12.3	80.5	.002292	.17
	2.8504	3.6168	35.7	-137.3	.002326	1.48
	2.8504	2.7449	14.5	-146.3	.002491	.26
	2.8387	2.4223	10.1	126.9	.002108	.11
	2.8426	2.0802	10.9	-158.2	.002357	.14
	2.8563	1.7067	6.4	-161.6	.002357	.05
	3.2532	3.6188	23.0	- 74.7	.002326	.62
	3.2160	2.7370	12.8	108.4	.002491	.20
	3.2004	2.3949	4.5	-116.6	.002108	.02
	3.1789	2.0469	19.9	156.0	.002357	.47
	3.1339	1.6950	16.6	76.0	.002357	.33
82.40	2.1287	3.6489	11.9	- 90.0	.002316	.16
	2.1287	2.7591	9.9	126.9	.002430	.12
	2.1207	2.4958	22.5	105.3	.002102	.53
	2.1207	2.1825	29.9	97.6	.002296	1.03
	2.1207	1.7935	21.8	- 5.2	.002296	.55
	2.4838	3.6130	5.9	89.9	.002565	.05
	2.4838	2.7751	27.5	30.3	.002457	.93
	2.4798	2.4678	29.7	36.9	.002342	1.03
	2.4878	2.1287	32.2	42.5	.002477	1.28
	2.4798	1.7616	26.5	26.6	.002477	.87
	2.8369	3.6369	57.6	84.1	.002271	3.77
	2.8329	2.7631	16.9	69.4	.002291	.33
	2.8329	2.4319	25.2	45.0	.002330	.74
	2.8269	2.0928	19.8	90.0	.002360	.46
	2.8309	1.7257	21.8	95.2	.002360	.56
	3.2379	3.6329	11.2	45.0	.002271	.14
	3.2180	2.7511	42.0	48.8	.002291	2.02
	3.1860	2.3721	46.7	53.6	.002330	2.54
	3.1481	2.0688	23.8	41.6	.002360	.67
	3.1302	1.7177	30.1	23.2	.002360	1.07

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
123.60	2.1271	3.5953	27.1	-153.4	.002257	.83
	2.1271	2.7801	25.8	128.7	.002288	.76
	2.1271	2.5103	14.5	123.7	.002056	.22
	2.1310	2.1975	7.3	-123.7	.002103	.06
	2.1310	1.7830	15.4	-113.2	.002103	.25
	2.5064	3.6168	24.6	145.0	.002506	.76
	2.5064	2.7722	21.7	-158.2	.002533	.60
	2.5064	2.4712	20.8	-150.9	.002391	.52
	2.5064	2.1427	31.3	165.1	.002430	1.19
	2.5064	1.7576	23.5	-121.0	.002430	.67
	2.8563	3.6735	23.6	20.0	.002234	.62
	2.8563	2.7605	20.6	- 78.7	.002421	.51
	2.8563	2.4399	9.0	-116.6	.001969	.08
	2.8426	2.0997	32.5	- 97.1	.002184	1.16
	2.8543	1.7283	16.3	- 60.3	.002184	.29
	3.2610	3.6266	8.3	- 14.0	.002234	.08
	3.2434	2.7683	10.1	- 89.9	.002421	.12
	3.2278	2.4321	24.2	90.0	.001969	.58
	3.1965	2.0626	32.8	- 47.5	.002184	1.18
	3.1613	1.7067	32.5	- 97.1	.002184	1.16
164.80	2.1047	3.6369	23.1	20.0	.002330	.62
	2.1127	2.7791	31.3	18.4	.002436	1.19
	2.1127	2.5077	31.9	- 21.8	.002208	1.13
	2.1167	2.1766	33.7	- 49.8	.002298	1.30
	2.1147	1.7796	20.4	- 29.1	.002298	.48
	2.4638	3.6269	15.1	66.8	.002278	.26
	2.4638	2.7671	34.5	13.2	.002366	1.41
	2.4618	2.4579	18.2	- 12.5	.002190	.36
	2.4579	2.1367	26.9	- 54.0	.002304	.83
	2.4678	1.7416	19.8	- 90.0	.002304	.45
	2.8589	3.6449	47.0	- 67.8	.002277	2.51
	2.8369	2.7431	8.8	- 26.6	.002454	.10
	2.8289	2.4239	12.7	- 51.3	.002020	.16
	2.8229	2.0608	28.0	- 45.0	.002337	.91
	2.8389	1.7117	16.8	- 45.0	.002337	.33
	3.2459	3.6309	11.5	149.0	.002277	.15
	3.2180	2.7411	15.1	- 66.8	.002454	.28
	3.1860	2.3960	9.9	-143.1	.002020	.10
	3.1701	2.0449	19.9	84.3	.002337	.46
	3.1262	1.6858	18.2	77.5	.002337	.39

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
206.00	2.1486	3.6031	10.3	-168.7	.002286	.12
	2.1564	2.7898	25.3	61.4	.002181	.70
	2.1564	2.4985	18.6	49.4	.002004	.35
	2.1525	2.1720	8.1	.0	.002213	.07
	2.1486	1.7732	13.5	173.4	.002213	.20
	2.5122	3.6305	30.0	109.7	.002607	1.17
	2.5396	2.7801	6.1	.0	.002588	.05
	2.5239	2.4673	18.6	40.6	.002320	.40
	2.5220	2.1212	14.1	.0	.002399	.24
	2.5064	1.7380	32.8	100.6	.002399	1.29
	2.8739	3.6305	26.9	167.0	.002347	.85
	2.8641	2.7566	57.4	108.4	.002485	4.10
	2.8641	2.4301	51.9	103.5	.002119	2.85
	2.8622	2.0802	58.6	93.9	.002298	3.95
	2.8661	1.7165	27.1	116.6	.002298	.84
	3.2512	3.6325	50.1	139.9	.002347	2.95
	3.2493	2.7546	38.5	132.9	.002485	1.85
	3.2199	2.4262	47.6	126.4	.002119	2.40
	3.1984	2.0821	74.9	117.3	.002298	6.45
	3.1652	1.7243	51.9	103.5	.002298	3.09
247.20	2.0948	3.6349	94.4	70.4	.002345	10.46
	2.1247	2.8010	95.5	27.1	.002471	11.27
	2.1247	2.5217	94.6	26.0	.002098	9.39
	2.1247	2.1766	94.4	19.6	.002363	10.53
	2.1027	1.7855	70.2	9.7	.002363	5.82
	2.4539	3.6549	91.7	37.1	.002431	10.23
	2.4698	2.7671	69.9	28.7	.002572	6.29
	2.4758	2.4698	79.1	13.0	.002321	7.27
	2.4718	2.1367	85.9	23.0	.002363	8.72
	2.4618	1.7736	83.8	19.3	.002363	8.29
	2.8329	3.6509	121.8	32.4	.002397	17.77
	2.8190	2.7970	102.1	31.5	.002553	13.30
	2.8170	2.4738	89.9	33.3	.002274	9.20
	2.8190	2.1187	87.6	28.3	.002297	8.81
	2.8269	1.7357	75.8	15.1	.002297	6.59
	3.2080	3.6628	109.0	45.0	.002397	14.25
	3.1920	2.7691	84.0	26.6	.002553	9.01
	3.1581	2.4339	105.5	6.5	.002274	12.65
	3.1362	2.1107	76.4	10.4	.002297	6.70
	3.1142	1.7357	69.9	- 8.1	.002297	5.61

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
288.40	2.1799	3.6911	33.8	17.4	.002152	1.23
	2.2405	2.8328	84.8	- 1.4	.002215	7.96
	2.2405	2.5396	94.7	- 26.6	.002073	9.30
	2.2405	2.2033	85.5	- 19.3	.002140	7.82
	2.2170	1.7849	81.7	- 20.2	.002140	7.14
	2.5846	3.6852	75.1	- 6.2	.002368	6.67
	2.6002	2.8133	78.7	.0	.002430	7.52
	2.6002	2.4948	84.3	- 11.0	.002362	8.39
	2.6002	2.1544	86.8	.0	.002340	8.81
	2.5846	1.7654	89.6	- 14.3	.002340	9.38
	2.9756	3.6950	34.4	3.4	.002397	1.42
	2.9501	2.8094	60.7	- 15.4	.002321	4.28
	2.9384	2.4790	69.6	- 29.5	.002008	4.86
	2.9384	2.1212	63.8	- 34.7	.002174	4.42
	2.9384	1.7361	46.4	- 2.5	.002174	2.35
	3.3275	3.7087	35.2	- 23.6	.002397	1.49
	3.3236	2.7918	51.1	9.1	.002321	3.03
	3.3236	2.4379	89.4	- 28.3	.002008	6.02
	3.2727	2.0958	92.8	- 42.4	.002174	9.37
	3.2336	1.7146	59.3	- 35.3	.002174	3.83
329.60	2.1267	3.6449	66.7	- 78.0	.002230	4.96
	2.2085	2.7990	42.0	-131.2	.002279	2.01
	2.2085	2.4798	56.7	-119.2	.002183	3.50
	2.2045	2.1486	34.5	-103.2	.002250	1.34
	2.1786	1.7576	31.3	-108.4	.002250	1.10
	2.5277	3.6469	57.4	- 92.0	.002632	4.33
	2.5476	2.7671	40.7	-119.1	.002598	2.15
	2.5576	2.4539	35.0	-132.7	.002576	1.58
	2.5576	2.1367	35.2	-141.8	.002676	1.66
	2.5476	1.7516	40.7	-119.1	.002676	2.22
	2.8668	3.6529	74.1	-133.9	.002436	6.69
	2.8768	2.7810	56.0	-122.0	.002293	3.59
	2.8768	2.4399	60.0	-107.2	.002086	3.76
	2.8708	2.0828	54.0	-118.4	.002415	3.52
	2.8728	1.7337	53.4	-141.0	.002415	3.45
	3.2399	3.6489	59.3	-126.9	.002436	4.28
	3.2419	2.7771	53.8	-144.0	.002293	3.32
	3.2359	2.3920	88.9	-147.7	.002086	8.24
	3.2040	2.0489	60.1	-136.3	.002415	4.37
	3.1621	1.7017	43.8	-161.6	.002415	2.31

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
370.80	2.1935	3.6266	82.4	- 21.5	.002243	7.62
	2.2131	2.8016	53.4	- 10.9	.002151	3.07
	2.2131	2.4907	56.2	- 21.0	.002188	3.46
	2.2326	2.1701	35.8	- 16.4	.002205	1.41
	2.2072	1.7556	58.9	- 38.0	.002205	3.83
	2.5826	3.6285	62.5	.0	.002612	5.11
	2.5806	2.7781	38.8	- 27.9	.002443	1.84
	2.5767	2.4594	33.6	- 32.7	.002376	1.34
	2.5728	2.1329	42.0	- 54.8	.002403	2.12
	2.5650	1.7302	57.4	- 50.7	.002403	3.95
	2.9247	3.6422	51.4	- 45.0	.002420	3.19
	2.9208	2.7625	34.4	- 49.8	.002465	1.46
	2.9208	2.4223	44.3	- 59.9	.002298	2.25
	2.9130	2.0743	27.4	- 17.1	.002366	.89
	2.8974	1.7028	63.4	- 52.8	.002366	4.75
	3.2923	3.6618	40.9	- 20.2	.002420	2.02
	3.2805	2.7605	43.6	- 56.3	.002465	2.35
	3.2493	2.3910	14.5	- 33.7	.002298	.24
	3.2297	2.0547	26.3	- 4.4	.002366	.82
	3.1926	1.7009	62.3	- 60.9	.002366	4.59
412.00	2.2025	3.6150	18.2	-139.4	.002329	.39
	2.2603	2.7890	72.5	- 17.4	.002387	6.28
	2.2603	2.4599	54.3	- 10.5	.002266	3.34
	2.2384	2.1387	48.6	- 63.4	.002211	2.62
	2.2244	1.7217	42.0	- 41.2	.002211	1.95
	2.5895	3.6469	24.8	28.6	.002779	.85
	2.5815	2.7491	24.5	- 14.0	.002624	.78
	2.5855	2.4359	21.0	- 48.8	.002647	.58
	2.5815	2.1027	35.6	- 56.3	.002491	1.58
	2.5835	1.7077	33.7	- 49.8	.002491	1.41
	2.9027	3.6170	30.9	- 63.4	.002406	1.15
	2.8988	2.7551	17.9	- 83.7	.002369	.38
	2.8988	2.4020	11.9	- 90.0	.002241	.16
	2.8968	2.0748	12.0	- 9.5	.002162	.16
	2.9107	1.6838	36.3	- 53.7	.002162	1.46
	3.2778	3.6349	3[illegible].8	- 84.0	.002406	1.72
	3.2658	2.7411	32.2	-100.6	.002369	1.23
	3.2479	2.3840	29.7	- 86.2	.002241	.99
	3.2299	2.0469	23.9	- 24.4	.002162	.62
	3.1920	1.6479	30.9	- 63.4	.002162	1.04

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
453.20	2.1799	3.6149	54.5	141.0	.002232	3.32
	2.2815	2.7801	33.6	57.3	.002432	1.37
	2.2659	2.4809	34.3	90.0	.002159	1.27
	2.2542	2.1271	24.3	41.6	.002302	.68
	2.2385	1.7283	25.3	61.4	.002302	.74
	2.6041	3.6403	34.5	173.3	.002715	1.62
	2.6041	2.7722	36.4	70.6	.002556	1.69
	2.5904	2.4438	41.2	78.7	.002447	2.07
	2.5974	2.1036	20.8	60.9	.002365	.51
	2.5865	1.7048	28.5	81.9	.002365	.96
	2.9384	3.6149	38.5	84.0	.002501	1.86
	2.9228	2.7449	46.9	64.5	.002511	2.76
	2.9208	2.4106	28.5	45.0	.002367	.96
	2.9247	2.0723	18.0	26.6	.002220	.36
	2.9189	1.6735	24.3	41.6	.002220	.66
	3.2962	3.6246	48.5	92.4	.002501	2.94
	3.2747	2.7292	32.5	82.9	.002511	1.33
	3.2512	2.3617	20.3	84.3	.002367	.49
	3.2512	2.0450	14.5	56.3	.002220	.23
	3.2063	1.6735	48.0	75.4	.002220	2.55
494.40	2.1606	3.6489	18.8	108.4	.002364	.42
	2.2783	2.8170	8.2	76.0	.002418	.08
	2.2603	2.4938	15.1	23.2	.002141	.24
	2.2564	2.1546	38.4	55.5	.002306	1.70
	2.2364	1.7436	29.2	28.3	.002306	.98
	2.5556	3.6509	10.6	-111.8	.002640	.15
	2.5935	2.7830	17.7	- 26.6	.002434	.39
	2.5935	2.4758	29.7	.0	.002446	1.08
	2.5915	2.1207	28.0	8.1	.002473	.97
	2.5875	1.7357	READINGS	INVALID		
	2.9067	3.6549	59.0	129.6	.002462	4.28
	2.9187	2.7970	19.8	180.0	.002372	.46
	2.9187	2.4219	17.7	153.4	.002262	.35
	2.9127	2.0823	20.6	-163.3	.002341	.50
	2.9287	1.6998	23.9	155.6	.002341	.67
	3.2758	3.6828	15.9	97.1	.002462	.31
	3.2698	2.7731	32.7	115.0	.002372	1.27
	3.2499	2.4040	23.1	149.0	.002262	.60
	3.2379	2.0589	29.7	180.0	.002341	1.03
	3.2040	1.6938	15.1	-156.8	.002341	.27

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
535.60	2.1740	3.6325	14.3	-171.9	.002184	.22
	2.2835	2.7879	53.0	-107.7	.002354	3.30
	2.2796	2.4868	24.3	- 85.2	.002184	.64
	2.2757	2.1584	9.0	153.4	READINGS	INVALID
	2.2639	1.7419	4.0	180.0	READINGS	INVALID
	2.6002	3.6305	18.0	- 26.6	.002961	.48
	2.6197	2.7644	6.4	- 71.6	.002994	.06
	2.6197	2.4438	18.6	- 77.5	.002798	.48
	2.6197	2.1075	7.3	-123.7	READINGS	INVALID
	NO READING					
	2.9013	3.6598	29.1	- 33.7	.002324	.98
	2.9032	2.7449	38.5	- 84.0	.002473	1.84
	2.9052	2.4184	6.4	108.4	.002322	.05
	2.9052	2.0665	8.3	76.0	.002256	.08
	2.9974	1.6833	22.6	169.7	.002256	.57
	3.2942	3.6403	37.7	-105.5	.002324	1.65
	3.2610	2.7586	23.5	-121.0	.002473	.66
	3.2317	2.3734	25.3	-118.6	.002322	.74
	3.2219	2.0450	25.8	128.7	.002256	.75
	3.1926	1.6676	32.8	-137.5	.002256	1.22
576.80	2.1466	3.6469	4.4	153.4	.002146	.02
	2.2623	2.7671	16.3	76.0	.002405	.32
	2.2623	2.4698	7.1	123.7	.002247	.06
	2.2484	2.1586	8.8	-116.6	.002241	.09
	2.2324	1.7436	17.9	173.7	.002241	.36
	2.5716	3.6429	42.7	166.6	.002574	2.34
	2.5955	2.7771	37.6	93.0	.002620	1.85
	2.5975	2.4579	12.0	99.5	.002496	.18
	2.5875	2.1147	10.1	101.3	.002441	.12
	2.5815	1.7137	READINGS	INVALID		
	2.9307	3.6389	49.9	- 33.7	.002637	3.28
	2.9227	2.7591	50.6	38.7	.002610	3.35
	2.9167	2.4279	34.1	10.0	.002522	1.47
	2.9147	2.0908	33.1	17.4	.002273	1.25
	2.9067	1.7037	43.5	39.5	.002273	2.15
	3.2658	3.6469	12.5	- 71.6	.002637	.21
	3.2579	2.7531	28.3	12.1	.002610	1.05
	3.2379	2.3820	34.5	[illegible].6	.002522	1.50
	3.2219	2.0788	28.8	15.9	.002273	.94
	3.1800	1.6718	17.9	6.3	.002273	.36

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
618.00	2.1701	3.6344	153.2	-167.1	.002365	27.75
	2.2874	2.8035	140.0	165.0	.002240	21.95
	2.2757	2.4927	134.4	172.2	.002122	19.17
	2.2717	2.1505	123.1	180.0	.002258	17.10
	2.2463	1.7439	138.4	-172.5	.002258	21.62
	2.5591	3.6403	131.9	-173.9	.002574	22.39
	2.6178	2.8016	159.5	177.8	.002446	31.12
	2.6178	2.4555	159.5	-177.8	.002505	31.87
	2.6178	2.1173	147.3	178.4	.002586	28.08
	2.6041	1.7322	147.5	-176.9	.002586	28.14
	2.9423	3.6325	151.3	179.2	.002596	29.72
	2.9423	2.7761	155.5	177.8	.002460	29.73
	2.9384	2.4242	157.4	178.5	.002335	28.94
	2.9365	2.0762	157.1	-167.4	.002358	29.11
	2.9306	1.7107	160.0	-166.1	.002358	30.19
	3.2981	3.6285	143.9	-174.4	.002596	26.83
	3.2884	2.7644	143.6	176.0	.002460	25.37
	3.2630	2.3871	151.4	-178.5	.002335	26.76
	3.2493	2.0528	148.4	-168.2	.002358	25.96
	3.2102	1.6696	147.6	176.1	.002358	25.70
659.20	1.9990	3.6130	29.7	-143.1	.002283	1.00
	2.1287	2.8030	4.4	63.4	.002480	.02
	2.1307	2.4878	14.0	8.1	.002403	.23
	2.1267	2.1586	12.5	71.6	.002272	.18
	2.0968	1.7257	16.3	- 76.0	.002272	.30
	2.4419	3.6289	46.2	- 46.7	.002671	2.85
	2.4379	2.7830	28.3	- 65.2	.002542	1.02
	2.4399	2.4519	2.0	89.7	.002418	.00
	2.4419	2.1187	6.3	161.6	.002439	.05
	2.4359	1.7057	18.2	- 77.5	.002439	.41
	2.7810	3.6409	12.5	- 71.6	.002601	.20
	2.7691	2.7651	4.0	.0	.002481	.02
	2.7611	2.4319	7.9	89.9	.002247	.07
	2.7631	2.0569	4.0	180.0	.002330	.02
	2.7531	1.6658	23.1	-110.0	.002330	.62
	3.1242	3.6329	17.9	- 96.3	.002601	.42
	3.1162	2.7631	4.4	-116.6	.002481	.02
	3.0883	2.3781	10.1	-101.3	.002247	.11
	3.0783	2.0489	10.1	-101.3	.002330	.12
	3.0344	1.6818	9.9	- 53.1	.002330	.11

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
700.40	2.1466	3.6168	127.1	.9	.002223	17.96
	2.2893	2.8074	118.0	12.8	.002342	16.29
	2.2893	2.4946	122.1	7.6	.002223	16.58
	2.2757	2.1623	129.2	14.5	.002162	18.04
	2.2502	1.7283	131.2	.9	.002162	18.60
	2.5904	3.6070	109.2	- 4.2	.002735	16.32
	2.6295	2.7761	145.6	4.0	.002606	27.63
	2.6178	2.4575	146.4	11.9	.002466	26.43
	2.6119	2.1193	143.4	2.4	.002492	25.61
	2.6080	1.7146	148.7	18.2	.002492	27.53
	2.9462	3.6207	124.8	- 14.0	.002679	20.86
	2.9462	2.7761	139.1	16.9	.002491	24.11
	2.9384	2.4321	147.5	16.7	.002305	25.06
	2.9326	2.0762	138.6	16.1	.002242	21.52
	2.9228	1.6891	150.0	17.2	.002242	25.21
	3.2962	3.6109	133.5	4.3	.002679	23.89
	3.2864	2.7605	141.4	2.5	.002491	24.89
	3.2610	2.3773	139.3	10.0	.002305	22.37
	3.2473	2.0430	133.9	- 6.1	.002242	20.10
	3.2160	1.6618	148.7	7.8	.002242	24.77
741.60	2.1247	3.6150	8.2	-104.0	.002313	.08
	2.2424	2.8289	10.6	68.2	.002325	.13
	2.2504	2.5037	11.9	90.0	.002234	.16
	2.2504	2.1905	10.6	111.8	.002208	.13
	2.2264	1.7277	24.1	35.0	.002208	.64
	2.5496	3.6209	46.3	129.8	.002815	3.02
	2.5815	2.7930	14.3	-123.7	.002687	.27
	2.5815	2.4818	12.5	108.4	.002368	.19
	2.5835	2.1247	19.8	- 90.0	.002625	.51
	2.5756	1.7516	21.7	90.0	.002625	.62
	2.9007	3.6110	19.9	174.3	.002627	.52
	2.9007	2.8050	37.3	-122.0	.002529	1.76
	2.9007	2.4738	19.5	-114.0	.002125	.40
	2.8948	2.0948	12.5	108.4	.002430	.19
	2.8948	1.7097	7.1	33.7	.002430	.06
	3.2559	3.6429	20.4	29.1	.002627	.54
	3.2559	2.7691	7.9	- 89.9	.002529	.08
	3.2239	2.4020	17.9	- 83.7	.002125	.34
	3.2100	2.0349	16.3	-104.0	.002430	.32
	3.1800	1.7017	18.8	108.4	.002430	.43

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
787.80	2.1447	3.6090	8.3	- 14.0	.002293	.08
	2.2933	2.8172	39.8	- 30.5	.002497	1.98
	2.2893	2.5064	47.6	- 53.6	.002116	2.40
	2.2717	2.1720	53.3	- 60.5	.002342	3.33
	2.2698	1.7419	56.6	4.1	.002342	3.76
	2.5611	3.6422	14.7	- 74.1	.002624	.28
	2.6217	2.7644	22.8	- 45.0	.002831	.74
	2.6139	2.4692	35.3	- 59.0	.002492	1.55
	2.6119	2.0997	34.3	- 61.9	.002597	1.53
	2.6080	1.7361	40.9	- 57.1	.002597	2.17
	2.9267	3.6227	29.1	- 33.7	.002404	1.02
	2.9267	2.7449	63.2	- 73.3	.002406	4.80
	2.9306	2.4145	72.4	- 77.1	.002373	6.23
	2.9286	2.0880	13.5	- 63.4	.002363	.22
	2.9286	1.6931	49.8	- 68.6	.002363	2.93
	3.3138	3.6207	28.5	- 81.9	.002404	.98
	3.2864	2.7527	32.3	- 90.0	.002406	1.25
	3.2630	2.3597	44.2	- 65.8	.002373	2.32
	3.2434	2.0274	8.3	104.0	.002363	.08
	3.2102	1.6794	54.5	- 90.0	.002363	3.51
824.00	2.1327	3.6130	62.4	11.0	.002358	4.59
	2.2763	2.8090	31.9	-111.8	.002309	1.18
	2.2783	2.4658	25.7	-112.6	.002274	.75
	2.2763	2.1446	24.1	- 99.5	.002504	.72
	2.2823	1.7317	11.5	-121.0	.002504	.17
	2.5536	3.6070	50.5	- 30.6	.002655	3.39
	2.5975	2.7771	28.1	129.3	.002591	1.02
	2.5995	2.4519	26.9	-107.1	.002615	.95
	2.5995	2.0948	7.1	-146.3	.002563	.07
	2.5975	1.7177	47.5	-106.9	.002563	2.90
	2.9247	3.5950	13.8	180.0	.002699	.26
	2.9187	2.7451	19.9	95.7	.002539	.50
	2.9167	2.4040	9.9	143.1	.002488	.12
	2.9007	2.0828	32.2	-132.5	.002247	1.16
	2.9127	1.6638	24.8	-151.4	.002247	.69
	3.2599	3.6150	49.6	-175.4	.002699	3.32
	3.2559	2.7372	22.1	169.7	.002539	.62
	3.2419	2.3621	22.1	116.6	.002488	.61
	3.2080	2.0429	17.9	173.7	.002247	.36
	3.1800	1.6479	30.8	-135.0	.002247	1.06

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
865.20	2.2053	3.6207	36.4	3.2	.002369	1.57
	2.2815	2.7879	40.0	49.1	.002359	1.89
	2.2796	2.4829	99.4	66.0	.002187	10.80
	2.2678	2.1486	94.7	63.4	.002293	10.29
	2.2639	1.7322	67.2	57.3	.002293	5.17
	2.6041	3.6168	28.9	55.2	.002900	1.21
	2.6041	2.7859	31.5	50.2	.002520	1.25
	2.6061	2.4438	71.3	61.3	.002523	6.42
	2.6061	2.0958	104.9	67.4	.002594	14.28
	2.5943	1.6911	81.2	34.9	.002594	8.54
	2.9130	3.6227	41.5	119.1	.002636	2.27
	2.9247	2.7644	77.2	70.1	.002491	7.43
	2.9228	2.4203	75.8	61.4	.002206	6.34
	2.9071	2.0645	72.2	26.6	.002313	6.03
	2.9071	1.6813	105.3	53.6	.002313	12.83
	3.2649	3.6168	32.5	29.7	.002636	1.39
	3.2649	2.7566	72.7	70.6	.002491	6.59
	3.2532	2.3793	92.2	66.8	.002206	9.37
	3.2258	2.0293	84.5	49.8	.002313	8.25
	3.1887	1.6579	100.9	53.1	.002313	11.77
906.40	2.1686	3.6150	45.6	- 5.0	.002490	2.59
	2.3022	2.8389	28.3	24.8	.002774	1.11
	2.3182	2.5556	38.4	11.9	.002405	1.77
	2.3182	2.2284	45.6	17.7	.002188	2.28
	2.3182	1.7875	47.0	- 14.6	.002188	2.42
	2.5656	3.6329	31.9	-119.7	.002808	1.43
	2.6175	2.8010	51.7	- 43.5	.002692	3.60
	2.6334	2.5137	52.8	- 13.0	.002528	3.52
	2.6394	2.1905	39.5	.0	.002501	1.96
	2.6633	1.7636	48.5	11.8	.002501	2.94
	2.9047	3.6309	63.2	- 20.1	.002662	5.31
	2.9446	2.8170	48.1	- 19.2	.002588	3.00
	2.9526	2.4698	40.3	- 11.3	.002354	1.91
	2.9646	2.1147	58.6	- 11.7	.002506	4.30
	2.9746	1.7476	55.7	- 6.1	.002506	3.88
	3.2878	3.6309	63.8	- 16.2	.002662	5.42
	3.2798	2.8050	44.4	- 32.3	.002588	2.55
	3.2778	2.4459	43.4	- 43.2	.002354	2.21
	3.2618	2.1067	52.8	- 13.0	.002506	3.49
	3.2399	1.7277	57.6	- 5.9	.002506	4.16

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
947.60	2.2502	3.6168	83.1	-174.4	.002571	8.88
	2.3069	2.7996	4.5	-116.6	.002356	.02
	2.3167	2.4907	12.8	-108.4	.002207	.18
	2.3109	2.1623	5.7	-135.0	.002261	.04
	2.3089	1.7204	9.0	116.6	.002261	.09
	2.5885	3.5894	20.2	- 36.9	.002561	.52
	2.6413	2.7507	18.3	- 6.3	.002658	.44
	2.6569	2.4321	12.3	- 9.5	.002529	.19
	2.6452	2.0958	42.8	- 70.7	.002542	2.32
	2.6413	1.7009	27.1	-116.6	.002542	.93
	2.9717	3.6012	36.4	- 3.2	.002657	1.76
	2.9697	2.7488	30.0	-109.7	.002550	1.15
	2.9619	2.4125	13.5	153.4	.002311	.21
	2.9638	2.0528	27.4	126.0	.002366	.89
	2.9619	1.6755	28.9	167.9	.002366	.99
	3.3255	3.5992	14.3	171.9	.002657	.27
	3.3021	2.7331	13.5	-116.6	.002550	.23
	3.2845	2.3500	28.5	-135.0	.002311	.94
	3.2766	2.0176	22.3	174.8	.002366	.59
	3.2454	1.6520	21.1	163.3	.002366	.52
988.80	2.0868	3.6070	63.3	180.0	.002158	4.32
	2.3002	2.8349	24.1	35.0	.002581	.75
	2.3142	2.5436	30.9	50.2	.002184	1.04
	2.3142	2.2244	42.5	27.8	.002221	2.00
	2.3142	1.7955	42.0	48.8	.002221	1.96
	2.5815	3.6209	41.7	5.4	.002818	2.45
	2.6354	2.7990	41.6	64.7	.003093	2.67
	2.6454	2.5117	57.4	88.0	.002664	4.38
	2.6534	2.1506	51.6	32.5	.002679	3.56
	2.6514	1.7397	42.5	27.8	.002679	2.41
	2.9406	3.6289	13.3	116.6	.002776	.24
	2.9347	2.7890	32.6	76.0	.002699	1.44
	2.9406	2.4758	31.9	60.3	.002543	1.29
	2.9486	2.1367	29.4	42.3	.002454	1.06
	2.9466	1.7536	35.0	47.3	.002454	1.50
	3.2738	3.6329	19.5	24.0	.002776	.53
	3.2738	2.7930	42.0	41.2	.002699	2.38
	3.2579	2.4259	53.2	48.0	.002543	3.60
	3.2399	2.1087	23.1	59.0	.002454	.65
	3.2200	1.7337	36.3	45.0	.002454	1.62

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1030.00	2.1877	3.6168	59.6	- 24.0	.002297	4.08
	2.3255	2.8133	46.4	145.6	.002532	2.73
	2.3363	2.5142	33.1	127.6	.002166	1.19
	2.3480	2.1818	4.5	153.4	.002214	.02
	2.3363	1.7517	18.0	116.6	.002214	.36
	2.6295	3.5934	28.5	-171.9	.002872	1.17
	2.6588	2.7879	30.3	180.0	.002705	1.24
	2.6588	2.4888	41.4	-137.0	.002455	2.10
	2.6882	2.1232	20.2	126.9	.002681	.55
	2.6784	1.7204	19.0	122.0	.002681	.49
	2.9658	3.6129	37.2	-130.6	.002546	1.76
	2.9775	2.7801	23.0	127.9	.002424	.64
	2.9775	2.4399	22.6	-153.4	.002183	.56
	2.9853	2.0723	21.1	-106.7	.002441	.54
	2.9853	1.7009	6.4	-108.4	.002441	.05
	3.3431	3.6070	24.2	- 90.0	.002546	.75
	3.3333	2.7605	12.3	- 80.5	.002424	.18
	3.3196	2.3891	9.0	63.4	.002183	.09
	3.2884	2.0371	21.4	- 48.8	.002441	.56
	3.2708	1.6774	10.1	- 36.9	.002441	.12
1071.20	2.1406	3.5830	29.4	19.7	.002451	1.06
	2.2623	2.8608	49.5	118.6	.002497	3.07
	2.2943	2.5696	17.7	116.6	.002341	.37
	2.3102	2.2264	37.1	115.2	.002292	1.58
	2.3062	1.8115	50.8	103.5	.002292	2.96
	2.5536	3.6170	49.4	163.7	.002821	3.45
	2.6055	2.7990	32.7	115.0	.002707	1.45
	2.6155	2.4838	8.4	135.0	.002742	.10
	2.6414	2.1666	57.7	128.0	.002664	4.44
	2.6414	1.7556	62.1	112.5	.002664	5.13
	2.9167	3.6010	4.4	26.6	.002714	.03
	2.9207	2.8070	31.3	124.7	.002513	1.23
	2.9207	2.4658	26.6	138.0	.002264	.80
	2.9426	2.1167	42.8	123.7	.002406	2.20
	2.9446	1.7476	41.1	125.2	.002406	2.04
	3.2738	3.6090	40.8	157.2	.002714	2.25
	3.2758	2.7810	35.2	141.8	.002513	1.56
	3.2618	2.4339	31.3	145.3	.002264	1.11
	3.2539	2.0928	34.0	125.5	.002406	1.39
	3.2279	1.7277	41.1	125.2	.002406	2.04

Table B-IV. Rear-Upper Grid Calculations - Model 35 (Continued)

Model 35, Shot 337

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1112.40	2.2151	3.6266	98.2	170.5	.002588	12.47
	2.3030	2.8563	16.3	- 82.9	.002303	.30
	2.3284	2.5298	14.3	-171.9	.002405	.24
	2.3324	2.2151	15.4	156.8	.002405	.28
	2.3245	1.8006	7.3	-123.7	.002405	.06
	2.5826	3.6070	54.8	173.7	.002747	4.13
	2.6452	2.8172	10.1	126.9	.002654	.14
	2.6530	2.4946	34.4	93.4	.002650	1.56
	2.6530	2.1681	42.8	109.3	.002669	2.44
	2.6549	1.7771	31.6	116.6	.002669	1.33
	2.9697	3.6149	20.3	84.3	.002784	.57
	2.9599	2.8055	26.3	- 94.4	.002440	.84
	2.9580	2.4575	7.3	56.3	.002276	.06
	2.9619	2.1075	24.4	114.4	.002436	.72
	2.9619	1.7341	19.0	122.0	.002436	.44
	3.3060	3.6227	38.8	-171.0	.002784	2.10
	3.3060	2.7820	41.5	-150.9	.002440	2.11
	3.2942	2.4066	38.1	-148.0	.002276	1.65
	3.2688	2.0645	32.8	-169.4	.002436	1.31
	3.2473	1.7107	28.7	-129.3	.002436	1.00
1153.60	2.0449	3.5990	63.7	-126.2	.002300	4.66
	2.2643	2.8449	44.2	-100.3	.002635	2.57
	2.2803	2.5676	31.7	-176.4	.002328	1.17
	2.2963	2.2324	25.7	180.0	.002264	.75
	2.3022	1.8055	36.8	-126.3	.002264	1.53
	2.4998	3.6229	38.4	-124.5	.002528	1.86
	2.5995	2.8070	44.4	-159.1	.002932	2.89
	2.6135	2.5177	33.8	-173.3	.002785	1.60
	2.6274	2.2065	14.0	-171.9	.002571	.25
	2.6274	1.7835	18.7	-148.0	.002571	.45
	2.9187	3.6209	78.4	-146.3	.002920	8.98
	2.9187	2.7810	75.5	-137.1	.002932	8.37
	2.9247	2.4718	46.0	-154.5	.002592	2.74
	2.9327	2.1387	40.0	171.5	.002460	1.97
	2.9347	1.7636	11.9	180.0	.002460	.17
	3.2359	3.6030	38.9	-114.0	.002920	2.21
	3.2399	2.7611	21.8	-174.8	.002932	.70
	3.2299	2.4140	26.0	-171.3	.002592	.88
	3.2219	2.0868	12.7	128.7	.002460	.20
	3.2100	1.7057	28.8	-105.9	.002460	1.02

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
16.70	2.1183	3.5992	19.8	- 84.3	.002295	.45
	2.1183	2.6794	10.6	68.2	.002294	.13
	2.1183	2.3664	16.9	69.4	.002196	.31
	2.1374	2.0420	34.4	-113.6	.002236	1.33
	2.1622	1.6851	38.3	-101.9	.002236	1.64
	2.4962	3.6240	31.8	- 97.1	.002098	1.06
	2.4790	2.6813	17.6	- 63.4	.002080	.32
	2.4580	2.3702	30.6	- 75.1	.002413	1.13
	2.4351	2.0611	11.5	149.0	.002118	.14
	2.4389	1.6947	48.5	-116.6	.002118	2.49
	2.9198	3.6126	12.6	-141.3	.002517	.20
	2.8550	2.7004	29.3	-137.7	.002151	.92
	2.8397	2.3721	34.4	-113.6	.002524	1.50
	2.8397	2.0458	14.4	-164.1	.002411	.25
	2.8435	1.6908	18.2	-139.4	.002411	.40
	3.2729	3.6107	31.6	- 93.6	.002517	1.26
	3.2519	2.7385	21.3	- 56.3	.002151	.49
	3.2481	2.3912	30.9	- 63.4	.002524	1.20
	3.2691	2.0496	28.2	-102.1	.002411	.96
	3.3282	1.6794	49.9	161.6	.002411	3.00
57.60	2.1142	3.5895	46.2	67.8	.002387	2.55
	2.1142	2.6680	22.2	- 37.9	.002270	.56
	2.1142	2.3504	26.2	- 48.0	.002260	.77
	2.1220	2.0368	11.0	- 45.0	.002193	.13
	2.1510	1.6651	19.1	- 66.0	.002193	.40
	2.4705	3.5876	16.6	20.6	.002450	.34
	2.4724	2.6583	29.7	- 31.6	.002397	1.06
	2.4530	2.3427	33.1	- 28.1	.002642	1.44
	2.4182	2.0387	47.5	- 35.0	.002141	2.41
	2.4105	1.6457	36.9	- 71.6	.002141	1.46
	2.8287	3.5973	23.7	145.0	.002213	.62
	2.7977	2.6680	21.0	-123.7	.002092	.46
	2.7996	2.3582	11.0	-135.0	.002325	.14
	2.7977	2.0329	16.7	-125.5	.002506	.35
	2.7977	1.6728	22.7	-121.0	.002506	.64
	3.2236	3.5857	17.9	12.5	.002213	.36
	3.2372	2.6951	28.0	- 56.3	.002092	.82
	3.2391	2.3698	20.7	- 41.2	.002325	.50
	3.2507	2.0136	35.7	- 60.6	.002506	1.60
	3.2643	1.6805	34.0	-113.6	.002506	1.44

Table B-V. Rear-Upper Grid Calculations - Model 35
with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
98.50	2.1355	3.6412	8.4	135.0	.002187	.08
	2.1355	2.6660	35.1	- 51.8	.002213	1.36
	2.1355	2.3473	30.7	- 45.0	.002060	.97
	2.1450	2.0344	25.7	- 4.4	.002065	.68
	2.1698	1.6679	19.4	24.0	.002065	.39
	2.5115	3.6298	27.7	- 4.1	.002239	.86
	2.5038	2.6660	17.6	-116.6	.002336	.36
	2.4866	2.3550	3.9	180.0	.002632	.02
	2.4733	2.0344	39.4	- 36.9	.002279	1.77
	2.4504	1.6603	43.3	24.2	.002279	2.13
	2.9098	3.6260	31.6	- 3.6	.002247	1.12
	2.8435	2.6832	25.7	- 4.4	.002084	.69
	2.8321	2.3645	23.8	- 48.4	.002306	.65
	2.8302	2.0324	19.4	- 24.0	.002331	.44
	2.8321	1.6718	20.3	- 29.1	.002331	.48
	3.2901	3.6145	39.5	- 2.9	.002247	1.75
	3.2672	2.7156	24.4	14.0	.002084	.62
	3.2634	2.3779	8.1	- 14.0	.002306	.08
	3.2863	2.0191	4.4	153.4	.002331	.02
	3.3149	1.6489	37.2	- 58.0	.002331	1.61
139.40	2.1084	3.5954	58.8	- 7.6	.002316	4.01
	2.1355	2.6409	49.0	- 6.8	.002550	3.06
	2.1355	2.3291	41.0	- 31.4	.002317	1.95
	2.1471	2.0348	30.2	14.9	.002239	1.02
	2.1684	1.6728	26.1	- 26.6	.002239	.76
	2.4976	3.5857	12.3	18.4	.002311	.17
	2.4647	2.6428	5.8	89.9	.002224	.04
	2.4492	2.3427	16.5	- 45.0	.002564	.35
	2.4492	2.0155	24.4	- 61.4	.002364	.70
	2.4492	1.6631	21.5	- 5.2	.002364	.55
	2.8596	3.5954	11.0	-135.0	.002208	.13
	2.8228	2.6660	38.5	45.0	.002046	1.52
	2.8151	2.3408	15.7	- 7.1	.002451	.30
	2.8151	2.0252	15.7	- 7.1	.002440	.30
	2.8151	1.6631	14.8	23.2	.002440	.27
	3.2623	3.5837	45.5	160.0	.002208	2.29
	3.2604	2.7009	34.0	156.4	.002046	1.18
	3.2469	2.3679	19.8	-168.7	.002451	.48
	3.2469	2.0155	19.8	101.3	.002440	.48
	3.2836	1.6496	15.7	29.7	.002440	.30

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
180.30	2.1927	3.6336	28.2	12.1	.002507	1.00
	2.1832	2.6603	38.3	34.5	.002336	1.71
	2.1698	2.3263	44.1	26.6	.002256	2.19
	2.1737	2.0420	33.5	- 28.1	.002133	1.20
	2.1927	1.6565	45.9	- 25.5	.002133	2.24
	2.5229	3.6336	23.8	41.6	.002259	.64
	2.5038	2.6718	46.0	31.0	.002088	2.21
	2.4981	2.3435	46.4	- 12.3	.002569	2.77
	2.4847	2.0134	31.8	- 60.3	.002379	1.20
	2.4714	1.6584	19.8	- 84.3	.002379	.47
	2.8931	3.6183	8.8	- 26.6	.002577	.10
	2.8702	2.7099	27.4	30.3	.002181	.82
	2.8473	2.3626	19.7	.0	.002535	.49
	2.8454	2.0305	12.0	- 80.5	.002365	.17
	2.8454	1.6775	12.0	- 80.5	.002365	.17
	3.2481	3.6298	16.7	135.0	.002577	.36
	3.2366	2.7290	33.1	107.4	.002181	1.19
	3.2443	2.3740	12.5	71.6	.002535	.20
	3.2824	2.0382	37.9	38.7	.002365	1.70
	3.3282	1.6565	33.8	6.7	.002365	1.35
221.20	2.1355	3.6012	19.5	5.7	.002351	.45
	2.1665	2.6621	35.0	33.7	.002362	1.45
	2.1742	2.3485	47.0	24.4	.002158	2.38
	2.1762	2.0194	56.4	- 46.4	.002475	3.93
	2.2091	1.6534	30.4	- 26.6	.002475	1.15
	2.5150	3.6012	45.5	- 20.0	.002423	2.51
	2.5034	2.6660	44.7	.0	.002193	2.19
	2.4937	2.3330	42.1	33.7	.002599	2.30
	2.4647	1.9884	51.0	40.4	.002437	3.17
	2.4511	1.6438	42.7	30.1	.002437	2.22
	2.8674	3.5915	43.5	26.6	.002404	2.27
	2.8461	2.6796	19.1	- 24.0	.002063	.38
	2.8345	2.3408	31.3	7.1	.002417	1.19
	2.8170	2.0136	25.6	- 8.7	.002227	.73
	2.8170	1.6515	24.0	- 14.0	.002227	.64
	3.2507	3.5954	57.2	- 17.8	.002404	3.93
	3.2507	2.7318	53.4	10.5	.002063	2.94
	3.2507	2.3795	70.8	15.9	.002417	6.05
	3.2759	2.0387	46.2	- 22.2	.002227	2.38
	3.3166	1.6534	48.8	4.6	.002227	2.65

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
262.10	2.2118	3.6355	23.8	- 41.6	.002407	.68
	2.2118	2.6794	56.5	- 29.2	.002389	3.82
	2.2118	2.3454	69.5	- 34.6	.002117	5.11
	2.2118	2.0019	71.5	- 39.4	.002145	5.48
	2.2195	1.6431	29.1	- 61.7	.002145	.91
	2.5649	3.6183	30.2	- 11.3	.002346	1.07
	2.5477	2.6718	46.8	- 27.6	.002294	2.51
	2.5324	2.3664	51.4	- 4.4	.002635	3.49
	2.5229	2.0458	62.7	12.7	.002418	4.75
	2.5076	1.6794	30.8	- 39.8	.002418	1.15
	2.9313	3.6374	37.9	- 27.9	.002411	1.73
	2.8874	2.7023	33.1	- 17.4	.002053	1.12
	2.8779	2.3664	29.6	- 36.9	.002238	.98
	2.8702	2.0267	36.7	- 36.3	.002323	1.56
	2.8683	1.6718	46.6	- 36.4	.002323	2.52
	3.3015	3.6126	22.1	- 63.4	.002411	.59
	3.2882	2.7385	31.2	- 71.6	.002053	1.00
	3.3111	2.3931	53.1	- 31.3	.002238	3.18
	3.3244	2.0210	45.9	- 64.5	.002323	2.44
	3.3760	1.6603	35.1	- 51.8	.002323	1.43
303.00	2.1530	3.5857	9.9	-101.3	.002303	.11
	2.2149	2.6350	62.0	- 48.8	.002431	4.67
	2.2304	2.3098	43.7	- 32.3	.002207	2.11
	2.2304	1.9748	41.7	- 27.8	.002363	2.06
	2.2227	1.6283	53.4	- 56.9	.002363	3.37
	2.5440	3.5954	62.7	- 7.1	.002433	4.78
	2.5440	2.6447	35.2	- 6.3	.002351	1.46
	2.5440	2.3291	56.4	- 43.6	.002882	4.58
	2.5247	2.0019	54.7	- 83.9	.002364	3.54
	2.4743	1.6244	75.1	- 79.6	.002364	6.67
	2.9003	3.5741	31.3	- 29.7	.002545	1.25
	2.8771	2.6699	43.7	- 32.3	.002038	1.95
	2.8577	2.3233	47.5	- 35.0	.002328	2.62
	2.8461	1.9923	54.0	- 30.3	.002313	3.37
	2.8538	1.6244	62.6	- 53.8	.002313	4.53
	3.2604	3.5760	5.5	45.0	.002545	.04
	3.2604	2.7028	18.3	- 58.0	.002038	.34
	3.2953	2.3524	37.4	- 99.0	.002328	1.63
	3.2953	1.9981	37.1	- 84.0	.002313	1.60
	3.3379	1.6263	37.7	-124.5	.002313	1.65

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
343.90	2.2099	3.6260	22.1	10.3	.002186	.53
	2.2519	2.6336	45.9	-154.5	.002356	2.48
	2.2481	2.3225	69.7	- 81.9	.002173	5.28
	2.2481	1.9828	50.4	- 59.4	.002188	2.78
	2.2481	1.5992	79.3	- 55.1	.002188	6.89
	2.6260	3.6107	15.4	- 39.8	.002452	.29
	2.5821	2.6679	42.5	- 21.8	.002163	1.95
	2.5725	2.3282	39.1	- 45.0	.002447	1.87
	2.5286	1.9924	57.3	- 63.4	.002102	3.45
	2.5210	1.6069	83.9	- 23.6	.002102	7.40
	2.9580	3.6221	26.5	42.0	.002541	.89
	2.9237	2.6794	39.9	- 32.9	.002167	1.73
	2.9160	2.3397	45.5	5.0	.002478	2.57
	2.9160	2.0000	46.0	- 31.0	.002527	2.67
	2.9046	1.6221	44.3	- 57.7	.002527	2.48
	3.3053	3.6164	45.4	34.4	.002541	2.62
	3.2977	2.7233	57.6	- 38.0	.002167	3.60
	3.3053	2.3569	23.8	- 24.4	.002478	.70
	3.3282	1.9847	48.5	- 63.4	.002527	2.97
	3.3550	1.6298	29.3	-137.7	.002527	1.09
384.80	2.1742	3.5895	12.4	- 51.3	.002070	.16
	2.1742	2.6157	66.1	.0	.001919	4.19
	2.2401	2.2420	73.9	- 54.6	.002150	5.87
	2.2556	1.9322	25.3	- 32.5	.002214	.71
	2.2672	1.5644	31.6	- 10.6	.002214	1.11
	2.5557	3.5857	39.7	168.7	.002369	1.86
	2.5828	2.6292	27.6	- 39.3	.002361	.90
	2.5712	2.3020	27.8	- 65.2	.002565	.99
	2.5499	1.9516	41.6	- 37.4	.002518	2.18
	2.5499	1.5915	41.2	- 8.1	.002518	2.14
	2.9197	3.5915	24.4	-151.4	.002319	.69
	2.9100	2.6486	27.0	-149.7	.002232	.81
	2.9022	2.3272	41.2	-135.0	.002242	1.91
	2.8848	1.9690	42.6	-155.8	.002512	2.28
	2.8771	1.5876	40.0	-150.9	.002512	2.01
	3.2972	3.6012	7.0	- 33.7	.002319	.06
	3.3049	2.6680	47.0	- 82.9	.002232	2.47
	3.3166	2.3427	22.[illegible]	- 45.0	.002242	.54
	3.3166	1.9555	13.7	- 8.1	.002512	.24
	3.3166	1.6070	45.3	- 59.0	.002512	2.58

Table B-V. Rear-Upper Grid Calculations - Model 35
with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
425.70	2.2176	3.6164	18.2	49.4	.002461	.41
	2.3168	2.6336	148.2	10.0	.002423	26.61
	2.2901	2.2634	67.5	37.9	.002414	5.49
	2.2691	1.9695	27.5	69.0	.002183	.82
	2.2786	1.5935	24.7	61.4	.002183	.67
	2.5878	3.6183	8.8	63.4	.002515	.10
	2.6031	2.6508	29.3	42.3	.002387	1.03
	2.5840	2.3034	22.1	10.3	.002934	.71
	2.5611	1.9676	32.8	32.7	.002647	1.43
	2.5611	1.6011	25.9	98.7	.002647	.89
	2.9370	3.6107	13.2	63.4	.002303	.20
	2.9008	2.6660	8.4	45.0	.002022	.07
	2.8874	2.3111	17.0	- 54.5	.002293	.33
	2.8779	1.9828	25.3	51.3	.002134	.68
	2.8702	1.6031	40.5	47.0	.002134	1.75
	3.3111	3.6126	22.1	79.7	.002303	.56
	3.3034	2.6775	43.4	78.2	.002022	2.36
	3.3206	2.3416	16.3	104.0	.002293	.30
	3.3416	1.9828	19.7	90.0	.002134	.42
	3.3779	1.5916	49.3	- 2.3	.002134	2.60
466.60	2.1859	3.6031	90.2	7.4	.002507	10.20
	2.3175	2.6409	36.3	74.5	.002445	1.61
	2.2924	2.2827	45.5	70.0	.002197	2.27
	2.2652	1.9574	31.3	29.7	.002225	1.09
	2.2788	1.5857	26.4	72.9	.002225	.78
	2.5595	3.5934	35.0	33.7	.002423	1.49
	2.6041	2.6486	24.4	61.4	.002333	.69
	2.5924	2.3059	44.8	55.6	.002839	2.84
	2.5770	1.9690	22.2	15.3	.002508	.62
	2.5460	1.6167	11.3	-121.0	.002508	.16
	2.9255	3.6031	23.4	4.8	.002337	.64
	2.9158	2.6544	39.4	20.2	.002098	1.63
	2.9119	2.3136	59.3	41.0	.002443	4.29
	2.9003	1.9884	37.0	3.0	.002461	1.68
	2.9042	1.6167	30.4	39.8	.002461	1.13
	3.3011	3.6225	11.3	31.0	.002337	.15
	3.3146	2.7144	60.6	84.5	.002098	3.85
	3.3127	2.3582	31.6	47.5	.002443	1.22
	3.3166	1.9748	19.8	- 78.7	.002461	.48
	3.3650	1.6050	32.2	115.0	.002461	1.27

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
507.50	2.3053	3.6279	92.2	- 41.5	.002735	11.63
	2.3263	2.6679	55.8	- 81.9	.002445	3.81
	2.3053	2.3053	63.7	- 73.8	.002193	4.44
	2.2958	1.9847	61.9	- 59.3	.002233	4.28
	2.2863	1.6183	49.7	- 96.8	.002233	2.75
	2.6164	3.6374	61.9	- 22.5	.002459	4.71
	2.6145	2.6718	32.1	- 79.4	.002356	1.21
	2.6088	2.3397	26.3	- 77.0	.002526	.87
	2.5821	1.9733	33.8	- 83.3	.002490	1.42
	2.5553	1.5916	33.5	- 45.0	.002490	1.39
	2.9599	3.6126	35.0	- 73.6	.002531	1.55
	2.9370	2.6794	17.9	6.3	.002118	.34
	2.9313	2.3492	8.1	- 14.0	.002195	.07
	2.9143	1.9847	50.3	-101.3	.002506	3.17
	2.8931	1.6221	29.1	-118.3	.002506	1.06
	3.3206	3.6183	65.4	- 84.8	.002531	5.41
	3.3092	2.7366	51.8	-107.7	.002118	2.84
	3.3416	2.3645	28.2	-102.1	.002195	.88
	3.3454	1.9637	7.1	33.7	.002506	.06
	3.3645	1.6202	24.1	-145.0	.002506	.73
548.40	2.2536	3.5431	148.1	-176.2	.002549	27.94
	2.3253	2.5866	30.4	- 63.4	.002511	1.16
	2.3098	2.2227	54.5	- 88.0	.002354	3.49
	2.2962	1.9051	55.3	- 79.9	.002272	3.47
	2.2730	1.5373	60.9	-116.6	.002272	4.21
	2.6157	3.5702	22.8	-160.0	.002593	.67
	2.6099	2.6176	11.3	- 31.0	.002299	.15
	2.5983	2.2807	47.0	- 97.1	.002677	2.96
	2.5808	1.9361	75.7	-138.1	.002834	8.12
	2.5692	1.5934	READINGS	INVALID		
	2.9351	3.5702	9.7	180.0	.002522	.12
	2.9332	2.6563	16.7	-144.5	.002233	.32
	2.9197	2.3117	24.7	-135.0	.002387	.73
	2.8906	1.9400	23.7	-170.5	.002445	.68
	2.8906	1.5915	19.4	-143.1	.002445	.46
	3.3069	3.5586	8.7	-153.4	.002522	.10
	3.2991	2.6660	42.0	-103.4	.002283	2.01
	3.3069	2.3311	27.8	-114.8	.002387	.92
	3.3224	1.9787	31.2	93.6	.002445	1.19
	3.3456	1.5915	25.3	-147.5	.002445	.79

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
589.30	2.1603	3.6183	READINGS	INVALID		
	2.3397	2.6412	76.1	36.6	.002288	6.63
	2.3073	2.2519	39.7	26.6	.002500	1.97
	2.3053	1.9313	13.8	.0	READINGS	INVALID
	2.2595	1.5649	10.1	11.3	READINGS	INVALID
	2.5954	3.6298	15.8	.0	.002493	.31
	2.6240	2.6660	8.4	45.0	.002327	.08
	2.6031	2.2939	17.0	-144.5	.002524	.36
	2.5267	1.9237	10.6	111.8	READINGS	INVALID
	NO READING					
	2.9504	3.6126	33.8	173.3	.002448	1.40
	2.9237	2.6698	19.5	135.0	.002121	.40
	2.9141	2.3321	10.6	-158.2	.002338	.13
	2.8912	1.9809	24.7	61.4	.002297	.70
	2.8779	1.6107	12.0	- 9.5	.002297	.17
	3.3130	3.6145	29.3	132.3	.002448	1.05
	3.2996	2.6966	25.6	67.4	.002121	.70
	3.3302	2.3397	6.2	- 71.6	.002338	.05
	3.3435	1.9943	13.9	- 98.1	.002297	.22
	3.3435	1.6069	27.5	159.0	.002297	.87
630.20	NO READING					
	2.3853	2.6312	35.0	- 19.4	.002879	1.77
	2.3446	2.2401	43.5	- 10.3	.002672	2.52
	2.3098	1.9051	17.4	-116.6	.002488	.38
	2.2827	1.5392	13.0	- 26.6	.002488	.21
	2.6312	3.5702	15.6	.0	.002922	.35
	2.6157	2.6234	48.6	2.3	.002255	2.67
	2.5847	2.2711	31.1	.0	.002765	1.34
	2.5770	1.9458	59.2	23.2	.002350	4.12
	2.5247	1.5663	READINGS	INVALID		
	2.9022	3.5741	34.6	38.2	.002416	1.45
	2.9197	2.6699	35.2	6.3	.002043	1.27
	2.9100	2.3078	19.8	11.3	.002448	.48
	2.9022	1.9613	19.4	- 53.1	.002596	.49
	2.9022	1.5895	16.0	76.0	.002596	.33
	3.2875	3.5799	27.6	39.3	.002416	.92
	3.3088	2.6893	65.8	19.0	.002043	4.42
	3.3088	2.3253	31.7	55.5	.002448	1.74
	3.3204	1.9652	15.2	- 39.8	.002596	.30
	3.3204	1.6012	34.0	59.0	.002596	1.50

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
671.10	2.2290	3.6145	READINGS	INVALID		
	2.3721	2.6298	66.3	- 53.5	.002288	5.02
	2.3492	2.2443	11.8	- 90.0	.002367	.17
	2.2977	1.9160	10.1	- 11.3	.002403	.12
	2.2710	1.5592	.0	.0	.002403	.00
	2.6107	3.6298	21.3	33.7	.002479	.56
	2.6718	2.6679	48.4	11.8	.002430	2.84
	2.6336	2.2939	55.5	- 6.1	.002733	4.22
	2.5802	1.9466	29.3	- 19.7	.002598	1.12
	2.5267	1.5763	21.2	- 68.2	.002598	.59
	2.9771	3.6336	59.7	7.6	.002361	4.21
	2.9580	2.6737	35.1	- 38.2	.002088	1.29
	2.9332	2.3359	31.6	.0	.002155	1.07
	2.9027	1.9656	4.4	-153.4	.002491	.02
	2.8817	1.6260	15.8	180.0	.002491	.31
	3.3340	3.6317	33.1	17.4	.002361	1.29
	3.3607	2.7176	22.5	- 15.3	.002088	.53
	3.3511	2.3702	29.7	3.8	.002155	.95
	3.3550	1.9847	29.3	47.7	.002491	1.07
	3.3607	1.6355	41.8	19.3	.002491	2.18
712.00	NO READING		READINGS	INVALID		
	.4240	2.5789	53.4	- 10.5	.002687	3.83
	. 3446	2.2285	17.6	- 96.3	.002367	.37
	2 3195	1.9032	28.9	- 47.7	.002339	.98
	2.2827	1.5392	38.9	- 53.1	.002339	1.77
	2.6486	3.5818	43.9	12.8	.002772	2.67
	2.6621	2.6331	36.2	- 53.7	.002430	1.59
	2.6389	2.2652	19.5	- 5.7	.003023	.58
	2.6041	1.9361	48.6	- 73.7	.002540	3.00
	2.5324	1.5470	10.5	- 68.2	.002540	.14
	2.9603	3.5818	17.4	- 63.4	.002464	.37
	2.9468	2.6486	20.9	68.2	.002148	.47
	2.9409	2.3078	21.5	- 5.2	.002455	.57
	2.8984	1.9593	19.2	45.0	.002356	.44
	2.8867	1.5895	37.4	- 27.9	.002356	1.65
	3.3185	3.5895	5.8	180.0	.002464	.04
	3.3301	2.6834	14.2	-164.1	.002148	.22
	3.3379	2.3272	25.6	- 98.7	.002455	.80
	3.3398	1.9864	8.0	- 14.0	.002356	.08
	3.3591	1.6147	27.8	- 12.1	.002356	.91

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
752.90	NO READING		READINGS INVALID			
	2.4237	2.6202	31.8	- 60.3	.002412	1.22
	2.3473	2.2271	42.2	- 52.6	.002138	1.90
	2.3168	1.8950	61.3	- 93.7	.002617	4.91
	2.2939	1.5286	37.5	- 87.0	.002617	1.84
	2.6527	3.6393	22.1	-116.6	.002669	.65
	2.6927	2.6393	42.7	- 56.3	.002511	2.29
	2.6527	2.2920	36.4	- 49.4	.002657	1.76
	2.5935	1.9008	62.3	-101.0	.002526	4.90
	2.5305	1.5668	38.8	- 75.3	.002526	1.90
	2.9847	3.6183	14.4	- 15.9	.002514	.26
	2.9656	2.6927	30.0	- 23.2	.002075	.94
	2.9542	2.3340	19.8	- 84.3	.002348	.46
	2.9160	1.9790	41.4	- 90.0	.002399	2.06
	2.9141	1.6088	37.7	- 96.0	.002399	1.70
	3.3282	3.6317	14.2	-146.3	.002514	.25
	3.3473	2.7137	8.8	-116.6	.002075	.08
	3.3473	2.3454	33.1	-107.4	.002348	1.28
	3.3626	1.9828	45.9	- 64.5	.002399	2.52
	3.3874	1.6298	35.5	- 90.0	.002399	1.51
793.80	NO READING		READINGS INVALID			
	2.4395	2.5518	66.4	- 58.2	.002657	5.85
	2.3698	2.1955	79.9	- 41.1	.002232	7.13
	2.3156	1.8432	78.4	- 82.9	.002487	7.64
	2.2846	1.5024	48.8	- 94.6	.002487	2.96
	2.6389	3.5624	31.6	- 79.4	.002613	1.31
	2.6854	2.5983	31.2	- 86.4	.002524	1.23
	2.6621	2.2381	72.9	- 80.8	.002881	7.65
	2.5924	1.8761	15.2	- 50.2	.002643	.30
	2.5421	1.5102	67.9	- 66.4	.002643	6.09
	2.9739	3.5779	3.9	180.0	.002653	.02
	2.9739	2.6370	56.6	- 74.1	.002181	3.50
	2.9429	2.2885	45.1	- 82.6	.002322	2.36
	2.8984	1.9187	74.1	- 94.5	.002332	6.40
	2.8829	1.5528	80.7	-105.4	.002332	7.58
	3.3069	3.5818	33.1	- 90.0	.002653	1.45
	3.3252	2.6757	16.0	-104.0	.002181	.28
	3.3282	2.2962	33.3	- 96.7	.002322	1.29
	3.3591	1.9458	39.4	-122.9	.002332	1.81
	3.3591	1.5799	64.0	-109.5	.002332	4.77

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
834.70	NO READING		READINGS	INVALID		
	2.4580	2.5649	31.6	- 3.6	.002662	1.33
	2.4065	2.1756	73.0	- 71.1	.002521	6.71
	2.3263	1.8187	84.8	- 90.0	.002421	8.71
	2.2901	1.4809	55.5	- 73.5	.002421	3.73
	2.6584	3.6088	25.7	85.6	.002579	.85
	2.6947	2.6088	44.3	- 69.1	.002374	2.33
	2.6641	2.2214	37.9	- 81.0	.002858	2.06
	2.6031	1.8893	28.2	- 77.9	.002551	1.02
	2.5573	1.5057	38.8	- 75.3	.002551	1.92
	2.9809	3.6183	18.7	71.6	.002517	.44
	2.9809	2.6393	32.5	- 76.0	.002138	1.13
	2.9599	2.2901	22.5	- 52.1	.002338	.59
	2.9103	1.9065	55.0	- 14.5	.002340	3.54
	2.8931	1.5324	37.7	- 84.0	.002340	1.66
	3.3282	3.5992	25.3	- 51.3	.002517	.80
	3.3435	2.6985	43.6	- 95.2	.002138	2.03
	3.3435	2.3130	31.9	-111.8	.002338	1.19
	3.3416	1.9504	64.0	-123.7	.002340	4.79
	3.3664	1.5706	47.4	-106.9	.002340	2.63
875.60	NO READING		READINGS	INVALID		
	2.4705	2.5499	31.6	- 10.6	.002608	1.31
	2.3930	2.1278	54.5	- 34.8	.002348	3.48
	2.3156	1.7599	35.7	- 67.6	.002591	1.66
	2.3001	1.4501	37.7	- 78.1	.002591	1.85
	2.6409	3.5876	8.0	166.0	.002479	.08
	2.7009	2.5576	49.2	- 9.1	.002602	3.15
	2.6680	2.2014	21.0	- 33.7	.002676	.59
	2.5983	1.8490	71.7	- 49.4	.002402	6.17
	2.5518	1.4734	45.1	- 82.6	.002402	2.44
	2.9797	3.5954	19.4	- 36.9	.002563	.48
	2.9816	2.6060	21.4	- 90.0	.002382	.54
	2.9564	2.2711	45.5	- 70.0	.002605	2.70
	2.9506	1.9051	51.3	- 37.3	.002568	3.38
	2.8867	1.5160	37.5	- 21.3	.002568	1.81
	3.3224	3.5624	READINGS	INVALID		
	3.3224	2.6331	58.3	- 90.0	.002382	4.05
	3.3166	2.2672	[illegible].1	- 76.0	.002605	1.34
	3.3243	1.8935	54.0	- 59.7	.002568	3.75
	3.3456	1.5353	35.0	- 86.8	.002568	1.58

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
916.50	NO READING		READINGS	INVALID		
	2.4885	2.5592	READINGS	INVALID		
	2.4504	2.1450	76.9	- 22.6	.002337	6.91
	2.3397	1.7863	48.0	- 19.2	.002313	2.67
	2.2977	1.4447	62.7	- 77.3	.002313	4.54
	2.6508	3.6107	67.8	- 8.4	.002663	6.12
	2.7424	2.6011	59.7	- 7.6	.002504	4.46
	2.6813	2.2099	60.4	- 38.4	.002743	5.00
	2.6489	1.8359	92.7	- 29.3	.002596	11.16
	2.5630	1.4618	52.1	- 60.5	.002596	3.52
	2.9962	3.6069	39.9	- 32.9	READINGS	INVALID
	2.9809	2.6183	55.4	- 4.1	.002169	3.33
	2.9752	2.2481	76.1	- 53.4	.002376	6.89
	2.9504	1.8760	59.2	- 53.1	.002569	4.50
	2.9275	1.5191	64.4	- 40.0	.002569	5.33
	NO READING					
	3.3435	2.6412	58.3	24.0	.002169	3.68
	3.3511	2.2824	66.2	- 26.6	.002376	5.20
	3.3683	1.9046	55.7	- 22.9	.002569	3.98
	3.3683	1.5363	66.3	- 36.5	.002569	5.64
957.40	NO READING		READINGS	INVALID		
	NO READING					
	2.4627	2.0987	95.6	- 85.3	.002279	10.41
	2.3601	1.7444	55.0	- 81.9	.002274	3.44
	2.3136	1.3901	50.0	- 76.5	.002274	2.84
	2.7067	3.5779	76.7	-171.3	.002660	7.83
	2.7590	2.5499	34.0	- 31.0	.002342	1.35
	2.7144	2.1646	70.1	- 56.3	.002884	7.09
	2.6776	1.8045	34.8	- 26.6	.002521	1.52
	2.5770	1.4288	46.4	- 57.0	.002521	2.71
	3.0126	3.5741	35.2	- 6.3	.002589	1.61
	3.0358	2.6021	50.7	- 4.4	.002036	2.62
	3.0010	2.2110	48.6	2.3	.002583	3.06
	2.9855	1.8587	35.2	- 6.3	.002474	1.53
	2.9351	1.4753	17.4	-116.6	.002474	.37
	3.3611	3.5702	READINGS	INVALID		
	3.3746	2.6563	42.1	33.7	.002036	1.80
	3.3746	2.2381	34.6	- 51.8	.002583	1.55
	3.3746	1.8722	3.9	.0	.002474	.02
	3.39[illegible]	1.4966	23.5	- 24.4	.002474	.68

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
998.30	NO READING		READINGS	INVALID		
	2.5802	2.6126	READINGS	INVALID		
	2.4580	2.0515	65.4	- 95.2	.002478	5.29
	2.3473	1.7328	61.4	- 95.5	.002152	4.06
	2.3092	1.3969	33.7	-110.6	.002152	1.22
	2.5763	3.5992	READINGS	INVALID		
	2.7710	2.5840	53.8	28.4	.002284	3.31
	2.7195	2.1527	5.6	- 45.0	.002868	.04
	2.6794	1.8206	35.3	-116.6	.002646	1.65
	2.5878	1.4237	35.6	- 93.2	.002646	1.67
	3.0305	3.6031	READINGS	INVALID		
	3.0305	2.6145	19.4	-114.0	.002173	.41
	3.0229	2.2500	15.8	.0	.002640	.33
	2.9847	1.8721	24.4	-104.0	.002508	.75
	2.9198	1.5038	33.9	-125.5	.002508	1.44
	3.3836	3.5954	18.6	- 32.0	.002500	.43
	3.3779	2.6641	63.6	- 97.1	.002173	4.40
	3.3721	2.2557	9.9	126.9	.002640	.13
	3.3721	1.9046	8.4	-135.0	.002508	.09
	3.3893	1.5267	11.8	- 90.0	.002508	.18
1039.20	NO READING		READINGS	INVALID		
	2.6254	2.5286	83.8	- 86.0	.002809	9.86
	2.4569	2.0348	22.2	52.1	.002298	.56
	2.3543	1.6844	62.8	-111.8	.002374	4.68
	2.3020	1.3591	53.8	-139.4	.002374	3.43
	NO READING		READINGS	INVALID		
	2.8054	2.5750	29.4	7.6	.002487	1.08
	2.7183	2.1607	38.3	30.5	.002627	1.93
	2.6621	1.7735	41.0	-121.4	.002538	2.13
	2.5750	1.3940	53.4	169.5	.002538	3.62
	NO READING		READINGS	INVALID		
	3.0281	2.5847	29.7	- 78.7	.002342	1.04
	3.0165	2.2110	27.8	- 77.9	.002536	.98
	2.9797	1.8354	28.7	-151.7	.002393	.99
	2.9158	1.4482	39.9	-137.0	.002393	1.90
	3.3766	3.5605	READINGS	INVALID		
	3.3669	2.5944	56.5	-139.2	.002342	3.74
	3.3688	2.2459	9.7	180.0	.002536	.12
	3.3688	1.8664	16.0	-104.0	.002393	.31
	3.3979	1.4850	16.6	-110.6	.002393	.33

Table B-V. Rear-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1080.10	NO READING		READINGS	INVALID		
	2.5859	2.5305	16.7	-135.0	.002457	.34
	2.4714	2.0687	39.7	- 26.6	.002076	1.64
	2.3244	1.6756	8.4	- 45.0	.002528	.09
	2.2691	1.3626	24.7	-151.4	.002528	.77
	NO READING		READINGS	INVALID		
	2.7996	2.5878	23.7	- 90.0	.002534	.71
	2.7519	2.1718	66.1	- 17.4	.002917	6.38
	2.6584	1.7863	42.2	10.8	.002687	2.39
	2.5363	1.4332	19.7	180.0	.002687	.52
	NO READING		READINGS	INVALID		
	3.0363	2.5859	49.3	16.3	.002502	3.04
	3.0286	2.2233	54.6	- 12.5	.002625	3.91
	2.9599	1.8588	19.7	.0	.002346	.46
	2.8912	1.4771	15.9	82.9	.002346	.30
	NO READING		READINGS	INVALID		
	3.3359	2.6279	49.3	92.3	.002502	3.05
	3.3626	2.2557	14.2	- 56.3	.002625	.27
	3.3683	1.8893	7.9	.0	.002346	.07
	3.3836	1.5115	29.3	109.7	.002346	1.01
1121.00	NO READING		READINGS	INVALID		
	2.6137	2.5169	48.6	53.1	.002424	2.86
	2.4918	2.0174	23.7	-145.0	.002252	.63
	2.3601	1.6786	31.9	-142.4	.002271	1.15
	2.2807	1.3475	35.7	-157.6	.002271	1.45
	NO READING		READINGS	INVALID		
	2.8054	2.5518	30.4	- 63.4	.002245	1.04
	2.7803	2.1413	23.4	-138.4	.002965	.81
	2.7028	1.7812	33.0	-135.0	.002623	1.43
	2.5557	1.3940	53.9	-115.6	.002623	3.81
	NO READING		READINGS	INVALID		
	3.0745	2.5983	18.4	108.4	.002416	.41
	3.0687	2.1994	19.2	-135.0	.002845	.53
	2.9990	1.8354	23.4	- 85.2	.002618	.72
	2.9177	1.4637	15.7	- 97.1	.002618	.32
	NO READING		READINGS	INVALID		
	3.3650	2.6428	13.6	.0	.002416	.22
	3.3766	2.2343	32.1	104.0	.002845	1.46
	3.3766	1.8664	21.0	-146.3	.002618	.58
	3.3882	1.5121	41.2	171.9	.002618	2.23

Table B-V. Rear-Upper Grid Calculations - Model 35
with Baffle (Continued)

Model 35, Shot 338

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1161.96	NO READING		READINGS	INVALID		
	2.6145	2.5687	40.7	22.8	.002393	1.98
	2.4523	2.0553	59.2	53.1	.002027	3.55
	2.2996	1.6565	21.3	- 56.3	.002368	.54
	2.2366	1.3492	14.4	-164.1	.002368	.24
	2.6641	3.5916	READINGS	INVALID		
	2.8130	2.5611	34.4	13.2	.002590	1.54
	2.7347	2.1565	14.2	-123.7	.002702	.27
	2.6355	1.7634	25.3	-128.7	.002477	.79
	2.5134	1.3855	23.8	41.6	.002477	.70
	2.9943	3.6107	READINGS	INVALID		
	3.0305	2.6031	8.8	-116.6	.002420	.09
	3.0153	2.2099	8.1	76.0	.002508	.08
	2.9618	1.8359	50.5	-141.3	.002610	3.33
	2.8393	1.4618	10.1	- 11.3	.002610	.13
	3.3340	3.6183	READINGS	INVALID		
	3.3492	2.6279	47.4	- 16.9	.002420	2.72
	3.3550	2.2863	40.7	50.9	.002508	2.07
	3.3511	1.8779	29.3	19.7	.002610	1.12
	3.3435	1.5172	26.5	- 42.0	.002610	.92
1202.80	NO READING		READINGS	INVALID		
	2.6505	2.5324	44.4	- 66.8	.002695	2.66
	2.5266	2.0639	50.6	- 2.2	.002258	2.89
	2.3717	1.6612	50.6	- 87.8	.002450	3.14
	2.2672	1.3437	27.6	-140.7	.002450	.94
	NO READING		READINGS	INVALID		
	2.8383	2.5595	8.7	116.6	.002371	.09
	2.7725	2.1297	42.1	- 56.3	.002695	2.56
	2.6873	1.7619	24.9	- 51.3	.002929	.91
	2.5731	1.4095	9.7	- 89.9	.002929	.14
	NO READING					
	3.0707	2.5905	27.1	- 69.0	.002337	.86
	3.0707	2.2072	2.7	- 45.0	.002360	.01
	2.9603	1.8045	12.4	-141.3	.002399	.19
	2.9274	1.4618	18.3	-122.0	.002399	.40
	NO READING		READINGS	INVALID		
	3.4095	2.6292	9.9	78.7	.002337	.11
	3.4017	2.2652	35.5	- 80.5	.002360	1.48
	3.4031	1.8761	10.5	- 21.8	.002399	.13
	3.4076	1.4947	18.3	- 32.0	.002399	.40

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
50.50	1.9904	1.3979	21.9	- 84.8	.002250	.54
	2.0153	1.1237	26.1	- 98.7	.002319	.79
	2.0288	.6462	12.1	80.5	.002288	.17
	2.0441	.2991	8.2	- 14.0	.002690	.09
	2.0479	.0038	7.9	.0	.002690	.08
	2.4276	1.3346	18.8	08.4	.002453	.44
	2.4276	1.0201	8.2	- 76.0	.002476	.08
	2.4276	.6136	20.7	-106.7	.002432	.52
	2.4199	.2608	18.7	-127.0	.002834	.50
	2.4199	.0153	16.4	-166.0	.002834	.38
	2.8591	1.3039	49.7	180.0	.002001	2.47
	2.8418	.9703	58.4	162.2	.002125	3.63
	2.8054	.5906	49.7	-163.7	.002240	2.76
	2.7958	.2263	55.7	145.2	.002467	3.82
	2.7862	.0077	45.7	177.5	.002467	2.58
	3.1774	1.2886	28.7	-123.7	.002001	.82
	3.1716	.9588	25.1	-161.6	.002125	.67
	3.1640	.5753	31.8	180.0	.002240	1.13
	3.1659	.2244	35.8	180.0	.002467	1.58
	3.1640	.0019	36.3	170.5	.002467	1.62
91.30	2.0545	1.4047	107.9	11.5	.002212	12.88
	2.0759	1.1206	120.8	- 17.0	.002398	17.49
	2.0934	.6654	103.0	8.7	.002370	12.58
	2.0992	.3093	86.7	6.5	.002510	9.44
	2.0992	.0019	82.3	- 2.7	.002510	8.51
	2.4669	1.3794	73.4	9.2	.002573	6.93
	2.4825	1.0428	84.4	4.0	.002491	8.88
	2.4747	.6187	94.1	- 2.4	.002764	12.23
	2.4708	.2802	102.2	12.2	.002456	12.82
	2.4650	.0000	100.6	- 6.7	.002456	12.42
	2.9047	1.2996	113.6	1.0	.002192	14.14
	2.8696	1.0039	109.9	4.1	.002100	12.69
	2.8[illegible]24	.6070	104.1	- 4.3	.002389	12.94
	2.8230	.2840	117.9	11.5	.002160	15.01
	2.8230	.0039	125.6	- 3.6	.002160	17.03
	3.2140	1.2879	105.9	3.2	.002192	12.29
	3.2004	.9728	96.0	.0	.002100	9.67
	3.1926	.5895	104.1	4.3	.002389	12.94
	3.1926	.2354	101.9	2.2	.002160	11.22
	3.1926	.0058	103.8	- 1.1	.002160	11.64

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
132.10	2.0940	1.4190	16.4	166.0	.002211	.30
	2.1285	1.0892	15.1	156.8	.002548	.29
	2.1285	.6616	35.4	-141.8	.002332	1.46
	2.1285	.3087	28.2	-140.7	.002381	.95
	2.1285	.0000	21.9	180.0	.002381	.57
	2.4986	1.3461	33.8	-118.1	.002280	1.30
	2.5101	1.0259	22.7	-164.7	.002302	.59
	2.5197	.6098	22.2	-153.4	.002557	.63
	2.5177	.2819	16.4	-166.0	.002369	.32
	2.5177	.0038	10.1	168.7	.002369	.12
	2.9703	1.3058	4.4	-153.4	.002066	.02
	2.9492	.9779	15.1	- 66.8	.002147	.25
	2.9070	.5829	11.9	- 90.0	.002371	.17
	2.9089	.2493	18.0	- 83.7	.002390	.39
	2.9089	.0000	2.8	- 45.0	.002390	.01
	3.2809	1.2943	12.6	108.4	.002066	.16
	3.2656	.9588	14.3	-146.3	.002147	.22
	3.2656	.5829	22.5	-135.0	.002371	.60
	3.2656	.2282	7.9	180.0	.002390	.08
	3.2656	.0000	13.3	-153.4	.002390	.21
172.90	2.0389	1.4086	43.5	- 54.2	.002334	2.21
	2.0623	1.1265	15.8	- 97.1	.002311	.29
	2.0651	.6440	26.1	- 77.0	.002363	.81
	2.0778	.2918	29.4	- 86.2	.002554	1.11
	2.0778	.0019	4.4	63.4	.002554	.02
	2.4514	1.3502	29.4	- 53.1	.002507	1.08
	2.4611	1.0370	25.5	- 32.5	.002339	.76
	2.4553	.6089	31.6	- 68.2	.002628	1.32
	2.4553	.2763	33.3	- 90.0	.002453	1.36
	2.4553	.0019	.0	.0	.002453	.00
	2.9008	1.2977	179.1	- 84.4	.002150	34.47
	2.8755	.9903	37.2	- 18.4	.002189	1.51
	2.8424	.5953	49.5	- 18.4	.002516	3.09
	2.8249	.2665	40.7	- 35.2	.002273	1.89
	2.8249	.0019	33.3	3.4	.002273	1.26
	3.2101	1.2996	28.5	- 74.1	.002150	.87
	3.1887	.9650	20.8	- 48.8	.002189	.47
	3.1770	.5739	30.7	- 63.4	.002516	1.18
	3.1848	.2354	23.9	- 55.0	.002273	.65
	3.1809	.0000	13.7	.0	.002273	.21

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
213.70	2.1189	1.3845	93.4	- 51.9	.002254	9.83
	2.1266	1.0738	86.3	- 51.5	.002385	8.87
	2.1342	.6366	50.7	- 11.3	.002289	2.94
	2.1304	.2800	43.6	30.1	.002692	2.56
	2.1304	.0038	37.8	.0	.002692	1.92
	2.5158	1.3231	51.5	- 27.6	.003086	4.10
	2.5312	1.0125	40.0	- 26.6	.002127	1.70
	2.5312	.5810	45.7	34.4	.002310	2.42
	2.5177	.2493	22.2	- 10.3	.002454	.61
	2.5177	.0038	15.9	.0	.002454	.31
	2.9875	1.1314	41.8	- 2.7	.002971	2.59
	2.9837	.9664	57.9	- 5.9	.002286	3.84
	2.9530	.5676	43.8	- 39.5	.002554	2.45
	2.9415	.2263	52.5	- 52.7	.002783	3.83
	2.9415	.0019	21.9	.0	.002783	.66
	3.2886	1.2675	28.4	- 24.8	.002971	1.20
	3.2790	.9434	38.2	9.0	.002286	1.67
	3.2790	.5561	49.7	- 16.3	.002554	3.15
	3.2790	.2090	43.6	- 24.2	.002783	2.64
	3.2790	.0000	43.7	.0	.002783	2.66
254.50	2.0953	1.3366	22.8	- 59.0	.002450	.64
	2.1148	1.0603	26.3	- 26.6	.002693	.93
	2.1148	.6342	11.9	- 9.5	.002451	.17
	2.1148	.3132	13.7	.0	.002603	.24
	2.1148	.0019	14.3	- 15.9	.002603	.26
	2.4961	1.3268	23.6	41.6	.002470	.69
	2.4961	1.0195	18.5	58.0	.002337	.40
	2.4922	.6342	28.2	56.3	.002434	.97
	2.4767	.2724	11.4	31.0	.002615	.17
	2.4708	.0019	3.9	- 89.9	.002615	.02
	2.9416	1.2957	162.6	87.9	.002331	30.84
	2.9319	.9844	14.3	-164.1	.002103	.21
	2.8755	.5681	29.1	109.7	.002380	1.01
	2.8560	.2257	40.3	150.9	.002473	2.01
	2.8463	.0019	43.1	-177.4	.002473	2.30
	3.2354	1.2879	21.2	56.3	.002331	.52
	3.2257	.9708	6.2	- 18.4	.002103	.04
	3.2237	.5603	4.4	116.6	.002380	.02
	3.2237	.2179	22.8	121.0	.002473	.64
	3.2237	.0000	17.6	180.0	.002473	.38

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
295.30	2.1304	1.3653	52.3	8.7	.002299	3.14
	2.1496	1.0623	40.8	- 43.0	.002460	2.04
	2.1457	.6347	42.1	- 45.0	.002240	1.99
	2.1438	.2800	60.7	- 58.4	.002683	4.93
	2.1438	.0000	31.9	3.6	.002683	1.36
	2.5331	1.3384	56.9	- 29.2	.002366	3.83
	2.5407	1.0278	59.1	- 42.3	.002360	4.12
	2.5465	.6040	85.3	- 62.2	.002424	8.82
	2.5273	.2550	77.3	- 44.0	.002564	7.66
	2.5177	.0000	53.7	2.1	.002564	3.69
	2.9933	1.2905	66.4	- 38.9	.002062	4.55
	2.9703	.9626	60.4	- 43.7	.002294	4.19
	2.9434	.5944	45.7	- 34.4	.002458	2.57
	2.9070	.2454	35.8	- 3.2	.002376	1.52
	2.8993	.0000	47.8	4.8	.002376	2.72
	3.3001	1.2848	52.2	- 40.4	.002062	2.80
	3.2848	.9415	62.4	- 37.2	.002294	4.46
	3.2771	.5599	36.6	- 12.5	.002458	1.65
	3.2675	.2282	38.2	- 27.9	.002376	1.74
	3.2617	.0000	35.8	3.2	.002376	1.52
336.10	2.1459	1.3444	79.9	- 17.1	.002227	7.11
	2.1440	1.0331	66.7	- 3.4	.002497	5.55
	2.1440	.6051	68.8	- 4.9	.002350	5.56
	2.1459	.2626	79.9	11.3	.003002	9.58
	2.1459	.0039	78.4	2.9	.003002	9.23
	2.5447	1.2996	86.2	- 21.3	.002413	8.96
	2.5389	.9805	74.3	- 18.4	.002295	6.34
	2.5311	.5603	66.1	- 12.0	.002692	5.87
	2.5311	.2198	84.4	- 4.0	.003088	11.00
	2.5233	.0039	88.1	.0	.003088	11.99
	2.9922	1.2549	77.2	- 35.7	.002342	6.97
	2.9747	.9436	65.7	- 17.4	.002215	4.77
	2.9125	.5428	75.6	- 21.3	.002441	6.98
	2.8911	.2237	110.3	- 19.7	.002674	16.25
	2.8930	.0058	111.6	1.0	.002674	16.66
	3.2743	1.2549	68.4	- 23.6	.002342	5.48
	3.2743	.9339	73.7	- 10.7	.002215	6.02
	3.2588	.5525	81.1	- 8.3	.002441	8.04
	3.2568	.2004	78.6	- 4.3	.002674	8.25
	3.2588	.0019	84.2	1.3	.002674	9.48

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
376.90	2.2052	1.3423	17.8	- 63.4	.002376	.38
	2.2148	1.0585	31.8	.0	.002481	1.25
	2.2128	.6290	43.7	.0	.002338	2.23
	2.2205	.2953	36.0	6.3	.002601	1.68
	2.2205	.0038	26.1	8.7	.002601	.89
	2.6117	1.3078	22.7	- 37.9	.002558	.66
	2.6098	1.0048	34.8	- 31.0	.002371	1.43
	2.6098	.5906	23.9	4.8	.002346	.67
	2.6098	.2493	30.3	58.4	.002663	1.22
	2.6040	.0000	25.9	4.4	.002663	.89
	3.0547	1.2464	22.2	-100.3	.002158	.53
	3.0316	.9434	23.8	- 90.0	.002217	.63
	3.0125	.5676	14.0	- 8.1	.002512	.25
	3.0086	.2090	20.3	- 11.3	.002836	.58
	3.0086	.0019	20.3	11.3	.002836	.58
	3.3615	1.2579	27.7	- 69.0	.002158	.83
	3.3557	.9281	21.9	- 90.0	.002217	.53
	3.3557	.5484	32.1	- 68.2	.002512	1.29
	3.3442	.2224	15.1	23.2	.002836	.32
	3.3442	.0019	13.3	26.6	.002836	.25
417.70	2.1537	1.3288	23.6	- 41.6	.002264	.63
	2.1751	1.0331	39.7	- 57.1	.002630	2.07
	2.1868	.6051	37.6	- 51.3	.002572	1.82
	2.1809	.2665	58.9	- 74.6	.002937	5.10
	2.1712	.0078	15.8	- 7.1	.002937	.37
	2.5623	1.2860	26.3	- 42.0	.002541	.88
	2.5681	.9630	30.5	- 45.0	.002534	1.18
	2.5545	.5623	52.7	- 68.2	.002799	3.89
	2.5467	.2451	39.7	- 69.8	.002989	2.35
	2.5486	.0058	20.0	11.3	.002989	.60
	2.9883	1.2335	42.0	- 62.2	.002295	2.03
	2.9747	.9202	47.4	- 38.3	.002255	2.53
	2.9261	.5409	57.9	- 66.0	.002595	4.34
	2.9105	.2198	6.2	-108.4	.002776	.05
	2.9125	.0097	2.0	180.0	.002776	.01
	3.2840	1.2296	46.1	- 77.7	.002295	2.44
	3.2743	.9125	55.4	- 81.9	.002255	3.46
	3.2704	.5233	41.2	- 92.7	.002595	2.20
	3.2704	.2062	49.9	- 78.7	.002776	3.46
	3.2704	.0078	9.8	.0	.002776	.13

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
458.50	2.2224	1.3269	38.0	- 84.0	.002290	1.65
	2.2359	1.0259	32.0	- 97.1	.002427	1.25
	2.2359	.6002	23.9	-131.6	.002298	.66
	2.2359	.2397	6.0	- 89.9	.003143	.06
	2.2359	.0019	11.6	- 31.0	.003143	.21
	2.6309	1.2905	36.3	- 80.5	.002540	1.67
	2.6309	.9837	18.0	- 83.7	.002175	.35
	2.6290	.5427	28.7	- 56.3	.002588	1.06
	2.6232	.2128	45.0	- 45.0	.003105	3.14
	2.6232	.0038	29.9	- 3.8	.003105	1.38
	3.0738	1.2100	24.3	- 35.0	.002288	.67
	3.0681	.9147	18.8	- 18.4	.002373	.42
	3.0355	.5158	30.3	- 66.8	.002709	1.24
	3.0067	.2033	24.3	- 55.0	.003136	.92
	3.0067	.0019	13.3	- 26.6	.003136	.28
	3.3710	1.2138	13.3	- 26.6	.002288	.20
	3.3634	.8744	18.0	- 96.3	.002373	.38
	3.3538	.5081	9.9	126.9	.002709	.13
	3.3538	.1745	21.9	-174.8	.003136	.76
	3.3538	.0019	18.8	-161.6	.003136	.56
499.30	2.1576	1.2918	109.5	-169.7	.002323	13.92
	2.1712	1.0019	121.6	-177.2	.002532	18.71
	2.1712	.5875	107.2	170.5	.002397	13.77
	2.1809	.2607	106.6	172.6	.002923	16.62
	2.1809	.0019	105.8	178.9	.002923	16.35
	2.5681	1.2510	122.0	-174.5	.002556	19.02
	2.5700	.9455	119.5	-178.1	.002416	17.26
	2.5700	.5389	121.1	166.0	.002889	21.18
	2.5778	.2140	115.4	165.3	.003470	23.11
	2.5778	.0039	111.6	180.0	.003470	21.62
	3.0078	1.2198	131.0	170.5	.002388	20.50
	2.9922	.9144	157.0	176.4	.002410	29.70
	2.9377	.5136	146.0	173.1	.002803	29.87
	2.9241	.2004	126.1	173.8	.003122	24.81
	2.9241	.0039	125.3	180.0	.003122	24.52
	3.2957	1.2237	121.1	166.0	.002388	17.51
	3.2724	.8949	126.8	166.6	.002410	19.38
	3.2646	.5311	126.4	167.5	.002803	22.38
	3.2490	.2043	128.5	172.1	.003122	25.78
	3.2529	.0019	127.3	-179.1	.003122	25.30

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
540.10	2.1170	1.3078	22.2	79.7	.002402	.59
	2.1170	1.0201	39.0	104.7	.002632	2.01
	2.1323	.6174	19.9	90.0	.002339	.46
	2.1323	.2531	22.7	142.1	.002926	.75
	2.1323	.0038	17.9	180.0	.002926	.47
	2.5120	1.2790	14.0	98.1	.002645	.26
	2.5139	.9799	33.3	107.4	.002473	1.37
	2.5139	.5714	37.1	105.5	.002714	1.87
	2.5139	.2416	29.5	132.3	.002917	1.27
	2.5139	.0038	20.3	-168.7	.002917	.60
	2.9473	1.2311	34.0	83.3	.002092	1.21
	2.9147	.9243	21.5	123.7	.002206	.51
	2.8936	.5331	30.1	82.4	.002584	1.17
	2.8840	.2167	52.3	98.7	.002901	3.96
	2.8840	.0019	4.0	180.0	.002901	.02
	3.2560	1.2426	11.9	90.0	.002092	.15
	3.2426	.9032	35.6	77.5	.002206	1.48
	3.2330	.5350	22.2	63.4	.002584	.64
	3.2291	.1918	40.8	47.0	.002901	2.41
	3.2291	.0000	23.8	.0	.002901	.82
580.90	2.1615	1.3132	30.7	- 63.4	.002467	1.16
	2.1615	1.0389	20.8	- 48.8	.002525	.55
	2.1712	.6070	47.4	- 97.1	.002351	2.64
	2.1634	.2743	18.5	-122.0	.002712	.46
	2.1634	.0019	10.5	-158.2	.002712	.15
	2.5661	1.2646	23.6	- 41.6	.002547	.71
	2.5603	.9767	26.3	- 48.0	.002428	.84
	2.5603	.5739	43.5	- 82.2	.002823	2.67
	2.5584	.2354	30.0	-101.3	.002813	1.26
	2.5584	.0000	5.9	180.0	.002813	.05
	3.0117	1.2529	14.1	33.7	.002351	.23
	2.9805	.9319	9.8	180.0	.002304	.11
	2.9416	.5428	4.4	116.6	.002767	.03
	2.9163	.2510	6.2	161.6	.002376	.05
	2.9202	.0039	3.9	180.0	.002376	.02
	3.2957	1.2354	24.8	18.4	.002351	.72
	3.2802	.9300	14.1	33.7	.002304	.23
	3.2743	.5506	11.7	.0	.002767	.19
	3.2763	.2335	15.6	7.1	.002376	.30
	3.2763	.0019	13.7	.0	.002376	.22

Table B-VI. Rear-Lower Grid Calculations - Model 35
with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
621.70	2.1304	1.2809	34.0	- 96.7	.002411	1.39
	2.1304	1.0048	27.0	-107.1	.002411	.88
	2.1266	.5714	28.2	-140.7	.002443	.57
	2.1227	.2378	22.7	-127.9	.003158	.81
	2.1227	.0000	14.0	-171.9	.003158	.31
	2.5292	1.2637	28.7	-123.7	.002700	1.11
	2.5312	.9607	34.3	-100.0	.002532	1.49
	2.5197	.5292	28.1	-135.0	.002798	1.10
	2.5081	.2128	20.5	-150.9	.003093	.65
	2.5081	.0038	17.9	180.0	.003093	.49
	2.9588	1.2387	42.1	- 98.1	.001969	1.75
	2.9051	.9243	2.8	- 45.0	.002088	.01
	2.8917	.5369	5.6	45.0	.002460	.04
	2.8782	.2186	41.9	- 84.6	.002722	2.39
	2.8802	.0019	8.9	-153.4	.002722	.11
	3.2790	1.2502	13.3	-153.4	.001969	.17
	3.2541	.9108	22.2	-116.6	.002088	.52
	3.2445	.5350	15.5	-129.8	.002460	.30
	3.2445	.1937	34.0	-110.6	.002722	1.57
	3.2426	.0000	11.9	180.0	.002722	.19
662.50	2.1576	1.2803	33.5	20.6	.002492	1.40
	2.1537	1.0136	34.2	- 23.6	.002568	1.50
	2.1498	.5895	35.5	- 6.3	.002395	1.51
	2.1498	.2568	40.9	16.7	.002882	2.41
	2.1498	.0000	39.2	.0	.002882	2.21
	2.5506	1.2412	29.6	- 7.6	.002628	1.15
	2.5545	.9436	43.1	- 50.5	.002404	2.24
	2.5409	.5545	38.6	66.0	.002521	1.88
	2.5409	.2257	29.4	53.1	.002985	1.29
	2.5409	.0000	17.7	- 6.3	.002985	.47
	3.0058	1.2121	60.8	- 3.7	.002531	4.68
	2.9825	.9300	64.6	- 14.0	.002436	5.08
	2.9455	.5467	55.0	- 4.1	.002612	3.95
	2.9202	.2101	29.8	- 23.2	.002847	1.27
	2.9125	.0000	27.5	- 4.1	.002847	1.08
	3.2840	1.2296	37.6	- 38.7	.002531	1.79
	3.2764	.9105	39.6	- 8.5	.002436	1.91
	3.2646	.5389	41.3	- 5.4	.002612	2.23
	3.2646	.2023	30.4	14.9	.002847	1.32
	3.2646	.0019	31.3	.0	.002847	1.40

Table B-VI. Rear-Lower Grid Calculations - Model 35 w/Baffle (Continued)

Model 35, Shot 539

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
703.30	2.1611	1.2924	18.3	- 77.5	.002222	.37
	2.1611	.9914	13.9	- 90.0	.002723	.26
	2.1611	.5676	7.2	-123.7	.002596	.07
	2.1611	.2493	7.2	123.7	.003089	.08
	2.1611	.0000	7.2	123.7	.003089	.08
	2.5580	1.2598	15.9	.0	.002350	.30
	2.5580	.9281	6.3	161.6	.002546	.05
	2.5350	.5638	6.3	-108.4	.002534	.05
	2.5254	.2359	11.6	121.0	.002911	.20
	2.5254	.0019	8.2	104.0	.002911	.10
	3.0182	1.2349	14.3	56.3	.002156	.22
	2.9664	.9089	16.0	29.7	.002242	.29
	2.9453	.5331	4.0	.0	.002514	.02
	2.9051	.2071	4.4	63.4	.002714	.03
	2.9070	.0000	11.6	31.0	.002714	.18
	3.3078	1.2272	16.0	- 7.1	.002156	.28
	3.2924	.9051	24.3	55.0	.002242	.66
	3.2848	.5312	16.9	- 45.0	.002514	.36
	3.2733	.2013	8.9	26.6	.002714	.11
	3.2733	.0000	10.7	21.8	.002714	.16
744.10	2.1615	1.2626	45.4	- 82.6	.002489	2.57
	2.1537	1.0000	26.3	- 42.0	.002582	.90
	2.1459	.5837	18.6	- 18.4	.002497	.43
	2.1459	.2626	21.2	33.7	.002872	.64
	2.1459	.0058	18.1	12.5	.002872	.47
	2.5661	1.2412	31.9	- 47.5	.002585	1.31
	2.5486	.9455	38.0	55.5	.002289	1.65
	2.5389	.5486	34.3	- 31.0	.002552	1.50
	2.5350	.2354	21.1	- 68.2	.002911	.65
	2.5389	.0078	17.6	.0	.002911	.45
	3.0136	1.2237	9.8	- 36.9	.002572	.12
	2.9961	.9377	29.4	3.8	.002286	.99
	2.9494	.5467	17.5	26.6	.002633	.40
	2.9222	.2140	20.0	11.3	.002837	.57
	2.9222	.0058	17.7	6.3	.002837	.45
	3.2996	1.2276	16.1	- 14.0	.002572	.34
	3.2840	.9300	8.1	14.0	.002286	.07
	3.2763	.5272	8.8	- 63.4	.002633	.10
	3.2724	.2062	19.6	- 36.9	.002837	.54
	3.2743	.0058	15.7	.0	.002837	.35

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
784.90	2.1668	1.2483	49.8	-113.5	.002493	3.10
	2.1802	.9741	34.0	-110.6	.002562	1.48
	2.1783	.5618	11.2	-135.0	.002643	.17
	2.1783	.2608	21.9	- 95.2	.003211	.77
	2.1783	.0038	2.0	180.0	.003211	.01
	2.5791	1.2368	55.4	-104.5	.002611	4.01
	2.5791	.9588	28.1	- 81.9	.002424	.96
	2.5638	.5465	13.3	-116.6	.002529	.22
	2.5331	.2167	15.1	-113.2	.002984	.34
	2.5427	.0019	10.1	-168.7	.002984	.15
	3.0259	1.2291	40.9	-119.1	.002252	1.88
	2.9952	.9108	41.0	-129.1	.002342	1.96
	2.9607	.5407	42.5	-142.6	.002534	2.29
	2.9243	.2109	30.8	165.1	.002801	1.33
	2.9243	.0019	27.9	-175.9	.002801	1.09
	3.3231	1.2234	42.5	-127.4	.002252	2.04
	3.3001	.9070	42.8	-111.8	.002342	2.14
	3.2886	.5235	25.9	175.6	.002534	.85
	3.2886	.1898	32.3	-132.5	.002801	1.47
	3.2886	.0000	21.9	180.0	.002801	.67
825.70	2.1420	1.2179	58.9	- 74.6	.002617	4.54
	2.1420	.9689	35.3	- 86.8	.002650	1.65
	2.1381	.5759	20.[illegible]	- 78.7	.002445	.49
	2.1440	.2412	29.6	- 82.4	.003128	1.37
	2.1440	.0058	3.9	.0	.003128	.02
	2.5525	1.1887	52.0	- 70.2	.002836	3.84
	2.5525	.9183	55.4	- 81.9	.002512	3.85
	2.5331	.5370	18.1	- 77.5	.002864	.47
	2.5292	.2218	42.9	- 43.2	.003087	2.85
	2.5292	.0058	21.5	.0	.003087	.72
	2.9942	1.1887	54.2	- 77.5	.002545	3.73
	2.9708	.9066	56.4	- 69.7	.002366	3.76
	2.9163	.5214	45.2	- 72.3	.002606	2.66
	2.8930	.2218	57.1	- 59.0	.002880	4.69
	2.8949	.0039	29.4	.0	.002880	1.24
	3.2743	1.1946	59.0	- 84.3	.002545	4.44
	3.2685	.8911	50.3	- 76.5	.002366	3.00
	3.2510	.5292	39.7	- 57.1	.002606	2.05
	3.2510	.1829	37.2	- 71.6	.002880	1.99
	3.2529	.0058	11.7	.0	.002880	.20

Table B-VI. Rear-Lower Grid Calculations - Model 35
with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
866.50	2.1822	1.1927	14.0	- 81.9	.002536	.25
	2.1822	.9396	40.5	- 78.7	.002712	2.23
	2.1822	.5427	49.7	- 73.7	.002477	3.06
	2.1822	.2320	12.7	- 51.3	.003441	.28
	2.1822	.0038	8.2	- 14.0	.003441	.12
	2.5964	1.1889	13.9	.0	.002568	.25
	2.5868	.9051	34.0	- 69.4	.002503	1.44
	2.5676	.5292	40.2	- 81.5	.002438	1.97
	2.5638	.1879	20.3	- 78.7	.003616	.74
	2.5638	.0019	8.4	- 45.0	.003616	.13
	3.0374	1.1774	31.0	- 50.2	.002339	1.13
	3.0144	.8591	27.8	- 90.0	.002425	.94
	2.9741	.4986	31.4	- 34.7	.002546	1.26
	2.9530	.1630	47.2	- 67.8	.003706	4.13
	2.9530	.0019	19.9	.0	.003706	.73
	3.3289	1.1659	35.8	- 19.4	.002339	1.50
	3.3116	.8591	33.1	- 57.3	.002425	1.33
	3.3097	.4909	40.2	- 57.1	.002546	2.06
	3.3001	.1553	28.7	- 33.7	.003706	1.52
	3.3001	.0000	25.9	- 4.4	.003706	1.24
907.30	2.1440	1.2043	28.2	-123.7	.002318	.92
	2.1498	.9300	31.6	- 97.1	.002612	1.30
	2.1518	.5292	31.6	- 97.1	.002715	1.35
	2.1518	.2315	33.5	- 96.7	.003309	1.86
	2.1518	.0039	5.5	-135.0	.003309	.05
	2.5661	1.1887	39.[illegible]	- 84.3	.002679	2.08
	2.5642	.8872	41.[illegible]	- 70.7	.002502	2.15
	2.5389	.4981	31.[illegible]	- 60.3	.002716	1.35
	2.5331	.2023	26.3	- 42.0	.003422	1.19
	2.5350	.0000	19.7	- [illegible].7	.003422	.66
	3.0136	1.1654	42.8	- 74.1	.002340	2.14
	2.9708	.8794	23.7	- 65.6	.002326	.65
	2.9416	.5039	48.6	- 40.1	.002568	3.04
	2.9105	.1790	36.6	15.5	.003306	2.21
	2.9144	.0039	35.3	- 3.2	.003306	2.06
	3.3074	1.1829	30.0	-101.3	.002340	1.05
	3.2860	.8638	17.5	-116.6	.002326	.36
	3.2724	.4961	22.9	-160.0	.002568	.67
	3.2743	.1673	14.3	-164.1	.003306	.34
	3.2782	.0039	13.7	180.0	.003306	.31

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
948.10	2.1668	1.1697	60.8	- 78.7	.002400	4.43
	2.1783	.9089	36.3	- 80.5	.002632	1.73
	2.1783	.5120	8.9	- 63.4	.002377	.09
	2.1783	.1994	26.1	- 98.7	.003632	1.24
	2.1783	.0000	2.0	- 89.7	.003632	.01
	2.6002	1.1505	39.7	- 90.0	.002645	2.09
	2.6002	.8667	23.9	- 94.8	.002469	.71
	2.5829	.5024	10.7	68.2	.002520	.14
	2.5829	.1707	9.9	-126.9	.003518	.17
	2.5829	.0000	6.0	180.0	.003518	.06
	3.0489	1.1371	25.9	- 57.5	.002626	.88
	3.0240	.8380	30.8	-104.9	.002749	1.31
	3.0105	.4679	32.1	-111.8	.003225	1.66
	2.9875	.1726	4.4	-116.6	.004199	.04
	2.9875	.0000	6.3	-161.6	.004199	.08
	3.3231	1.1371	41.8	- 92.7	.002626	2.29
	3.3039	.8437	24.3	-125.0	.002749	.81
	3.2886	.4832	23.9	- 94.8	.003225	.92
	3.2867	.1515	8.9	-116.6	.004199	.17
	3.2867	.0000	6.3	-161.6	.004199	.08
988.90	2.1556	1.1459	28.2	-146.3	.002543	1.01
	2.1556	.8949	49.1	-156.5	.002859	3.45
	2.1556	.5214	47.7	160.8	.002569	2.92
	2.1479	.2062	45.7	170.1	.003605	3.77
	2.1518	.0019	45.1	177.5	.003605	3.66
	2.5661	1.1498	46.1	167.7	.002691	2.86
	2.5623	.8638	39.4	174.3	.002675	2.07
	2.5428	.5078	41.9	-169.2	.002784	2.44
	2.5272	.1946	58.2	160.3	.003494	5.92
	2.5292	.0000	54.9	178.0	.003494	5.26
	3.0272	1.1440	53.2	173.7	.002474	3.50
	2.9630	.8502	53.8	169.5	.002304	3.33
	2.9300	.4747	106.9	171.6	.002710	15.49
	2.9086	.1751	95.0	165.7	.003392	15.30
	2.9086	.0019	107.8	177.9	.003392	19.70
	3.3054	1.1420	35.3	123.7	.002474	1.54
	3.2724	.8444	15.8	-172.9	.002304	.29
	3.2704	.4726	19.3	-156.0	.002710	.50
	3.2704	.1595	22.9	-160.0	.003392	.89
	3.2724	.0019	21.5	180.0	.003392	.79

Table B-VI. Rear-Lower Grid Calculations - Model 35
with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1029.70	2.1438	1.1544	34.7	166.8	.002397	1.44
	2.1342	.8897	41.8	154.7	.002683	2.34
	2.1342	.5273	37.8	177.0	.002464	1.76
	2.1342	.2071	30.8	165.1	.003502	1.67
	2.1342	.0019	33.8	180.0	.003502	2.00
	2.5561	1.1601	19.6	114.0	.002703	.52
	2.5618	.8706	19.6	155.0	.002687	.51
	2.5427	.4947	10.7	-158.2	.003033	.17
	2.5292	.1898	9.9	180.0	.003571	.18
	2.5292	.0019	18.7	148.0	.003571	.63
	2.9971	1.1429	37.8	180.0	.002237	1.59
	2.9722	.8476	11.6	59.0	.002245	.15
	2.9070	.4832	24.2	170.5	.002568	.75
	2.8974	.1956	33.8	176.6	.003216	1.84
	2.8821	.0038	21.9	-174.8	.003216	.77
	3.3039	1.1659	26.7	132.0	.002237	.80
	3.2886	.8418	4.0	180.0	.002245	.02
	3.2713	.4756	41.0	157.2	.002568	2.15
	3.2656	.1438	46.2	154.5	.003236	3.43
	3.2656	.0000	43.9	174.8	.003216	3.10
1070.50	2.1226	1.1537	47.2	-175.2	.002409	2.60
	2.1187	.9125	35.5	173.7	.002604	1.64
	2.1187	.5233	31.9	169.4	.002460	1.25
	2.1187	.2140	35.3	160.6	.003452	2.15
	2.1187	.0019	33.3	-176.6	.003452	1.92
	2.5584	1.1673	41.5	160.7	.002710	2.33
	2.5447	.8716	55.1	-163.5	.002580	3.92
	2.5331	.5039	47.2	-175.2	.002933	3.26
	2.5175	.1946	35.3	-176.8	.003695	2.30
	2.5136	.0097	35.3	-176.8	.003695	2.30
	2.9903	1.1440	32.1	127.6	.002401	1.24
	2.9689	.8599	45.0	180.0	.002420	2.45
	2.9066	.4786	18.5	122.0	.002810	.48
	2.8755	.1770	29.4	-126.9	.003336	1.44
	2.8872	.0000	4.4	-116.6	.003336	.03
	3.2879	1.1615	18.6	161.6	.002401	.41
	3.2685	.8444	24.5	118.6	.002420	.73
	3.2335	.4883	20.0	101.3	.002810	.56
	3.2296	.1799	26.3	116.6	.003336	1.15
	3.2296	.0058	11.7	180.0	.003336	.23

Table B-VI. Rear-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 339

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1111.30	2.0978	1.1505	44.0	-161.6	.002336	2.26
	2.0997	.8936	34.8	-149.0	.002844	1.72
	2.1035	.5331	24.9	-151.4	.002551	.79
	2.1016	.2186	22.2	-169.7	.003403	.84
	2.1016	.0000	21.9	-174.8	.003403	.82
	2.5177	1.1735	50.8	-149.4	.002401	3.09
	2.5101	.8552	32.0	172.9	.002651	1.36
	2.4966	.4909	28.1	171.9	.002662	1.05
	2.4947	.1879	39.9	174.3	.003516	2.80
	2.4947	.0000	50.3	-170.9	.003516	4.45
	2.9779	1.1678	28.9	74.1	.002089	.87
	2.9281	.0476	16.0	- 97.1	.002172	.28
	2.8974	.4986	8.2	-166.0	.002398	.08
	2.8802	.1726	15.1	23.2	.003207	.37
	2.8802	.0000	7.2	146.3	.003207	.08
	3.2867	1.1716	9.9	-143.1	.002089	.10
	3.2771	.8629	17.0	-159.4	.002172	.31
	3.2675	.4947	18.3	12.5	.002398	.40
	3.2541	.1668	20.3	- 11.3	.003207	.66
	3.2541	.0000	20.7	- 16.7	.003207	.69
1152.10	2.0817	1.1401	24.8	-161.6	.002543	.78
	2.0895	.8949	33.3	-139.8	.002652	1.47
	2.0973	.5117	53.8	-123.1	.002566	3.71
	2.0973	.2101	28.0	-167.9	.003570	1.40
	2.0973	.0000	27.5	175.9	.003570	1.35
	2.5156	1.1420	43.3	-108.4	.002427	2.28
	2.5136	.8755	6.2	-161.6	.002469	.05
	2.5058	.5078	14.1	123.7	.002708	.27
	2.4786	.1984	35.9	150.6	.003145	2.03
	2.4650	.0019	31.4	176.4	.003145	1.55
	2.9981	1.1712	78.4	- 88.6	.002348	7.21
	2.9669	.8444	27.4	- 90.0	.002460	.92
	2.8988	.4767	27.3	-159.0	.002685	1.00
	2.8891	.1829	20.4	-163.3	.003158	.66
	2.8813	.0039	19.7	174.3	.003158	.61
	3.2802	1.1556	39.9	-101.3	.002348	1.87
	3.2529	.8385	54.2	-130.6	.002460	3.61
	3.2510	.4922	39.6	-171.5	.002685	2.11
	3.2490	.1751	29.8	-156.8	.003158	1.40
	3.2490	.0000	27.5	175.9	.003158	1.19

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
50.00	.5971	.0000	52.5	.0	.002548	3.51
	.5971	.1463	28.9	-137.7	.002124	.89
	.5971	.5395	24.4	151.4	.002268	.67
	.5971	.9210	25.3	180.0	.002316	.74
	.5971	1.3620	24.9	-128.7	.002316	.72
	.9951	.0000	5.8	180.0	.002688	.05
	.9951	.1795	10.5	-158.2	.002401	.13
	.9951	.5620	9.9	-101.3	.002394	.12
	.9834	.9678	9.7	-143.1	.002295	.11
	.9678	1.4927	39.9	-137.0	.002295	1.83
	1.3502	.0039	27.5	-171.9	.002354	.89
	1.3483	.2068	29.2	180.0	.002474	1.05
	1.3483	.5932	15.7	-150.3	.002281	.28
	1.3034	.9912	20.7	-131.2	.002342	.50
	1.2117	1.5766	20.9	158.2	.002342	.51
	1.7268	.0039	17.9	-139.4	.002354	.38
	1.7327	.2849	13.8	171.9	.002474	.23
	1.7171	.6517	33.1	-130.2	.002281	1.25
	1.7073	1.0751	7.0	123.7	.002342	.06
	1.5176	1.7951	38.4	-120.5	.002342	1.72
101.20	.6808	.0000	9.9	180.0	.002594	.13
	.6038	.1577	15.4	140.2	.002163	.26
	.5981	.5615	12.5	-108.4	.002240	.17
	.5865	.9462	15.4	-140.2	.002411	.29
	.5865	1.3769	21.7	180.0	.002411	.57
	.9981	.0077	27.7	175.9	.002454	.94
	.9942	.2038	14.4	164.1	.002477	.26
	.9942	.5692	14.0	-171.9	.002395	.23
	.9827	.9750	28.3	-114.8	.002280	.91
	.9519	1.4654	42.2	-127.4	.002280	2.03
	1.3558	.0154	15.8	180.0	.002163	.27
	1.3538	.2327	18.2	139.4	.002414	.40
	1.3365	.6154	26.0	171.3	.002260	.76
	1.3077	1.0192	21.3	-158.2	.002318	.52
	1.2096	1.5923	15.4	-129.8	.002318	.28
	1.7404	.0019	7.9	.0	.002163	.07
	1.7404	.3038	READINGS	INVALID		
	1.7269	.6673	12.5	- 71.6	.002260	.18
	1.7058	1.0788	34.0	-125.5	.002318	1.34
	1.6269	1.8212	6.2	71.6	.002318	.05

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
142.40	.5873	.0000	81.7	180.0	.002525	8.42
	.5854	.1561	7.0	123.7	.002236	.05
	.5932	.5268	1.9	.0	.002360	.00
	.5854	.9112	23.7	- 55.0	.002316	.65
	.5756	1.3620	20.3	- 73.3	.002316	.48
	.9678	.0020	1.9	- 89.7	.002559	.00
	.9815	.1834	19.4	- 90.0	.002482	.47
	.9815	.5600	7.8	89.9	.002573	.08
	.9717	.9424	9.7	- 89.9	.002271	.11
	.9424	1.4595	23.3	.0	.002271	.62
	1.3346	.0039	14.0	- 33.7	READINGS	INVALID
	1.3346	.2185	11.8	- 9.5	READINGS	INVALID
	1.3229	.5971	24.9	- 38.7	.002274	.71
	1.2839	.9834	19.8	- 78.7	.002282	.45
	1.2020	1.5649	51.2	- 81.3	.002282	2.99
	1.7346	.0039	8.0	-166.0	READINGS	INVALID
	NO READING					
	1.7210	.6400	20.0	- 60.9	.002274	.46
	1.6878	1.0478	6.2	18.4	.002282	.04
	1.6195	1.8010	36.2	- 53.7	.002282	1.49
183.60	.6000	.0000	39.5	.0	.002436	1.90
	.6000	.1635	41.6	- 5.4	.002101	1.82
	.6000	.5615	33.6	- 3.4	.002395	1.35
	.6000	.9269	45.1	- 23.2	.002378	2.42
	.5923	1.3577	60.0	- 46.3	.002378	4.28
	.9981	.0058	53.6	6.3	.002445	3.51
	.9942	.1846	46.1	- 9.9	.002334	2.48
	.9942	.5769	31.2	- 18.4	.002379	1.16
	.9827	.9654	32.1	- 10.6	.002412	1.24
	.9750	1.4654	47.7	- 24.4	.002412	2.74
	1.3673	.0077	51.9	8.7	.002265	3.05
	1.3654	.2308	53.7	17.1	.002528	3.64
	1.3558	.6000	48.4	- 11.8	.002229	2.61
	1.3115	1.0090	40.2	- 11.3	.002381	1.93
	1.2173	1.5423	46.6	- 36.4	.002381	2.58
	1.7327	.0000	26.3	13.0	.002265	.78
	1.7462	.2904	READINGS	INVALID		
	1.7365	.6500	36.4	49.4	.002229	1.48
	1.7115	1.0808	33.1	17.4	.002381	1.30
	1.6481	1.7923	63.0	- 32.2	.002381	4.72

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	P LB/SQFT
224.80	.6263	.0000	77.8	.0	.002603	7.88
	.6263	.1522	20.3	- 16.7	.002231	.46
	.6263	.5249	47.0	- 65.6	.002442	2.70
	.6263	.8937	50.6	- 67.4	.002439	3.12
	.6166	1.3190	60.6	- 84.5	.002439	4.48
	1.0205	.0078	11.8	- 9.5	.002582	.18
	1.0263	.1756	21.0	33.7	.002481	.55
	1.0107	.5502	39.1	- 63.4	.002457	1.88
	1.0029	.9366	49.7	- 59.4	.002341	2.89
	.9854	1.4400	59.2	- 66.8	.002341	4.11
	1.3854	.0117	13.6	.0	.002300	.21
	1.3854	.2341	13.0	- 63.4	.002542	.22
	1.3698	.5873	16.0	- 76.0	.002396	.31
	1.3229	.9756	45.5	- 70.0	.002377	2.46
	1.2390	1.5376	61.0	- 67.5	.002377	4.43
	1.7600	.0098	56.4	.0	.002300	3.66
	1.7620	.2888	13.0	26.6	.002542	.22
	1.7444	.6673	20.7	- 48.8	.002396	.51
	1.7190	1.0576	42.1	- 56.3	.002377	2.10
	1.6722	1.7678	55.0	8.1	.002377	3.60
266.00	.6769	.0000	75.0	.0	.002581	7.26
	.6192	.1577	8.8	-116.6	.002359	.09
	.6192	.5192	10.6	-111.8	.002422	.14
	.6192	.8898	16.3	-104.0	.002364	.31
	.5981	1.2981	13.6	-111.9	.002364	.13
	1.0096	.0038	.0	.0	.002466	.00
	1.0115	.1962	16.9	-110.6	.002585	.37
	1.0115	.5423	19.8	- 84.3	.002575	.51
	1.0077	.9231	22.1	- 63.4	.002515	.61
	.9981	1.4115	39.7	- 84.3	.002515	1.98
	1.3808	.0077	2.0	180.0	.002134	.00
	1.3712	.2192	27.7	- 94.1	.002565	.98
	1.3596	.5846	16.9	- 69.4	.002316	.33
	1.3269	.9577	26.5	- 48.0	.002240	.79
	1.2404	1.4865	59.2	- 53.1	.002240	3.92
	1.7885	.0000	16.3	76.0	.002134	.28
	1.7577	.2962	15.9	82.4	.002565	.32
	1.7500	.6346	24.1	- 55.0	.002316	.67
	1.7346	1.0462	33.5	- 45.0	.002240	1.26
	1.7019	1.8000	38.3	- 11.9	.002240	1.64

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
307.20	.7005	.0000	58.1	180.0	.003077	7.13
	.6224	.1444	21.7	-116.6	.002240	.53
	.6224	.5151	30.8	-124.7	.002401	1.14
	.6224	.8780	37.4	-117.9	.002407	1.68
	.6127	1.3093	25.9	-103.0	.002407	.81
	1.0205	.0078	23.4	-175.2	.002889	.79
	1.0205	.1600	46.4	-123.0	.002436	2.62
	1.0127	.5307	40.5	-125.2	.002434	1.99
	1.0127	.9171	35.1	-123.7	.002302	1.42
	.9893	1.4010	35.1	-109.4	.002302	1.42
	1.3834	.0117	6.2	161.6	.002401	.05
	1.3834	.2068	34.0	-103.2	.002596	1.50
	1.3756	.5717	37.2	- 96.0	.002394	1.65
	1.3405	.9561	35.1	- 93.2	.002390	1.47
	1.2741	1.4907	12.5	- 38.7	.002390	.19
	1.7639	.0254	33.6	170.0	.002401	1.35
	1.7639	.3044	38.2	-104.7	.002596	1.89
	1.7580	.6478	27.8	-114.8	.002394	.93
	1.7424	1.0341	44.8	- 92.5	.002390	2.40
	1.7093	1.7600	54.5	- 88.0	.002390	3.55
348.40	.6096	.0000	88.8	180.0	.002980	11.75
	.6096	.1385	12.6	-141.3	.002423	.19
	.6019	.4942	28.7	-105.9	.002460	1.02
	.6019	.8481	38.0	-117.9	.002387	1.72
	.5923	1.2131	38.3	-101.9	.002387	1.75
	.9865	.0019	39.7	-174.3	.002856	2.25
	.9865	.1577	11.5	121.0	.002454	.16
	.9885	.5096	11.8	- 90.0	.002427	.17
	.9885	.8942	34.5	-113.5	.002307	1.37
	.9865	1.3788	40.7	- 76.0	.002307	1.91
	1.3750	.0096	28.3	-167.9	.002617	1.04
	1.3635	.1865	20.1	-168.7	.002569	.52
	1.3558	.5481	22.5	-127.9	.002397	.61
	1.3250	.9231	32.5	-104.0	.002253	1.19
	1.2500	1.4788	19.4	- 66.0	.002253	.43
	1.7558	.0058	21.8	- 84.8	.002617	.62
	1.7481	.2596	14.2	- 56.3	.002569	.26
	1.7385	.6096	40.0	- 69.8	.002397	1.91
	1.7327	1.0019	32.5	- 76.0	.002253	1.19
	1.7038	1.7462	46.2	- 70.0	.002253	2.40

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
389.60	.6127	.0000	13.6	.0	.002851	.26
	.6127	.1366	14.8	- 23.2	.002337	.26
	.6146	.4878	13.0	- 63.4	.002442	.21
	.6049	.8440	31.2	- 86.4	.002387	1.16
	.6049	1.2722	31.4	- 68.2	.002387	1.18
	.9815	.0039	23.4	4.8	.002788	.76
	1.0146	.1698	24.1	- 14.0	.002663	.77
	1.0127	.5190	21.7	10.3	.002570	.61
	.9990	.8859	37.8	- 55.5	.002289	1.63
	.9990	1.3620	48.7	- 61.4	.002289	2.72
	1.3561	.0059	14.0	- 33.7	.002187	.22
	1.3639	.2029	25.6	8.7	.002573	.84
	1.3620	.5541	29.4	- 7.6	.002297	.99
	1.3327	.9249	35.8	- 22.4	.002345	1.50
	1.2820	1.4732	52.3	- 42.0	.002345	3.21
	1.7659	.0039	23.3	.0	.002187	.60
	1.7717	.2927	32.1	14.0	.002573	1.32
	1.7717	.6107	37.0	.0	.002297	1.57
	1.7502	1.0029	48.6	- 53.1	.002345	2.77
	1.7249	1.7171	63.1	- 56.3	.002345	4.67
430.80	.6231	.0000	17.8	.0	.003045	.48
	.6231	.1327	17.9	- 6.3	.002331	.37
	.6077	.4827	16.3	- 14.0	.002538	.34
	.6038	.8173	25.7	.0	.002327	.77
	.6038	1.2442	43.8	- 82.2	.002327	2.23
	1.0096	.0038	37.7	- 6.0	.002864	2.04
	1.0096	.1519	26.0	- 81.3	.002416	.81
	1.0096	.5135	15.0	- 23.2	.002508	.26
	1.0096	.8635	23.0	- 59.0	.002278	.60
	1.0096	1.3365	56.1	-100.1	.002278	3.59
	1.3865	.0019	51.3	- 2.2	.002461	3.24
	1.3885	.1904	43.6	- 5.2	.002587	2.46
	1.3846	.5442	25.0	18.4	.002544	.79
	1.3577	.9096	30.7	- 45.0	.002350	1.11
	1.2885	1.4442	65.6	- 96.9	.002350	5.06
	1.7788	.0058	21.7	.0	.002461	.58
	1.7788	.2673	31.8	- 60.3	.002587	1.31
	1.7750	.6096	16.3	- 14.0	.002544	.34
	1.7615	.9635	44.7	- 48.6	.002350	2.35
	1.7385	1.6942	42.5	- 68.2	.002350	2.12

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 540

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
472.00	.6302	.0000	3.9	.0	.003050	.02
	.6302	.1346	3.9	.0	.002326	.02
	.6302	.4839	20.3	- 16.7	.002529	.52
	.6302	.8449	21.7	79.7	.002696	.64
	.0107	1.2293	12.3	71.6	.002696	.20
	1.0185	.0000	15.6	180.0	.002763	.33
	1.0185	.1444	16.0	14.0	.002378	.31
	1.0263	.5132	15.7	7.1	.002648	.33
	1.0107	.8663	16.0	14.0	.002404	.31
	.9893	1.3073	15.7	- 97.1	.002404	.30
	1.4068	.0039	21.7	26.6	.002493	.59
	1.4068	.1990	19.4	- 53.1	.002545	.48
	1.3854	.5620	22.0	- 45.0	.002497	.60
	1.3541	.9034	14.0	- 56.3	.002321	.23
	1.2741	1.4088	33.2	- 69.4	.002321	1.28
	1.7873	.0039	31.1	.0	.002493	1.21
	1.7873	.2654	35.7	- 29.4	.002545	1.62
	1.7873	.6068	40.1	- 50.9	.002497	2.01
	1.7795	.9698	34.6	38.2	.002321	1.39
	1.7405	1.6780	22.0	- 45.0	.002321	.56
513.20	.6269	.0000	5.9	180.0	.003046	.05
	.6269	.1327	12.6	128.7	.002337	.19
	.6269	.4769	11.2	-135.0	.002409	.15
	.6077	.8365	29.7	176.2	.002382	1.05
	.6077	1.2558	35.1	128.2	.002382	1.47
	.9942	.0038	7.1	123.7	.002944	.07
	1.0250	.1558	31.8	97.1	.002437	1.23
	1.0250	.5154	13.2	-153.4	.002518	.22
	1.0250	.8673	2.0	180.0	.002347	.00
	1.0077	1.3212	45.4	90.0	.002347	2.42
	1.4058	.0115	22.1	169.7	.002609	.63
	1.4000	.1750	21.7	180.0	.002543	.60
	1.4000	.5288	21.3	-146.3	.002275	.52
	1.3654	.8981	23.8	131.6	.002377	.67
	1.3000	1.4135	22.1	116.6	.002377	.58
	1.8096	.0058	11.8	180.0	.002609	.18
	1.8096	.2500	12.5	161.6	.002543	.20
	1.8000	.5788	13.2	-153.4	.002275	.20
	1.7885	.9846	37.7	132.9	.002377	1.69
	1.7538	1.6788	2.8	-135.0	.002377	.01

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
554.40	.6244	.0000	1.9	180.0	.002688	.01
	.6224	.1444	11.8	99.5	.002517	.18
	.6224	.4761	9.9	101.3	.002400	.12
	.6010	.8468	19.2	24.0	.002338	.43
	.5893	1.2566	16.0	-166.0	.002338	.30
	1.0146	.0059	11.3	31.0	.002721	.17
	1.0146	.1756	14.8	113.2	.002631	.29
	1.0146	.5073	8.0	166.0	.002596	.08
	1.0088	.8653	16.5	135.0	.002387	.33
	.9893	1.3522	11.3	-149.0	.002387	.15
	1.3854	.0078	19.2	156.0	.002431	.45
	1.3854	.1990	33.1	118.1	.002575	1.41
	1.3678	.5502	22.0	135.0	.002298	.56
	1.3385	.9210	10.5	158.2	.002401	.13
	1.2644	1.4283	19.4	-143.1	.002401	.45
	1.7756	.0039	17.4	153.4	.002431	.37
	1.7756	.2693	20.0	150.9	.002575	.52
	1.7756	.6010	25.3	157.4	.002298	.73
	1.7541	.9971	17.5	160.0	.002401	.37
	1.7385	1.6761	31.4	- 82.9	.002401	1.18
595.60	.6250	.0000	2.0	.0	.002820	.01
	.6250	.1442			.002411	
	.6250	.4865	13.2	153.4	.002493	.22
	.6250	.8462	25.7	- 67.4	.002523	.83
	.5923	1.2519	21.1	- 56.3	.002523	.57
	1.0038	.0096	2.8	135.0	.002827	.01
	1.0192	.1692	17.9	- 6.3	.002584	.41
	1.0173	.5173	15.4	39.8	.002544	.30
	1.0135	.8788	5.6	45.0	.002445	.04
	.9981	1.3154	22.5	- 74.7	.002445	.62
	1.3885	.0192	21.3	21.8	.002470	.56
	1.3846	.2038	19.7	.0	.002624	.51
	1.3846	.5442	27.7	- 4.1	.002390	.92
	1.3558	.9019	20.0	- 73.3	.002454	.52
	1.2846	1.4019	44.5	- 77.2	.002454	2.43
	1.7942	.0135	4.4	63.4	.002470	.02
	1.7923	.2596	11.8	- 90.0	.002624	.18
	1.7769	.5885	7.1	33.7	.002390	.06
	1.7712	.9846	21.3	- 56.3	.002454	.56
	1.7577	1.6481	19.5	- 45.0	.002454	.47

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
636.80	.6263	.0000	62.2	180.0	.000825	1.60
	.6029	.8195	READINGS	INVALID		
	.6107	.4820			.002468	
	.6107	.8234	49.8	-141.3	.002424	3.01
	.6010	1.2390	39.9	-133.0	.002424	1.93
	1.0127	.0078	33.1	180.0	.002733	1.49
	1.0322	.1737	40.1	-166.0	.002534	2.04
	1.0263	.5171	44.4	-156.8	.002612	2.58
	1.0127	.8702	54.5	-145.2	.002504	3.72
	.9951	1.3307	42.7	-149.9	.002504	2.28
	1.4049	.0156	26.1	-153.4	.002689	.92
	1.4049	.1990	37.4	-128.7	.002669	1.86
	1.3951	.5483	42.1	-146.3	.002456	2.17
	1.3444	.9015	54.8	-152.5	.002413	3.62
	1.2741	1.3854	62.0	-131.2	.002413	4.64
	1.7776	.0078	41.0	-174.6	.002689	2.26
	1.7756	.2576	39.7	-168.7	.002669	2.10
	1.7815	.6049	36.3	164.5	.002456	1.62
	1.7659	.9795	39.9	-137.0	.002413	1.92
	1.7522	1.6624	41.9	-111.8	.002413	2.12
678.00	.5635	.0000	5.9	180.0	READINGS	INVALID
	NO READING					
	.5942	.8077	17.0	- 54.5	.005239	.75
	.5865	.8154	2.0	180.0	.002544	.00
	.5654	1.2231	34.0	-170.5	.002544	.73
	.9712	.0096	61.2	1.8	.002963	5.55
	.9808	.1596	26.0	- 81.3	.002516	.85
	.9769	.5000	31.9	-111.8	.002588	1.32
	.9692	.8481	32.1	-137.5	.002519	1.30
	.9615	1.2942	58.6	-122.6	.002519	4.32
	1.3654	.0077	61.5	-174.5	.002706	5.11
	1.3615	.1750	34.5	-156.4	.002577	1.53
	1.3500	.5212	50.9	-144.5	.002450	3.18
	1.3077	.8769	47.8	-128.3	.002421	2.76
	1.2442	1.3558	52.2	-100.9	.002421	3.30
	1.7538	.0036	28.3	167.9	.002706	1.08
	1.7538	.2519	21.3	-158.2	.002577	.58
	1.7423	.5981	42.0	-131.2	.002450	2.16
	1.7423	.9577	30.1	-113.2	.002421	1.09
	1.7423	1.6095	67.2	- 86.6	.002421	5.47

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
719.20	.6205	.0000	21.4	.0	.002958	.68
	.6205	.1171	READINGS	INVALID		
	.6205	.4683	..			
	.6088	.8234	24.4	151.4	.002607	.77
	.5776	1.2351	16.0	166.0	.002607	.34
	1.0732	.0098	9.9	11.3	.003803	.19
	1.0361	.1483	17.5	- 90.0	.002843	.44
	1.0146	.4878	1.9	180.0	.002754	.01
	.9893	.8488	9.7	180.0	.002562	.12
	.9639	1.2820	21.5	-174.8	.002562	.59
	1.3444	.0098	23.7	170.5	.002689	.75
	1.3737	.1854	20.3	163.3	.002725	.56
	1.3541	.5190	17.6	-173.7	.002391	.37
	1.3151	.8644	8.7	153.4	.002471	.09
	1.2644	1.3346	33.1	-176.6	.002471	1.36
	1.7502	.0137	22.2	-164.7	.002689	.66
	1.7561	.2498	21.5	-174.8	.002725	.63
	1.7541	.5737	27.1	-111.0	.002391	.88
	1.7541	.9522	26.5	-144.0	.002471	.86
	1.7561	1.5961	11.8	- 99.5	.002471	.17
760.40	.5846	.0000	3.9	.0	.003237	.03
	.5846	.1269	38.9	- 59.5	.002399	1.82
	.5731	.4519	30.1	- 66.8	.002433	1.10
	.5654	.8269	25.0	- 71.6	.002554	.80
	.5500	1.2269	10.1	-101.3	.002554	.13
	.9808	.0115	48.4	-168.2	.003358	3.93
	.9808	.1473	17.6	-116.6	.002599	.40
	.9750	.5000	18.2	- 40.6	.002617	.43
	.9596	.8481	47.1	- 33.0	.002562	2.34
	.9404	1.2923	17.0	- 54.5	.002562	.37
	1.3423	.0115	36.0	- 9.5	.002671	1.73
	1.3423	.1808	30.2	- 78.7	.002688	1.22
	1.3327	.5192	34.9	- 42.7	.002422	1.48
	1.3000	.8808	30.8	- 50.2	.002382	1.13
	1.2115	1.3538	24.0	-170.5	.002382	.69
	1.7327	.0038	33.7	- 20.6	.002671	1.52
	1.7327	.2500	37.7	- 47.1	.002688	1.91
	1.7327	.5731	33.6	- 40.2	.002422	1.37
	1.7212	.9423	22.1	- 79.7	.002382	.58
	1.7404	1.5981	53.6	- 96.3	.002382	3.42

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
801.60	.6244	.0000	23.3	.0	.003881	1.06
	.6400	.0839	26.1	- 26.6	.002381	.81
	.6322	.4410	40.5	54.8	.002457	2.01
	.6166	.8000	9.7	53.1	.002391	.11
	.5756	1.2254	15.7	119.7	.002391	.29
	1.0263	.0000	14.0	- 33.7	.003631	.36
	1.0283	.1327	11.8	- 9.5	.002718	.19
	1.0283	.4761	8.7	26.6	.002850	.11
	1.0283	.8234	11.8	- 9.5	.002670	.19
	.9737	1.2683	12.5	141.3	.002670	.21
	1.3795	.0039	1.9	- 89.7	.002891	.01
	1.3795	.1561	3.9	.0	.002624	.02
	1.3795	.4956	15.6	.0	.002420	.29
	1.3346	.8410	3.9	- 89.9	.002460	.02
	1.2410	1.3307	.0	.0	.002460	.00
	1.7815	.0020	17.6	6.3	.002891	.45
	1.7815	.2224	13.8	- 8.1	.002624	.25
	1.7795	.5522	9.7	.0	.002420	.11
	1.7580	.9307	16.7	- 35.5	.002460	.34
	1.7502	1.5434	56.7	- 95.9	.002460	3.95
842.80	.6077	.0000	READINGS	INVALID		
	.6077	.1154	READINGS	INVALID		
	.5962	.4846	READINGS	INVALID		
	.5712	.8346	READINGS	INVALID		
	.5423	1.2404	READINGS	INVALID		
	.9923	.0038	READINGS	INVALID		
	.9923	.1404	READINGS	INVALID		
	.9827	.5038	READINGS	INVALID		
	.9712	.8462	READINGS	INVALID		
	.9308	1.3000	READINGS	INVALID		
	1.3423	.0096	READINGS	INVALID		
	1.3462	.1808	READINGS	INVALID		
	1.3481	.5192	READINGS	INVALID		
	1.3000	.8769	READINGS	INVALID		
	1.2115	1.3538	READINGS	INVALID		
	1.7500	.0058	READINGS	INVALID		
	1.7462	.2481	READINGS	INVALID		
	1.7423	.5731	READINGS	INVALID		
	1.7346	.9327	READINGS	INVALID		
	1.7346	1.5423	READINGS	INVALID		

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
884.00	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
925.20	.5827	.0000	READINGS INVALID			
	.5827	.1269	READINGS INVALID			
	.5827	.4731	READINGS INVALID			
	.5635	.8404	READINGS INVALID			
	.5288	1.2481	READINGS INVALID			
	.9788	.0000	READINGS INVALID			
	.9731	.1212	READINGS INVALID			
	.9731	.4750	READINGS INVALID			
	.9635	.8404	READINGS INVALID			
	.8885	1.2750	READINGS INVALID			
	1.3481	.0058	READINGS INVALID			
	1.3500	.1750	READINGS INVALID			
	1.3288	.5058	READINGS INVALID			
	1.2808	.8481	READINGS INVALID			
	1.1654	1.3192	READINGS INVALID			
	1.7558	.0096	READINGS INVALID			
	1.7558	.2135	READINGS INVALID			
	1.7500	.5442	READINGS INVALID			
	1.7365	.8904	READINGS INVALID			
	1.7115	1.5135	READINGS INVALID			

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
966.40	.602	.0000	1.9	180.0	.003166	.01
	.602	.1229	13.8	- 98.1	.002400	.23
	[illegible]	.4780	22.7	-121.0	.002436	.63
	[illegible]	.8449	42.0	-103.4	.002549	2.25
	.5424	1.2663	11.0	135.0	.002549	.15
	.9659	.0078	15.2	50.2	.002822	.33
	.9990	.1620	20.0	60.9	.002600	.52
	.9990	.4956	12.3	-108.4	.002711	.21
	.9756	.8566	38.2	-104.7	.002563	1.87
	.8917	1.3210	17.9	-167.5	.002563	.41
	1.3795	.0039	7.0	123.7	.002739	.07
	1.3737	.1776	11.0	-135.0	.002655	.16
	1.3600	.5249	7.0	-123.7	.002673	.07
	1.3073	.8546	26.5	-107.1	.002407	.84
	1.1668	1.3208	26.1	-153.4	.002407	.82
	1.7659	.0020	2.8	-135.0	.002739	.01
	1.7659	.2341	8.7	153.4	.002655	.10
	1.7522	.5600	19.2	-114.0	.002673	.49
	1.7307	.8956	39.4	-122.9	.002407	1.87
	1.7132	1.5024	63.3	-107.9	.002407	4.83
1007.60	.5808	.0000	7.9	180.0	.003393	.11
	.5808	.1135	8.8	153.4	.002457	.10
	.5712	.4538	8.1	-166.0	.002561	.08
	.5538	.8000	14.2	-123.7	.002447	.25
	.5212	1.2558	20.1	168.7	.002447	.50
	.9885	.0115	13.8	.0	.003598	.34
	.9827	.1385	25.3	-141.3	.002759	.88
	.9692	.4635	9.9	180.0	.002885	.14
	.9538	.8038	35.3	-153.4	.002550	1.59
	.8712	1.2712	29.3	-137.7	.002550	1.10
	1.3442	.0115	38.0	171.0	.002904	2.09
	1.3423	.1673	15.9	-150.3	.002656	.34
	1.3250	.5000	38.9	-149.5	.002586	1.96
	1.2731	.8231	36.9	-164.5	.002367	1.61
	1.1423	1.3077	41.4	180.0	.002367	2.03
	1.7538	.0077	10.1	78.7	.002904	.15
	1.7481	.2173	8.4	-135.0	.002656	.09
	1.7423	.5269	8.1	- 76.0	.002586	.09
	1.7154	.8577	16.9	-110.6	.002367	.34
	1.6923	1.4538	39.3	- 72.5	.002367	1.83

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1048.80	.5951	.0000	5.8	.0	.003240	.06
	.5951	.1268	11.3	- 59.0	.002410	.15
	.5951	.4761	24.1	76.0	.002605	.75
	.5737	.8332	34.0	76.8	.002618	1.51
	.5229	1.2702	15.6	90.0	.002618	.32
	.9795	.0078	10.5	-158.2	.003288	.18
	.9795	.1463	8.7	116.6	.002647	.10
	.9893	.4956	21.7	63.4	.002850	.67
	.9444	.8410	30.8	108.4	.002623	1.24
	.8702	1.3015	33.6	100.0	.002623	1.48
	1.3424	.0098	31.2	- 3.6	.002792	1.36
	1.3600	.1698	30.2	- 14.9	.002563	1.17
	1.3268	.5054	26.5	36.0	.002467	.86
	1.2722	.8449	35.8	67.6	.002265	1.45
	1.1259	1.3288	37.4	117.9	.002265	1.59
	1.7678	.0117	8.3	- 45.0	.002792	.10
	1.7600	.2283	8.7	26.6	.002563	.10
	1.7541	.5522	8.3	-135.0	.002467	.08
	1.7249	.8800	25.6	98.7	.002265	.74
	1.7249	1.4654	29.4	- 97.6	.002265	.98
1090.00	.5865	.0000	19.7	180.0	.003477	.68
	.5865	.1038	19.8	-174.3	.002322	.46
	.5769	.4769	21.3	158.2	.002535	.57
	.5615	.8327	16.9	159.4	.002556	.36
	.5212	1.2712	37.1	64.8	.002556	1.76
	.9788	.0077	6.2	- 71.6	.003202	.06
	.9788	.1462	4.4	63.4	.002474	.02
	.9788	.4827	29.3	160.3	.002631	1.13
	.9442	.8327	19.8	174.3	.002482	.49
	.8654	1.3038	31.6	176.4	.002482	1.24
	1.3750	.0096	15.9	172.9	.003045	.39
	1.3712	.1596	43.8	172.2	.002756	2.65
	1.3462	.5154	26.3	-167.0	.002549	.88
	1.2865	.8558	10.1	168.7	.002515	.13
	1.1250	1.3404	31.6	-176.4	.002515	1.26
	1.7596	.0019	35.5	180.0	.003045	1.92
	1.7558	.2212	24.4	-166.0	.002756	.82
	1.7365	.5212	41.5	-154.7	.002549	2.19
	1.7115	.8827	28.3	-167.9	.002515	1.00
	1.6885	1.4250	115.6	-152.6	.002515	16.81

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1131.20	.5756	.0000	52.5	180.0	.002981	4.11
	.5756	.1249	54.2	159.0	.002311	3.39
	.5756	.4839	33.3	-173.3	.002685	1.49
	.5580	.8390	43.5	169.7	.002752	2.60
	.5385	1.3034	58.3	154.3	.002752	4.67
	.9815	.0020	64.3	176.5	.003421	7.07
	.9815	.1502	58.5	-176.2	.002840	4.86
	.9620	.5054	76.7	171.3	.002810	8.28
	.9249	.8429	69.5	162.1	.002591	6.26
	.8390	1.3034	75.5	145.5	.002591	7.39
	1.3268	.0117	75.9	-178.5	.002799	8.06
	1.3171	.1756	72.2	175.4	.002638	6.87
	1.3015	.4995	78.7	-171.5	.002493	7.71
	1.2624	.8468	70.4	-173.7	.002581	6.40
	1.0946	1.3268	95.3	171.9	.002581	11.96
	1.7327	.0117	50.6	-177.8	.002799	3.58
	1.7366	.2224	60.6	174.5	.002638	4.84
	1.7171	.5346	64.9	171.4	.002493	5.25
	1.6976	.8741	61.1	170.8	.002581	4.81
	1.6234	1.4127	111.0	177.0	.002581	15.90
1172.40	.5346	.0000	5.9	.0	.003406	.06
	.5365	.1231	20.1	78.7	.002505	.51
	.5442	.4731	39.7	116.6	.002677	2.11
	.5192	.8404	32.8	122.7	.002552	1.38
	.4692	1.2962	64.4	130.0	.002552	5.30
	.9154	.0115	16.3	166.0	.003309	.44
	.9212	.1423	27.9	171.9	.002530	.99
	.9038	.4942	33.6	176.6	.002628	1.48
	.8788	.8538	56.9	146.3	.002591	4.20
	.8038	1.3462	68.9	113.6	.002591	6.15
	1.3000	.0077	10.6	-158.2	.002789	.16
	1.3000	.1654	7.9	89.9	.002716	.08
	1.2692	.5038	30.9	116.6	.002455	1.17
	1.2173	.8481	45.9	154.5	.002463	2.59
	1.0308	1.3538	81.4	129.1	.002463	8.15
	1.7096	.0000	17.6	-153.4	.002789	.43
	1.6962	.2269	26.8	144.0	.002716	.98
	1.6731	.5308	28.3	155.2	.002455	.98
	1.6519	.8923	39.3	142.5	.002463	1.90
	1.5788	1.4308	42.2	-169.2	.002463	2.19

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1213.60	.5815	.0000	21.4	.0	.002972	.68
	.5795	.1444	24.8	45.0	.002415	.74
	.5580	.5190	22.8	110.0	.002778	.72
	.5405	.8663	27.2	90.0	.002658	.99
	.4976	1.3522	54.8	83.9	.002658	3.99
	.9659	.0059	16.0	-166.0	.003144	.40
	.9541	.1541	22.2	164.7	.002579	.63
	.9288	.5073	11.7	180.0	.002618	.18
	.8780	.8741	8.3	135.0	.002489	.08
	.8117	1.3659	42.7	120.1	.002489	2.27
	1.3171	.0078	6.2	- 18.4	.002648	.05
	1.3171	.1834	8.7	116.6	.002675	.10
	1.2878	.5268	20.3	-163.3	.002544	.52
	1.2215	.8663	27.3	175.9	.002535	.94
	1.0439	1.3893	52.5	141.0	.002535	3.50
	1.7171	.0039	21.5	174.8	.002648	.61
	1.7151	.2380	13.0	-153.4	.002675	.23
	1.6917	.5463	9.7	-143.1	.002544	.12
	1.6505	.8859	38.6	-139.1	.002535	1.89
	1.5824	1.4049	66.5	-164.7	.002535	5.61
1254.80	.5558	.0000	17.8	180.0	.003409	.54
	.5538	.1404	29.1	-118.3	.002664	1.13
	.5365	.4942	42.5	-111.8	.002681	2.42
	.5192	.8673	12.0	-170.5	.002542	.18
	.4750	1.3500	14.4	164.1	.002542	.26
	.9000	.0077	14.4	-164.1	.002949	.30
	.9000	.1481	22.1	-116.6	.002569	.63
	.8923	.4942	28.3	-155.2	.002693	1.07
	.8731	.8596	8.8	-116.6	.002638	.10
	.7827	1.3827	36.2	150.6	.002638	1.73
	1.3058	.0058	9.9	-143.1	.002900	.14
	1.2962	.1731	24.1	-125.0	.002760	.80
	1.2500	.4981	42.2	-127.4	.002471	2.20
	1.1904	.8500	38.3	-145.5	.002479	1.82
	.9904	1.3865	69.8	-171.9	.002479	6.03
	1.6885	.0019	63.2	178.2	.002900	5.79
	1.6846	.2212	70.7	-149.9	.002760	6.91
	1.6654	.5250	45.4	-145.6	.002471	2.55
	1.6231	.8673	58.3	-151.7	.002479	4.21
	1.5154	1.4135	52.5	-145.7	.002479	3.42

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1296.00	.5639	.0000	3.9	180.0	.003423	.03
	.5659	.1190	6.2	108.4	.002444	.05
	.5424	.4800	21.7	116.6	.002629	.62
	.5288	.8644	59.2	113.2	.002608	4.58
	.4839	1.3561	51.4	119.5	.002608	3.44
	.9522	.0020	35.1	3.2	.003446	2.12
	.9444	.1346	20.9	21.8	.002617	.57
	.9034	.4956	10.5	68.2	.002686	.15
	.8741	.8663	29.7	121.6	.002762	1.22
	.7805	1.3834	49.6	101.3	.002762	3.40
	1.3093	.0020	27.3	175.9	.003460	1.29
	1.3034	.1639	26.2	138.0	.002909	1.00
	1.2624	.4937	34.0	103.2	.002599	1.50
	1.1902	.8449	49.7	120.6	.002511	3.10
	.9756	1.3795	82.7	119.6	.002511	8.60
	1.6546	.0059	20.3	163.3	.003460	.71
	1.6546	.2029	29.8	168.7	.002909	1.29
	1.6546	.5210	30.4	153.4	.002599	1.20
	1.6098	.8585	31.4	158.2	.002511	1.24
	1.5395	1.3756	32.1	166.0	.002511	1.29
1337.20	.5519	.0000	2.0	180.0	.003011	.01
	.5519	.1462	26.0	98.7	.002485	.84
	.5269	.5135	22.1	79.7	.002451	.60
	.4962	.9212	20.1	101.3	.002436	.49
	.4500	1.3942	26.5	116.6	.002436	.85
	.9346	.0096	19.4	156.0	.003148	.59
	.9192	.1558	23.8	114.4	.002671	.76
	.8962	.5038	7.1	56.3	.002662	.07
	.8577	.8846	10.1	168.7	.002665	.13
	.7731	1.4308	39.5	143.1	.002665	2.08
	1.2788	.0077	11.2	135.0	.002797	.17
	1.2769	.1904	8.8	116.6	.002776	.11
	1.2423	.5308	17.6	116.6	.002534	.39
	1.1654	.8923	29.7	176.2	.002478	1.09
	.9500	1.4577	26.8	107.1	.002478	.89
	1.6692	.0077	.0	.0	.002797	.00
	1.6558	.2269	10.1	- 11.3	.002776	.14
	1.6385	.5385	12.6	- 38.7	.002534	.20
	1.5942	.8788	6.2	-108.4	.002478	.05
	1.4846	1.4212	83.7	145.6	.002478	8.69

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1378.40	.5620	.0000	21.4	180.0	.003050	.70
	.5620	.1444	21.7	-169.7	.002539	.60
	.5463	.5015	16.7	144.5	.002681	.38
	.5249	.8839	8.7	-153.4	.002657	.10
	.4722	1.3795	9.7	36.9	.002657	.13
	.9346	.0098	25.3	180.0	.003228	1.03
	.9346	.1561	16.6	159.4	.002671	.37
	.9073	.5015	22.8	160.0	.002884	.75
	.8644	.8683	38.4	149.5	.002624	1.93
	.7493	1.4068	50.9	136.5	.002624	3.40
	1.3015	.0098	7.0	-123.7	.003381	.08
	1.2995	.1717	28.7	-118.3	.002791	1.15
	1.2546	.5093	37.2	-132.9	.002521	1.74
	1.1610	.8468	41.3	-138.8	.002413	2.06
	.9678	1.4049	27.2	180.0	.002413	.89
	1.6546	.0059	27.3	-175.9	.003381	1.26
	1.6644	.2010	19.4	-143.1	.002791	.53
	1.6644	.5132	26.5	-126.0	.002521	.88
	1.6078	.8527	30.8	-145.3	.002413	1.14
	1.4712	1.4224	109.3	174.9	.002413	14.42
1419.60	.5308	.0000	11.8	180.0	.002985	.21
	.5308	.1423	21.0	131.2	.002438	.54
	.5135	.5231	29.6	143.1	.002566	1.12
	.4885	.9173	70.3	128.2	.002620	6.47
	.4577	1.4000	49.8	123.7	.002620	3.25
	.9096	.0096	29.9	-172.4	.003186	1.42
	.9038	.1615	36.0	-170.5	.002700	1.75
	.8750	.5115	29.6	143.1	.002684	1.18
	.8250	.9038	35.6	123.7	.002619	1.66
	.7365	1.4654	75.0	144.6	.002619	7.37
	1.2750	.0019	49.3	180.0	.003112	3.79
	1.2635	.1654	47.4	180.0	.002788	3.13
	1.2173	.5038	47.7	150.3	.002466	2.81
	1.1346	.8604	58.3	156.0	.002555	4.34
	.9231	1.4577	85.1	135.9	.002555	9.26
	1.6423	.0058	33.8	-173.3	.003112	1.78
	1.6404	.2154	43.5	177.4	.002788	2.63
	1.6231	.5173	65.1	180.0	.002466	5.23
	1.5692	.8615	46.4	-167.7	.002555	2.76
	1.3769	1.4308	106.4	169.3	.002555	14.47

Table B-VII. Front-Lower Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 340

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1460.80	.5502	.0000	29.2	.0	.003075	1.31
	.5483	.1600	14.8	23.2	.002528	.28
	.5229	.5190	2.8	- 45.0	.002445	.01
	.4820	.9385	12.5	- 38.7	.002718	.21
	.4449	1.4205	47.3	99.5	.002718	3.04
	.9054	.0059	7.0	- 33.7	.003392	.08
	.8995	.1502	15.7	- 7.1	.002606	.32
	.8839	.5190	11.3	31.0	.003081	.20
	.8449	.8976	15.2	- 39.8	.002674	.31
	.6888	1.4498	16.6	159.4	.002674	.37
	1.2527	.0098	22.2	164.7	.003236	.80
	1.2527	.1717	33.6	170.0	.002776	1.56
	1.2137	.5327	9.7	-143.1	.002643	.12
	1.1083	.8702	15.7	150.3	.002430	.30
	.9073	1.4634	45.2	115.5	.002430	2.49
	1.6215	.0020	35.2	- 6.3	.003236	2.01
	1.6215	.2029	20.0	- 29.1	.002776	.56
	1.6000	.5132	15.7	- 82.9	.002643	.32
	1.5629	.8429	29.2	- 93.8	.002430	1.04
	1.3678	1.4420	36.3	164.5	.002430	1.60
1502.00	.5596	.0000	11.8	.0	.002993	.21
	.5442	.1481	10.1	-101.3	.002406	.12
	.5154	.5212	5.6	45.0	.002599	.04
	.4981	.9096	29.6	- 53.1	.002498	1.09
	.4500	1.4462	25.0	71.6	.002498	.78
	.9154	.0058	10.1	- 11.3	.003527	.18
	.9192	.1596	17.0	54.5	.002995	.43
	.8846	.5173	8.1	104.0	.002877	.10
	.8365	.8942	16.9	159.4	.002596	.37
	.7212	1.4712	38.8	14.7	.002596	1.95
	1.2538	.0077	9.9	.0	.002764	.13
	1.2308	.1712	5.6	135.0	.002674	.04
	1.2095	.4981	39.7	-116.6	.002432	1.92
	1.1212	.8731	8.8	63.4	.002487	.10
	.9038	1.4981	12.5	71.6	.002487	.19
	1.6769	.0019	42.2	10.8	.002764	2.46
	1.6577	.2058	26.8	- 17.1	.002674	.96
	1.6250	.5019	22.5	15.3	.002432	.62
	1.5673	.8327	10.6	158.2	.002487	.14
	1.3423	1.4404	57.2	180.0	.002487	4.07

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
52.40	.6346	3.1385	112.2	- 6.1	.002308	14.54
	.6462	2.7442	125.5	- 32.7	.002468	19.43
	.6808	2.4038	62.6	- 80.8	.002315	6.53
	.7135	2.0885	30.9	- 75.1	.002494	1.19
	.7827	1.7346	14.1	- 45.0	.002494	.25
	.9885	3.1365	59.9	- 3.8	.002184	3.92
	1.0115	2.7346	56.6	- 50.7	.002239	3.59
	1.0154	2.4731	79.3	- 64.7	.002335	7.35
	1.0308	2.1346	24.3	- 55.0	.002396	.71
	1.0519	1.7538	27.1	36.0	.002396	.88
	1.3654	3.1404	47.4	- 14.6	.002029	2.28
	1.3654	2.7192	39.9	- 36.9	.002085	1.66
	1.3577	2.5096	48.0	- 48.4	.002174	2.50
	1.3462	2.1865	22.7	- 52.1	.002294	.59
	1.3538	1.7885	19.9	- 53.1	.002294	.46
	1.7788	3.1423	4.0	89.9	.002029	.02
	1.7692	2.7135	28.2	- 81.9	.002085	.83
	1.7692	2.5577	42.0	- 95.4	.002174	1.92
	1.7577	2.2904	45.4	- 74.7	.002294	2.37
	1.7615	1.8462	33.9	- 61.9	.002294	1.32
93.20	.7063	3.1024	162.5	- 11.9	.002417	31.93
	.7063	2.7024	169.6	- 47.8	.002418	34.78
	.7083	2.3532	91.1	- 52.9	.002553	10.60
	.7259	2.0566	64.1	- 50.0	.002411	4.96
	.7805	1.7112	28.6	- 74.1	.002411	.99
	1.0420	3.1122	125.0	- 8.1	.002230	17.42
	1.0439	2.7005	93.1	- 24.9	.002155	9.35
	1.0517	2.4156	81.7	- 35.2	.002630	8.78
	1.0517	2.1307	75.9	- 21.3	.002475	7.12
	1.0751	1.7639	42.9	15.9	.002475	2.28
	1.4088	3.1005	78.9	- 18.9	.002430	7.56
	1.3951	2.6927	63.5	- 21.8	.002359	4.75
	1.3951	2.4878	41.3	- 25.3	.002509	2.14
	1.3698	2.1834	20.5	- 16.7	.002361	.50
	1.3600	1.7756	14.2	33.7	.002361	.24
	1.7541	3.1044	31.1	- 55.3	.002430	1.17
	1.7541	2.6888	14.3	-164.1	.002359	.24
	1.7463	2.5229	9.8	143.1	.002509	.12
	1.7620	2.2634	51.0	- 74.4	.002361	3.07
	1.7678	1.8302	11.8	.0	.002361	.16

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
134.00	7904	3.1058	173.5	- 2.6	.002235	33.66
	.7577	2.6212	201.5	- 61.7	.002791	56.66
	.7346	2.3327	141.4	- 68.5	.002327	23.25
	.7538	2.0404	85.6	- 62.2	.002470	9.04
	.7904	1.7077	58.3	- 97.9	.002470	4.20
	1.1096	3.1132	70.2	- 6.5	.002370	5.84
	1.0942	2.6962	112.8	- 54.3	.002439	15.52
	1.0808	2.4269	77.6	- 48.1	.002795	8.42
	1.1000	2.1077	107.0	- 61.0	.002964	16.98
	1.0923	1.7654	66.8	- 63.4	.002964	6.62
	1.4385	3.1154	205.4	- 8.4	.002472	52.17
	1.4231	2.6962	180.9	- 16.6	.002553	41.79
	1.3942	2.4923	103.6	- 30.0	.002156	11.56
	1.3654	2.1808	71.8	- 56.3	.002498	6.45
	1.3654	1.7962	40.6	- 78.7	.002498	2.06
	1.7962	3.1173	READINGS	INVALID		
	1.7558	2.7096	165.6	- 2.8	.002553	35.00
	1.7615	2.5635	115.5	- 15.0	.002156	14.39
	1.7712	2.2423	38.3	- 38.7	.002498	1.83
	1.7731	1.8462	42.3	- 98.1	.002498	2.23
174.80	.8761	3.0946	36.1	29.4	.002327	1.51
	.8000	2.5288	223.4	- 96.6	.002968	74.05
	.7590	2.2244	144.5	- 97.0	.002604	27.17
	.7649	1.9824	82.6	-108.0	.002455	8.38
	.7727	1.6546	63.6	- 98.9	.002455	4.97
	1.1102	3.1044	100.5	- 4.5	.001491	7.52
	1.1083	2.6107	101.4	- 58.5	.001971	10.13
	1.1024	2.3590	112.9	- 76.9	.002409	15.35
	1.1024	2.0390	90.3	- 90.0	.002847	11.62
	1.1044	1.7054	82.6	- 72.0	.002847	9.71
	1.6078	3.0712	106.2	3.2	READINGS	INVALID
	1.5649	2.6420	101.4	- 31.5	.002295	11.80
	1.4829	2.4371	102.1	- 38.0	.002600	13.56
	1.4088	2.1249	96.6	- 37.6	.002481	11.58
	1.3678	1.7366	78.0	- 40.9	.002481	7.54
	NO READING					
	1.9161	2.6810	111.4	- 9.1	.002295	14.24
	1.8556	2.4937	101.4	- 21.6	.002600	13.36
	1.7912	2.2400	64.9	3.5	.002481	5.23
	1.7620	1.7893	59.4	- 55.8	.002481	4.37

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
215.60	.8212	3.1231	READINGS	INVALID		
	.7327	2.4038	167.8	- 85.9	.002713	38.20
	.7173	2.1923	97.8	-123.4	.002482	11.87
	.7288	1.9635	61.5	-114.9	.002341	4.43
	.7308	1.6462	28.5	- 65.2	.002341	.95
	1.2077	3.1115	205.6	- 3.3	.001942	41.05
	1.1462	2.6115	123.2	- 14.0	.002052	15.58
	1.1058	2.3192	98.7	- 43.4	.002410	11.73
	1.1000	2.0192	63.0	- 55.3	.002532	5.03
	1.1173	1.6885	58.6	- 54.7	.002532	4.35
	1.5423	3.1212	36.6	29.4	.002300	1.54
	1.5077	2.6442	6.3	-161.6	.002276	.05
	1.4731	2.4308	45.1	- 45.0	.002359	2.40
	1.4404	2.1231	72.0	- 41.6	.002508	6.50
	1.4231	1.7462	54.4	- 28.4	.002508	3.71
	1.8635	3.1231	READINGS	INVALID		
	1.8635	2.6923	10.2	-101.3	.002276	.12
	1.8538	2.5269	46.0	17.7	.002359	2.50
	1.8346	2.2462	77.0	- 10.4	.002508	7.43
	1.8058	1.7981	86.1	- 5.3	.002508	9.28
256.40	NO READING		READINGS	INVALID		
	.8117	2.3649	215.0	- 69.5	.002677	51.90
	.7063	2.1444	85.9	-100.5	.002222	8.20
	.7395	1.9278	53.6	- 66.3	.002289	3.29
	.7844	1.6293	59.0	- 60.0	.002289	3.98
	1.3112	3.0927	96.4	3.5	.002098	9.75
	1.2254	2.5815	148.7	- 33.7	.002184	24.14
	1.1727	2.2927	103.1	- 40.4	.002524	13.41
	1.1376	1.9883	77.0	- 70.6	.002811	8.34
	1.1376	1.6585	51.7	- 81.3	.002811	3.75
	1.6390	3.0888	41.3	2.7	READINGS	INVALID
	1.5590	2.6400	79.1	- 14.4	.002167	6.77
	1.5141	2.4059	84.5	- 30.7	.002288	8.18
	1.4615	2.0780	75.0	- 47.1	.002392	6.74
	1.4146	1.7112	82.6	- 72.0	.002392	8.16
	NO READING					
	1.9141	2.6712	62.1	- 18.4	.002167	4.18
	1.8985	2.5073	70.8	- 43.9	.002288	5.74
	1.8654	2.2263	67.6	- 35.5	.002392	5.46
	1.8459	1.7815	73.0	- 23.8	.002392	6.37

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
297.20	NO READING		READINGS	INVALID		
	.6981	2.1962	217.6	-142.8	.003048	72.17
	.7019	2.1096	85.9	- 94.0	.002345	8.65
	.7500	1.9154	59.8	- 91.9	.002484	4.44
	.8096	1.5962	64.9	- 72.1	.002484	5.23
	1.3019	3.1173	READINGS	INVALID		
	1.2673	2.5308	126.2	- 21.3	.002299	18.30
	1.1827	2.2538	105.6	- 91.1	.002388	13.32
	1.1250	1.9481	63.9	- 86.4	.002402	4.90
	1.1250	1.6385	60.1	- 95.7	.002402	4.33
	1.5827	3.1231	6.0	.0	.002129	.04
	1.5827	2.6250	62.9	- 79.0	.002118	4.19
	1.5442	2.3885	65.9	- 86.5	.002431	5.28
	1.4904	2.0692	42.8	- 62.2	.002354	2.15
	1.4481	1.6692	60.5	- 72.8	.002354	4.31
	1.9596	3.1019	READINGS	INVALID		
	1.9212	2.6731	39.3	- 24.0	.002118	1.63
	1.9038	2.4788	45.9	- 34.4	.002431	2.56
	1.8885	2.2077	74.1	- 23.8	.002354	6.45
	1.8712	1.7692	53.9	- 94.2	.002354	3.43
338.00	NO READING		READINGS	INVALID		
	.6420	2.2361	25.6	-147.5	.001855	.61
	.7005	2.0605	75.3	- 97.5	.002506	7.10
	.7376	1.8693	57.8	-107.8	.002352	3.92
	.8039	1.5688	35.6	- 96.3	.002352	1.49
	NO READING					
	1.3405	2.5366	266.9	-123.0	.002492	88.77
	1.1707	2.1893	113.3	-115.7	.002751	17.66
	1.1415	1.9259	50.1	- 78.7	.002597	3.26
	1.1317	1.6000	46.2	- 77.7	.002597	2.77
	1.6449	3.0888	READINGS	INVALID		
	1.5707	2.5795	READINGS	INVALID		
	1.5180	2.3415	READINGS	INVALID		
	1.4810	2.0410	63.3	- 97.1	.002256	4.52
	1.4322	1.6546	38.1	- 78.1	.002256	1.64
	NO READING		READINGS	INVALID		
	1.9493	2.6556	165.3	3.4	.001980	27.04
	1.9356	2.4820	178.8	- 1.3	.002114	33.78
	1.9317	2.1971	149.4	- 2.3	.002256	25.17
	1.8420	1.7288	136.7	- 7.4	.002256	21.06

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
378.80	NO READING		READINGS INVALID			
	.6769	2.1827	131.6	- 54.9	.003778	32.71
	.6923	2.0365	63.3	- 61.8	.002714	5.44
	.7327	1.8615	71.8	- 91.6	.002433	6.26
	.8058	1.5615	31.9	- 90.0	.002433	1.24
	1.1000	3.1096	READINGS INVALID			
	1.1250	2.3115	293.0	-122.5	READINGS INVALID	
	1.1346	2.1538	99.6	- 90.0	READINGS INVALID	
	1.1346	1.9000	67.0	- 67.2	.002564	5.75
	1.1346	1.5942	30.4	- 58.4	.002564	1.19
	NO READING		READINGS INVALID			
	NO READING					
	NO READING					
	1.4827	2.0077	109.9	- 46.5	.001784	10.78
	1.4558	1.6327	52.9	- 70.2	.001784	2.50
	NO READING		READINGS INVALID			
	2.0827	2.6827	READINGS INVALID			
	2.0788	2.4750	71.2	- 72.1	READINGS INVALID	
	2.0346	2.2019	51.2	-103.5	.001784	2.34
	2.0038	1.7519	41.5	- 35.2	.001784	1.53
419.60	NO READING		READINGS INVALID			
	.7161	2.1307	46.2	-167.7	.003506	3.75
	.7298	2.0059	72.7	180.0	.002644	6.98
	.7356	1.7990	62.4	-151.8	.002517	4.90
	.8039	1.5376	44.8	-164.7	.002517	2.52
	NO READING		READINGS INVALID			
	1.1863	2.2946	115.3	-103.8	.001802	11.97
	1.1707	2.0917	103.7	-108.8	.002244	12.07
	1.1668	1.8654	61.4	-129.8	.002684	5.05
	1.1473	1.5746	36.9	-115.2	.002684	1.83
	NO READING		READINGS INVALID			
	1.7112	2.5698	READINGS INVALID			
	1.6215	2.3024	READINGS INVALID			
	1.5551	1.9629	118.7	- 34.2	.002693	18.98
	1.4498	1.6059	86.7	- 13.1	.002693	10.12
	NO READING		READINGS INVALID			
	NO READING					
	1.9571	2.4156	23.7	- 24.4	.002661	.75
	1.9200	2.1483	52.8	- 45.0	.002693	3.75
	1.8751	1.7054	53.6	- 23.7	.002693	3.87

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
460.40	NO READING		READINGS	INVALID		
	.6327	2.1731	105.2	155.4	.003941	21.81
	.6212	2.0365	105.5	169.1	.002714	15.11
	.6788	1.8327	21.2	138.8	.002432	.55
	.7635	1.5500	17.8	- 63.4	.002432	.39
	NO READING		READINGS	INVALID		
	1.0981	2.2019	220.1	-121.7	.001373	33.25
	1.1019	2.0577	122.6	-134.3	.001822	13.69
	1.0962	1.8538	73.8	-128.4	.002076	5.65
	1.1192	1.5615	38.3	- 99.0	.002076	1.52
	NO READING		READINGS	INVALID		
	1.8096	2.5885	314.6	-141.2	.001784	88.31
	1.7173	2.2885	203.1	-137.4	.002104	43.39
	1.5788	1.9423	93.7	-150.7	.002123	9.31
	1.5385	1.6135	43.9	- 2.6	.002123	2.04
	NO READING		READINGS	INVALID		
	2.1500	2.7038	READINGS	INVALID		
	2.1000	2.4654	45.4	-164.7	.002104	2.17
	2.0712	2.1654	25.0	- 61.4	.002123	.66
	2.0519	1.7308	36.7	- 12.5	.002123	1.43
501.20	NO READING		READINGS	INVALID		
	.6224	2.1737	53.9	123.1	.004564	6.64
	.6283	2.0254	27.9	129.3	.002859	1.11
	.7200	1.8127	16.2	14.0	.002641	.35
	.8117	1.5220	9.8	53.1	.002641	.13
	1.0439	3.1024	READINGS	INVALID		
	1.0732	2.1112	READINGS	INVALID		
	1.0868	2.0059	91.0	- 32.7	.002983	12.34
	1.1220	1.8088	78.2	- 28.5	.002765	8.46
	1.1415	1.5376	45.2	.0	.002765	2.82
	1.6098	3.1005	READINGS	INVALID		
	1.4712	2.3766			.001912	
	1.4751	2.1678			.002187	
	1.4751	1.9180	35.0	- 38.2	.002447	1.50
	1.4927	1.6039	70.5	- 12.9	.002447	6.08
	1.8380	3.0985	READINGS	INVALID		
	1.7678	2.5522	READINGS	INVALID		
	1.9141	2.4039			.002187	69.81
	1.9317	2.1268			.002447	90.78
	1.9102	1.6976			.002447	73.73

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
542.00	NO READING		READINGS	INVALID		
	.6038	2.2173	55.8	90.0	READINGS	INVALID
	.6038	2.0577	55.4	120.3	.002348	3.60
	.6942	1.8365	63.3	167.3	.002366	4.74
	.7692	1.5577	31.9	180.0	.002366	1.20
	NO READING		READINGS	INVALID		
	NO READING					
	1.1769	2.0096	62.0	- 45.0	.002918	5.61
	1.1635	1.8173	18.4	- 77.5	.002261	.38
	1.1635	1.5615	22.5	-135.0	.002261	.57
	NO READING		READINGS	INVALID		
	1.6019	2.3712	133.7	- 86.6	READINGS	INVALID
	1.6038	2.1327	73.8	- 88.5	.001394	3.79
	1.6058	1.9212	61.8	- 91.8	.001551	2.96
	1.6058	1.5981	44.6	-116.6	.001551	1.54
	NO READING		READINGS	INVALID		
	NO READING					
	2.3462	2.4404	305.1	- 66.1	.001394	64.90
	2.3365	2.1385	463.3	- 86.3	.001551	166.46
	2.2923	1.7288	READINGS	INVALID		
582.80	NO READING		READINGS	INVALID		
	.6224	2.2283	86.3	101.8	.003725	13.87
	.6010	2.0722	38.7	120.5	.002452	1.84
	.6595	1.8263	70.8	-160.6	.002361	5.92
	.7805	1.5220	59.7	-133.7	.002361	4.21
	NO READING		READINGS	INVALID		
	1.1298	2.0722	READINGS	INVALID		
	1.1298	1.9629	114.7	-128.0	.003591	23.63
	1.1259	1.7912	83.5	-138.8	.002966	10.34
	1.1259	1.5220	81.0	-140.9	.002966	9.73
	NO READING		READINGS	INVALID		
	1.4790	2.2459	READINGS	INVALID		
	1.4771	2.0956	READINGS	INVALID		
	1.4732	1.8576	79.1	-104.4	READINGS	INVALID
	1.4732	1.5649	47.5	-114.4	READINGS	INVALID
	NO READING		READINGS	INVALID		
	2.0644	2.4234	READINGS	INVALID		
	2.0351	2.1307	71.5	-159.1	.001421	3.63
	1.9610	1.6741	151.7	-158.7	READINGS	INVALID
	NO READING					

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
623.60	NO READING		READINGS	INVALID		
	.5865	2.3000	72.2	83.7	.003196	8.33
	.5846	2.0904	73.8	141.6	.002355	6.40
	.6288	1.8135	55.9	175.9	.002368	3.71
	.7288	1.5154	35.9	-160.6	.002368	1.53
	NO READING		READINGS	INVALID		
	1.0904	2.0365	83.1	- 46.0	READINGS	INVALID
	1.1077	1.9212	82.4	- 57.8	READINGS	INVALID
	1.1019	1.7635	64.9	- 42.5	.002203	4.64
	1.1019	1.5115	48.0	- 48.4	.002203	2.54
	NO READING		READINGS	INVALID		
	NO READING					
	NO READING					
	1.5865	1.8462	39.3	- 59.5	.001934	1.49
	1.5865	1.5558	50.7	-135.0	.001934	2.49
	NO READING		READINGS	INVALID		
	NO READING					
	2.2808	2.4154	288.6	76.8	READINGS	INVALID
	2.1981	2.0846	447.1	78.7	.001934	193.32
	2.1442	1.6577	READINGS	INVALID		
664.40	NO READING		READINGS	INVALID		
	.6302	2.2985	READINGS	INVALID		
	.5444	2.1171	78.2	118.5	.002000	6.12
	.6049	1.8302	43.1	133.2	.001963	1.82
	.7473	1.5102	22.2	- 45.0	.001963	.48
	NO READING		READINGS	INVALID		
	1.1863	2.0137	49.5	- 83.2	.001801	2.20
	1.1727	1.8946	41.3	-115.3	.002613	2.23
	1.1727	1.7483	32.0	-137.5	.003554	1.82
	1.1571	1.4868	29.9	-113.2	.003554	1.59
	NO READING		READINGS	INVALID		
	1.8693	2.4917	READINGS	INVALID		
	1.7737	2.2244	READINGS	INVALID		
	1.4927	1.8244	39.5	- 95.7	.002308	1.80
	1.4380	1.5298	46.7	-104.6	.002308	2.51
	NO READING		READINGS	INVALID		
	2.1405	2.6459	READINGS	INVALID		
	2.0995	2.4059	READINGS	INVALID		
	2.0468	2.1034	181.0	15.1	.002308	37.82
	1.8829	1.6273	92.6	- 17.3	.002308	9.88

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
705.20	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.5481	2.1577	131.0	81.3	.002220	19.06
	.6000	1.8442	74.7	133.9	.002278	6.35
	.7442	1.5000	49.9	-177.7	.002278	2.83
	NO READING		READINGS	INVALID		
	1.0962	1.9885	READINGS	INVALID		
	1.0904	1.8846	171.7	-176.7	READINGS	INVALID
	1.0788	1.7423	170.0	-175.3	.002114	30.53
	1.0904	1.4846	123.5	180.0	.002114	16.13
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING					
	1.5827	1.8077	97.2	-134.2	.001464	6.92
	1.5750	1.5115	47.5	-147.0	.001464	1.65
	NO READING		READINGS	INVALID		
	NO READING					
	NO READING					
	2.3692	2.1308	74.1	-143.7	.001464	4.02
	2.2308	1.6308	31.5	18.4	.001464	.73
746.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.5639	2.2439	99.7	57.9	.002169	10.78
	.5541	1.8829	72.9	104.0	.002356	6.26
	.6985	1.5083	48.8	139.9	.002356	2.80
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.0049	1.8849	78.2	154.7	.003520	10.76
	1.0068	1.7346	62.0	169.0	.002962	5.70
	1.0361	1.4868	38.1	145.5	.002962	2.15
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.4322	1.9473	READINGS	INVALID		
	1.4263	1.7561	85.0	-139.7	.002332	8.42
	1.3990	1.5044	110.4	174.9	.002332	14.21
	NO READING		READINGS	INVALID		
	2.1444	2.6283	READINGS	INVALID		
	2.1054	2.3844	READINGS	INVALID		
	1.9883	2.0605	229.3	-155.2	.002332	61.32
	1.9122	1.6371	167.0	-178.0	.002332	32.53

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
786.80	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.6000	2.2404	READINGS	INVALID		
	.5827	1.9135	32.1	7.1	.002334	1.20
	.7077	1.5308	12.0	180.0	.002334	.17
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.0212	1.9173	48.2	-172.9	.002982	3.46
	1.0192	1.7538	49.3	-136.6	.002655	3.23
	1.0596	1.5058	26.0	- 94.4	.002655	.90
	NO READING		READINGS	INVALID		
	1.5250	2.0442	READINGS	INVALID		
	1.5288	1.9288	167.7	- 9.6	.001659	23.33
	1.5192	1.7538	63.3	- 28.2	.002131	4.27
	1.4673	1.5212	44.1	- 71.6	.002131	2.07
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.3231	2.3865	81.3	- 59.0	.001659	5.49
	2.1654	2.0365	90.2	- 59.5	.002131	8.67
	2.0673	1.6250	87.0	-110.1	.002131	8.06
827.60	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING					
	.5854	1.8868	25.6	57.5	.002621	.86
	.6868	1.5083	30.7	140.2	.002621	1.23
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.9580	1.8790	46.7	-165.4	.002432	2.65
	.9717	1.7015	65.3	173.1	.002592	5.52
	1.0341	1.4615	47.5	-172.9	.002592	2.92
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.5941	1.9200	86.8	-127.6	.002430	9.16
	1.4810	1.7268	67.6	-144.5	.002521	5.76
	1.4127	1.4634	33.4	- 93.4	.002521	1.41
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.1463	2.3161	87.7	- 74.4	.002430	9.34
	2.0332	1.9844	96.4	- 33.4	.002521	11.72
	1.8829	1.5571	67.1	- 69.4	.002521	5.68

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
868.40	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.6385	2.4788	READINGS	INVALID		
	.5962	1.9346	82.7	105.4	.002643	9.03
	.6846	1.5500	70.2	124.6	.002643	6.51
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.9769	1.9058	READINGS	INVALID		
	.9558	1.7615	102.4	142.9	.002483	13.02
	1.0135	1.5000	57.1	155.2	.002483	4.04
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.4769	1.8615	218.7	-149.9	.001529	36.57
	1.4654	1.7154	89.1	-153.4	.001852	7.35
	1.4654	1.4885	18.8	-148.0	.001852	.33
	NO READING		READINGS	INVALID		
	2.4019	2.5846	READINGS	INVALID		
	2.3462	2.3038	313.9	-124.4	.001529	75.32
	2.2442	1.9846	127.4	-117.0	.001852	15.04
	2.0904	1.5635	37.4	- 64.8	.001852	1.30
909.20	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.6615	2.3317	80.2	59.0	READINGS	INVALID
	.5639	1.9649	53.4	126.0	.002727	3.89
	.6478	1.5649	21.2	-146.3	.002727	.62
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING					
	.8917	1.7620	100.2	151.9	.002497	12.52
	.9834	1.4849	57.3	-157.8	.002497	4.09
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.4088	1.8127	133.3	-136.2	.002942	26.16
	1.4029	1.6878	115.5	-144.7	.002620	17.48
	1.3971	1.4537	116.9	-155.2	.002620	17.89
	NO READING		READINGS	INVALID		
	1.9532	2.2185	164.1	-137.9	READINGS	INVALID
	1.9727	2.0624	50.3	-128.7	.002942	3.72
	1.9766	1.8732	162.8	-131.6	.002620	34.70
	1.8985	1.5239	139.8	-150.6	.002620	25.61

Table 8-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
950.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.6788	2.5462	195.9	80.6	.002115	40.58
	.5654	1.9769	45.9	55.6	.002629	2.77
	.6673	1.5365	19.9	180.0	.002629	.52
	NO READING		READINGS	INVALID		
	.9115	2.0808	READINGS	INVALID		
	.8923	1.9500	READINGS	INVALID		
	.8692	1.8077	57.0	126.5	.002459	3.99
	.9615	1.4788	61.4	166.9	.002459	4.63
	NO READING		READINGS	INVALID		
	1.3885	1.8577	READINGS	INVALID		
	1.3827	1.7712	READINGS	INVALID		
	1.3731	1.6500	58.2	-128.0	.002123	3.60
	1.3615	1.4404	95.5	-156.6	.002123	9.68
	.0096-	19.3500	READINGS	INVALID		
	2.2827	2.4769	READINGS	INVALID		
	2.3154	2.2654	READINGS	INVALID		
	2.1385	1.8654	86.3	- 96.6	.002123	7.90
	1.9712	1.4962	54.1	- 96.3	.002123	3.11
990.80	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.6927	2.5210	READINGS	INVALID		
	.5893	2.0020	84.0	79.2	.002764	9.74
	.6283	1.5649	61.7	127.2	.002764	5.26
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.7980	2.0683	116.0	92.9	READINGS	INVALID
	.8585	1.8068	42.9	74.1	.002431	2.24
	.9249	1.4985	22.0	79.7	.002431	.59
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING					
	1.3678	1.6429	30.7	- 50.2	.002575	1.21
	1.3112	1.4166	22.9	- 59.0	.002575	.68
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.9668	1.7893	120.8	- 45.7	.002575	18.79
	1.8927	1.4712	193.5	- 5.8	.002575	48.18

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1031.60	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.5808	2.0577	57.1	102.1	.002270	3.70
	.6308	1.5865	54.2	126.0	.002270	3.33
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.8865	2.0635	212.6	- 83.5	.002919	65.95
	.8808	1.8481	310.6	- 81.1	.002366	114.09
	.9654	1.5000	READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.4000	1.7442	READINGS	INVALID		
	1.3923	1.6269	74.7	-170.8	.001968	5.49
	1.3731	1.4212	17.9	180.0	.001968	.32
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.2212	1.7808	69.7	- 36.9	.001968	4.79
	2.1596	1.4769	34.1	-159.4	.001968	1.14
1072.40	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.5775	2.0566	33.6	69.4	READINGS	INVALID
	.5971	1.6078	46.0	140.2	READINGS	INVALID
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.8215	1.8615	READINGS	INVALID		
	.9054	1.5063	63.5	158.2	READINGS	INVALID
	NO READING					
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.2956	1.6312	45.3	-162.3	.002538	2.61
	1.2937	1.4166	84.5	178.7	.002538	9.05
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.0215	1.7483	87.7	-146.0	.002538	9.76
	1.8615	1.4595	112.8	-148.5	.002538	16.16

Table B-VIII. Front-Upper Grid Calculations - Model 35 with Baffle (Continued)

Model 35, Shot 342

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1113.20	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.5923	2.0885	56.7	79.9	.002597	4.17
	.5962	1.6154	22.3	116.6	.002597	.64
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.8231	1.8712	413.7	103.4	.002356	201.64
	.9038	1.5154	READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.3500	1.6135	146.2	160.1	.002043	21.84
	1.2904	1.4231	74.2	173.8	.002043	5.62
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.1500	1.7327	161.4	-147.1	.002043	26.60
	2.0654	1.4192	93.4	-146.3	.002043	8.91
1154.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.5873	2.1112	107.9	56.9	.002649	15.41
	.5873	1.6273	47.5	82.9	.002649	2.99
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	.8117	1.9005	112.2	86.0	.002981	18.77
	.8722	1.5415	58.9	90.0	.002981	5.17
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.1610	1.6800	92.3	150.7	.002407	10.26
	1.2215	1.4244	36.5	143.7	.002407	1.61
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.8888	1.6624	119.7	-139.0	.002407	17.25
	1.7854	1.4088	63.0	-176.4	.002407	4.77

Table B-IX. Front-Upper Grid Calculation - Model 36

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
25.00	NO READING		READINGS INVALID			
	.2895	2.7619	27.4	- 85.9	.002525	.95
	.2705	2.0476	9.8	-143.1	.002326	.11
	.2400	1.6590	39.1	126.9	.002588	1.98
	.2057	1.3010	19.9	101.3	.002588	.51
	NO READING		READINGS INVALID			
	.5495	2.7829	28.0	102.1	.002284	.89
	.5848	2.0419	25.2	116.6	.002181	.75
	.5848	1.5514	34.5	153.5	.002377	1.43
	.5457	1.2781	21.0	158.2	.002377	.53
	NO READING		READINGS INVALID			
	1.0495	2.8248	3.9	180.0	.002187	.02
	1.0457	2.0533	2.8	45.0	.002295	.01
	1.0362	1.6838	15.1	76.0	.002294	.30
	1.0057	1.1924	24.5	28.6	.002294	.59
	NO READING		READINGS INVALID			
	1.4038	2.8838	READINGS INVALID			
	1.3467	2.0895	33.3	93.4	.002296	1.27
	1.3086	1.7257	21.1	123.7	.002294	.51
	1.2762	1.1576	47.3	50.3	.002294	2.56
56.60	NO READING		READINGS INVALID			
	.2615	2.7902	57.2	25.7	.002405	3.93
	.2459	2.0524	27.3	- 12.1	.002454	.92
	.2244	1.7015	15.7	- 14.0	.002371	.29
	.2224	1.3112	11.5	9.5	.002371	.16
	NO READING		READINGS INVALID			
	.5361	2.8176	24.4	128.7	.002275	.68
	.5776	2.0839	35.5	53.7	.002199	1.38
	.5580	1.7112	31.5	65.0	.002124	1.06
	.5580	1.2800	32.5	- 3.4	.002124	1.12
	NO READING		READINGS INVALID			
	1.0459	2.8195	7.9	-156.0	READINGS INVALID	
	1.0498	2.0751	10.3	111.8	.002416	.13
	1.0302	1.7210	18.8	66.0	.002444	.43
	1.0224	1.2078	30.5	3.6	.002444	1.14
	NO READING		READINGS INVALID			
	NO READING					
	1.3288	2.1190	27.0	8.1	.002416	.68
	1.2898	1.7327	10.8	-135.0	.002444	.14
	1.2683	1.1902	15.4	- 54.5	.002444	.33

Table B-IX. Front-Upper Grid Calculation - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
108.20	NO READING		READINGS INVALID			
	.3410	2.7367	18.4	148.0	.002704	.47
	.2971	2.0419	21.6	- 84.8	.002373	.55
	.2552	1.6552	29.9	- 78.7	.002446	1.09
	.2171	1.3029	12.5	128.7	.002446	.19
	NO READING		READINGS INVALID			
	.6343	2.8019	20.8	138.8	.002357	.51
	.6057	2.0705	27.2	- 30.3	.002278	.84
	.5981	1.6800	43.7	- 10.3	.002282	2.18
	.5790	1.2732	28.2	56.3	.002282	.91
	NO READING		READINGS INVALID			
	1.0419	2.8229	8.3	-135.0	.002068	.07
	1.0419	2.0629	14.2	- 74.1	.002223	.22
	1.0438	1.7010	32.1	52.4	.002403	1.23
	1.0362	1.1943	20.8	131.2	.002403	.52
	NO READING		READINGS INVALID			
	1.4076	2.8857	READINGS INVALID			
	1.3733	2.0933	48.9	- 92.3	.002223	2.66
	1.3010	1.7181	10.0	11.3	.002403	.12
	1.2857	1.1543	22.9	-110.0	.002403	.63
149.80	NO READING		READINGS INVALID			
	.2459	2.8000	110.1	-166.0	.002238	13.57
	.2478	2.0410	59.4	-154.1	.002249	5.42
	.2302	1.6722	27.3	155.2	.002381	.89
	.2146	1.3210	7.9	-104.0	.002381	.07
	NO READING		READINGS INVALID			
	.6205	2.8312	43.9	-159.4	.002248	2.69
	.6010	2.0702	33.8	-132.7	.002456	1.40
	.6010	1.7034	15.3	159.4	.002297	.31
	.5737	1.3034	33.2	- 36.9	.002297	1.67
	NO READING		READINGS INVALID			
	1.0400	2.8137	55.0	-123.7	READINGS INVALID	
	1.0537	2.0624	12.1	- 71.6	.002807	.20
	1.0498	1.7463	5.0	-161.6	.002366	.04
	1.0088	1.2234	35.0	-150.6	.002366	1.45
	NO READING		READINGS INVALID			
	NO READING					
	1.3268	2.0702	54.6	-143.5	.002807	4.18
	1.2995	1.7346	8.5	-116.6	.002366	.09
	1.2605	1.1588	15.3	159.4	.002366	.31

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
191.40	NO READING		READINGS INVALID			
	.2343	2.7500	40.3	-104.0	.002373	1.93
	.2305	2.0229	30.9	-145.3	.002368	1.13
	.2305	1.6557	17.5	-116.6	.002173	.33
	.2152	1.2952	21.9	153.4	.002173	.52
	NO READING		READINGS INVALID			
	.5886	2.7848	32.5	-126.3	.002286	7.78
	.5829	2.0457	55.9	-126.5	.002311	3.61
	.5829	1.6857	54.0	-148.7	.002313	4.74
	.6095	1.2533	41.5	-135.0	.002313	1.99
	NO READING		READINGS INVALID			
	1.0114	2.7771	86.5	-173.5	.002300	8.61
	1.0457	2.0514	48.5	-139.9	.002514	2.96
	1.0381	1.6990	51.2	-116.6	.002321	4.34
	1.0057	1.1771	49.8	-101.3	.002321	2.88
	NO READING		READINGS INVALID			
	1.3600	2.8686	READINGS INVALID			
	1.3295	2.0510	51.9	-109.8	.002514	3.39
	1.2971	1.7105	33.4	-110.6	.002321	1.29
	1.2705	1.1600	15.7	-110.6	.002321	.32
233.00	NO READING		READINGS INVALID			
	.2361	2.7610	1.9	89.7	.002460	.00
	.2224	2.0234	13.1	- 18.4	.002475	.41
	.2224	1.6556	45.9	- 73.1	.002676	2.81
	.1951	1.3307	33.3	- 76.8	.002676	1.49
	NO READING		READINGS INVALID			
	.5717	2.7549	41.9	-149.9	.002355	2.07
	.5678	2.0254	35.5	-143.7	.002354	1.48
	.5463	1.6702	34.0	-128.2	.002207	1.27
	.5444	1.2741	27.3	-167.9	.002207	.82
	NO READING		READINGS INVALID			
	.9541	2.8039	75.0	172.7	.002168	5.10
	1.0166	2.0312	47.2	-133.4	.002508	2.91
	1.0224	1.6917	23.3	-125.0	.002344	.54
	.9990	1.1746	18.1	- 71.6	.002344	.38
	NO READING		READINGS INVALID			
	1.2917	2.8741	154.1	-162.4	.002168	29.20
	1.3093	2.0215	55.6	- 95.9	.002508	4.03
	1.2878	1.7034	27.5	-123.7	.002344	.89
	1.2546	1.1532	24.8	-112.6	.002344	.72

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
274.60	NO READING		READINGS INVALID			
	.2343	2.7519	15.8	- 82.9	.002668	.33
	.2476	2.0171	51.5	- 29.5	.002516	3.35
	.2438	1.6229	10.5	- 68.2	.002492	.14
	.2229	1.2629	59.3	- 72.8	.002492	4.39
	NO READING		READINGS INVALID			
	.5524	2.7638	15.8	82.9	.002328	.29
	.5543	2.0248	15.7	- 69.4	.002332	.33
	.5619	1.6590	21.9	- 10.3	.002265	.54
	.5829	1.2476	25.5	- 36.0	.002266	.80
	NO READING		READINGS INVALID			
	.9371	2.7867	37.6	- 9.0	.002431	1.72
	1.0133	2.0171	18.5	- 18.4	.002572	.44
	1.0248	1.6800	28.9	- 28.3	.002400	1.00
	1.0114	1.1500	10.5	21.8	.002403	.13
	NO READING		READINGS INVALID			
	1.2038	2.8190	109.6	-101.3	.002431	14.61
	1.3238	2.0057	29.8	- 23.2	.002572	1.14
	1.2819	1.6876	29.3	36.9	.002403	1.03
	1.2610	1.1371	10.5	21.8	.002403	.13
315.20	NO READING		READINGS INVALID			
	.2380	2.7454	45.9	63.4	.002535	2.79
	.2673	1.9980	83.1	- 80.8	.002564	9.20
	.2253	1.6468	29.8	- 50.2	.002405	1.07
	.2127	1.2741	51.5	- 60.3	.002405	4.55
	NO READING		READINGS INVALID			
	.5737	2.7805	52.8	- 12.5	.002186	3.04
	.5737	2.0098	59.4	- 58.5	.002325	5.60
	.5678	1.6563	50.9	- 57.8	.002238	4.15
	.5659	1.2585	95.2	- 50.6	.002238	10.36
	NO READING		READINGS INVALID			
	.9912	2.7980	55.1	- 31.8	.002523	5.35
	1.0341	2.0254	45.5	- 57.0	.002561	2.76
	1.0478	1.5780	51.9	- 72.9	.002371	3.19
	1.0088	1.1735	29.1	- 23.2	.002371	1.00
	NO READING		READINGS INVALID			
	1.2702	2.7558	20.3	-131.2	.002523	.52
	1.3365	2.0098	42.9	- 57.7	.002561	2.45
	1.3112	1.7210	54.6	- 53.5	.002371	3.53
	1.2644	1.1571	37.9	- 40.9	.002371	1.70

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	G LB/SQFT
357.80	NO READING		READINGS INVALID			
	.2552	2.8038	28.5	- 15.9	.002204	.89
	.2610	1.9352	5.2	108.4	.002505	.05
	.2629	1.6000	43.9	- 32.3	.002194	2.12
	.2533	1.2095	55.7	- 43.6	.002194	3.52
	NO READING		READINGS INVALID			
	.5038	2.7524	47.1	- 41.5	.002273	2.52
	.5905	1.9557	15.7	- 69.4	.002393	.33
	.5943	1.6076	39.3	- 95.7	.002443	1.88
	.5438	1.1733	21.5	- 95.2	.002443	.57
	NO READING		READINGS INVALID			
	.9924	2.7524	31.3	- 93.6	.002711	1.33
	1.0381	1.9730	45.5	- 67.8	.002436	2.63
	1.0400	1.6305	29.9	-101.3	.002445	1.09
	1.0381	1.1486	21.9	- 79.7	.002445	.58
	NO READING		READINGS INVALID			
	1.1905	2.8038	47.6	-170.5	.002711	3.07
	1.3467	1.9595	45.3	- 62.4	.002436	2.61
	1.3143	1.6438	53.1	- 83.7	.002445	3.45
	1.2895	1.1124	38.8	- 49.1	.002445	1.84
399.40	NO READING		READINGS INVALID			
	.2654	2.7376	32.1	- 92.7	.002527	3.52
	.2654	2.0039	25.8	85.9	.002501	.93
	.2634	1.6234	5.7	- 89.9	.002742	.04
	.2537	1.2351	33.3	103.2	.002742	1.52
	NO READING		READINGS INVALID			
	.5088	2.7493	13.5	- 81.9	.002259	.21
	.5795	1.9941	2.7	135.0	.002271	.01
	.5639	1.6273	12.1	161.6	.002295	.17
	.5639	1.2371	52.6	136.5	.002295	3.18
	NO READING		READINGS INVALID			
	.9893	2.7668	90.2	154.7	.002635	8.48
	1.0517	1.9824	15.4	- 54.5	.002597	.35
	1.0420	1.6488	12.1	- 71.6	.002286	.17
	1.0127	1.1571	25.1	- 81.3	.002286	.72
	NO READING		READINGS INVALID			
	1.2234	2.7590	32.0	-107.4	.002635	1.35
	1.3580	1.9588	33.8	- 47.3	.002597	1.48
	1.3171	1.6583	20.3	- 41.2	.002286	.47
	1.2898	1.1278	11.1	-121.0	.002286	.14

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
441.00	NO READING		READINGS INVALID			
	.2514	2.7219	41.5	98.1	.002375	2.04
	.2629	1.9519	47.3	-119.7	.002558	2.86
	.2629	1.5943	55.0	-119.2	.002542	3.99
	.2457	1.2419	39.3	174.3	.002542	1.95
	NO READING		READINGS INVALID			
	.5057	2.7390	39.5	171.5	.002399	1.87
	.5886	1.9576	52.5	-135.0	.002338	3.22
	.5829	1.6114	19.5	-126.9	.002341	.45
	.6057	1.2095	19.3	-135.0	.002341	.44
	NO READING		READINGS INVALID			
	.9200	2.7867	81.6	137.9	.002347	7.82
	1.0476	1.9557	15.5	-135.0	.002380	.33
	1.0438	1.5190	18.5	-108.4	.002415	.42
	1.0419	1.1238	11.9	- 80.5	.002415	.17
	NO READING		READINGS INVALID			
	1.1810	2.7733	READINGS INVALID			
	1.3595	1.9448	41.2	-148.6	.002380	2.02
	1.3235	1.5305	37.5	-141.3	.002415	1.70
	1.2838	1.1029	37.2	-177.0	.002415	1.67
482.60	NO READING		READINGS INVALID			
	.2595	2.7735	READINGS INVALID			
	.2420	1.9529	13.8	-146.3	.002541	.25
	.2361	1.5746	23.5	155.0	.002765	.77
	.2146	1.2390	8.5	115.5	.002765	.10
	NO READING		READINGS INVALID			
	.5598	2.7551	32.5	-139.8	.002390	1.10
	.5424	1.9571	17.3	-173.7	.002248	.34
	.5522	1.5117	13.5	171.9	.002254	.21
	.5502	1.2234	31.3	142.4	.002264	1.11
	NO READING		READINGS INVALID			
	.9288	2.8215	43.9	-145.6	READINGS INVALID	
	1.0400	1.9707	24.9	-175.6	.002785	.86
	1.0361	1.5312	10.3	158.2	.002649	.14
	1.0146	1.1454	32.4	151.9	.002649	1.34
	NO READING		READINGS INVALID			
	NO READING					
	1.3229	1.9473	42.2	161.6	.002785	2.48
	1.2878	1.6449	47.8	151.4	.002649	3.03
	1.2527	1.1259	27.8	154.1	.002649	1.02

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
524.20	NO READING		READINGS INVALID			
	NO READING					
	.2514	1.9543	32.2	-104.0	.002605	1.35
	.2400	1.5000	29.8	156.8	.002553	1.18
	.2419	1.2495	23.9	-145.0	.002553	.75
	NO READING		READINGS INVALID			
	.5810	2.7181	34.8	-128.2	.002524	1.53
	.5714	1.9557	10.0	78.7	.002379	.12
	.5695	1.6133	9.1	-166.0	.002410	.08
	.5810	1.2286	37.3	174.0	.002410	1.58
	NO READING		READINGS INVALID			
	.8838	2.7619	95.2	-119.2	.002735	12.56
	1.0229	1.9538	24.9	-135.0	.002552	.82
	1.0343	1.6229	15.8	-125.5	.002556	.36
	1.0133	1.1390	20.4	-163.3	.002556	.53
	NO READING		READINGS INVALID			
	1.1048	2.7314	READINGS INVALID			
	1.3295	1.9581	25.2	26.6	.002552	.91
	1.2876	1.6533	13.5	- 18.4	.002556	.44
	1.2571	1.1105	41.5	- 45.0	.002556	2.20
555.80	NO READING		READINGS INVALID			
	.2341	2.7044	READINGS INVALID			
	.2341	1.9317	43.5	- 28.8	.002543	2.51
	.2088	1.5853	53.0	- 30.3	.002589	3.78
	.1951	1.2254	74.1	- 55.5	.002689	7.38
	NO READING		READINGS INVALID			
	.5483	2.7278	53.2	-151.1	.002365	4.72
	.5444	1.9558	43.2	-123.7	.002273	2.63
	.5444	1.5098	34.6	- 83.7	.002253	1.34
	.5132	1.2273	51.1	- 90.0	.002253	4.20
	NO READING		READINGS INVALID			
	.8820	2.7376	93.1	-103.5	READINGS INVALID	
	1.0224	1.9532	41.2	- 76.6	.002427	2.06
	1.0263	1.6176	37.5	-104.7	.002254	1.58
	.9951	1.1395	43.5	- 74.7	.002254	2.13
	NO READING		READINGS INVALID			
	NO READING					
	1.3463	1.9590	42.4	- 82.2	.002427	2.18
	1.3054	1.6390	23.2	- 80.5	.002254	.61
	1.2820	1.0956	43.0	- 77.2	.002254	2.09

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	W LB/SQFT
507.40	NO READING		READINGS INVALID			
	NO READING					
	.2895	1.9333	33.3	93.4	.003115	1.73
	.2857	1.5733	15.8	82.9	.002801	.35
	.2838	1.1886	15.1	166.0	.002801	.35
	NO READING		READINGS INVALID			
	.5257	2.5375	READINGS INVALID			
	.5448	1.9257	49.5	9.1	.002353	2.88
	.5733	1.5790	23.5	.0	.002332	.64
	.5810	1.1676	53.3	- 8.4	.002332	3.32
	NO READING		READINGS INVALID			
	.8510	2.5557	READINGS INVALID			
	1.0324	1.9238	41.2	58.6	.002712	2.30
	1.0248	1.5857	21.9	79.7	.002441	.58
	1.0248	1.0971	15.8	54.5	.002441	.34
	NO READING		READINGS INVALID			
	1.0933	2.5037	READINGS INVALID			
	1.3352	1.9162	35.2	93.2	.002712	1.58
	1.2914	1.5305	15.6	90.0	.002441	.30
	1.2657	1.0585	25.3	132.0	.002441	.84
549.00	NO READING		READINGS INVALID			
	.1951	2.7102	READINGS INVALID			
	.2322	1.9549	51.1	-178.2	.002290	4.27
	.2107	1.5020	47.7	153.7	.002298	2.61
	.1795	1.2293	35.8	146.7	.002298	3.65
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	.5932	1.9746	42.0	2.5	.002324	2.05
	.5578	1.5098	7.9	14.0	.002377	.07
	.5659	1.2195	51.2	116.6	.002377	3.12
	NO READING		READINGS INVALID			
	NO READING					
	1.0439	1.9883	35.0	58.0	.002421	1.57
	1.0302	1.5390	11.1	59.0	.002376	.15
	1.0049	1.1532	32.8	125.5	.002376	1.28
	NO READING		READINGS INVALID			
	NO READING					
	1.3444	1.9941	59.1	90.0	.002421	4.23
	1.3054	1.6546	20.5	111.8	.002376	.50
	1.2644	1.1151	35.1	135.0	.002376	1.46

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
690.60	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	.2286	1.9314	13.1	- 63.4	.002473	.21
	.2400	1.5867	19.4	32.0	.002532	.45
	.2114	1.2352	24.7	18.4	.002532	.80
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	.5867	1.9276	39.6	-147.1	.002350	1.84
	.5810	1.5810	31.3	176.4	.002483	1.22
	.5581	1.2133	26.6	126.0	.002483	.88
	NO READING		READINGS INVALID			
	.9162	2.5962	READINGS INVALID			
	1.0514	1.9543	23.5	- 85.2	.002644	.73
	1.0305	1.5962	5.2	161.6	.002599	.05
	1.0057	1.1238	10.0	- 78.7	.002599	.13
	NO READING		READINGS INVALID			
	1.3352	2.5200	READINGS INVALID			
	1.3352	1.9752	34.6	-137.3	.002644	1.58
	1.2838	1.6495	19.5	180.0	.002599	.50
	1.2419	1.0933	34.8	-141.8	.002599	1.57
732.20	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	.2380	1.9532	41.8	- 65.8	.002768	2.42
	.2263	1.6117	13.9	-105.9	.002560	.26
	.2029	1.2371	35.1	45.0	.002660	1.64
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	.5600	1.9532	19.6	-150.9	.002340	.45
	.5366	1.6117	17.3	173.7	.002292	.34
	.5202	1.2410	5.0	-108.4	.002292	.04
	NO READING		READINGS INVALID			
	NO READING					
	1.0459	1.9549	19.5	- 78.7	.002806	.53
	1.0244	1.6410	10.8	45.0	.002497	.15
	1.0058	1.1434	11.6	99.5	.002497	.17
	NO READING		READINGS INVALID			
	NO READING					
	1.3190	1.9707	23.3	- 35.0	.002806	.76
	1.2859	1.6546	43.0	- 12.8	.002497	2.31
	1.2371	1.0946	25.6	21.0	.002497	.88

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
773.80	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	.2457	1.8933	READINGS INVALID			
	.2362	1.5733	READINGS INVALID			
	.2362	1.2510	READINGS INVALID			
	NO READING		READINGS INVALID			
	.5543	2.6171	READINGS INVALID			
	.5595	1.9181	READINGS INVALID			
	.5638	1.5829	READINGS INVALID			
	.5562	1.2076	READINGS INVALID			
	NO READING		READINGS INVALID			
	1.0552	2.4548	READINGS INVALID			
	1.0552	1.9352	READINGS INVALID			
	1.0381	1.6038	READINGS INVALID			
	1.0038	1.1352	READINGS INVALID			
	NO READING		READINGS INVALID			
	1.4286	2.4495	READINGS INVALID			
	1.3543	1.9619	READINGS INVALID			
	1.3257	1.6400	READINGS INVALID			
	1.2667	1.1029	READINGS INVALID			
815.40	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	NO READING					
	NO READING					
	NO READING					
	NO READING		READINGS INVALID			
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING		READINGS INVALID			
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	NO READING					
	NO READING					
	NO READING					

Table B-IX. Front-Upper Grid Calculations -Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
857.00	NO READING		READINGS INVALID			
	.2305	2.6343	READINGS INVALID			
	.2419	1.8990	READINGS INVALID			
	.2419	1.5771	READINGS INVALID			
	.2419	1.2114	READINGS INVALID			
	NO READING		READINGS INVALID			
	.5333	2.5810	READINGS INVALID			
	.5257	1.9238	READINGS INVALID			
	.5295	1.5638	READINGS INVALID			
	.5295	1.1771	READINGS INVALID			
	NO READING		READINGS INVALID			
	.9543	2.5981	READINGS INVALID			
	1.0629	1.9333	READINGS INVALID			
	1.0248	1.6095	READINGS INVALID			
	.9924	1.1314	READINGS INVALID			
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3448	1.9576	READINGS INVALID			
	1.2838	1.6476	READINGS INVALID			
	1.2381	1.0952	READINGS INVALID			
898.60	NO READING		READINGS INVALID			
	NO READING					
	.2576	1.8927	32.6	- 69.4	.002851	1.52
	.2595	1.5629	43.6	- 78.7	.002574	3.05
	.2127	1.2156	43.9	-124.4	.002574	2.48
	NO READING		READINGS INVALID			
	.5463	2.5678	73.9	- 32.2	READINGS INVALID	
	.5815	1.9122	65.1	- 31.8	.002416	5.12
	.5698	1.5805	41.8	- 65.8	.002268	1.99
	.5639	1.1649	19.6	- 29.1	.002268	.44
	NO READING		READINGS INVALID			
	NO READING					
	1.0673	1.9493	27.8	- 74.1	.002545	.98
	1.0244	1.5117	50.4	- 65.4	.002270	2.88
	1.0185	1.1161	25.1	- 81.3	.002270	.71
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3463	1.9551	42.7	- 63.4	.002545	2.32
	1.3112	1.6254	40.6	- 48.8	.002270	1.87
	1.2859	1.0349	32.0	- 72.6	.002270	1.16

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	P LB/SQFT
940.20	NO READING		READINGS INVALID			
	.2533	2.5200	READINGS INVALID			
	.2533	1.8686	15.5	- 45.0	.002734	.38
	.2514	1.5295	33.2	-116.1	.002927	1.62
	.2171	1.1752	39.1	- 92.9	.002927	2.24
	NO READING		READINGS INVALID			
	.5000	2.5390	READINGS INVALID			
	.5810	1.8835	34.6	- 73.6	.002174	1.30
	.5467	1.5257	49.7	- 45.0	.002427	3.00
	.5467	1.1576	45.6	- 9.9	.002427	2.53
	NO READING		READINGS INVALID			
	.9332	2.5943	READINGS INVALID			
	1.0705	1.9067	38.5	- 59.5	.002660	1.98
	1.0457	1.5538	45.8	- 39.8	.002509	2.63
	.9962	1.1067	10.5	- 68.2	.002509	.14
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3633	1.9295	23.6	24.4	.002660	.74
	1.3105	1.6171	14.2	15.9	.002509	.25
	1.2476	1.0548	23.5	- 94.8	.002509	.69
981.80	NO READING		READINGS INVALID			
	NO READING					
	.2693	1.8810	13.9	-105.9	.002570	.25
	.2439	1.5337	30.8	- 97.1	.002303	1.09
	.2107	1.1765	1.9	- 89.7	.002303	.00
	NO READING		READINGS INVALID			
	NO READING					
	.5912	1.9790	47.8	- 28.6	.002387	2.73
	.5049	1.5454	51.1	- 1.8	.002503	4.67
	.5088	1.1571	52.5	- 12.1	.002503	3.45
	NO READING		READINGS INVALID			
	NO READING					
	1.0868	1.9151	27.3	- 12.1	.002666	.93
	1.0595	1.5824	17.3	- 6.3	.002373	.35
	1.0224	1.1053	31.8	- 32.7	.002373	1.70
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3578	1.9549	8.5	- 53.4	.002666	.10
	1.3249	1.6293	10.3	- 58.2	.002373	.13
	1.2839	1.0515	5.0	- 71.6	.002373	.04

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1023.40	NO READING		READINGS INVALID			
	.2476	2.5314	READINGS INVALID			
	.2495	1.8552	19.5	-143.1	.002334	.45
	.2476	1.4990	13.4	- 58.0	.002524	.43
	.2171	1.1733	24.5	- 28.6	.002524	.76
	NO READING		READINGS INVALID			
	.5095	2.5143	READINGS INVALID			
	.5229	1.8567	15.8	-125.5	.002398	.34
	.5076	1.5238	23.8	-170.5	.002517	.71
	.5962	1.1505	43.3	-156.0	.002517	2.94
	NO READING		READINGS INVALID			
	.9371	2.5619	READINGS INVALID			
	1.0971	1.9010	15.8	- 54.5	.002855	.40
	1.0629	1.5519	15.8	-125.5	.002681	.38
	1.0229	1.0895	7.0	33.7	.002681	.07
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3676	1.9219	40.2	- 60.9	.002855	2.31
	1.3143	1.6076	38.5	- 66.0	.002681	1.99
	1.2495	1.0590	3.1	-166.0	.002681	.09
1065.00	NO READING		READINGS INVALID			
	.2537	2.5054	93.2	-114.1	.002868	13.83
	.2537	1.8693	11.4	180.0	.002700	.18
	.2537	1.5180	18.8	156.0	.002647	.47
	.2322	1.1549	21.1	- 95.2	.002647	.59
	NO READING		READINGS INVALID			
	.5049	2.4995	39.7	-144.8	.002548	2.01
	.5815	1.8654	22.3	-160.0	.002348	.59
	.5815	1.5415	15.3	110.6	.002353	.31
	.5620	1.1454	31.1	- 79.4	.002353	1.13
	NO READING		READINGS INVALID			
	.9795	2.5659	59.3	7.9	.002318	5.57
	1.0966	1.9024	35.6	-141.3	.002491	1.67
	1.0498	1.5588	25.6	-153.4	.002429	.80
	1.0283	1.1132	35.2	161.5	.002429	1.59
	NO READING		READINGS INVALID			
	1.4302	2.5520	READINGS INVALID			
	1.3873	1.9298	21.6	135.0	.002491	.58
	1.3405	1.5941	27.1	-140.7	.002429	.89
	1.2761	1.0595	17.3	96.[illegible]	.002429	.36

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1136.60	NO READING		READINGS INVALID			
	.2076	2.4419	42.0	-152.2	.002758	2.43
	.2381	1.8552	14.9	-156.8	.002432	.27
	.2305	1.5067	24.2	166.0	.002224	.65
	.2152	1.1524	55.9	107.4	.002224	4.77
	NO READING		READINGS INVALID			
	.5771	2.4914	30.4	135.0	.002481	1.15
	.6019	1.8590	25.4	90.0	.002583	.83
	.6019	1.5390	27.6	135.0	.002623	1.00
	.6019	1.1200	44.9	90.0	.002623	2.65
	NO READING		READINGS INVALID			
	1.0057	2.5714	33.2	- 28.1	READINGS INVALID	
	1.0586	1.8781	34.6	137.3	.002707	1.62
	1.0400	1.5505	24.5	118.6	.002649	.79
	.9886	1.1010	35.0	167.5	.002649	1.72
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3524	1.9371	51.0	122.5	.002707	3.52
	1.2933	1.5905	55.1	122.7	.002649	5.61
	1.2476	1.0752	48.5	139.9	.002649	3.12
1148.20	NO READING		READINGS INVALID			
	.2156	2.4859	55.9	3.3	.002784	5.23
	.2400	1.8634	35.7	- 27.9	.002664	1.79
	.2302	1.5239	33.2	- 2.9	.002869	2.09
	.2127	1.2273	47.7	.0	.002869	3.26
	NO READING		READINGS INVALID			
	.5834	2.5210	55.0	- 3.4	.002574	5.43
	.5815	1.8907	45.1	-114.4	.002364	2.51
	.5620	1.5610	33.2	-143.1	.002452	1.78
	.5620	1.1302	15.7	166.0	.002452	.30
	NO READING		READINGS INVALID			
	1.0088	2.5502	13.0	-122.0	READINGS INVALID	
	1.0712	1.9259	15.3	.0	.002677	.31
	1.0380	1.5902	42.7	79.7	.002484	2.26
	.9932	1.1180	5.9	- 33.7	.002484	.06
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3600	1.9727	13.9	- 74.1	.002677	.26
	1.3054	1.6488	34.0	38.2	.002484	1.43
	1.2390	1.0907	4.3	153.4	.002484	.02

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1189.80	NO READING		READINGS	INVALID		
	.2743	2.4457	54.7	.0	.002851	4.27
	.2705	1.8331	3.1	14.0	.003061	.10
	.2686	1.5048	19.2	-156.0	.002794	.52
	.2629	1.1524	38.5	-120.5	.002794	2.08
	NO READING		READINGS	INVALID		
	.5419	2.4876	34.2	- 59.0	.002563	1.50
	.5829	1.8171	13.4	- 32.0	.002567	.45
	.5714	1.5162	37.9	-101.9	.002402	1.73
	.5867	1.1238	33.3	-139.8	.002402	1.33
	NO READING		READINGS	INVALID		
	.9962	2.5562	READINGS	INVALID		
	1.0838	1.8781	19.9	- 11.3	.002980	.59
	1.0476	1.5924	27.6	- 8.1	.002430	.93
	.9943	1.0971	35.4	6.3	.002430	1.52
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.3562	1.9238	37.1	- 18.4	.002980	2.05
	1.3200	1.6114	22.8	- 31.0	.002430	.63
	1.2438	1.0781	37.9	- 11.9	.002430	1.75
1231.40	NO READING		READINGS	INVALID		
	.2712	2.4859	32.5	176.6	.002961	1.56
	.2478	1.8554	58.9	104.4	.002459	5.84
	.2127	1.5151	23.6	126.9	.002807	1.15
	.1932	1.1941	55.6	112.2	.002807	4.34
	NO READING		READINGS	INVALID		
	.5010	2.4917	15.4	60.3	READINGS	INVALID
	.5971	1.8810	77.7	62.2	.002194	6.51
	.5541	1.5239	50.7	70.2	.002290	2.94
	.5366	1.1588	53.5	92.0	.002290	3.27
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.0907	1.9220	58.8	86.8	.002534	5.23
	1.0654	1.5863	15.7	104.0	.002529	.31
	1.0283	1.1220	34.3	90.0	.002529	1.49
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	1.3951	1.9510	55.9	76.4	.002534	4.27
	1.3249	1.6371	38.9	101.3	.002529	1.91
	1.2761	1.0829	27.0	81.9	.002529	.92

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1273.00	NO READING		READINGS INVALID			
	.2419	2.4476	14.1	-123.7	.002764	.27
	.2533	1.9048	33.4	- 67.4	.002435	1.36
	.2514	1.5276	44.1	12.8	.002599	2.62
	.2419	1.2038	50.0	19.0	.002599	4.85
	NO READING		READINGS INVALID			
	.5475	2.5010	53.3	23.5	READINGS INVALID	
	.5190	1.8857	31.5	- 29.7	.002307	1.24
	.5886	1.5538	37.9	34.5	.002519	1.81
	.5848	1.1771	35.5	15.5	.002519	1.58
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.0876	1.9467	25.4	- 30.0	.002554	.86
	1.0438	1.6076	15.6	45.0	.002456	.34
	.9943	1.1314	15.5	-135.0	.002456	.34
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3695	1.9790	15.1	104.0	.002554	.34
	1.3124	1.6495	34.6	42.7	.002456	1.47
	1.2475	1.1048	57.5	17.8	.002456	4.06
1314.60	NO READING		READINGS INVALID			
	.2534	2.4741	109.2	- 27.0	.002509	14.96
	.2595	1.8341	30.2	- 51.6	.002752	3.85
	.2555	1.5259	9.5	- 53.1	.002944	.13
	.2498	1.2137	15.7	14.0	.002944	.36
	NO READING		READINGS INVALID			
	.5534	2.5190	29.1	-121.6	READINGS INVALID	
	.5244	1.8554	33.2	-143.1	.002570	1.87
	.5354	1.5454	35.2	-139.4	.002345	1.45
	.5717	1.1785	45.4	-170.5	.002345	2.53
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.0907	1.8956	35.2	- 49.4	.002775	1.72
	1.0771	1.5980	23.5	14.0	.002134	.59
	1.0166	1.1102	19.6	- 29.1	.002134	.41
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3012	1.9756	11.1	-149.0	.002775	.17
	1.3502	1.6505	9.5	89.9	.002134	.10
	1.3307	1.1005	17.5	-102.5	.002134	.33

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1355.20	NO READING		READINGS INVALID			
	.3390	2.3981	50.7	- 74.4	.003599	4.63
	.2914	1.8343	15.8	- 97.1	.003145	.39
	.2571	1.5200	40.3	-112.8	.003247	2.63
	.2571	1.2076	22.1	-135.0	.003247	.79
	NO READING		READINGS INVALID			
	.5343	2.4762	55.1	-109.0	READINGS INVALID	
	.5886	1.8529	13.8	- 8.1	.002376	.23
	.5619	1.5410	23.8	9.5	.002235	.53
	.5390	1.1595	23.6	- 65.6	.002235	.52
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.1105	1.9200	5.2	- 71.6	.003206	.06
	1.0667	1.6133	30.3	-165.1	.002574	1.18
	1.0114	1.1219	19.3	-135.0	.002574	.48
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3600	1.9733	11.9	170.5	.003206	.23
	1.3124	1.6590	14.2	-105.9	.002574	.26
	1.2438	1.0876	20.8	-138.8	.002574	.56
1397.80	NO READING		READINGS INVALID			
	.2771	2.4254	35.9	177.5	.002771	10.23
	.2576	1.8185	49.5	177.8	.002503	3.08
	.2400	1.4888	25.9	-144.0	.002669	.90
	.2341	1.1980	41.0	-152.2	.002669	2.24
	NO READING		READINGS INVALID			
	.5420	2.4556	48.0	- 83.2	READINGS INVALID	
	.5380	1.8534	41.2	- 13.4	.002777	2.36
	.5088	1.5493	33.3	- 13.2	.002462	1.37
	.5815	1.1571	21.3	- 10.3	.002462	.56
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.0927	1.8907	19.2	5.7	.002567	.49
	1.0478	1.5902	40.5	- 98.1	.002038	1.67
	1.0029	1.0956	17.6	-130.6	.002038	.32
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3795	1.9785	45.9	26.6	.002567	2.94
	1.3463	1.6458	35.7	- 99.0	.002038	1.37
	1.3151	1.0868	14.5	-113.2	.002038	.22

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	U LB/SQFT
1439.40	NO READING		READINGS INVALID			
	.2533	2.4019	READINGS INVALID			
	.2419	1.8362	53.3	- 98.4	.002472	3.52
	.2362	1.5048	24.7	-108.4	.002736	.84
	.2210	1.1886	55.3	-110.3	.002736	4.33
	NO READING		READINGS INVALID			
	.5400	2.4286	55.3	- 98.1	READINGS INVALID	
	.5286	1.8533	37.3	-137.1	.002377	1.66
	.5943	1.5333	53.7	-123.1	.002486	3.58
	.5600	1.1557	34.1	-156.8	.002486	1.45
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.1295	1.9219	43.3	14.0	.002710	3.17
	1.0610	1.5733	40.3	- 14.0	.002671	2.17
	1.0000	1.1086	15.1	-166.0	.002671	.35
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.4019	1.9943	34.5	16.4	.002710	1.63
	1.3067	1.6229	27.2	-149.7	.002671	.98
	1.2381	1.0743	59.5	-156.8	.002671	4.73
1481.00	NO READING		READINGS INVALID			
	NO READING					
	.2498	1.7659	90.5	- 42.4	.002693	11.02
	.2322	1.4654	75.7	- 56.3	.002849	8.15
	.2146	1.1454	37.4	- 58.4	.002849	10.87
	NO READING		READINGS INVALID			
	.5341	2.4020	77.2	- 81.5	READINGS INVALID	
	.5107	1.8380	53.3	- 86.8	.002264	5.36
	.5795	1.5044	55.8	- 91.5	.002364	5.28
	.5483	1.1493	71.7	- 51.4	.002364	5.08
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.1395	1.9024	49.5	- 74.4	.002944	3.51
	1.0868	1.5305	33.8	- 42.7	.002439	1.39
	.9873	1.0927	55.4	- 66.0	.002439	3.88
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.4127	1.9383	44.0	- 85.0	.002944	2.86
	1.3229	1.5332	48.9	- 20.6	.002439	2.92
	1.2605	1.0534	37.0	- 34.5	.002439	1.57

Table B-IX. Front-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 343

TIME MICROSEC	X INCHES	Y INCHES	J FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1522.60	NO READING		READINGS INVALID			
	.3162	2.3638	READINGS INVALID			
	.3086	1.7752	39.1	2.9	.002892	2.21
	.2781	1.4419	20.1	- 29.1	.002938	.59
	.2667	1.1143	10.0	- 78.7	.002938	.15
	NO READING		READINGS INVALID			
	.6514	2.3524	READINGS INVALID			
	.6324	1.7848	47.9	- 78.2	.002409	2.76
	.5924	1.4667	42.2	13.4	.002386	2.12
	.5943	1.1029	22.1	- 45.0	.002386	.58
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.1429	1.8743	40.3	-129.1	.002819	2.29
	1.0857	1.5505	23.0	-114.8	.002469	.97
	1.0229	1.0571	25.3	- 42.0	.002469	.85
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.4057	1.9505	13.8	171.9	.002819	.27
	1.3524	1.6057	13.4	- 58.0	.002469	.42
	1.2686	1.0533	10.0	168.7	.002469	.12
1564.20	NO READING		READINGS INVALID			
	.2888	2.3180	50.3	-124.7	READINGS INVALID	
	.2888	1.7578	45.8	-177.6	.002909	3.06
	.2498	1.4556	54.1	149.6	.002618	5.38
	.2166	1.1356	58.8	-176.8	.002618	6.19
	NO READING		READINGS INVALID			
	NO READING					
	.5205	1.7912	23.0	175.2	.002710	.72
	.5205	1.5141	25.1	171.3	.002427	.76
	.5639	1.1337	35.6	164.5	.002427	1.54
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.1141	1.8712	57.7	-124.2	.002699	4.49
	1.0751	1.5551	20.5	-111.8	.002559	.54
	1.0068	1.0751	7.9	104.0	.002559	.08
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	1.3990	1.9902	27.0	98.1	.002699	.98
	1.3327	1.6176	35.6	154.5	.002559	1.63
	1.2507	1.0654	11.6	- 9.5	.002559	.17

Table B-X. Front-Lower Grid Calculations - Model 36

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
25.00	.2667	1.2552	22.1	135.[illegible]	.002152	.53
	.2552	.8857	25.4	157.4	.002397	.77
	.2571	.5448	8.7	153.4	.002275	.09
	.2571	.1733	27.2	111.[illegible]	.002165	.80
	.2571	.0038	10.0	168.7	.002165	.11
	.6038	1.3162	10.5	-158.2	.002099	.12
	.6190	.9162	35.2	160.6	.002364	1.47
	.6305	.5524	23.6	155.6	.002313	.64
	.6305	.1600	25.4	157.4	.002396	.77
	.6305	.0076	21.6	-174.8	.002396	.56
	1.0552	1.3867	28.0	65.2	.002331	.91
	1.0248	.9524	14.2	-105.9	.002291	.23
	1.0152	.5752	18.0	167.5	.002400	.39
	1.0114	.2152	13.8	-171.9	.002159	.21
	1.0133	.0038	11.7	180.0	.002159	.15
	1.4743	1.4990	23.5	-131.6	.002331	.65
	1.4095	1.0000	11.4	121.0	.002291	.15
	1.3943	.6038	15.8	-150.3	.002400	.30
	1.3886	.2400	18.0	130.6	.002159	.35
	1.3905	.0038	11.7	180.0	.002159	.15
66.40	.2916	1.2690	8.1	45.0	.002379	.08
	.2660	.8951	24.2	71.6	.002371	.70
	.2660	.5184	12.9	- 63.4	.002485	.21
	.2544	.1515	27.4	- 77.9	.002152	.81
	.2544	.0039	6.9	- 33.7	.002152	.05
	.6039	1.2913	23.4	35.0	.002140	.59
	.6078	.9282	21.9	- 52.1	.002277	.54
	.6194	.5495	53.5	- 75.5	.002267	3.24
	.6175	.1864	31.9	32.7	.002210	1.12
	.6194	.0019	25.6	- 13.0	.002210	.72
	1.0447	1.3922	29.8	-135.0	.002380	1.06
	1.0272	.9398	6.1	- 18.4	.002328	.04
	1.0136	.5709	32.8	- 69.4	.002354	1.26
	1.0175	.1942	20.4	- 41.2	.002255	.47
	1.0194	.0019	13.6	- 8.1	.002255	.21
	1.4574	1.4738	29.3	-121.6	.002380	1.02
	1.4078	1.0019	16.4	- 69.4	.002328	.31
	1.3922	.6039	15.8	14.0	.002354	.29
	1.3922	.2408	21.9	15.3	.002255	.54
	1.3942	.0019	23.3	- 9.5	.002255	.61

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
107.80	.2724	1.2610	16.8	35.5	.002060	.29
	.2629	.9086	24.5	- 28.6	.002150	.64
	.2629	.5333	17.7	6.3	.002356	.37
	.2629	.1467	31.5	29.7	.002056	1.02
	.2629	.0000	27.6	- 8.1	.002056	.79
	.6229	1.3295	10.0	- 78.7	.002186	.11
	.6324	.8990	15.8	- 29.7	.002204	.27
	.6438	.5010	45.1	- 85.0	.002651	2.70
	.6571	.1771	31.8	- 79.4	.002396	1.21
	.6552	.0019	3.9	.0	.002396	.02
	1.0343	1.3657	57.5	-107.8	.002361	3.90
	1.0305	.9505	11.9	- 80.5	.002248	.16
	1.0267	.5448	14.1	- 56.3	.002432	.24
	1.0267	.2019	3.9	.0	.002125	.02
	1.0267	.0019	2.0	.0	.002125	.00
	1.4590	1.4743	30.9	- 55.3	.002361	1.13
	1.4152	.9848	33.2	- 45.0	.002248	1.24
	1.4095	.6076	31.5	- 7.1	.002432	1.21
	1.4095	.2457	20.1	- 29.1	.002125	.43
	1.4133	.0000	17.7	6.3	.002125	.33
149.20	.2951	1.2777	19.2	126.9	.002383	.44
	.2874	.8835	4.3	63.4	.002377	.02
	.2835	.5204	5.4	135.0	.002708	.04
	.2816	.1670	24.0	151.4	.002376	.69
	.2816	.0000	21.2	174.8	.002376	.53
	.6058	1.2816	54.6	-161.6	.002339	3.48
	.6214	.9204	54.8	126.5	.002192	3.29
	.6233	.5049	64.9	124.2	.002342	4.93
	.6233	.1553	46.4	172.9	.002421	2.60
	.6233	.0019	44.1	177.5	.002421	2.36
	1.0272	1.3379	37.8	156.0	.002324	1.66
	1.0291	.9282	32.8	-173.3	.002250	1.21
	1.0214	.5592	33.5	149.0	.002267	1.27
	1.0214	.1942	29.8	-165.1	.002232	.99
	1.0214	.0019	28.8	180.0	.002232	.92
	1.4699	1.4485	21.4	-153.4	.002324	.53
	1.4311	.9786	25.2	171.3	.002250	.72
	1.4233	.6000	32.6	176.6	.002267	1.21
	1.4097	.2311	40.4	-174.6	.002232	1.83
	1.4117	.0039	48.1	175.4	.002232	2.58

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	P LB/SQFT
100.00	.2610	1.2762	42.3	- 56.3	.002441	2.18
	.2648	.9124	33.4	- 20.6	.002387	1.33
	.2590	.5371	35.4	- 6.3	.002410	1.51
	.2419	.1581	30.5	- 39.8	.002100	.90
	.2419	.0019	23.5	4.8	.002100	.58
	.5714	1.3124	50.2	- 13.5	.002248	2.84
	.6000	.9429	63.0	- 29.7	.002271	4.51
	.6076	.5543	43.9	32.9	.002319	2.24
	.6114	.1829	49.2	6.8	.002319	2.81
	.6114	.0038	48.9	.5	.002319	2.77
	1.0000	1.3810	49.0	- 4.6	.002280	2.74
	.9981	.9467	43.7	- 10.3	.002294	2.19
	.9981	.5619	50.8	.0	.002282	3.07
	.9981	.1943	50.8	.0	.002293	2.96
	.9981	.0019	50.8	2.2	.002293	2.96
	1.4400	1.4648	41.0	.9	.002280	1.92
	1.3905	.9886	38.5	- 24.0	.002294	1.70
	1.3771	.6095	32.1	- 37.6	.002382	1.22
	1.3695	.2419	24.2	14.0	.002293	.67
	1.3657	.0038	23.5	- 4.8	.002293	.63
232.00	.3184	1.2427	27.1	- 98.1	.002225	.92
	.3184	.8718	49.8	-105.6	.002491	3.09
	.3184	.5105	26.1	-107.1	.002488	.85
	.3049	.1476	11.2	- 31.0	.002326	.15
	.3049	.0019	9.6	.0	.002326	.11
	.6544	1.2659	35.8	- 74.5	.002301	1.46
	.6757	.8893	49.9	- 92.2	.002378	2.96
	.6607	.5282	10.3	-158.2	.002239	.12
	.6718	.1612	13.4	180.0	.002382	.21
	.6718	.0019	13.6	-171.9	.002382	.22
	1.0757	1.3340	25.2	- 81.3	.002322	.74
	1.0718	.9204	11.2	- 59.0	.002358	.15
	1.0718	.5592	9.8	- 78.7	.002515	.12
	1.0718	.1942	6.1	- 71.6	.002367	.04
	1.0718	.0039	2.7	45.0	.002367	.01
	1.5107	1.4485	12.1	-108.4	.002322	.17
	1.4660	.9631	18.2	18.4	.002358	.39
	1.4485	.5806	16.3	- 45.0	.002515	.33
	1.4330	.2369	12.9	- 26.6	.002367	.20
	1.4350	.0019	17.7	12.5	.002367	.37

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
273.40	.2571	1.2495	62.1	-167.3	.002248	4.34
	.2514	.8648	70.5	-160.6	.002586	6.42
	.2514	.5124	78.4	175.7	.002572	7.90
	.2514	.1524	88.0	178.7	.002265	8.76
	.2514	.0019	87.9	180.0	.002265	8.76
	.5810	1.2781	66.1	-161.0	.002242	4.90
	.5981	.8933	64.6	-176.5	.002307	4.92
	.5981	.5505	48.9	177.7	.002266	2.71
	.5981	.1829	50.8	180.0	.002266	2.92
	.5981	.0019	50.8	180.0	.002266	2.92
	1.0038	1.3562	52.6	164.9	.002347	3.25
	1.0038	.9371	55.0	173.9	.002188	3.31
	1.0000	.5524	60.7	-176.3	.002353	4.34
	1.0000	.1886	60.6	180.0	.002309	4.24
	1.0000	.0038	60.6	-178.2	.002309	4.24
	1.4362	1.4533	47.5	-170.5	.002347	2.65
	1.4076	.9943	45.3	-172.6	.002188	2.25
	1.3886	.5981	55.0	173.9	.002353	3.56
	1.3810	.2362	41.8	-169.2	.002309	2.01
	1.3829	.0076	43.0	180.0	.002309	2.13
314.80	.2583	1.2291	29.2	- 23.2	.002249	.96
	.2524	.8485	25.7	- 26.6	.002508	.83
	.2408	.5223	28.8	- 36.9	.002259	.93
	.2175	.1495	25.7	- 26.6	.002100	.69
	.2175	.0019	23.1	4.8	.002100	.56
	.5922	1.2485	30.0	- 63.4	.002271	1.02
	.6117	.8854	8.1	- 45.0	.002368	.08
	.6117	.5301	50.2	- 83.4	.002306	2.90
	.6214	.1612	20.0	- 73.3	.002428	.49
	.6214	.0019	5.8	.0	.002428	.04
	1.0252	1.3476	39.9	- 54.8	.002265	1.80
	1.0175	.9262	29.3	- 58.4	.002321	.99
	1.0117	.5553	17.7	- 49.4	.002395	.37
	1.0117	.1942	15.0	50.2	.002284	.26
	1.0117	.0019	9.8	11.3	.002284	.11
	1.4641	1.4408	34.7	- 83.7	.002265	1.37
	1.4214	.9573	42.3	- 84.8	.002321	2.08
	1.3942	.5864	7.9	- 76.0	.002395	.07
	1.3922	.2291	18.2	- 18.4	.002284	.38
	1.3922	.0019	15.8	- 14.0	.002284	.29

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
356.20	.2838	1.2381	62.1	- 77.3	.002424	4.68
	.2743	.8533	61.1	- 82.6	.002540	4.74
	.2743	.4952	47.9	- 78.2	.002844	3.27
	.2743	.1410	16.8	- 54.5	.002640	.37
	.2743	.0038	10.0	11.1	.002640	.13
	.5943	1.2514	46.5	.0	.002279	2.51
	.6038	.8876	13.8	- 45.0	.002216	.21
	.6038	.5010	35.2	- 86.8	.002423	1.50
	.6038	.1638	8.1	166.0	.002304	.07
	.6038	.0019	7.8	180.0	.002304	.07
	1.0267	1.3238	35.9	- 67.6	.002438	1.57
	1.0190	.9124	44.6	- 61.2	.002389	2.38
	1.0114	.5390	21.1	- 56.3	.002444	.55
	1.0095	.2000	13.8	- 45.0	.002229	.21
	1.0095	.0057	9.8	.0	.002229	.11
	1.4400	1.4190	43.3	-108.4	.002438	2.28
	1.4114	.9524	15.3	-129.6	.002389	.28
	1.3905	.5905	22.3	-127.9	.002444	.61
	1.3981	.2305	17.5	-153.4	.002229	.34
	1.3981	.0038	15.6	180.0	.002229	.27
397.60	.2718	1.1689	40.0	-106.7	.002136	1.71
	.2602	.7883	19.3	95.7	.002492	.46
	.2505	.4757	1.9	180.0	.002582	.00
	.2272	.1359	6.1	-108.4	.002297	.04
	.2272	.0039	1.9	180.0	.002297	.00
	.6388	1.2485	5.8	180.0	.002295	.04
	.6214	.8757	25.0	- 94.4	.002298	.72
	.6136	.4951	11.7	99.5	.002378	.16
	.6136	.1631	15.5	- 97.1	.002376	.28
	.6136	.0019	6.1	108.4	.002376	.04
	1.0388	1.3146	39.1	11.3	.002497	1.91
	1.0388	.8874	30.7	.0	.002564	1.21
	1.0233	.5339	7.7	- 89.9	.002630	.08
	1.0214	.1845	19.7	-119.1	.002553	.50
	1.0214	.0019	9.8	-168.7	.002553	.12
	1.4505	1.4000	19.3	- 5.7	.002497	.46
	1.4117	.9456	17.3	- 90.0	.002564	.38
	1.3806	.5689	11.7	- 99.5	.002630	.18
	1.3767	.2214	7.7	180.0	.002553	.08
	1.3767	.0019	6.1	-161.6	.002553	.05

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
439.00	.2724	1.2000	20.8	48.8	.002508	.54
	.2724	.8724	47.3	51.7	.002600	2.91
	.2724	.4952	31.5	29.7	.002720	1.35
	.2724	.1352	42.9	- 24.2	.002899	2.66
	.2724	.0038	41.1	- 2.7	.002899	2.45
	.5886	1.2514	25.5	-147.5	.002008	.65
	.6019	.8629	18.4	- 58.0	.002218	.36
	.6019	.5124	27.4	.0	.002318	.87
	.6019	.1486	48.3	- 58.2	.002614	3.05
	.6019	.0076	23.5	.0	.002614	.72
	1.0648	1.3314	18.5	-108.4	.002540	.44
	1.0495	.9124	12.4	- 18.4	.002496	.19
	1.0114	.5314	26.6	- 17.1	.002457	.87
	1.0000	.1829	15.3	- 39.8	.002284	.27
	1.0000	.0038	13.8	- 8.1	.002284	.22
	1.4590	1.4171	19.2	- 24.0	.002540	.47
	1.4114	.9352	21.1	- 33.7	.002496	.56
	1.3886	.5790	29.9	- 11.3	.002457	1.10
	1.3905	.2305	38.4	- 14.7	.002284	1.68
	1.3924	.0019	31.3	.0	.002284	1.12
480.40	.2854	1.1845	4.3	26.6	.002341	.02
	.2893	.8252	42.6	-144.2	.002531	2.29
	.2777	.4913	37.0	-158.7	.002365	1.62
	.2660	.1184	39.5	-150.9	.002962	2.31
	.2680	.0019	34.5	180.0	.002962	1.76
	.6175	1.2350	12.9	26.6	.002266	.19
	.6311	.8602	19.3	95.7	.002329	.43
	.6408	.4951	1.9	180.0	.002287	.00
	.6388	.1223	6.1	108.4	.002848	.05
	.6369	.0019	4.3	-116.6	.002848	.03
	1.0330	1.2971	50.3	-162.3	.002426	3.07
	1.0505	.8835	37.7	-165.3	.002526	1.79
	1.0485	.5301	9.8	101.3	.002507	.12
	1.0330	.1748	9.8	78.7	.002519	.12
	1.0350	.0000	2.7	45.0	.002519	.01
	1.4680	1.3922	27.9	164.1	.002426	.95
	1.4291	.9340	39.5	119.1	.002526	1.97
	1.4097	.5631	9.6	126.9	.002507	.12
	1.4136	.2117	12.3	128.7	.002519	.19
	1.4078	.0019	7.9	166.0	.002519	.08

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
521.80	.2762	1.2019	41.5	41.2	.002337	2.02
	.2381	.8476	19.2	66.0	.002343	.43
	.2381	.4819	27.6	- 45.0	.002477	.95
	.2381	.1162	6.2	18.4	.002735	.05
	.2381	.0038	2.0	.0	.002735	.01
	.6000	1.2571	23.5	4.8	.002288	.63
	.6000	.8819	30.9	55.3	.002302	1.10
	.6000	.5124	7.0	123.7	.002325	.06
	.6000	.1543	43.0	92.6	.002458	2.28
	.6000	.0038	2.0	180.0	.002458	.00
	1.0171	1.3162	19.5	.0	.002511	.48
	1.0133	.9029	23.5	85.2	.002414	.67
	1.0095	.5410	10.5	68.2	.002506	.14
	1.0019	.1924	19.6	- 5.7	.002257	.44
	1.0019	.0057	13.8	8.1	.002257	.22
	1.4324	1.4248	33.4	20.6	.002511	1.40
	1.3924	.9695	26.3	48.0	.002414	.83
	1.3829	.5867	16.6	45.0	.002506	.34
	1.3829	.2400	9.8	- 53.1	.002257	.11
	1.3848	.0038	15.6	.0	.002257	.28
563.20	.3165	1.2117	35.0	- 9.5	.002390	1.46
	.2971	.8427	72.9	- 3.0	.002392	6.36
	.2971	.4718	34.7	6.3	.002689	1.62
	.2718	.1204	31.0	21.8	.002534	1.22
	.2699	.0019	28.8	- 3.8	.002534	1.05
	.6408	1.2369	33.1	-100.0	.002473	1.35
	.6485	.8854	32.6	- 90.0	.002252	1.20
	.6369	.5010	23.0	- 90.0	.002280	.60
	.6369	.1650	20.6	-111.8	.002406	.51
	.6350	.0019	10.3	-158.2	.002406	.13
	1.0524	1.2971	20.6	21.8	.002451	.52
	1.0524	.9068	31.7	- 65.0	.002379	1.20
	1.0524	.5398	17.7	- 12.5	.002418	.38
	1.0524	.1728	25.2	- 8.7	.002637	.84
	1.0485	.0019	25.2	- 8.7	.002637	.84
	1.4990	1.4039	9.6	- 53.1	.002451	.11
	1.4466	.9534	16.4	-110.6	.002379	.32
	1.4214	.5748	23.3	- 99.5	.002418	.66
	1.4194	.2039	30.0	-116.6	.002637	1.19
	1.4233	.0019	13.6	-171.9	.002637	.24

Table B-X. Front-Lower Grid Calculations -Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
604.60	.3105	1.1962	6.2	- 71.6	.002782	.05
	.3105	.8438	6.2	18.4	.002815	.05
	.2724	.4857	7.8	180.0	.002789	.09
	.2667	.1276	25.5	85.6	.003070	1.00
	.2667	.0019	3.9	.0	.003070	.02
	.5943	1.2248	8.7	116.6	.002092	.08
	.6000	.8495	28.9	-118.3	.002328	.97
	.6000	.4895	4.4	153.4	.002204	.02
	.5924	.1352	19.9	-101.3	.002378	.47
	.5905	.0000	2.	180.0	.002378	.00
	1.0362	1.3238	44.	41.4	.002503	2.46
	1.0267	.8743	16.8	- 35.5	.002606	.37
	1.0267	.5371	4.4	- 63.4	.002703	.03
	1.0267	.1886	11.9	80.5	.002663	.19
	1.0267	.0019	10.5	158.2	.002663	.15
	1.4381	1.4171	22.3	74.7	.002503	.62
	1.3867	.9543	21.0	-111.8	.002606	.58
	1.3790	.5638	7.0	-123.7	.002703	.07
	1.3695	.2133	12.5	141.3	.002663	.21
	1.3714	.0019	14.2	164.1	.002663	.27
646.00	.3184	1.2058	38.4	177.1	.002399	1.77
	.3029	.8447	46.6	170.5	.002531	2.75
	.2893	.4718	11.7	170.5	.002704	.18
	.2738	.1456	9.6	-126.9	.002520	.12
	.2738	.0019	5.8	180.0	.002520	.04
	.6369	1.2447	44.5	82.6	.002100	2.08
	.6350	.8602	19.7	60.9	.002265	.44
	.6330	.5029	43.3	77.2	.002230	2.09
	.6330	.1456	45.6	67.8	.002504	2.60
	.6330	.0019	19.5	11.3	.002504	.48
	1.0854	1.3262	21.9	74.7	.002388	.57
	1.0660	.8971	46.4	97.1	.002535	2.72
	1.0544	.5359	12.9	116.6	.002580	.21
	1.0544	.1845	16.3	135.0	.002615	.35
	1.0388	.0058	11.7	170.5	.002615	.18
	1.5049	1.4252	17.7	77.5	.002388	.37
	1.4388	.9340	10.3	21.8	.002535	.14
	1.4175	.5689	21.2	95.2	.002580	.58
	1.4097	.2117	30.3	108.4	.002615	1.20
	1.4097	.0058	9.8	168.7	.002615	.12

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
687.40	.2724	1.1981	29.8	148.4	.002307	1.03
	.2648	.8514	28.9	-151.7	.002573	1.07
	.2610	.4876	49.9	149.4	.002578	3.22
	.2610	.1200	37.9	-145.5	.002561	1.84
	.2610	.0019	31.3	180.0	.002561	1.25
	.6000	1.2686	46.0	167.7	.002128	2.25
	.6095	.8667	13.1	116.6	.002382	.20
	.6095	.5314	9.8	53.1	.002320	.11
	.6095	.1771	20.4	73.3	.002221	.46
	.6095	.0038	5.9	.0	.002221	.04
	1.0419	1.3448	21.6	-174.8	.002483	.58
	1.0210	.9200	21.8	169.7	.002483	.59
	1.0210	.5486	22.1	-135.0	.002718	.66
	1.0152	.2000	39.9	168.7	.002428	1.93
	1.0152	.0038	21.6	-174.8	.002428	.57
	1.4419	1.4343	43.0	177.4	.002483	2.30
	1.3962	.9581	30.5	129.8	.002483	1.16
	1.3771	.5848	16.1	-166.0	.002718	.35
	1.3600	.2419	11.4	149.0	.002428	.16
	1.3619	.0038	6.2	-161.6	.002428	.05
728.80	.2932	1.2214	READINGS	INVALID		
	.2737	.8311	READINGS	INVALID		
	.2486	.4971	READINGS	INVALID		
	.2427	.1243	READINGS	INVALID		
	.2427	.0019	READINGS	INVALID		
	.5922	1.2544	23.4	-125.0	.002090	.57
	.6291	.8718	15.3	180.0	.002289	.27
	.6388	.5107	21.7	-135.0	.002550	.60
	.6388	.1650	26.1	-120.0	.002508	.85
	.6388	.0019	15.5	-172.9	.002508	.30
	1.0641	1.3243	24.9	-157.4	.002518	.78
	1.0447	.9010	13.6	171.9	.002375	.22
	1.0388	.5204	28.5	132.3	.002607	1.06
	1.0155	.1922	19.2	-143.1	.002352	.43
	1.0175	.0039	17.3	180.0	.002352	.35
	1.4621	1.4272	9.6	180.0	.002518	.12
	1.4194	.9573	33.1	80.0	.002375	1.30
	1.4019	.5650	12.1	- 71.6	.002607	.19
	1.4000	.2175	32.6	- 90.0	.002352	1.25
	1.4039	.0039	2.7	-135.0	.002352	.01

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
770.20	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	.5867	1.2495	32.1	- 37.6	.002226	1.14
	.5943	.8667	20.4	-106.7	.002403	.50
	.5943	.5162	23.5	-138.4	.002211	.61
	.5943	.1562	43.9	-122.3	.002427	2.34
	.5943	.0019	23.5	175.2	.002427	.67
	1.0190	1.3352	54.1	-139.4	.002500	3.65
	1.0076	.9219	35.2	-146.3	.002274	1.41
	1.0019	.5695	23.5	180.0	.002387	.66
	1.0000	.1866	9.8	- 89.9	.002574	.12
	.9981	.0038	2.0	180.0	.002574	.00
	1.4324	1.4343	50.7	-117.6	.002500	3.21
	1.4019	.9905	29.3	-126.9	.002274	.96
	1.3810	.5733	11.1	-135.0	.002387	.15
	1.3600	.2095	17.7	173.7	.002574	.40
	1.3600	.0019	23.5	-175.2	.002574	.71
811.60	.2738	1.1534	READINGS	INVALID		
	.2544	.8350	READINGS	INVALID		
	.2485	.4757	READINGS	INVALID		
	.2485	.1049	READINGS	INVALID		
	.2485	.0039	READINGS	INVALID		
	.6175	1.2350	47.4	- 76.0	.002375	2.67
	.6233	.8574	29.0	- 82.4	.002452	1.03
	.6214	.4951	27.1	- 81.9	.002392	.86
	.6155	.1282	5.4	- 45.0	.002748	.04
	.6155	.0039	3.8	.0	.002748	.02
	1.0233	1.2893	50.2	- 83.4	.002519	3.17
	1.0155	.8816	40.3	- 87.3	.002393	1.94
	1.0155	.5204	54.2	- 81.9	.002609	3.84
	1.0155	.1825	15.5	- 82.9	.002515	.30
	1.0155	.0039	3.8	.0	.002515	.02
	1.4388	1.3825	57.8	- 95.7	.002519	4.21
	1.4019	.9340	45.6	-112.2	.002393	2.48
	1.3942	.5573	20.7	-146.3	.002609	.56
	1.3825	.2194	11.2	149.0	.002515	.16
	1.3806	.0019	9.6	180.0	.002515	.12

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
853.00	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	.5981	1.2038	22.3	-105.3	.002329	.58
	.5981	.8381	39.6	-110.2	.002356	1.84
	.5981	.4895	12.4	-108.4	.002404	.18
	.5981	.1524	7.8	89.9	.002577	.08
	.5981	.0019	3.9	- 89.9	.002577	.02
	1.0248	1.2857	25.4	- 67.4	.002686	.87
	1.0095	.8819	24.2	- 76.0	.002468	.72
	1.0095	.5162	11.7	- 90.0	.002719	.19
	1.0019	.1733	19.9	-101.3	.002732	.54
	1.0019	.0038	2.8	-135.0	.002732	.01
	1.4267	1.3771	24.5	28.6	.002686	.81
	1.3848	.9486	8.7	- 63.4	.002468	.09
	1.3638	.5619	14.9	- 66.8	.002719	.30
	1.3505	.2152	21.8	- 63.4	.002732	.65
	1.3505	.0019	15.6	.0	.002732	.33
894.40	.2893	1.1573	READINGS	INVALID		
	.2660	.8311	READINGS	INVALID		
	.2544	.4583	READINGS	INVALID		
	.2544	.1049	READINGS	INVALID		
	.2544	.0039	READINGS	INVALID		
	.6117	1.2136	22.4	- 59.0	.002236	.56
	.6097	.8155	18.2	- 18.4	.002509	.41
	.6175	.4835	18.1	- 32.0	.002421	.40
	.6155	.1359	34.3	- 63.4	.002822	1.66
	.6155	.0000	15.3	.0	.002822	.33
	1.0330	1.2660	8.1	- 45.0	.002455	.08
	1.0214	.8583	21.9	- 52.1	.002402	.57
	1.0155	.5087	21.9	- 52.1	.002493	.60
	1.0117	.1631	21.4	- 10.3	.002658	.61
	1.0136	.0019	53.7	.0	.002658	3.83
	1.4602	1.3942	21.9	- 15.3	.002455	.59
	1.4058	.9262	40.8	- 41.2	.002402	1.99
	1.4000	.5437	32.5	- 45.0	.002493	1.32
	1.3922	.2000	27.2	- 50.7	.002658	.99
	1.3961	.0019	17.4	6.3	.002658	.40

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
935.80	.2762	1.1467	117.7	11.5	.002451	16.97
	.2667	.8038	130.5	- 16.5	.002574	21.90
	.2629	.4629	137.9	7.3	.002544	24.20
	.2629	.0933	139.9	15.4	.003576	34.97
	.2629	.0057	134.9	- .8	.003576	32.52
	.6045	1.1848	129.7	- 6.1	.002356	19.82
	.6152	.8324	140.4	8.8	.002361	23.27
	.6133	.4800	124.1	7.2	.002365	18.22
	.6133	.1219	125.8	- 6.2	.002720	21.53
	.6133	.0019	125.1	1.8	.002720	21.30
	1.0305	1.2800	133.1	3.4	.002468	21.87
	1.0229	.8648	127.1	1.8	.002395	19.34
	1.0229	.4990	125.1	1.8	.002754	21.56
	1.0229	.1695	129.0	.9	.003104	25.83
	1.0552	.0038	127.0	- .9	.003104	25.05
	1.4476	1.3714	104.5	- 7.5	.002468	13.47
	1.4152	.9219	108.9	- 9.3	.002395	14.20
	1.3867	.5350	111.5	- 3.0	.002754	17.14
	1.3676	.1943	107.5	.0	.003104	17.93
	1.3676	.0038	103.6	.0	.003104	16.65
977.20	.4039	1.1806	29.2	113.2	.002237	.95
	.3903	.7942	11.7	99.5	.002691	.18
	.3903	.4757	26.9	85.9	.002605	.94
	.3883	.1417	48.0	87.7	.002867	3.30
	.3883	.0019	2.7	- 45.0	.002867	.01
	.7398	1.2000	21.4	79.7	.002346	.54
	.7476	.8369	19.7	119.1	.002521	.49
	.7398	.4990	26.1	107.1	.002299	.78
	.7398	.1223	36.2	122.0	.002937	1.92
	.7398	.0039	19.3	174.3	.002937	.55
	1.1650	1.2738	18.1	32.0	.002581	.42
	1.1476	.8621	20.7	56.3	.002548	.55
	1.1398	.5126	65.3	93.4	.002626	5.60
	1.1398	.1650	48.1	94.6	.002795	3.23
	1.1398	.0000	36.5	-177.0	.002795	1.86
	1.5631	1.3806	39.5	50.9	.002581	2.02
	1.5126	.9087	26.7	111.0	.002548	.91
	1.5107	.5379	48.1	94.6	.002626	3.04
	1.4990	.2000	42.2	92.6	.002795	2.49
	1.4990	.0019	4.3	- 26.6	.002795	.03

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1018.60	.2648	1.1733	99.1	-165.1	.002360	11.58
	.2648	.8152	97.9	176.6	.002727	13.06
	.2648	.4895	129.2	176.5	.002763	23.07
	.2648	.1410	140.3	-161.3	.002764	27.19
	.2648	.0038	132.9	179.2	.002764	24.41
	.6133	1.2057	122.4	-171.7	.002285	17.13
	.6057	.8495	119.3	178.1	.002488	17.70
	.6057	.5048	107.6	177.9	.002279	13.18
	.5943	.1524	109.6	168.7	.002155	12.95
	.5943	.0038	107.5	180.0	.002155	12.45
	1.0457	1.2695	122.7	-170.8	.002539	19.12
	1.0343	.8819	118.6	171.5	.002724	19.15
	1.0190	.5638	114.4	163.1	.002654	17.36
	1.0190	.2171	121.2	-179.1	.002320	17.03
	1.0190	.0019	127.1	178.2	.002320	18.73
	1.4724	1.4019	106.2	-173.7	.002539	14.31
	1.4057	.9467	95.3	164.5	.002724	12.37
	1.3829	.5867	117.5	176.2	.002654	18.32
	1.3657	.2362	115.0	170.2	.002320	15.34
	1.3714	.0019	109.4	180.0	.002320	13.89
1060.00	.3087	1.1553	38.1	- 49.1	.002579	1.87
	.2932	.8000	30.3	34.7	.002705	1.24
	.2621	.4835	33.9	- 42.7	.002330	1.34
	.2563	.0971	31.4	- 37.6	.002964	1.47
	.2563	.0039	25.0	- 4.4	.002964	.93
	.6194	1.1825	31.2	- 42.5	.002529	1.23
	.6291	.8408	34.3	- 26.6	.002575	1.51
	.6330	.5029	52.1	- 54.0	.002292	3.12
	.6330	.1537	42.6	- 7.8	.002905	2.63
	.6330	.0039	42.2	- 2.6	.002905	2.59
	1.0447	1.2544	43.1	- 57.7	.002667	2.47
	1.0311	.8796	35.0	- 80.5	.002485	1.52
	1.0311	.5456	50.6	- 65.4	.002542	3.26
	1.0194	.1631	53.0	- 77.5	.002604	3.66
	1.0136	.0039	11.5	.0	.002604	.17
	1.4583	1.3689	15.5	- 97.1	.002667	.32
	1.4214	.9340	35.0	- 80.5	.002485	1.52
	1.3942	.5456	43.8	- 61.2	.002542	2.43
	1.3864	.2194	47.9	- 36.9	.002604	2.99
	1.3903	.0019	32.6	3.4	.002604	1.39

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 35

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1101.40	.2895	1.1448	6.2	- 18.4	.002527	.05
	.2895	.8324	23.9	55.0	.002439	.69
	.2895	.4667	32.5	- 32.7	.002832	1.50
	.2895	.1219	33.6	- 35.5	.002835	1.60
	.2895	.0019	35.2	- 3.2	.002835	1.76
	.6362	1.1848	7.0	-123.7	.002378	.06
	.6362	.8343	11.9	-170.5	.002446	.17
	.6362	.4629	15.8	-150.3	.002500	.31
	.6362	.1467	14.9	-156.8	.002737	.30
	.6362	.0019	13.8	171.9	.002737	.26
	1.0686	1.2533	19.2	66.0	.002583	.48
	1.0400	.8476	15.8	- 7.1	.002650	.33
	1.0400	.5181	35.0	- 63.4	.002572	1.57
	1.0305	.1657	27.6	- 8.1	.002656	1.01
	1.0305	.0019	33.2	.0	.002656	1.47
	1.4705	1.3867	36.4	36.3	.002583	1.71
	1.4114	.9124	17.7	- 83.7	.002650	.41
	1.4038	.5486	20.1	- 60.9	.002572	.52
	1.4038	.2076	11.9	- 9.5	.002656	.19
	1.4038	.0038	3.9	.0	.002656	.02
1142.80	.3146	1.1534	43.1	110.9	.002828	2.62
	.3068	.8194	23.1	-131.6	.002796	.74
	.2893	.4660	34.7	173.7	.002616	1.58
	.2835	.0777	34.6	176.8	.003758	2.24
	.2913	.0019	34.7	173.7	.003758	2.27
	.6155	1.1767	42.9	153.4	.002365	2.17
	.6175	.8388	44.7	149.0	.002288	2.29
	.6194	.4951	58.4	131.0	.002188	3.73
	.6194	.1379	54.2	135.0	.002713	3.99
	.6194	.0058	38.5	174.3	.002713	2.01
	1.0524	1.2718	66.0	125.5	.002470	5.37
	1.0466	.8777	33.5	149.0	.002450	1.38
	1.0466	.5146	29.3	168.7	.002783	1.20
	1.0466	.1592	29.9	129.8	.002815	1.26
	1.0466	.0039	19.5	168.7	.002815	.54
	1.4874	1.3903	29.8	104.9	.002470	1.09
	1.4233	.9165	44.1	92.5	.002450	2.39
	1.4039	.5282	25.7	116.6	.002783	.92
	1.3981	.2175	29.9	129.8	.002815	1.26
	1.3942	.0019	19.2	180.0	.002815	.52

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1184.20	.2743	1.1848	15.8	-119.7	.002504	.31
	.2743	.8152	18.0	-139.4	.002698	.44
	.2552	.4705	28.2	-123.7	.002830	1.12
	.2552	.1238	47.9	101.8	.002554	2.93
	.2552	.0057	17.7	173.7	.002554	.40
	.5981	1.2038	45.6	46.7	.002253	2.34
	.5981	.8571	30.3	14.9	.002423	1.12
	.5981	.5067	27.4	4.1	.002452	.92
	.5981	.1848	16.8	54.5	.002226	.31
	.5981	.0057	10.5	- 21.8	.002226	.12
	1.0305	1.3067	3.9	- 89.9	.002335	.02
	1.0114	.8648	18.5	-161.6	.002396	.41
	1.0114	.5238	26.3	132.0	.002577	.89
	1.0114	.1886	35.0	153.4	.002385	1.46
	1.0114	.0057	31.3	180.0	.002385	1.17
	1.4629	1.4152	21.8	63.4	.002335	.56
	1.4095	.9562	18.5	71.6	.002396	.41
	1.3924	.5714	41.8	100.8	.002577	2.25
	1.3848	.2305	5.5	135.0	.002385	.04
	1.3848	.0038	2.8	45.0	.002385	.01
1225.00	.3068	1.1398	READINGS	INVALID		
	.2932	.8078	READINGS	INVALID		
	.2738	.4427	READINGS	INVALID		
	.2738	.1243	READINGS	INVALID		
	.2738	.0039	READINGS	INVALID		
	.6466	1.2097	43.3	- 12.8	.002511	2.35
	.6466	.8466	48.0	- 28.6	.002634	3.04
	.6466	.4971	44.3	- 17.7	.002466	2.42
	.6291	.1515	72.9	- 54.6	.002690	7.14
	.6291	.0019	42.2	- 2.6	.002690	2.40
	1.0524	1.2680	7.9	- 14.0	.002387	.07
	1.0291	.8718	23.2	65.6	.002517	.68
	1.0291	.5340	20.0	- 73.3	.002497	.50
	1.0155	.1748	21.2	- 84.8	.002472	.55
	1.0155	.0039	1.9	.0	.002472	.00
	1.4971	1.4097	27.9	-105.9	.002387	.93
	1.4291	.9340	32.8	- 96.7	.002517	1.36
	1.3961	.5689	13.6	- 98.1	.002497	.23
	1.3942	.2214	21.9	- 74.7	.002472	.59
	1.3961	.0039	6.1	- 18.4	.002472	.05

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1267.00	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	.6400	1.1943	49.0	-118.6	.002479	2.37
	.6400	.8343	26.2	-116.6	.002532	.87
	.6400	.4933	23.9	-145.0	.002519	.72
	.6400	.1257	41.5	- 98.1	.003143	2.70
	.6400	.0038	6.2	-161.6	.003143	.06
	1.0381	1.3048	22.3	-142.1	.002445	.61
	1.0210	.8857	12.4	-108.4	.002390	.18
	1.0171	.5048	44.1	-102.8	.002552	2.48
	1.0133	.1676	8.1	-104.0	.002616	.08
	1.0133	.0057	8.1	-166.0	.002616	.08
	1.4552	1.3886	38.8	-139.1	.002445	1.84
	1.4057	.9228	10.0	-168.7	.002390	.12
	1.3905	.5581	29.9	-101.3	.002552	1.14
	1.3905	.2095	30.6	-116.6	.002616	1.22
	1.3905	.0019	25.5	-175.6	.002616	.85
1308.40	.3068	1.1573	READINGS	INVALID		
	.2990	.7825	READINGS	INVALID		
	.2971	.4369	READINGS	INVALID		
	.2835	.0893	READINGS	INVALID		
	.2854	.0000	READINGS	INVALID		
	.6233	1.1670	32.6	15[illegible].8	.002530	1.35
	.6350	.8233	50.6	119.5	.002500	3.21
	.6272	.4835	52.3	118.4	.002445	3.35
	.6233	.1107	84.3	107.2	.003123	11.09
	.6233	.0000	24.9	180.0	.003123	.97
	1.0350	1.2544	17.3	180.0	.002488	.37
	1.0252	.8602	36.4	90.0	.002333	1.55
	1.0194	.4913	72.9	93.[illegible]	.002662	7.08
	1.0136	.1670	58.3	99.5	.002800	4.7[illegible]
	1.0078	.0019	10.3	-158.2	.002800	.15
	1.4680	1.3845	57.7	68.6	.002488	4.14
	1.4194	.9320	15.8	104.0	.002333	.29
	1.3903	.5398	48.5	108.4	.002662	3.13
	1.3806	.1942	40.8	131.2	.002800	2.33
	1.3709	.0019	26.9	175.9	.002800	1.01

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1349.80	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	.6152	1.2152	31.3	86.4	.002564	1.26
	.6152	.8781	21.8	116.6	.002523	.60
	.6152	.5350	8.1	104.0	.002472	.08
	.6152	.2057	52.1	77.0	.002018	2.74
	.6152	.0038	12.4	18.4	.002018	.15
	1.0210	1.3048	23.5	48.4	.002350	.65
	1.0210	.9219	20.8	48.8	.002678	.58
	1.0133	.5771	45.1	72.3	.002543	2.59
	1.0038	.2248	5.5	45.0	.002206	.03
	1.0038	.0019	12.4	18.4	.002206	.17
	1.4762	1.4419	25.0	51.3	.002350	.74
	1.4019	.9350	16.8	125.5	.002678	.38
	1.3752	.6038	42.9	114.2	.002543	2.34
	1.3638	.2400	26.1	103.0	.002206	.75
	1.3638	.0038	5.9	.0	.002206	.04
1391.20	.2757	1.1282	READINGS	INVALID		
	.2660	.8369	READINGS	INVALID		
	.2641	.4835	READINGS	INVALID		
	.2660	.1301	READINGS	INVALID		
	.2718	.0039	READINGS	INVALID		
	.6252	1.1981	48.0	- 92.3	.002381	2.74
	.6252	.8427	34.6	- 93.2	.002434	1.45
	.6252	.4913	59.5	- 91.8	.002433	4.30
	.6350	.1612	69.0	- 91.6	.002694	6.42
	.6350	.0039	2.7	-135.0	.002694	.01
	1.0505	1.2718	41.2	- 62.2	.002559	2.17
	1.0388	.8757	58.6	-101.3	.002704	4.65
	1.0330	.5340	75.2	-109.4	.002613	7.39
	1.0175	.1709	69.3	-104.4	.002666	6.40
	1.0194	.0058	17.4	173.7	.002666	.46
	1.4835	1.4039	54.2	- 98.1	.002559	3.76
	1.4097	.9456	29.0	- 97.6	.002704	1.14
	1.3728	.5786	57.6	- 93.8	.002613	4.34
	1.3748	.2194	48.3	- 83.2	.002666	3.11
	1.3767	.0019	6.1	18.4	.002666	.05

Table B-X. Front-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 345

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1432.60	NO READING					
	NO READING					
	NO READING					
	NO READING					
	NO READING					
	.6133	1.1676	46.0	- 77.7	.002517	2.66
	.6133	.8438	19.2	- 66.0	.002491	.46
	.6133	.4800	37.6	- 81.0	.002574	1.82
	.6133	.1371	34.2	-121.0	.003081	1.80
	.6133	.0019	17.7	-173.7	.003081	.48
	1.0400	1.2686	21.8	- 25.6	.002434	.58
	1.0095	.8648	23.6	- 65.6	.002440	.68
	.9886	.5067	27.2	-111.0	.002440	.90
	.9867	.1581	12.5	-141.3	.002793	.22
	.9867	.0038	10.0	-168.7	.002793	.14
	1.4686	1.3886	11.9	- 80.5	.002434	.17
	1.3981	.9105	31.8	-100.6	.002440	1.23
	1.3714	.5467	43.0	- 92.6	.002440	2.26
	1.3695	.1924	38.9	-107.5	.002793	2.12
	1.3695	.0057	19.6	174.3	.002793	.54
1474.00	.2874	1.0835	READINGS	INVALID		
	.2718	.7845	READINGS	INVALID		
	.2680	.4388	READINGS	INVALID		
	.2641	.0971	READINGS	INVALID		
	.2641	.0039	READINGS	INVALID		
	.6350	1.1534	6.1	-108.4	.002405	.04
	.6330	.8252	33.5	-103.2	.002402	1.35
	.6311	.4544	8.6	153.4	.002561	.09
	.6175	.1320	29.8	104.9	.002941	1.30
	.6175	.0019	7.7	180.0	.002941	.09
	1.0699	1.2621	8.6	- 63.4	.002584	.09
	1.0485	.8544	15.5	- 29.7	.002676	.32
	1.0233	.5087	31.0	21.3	.002677	1.28
	1.0078	.1631	35.0	80.5	.003071	1.88
	1.0097	.0039	6.1	18.4	.003071	.06
	1.4854	1.3922	1.9	180.0	.002584	.00
	1.4039	.9146	12.3	51.3	.002676	.20
	1.3709	.5359	19.2	- 53.1	.002677	.49
	1.3631	.1825	26.6	59.7	.003071	1.09
	1.3573	.0039	13.6	- 8.1	.003071	.28

Table B-XI. Rear-Lower Grid Calculations - Model 36

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
13.00	2.4624	1.2917	29.2	-176.2	.002191	.93
	2.4722	1.0459	7.0	146.3	.002284	.06
	2.4741	.6205	18.3	-148.0	.002356	.39
	2.4683	.2985	16.0	- 76.0	.002207	.28
	2.4683	.0020	13.7	171.9	.002207	.21
	2.8741	1.2546	11.0	-135.0	.002170	.13
	2.8741	.9795	40.4	-125.2	.002342	1.91
	2.8644	.5776	17.6	173.7	.002123	.33
	2.8566	.2205	13.6	- 90.0	.002303	.21
	2.8566	.0020	7.8	.0	.002303	.07
	3.2390	1.2332	13.7	-171.9	.002126	.20
	3.2410	.9366	17.5	- 90.0	.002348	.36
	3.2410	.5541	7.8	.0	.002153	.06
	3.2449	.1815	21.7	-116.6	.002341	.55
	3.2449	.0039	15.5	180.0	.002341	.28
	3.5590	1.2488	22.7	- 20.0	.002126	.55
	3.5824	.9190	13.6	- 90.0	.002348	.22
	3.6059	.5346	8.2	-135.0	.002153	.07
	3.6059	.1580	5.8	.0	.002341	.04
	3.6059	.0020	7.0	33.7	.002341	.06
54.30	2.4519	1.2885	32.5	- 14.0	.002236	1.16
	2.4750	1.0231	26.4	- 25.6	.002443	.85
	2.4596	.6077	15.4	39.8	.002288	.27
	2.4615	.2635	7.1	-123.7	.002420	.06
	2.4615	.0019	3.9	180.0	.002420	.02
	2.8558	1.2385	34.9	-163.6	.002112	1.29
	2.8462	.9673	37.9	152.1	.002327	1.67
	2.8423	.5712	29.5	143.1	.002170	.95
	2.8519	.2077	30.0	121.6	.002642	1.19
	2.8519	.0019	15.7	180.0	.002642	.33
	3.2365	1.2212	19.7	- 53.1	.002128	.41
	3.2231	.9269	10.0	101.3	.002449	.12
	3.2212	.5462	21.7	180.0	.002273	.53
	3.2173	.1750	26.8	162.9	.002374	.85
	3.1962	.0038	25.7	-175.6	.002374	.78
	3.5712	1.2308	15.0	-113.2	.002128	.24
	3.5538	.9038	12.6	141.3	.002449	.19
	3.5615	.5115	20.3	150.9	.002273	.47
	3.5788	.1481	17.8	-173.7	.002374	.38
	3.5865	.0038	7.9	180.0	.002374	.07

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	G LB/SQFT
95.60	2.4937	1.2839	45.0	- 7.4	.002690	2.72
	2.4956	1.0341	11.8	-170.5	.002652	.16
	2.4859	.6302	11.0	- 45.0	.002477	.15
	2.4644	.2927	6.1	- 71.6	.002193	.04
	2.4644	.0020	2.7	- 45.0	.002193	.01
	2.8410	1.2449	5.8	- 89.9	.002167	.04
	2.8410	.9971	13.0	-116.6	.002211	.19
	2.8410	.5951	9.7	-143.1	.002193	.10
	2.8410	.2459	7.8	- 89.9	.002170	.07
	2.8410	.0020	.0	.0	.002170	.00
	3.2507	1.2176	13.0	- 26.6	.002389	.20
	3.2390	.9463	4.3	116.6	.002333	.02
	3.2195	.5541	16.0	-104.0	.002107	.27
	3.2195	.1893	13.6	- 90.0	.002212	.20
	3.2195	.0020	21.4	- 5.2	.002212	.51
	3.5532	1.2391	35.7	-157.6	.002389	1.52
	3.5727	.9268	2.7	-135.0	.002333	.01
	3.5883	.5444	12.4	38.7	.002107	.16
	3.5883	.1561	8.7	- 63.4	.002212	.09
	3.5980	.0020	17.6	- 6.3	.002212	.34
136.90	2.4962	1.2827	15.9	- 82.9	.002304	.29
	2.4635	1.0212	22.4	164.7	.002481	.62
	2.4673	.6000	12.0	-170.5	.002341	.17
	2.4635	.2577	23.8	- 65.6	.002493	.71
	2.4635	.0000	17.8	173.7	.002493	.40
	2.8558	1.2327	16.2	- 14.0	.002082	.27
	2.8404	.9558	19.7	- 36.9	.002264	.44
	2.8346	.5654	5.9	.0	.002162	.04
	2.8519	.2000	20.6	- 73.3	.002710	.57
	2.8519	.0019	5.9	.0	.002710	.05
	3.2481	1.2154	15.7	90.0	.002360	.29
	3.2212	.9308	9.8	- 89.9	.002373	.11
	3.2173	.5308	8.1	104.0	.002177	.07
	3.2173	.1615	16.8	69.4	.002521	.36
	3.2173	.0019	5.9	.0	.002521	.04
	3.5385	1.2173	37.4	18.4	.002360	1.65
	3.5519	.9019	15.9	- 7.1	.002373	.30
	3.5712	.5192	2.0	.0	.002177	.00
	3.5827	.1404	2.8	45.0	.002521	.01
	3.6038	.0019	7.9	180.0	.002521	.08

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
178.20	2.4956	1.2683	46.9	-172.9	.002563	2.82
	2.4741	1.0400	9.7	126.9	.002472	.12
	2.4741	.6283	15.2	129.8	.002309	.27
	2.4741	.2712	16.6	110.6	.002316	.32
	2.4468	.0039	1.9	.0	.002316	.00
	2.8566	1.2410	11.3	31.0	.002113	.14
	2.8566	.9854	23.6	80.5	.002363	.66
	2.8468	.5951	20.6	48.8	.002182	.46
	2.8468	.2263	25.2	112.6	.002189	.70
	2.8468	.0020	23.4	-175.2	.002189	.60
	3.2507	1.2332	14.0	56.3	.002073	.20
	3.2390	.9366	14.8	66.8	.002327	.25
	3.2176	.5620	4.3	116.6	.002136	.02
	3.2254	.2049	30.4	116.6	.002152	.99
	3.2254	.0020	13.7	171.9	.002152	.20
	3.5883	1.2468	23.6	9.5	.002073	.58
	3.5883	.9249	23.7	55.0	.002327	.65
	3.5902	.5444	6.1	108.4	.002136	.04
	3.5902	.1580	14.8	113.2	.002152	.23
	3.5902	.0020	27.2	180.0	.002152	.79
219.50	2.4500	1.2769	33.5	- 61.9	.002269	1.27
	2.4577	1.0288	29.5	- 36.9	.002368	1.03
	2.4577	.6115	36.3	- 77.5	.002314	1.52
	2.4577	.2231	14.3	- 74.1	.002377	.24
	2.4654	.0000	31.6	- 3.6	.002377	1.18
	2.8654	1.2385	32.3	- 52.4	.002153	1.12
	2.8442	.9788	29.8	- 82.4	.002255	1.00
	2.8481	.5808	36.2	- 67.6	.002305	1.51
	2.8423	.2231	22.4	- 52.1	.002355	.59
	2.8288	.0000	13.8	.0	.002355	.22
	3.2558	1.2269	34.0	-100.0	.002341	1.35
	3.2269	.9442	34.0	- 80.0	.002275	1.31
	3.2154	.5346	35.0	- 38.2	.002244	1.38
	3.2038	.1885	44.2	- 69.1	.002245	2.20
	3.2038	.0038	12.0	9.5	.002245	.16
	3.5615	1.2212	44.0	-100.3	.002341	2.27
	3.5654	.9212	49.8	- 99.1	.002275	2.83
	3.5692	.5250	41.1	- 73.3	.002244	1.90
	3.5769	.1538	15.9	29.7	.002245	.28
	3.5769	.0019	13.8	.0	.002245	.21

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
260.80	2.5112	1.2390	55.1	- 50.7	.002654	4.04
	2.4976	1.0224	64.8	- 51.1	.002449	5.15
	2.4820	.5932	42.9	- 71.6	.002382	2.20
	2.4780	.2576	59.0	- 80.5	.002496	4.35
	2.4780	.0020	2.7	45.0	.002496	.01
	2.8761	1.2156	46.9	- 82.9	.002161	2.33
	2.8605	.9561	54.0	- 69.0	.002349	3.43
	2.8605	.5620	52.4	- 87.9	.002123	2.92
	2.8605	.2088	35.4	- 80.5	.002549	1.60
	2.8605	.0020	23.4	4.8	.002549	.70
	3.2449	1.2000	53.7	-102.5	.002101	3.03
	3.2449	.9034	61.4	- 71.6	.002505	4.72
	3.2449	.5405	41.9	- 76.6	.002270	1.99
	3.2410	.1639	55.6	- 65.2	.002385	3.68
	3.2371	.0039	23.4	- 4.8	.002385	.65
	3.5805	1.2039	46.7	- 94.8	.002101	2.29
	3.5805	.8761	64.3	- 95.2	.002505	5.18
	3.6020	.5054	35.0	- 93.2	.002270	1.39
	3.6039	.1659	33.0	- 61.9	.002385	1.30
	3.6039	.0020	17.5	.0	.002385	.36
302.10	2.4846	1.2346	27.8	-135.0	.002377	.92
	2.4981	.9788	47.6	- 97.1	.002479	2.81
	2.4712	.5712	24.0	-125.0	.002361	.68
	2.4673	.2154	18.6	-122.0	.002885	.50
	2.4673	.0019	23.7	-175.2	.002885	.81
	2.8712	1.1923	40.4	-133.0	.002174	1.77
	2.8635	.9288	26.5	-138.0	.002268	.80
	2.8500	.5288	30.6	-135.0	.002259	1.06
	2.8481	.1885	23.9	-170.5	.002910	.83
	2.8519	.0019	19.8	174.3	.002910	.57
	3.2442	1.1750	30.0	-113.2	.002319	1.04
	3.2462	.8865	20.6	-163.3	.002547	.54
	3.2250	.4942	32.8	-122.7	.002295	1.23
	3.2269	.1385	22.0	-153.4	.002965	.72
	3.2269	.0019	15.9	-172.9	.002965	.37
	3.5577	1.1750	43.2	-136.8	.002319	2.16
	3.5596	.8577	15.0	-156.8	.002547	.29
	3.5673	.4904	38.8	-156.0	.002295	1.73
	3.5923	.1250	51.5	-136.5	.002965	3.93
	3.5942	.0019	37.4	180.0	.002965	2.07

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
343.40	2.4917	1.2195	27.4	- 81.9	.002664	1.00
	2.4917	.9756	14.0	-123.7	.002595	.25
	2.4683	.5737	9.7	- 53.1	.002531	.12
	2.4683	.2420	27.8	77.9	.002537	1.02
	2.4546	.0000	6.1	18.4	.002637	.05
	2.8488	1.1863	37.5	-111.3	.002253	1.58
	2.8410	.9385	19.4	-126.9	.002262	.43
	2.8390	.5405	14.0	-123.7	.002206	.22
	2.8371	.2049	7.0	146.3	.002624	.06
	2.8410	.0039	9.7	180.0	.002624	.12
	3.2332	1.1727	14.8	- 66.8	.002312	.25
	3.2254	.8976	27.2	- 94.1	.002438	.90
	3.2273	.5132	17.9	12.5	.002378	.36
	3.2215	.1541	19.4	53.1	.002905	.55
	3.2215	.0020	6.1	18.4	.002905	.05
	3.5493	1.1746	40.4	- 54.8	.002312	1.88
	3.5668	.8702	34.3	- 42.7	.002438	1.44
	3.5668	.4858	28.0	- 33.7	.002378	.93
	3.5668	.1307	20.0	- 29.1	.002905	.58
	3.5668	.0020	15.6	7.1	.002905	.36
384.70	2.4885	1.2077	16.9	-144.5	.002614	.37
	2.4904	.9673	21.3	-123.7	.002568	.58
	2.4769	.5635	14.3	-164.1	.002630	.27
	2.4731	.2423	26.4	116.6	.002788	.97
	2.4731	.0038	2.8	45.0	.002788	.01
	2.8577	1.1577	14.2	-146.3	.002115	.21
	2.8519	.9135	12.5	-108.4	.002274	.18
	2.8423	.5173	4.4	-116.6	.002224	.02
	2.8423	.1923	9.8	89.9	.002643	.13
	2.8423	.0019	4.4	-153.4	.002643	.03
	3.2500	1.1615	8.8	-116.6	.002152	.06
	3.2442	.8596	25.9	- 81.3	.002559	.86
	3.2423	.4981	24.9	161.6	.002316	.72
	3.2385	.1538	38.8	120.5	.002879	2.17
	3.2327	.0038	19.7	180.0	.002879	.56
	3.5808	1.1423	26.5	-138.0	.002152	.75
	3.5846	.8346	22.0	-153.4	.002559	.62
	3.5904	.4750	23.0	149.0	.002316	.61
	3.6096	.1154	18.1	102.5	.002879	.47
	3.6096	.0038	4.4	-153.4	.002879	.03

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
426.00	2.4780	1.2098	4.3	-116.6	.002571	.02
	2.4800	.9580	4.3	116.6	.002596	.02
	2.4546	.5698	9.7	143.1	.002615	.12
	2.4566	.2654	9.7	180.0	.002437	.11
	2.4566	.0020	4.3	-153.4	.002437	.02
	2.8371	1.1785	14.8	66.8	.002125	.23
	2.8371	.9268	17.5	.0	.002422	.37
	2.8371	.5366	20.6	41.2	.002471	.53
	2.8371	.2146	8.7	63.4	.002438	.09
	2.8371	.0020	1.9	180.0	.002438	.00
	3.2293	1.1649	8.7	- 26.6	.002418	.09
	3.2293	.8722	17.9	40.6	.002698	.43
	3.2039	.5210	13.7	135.0	.002423	.23
	3.2020	.1873	8.7	153.4	.002341	.09
	3.2020	.0020	11.8	-170.5	.002341	.16
	3.5298	1.1571	20.3	106.7	.002418	.50
	3.5473	.8605	13.0	63.4	.002698	.23
	3.5473	.5015	4.3	116.6	.002423	.02
	3.5629	.1483	16.7	125.5	.002341	.33
	3.5629	.0000	9.9	-168.7	.002341	.11
467.30	2.4865	1.2038	19.8	174.3	.002499	.49
	2.4885	.9712	28.4	146.3	.002472	1.00
	2.4692	.5692	9.8	143.1	.002457	.12
	2.4635	.2423	18.6	-122.0	.002671	.46
	2.4692	.0019	10.0	-168.7	.002671	.13
	2.8635	1.1712	12.6	- 38.7	.002132	.17
	2.8692	.9135	2.0	89.7	.002390	.00
	2.8577	.5308	14.2	-173.7	.002289	.23
	2.8462	.2000	12.6	-141.3	.002609	.21
	2.8404	.0019	9.8	180.0	.002609	.13
	3.2577	1.1577	22.0	- 79.7	.002252	.55
	3.2577	.8712	14.3	74.1	.002517	.26
	3.2327	.5077	29.8	- 7.6	.002309	1.02
	3.2308	.1577	19.7	- 53.1	.002663	.52
	3.2212	.0019	11.8	.0	.002663	.19
	3.5750	1.1615	18.7	18.4	.002252	.39
	3.5904	.8462	13.2	- 63.4	.002517	.22
	3.5885	.4788	11.5	- 59.0	.002309	.15
	3.6000	.1288	6.2	18.4	.002663	.05
	3.6000	.0019	6.2	18.4	.002663	.05

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
508.60	2.4585	1.2117	12.4	-128.7	.002504	.19
	2.4566	.9737	23.3	- 90.0	.002443	.66
	2.4468	.5756	16.5	- 45.0	.002542	.34
	2.4468	.2498	6.1	- 71.6	.002552	.05
	2.4468	.0000	.0	.0	.002552	.00
	2.8468	1.1707	17.5	- 90.0	.002318	.35
	2.8371	.9288	18.4	- 71.6	.002[illegible]11	.37
	2.8293	.5249	13.7	- 98.1	.002[illegible]7	.21
	2.8273	.2068	14.0	- 56.3	.0024[illegible]7	.24
	2.8273	.0020	13.7	8.1	.002447	.23
	3.2332	1.1434	27.4	- 98.1	.002429	.91
	3.2332	.8859	24.7	-135.0	.002733	.83
	3.2332	.5171	29.7	- 78.7	.002523	1.11
	3.2137	.1717	19.1	- 66.0	.002496	.46
	3.2137	.0020	17.6	- 6.3	.002496	.39
	3.5473	1.1629	36.8	-108.4	.002429	1.65
	3.5532	.8488	15.2	-129.8	.002733	.31
	3.5532	.4917	9.9	- 78.7	.002523	.12
	3.5688	.1502	11.0	-135.0	.002496	.15
	3.5688	.0020	7.8	180.0	.002496	.08
549.90	2.4788	1.1942	12.0	9.5	.002397	.17
	2.4885	.9481	11.8	90.0	.002548	.18
	2.4808	.5577	21.7	.0	.002510	.59
	2.4654	.2365	9.8	126.9	.002726	.13
	2.4692	.0019	6.2	161.6	.002726	.05
	2.8635	1.1538	21.7	174.8	.002246	.53
	2.8750	.8962	13.2	-153.4	.002417	.21
	2.8558	.5173	14.3	105.9	.002315	.24
	2.8538	.1885	4.4	-116.6	.002833	.03
	2.8538	.0038	2.8	135.0	.002833	.01
	3.2538	1.1308	15.9	150.3	.002380	.30
	3.2404	.8538	21.7	174.8	.002478	.59
	3.2385	.4788	31.6	176.4	.002416	1.20
	3.2385	.1404	12.5	161.6	.003069	.24
	3.2385	.0000	11.8	180.0	.003069	.21
	3.5635	1.1269	2.0	.0	.002380	.00
	3.5808	.8346	7.1	-123.7	.002478	.06
	3.5904	.4692	12.6	38.7	.002416	.19
	3.5923	.1212	10.6	158.2	.003069	.17
	3.5923	.0019	9.8	180.0	.003069	.15

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
591.20	2.4702	1.2137	32.5	72.6	.002667	1.41
	2.4566	.9854	29.4	97.6	.002636	1.12
	2.4683	.5756	21.7	153.4	.002564	.60
	2.4410	.2576	13.7	-171.9	.002526	.24
	2.4410	.0020	17.6	173.7	.002526	.39
	2.8254	1.1727	29.1	126.9	.002264	.96
	2.8254	.9229	33.4	125.5	.002377	1.32
	2.8254	.5385	34.3	132.7	.002318	1.37
	2.8254	.2029	14.8	156.8	.002523	.28
	2.8254	.0039	2.7	- 45.0	.002523	.01
	3.2195	1.1512	33.2	110.6	.002260	1.24
	3.2117	.8878	21.7	116.6	.002554	.60
	3.2020	.5190	32.1	115.0	.002366	1.22
	3.2020	.1756	24.3	118.6	.002423	.72
	3.2020	.0020	11.6	180.0	.002423	.16
	3.5493	1.1629	36.9	87.0	.002260	1.54
	3.5493	.8429	22.1	74.7	.002554	.62
	3.5629	.4995	14.1	105.9	.002366	.24
	3.5590	.1541	21.4	95.2	.002423	.56
	3.5590	.0020	2.7	-135.0	.002423	.01
632.50	2.4885	1.2250	34.8	132.7	.002537	1.54
	2.4846	.9769	10.6	-158.2	.002539	.14
	2.4615	.5673	25.2	141.3	.002415	.77
	2.4519	.2346	14.2	56.3	.002639	.27
	2.4519	.0038	9.8	.0	.002639	.13
	2.8462	1.1769	11.1	45.0	.002170	.13
	2.8558	.9231	12.0	99.5	.002378	.17
	2.8327	.5423	23.7	48.4	.002195	.62
	2.8404	.1942	27.3	59.7	.002647	.99
	2.8558	.0019	13.9	- 8.1	.002647	.26
	3.2423	1.1615	35.5	70.6	.002177	1.37
	3.2308	.8731	12.6	38.7	.002396	.19
	3.2250	.5077	20.6	73.3	.002352	.50
	3.2269	.1615	7.1	56.3	.002553	.06
	3.2269	.0000	3.9	.0	.002553	.02
	3.5654	1.1635	10.6	21.8	.002177	.12
	3.5865	.8558	39.9	57.1	.002396	1.90
	3.5865	.4827	10.6	68.2	.002352	.13
	3.5904	.1423	7.1	56.3	.002553	.06
	3.5904	.0000	2.8	- 45.0	.002553	.01

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
673.80	2.4468	1.2390	36.2	-164.5	.002406	1.58
	2.4468	.9815	37.7	-124.5	.002543	1.60
	2.4488	.5912	14.0	-146.3	.002449	.24
	2.4488	.2693	8.2	-135.0	.002307	.08
	2.4507	.0020	5.5	- 45.0	.002307	.03
	2.8332	1.1805	38.8	-126.9	.002129	1.60
	2.8234	.9346	23.7	-145.0	.002431	.66
	2.8410	.5561	28.2	- 74.1	.002352	.94
	2.8390	.2263	9.7	-143.1	.002390	.11
	2.8390	.0020	25.2	180.0	.002390	.76
	3.2312	1.1844	21.3	- 90.0	.002245	.51
	3.2215	.8956	6.1	161.6	.002472	.05
	3.2078	.5385	19.5	174.3	.002312	.44
	3.2059	.1815	22.7	-160.0	.002331	.60
	3.2059	.0020	21.3	180.0	.002331	.53
	3.5590	1.1668	19.4	- 90.0	.002245	.42
	3.5707	.8761	17.5	- 90.0	.002472	.38
	3.5668	.5093	3.9	- 89.9	.002312	.02
	3.5629	.1600	23.6	- 99.5	.002331	.65
	3.5610	.0000	27.2	.0	.002331	.86
715.10	2.4538	1.2154	18.1	- 40.6	.002484	.41
	2.4635	.9462	18.1	- 49.4	.002512	.41
	2.4500	.5596	8.1	14.0	.002440	.08
	2.4462	.2288	8.1	- 14.0	.002794	.09
	2.4558	.0000	2.0	180.0	.002794	.01
	2.8231	1.1462	28.7	-164.1	.002238	.92
	2.8365	.9096	21.3	-146.3	.002385	.54
	2.8404	.5154	35.5	-176.8	.002350	1.48
	2.8327	.1885	34.9	-163.6	.002781	1.69
	2.8308	.0019	33.5	180.0	.002781	1.56
	3.2423	1.1404	42.4	-111.8	.002253	2.03
	3.2250	.8750	16.8	- 69.4	.002354	.33
	3.2058	.5096	22.4	- 74.7	.002148	.54
	3.2058	.1538	15.9	-150.3	.002619	.33
	3.2058	.0000	7.9	180.0	.002619	.08
	3.5654	1.1442	24.7	-118.6	.002253	.69
	3.5865	.8385	31.6	- 93.6	.002354	1.17
	3.5865	.4788	8.1	- 76.0	.002148	.07
	3.5865	.1192	25.9	- 81.3	.002619	.88
	3.6173	.0000	13.9	8.1	.002619	.25

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
756.40	2.4605	1.2273	13.7	- 98.1	.002625	.25
	2.4585	.9678	43.1	35.8	.002894	2.69
	2.4566	.5932	31.1	- 3.6	.002696	1.30
	2.4566	.2673	29.1	- 53.1	.002601	1.10
	2.4488	.0020	7.8	.0	.002601	.08
	2.8059	1.1727	6.1	-108.4	.002124	.04
	2.8059	.9229	10.4	-158.2	.002249	.12
	2.8059	.5541	13.6	180.0	.002185	.20
	2.8059	.2166	24.0	-104.0	.002357	.68
	2.8059	.0020	3.9	180.0	.002357	.02
	3.2156	1.1454	36.5	-115.2	.002319	1.54
	3.2273	.8800	27.2	- 85.9	.002577	.96
	3.2137	.5171	19.5	- 95.7	.002252	.43
	3.1922	.1737	21.3	.0	.002472	.56
	3.1980	.0020	21.4	5.2	.002472	.57
	3.5473	1.1454	42.9	- 95.2	.002319	2.13
	3.5688	.8449	30.4	-153.4	.002577	1.19
	3.5688	.5015	20.3	-163.3	.002252	.46
	3.5668	.1346	26.1	-138.0	.002472	.84
	3.5746	.0020	50.5	177.8	.002472	3.15
797.70	2.4519	1.2019	29.6	- 93.8	.002911	1.27
	2.4981	.9712	13.8	- 90.0	.002753	.26
	2.4808	.5577	19.8	- 84.3	.002501	.49
	2.4635	.2058	8.1	- 76.0	.003289	.11
	2.4635	.0000	9.8	.0	.003289	.16
	2.8212	1.1404	23.0	- 59.0	.002282	.60
	2.8269	.9058	29.1	- 61.7	.002345	.99
	2.8269	.5154	32.6	- 65.0	.002226	1.18
	2.8269	.1654	16.9	- 35.5	.002807	.40
	2.8269	.0019	13.9	- 8.1	.002807	.27
	3.2269	1.1077	27.6	- 85.9	.002459	.94
	3.2269	.8481	36.8	-105.5	.002567	1.74
	3.2038	.4904	20.6	-106.7	.002357	.50
	3.2269	.1538	11.5	- 59.0	.003288	.22
	3.2269	.0019	.0	.0	.003288	.00
	3.5615	1.1019	23.0	-121.0	.002459	.65
	3.5596	.8250	29.1	-151.7	.002567	1.08
	3.5673	.4731	20.3	-119.1	.002357	.48
	3.5673	.1019	4.4	- 63.4	.003288	.03
	3.5673	.0019	8.1	-166.0	.003288	.11

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
839.00	2.4585	1.1980	37.1	-137.1	.002578	1.77
	2.4585	.9541	78.2	-156.6	.002757	8.43
	2.4585	.5737	48.5	-177.7	.002737	3.23
	2.4585	.2595	43.4	153.4	.002633	2.48
	2.4585	.0020	9.9	168.7	.002633	.13
	2.8176	1.1532	25.3	- 94.4	.002152	.69
	2.8195	.8576	30.1	-104.9	.002412	1.09
	2.8195	.5249	20.0	-119.1	.002369	.47
	2.8195	.2068	5.8	180.0	.002537	.04
	2.8195	.0000	5.8	180.0	.002537	.04
	3.2176	1.1180	32.0	-104.0	.002409	1.23
	3.2176	.8449	25.2	-157.4	.002701	.86
	3.2078	.4976	21.3	- 90.0	.002360	.54
	3.1980	.1639	41.2	-135.0	.002604	2.21
	3.1980	.0020	29.1	180.0	.002604	1.10
	3.5356	1.12	22.1	-127.9	.002409	.59
	3.5434	.8312	17.5	- 90.0	.002701	.41
	3.5590	.4839	20.3	- 73.3	.002360	.48
	3.5688	.1307	17.6	6.3	.002604	.40
	3.5668	.0000	17.5	.0	.002604	.40
880.30	2.4250	1.1769	37.0	-115.2	.002482	1.70
	2.4269	.9404	41.4	-115.3	.002529	2.17
	2.4327	.5558	14.2	-123.7	.002410	.24
	2.4250	.2250	32.6	-115.0	.003009	1.66
	2.4538	.0019	28.0	129.3	.003009	1.18
	2.8192	1.1154	43.7	-144.2	.002418	2.31
	2.8192	.8764	41.5	- 31.4	.002370	2.04
	2.8173	.4981	23.6	- 90.0	.002293	.64
	2.8212	.1654	25.6	- 90.0	.003279	1.07
	2.8212	.0019	2.0	89.7	.003279	.01
	3.2192	1.0769	32.3	-127.6	.002495	1.30
	3.2038	.8385	26.5	-138.0	.002425	.85
	3.2038	.4692	18.6	-122.0	.002231	.38
	3.1981	.1250	20.6	-106.7	.003242	.68
	3.1981	.0019	6.2	-161.6	.003242	.06
	3.5481	1.0846	44.0	-100.3	.002495	2.42
	3.5596	.8077	26.8	- 72.9	.002425	.87
	3.5731	.4538	19.4	-114.0	.002231	.42
	3.5846	.1038	2.0	89.7	.003242	.01
	3.5846	.0019	2.8	45.0	.003242	.01

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
921.60	2.4429	1.1649	19.1	- 24.0	.002499	.46
	2.4410	.9171	34.3	- 47.3	.002614	1.54
	2.4507	.5620	36.5	- 64.8	.002575	1.71
	2.4449	.2302	20.0	- 29.1	.003031	.60
	2.4410	.0234	9.9	168.7	.003031	.15
	2.7824	1.1278	15.6	- 60.3	.002349	.29
	2.8546	.8761	14.8	- 66.8	.002618	.29
	2.8195	.5015	11.3	31.0	.002398	.15
	2.8195	.1815	11.3	[illegible]	.002934	.19
	2.8195	.0020	3.9	[illegible]	.002934	.02
	3.1980	1.0927	8.2	-135.0	.002382	.08
	3.1980	.8273	7.8	- 89.9	.002625	.09
	3.1980	.4820	1.9	89.7	.002391	.00
	3.1922	.1444	9.7	53.1	.002721	.13
	3.1922	.0000	5.8	.0	.002721	.05
	3.5278	1.0829	7.8	- 89.9	.002382	.07
	3.5512	.8059	16.0	- 76.0	.002625	.34
	3.5512	.4683	17.9	-139.4	.002391	.38
	3.5688	.1327	33.9	-166.8	.002721	1.56
	3.5688	.0020	19.4	180.0	.002721	.51
962.90	2.4423	1.1692	25.1	135.0	.002482	.78
	2.4500	.9154	23.7	138.4	.002645	.74
	2.4481	.5231	10.6	- 21.8	.002569	.14
	2.4423	.2154	12.0	9.5	.002999	.22
	2.4442	.0038	28.0	- 50.7	.002999	1.17
	2.8269	1.1019	25.7	- 32.5	.002471	.81
	2.8250	.8635	41.8	171.9	.002516	2.19
	2.8269	.5038	8.4	135.0	.002357	.08
	2.8269	.1750	16.7	108.4	.003083	.54
	2.8250	.0019	4.4	-153.4	.003083	.03
	3.2135	1.0712	15.9	- 29.7	.002417	.30
	3.2038	.8308	13.8	.0	.002500	.24
	3.2038	.4712	11.8	.0	.002426	.17
	3.2038	.1327	17.8	- 6.3	.003542	.56
	3.2038	.0019	18.1	12.5	.003542	.58
	3.5481	1.0769	13.2	- 63.4	.002417	.21
	3.5635	.7923	9.8	- 89.9	.002500	.12
	3.5596	.4423	39.1	- 49.1	.002426	1.35
	3.5519	.0962	17.6	- 63.4	.003542	.55
	3.5654	.0019	8.1	- 14.0	.003542	.12

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1004.20	2.4254	1.1824	13.7	45.0	.002507	.24
	2.4234	.9327	17.6	83.7	.002710	.42
	2.4605	.5580	32.1	115.0	.002772	1.43
	2.4566	.2322	14.0	123.7	.002881	.28
	2.4585	.0020	7.0	- 33.7	.002881	.07
	2.8039	1.1141	24.3	151.4	.002304	.68
	2.8137	.8820	9.7	53.1	.002391	.11
	2.8137	.5073	19.4	- 36.9	.002310	.43
	2.8137	.1990	14.8	- 23.2	.002656	.29
	2.8156	.0000	19.4	.0	.002656	.50
	3.2117	1.0849	5.5	135.0	.002505	.04
	3.2117	.8273	5.5	-135.0	.002561	.04
	3.2098	.4820	12.3	- 71.6	.002419	.18
	3.2098	.1424	16.0	- 14.0	.003007	.38
	3.2098	.0039	15.5	.0	.003007	.36
	3.5337	1.0712	14.1	-164.1	.002505	.25
	3.5512	.7961	17.4	-153.4	.002561	.39
	3.5766	.4371	7.0	56.3	.002419	.06
	3.5766	.1171	17.4	26.6	.003007	.45
	3.5766	.0000	33.0	.0	.003007	1.64
1045.50	2.4519	1.1788	22.4	- 15.3	.002612	.66
	2.4519	.9327	23.7	4.8	.002506	.70
	2.4346	.5519	25.7	175.6	.002369	.78
	2.4346	.2269	23.0	160.0	.002809	.75
	2.4500	.0000	23.6	180.0	.002809	.78
	2.8058	1.1135	2.8	135.0	.002402	.01
	2.8308	.8712	23.0	- 31.0	.002501	.66
	2.8423	.4923	15.0	- 66.8	.002440	.27
	2.8404	.1692	36.3	- 77.5	.003196	2.11
	2.8442	.0019	7.1	33.7	.003196	.08
	3.2096	1.0750	27.8	-135.0	.002439	.95
	3.2000	.8269	21.2	-158.2	.002570	.58
	3.2077	.4596	23.7	-138.4	.002466	.69
	3.2192	.1288	22.3	-135.0	.003405	.84
	3.2192	.0019	15.9	-172.9	.003405	.43
	3.5346	1.0731	23.7	- 85.2	.002439	.69
	3.5481	.7846	18.1	-102.5	.002570	.42
	3.5635	.4481	8.1	76.0	.002466	.08
	3.5673	.1038	6.2	- 71.6	.003405	.07
	3.5981	.0019	2.0	.0	.003405	.01

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1086.80	2.4468	1.1766	7.8	180.0	.002590	.08
	2.4468	.9346	14.8	23.2	.002574	.28
	2.4351	.5600	32.5	72.6	.002496	1.32
	2.4351	.2400	11.8	9.5	.002870	.20
	2.4351	.0020	15.5	.0	.002870	.35
	2.8020	1.1161	9.7	53.1	.002485	.12
	2.8332	.8702	2.7	-135.0	.002556	.01
	2.8195	.4937	15.6	150.3	.002378	.29
	2.8215	.1639	11.0	-135.0	.003336	.20
	2.8215	.0039	4.3	-153.4	.003336	.03
	3.1922	1.0654	3.9	.0	.002452	.02
	3.1922	.8195	10.4	21.8	.002503	.14
	3.1922	.4663	19.5	5.7	.002256	.43
	3.1941	.1268	15.6	29.7	.003106	.38
	3.1941	.0020	11.8	9.5	.003106	.22
	3.5356	1.0478	29.2	- 93.8	.002452	1.04
	3.5473	.7785	35.1	- 6.3	.002503	1.55
	3.5785	.4449	35.7	- 45.0	.002256	1.44
	3.5785	.1112	35.8	- 40.6	.003106	1.99
	3.5785	.0000	5.8	180.0	.003106	.05
1128.10	2.4442	1.1788	22.4	37.9	.002611	.66
	2.4654	.9385	32.8	57.3	.002748	1.47
	2.4442	.5827	17.8	6.3	.002344	.37
	2.4462	.2288	20.3	- 29.1	.002988	.61
	2.4654	.0000	15.9	- 7.1	.002988	.38
	2.8115	1.1212	16.7	135.0	.002344	.33
	2.8288	.8692	32.6	155.0	.002383	1.27
	2.8288	.5000	17.6	-153.4	.002242	.35
	2.8327	.1615	31.1	124.7	.003047	1.48
	2.8404	.0000	17.8	-173.7	.003047	.48
	3.2135	1.0750	24.9	108.4	.002532	.78
	3.2096	.8308	9.8	143.1	.002387	.12
	3.2269	.4615	25.7	85.6	.002431	.80
	3.2327	.1365	15.9	82.9	.003681	.46
	3.2308	.0038	2.0	.0	.003681	.01
	3.5327	1.0442	10.0	101.3	.002532	.13
	3.5827	.7808	29.1	118.3	.002387	1.01
	3.5885	.4231	18.6	122.0	.002431	.42
	3.5942	.0808	16.9	125.5	.003681	.53
	3.5923	.0019	9.8	180.0	.003681	.18

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1169.40	2.4644	1.1902	11.8	-170.5	.002968	.21
	2.4644	.9620	33.5	-170.0	.002711	1.52
	2.4527	.5620	47.2	-109.2	.002831	3.16
	2.4527	.2302	20.6	-138.8	.003001	.64
	2.4507	.0000	36.9	177.0	.003001	2.04
	2.7902	1.1278	16.6	-110.6	.002317	.32
	2.8039	.8839	33.9	-166.8	.002427	1.39
	2.8039	.4859	31.6	-137.5	.002346	1.17
	2.8039	.1893	19.1	156.0	.002755	.50
	2.8039	.0020	25.3	175.6	.002755	.88
	3.1844	1.0888	38.2	-156.0	.002438	1.78
	3.1844	.8254	37.1	-132.9	.002603	1.79
	3.1941	.4917	42.9	-174.8	.002287	2.10
	3.1961	.1424	45.5	-140.2	.002851	2.95
	3.1961	.0020	33.0	-176.6	.002851	1.56
	3.5337	1.0576	11.3	- 59.0	.002438	.16
	3.5337	.8039	40.8	177.3	.002603	2.17
	3.5688	.4605	22.7	-160.0	.002287	.59
	3.5688	.1249	13.7	-171.9	.002851	.27
	3.5688	.0000	11.8	-170.5	.002851	.20
1210.70	2.4327	1.1769	30.1	168.7	.002566	1.16
	2.4327	.9327	31.7	-150.3	.002610	1.31
	2.4288	.5385	23.7	-131.6	.002600	.73
	2.4308	.2154	16.2	166.0	.003006	.40
	2.4288	.0019	17.8	173.7	.003006	.48
	2.8058	1.1058	34.0	-170.0	.002381	1.37
	2.7962	.8615	23.7	-131.6	.002448	.69
	2.8058	.4788	16.9	125.5	.002369	.34
	2.8154	.1692	22.0	-116.6	.003389	.82
	2.8154	.0019	9.8	180.0	.003389	.16
	3.1788	1.0596	29.5	-143.1	.002421	1.06
	3.1846	.8038	32.0	-137.5	.002411	1.24
	3.1846	.4577	42.1	-142.6	.002235	1.98
	3.1981	.1077	29.5	-143.1	.003990	1.74
	3.1981	.0019	15.7	180.0	.003990	.49
	3.5385	1.0346	10.6	-158.2	.002421	.14
	3.5423	.7827	50.6	-103.5	.002411	3.09
	3.5673	.4154	39.6	-153.4	.002235	1.75
	3.5808	.0788	19.7	180.0	.003990	.77
	3.5808	.0000	20.1	168.7	.003990	.80

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1252.00	2.4351	1.1961	33.2	-170.3	.002765	1.52
	2.4371	.9463	12.4	-141.3	.002757	.21
	2.4371	.5444	5.5	-135.0	.002733	.04
	2.4371	.2341	10.4	- 68.2	.003071	.17
	2.4332	.0020	8.0	14.0	.003071	.10
	2.7571	1.1220	44.6	180.0	.002255	2.24
	2.7883	.8663	13.6	- 90.0	.002628	.24
	2.7941	.4995	9.7	-143.1	.002374	.11
	2.7941	.1658	19.4	-143.1	.003190	.60
	2.7941	.0020	15.5	180.0	.003190	.38
	3.1610	1.0712	14.0	-123.7	.002149	.21
	3.1610	.8039	19.2	-135.0	.002669	.49
	3.1610	.4663	13.7	- 81.9	.002371	.22
	3.1727	.1249	6.1	71.6	.003101	.06
	3.1805	.0020	6.1	- 18.4	.003101	.06
	3.5239	1.0537	22.1	-105.3	.002149	.53
	3.5220	.7551	45.3	- 80.1	.002[illegible]9	2.74
	3.5337	.4429	6.1	- 18.4	.002371	.04
	3.5493	.1249	5.8	180.0	.003101	.05
	3.5493	.0039	6.1	161.6	.003101	.06
1293.30	2.4000	1.1731	15.9	172.9	.002551	.32
	2.4231	.9250	24.3	-166.0	.002627	.78
	2.4250	.5346	22.4	142.1	.002633	.66
	2.4346	.2058	3.9	180.0	.003388	.03
	2.4365	.0038	.0	.0	.003388	.00
	2.7615	1.1058	16.9	-144.5	.002267	.33
	2.7962	.8481	18.1	102.5	.002490	.41
	2.7981	.4731	10.6	68.2	.002332	.13
	2.8000	.1577	15.0	23.2	.003275	.37
	2.8000	.0019	33.5	.0	.003275	1.83
	3.1712	1.0481	10.6	- 68.2	.002241	.13
	3.1712	.7904	13.2	26.6	.002487	.22
	3.1865	.4442	40.2	- 11.3	.002314	1.87
	3.2000	.1135	34.8	42.7	.003973	2.41
	3.2038	.0000	17.7	.0	.003973	.62
	3.5327	1.0135	28.0	-129.3	.002241	.88
	3.5500	.7385	26.5	48.0	.002487	.87
	3.5731	.4135	31.7	- 7.1	.002314	1.17
	3.5750	.0788	16.2	- 14.0	.003973	.52
	3.5750	.0019	15.9	- 7.1	.003973	.50

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1334.60	2.4195	1.1980	27.8	24.8	.002787	1.08
	2.4137	.9405	18.4	-108.4	.002652	.45
	2.4195	.5580	17.4	153.4	.002535	.38
	2.4332	.2341	19.1	114.0	.002840	.52
	2.4332	.0020	4.3	- 26.6	.002840	.03
	2.7434	1.1122	15.5	- 90.0	.002372	.29
	2.7844	.8839	10.4	-158.2	.002405	.13
	2.7980	.5093	24.3	118.6	.002327	.69
	2.8078	.1756	12.3	-161.6	.002915	.22
	2.8273	.0020	4.3	26.6	.002915	.03
	3.1649	1.0615	14.1	-164.1	.002459	.25
	3.1727	.8098	14.8	-156.8	.002541	.28
	3.2000	.4585	20.6	138.8	.002545	.54
	3.1980	.1483	31.1	176.4	.002896	1.40
	3.1980	.0020	34.9	180.0	.002896	1.77
	3.5063	1.0322	27.2	180.0	.002459	.91
	3.5395	.7746	30.7	145.3	.002541	1.20
	3.5649	.4390	23.6	170.5	.002545	.71
	3.5649	.1210	6.1	-161.6	.002896	.05
	3.5649	.0020	7.8	180.0	.002896	.09
1375.90	2.4250	1.1846	15.4	-140.2	.002529	.30
	2.4173	.9077	9.8	126.9	.002804	.14
	2.4096	.5423	12.5	161.6	.002577	.20
	2.4269	.2231	27.4	159.0	.003305	1.24
	2.4404	.0019	25.6	180.0	.003305	1.08
	2.7615	1.0904	12.0	80.5	.002355	.17
	2.7865	.8442	37.8	-128.7	.002679	1.92
	2.7865	.4942	28.7	-164.1	.002269	.93
	2.7885	.1538	13.9	-171.9	.003589	.35
	2.8038	.0038	33.5	180.0	.003589	2.01
	3.1577	1.0442	24.0	-145.0	.002387	.69
	3.1577	.7846	27.6	-175.9	.002571	.98
	3.1712	.4577	27.8	-171.9	.002207	.86
	3.1692	.1154	26.8	-144.0	.003709	1.33
	3.1692	.0000	21.7	180.0	.003709	.87
	3.5058	1.0135	32.0	-132.5	.002387	1.23
	3.5250	.7558	34.9	-163.6	.002571	1.56
	3.5500	.4173	28.2	-155.2	.002207	.88
	3.5692	.0769	16.9	-125.5	.003709	.53
	3.5673	.0019	9.8	180.0	.003709	.18

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1417.20	2.4078	1.1883	67.8	-166.8	.002653	6.09
	2.4078	.9483	35.0	-176.8	.002839	1.74
	2.4078	.5620	25.2	- 90.0	.002598	.83
	2.4078	.2439	23.4	-155.6	.002762	.76
	2.4078	.0020	33.0	180.0	.002762	1.50
	2.7454	1.1239	36.1	-143.7	.002283	1.49
	2.7610	.8546	29.2	-176.2	.002477	1.05
	2.7707	.5015	32.3	-147.3	.002337	1.22
	2.7941	.1737	29.7	-168.7	.003062	1.35
	2.7941	.0020	27.4	-171.9	.003062	1.15
	3.1454	1.0478	55.2	-108.4	.002611	3.98
	3.1454	.8078	28.6	-151.7	.002547	1.05
	3.1727	.4546	53.9	-142.3	.002451	3.57
	3.1766	.1327	19.8	-101.3	.003155	.62
	3.1766	.0020	9.9	11.3	.003155	.15
	3.4849	1.0088	39.2	- 98.5	.002611	2.01
	3.5063	.7649	56.6	- 95.9	.002547	4.08
	3.5395	.4273	25.2	-157.4	.002451	.78
	3.5551	.1073	21.3	180.0	.003155	.72
	3.5551	.0020	19.5	-174.3	.003155	.60
1458.50	2.3596	1.1692	26.3	-167.0	.002581	.89
	2.3827	.9058	31.7	-172.9	.002758	1.39
	2.4096	.5173	22.0	-153.4	.002803	.68
	2.4058	.2135	35.5	- 56.3	.003412	2.15
	2.4077	.0019	19.8	5.7	.003412	.67
	2.7327	1.0692	52.1	-100.9	.002607	3.54
	2.7577	.8423	19.7	-126.9	.002581	.50
	2.7596	.4769	19.7	-126.9	.002343	.45
	2.7596	.1481	37.5	-176.6	.003648	2.05
	2.7769	.0000	33.5	180.0	.003648	2.04
	3.1404	.9923	44.9	-127.9	.002385	2.40
	3.1327	.7712	42.1	- 79.2	.002537	2.25
	3.1288	.4250	23.0	-121.0	.002282	.60
	3.1654	.0963	26.8	-126.0	.004391	1.57
	3.1788	.0019	15.9	-172.9	.004391	.55
	3.5000	.9750	29.5	- 90.0	.002385	1.04
	3.5192	.7000	33.0	- 72.6	.002537	1.38
	3.5269	.4077	19.8	- 95.7	.002282	.45
	3.5481	.0769	16.8	-110.6	.004391	.62
	3.5481	.0000	6.2	161.6	.004391	.09

Table B-XI. Rear-Lower Grid Calculations - Model 36 (Continued)

Model 36, Shot 348

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1499.80	2.3824	1.1824	27.0	- 21.0	.002717	.99
	2.3766	.9444	24.0	- 14.0	.002723	.78
	2.3883	.5522	13.7	-135.0	.002748	.26
	2.4273	.2146	4.3	-116.6	.003477	.03
	2.4273	.0039	9.7	.0	.003477	.16
	2.7356	1.0732	19.4	- 90.0	.002447	.46
	2.7493	.8390	24.5	-108.4	.002487	.75
	2.7590	.4859	23.6	- 80.5	.002318	.65
	2.7610	.1717	38.2	- 24.0	.003151	2.30
	2.7610	.0020	21.4	5.2	.003151	.72
	3.1180	1.0127	8.7	153.4	.002484	.09
	3.1532	.7668	32.3	- 57.3	.002621	1.37
	3.1610	.4351	36.6	- 32.0	.002393	1.60
	3.1610	.1112	11.0	45.0	.003648	.22
	3.1610	.0000	6.1	-161.6	.003648	.07
	3.4849	.9795	46.3	-123.0	.002484	2.66
	3.5161	.7337	20.3	- 73.3	.002621	.54
	3.5376	.4078	57.7	- 47.7	.002393	3.98
	3.5493	.0917	37.1	- 42.9	.003648	2.51
	3.5493	.0039	25.2	.0	.003648	1.16
1541.10	2.3846	1.1596	39.4	- 53.1	.002790	2.16
	2.4058	.9000	54.1	- 56.9	.002801	4.09
	2.4000	.5077	43.2	- 46.8	.002703	2.52
	2.4038	.2096	19.7	-143.1	.003400	.66
	2.4173	.0019	23.9	-170.5	.003400	.97
	2.7327	1.0500	28.2	167.9	.002378	.94
	2.7500	.8192	13.2	-116.6	.002452	.21
	2.7635	.4538	6.2	- 18.4	.002473	.05
	2.7942	.1327	20.1	- 78.7	.004007	.81
	2.7981	.0019	3.9	.0	.004007	.03
	3.1327	.9962	23.0	-160.0	.002474	.66
	3.1500	.7442	47.6	-172.9	.002513	2.85
	3.1596	.4058	33.9	-144.5	.002365	1.36
	3.1731	.1038	7.1	123.7	.004510	.11
	3.1731	.0000	4.4	153.4	.004510	.04
	3.4750	.9365	35.0	-141.8	.002474	1.52
	3.5250	.6808	38.8	-156.0	.002513	1.89
	3.5654	.3654	38.8	-149.5	.002365	1.78
	3.5750	.0519	35.2	-153.4	.004510	2.80
	3.5731	.0000	31.6	-176.4	.004510	2.25

Table B-XII. Rear-Upper Grid Calculations - Model 36

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
30.00	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.5212	2.0731	52.0	- 79.1	.002478	3.35
	2.5481	1.7231	29.0	-118.3	.002273	.96
	2.5808	1.2538	44.1	-147.7	.002275	2.21
	NO READING		READINGS INVALID			
	2.8558	2.7654	READINGS INVALID			
	2.8827	2.0577	42.4	-166.6	.002022	1.82
	2.8923	1.6904	40.5	-129.1	.002412	1.98
	2.9250	1.2615	26.3	-116.6	.002412	.84
	NO READING		READINGS INVALID			
	3.2423	2.7385	READINGS INVALID			
	3.2596	2.0308	39.5	- 26.6	.002438	1.90
	3.2942	1.6596	27.4	-111.0	.002393	.90
	3.2962	1.2846	42.2	-117.8	.002393	2.13
	NO READING		READINGS INVALID			
	3.6077	2.7827	READINGS INVALID			
	3.6462	2.0288	32.9	- 72.6	.002438	1.32
	3.6750	1.6596	60.7	-143.1	.002393	5.65
	3.7019	1.2750	55.4	-157.1	.002393	3.68
71.40	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.5600	2.0293	33.8	- 76.8	.002542	1.45
	2.5737	1.6761	50.4	- 92.2	.002307	2.93
	2.5912	1.2351	41.4	- 79.2	.002307	1.97
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.9093	2.0254	46.0	- 67.8	.001969	2.08
	2.9210	1.6722	33.1	- 69.4	.002294	1.25
	2.9463	1.2488	37.0	- 84.0	.002294	1.57
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2976	2.0273	31.2	- 60.3	.002500	1.22
	3.3210	1.6332	17.8	-102.5	.002593	.41
	3.3561	1.2468	44.9	- 82.6	.002593	2.61
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6605	2.0039	16.0	-166.0	.002500	.32
	3.6820	1.6312	29.1	- 93.8	.002593	1.10
	3.7268	1.2663	READINGS INVALID			

Table B-XII. Rear-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
112.80	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5288	2.0404	9.8	143.1	.002376	.11
	2.5462	1.6731	10.0	11.3	.002246	.11
	2.5885	1.2135	9.8	53.1	.002246	.11
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9000	2.0154	15.0	- 66.8	.002121	.24
	2.9038	1.6596	10.0	11.3	.002358	.12
	2.9288	1.2250	29.0	28.3	.002358	.99
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.2750	2.0038	23.6	- 94.8	.002479	.69
	3.2904	1.6423	35.4	93.2	READINGS	INVALID
	3.3019	1.2404	34.8	73.6	READINGS	INVALID
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6308	2.0250	25.0	- 45.0	.002479	.77
	3.6731	1.6308	35.6	- 6.3	READINGS	INVALID
	NO READING					
154.20	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5522	2.0351	47.9	- 76.0	.002540	2.91
	2.5834	1.6780	19.9	- 29.1	.002290	.45
	2.5971	1.2429	9.9	78.7	.002290	.11
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9151	2.0117	5.8	- 89.9	.002239	.04
	2.9307	1.6741	13.0	- 63.4	.002390	.20
	2.9717	1.2624	25.5	- 8.7	.002390	.77
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.2956	2.0039	36.0	- 36.3	.002572	1.67
	3.3190	1.6683	60.5	- 7.4	.002473	4.53
	3.3659	1.2800	47.1	- 9.5	.302473	2.74
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6780	1.9863	60.2	- 45.0	.002572	4.66
	3.7171	1.6273	41.0	- 19.3	.002473	2.08
	3.7405	1.2624	READINGS	INVALID		

Table B-XII. Rear-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
195.60	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5404	1.9942	31.5	- 86.4	.002558	1.27
	2.5635	1.6635	35.3	- 90.0	.002282	1.43
	2.5904	1.2231	24.3	- 76.0	.002282	.67
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9000	2.0096	54.3	- 49.4	.001940	2.86
	2.9096	1.6481	53.6	- 66.3	.002166	3.12
	2.9538	1.2212	57.0	- 92.0	.002166	3.52
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3038	1.9827	43.1	- 30.1	.002664	2.48
	3.3500	1.6346	62.4	- 77.3	.002457	4.79
	3.3481	1.2327	71.2	-118.0	.002457	6.22
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6731	1.9827	2.0	180.0	.002664	.01
	3.7115	1.6173	11.9	- 99.5	.002457	.18
	3.7481	1.2558	22.4	-105.3	.002457	.62
237.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5541	2.0039	35.0	-157.6	.002321	1.47
	2.5834	1.6429	51.9	- 63.4	.002265	3.05
	2.6029	1.2195	20.2	- 73.3	.002265	.46
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9502	1.9707	36.8	- 87.0	.002108	1.43
	2.9522	1.6254	27.4	- 98.1	.002489	.93
	2.9698	1.2059	11.8	-170.5	.002489	.17
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3327	1.9824	6.1	- 71.6	.002557	.05
	3.3327	1.6078	32.8	-135.0	.002380	1.28
	3.3327	1.2176	19.4	- 36.9	.002380	.45
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6761	1.9863	12.4	-128.7	.002557	.20
	3.7151	1.6156	24.5	-161.6	.002380	.71
	3.7346	1.2410	38.2	-120.5	.002380	1.73

Table B-XII. Rear-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
278.40	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5077	1.9808	57.8	- 99.8	.002451	4.09
	2.5865	1.6173	32.9	-107.4	.002580	1.40
	2.5962	1.2038	36.5	-126.3	.002580	1.72
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9019	1.9731	59.9	-139.0	.001957	3.51
	2.9058	1.6212	45.2	-124.4	.002247	2.30
	2.9423	1.2192	37.5	-137.1	.002247	1.58
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3058	1.9769	51.4	-136.5	.002636	3.48
	3.3269	1.6115	42.0	169.2	.002530	2.23
	3.3635	1.2212	25.1	-141.3	.002530	.80
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6654	1.9731	41.3	- 92.7	.002636	2.25
	3.6885	1.6096	38.7	-156.0	.002530	1.89
	3.7288	1.2231	33.8	-144.5	.002530	1.44
319.80	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5444	1.9473	23.3	- 41.6	.002588	.70
	2.5737	1.6117	24.5	-161.6	.002370	.71
	2.5815	1.1902	23.3	-138.4	.002370	.64
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9054	1.9317	44.7	-107.7	.002267	2.26
	2.9268	1.5883	27.2	- 85.9	.002472	.91
	2.9424	1.1805	44.7	-107.7	.002472	2.47
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.2956	1.9473	29.3	- 97.6	.002667	1.14
	3.2917	1.6156	38.2	-120.5	.002305	1.68
	3.3132	1.2020	45.9	-152.4	.002305	2.43
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6741	1.9454	34.8	- 90.0	.002667	1.62
	3.6800	1.6000	33.3	- 54.5	.002305	1.28
	3.7073	1.2215	9.9	- 78.7	.002305	.11

Table B-XII. Rear-Upper Grid Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
361.29	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5250	1.9654	43.9	- 63.4	.002567	2.47
	2.5635	1.6096	19.4	- 45.0	.002412	.46
	2.5788	1.1885	19.6	- 36.9	.002412	.47
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.8885	1.9308	34.3	- 66.4	.002016	1.19
	2.9077	1.5942	9.8	- 53.1	.002368	.11
	2.9288	1.1769	19.6	36.9	.002368	.46
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3019	1.9481	29.5	- 53.1	.002503	1.09
	3.3077	1.5788	71.5	- 52.8	.002363	6.04
	3.3231	1.2000	56.7	- 14.0	.002363	3.79
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6654	1.9385	34.3	- 66.4	.002503	1.47
	3.7077	1.5827	44.4	- 45.0	.002363	2.33
	3.7308	1.2135	64.6	- 70.5	.002363	4.93
402.60	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5639	1.9083				
	2.5873	1.5980	16.5	-159.4	.002457	.34
	2.5971	1.1785	20.6	-131.2	.002457	.52
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9190	1.9005	36.0	- 36.3	.002123	1.38
	2.9327	1.5805	12.4	- 38.7	.002438	.19
	2.9580	1.1922	23.5	9.5	.002438	.68
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3132	1.9239	44.2	- 66.8	.002596	2.54
	3.3346	1.5590	31.3	- 21.8	.002493	1.22
	3.3678	1.1883	25.2	32.5	.002493	.79
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6878	1.9141	9.9	11.3	.002596	.13
	3.7112	1.5688	9.7	143.1	.002493	.12
	3.7288	1.1610	31.5	100.6	.002493	1.24

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
444.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5827	1.9558	11.9	170.5	.000735	.05
	2.5481	1.6038	17.6	-116.6	.002219	.34
	2.5654	1.1731	60.5	- 35.8	.002219	4.06
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9173	1.9096	30.0	- 58.4	.002126	.96
	2.9173	1.5865	24.8	- 71.6	.002428	.75
	2.9519	1.1808	28.3	- 56.3	.002428	.97
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3192	1.9077	33.3	- 45.0	.002769	1.54
	3.3365	1.5673	2.0	.0	.002742	.01
	3.3442	1.2135	15.8	-150.3	.002742	.34
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6750	1.9404	11.8	- 90.0	.002769	.19
	3.7000	1.5885	27.8	- 81.9	.002742	1.06
	3.7250	1.2442	20.9	48.8	.002742	.60
485.40	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5522	1.9102				
	2.5795	1.5824	13.7	- 45.0	.002460	.23
	2.6459	1.1434	39.2	20.2	.002460	1.89
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9346	1.8751	28.8	- 70.3	.002199	.91
	2.9405	1.5571	37.6	- 55.5	.002513	1.77
	2.9737	1.1688	4.3	- 63.4	.002513	.02
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3366	1.9005	34.9	- 56.3	.002704	1.65
	3.3366	1.5590	18.4	- 71.6	.002511	.42
	3.3541	1.1805	36.2	- 74.5	.002511	1.64
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6878	1.9024	43.8	- 45.0	.002704	2.59
	3.7151	1.5415	30.6	- 55.3	.002511	1.18
	3.7424	1.1766	71.2	- 67.6	.002511	6.36

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
526.80	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5000	1.9250	18.1	-102.5	.002378	.39
	2.5577	1.5942	10.0	-168.7	.002445	.12
	2.6019	1.1865	20.9	138.8	.002445	.53
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9269	1.8827	8.8	-116.6	.002166	.08
	2.9385	1.5558	10.6	158.2	.002485	.14
	2.9538	1.1769	19.3	-156.0	.002485	.46
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3385	1.8788	22.9	-121.0	.002760	.72
	3.3423	1.5500	42.9	-105.9	.002443	2.25
	3.3538	1.1788	43.6	- 97.8	.002443	2.32
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.7058	1.9096	8.1	104.0	.002760	.09
	3.7173	1.5635	16.8	110.6	.002443	.34
	3.7519	1.1788	11.5	31.0	.002443	.16
568.20	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5483	1.8927	56.1	90.0	.002724	4.29
	2.5698	1.5805	17.8	102.5	.002485	.40
	2.6302	1.1571	19.1	156.0	.002485	.45
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9307	1.8673	16.0	166.0	.002194	.28
	2.9307	1.5610	15.6	150.3	.002454	.30
	2.9561	1.1610	2.7	135.0	.002454	.01
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3249	1.8810	16.0	104.0	.002587	.33
	3.3249	1.5180	8.7	153.4	.002379	.09
	3.3483	1.1376	25.2	122.5	.002379	.76
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6859	1.9102	19.4	- 36.9	.002587	.48
	3.7093	1.5571	17.8	- 12.5	.002379	.38
	3.7522	1.1824	33.8	76.8	.002379	1.36

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
609.60	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5000	1.9808	28.6	105.9	.002349	.96
	2.5538	1.6115	23.0	70.0	.002382	.63
	2.5846	1.1942	28.3	123.7	.002382	.96
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.9115	1.8865	49.7	-170.9	.002096	2.59
	2.9250	1.5635	26.4	138.0	.002540	.89
	2.9519	1.1788	15.8	60.3	.002540	.32
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3346	1.8942	14.2	-123.7	.002593	.26
	3.3346	1.5538	39.5	84.3	.002483	1.93
	3.3404	1.2000	56.2	77.9	.002483	3.93
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.7212	1.8981	15.0	- 66.8	.002593	.29
	3.7346	1.5596	5.6	- 45.0	.002483	.04
	3.7596	1.2115	25.8	98.7	.002483	.83
651.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.5405	1.9200	47.3	-145.0	.003134	3.50
	2.5776	1.6020	13.0	-153.4	.002499	.21
	2.6146	1.1805	1.9	89.7	.002499	.00
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.8820	1.8595	36.2	164.5	.002291	1.50
	2.9112	1.5785	23.5	-170.5	.002396	.66
	2.9639	1.1746	21.9	-135.0	.002396	.57
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.3171	1.8693	47.3	-145.0	.002779	3.10
	3.3288	1.5571	38.4	-130.9	.002600	1.92
	3.3600	1.1922	27.2	- 94.1	.002600	.96
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6917	1.8966	42.6	180.0	.002779	2.52
	3.7132	1.5532	50.5	-175.6	.002600	3.31
	3.7483	1.2078	53.8	-142.3	.002600	3.76

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
692.40	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.4615	1.9538	51.0	164.4	.002406	3.13
	2.5423	1.6058	48.3	153.4	.002471	2.88
	2.5846	1.1962	46.7	-165.4	.002471	2.69
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.8769	1.8962	13.2	116.6	.002071	.18
	2.9019	1.5596	29.0	-118.3	.002480	1.04
	2.9365	1.1635	39.3	-177.1	.002480	1.92
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2962	1.8673	56.3	-150.8	.002664	4.22
	3.3096	1.5250	50.1	-131.8	.002590	3.25
	3.3385	1.1731	43.6	-144.2	.002590	2.46
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6788	1.8981	33.4	-116.1	.002664	1.48
	3.6846	1.5558	23.6	-138.4	.002590	.72
	3.7173	1.1788	21.7	- 84.8	.002590	.61
733.80	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.491[illegible]	1.9337	45.3	160.0	.002712	2.78
	2.5346	1.6234	29.3	-172.4	.002354	1.01
	2.5698	1.1688	14.7	156.8	.002354	.26
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.8761	1.8712	36.5	-122.0	.002303	1.54
	2.8976	1.5532	23.5	-170.5	.002569	.71
	2.9249	1.1727	13.0	-153.4	.002569	.22
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2683	1.8420	27.7	-102.1	.002621	1.01
	3.2956	1.5200	5.5	-135.0	.002445	.04
	3.3249	1.1668	11.3	-121.0	.002445	.16
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6761	1.8673	33.9	-121.0	.002621	1.50
	3.6956	1.5376	53.3	- 70.9	.002445	3.47
	3.7502	1.1863	20.8	- 68.2	.002445	.53

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
775.20	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.4192	1.9692	36.5	-143.7	.002373	1.58
	2.5135	1.6019	70.3	-125.9	.002483	6.14
	2.5712	1.2019	16.8	- 20.6	.002483	.35
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.8577	1.8654	18.1	-139.4	.002150	.35
	2.8788	1.5558	42.0	-142.6	.002383	2.10
	2.9250	1.1577	34.7	-132.7	.002383	1.44
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2904	1.8404	39.7	- 98.5	.002640	2.08
	3.3058	1.5212	30.5	-135.0	.002580	1.20
	3.3327	1.1635	25.6	-122.5	.002580	.85
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6615	1.8692	43.1	-120.1	.002640	2.45
	3.7019	1.5058	49.3	- 94.6	.002580	3.13
	3.7250	1.1596	35.8	- 80.5	.002580	1.66
816.60	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.4624	1.9122	43.3	- 79.7	.002410	2.26
	2.4937	1.5668	22.1	- 74.7	.002636	.64
	2.5854	1.1629	53.1	- 79.5	.002636	3.72
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.8624	1.8595	33.4	-170.0	.002253	1.26
	2.8644	1.5278	36.6	- 90.0	.002501	1.69
	2.9015	1.1473	42.3	-105.9	.002501	2.23
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2624	1.8029	68.4	-118.7	.002644	6.19
	3.2741	1.4985	45.3	-129.8	.002401	2.47
	3.3112	1.1454	44.2	-113.2	.002401	2.35
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6546	1.8302	71.8	- 94.6	.002644	6.82
	3.6917	1.4888	33.1	- 96.7	.002401	1.32
	3.7561	1.1512	28.8	- 47.7	.002401	.99

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
858.00	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.4269	1.9269	13.9	135.0	.002493	.24
	2.5192	1.5808	23.6	- 4.8	.002470	.69
	2.5808	1.1500	24.3	- 76.0	.002470	.73
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.8250	1.8596	43.1	-133.2	.002230	2.07
	2.8788	1.5192	23.7	- 65.6	.002455	.69
	2.9135	1.1173	39.8	- 20.2	.002455	1.94
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2577	1.7808	34.4	-121.0	.002729	1.61
	3.2769	1.4865	15.7	- 90.0	.002408	.30
	3.3154	1.1231	14.3	- 15.9	.002408	.25
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6558	1.7981	73.9	-100.7	.002729	7.46
	3.6981	1.4731	34.7	-137.3	.002408	1.45
	3.7442	1.1385	66.5	-161.0	.002408	5.32
859.40	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.4527	1.9220	11.8	80.5	.002579	.19
	2.5171	1.5649	34.9	-146.3	.002534	1.54
	2.5912	1.1395	44.7	-162.3	.002534	2.53
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.8332	1.8283	32.0	-155.0	.002354	1.21
	2.8741	1.5063	32.2	-147.3	.002676	1.39
	2.9385	1.1337	9.7	126.9	.002676	.13
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2449	1.7737	24.3	-151.4	.003023	.89
	3.2741	1.4829	16.4	-135.0	.002786	.38
	3.3249	1.1415	16.0	- 76.0	.002786	.35
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6410	1.7580	36.7	-108.4	.003023	2.04
	3.6663	1.4654	35.6	-135.0	.002786	1.76
	3.6937	1.1298	47.8	-121.8	.002786	3.18

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
940.80	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.4288	1.9385	9.8	126.9	.002462	.12
	2.4904	1.5615	15.7	180.0	.002423	.30
	2.5385	1.1365	24.6	61.4	.002423	.73
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7962	1.8462	38.7	156.0	.002158	1.61
	2.8519	1.5019	18.1	102.5	.002459	.40
	2.9077	1.1250	41.0	163.3	.002459	2.07
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.2365	1.7692	33.4	-130.2	.002797	1.56
	3.2654	1.4750	34.7	-132.7	.002482	1.50
	3.3192	1.1077	45.7	-154.5	.002482	2.59
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6442	1.7635	29.2	-132.3	.002797	1.19
	3.6731	1.4481	18.6	-108.4	.002482	.43
	3.7192	1.0981	9.8	- 53.1	.002482	.12
982.20	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.4468	1.9298	23.3	175.2	.002621	.71
	2.5015	1.5649	19.4	143.1	.002731	.51
	2.6029	1.1610	31.0	180.0	.002731	1.31
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7980	1.8439	20.6	-131.2	.002432	.51
	2.8702	1.5239	18.3	-148.0	.002771	.46
	2.8995	1.1454	31.5	- 79.4	.002771	1.38
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.2234	1.7483	53.4	-133.5	.002967	4.23
	3.2507	1.4576	59.2	-101.3	.002621	4.59
	3.2839	1.1220	8.7	-116.6	.002621	.10
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6215	1.7366	63.7	-109.5	.002967	6.01
	3.6605	1.4478	46.5	- 90.0	.002621	2.83
	3.6995	1.1220	8.2	-135.0	.002621	.09

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1023.60	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.4058	1.9404	18.5	-148.0	.002511	.43
	2.4750	1.5731	27.3	-149.7	.002236	.83
	2.5077	1.1365	67.0	-175.0	.002236	5.02
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.7827	1.8308	37.5	- 96.0	.002204	1.55
	2.8365	1.4923	40.1	-168.7	.002599	2.08
	2.9135	1.0942	22.0	- 79.7	.002599	.63
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2000	1.7308	9.8	-126.9	.002695	.13
	3.2538	1.4173	31.7	- 68.2	.002802	1.41
	3.3154	1.1000	35.0	- 51.8	.002802	1.71
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6231	1.7038	41.3	- 92.7	.002695	2.30
	3.6731	1.4019	41.8	- 48.8	.002802	2.44
	3.7135	1.0923	37.5	- 6.0	.002802	1.97
1065.00	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.4312	1.9200	31.5	47.5	.002719	1.35
	2.4780	1.5512	26.3	- 17.1	.002508	.87
	2.5366	1.1551	44.9	7.4	.002508	2.53
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	2.7941	1.8068	31.9	104.0	.002303	1.17
	2.8312	1.5161	20.2	106.7	.002534	.52
	2.9034	1.1239	19.4	143.1	.002534	.47
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.2176	1.7405	12.4	128.7	.002869	.22
	3.2624	1.4283	7.0	146.3	.002634	.06
	3.3054	1.0946	14.0	- 56.3	.002634	.26
	NO READING		READINGS INVALID			
	NO READING		READINGS INVALID			
	3.6195	1.6956	31.0	- 90.0	.002869	1.38
	3.6878	1.4166	11.3	-121.0	.002634	.17
	3.7366	1.1180	23.3	- 4.8	.002634	.72

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1106.40	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.4269	1.9635	72.0	101.0	.002563	6.65
	2.5000	1.5054	36.1	60.6	.002547	1.66
	2.5519	1.1423	3.9	180.0	.002547	.02
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7750	1.8615	53.6	118.4	.002164	3.11
	2.8308	1.5115	7.1	- 33.7	.002469	.06
	2.8981	1.1058	4.4	116.6	.002469	.02
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.1923	1.7404	31.1	-145.7	.002768	1.33
	3.2481	1.4212	24.8	161.6	.002724	.84
	3.3231	1.0885	14.2	146.3	.002724	.27
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6231	1.6731	15.0	-156.8	.002768	.31
	3.6673	1.3923	45.5	-172.6	.002724	2.83
	3.7365	1.0904	32.5	-155.0	.002724	1.44
1147.80	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.4176	1.9902	31.3	111.8	.002558	1.25
	2.4956	1.5824	57.5	132.3	.002474	4.10
	2.5327	1.1551	49.6	141.3	.002474	3.04
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7688	1.8537	37.0	137.1	.002340	1.60
	2.8371	1.5122	27.9	127.7	.002684	1.05
	2.9015	1.1278	48.4	126.9	.002684	3.14
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.1922	1.7229	49.0	161.6	.003026	3.63
	3.2390	1.4361	48.1	130.1	.002746	3.17
	3.2937	1.1024	32.9	151.9	.002746	1.49
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6059	1.6858	48.5	156.5	.003026	3.56
	3.6429	1.4107	39.2	147.1	.002746	2.11
	3.7073	1.1044	32.0	155.0	.002746	1.41

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1189.20	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.4154	1.9923	42.5	- 56.3	.002576	2.32
	2.4615	1.6077	29.5	143.1	.002439	1.06
	2.5135	1.1731	73.6	-170.8	.002439	6.61
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7481	1.8865	33.8	125.5	.002357	1.35
	2.8154	1.5346	27.6	175.9	.002497	.95
	2.8692	1.1442	20.5	-163.3	.002497	.52
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.1462	1.7558	35.8	170.5	.002905	1.87
	3.2173	1.4577	40.9	-144.8	.002624	2.19
	3.2942	1.1038	11.1	45.0	.002624	.16
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.5788	1.6923	41.3	- 92.7	.002905	2.48
	3.6346	1.4135	57.3	- 67.8	.002624	4.30
	3.7077	1.1038	32.0	- 42.5	.002624	1.34
1230.60	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.4410	1.9551	8.0	-104.0	.002768	.09
	2.4722	1.6000	11.6	- 90.0	.002198	.15
	2.4605	1.1434	22.7	-160.0	.002198	.56
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7493	1.8810	11.8	80.5	.002221	.15
	2.8098	1.5141	35.7	-167.5	.002736	1.74
	2.8820	1.1220	9.9	- 78.7	.002736	.13
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.1571	1.7288	38.0	-165.3	.002590	1.87
	3.2059	1.4127	31.5	-169.4	.002861	1.42
	3.3015	1.1102	20.9	56.3	.002861	.63
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.6039	1.6488	26.3	-126.0	.002590	.90
	3.6644	1.3580	14.7	- 66.8	.002861	.31
	3.7307	1.0829	23.3	- 48.4	.002861	.78

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1272.00	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.4135	1.9846	54.2	133.5	.002573	3.78
	2.4615	1.5962	14.3	- 74.1	.002492	.25
	2.4923	1.1654	62.0	11.0	.002492	4.79
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7500	1.8981	23.6	85.2	.002388	.67
	2.7808	1.5269	15.3	39.8	.002543	.30
	2.8712	1.1346	7.1	33.7	.002543	.06
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.1096	1.7462	52.7	153.4	.002805	3.89
	3.1865	1.4519	39.8	147.1	.002628	2.08
	3.3058	1.1212	30.7	-140.2	.002628	1.24
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.5635	1.6712	39.3	-126.9	.002805	2.16
	3.6404	1.4000	25.5	-157.4	.002628	.86
	3.7231	1.0865	11.9	- 99.5	.002628	.19
1313.40	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.4039	1.9941	26.0	-138.0	.002384	.81
	2.4761	1.5863	24.5	-108.4	.002415	.72
	2.5210	1.1551	51.2	- 79.1	.002415	3.17
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7512	1.9044	28.2	-164.1	.002495	.99
	2.8215	1.5239	33.0	- 86.6	.002836	1.54
	2.8878	1.1259	41.1	- 81.9	.002836	2.39
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.1102	1.7522	52.6	- 83.7	.002642	3.65
	3.1727	1.4341	45.3	-110.0	.002599	2.67
	3.2780	1.0907	57.4	-122.6	.002599	4.29
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.5805	1.6176	93.4	- 84.1	.002642	11.53
	3.6410	1.3483	87.2	- 87.5	.002599	9.88
	3.7288	1.0712	47.1	-109.2	.002599	2.89

Table B-XII. Rear-Upper Calculations - Model 36 (Continued)

Model 36, Shot 350

TIME MICROSEC	X INCHES	Y INCHES	U FT/SEC	THETA DEGREES	DENSITY SLUGS/CUFT	Q LB/SQFT
1354.80	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.3942	1.9673	19.3	-156.0	.002494	.47
	2.4538	1.5731	26.7	- 72.9	.002378	.85
	2.5019	1.1154	62.1	- 34.7	.002378	4.59
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7231	1.8904	37.3	161.6	.002319	1.61
	2.7827	1.4942	44.8	-151.2	.002683	2.70
	2.8769	1.0942	23.9	170.5	.002683	.77
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.1154	1.6942	55.5	- 98.1	.002855	4.40
	3.1712	1.4096	34.8	- 73.6	.002700	1.64
	3.2750	1.0731	22.0	- 63.4	.002700	.65
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.5731	1.5788	73.1	-126.3	.002855	7.62
	3.6442	1.3135	19.3	-114.0	.002700	.51
	3.7077	1.0423	36.5	-143.7	.002700	1.80
1396.20	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.3863	1.9863	46.8	114.4	.002470	2.70
	2.4839	1.5610	24.3	118.6	.002965	.87
	2.5717	1.1200	40.7	92.7	.002965	2.45
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	2.7161	1.9161	54.6	157.1	.002263	3.39
	2.7824	1.5024	34.2	137.3	.002732	1.60
	2.8644	1.1298	30.3	153.4	.002732	1.25
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.1024	1.6976	53.1	-169.5	.003233	4.57
	3.1824	1.4010	14.7	-113.2	.002797	.30
	3.2878	1.0712	11.8	9.5	.002797	.19
	NO READING		READINGS	INVALID		
	NO READING		READINGS	INVALID		
	3.5376	1.5590	52.8	-151.6	.003233	4.51
	3.6332	1.3307	35.6	-157.6	.002797	1.77
	3.6995	1.0498	17.4	- 90.0	.002797	.42

APPENDIX B

II. PLOTS OF AIR FLOW VECTORS

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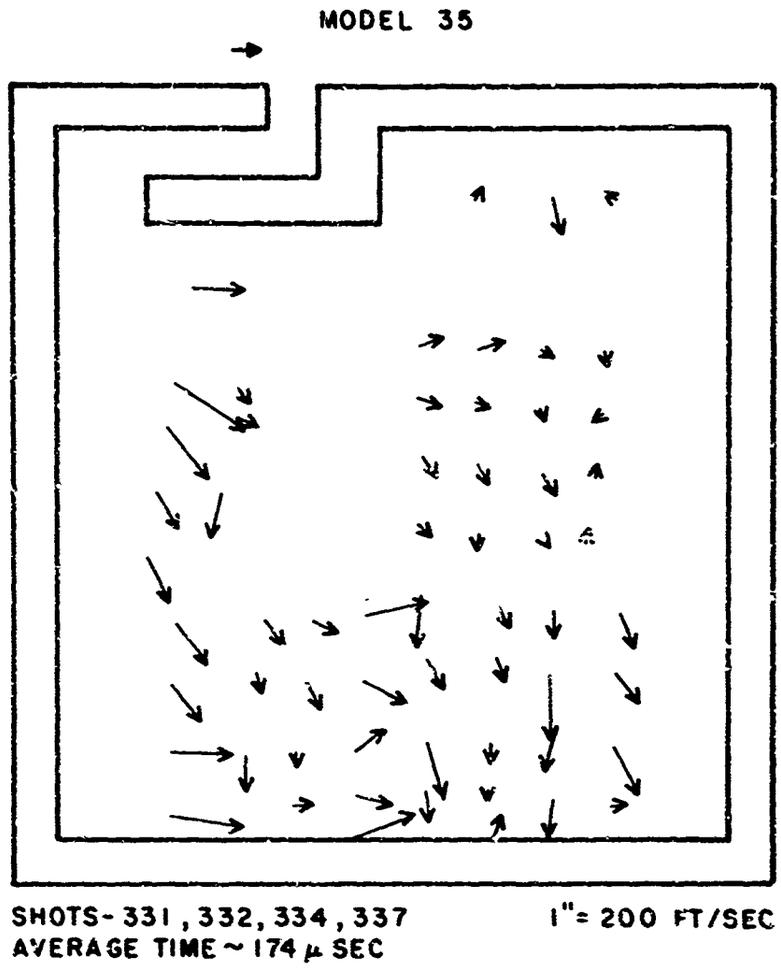

Figure B-1. Flow Vectors from Model 35

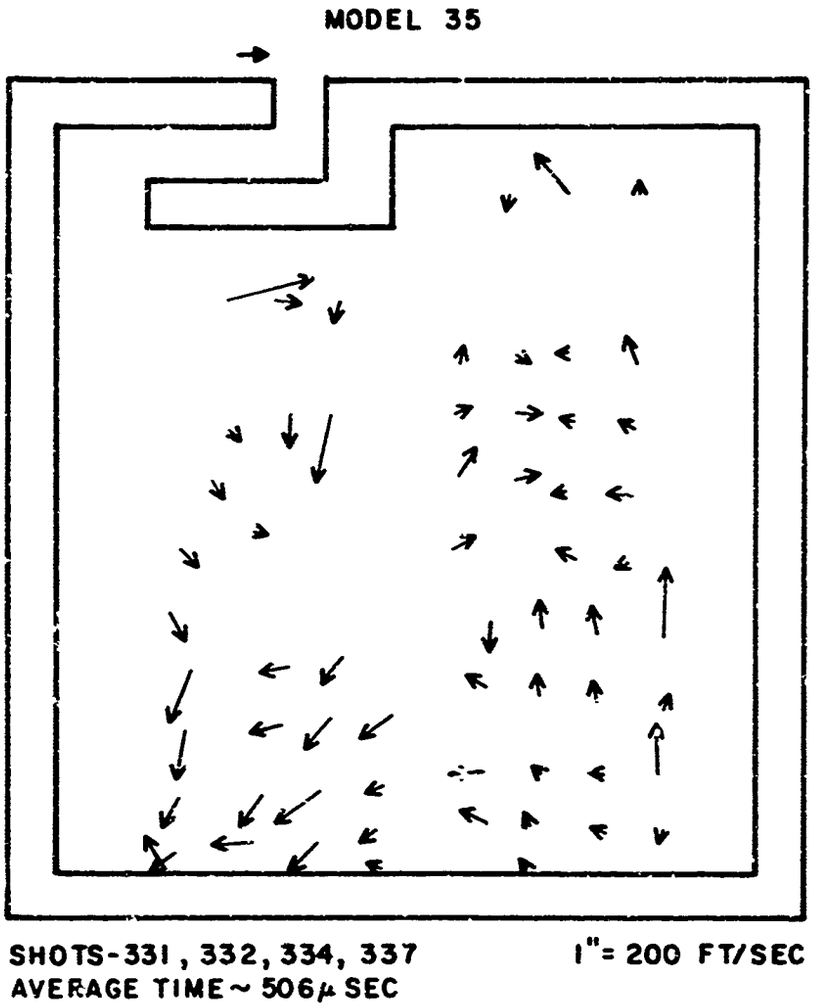

Figure B-1. Flow Vectors from Model 35 (Continued)

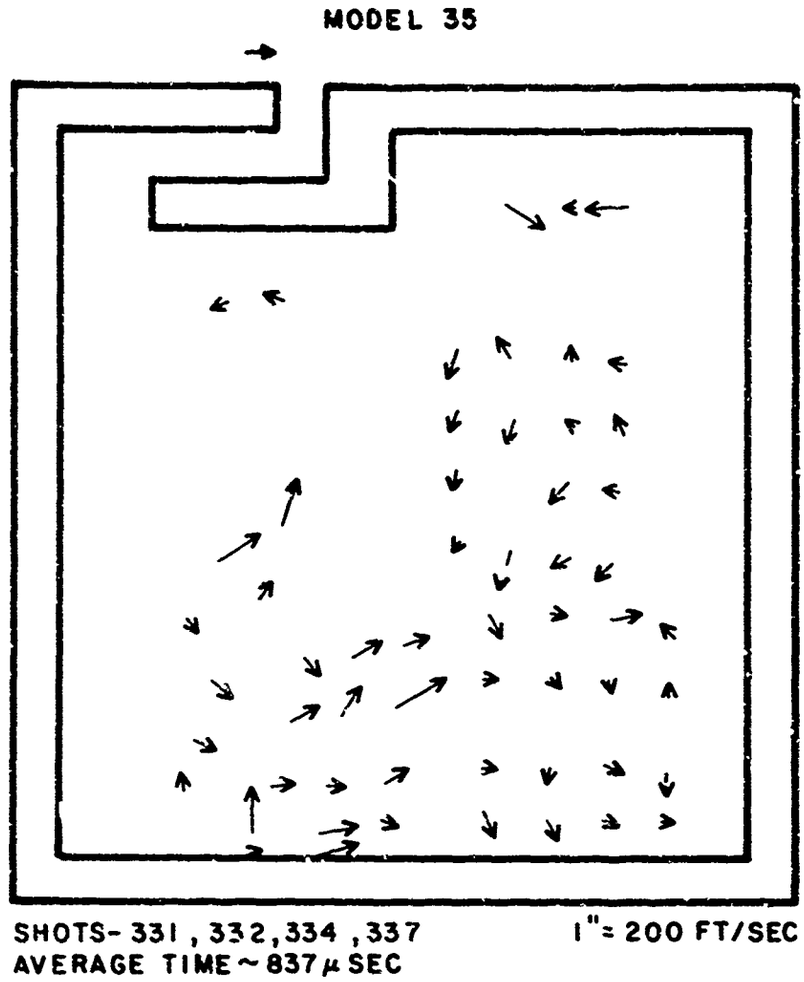

Figure B-1. Flow Vectors from Model 35 (Continued)

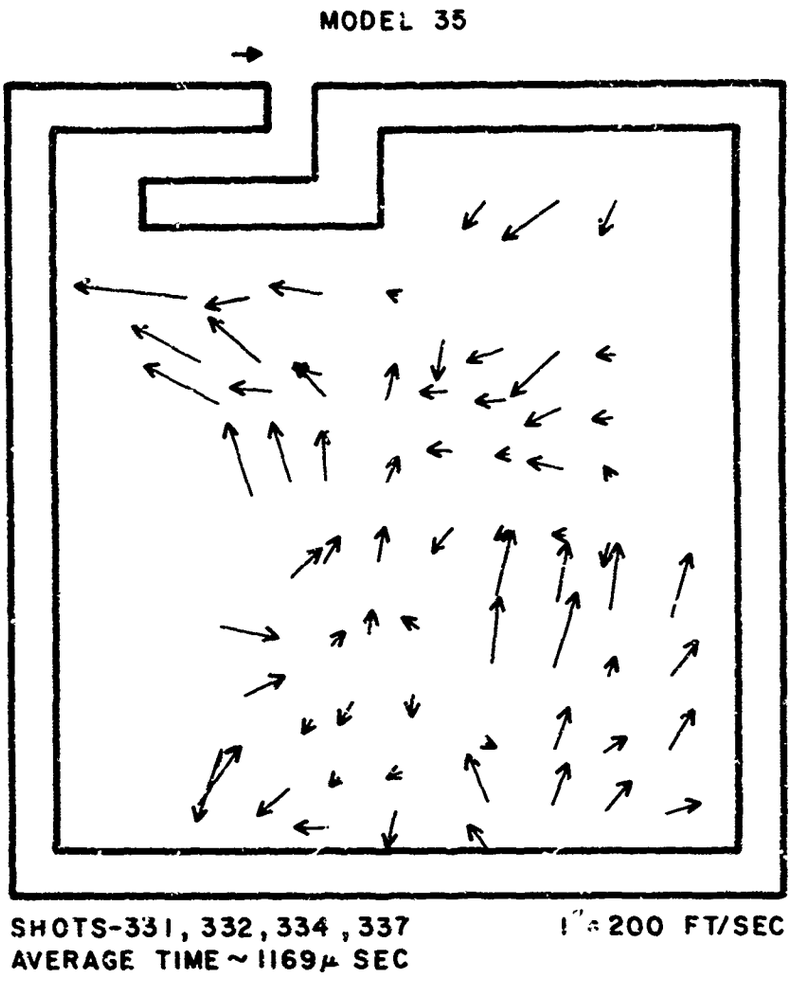

Figure B-1. Flow Vectors from Model 35 (Continued)

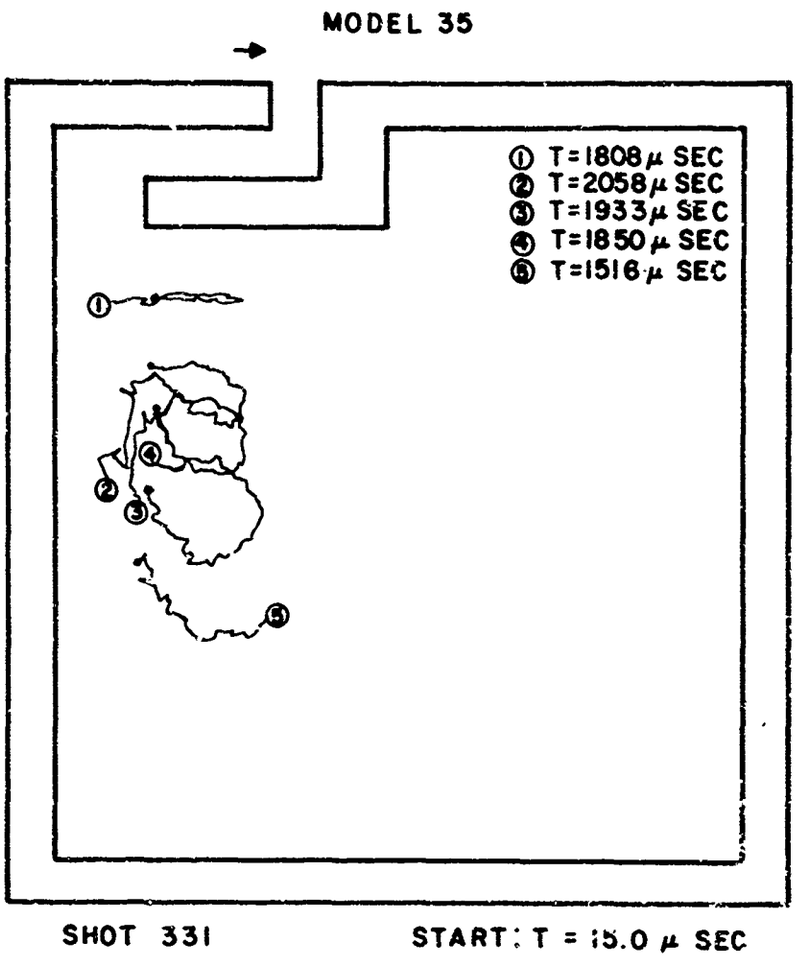

Figure B-2. Flow Paths - Model 35

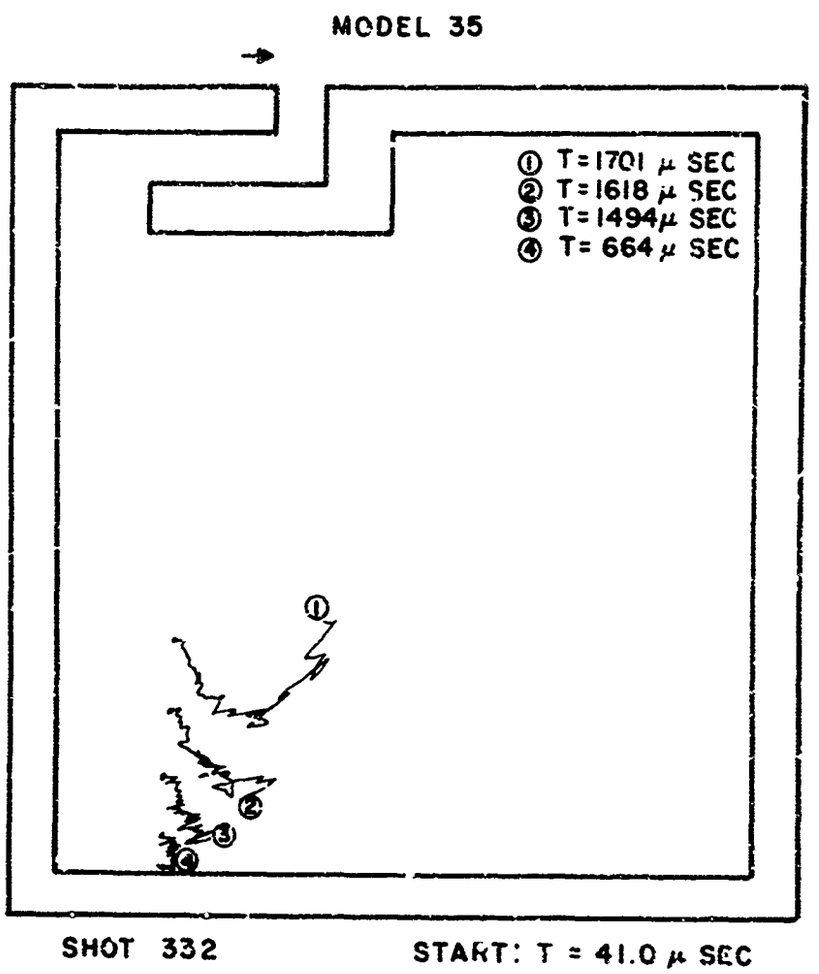

Figure B-2. Flow Paths - Model 35 (Continued)

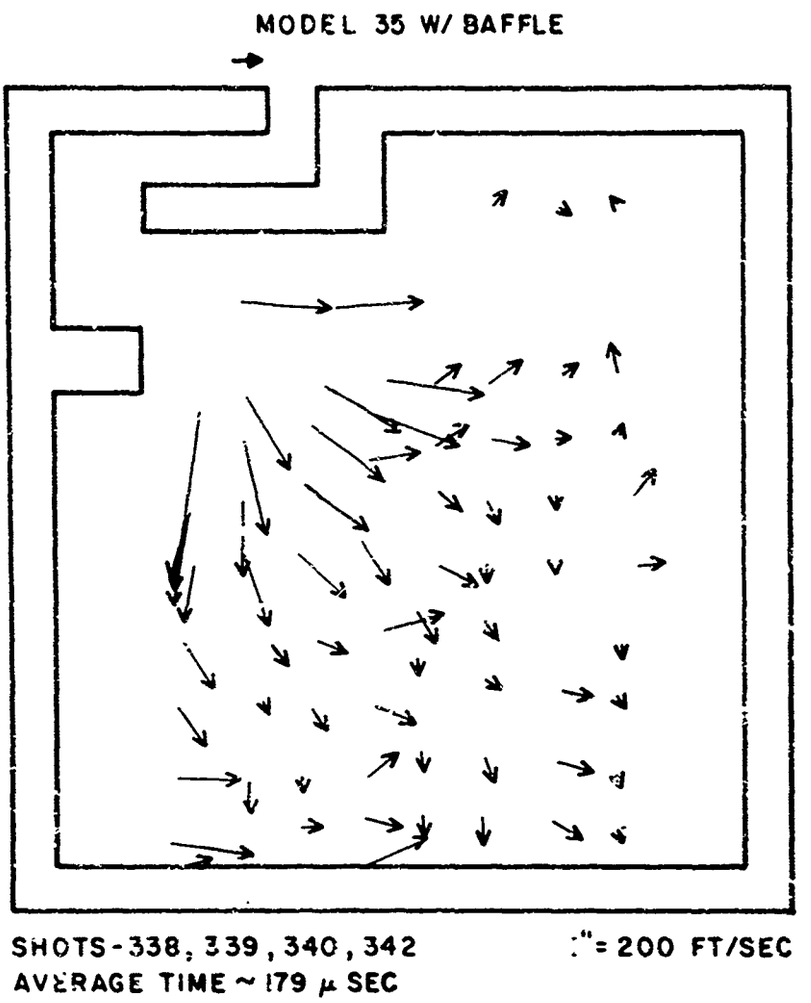

Figure B-3. Flow Vectors from Model 35, with Baffle

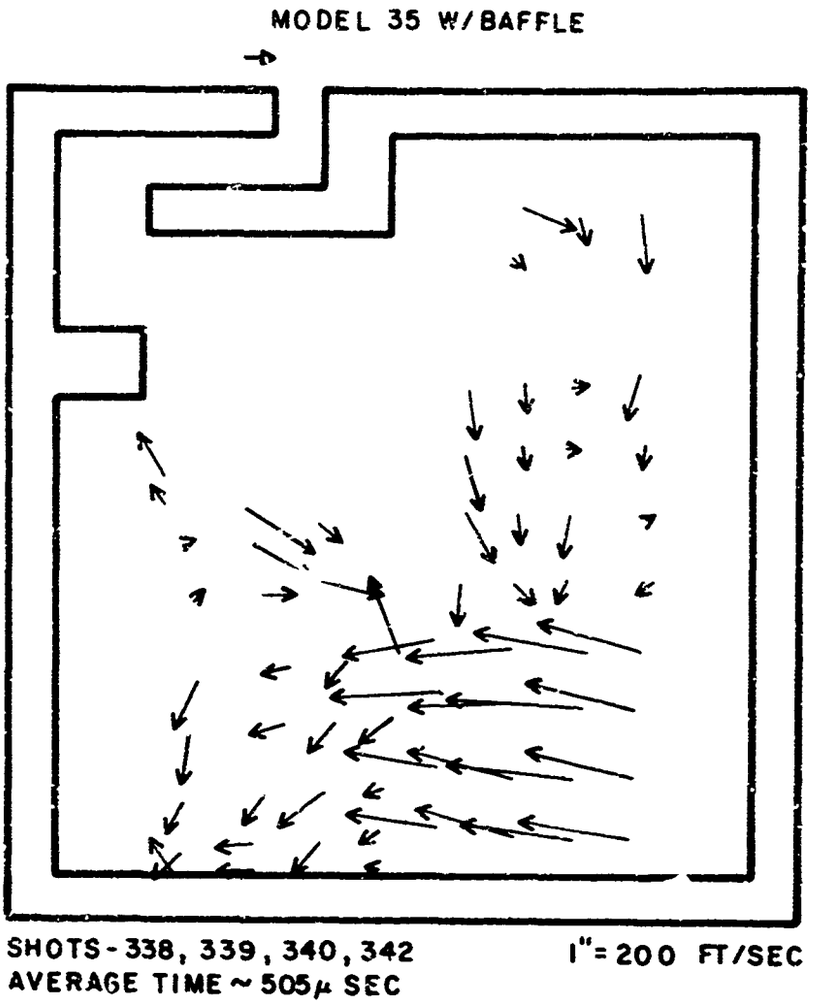

Figure B-3. Flow Vectors from Model 35, with Baffle (Continued)

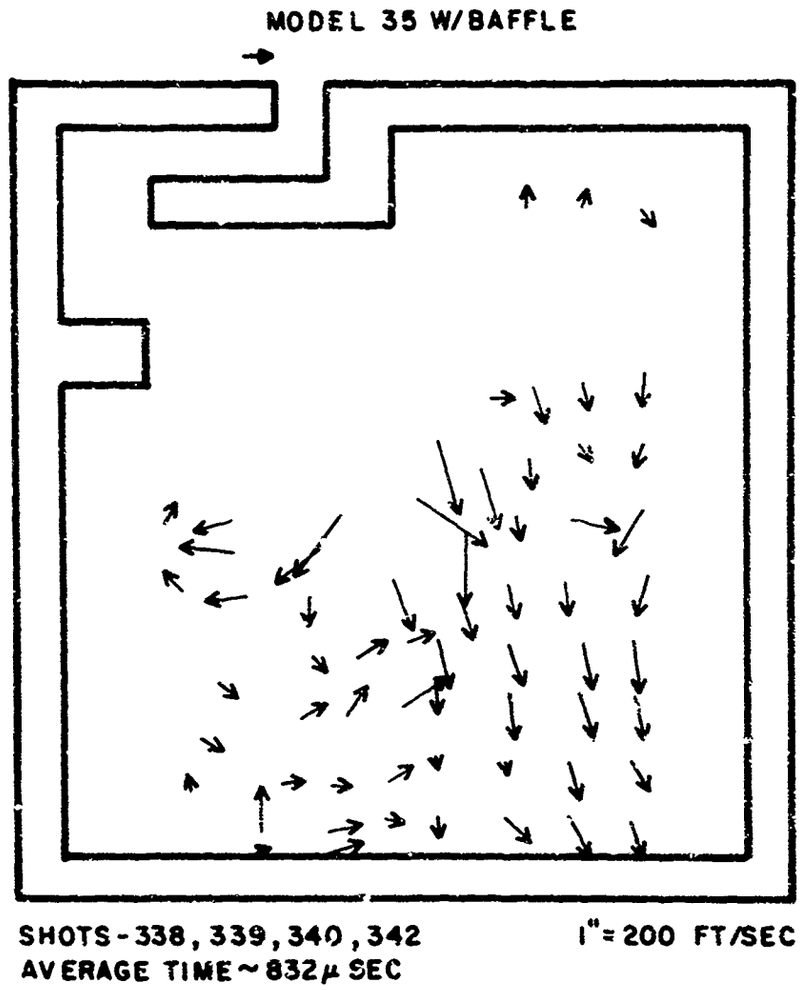

Figure B-3. Flow Vectors from Model 35, with Baffle (Continued)

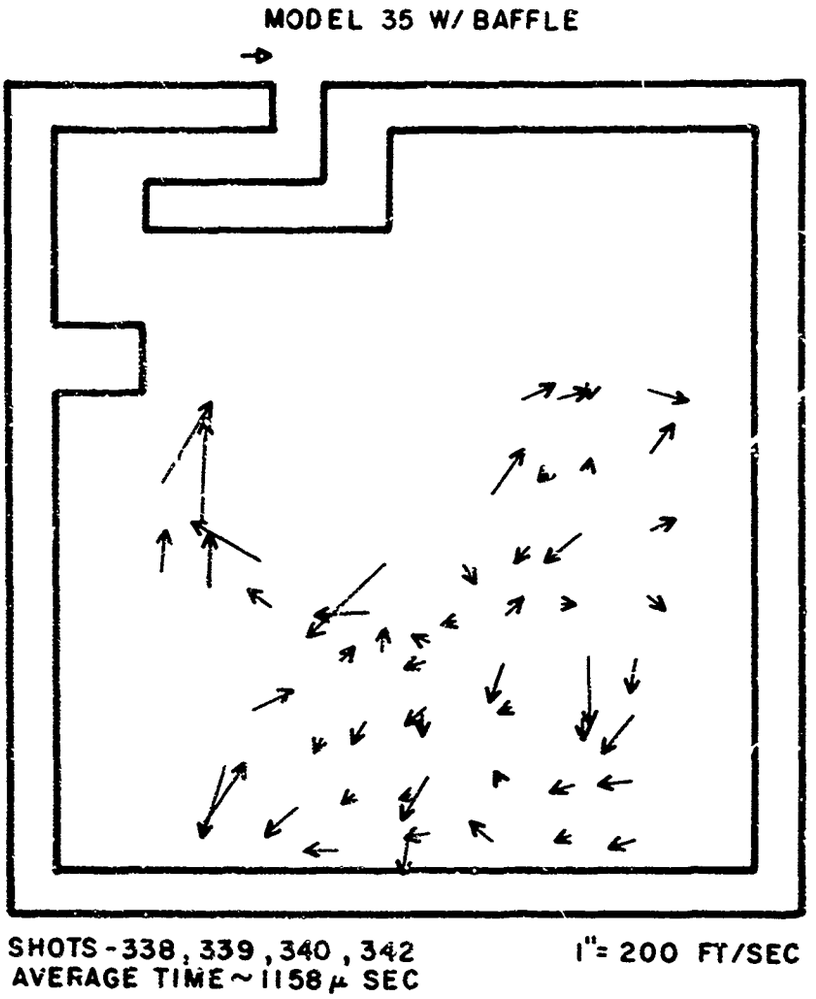

Figure B-3. Flow Vectors from Model 35, with Baffle (Continued)

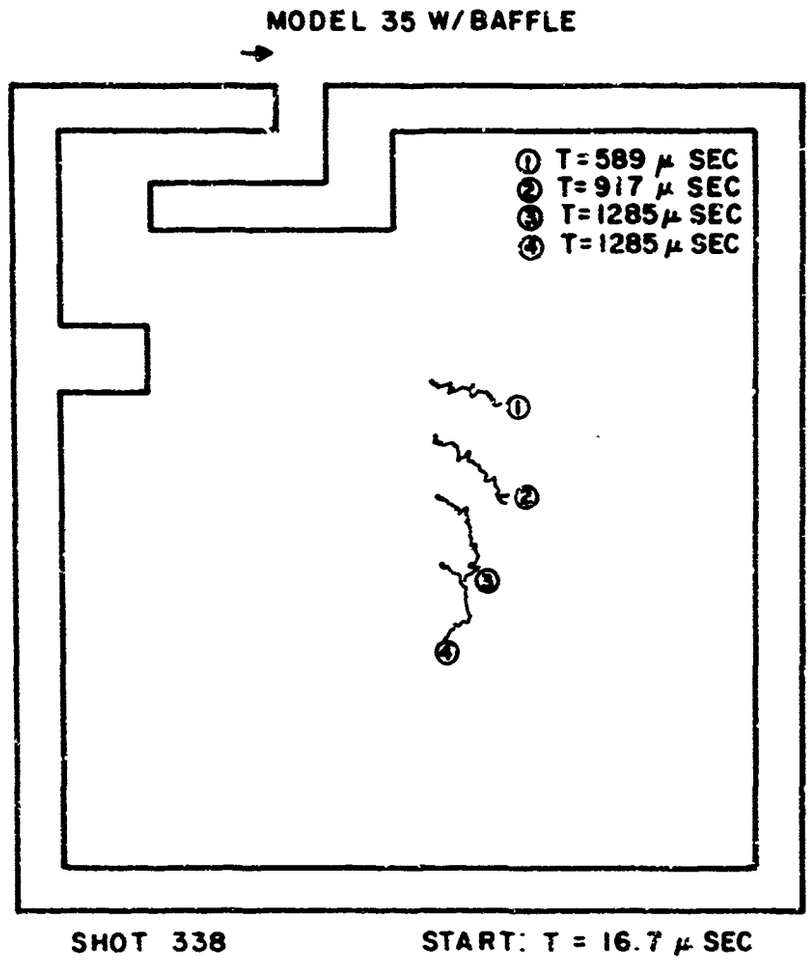

Figure B-4. Flow Paths - Model 35, with Baffle

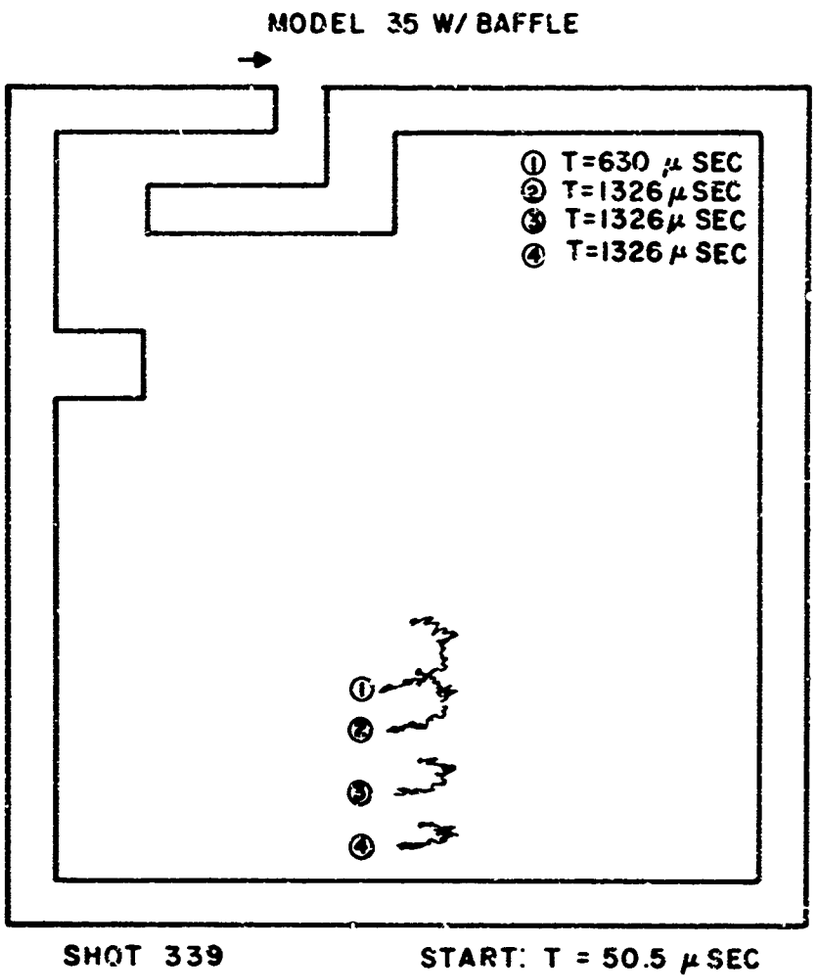

Figure B-4. Flow Paths - Model 35, with Baffle (Continued)

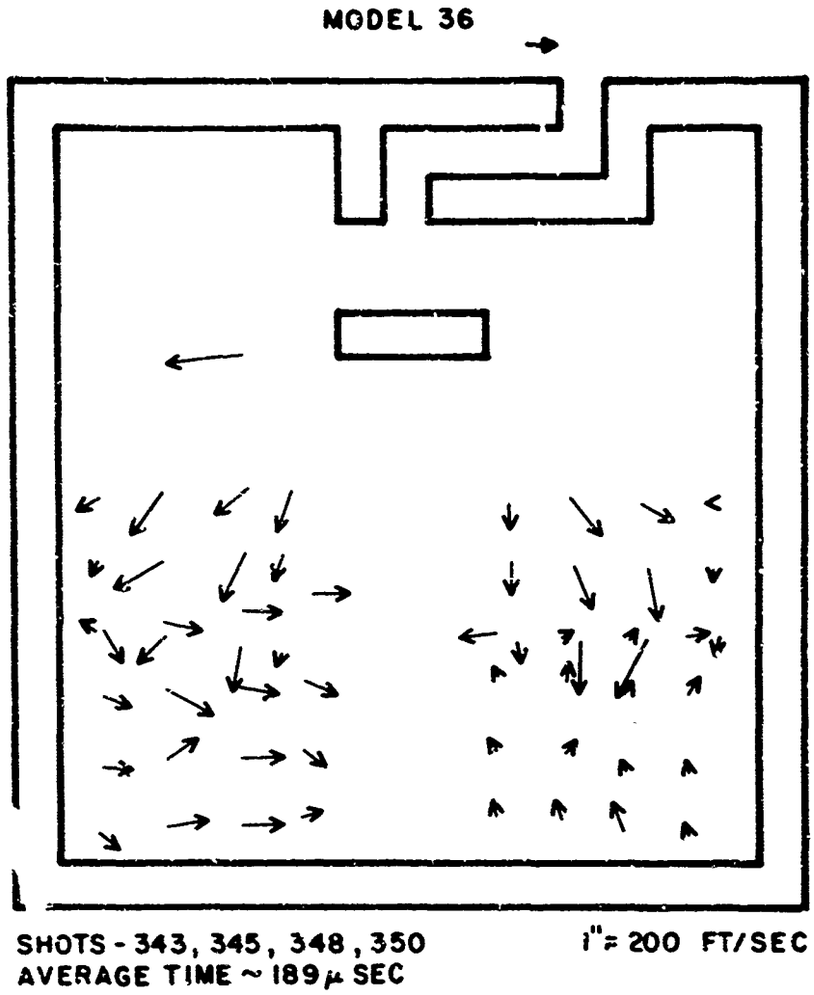

Figure B-5. Flow Vectors from Model 36

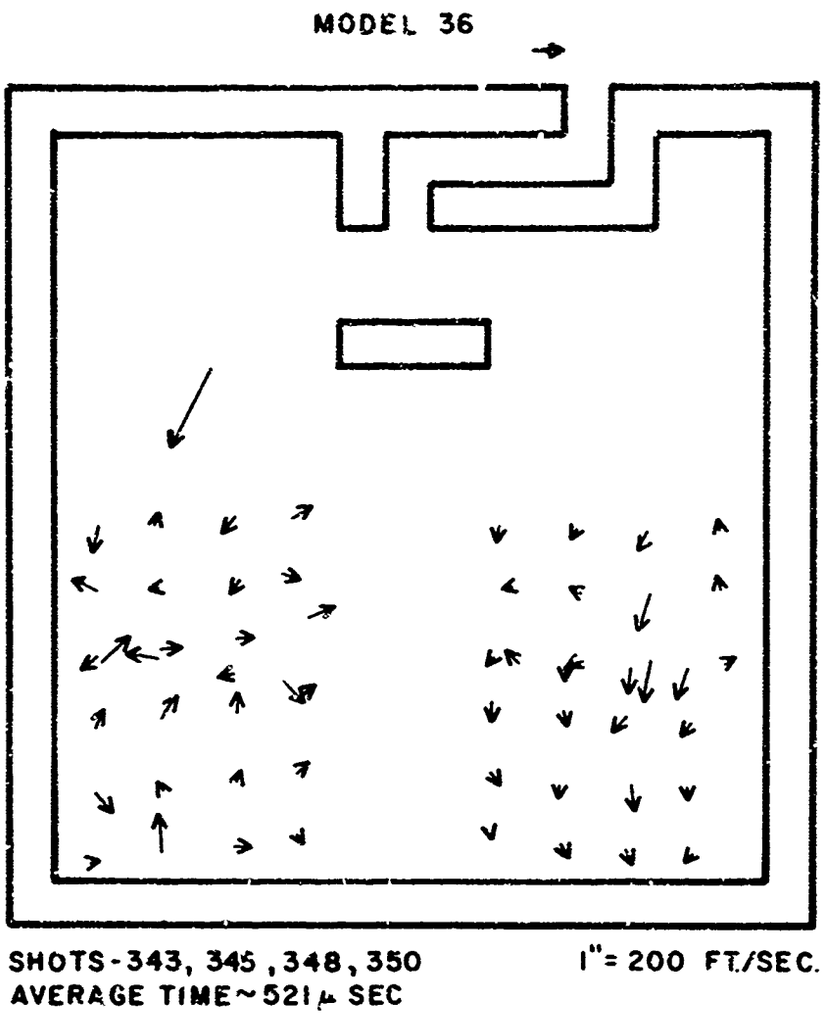

Figure B-5. Flow Vectors from Model 36 (Continued)

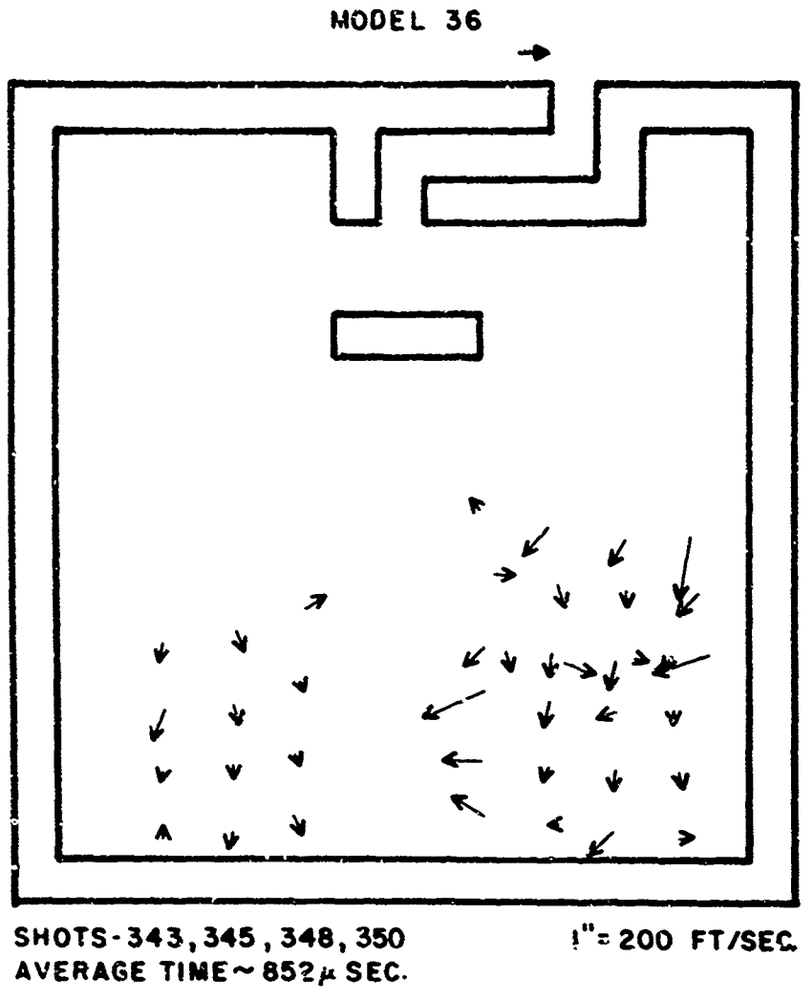

Figure B-5. Flow Vectors from Model 36 (Continued)

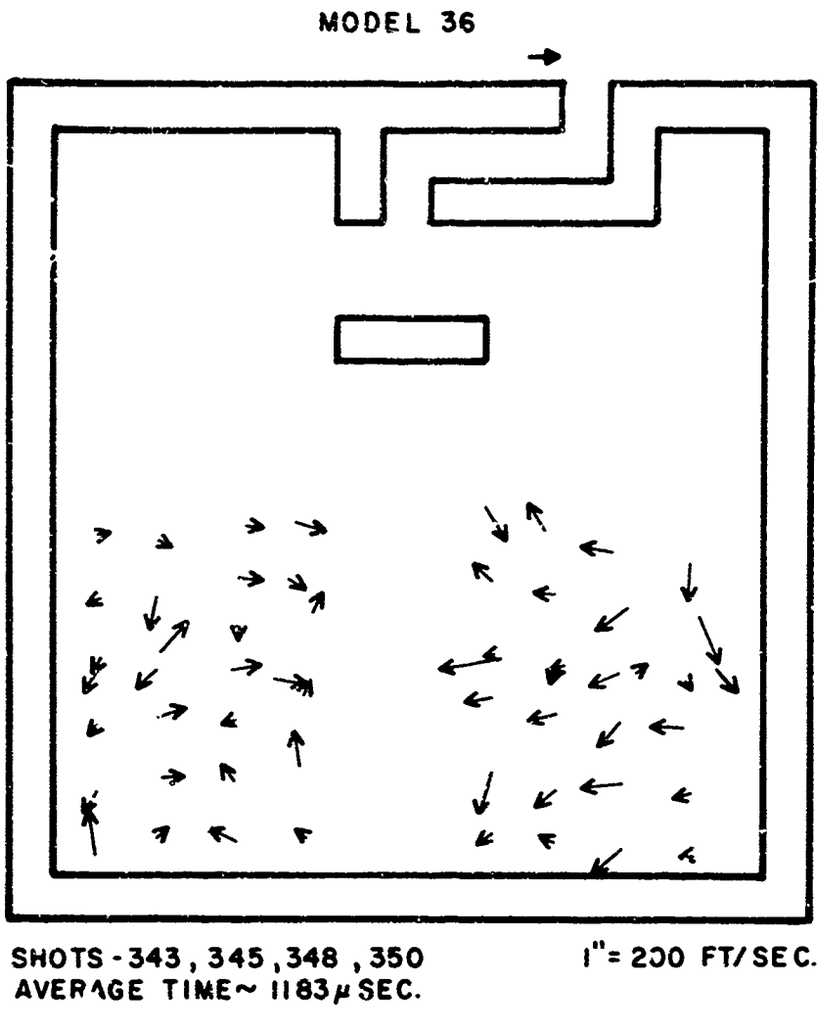

Figure B-5. Flow Vectors from Model 36 (Continued)

APPENDIX C

PRESSURE-TIME RECORDS, THREE-DIMENSIONAL MODELS

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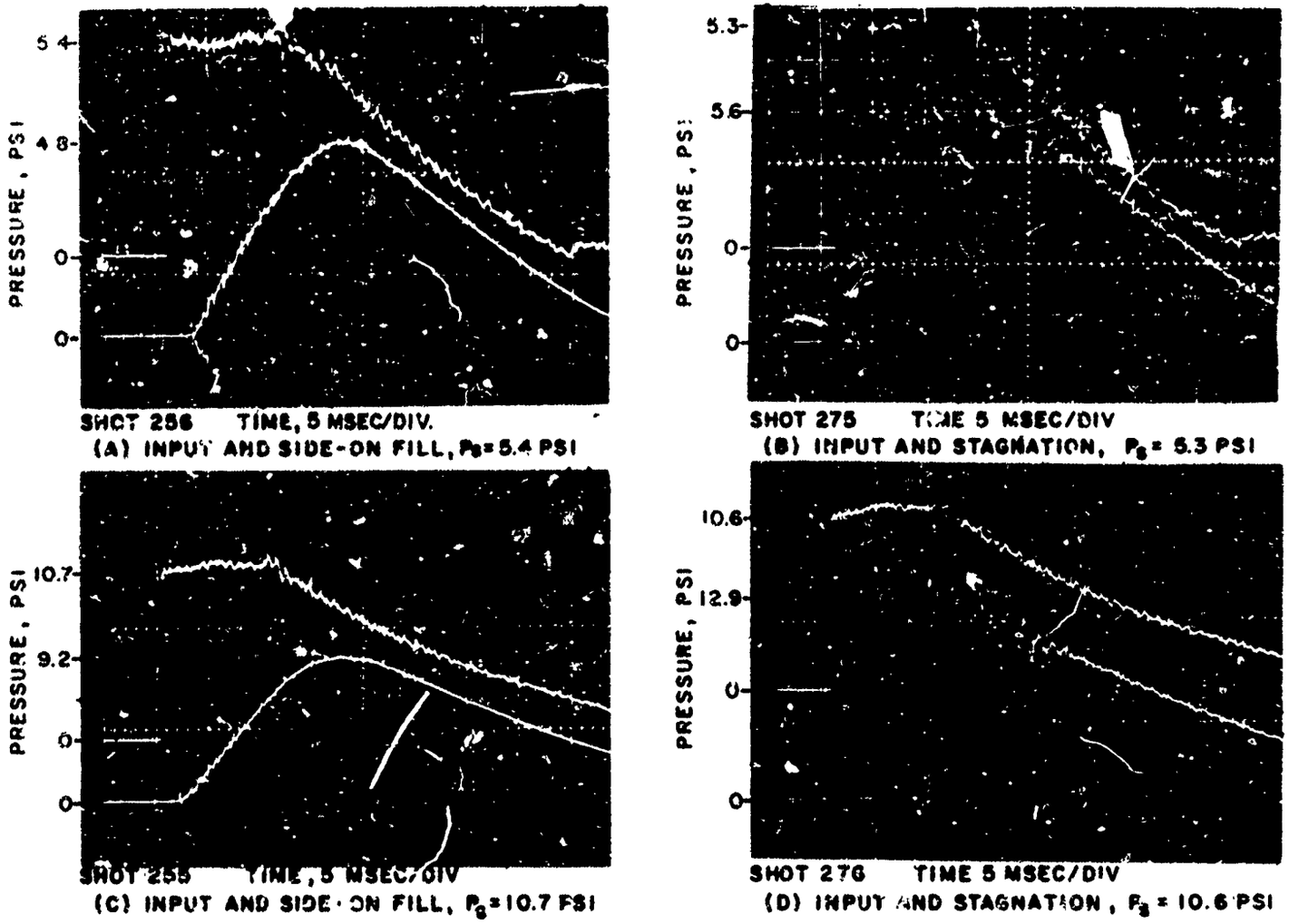
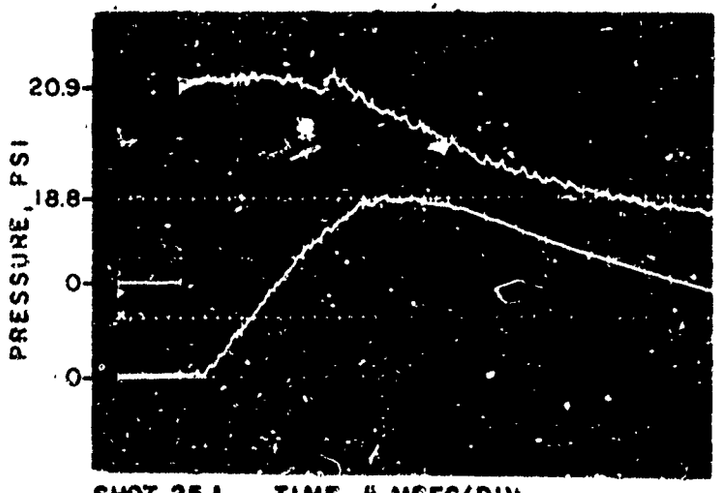
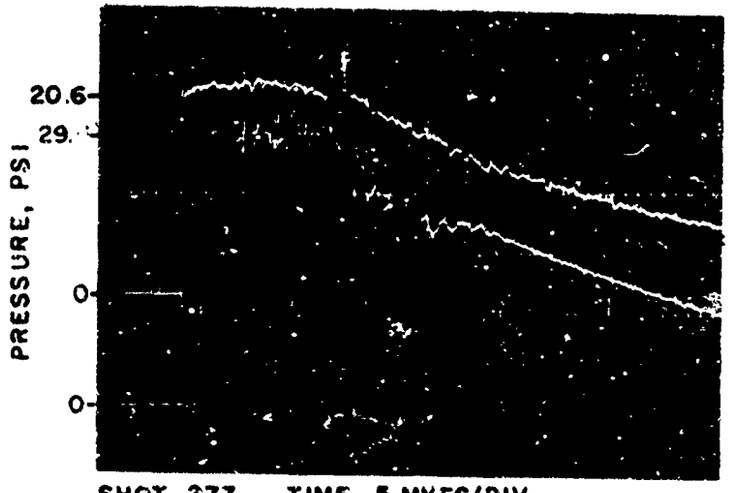


Figure C-1. Records from Position 1, Model 27-A



SHOT 254 TIME, 5 MSEC/DIV
(E) INPUT AND SIDE-ON FILL, P_3 = 20.9 PSI



SHOT 277 TIME, 5 MSEC/DIV
(F) INPUT AND STAGNATION, P_3 = 20.6 PSI

Figure C-1. Records from Position 1, Model 27-A (Continued)

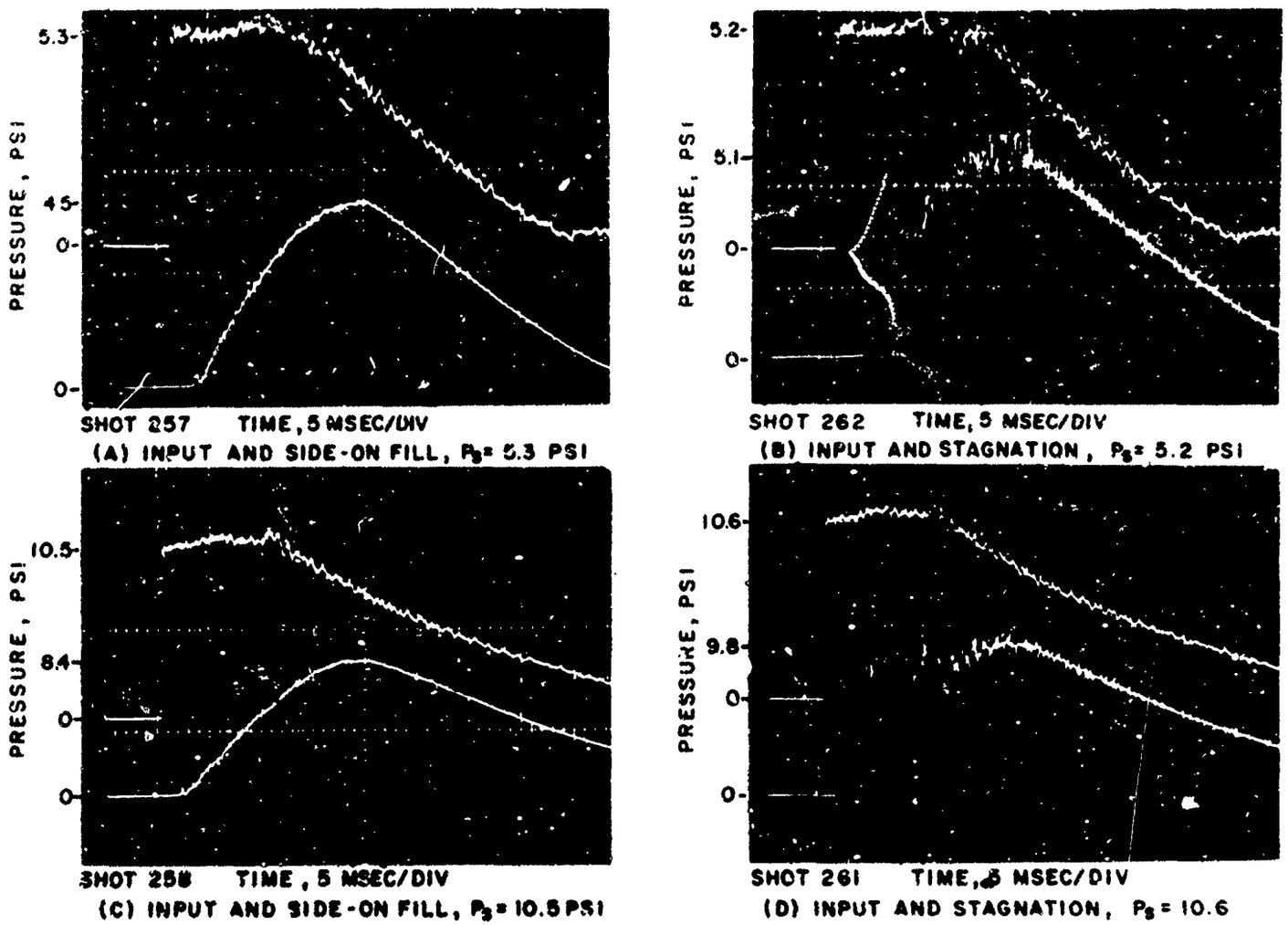
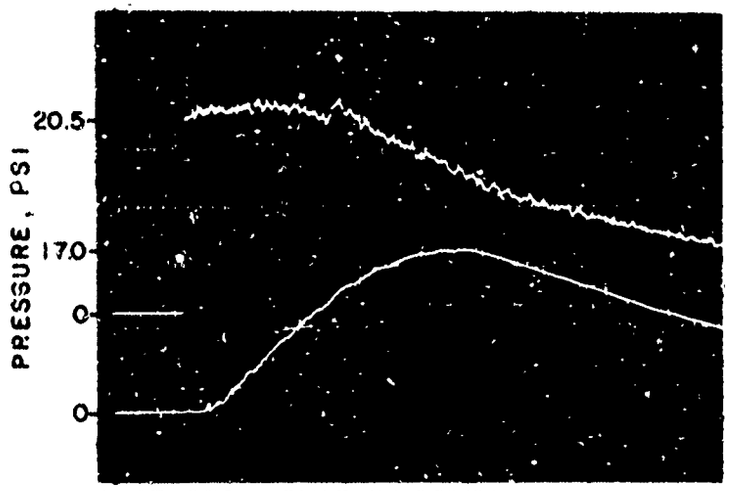
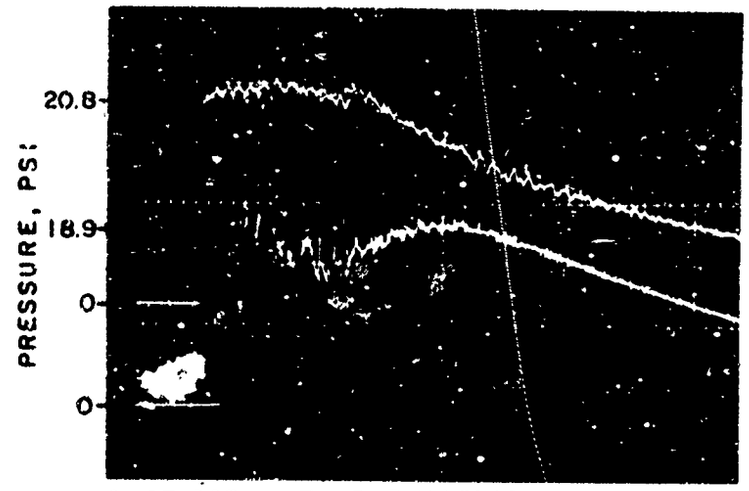


Figure C-2. Records from Position 2, Model 27-A



SHOT 259 TIME, 5 MSEC/DIV
(E) INPUT AND SIDE-ON FILL, P_3= 20.5 PSI



SHOT 263 TIME, 5 MSEC/DIV
(F) INPUT AND STAGNATION, P_3 = 20.8 PSI

Figure C-2. Records from Position 2, Model 27-A (Continued)

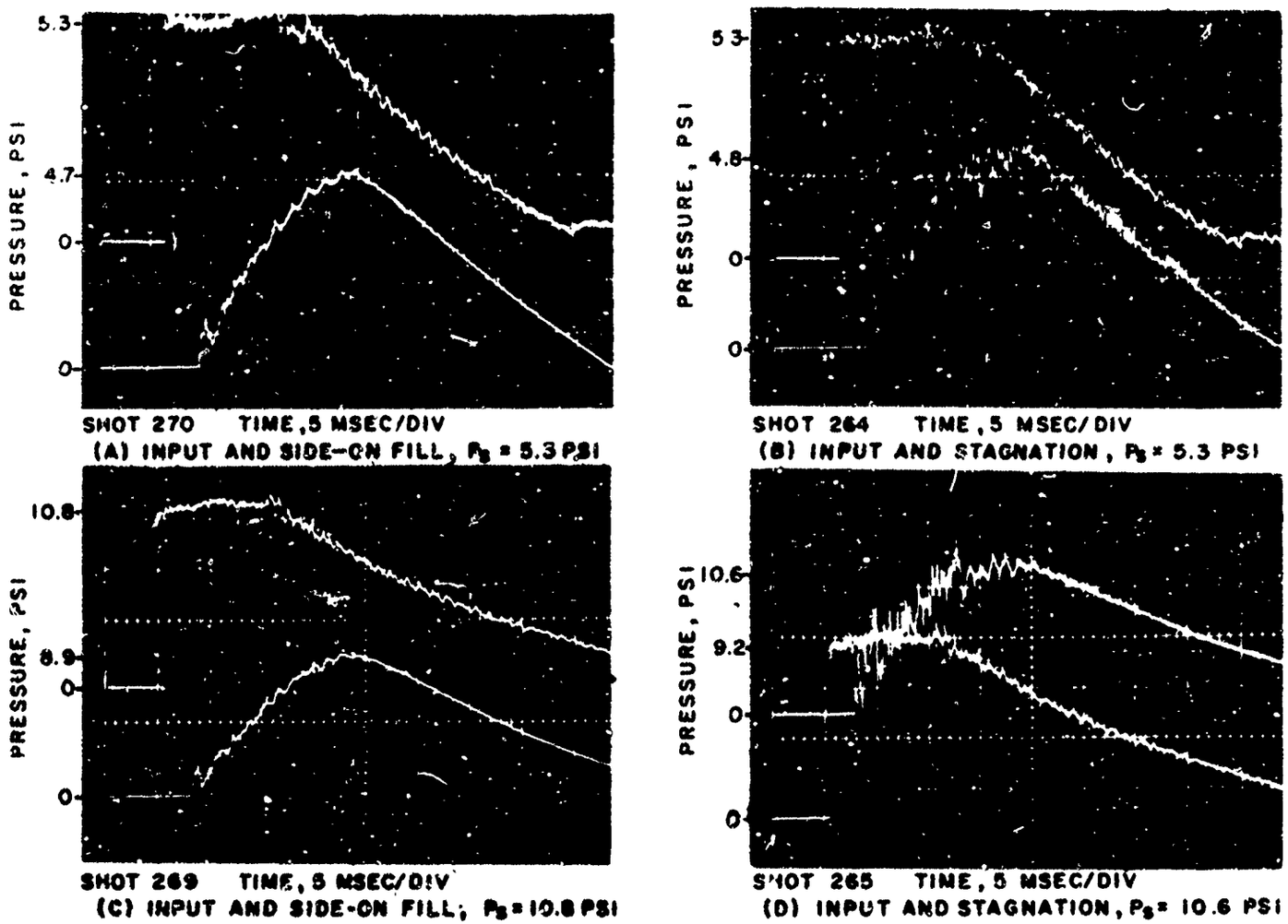
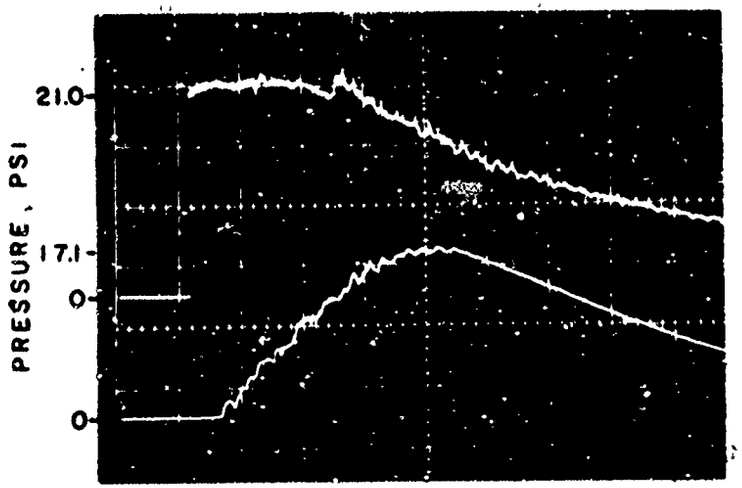
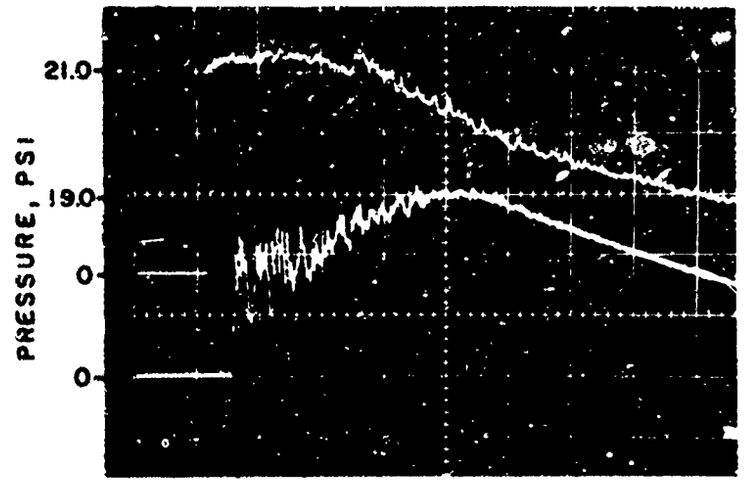


Figure C-3. Records from Position 3, Model 27-A



SHOT 271 TIME, 5 MSEC/DIV
(E) INPUT AND SIDE-ON FILL, P_3= 21.0 PSI



SHOT 267 TIME, 5 MSEC/DIV
(F) INPUT AND STAGNATION, P_2 = 21.0 PSI

Figure C-3. Records from Position 3, Model 27-A (Continued)

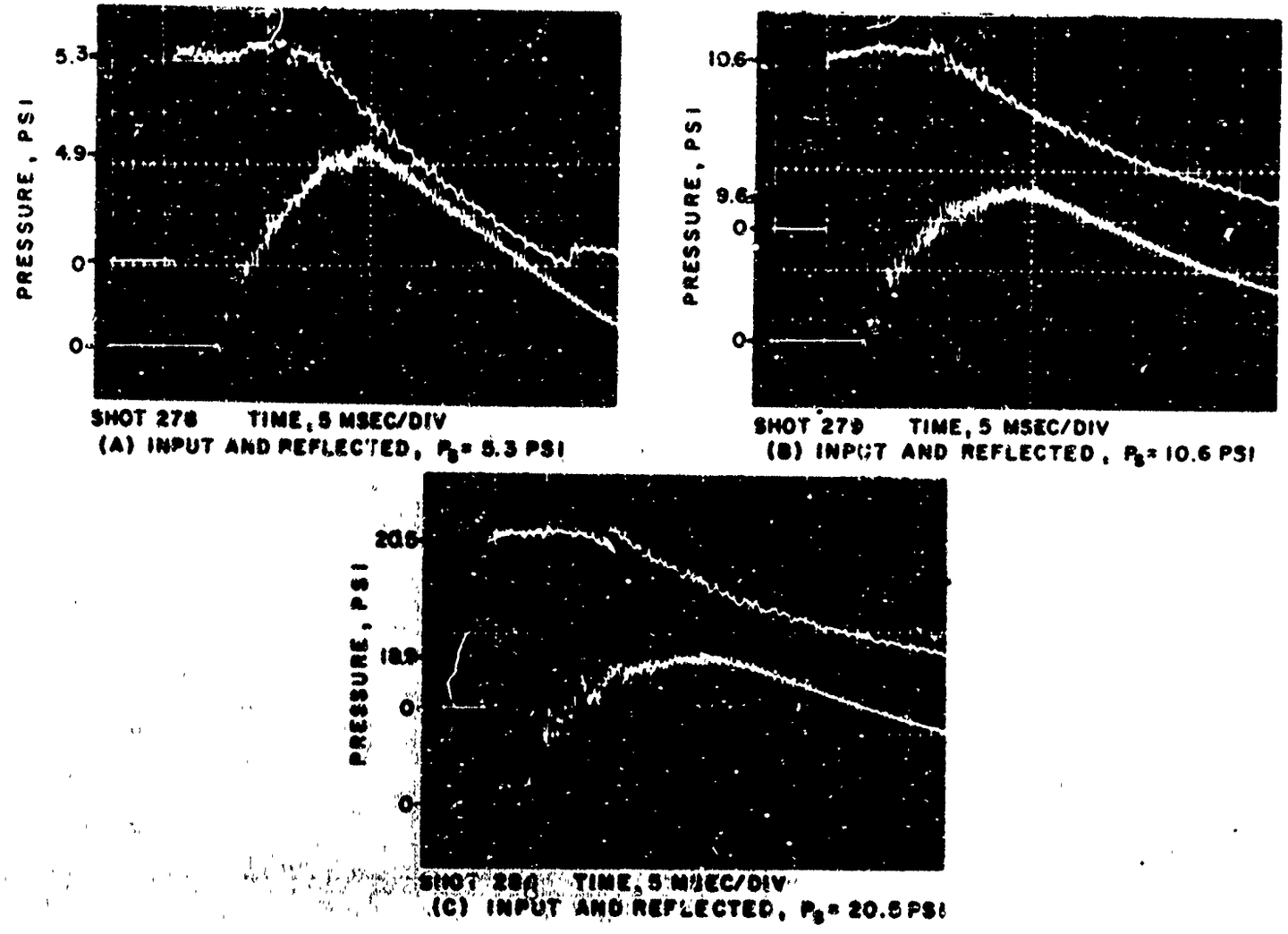
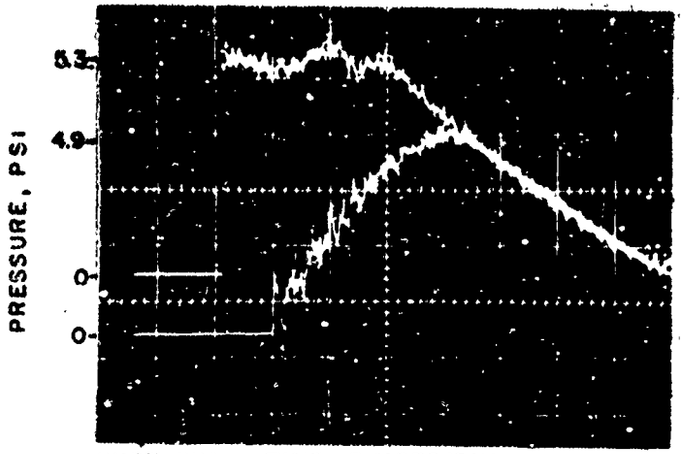
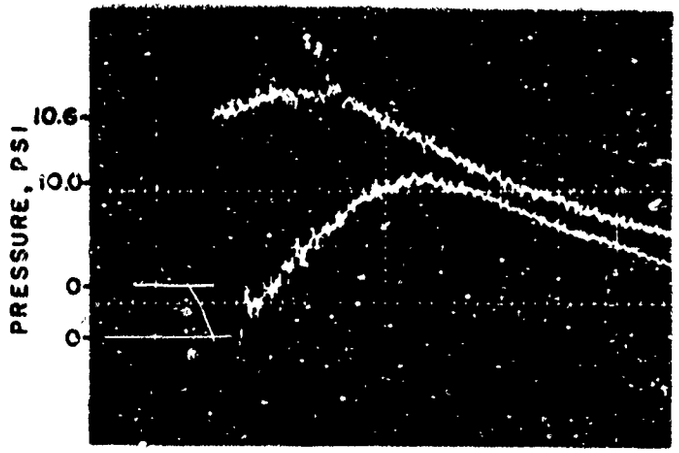


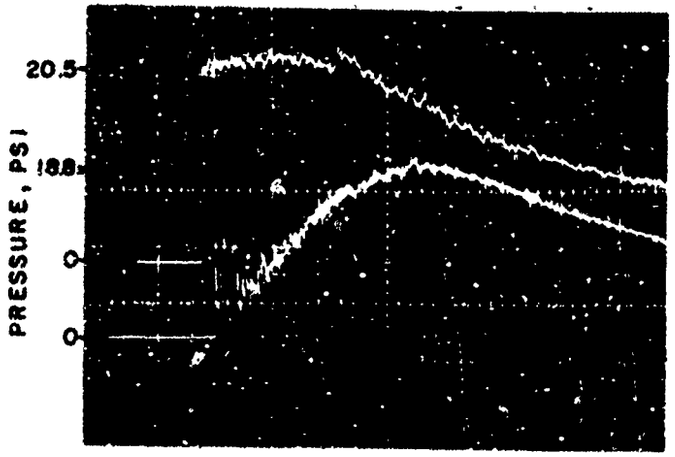
Figure C-4. Records from Position 4, Back Wall of Model 27-A



SHOT 281 TIME, 5 MSEC/DIV
(A) INPUT AND STAGNATION, P_s = 5.3 PSI



SHOT 282 TIME, 5 MSEC/DIV
(B) INPUT AND STAGNATION, P_s = 10.0 PSI



SHOT 283 TIME, 5 MSEC/DIV
(C) INPUT AND STAGNATION, P_s = 20.5 PSI

Figure C-5. Records from Position 2A, 20° off-center

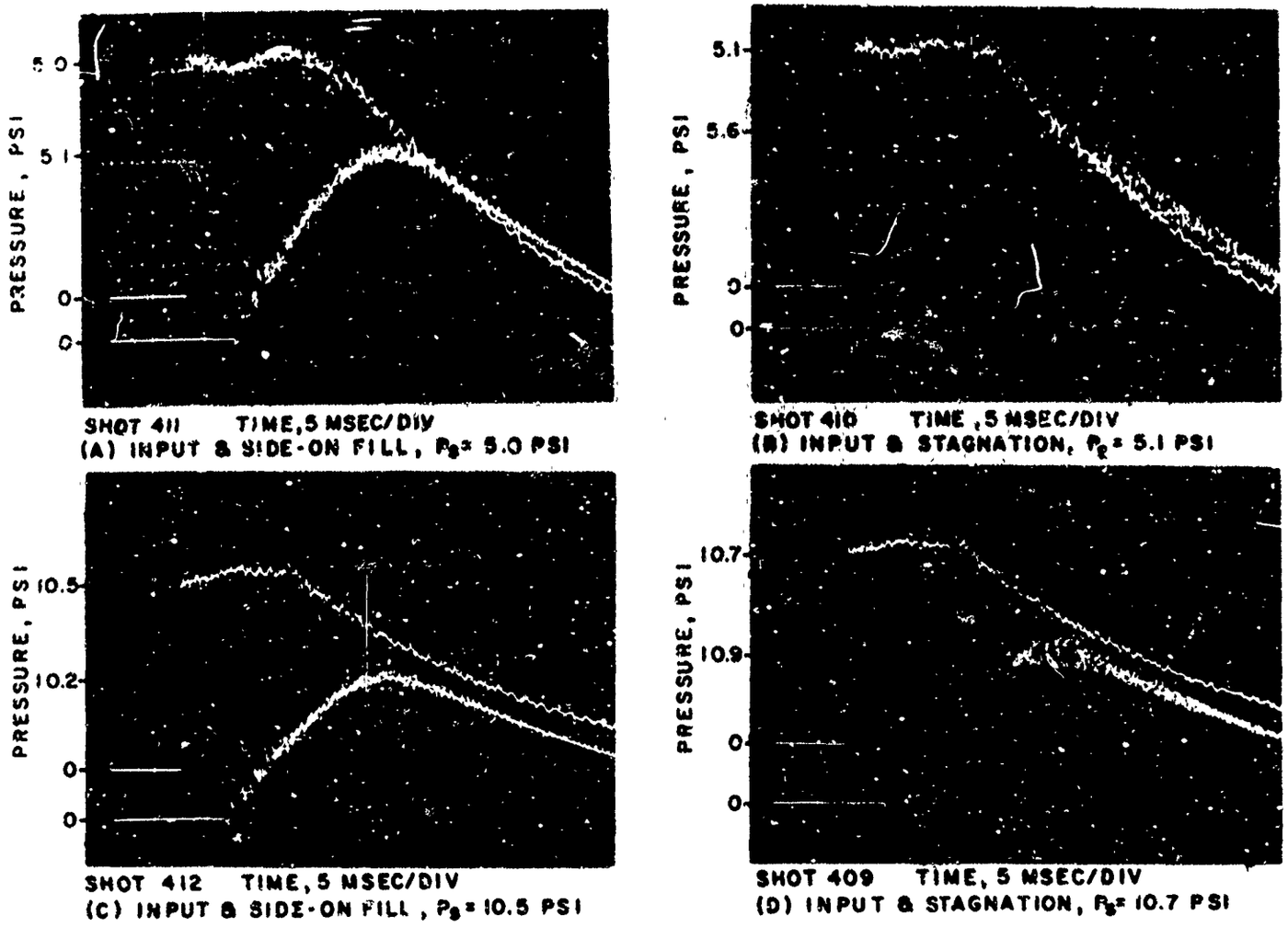
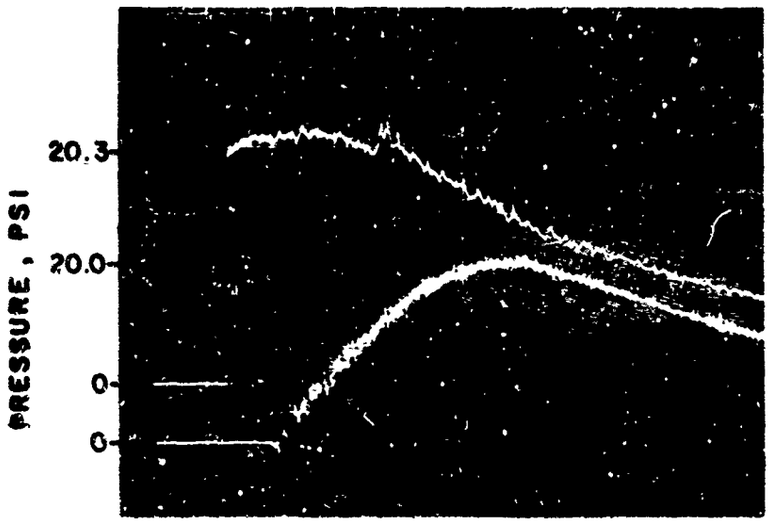
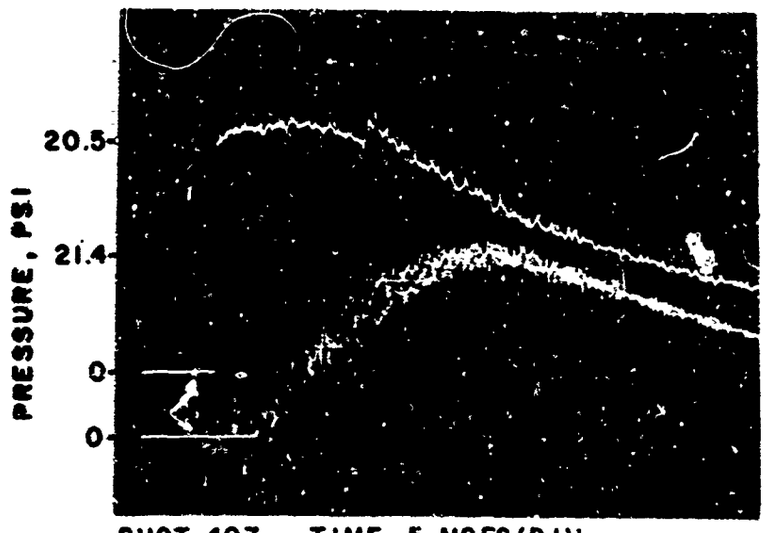


Figure C-6. Records from Position 3, Model 27-A, with Baffle



SHOT 413 TIME, 5 MSEC/DIV
(E) INPUT & SIDE-ON FILL, P_s = 20.3 PSI



SHOT 407 TIME, 5 MSEC/DIV
(F) INPUT & STAGNATION, P_s = 20.5 PSI

Figure C-6. Records from Position 3, Model 27-A, with Baffle (Continued)

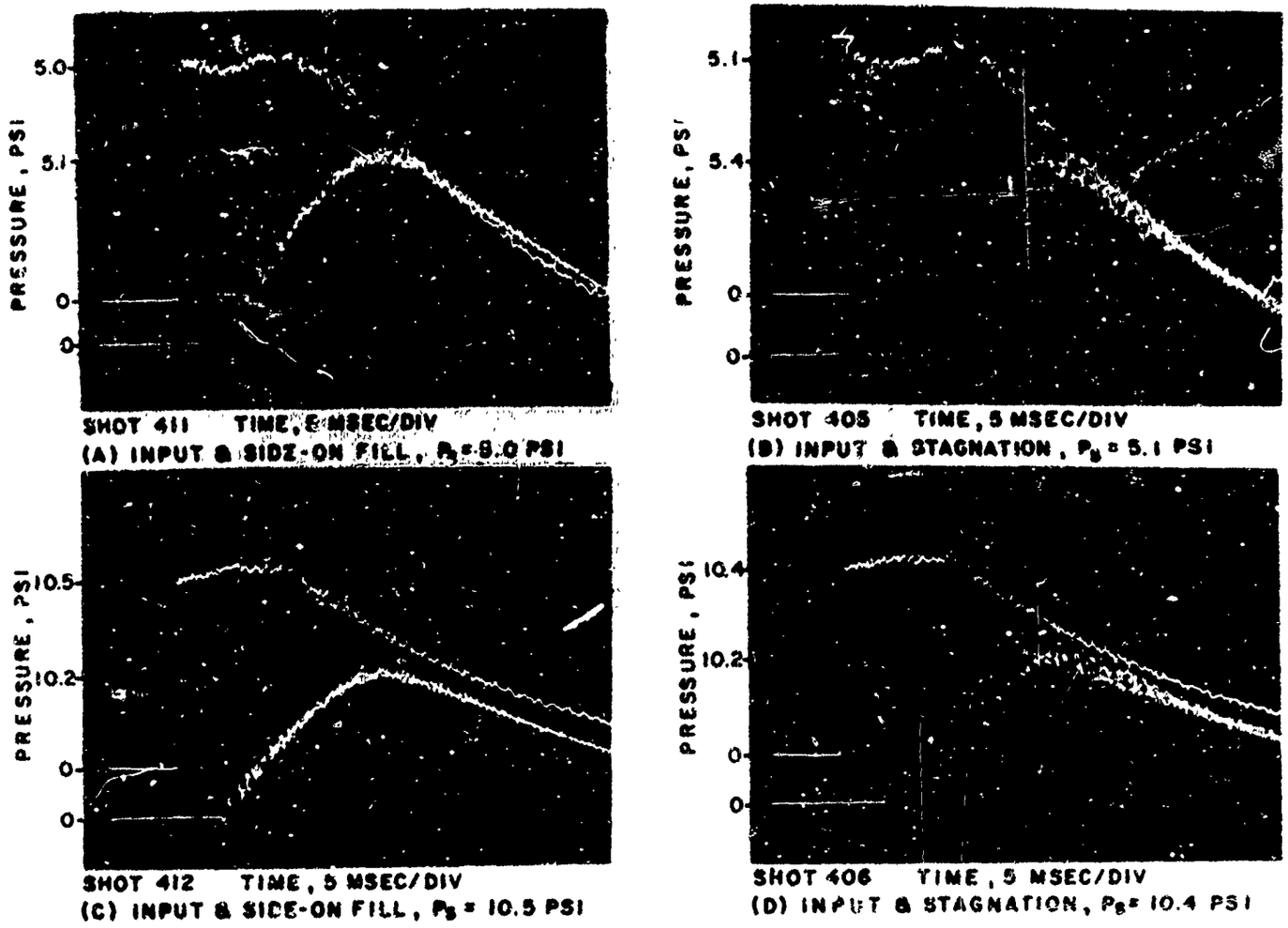
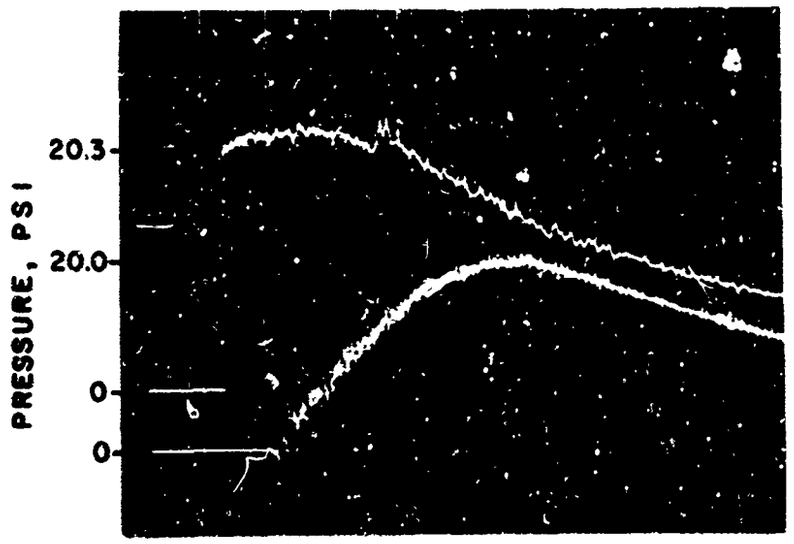
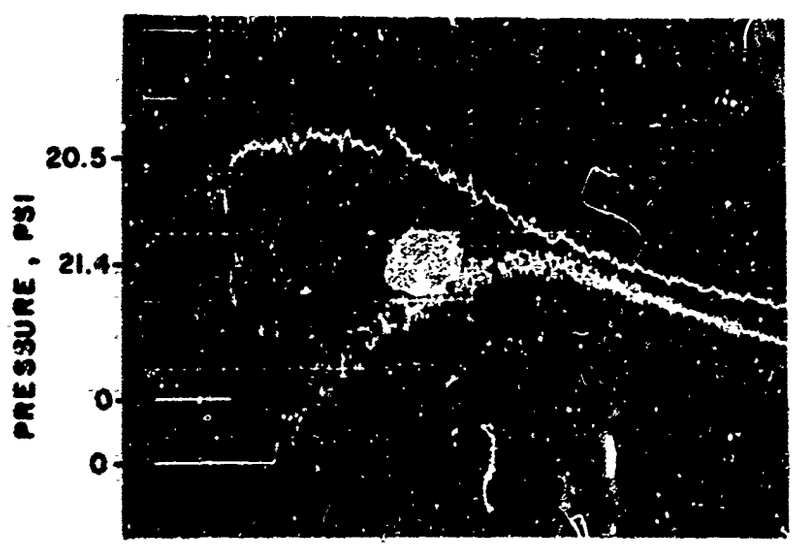


Figure C-7. Records from Position 2, Model 27-A, with Baffle



SHOT 413 TIME, 5 MSEC/DIV
(E) INPUT & SIDE-ON FILL, P_s = 20.3 PSI



SHOT 408 TIME, 5 MSEC/DIV
(F) INPUT & STAGNATION, P_s = 20.5 PSI

Figure C-7. Records from Position 2, Model 27-A, with Baffle (Continued)

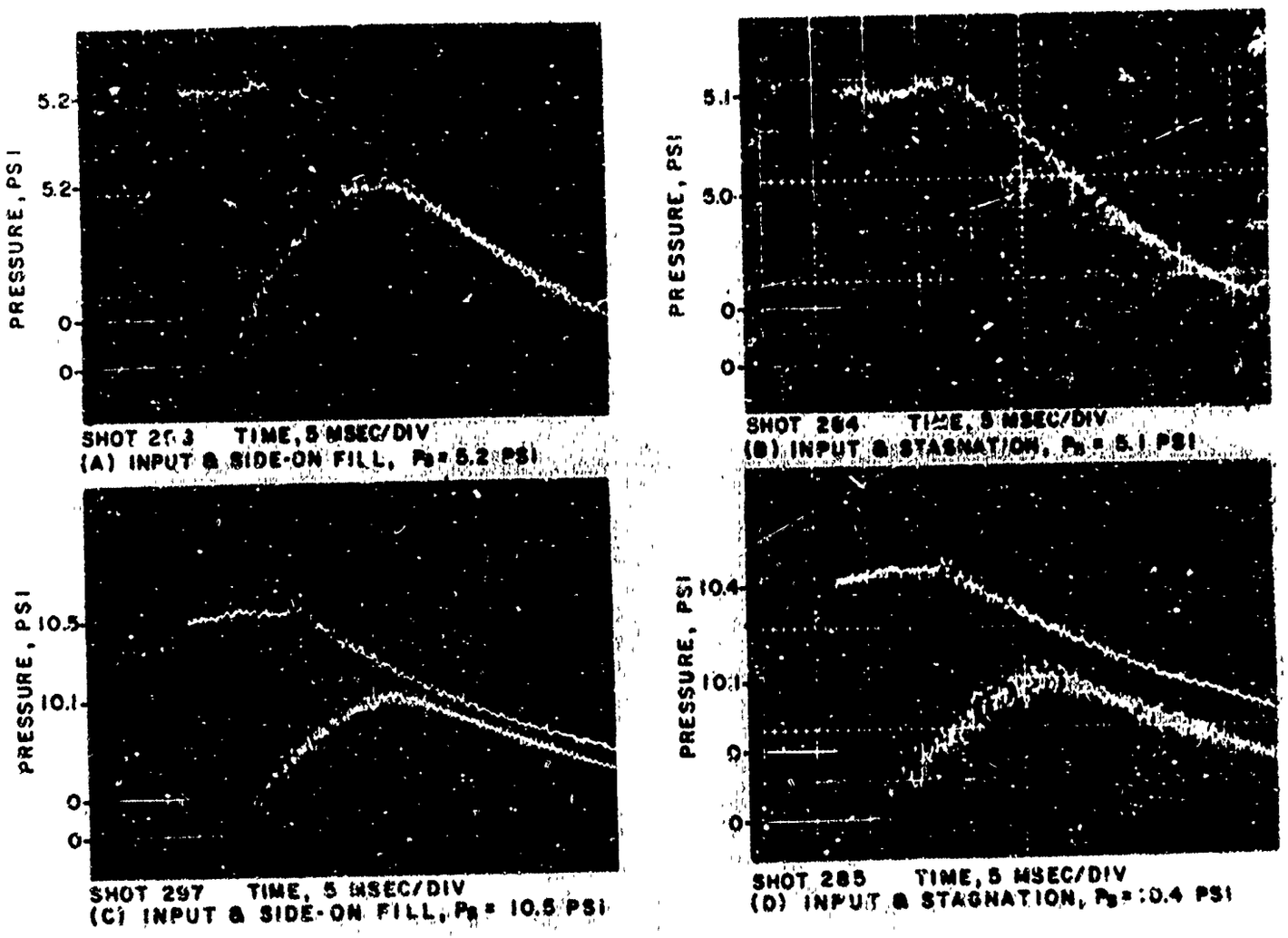
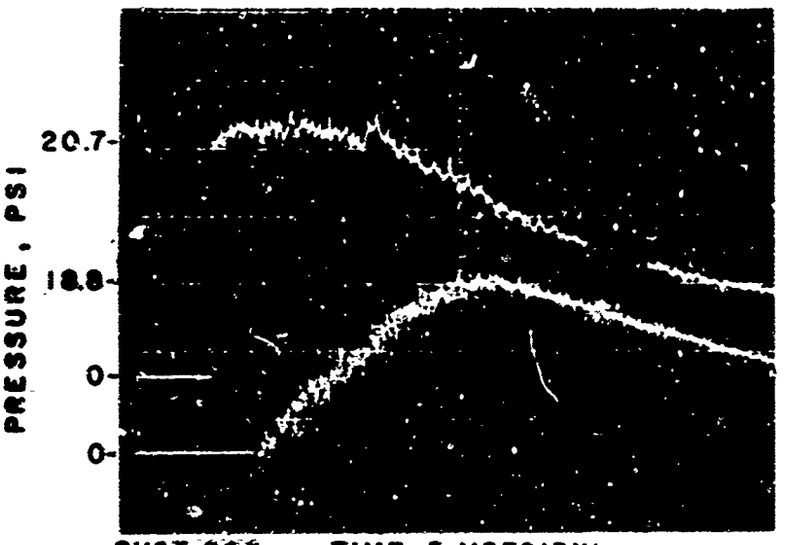
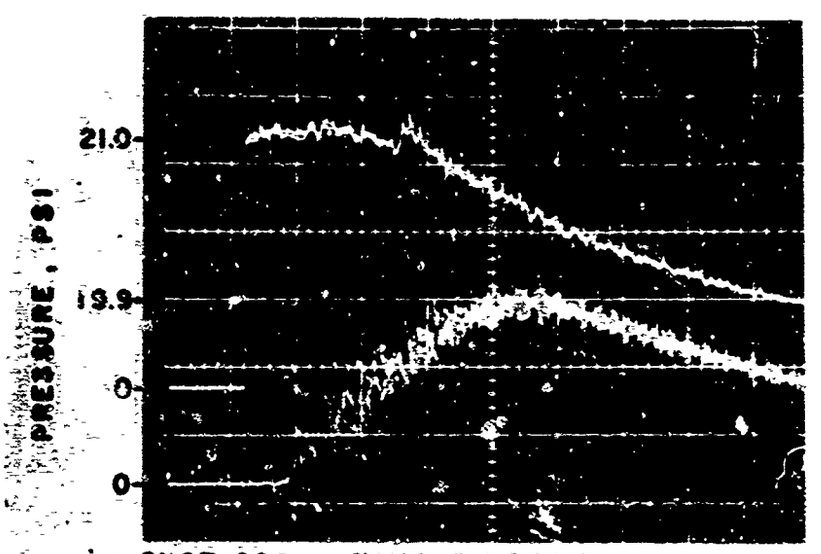


Figure C-8. Records from Position 1-B, Model 27-A, with Baffle



SHOT 298 TIME, 5 MSEC/DIV
(E) INPUT & SIDE-ON FILL, P_S = 20.7 PSI



SHOT 286 TIME 5 MSEC/DIV
(F) INPUT & STAGNATION, P_S = 21.0 PSI

Figure C-8. Records from Position 1-B, Model 27-A, with Baffle (Continued)

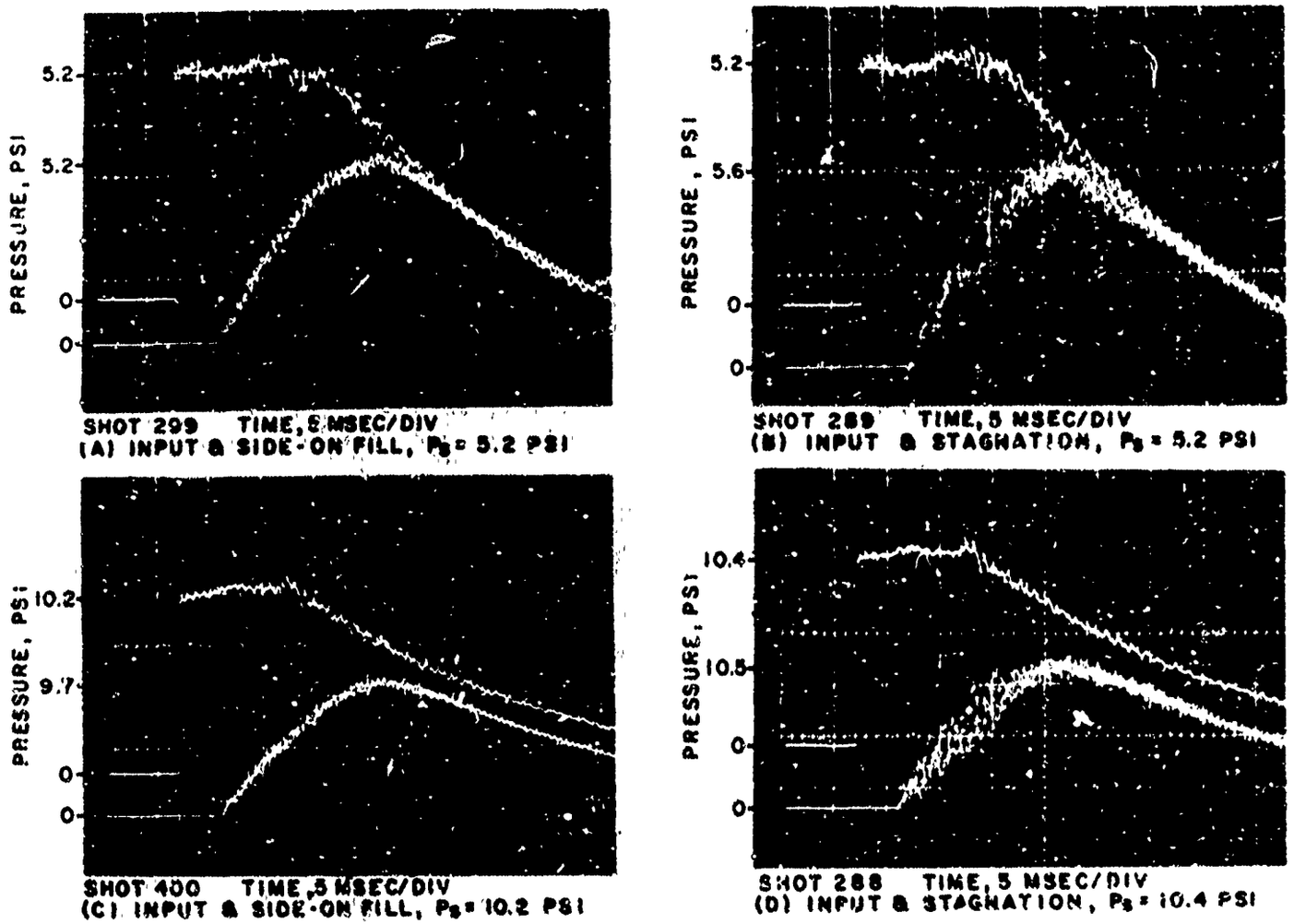
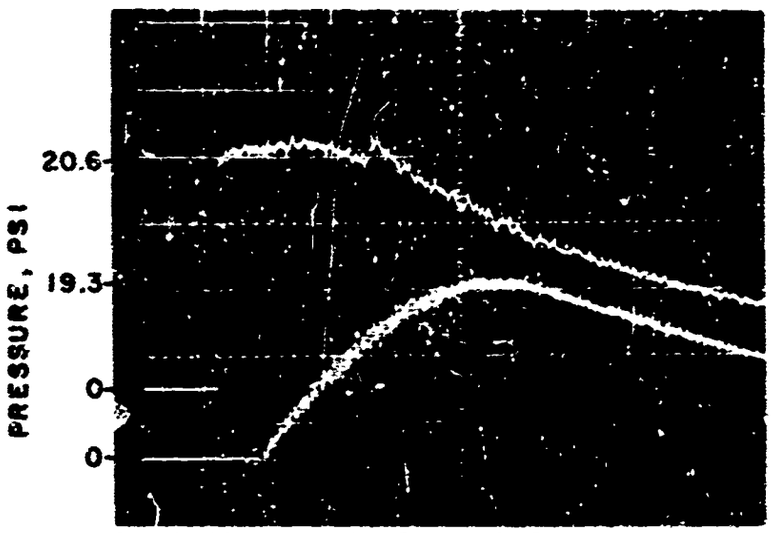
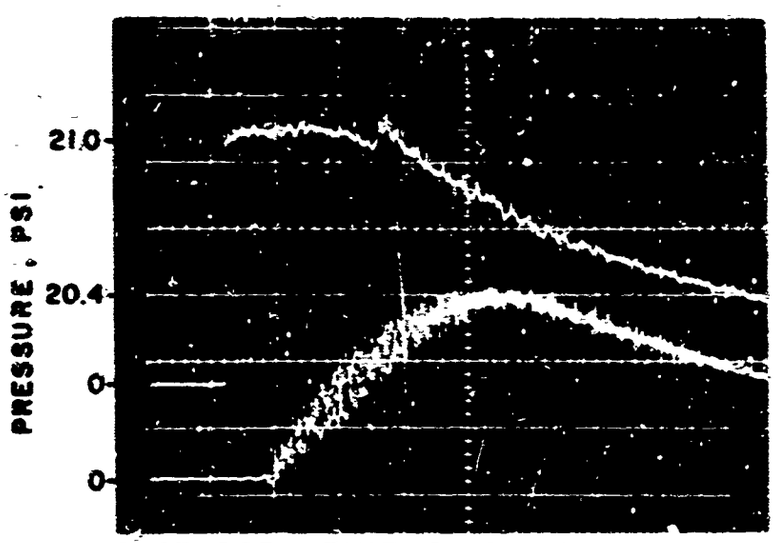


Figure C-9. Records from Position 2-B, Model 27-A, with Baffle



SHOT 401 TIME 5, MSEC/DIV
(E) INPUT & SIDE-ON FILL, P_s = 20.6 PSI



SHOT 287 TIME, 5 MSEC/DIV
(F) SIDE-ON & STAGNATION, P_s = 21.0 PSI

Figure C-9. Records from Position 2-B, Model 27-A, with Baffle (Continued)

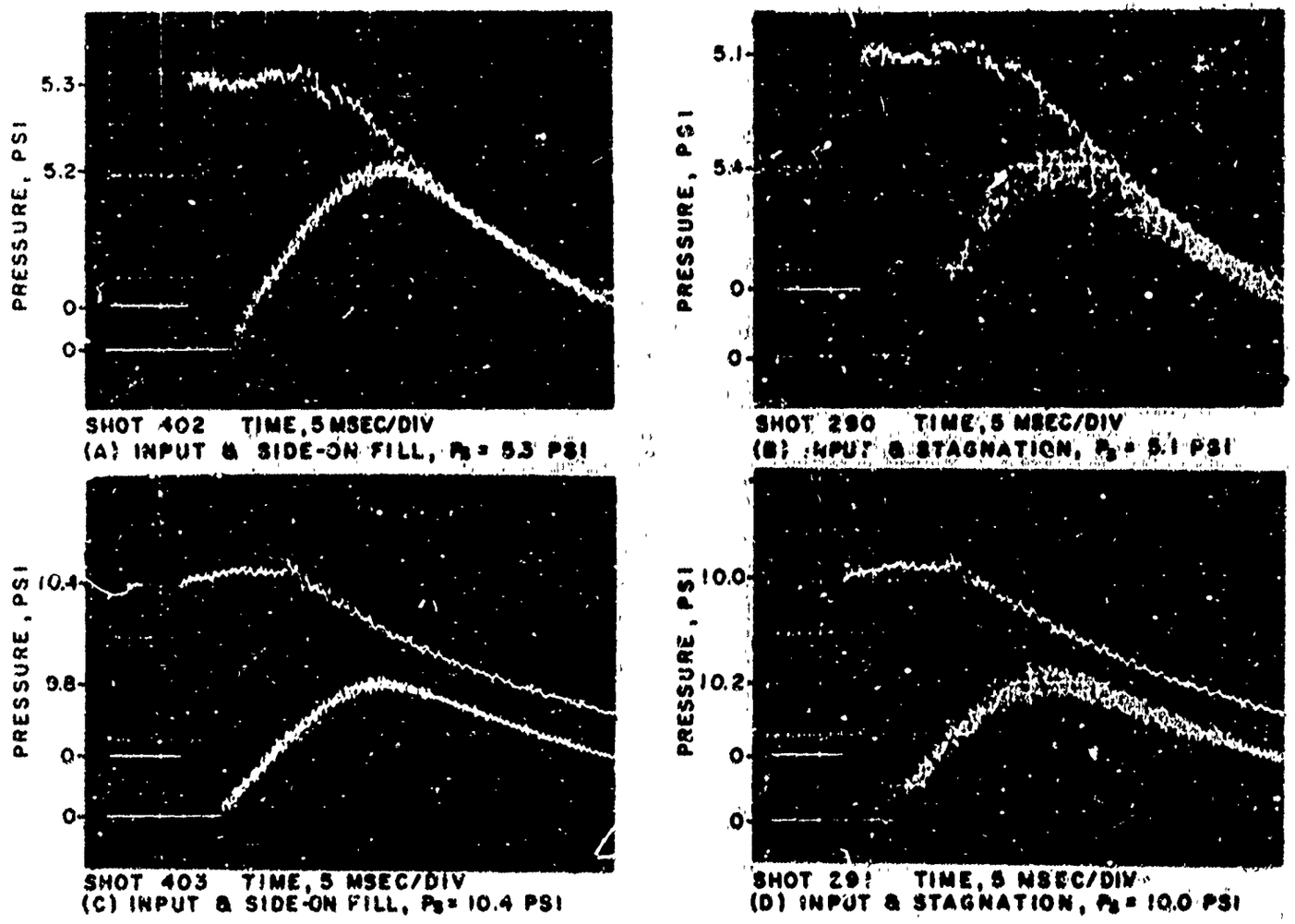
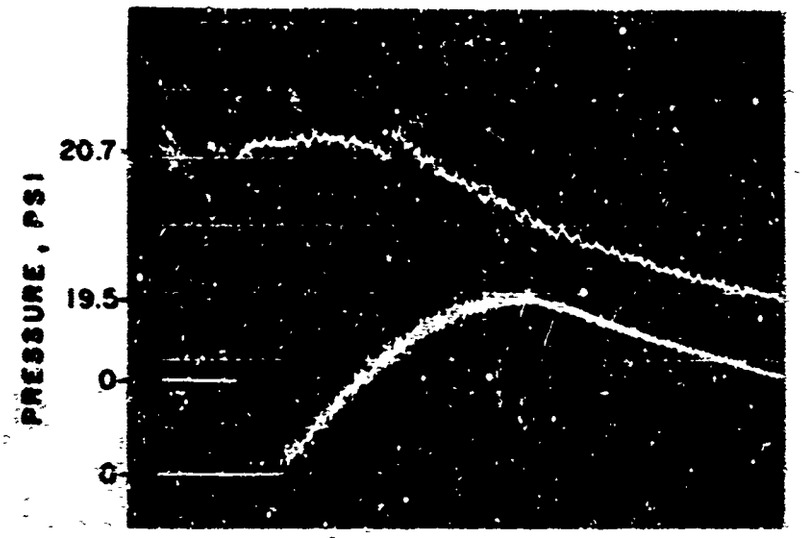
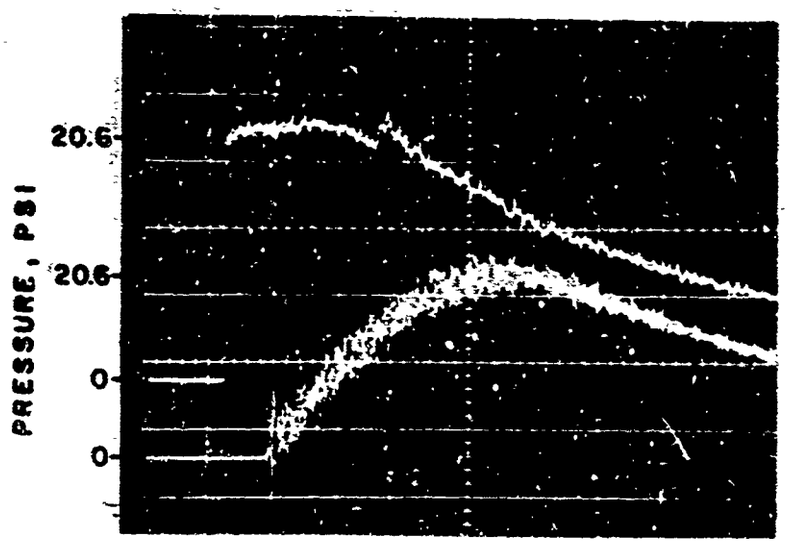


Figure C-10. Records from Position 3-B, Model 27-A, with Baffle



SHOT 404 TIME, 5 MSEC/DIV
(E) INPUT & SIDE-ON FILL, P_s = 20.7 PSI



SHOT 292 TIME, 5 MSEC/DIV
(F) INPUT & STAGNATION, P_s = 20.6 PSI

Figure C-10. Records from Position 3-B, Model 27-A, with Baffle (Continued)

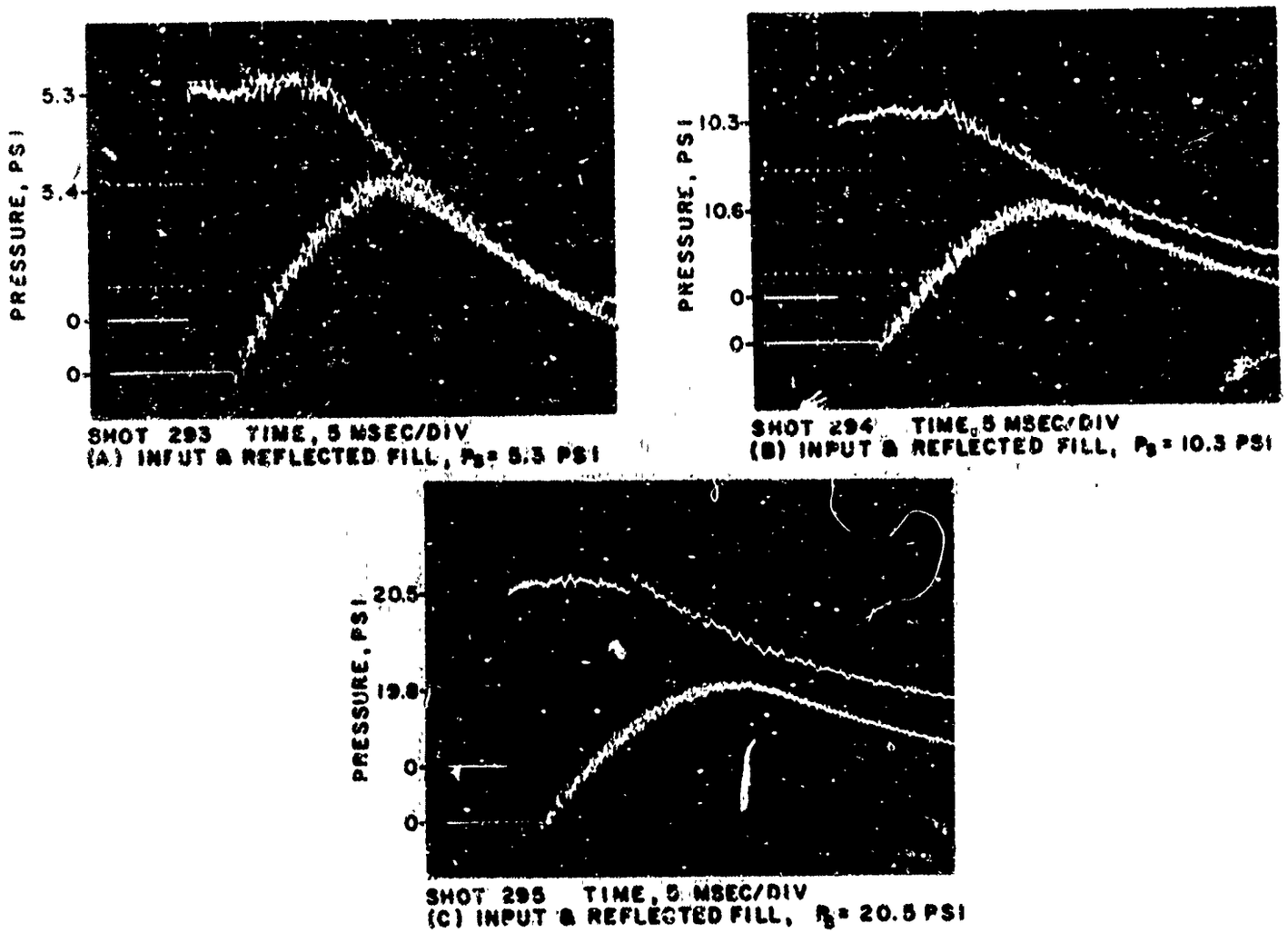


Figure C-11. Records from Position 4-B, Model 27-A, with Baffle

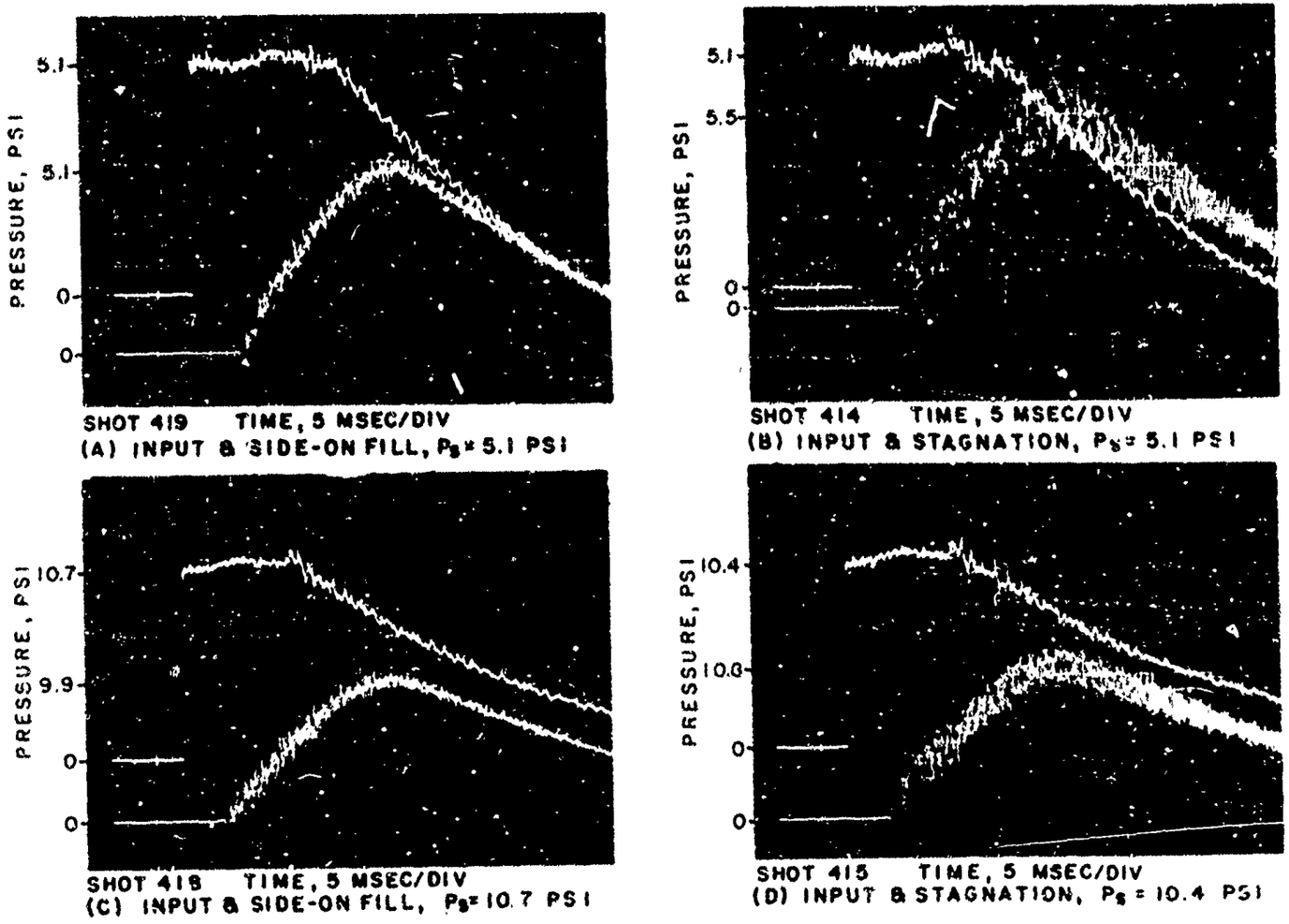
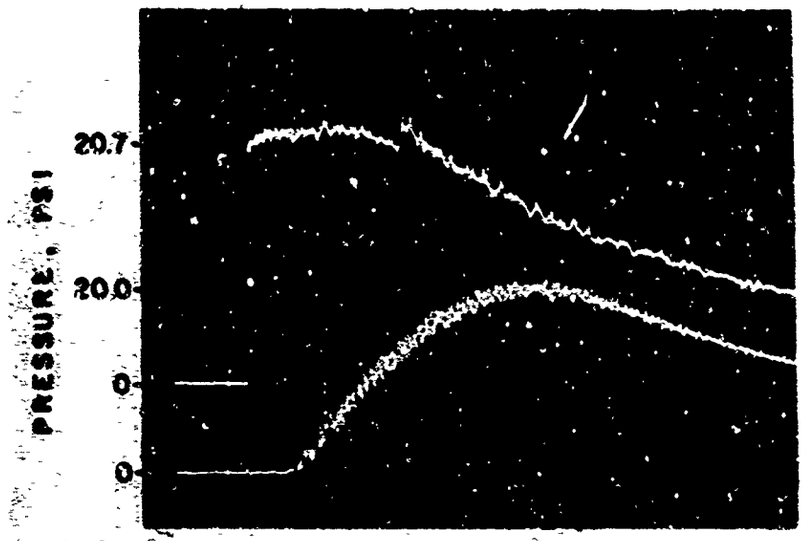
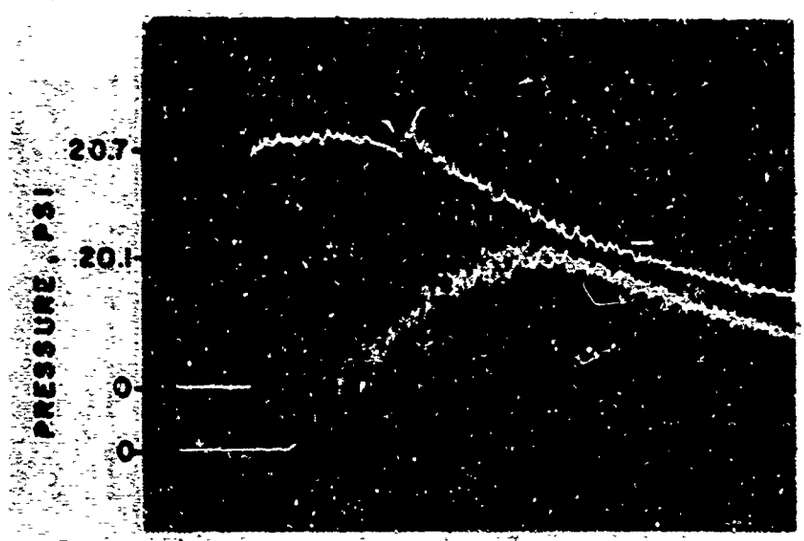


Figure C-12. Records from Position 1-C, Model 27-A, with Baffle



SHOT 417 TIME, 5 MSEC/DIV
(E) INPUT & SIDE-ON FILL, P_s = 20.7 PSI



SHOT 416 TIME, 5 MSEC/DIV
(F) INPUT & STAGNATION, P_s = 20.7 PSI

Figure C-12. Records from Position 1-C, Model 27-A, with Baffle (Continued)

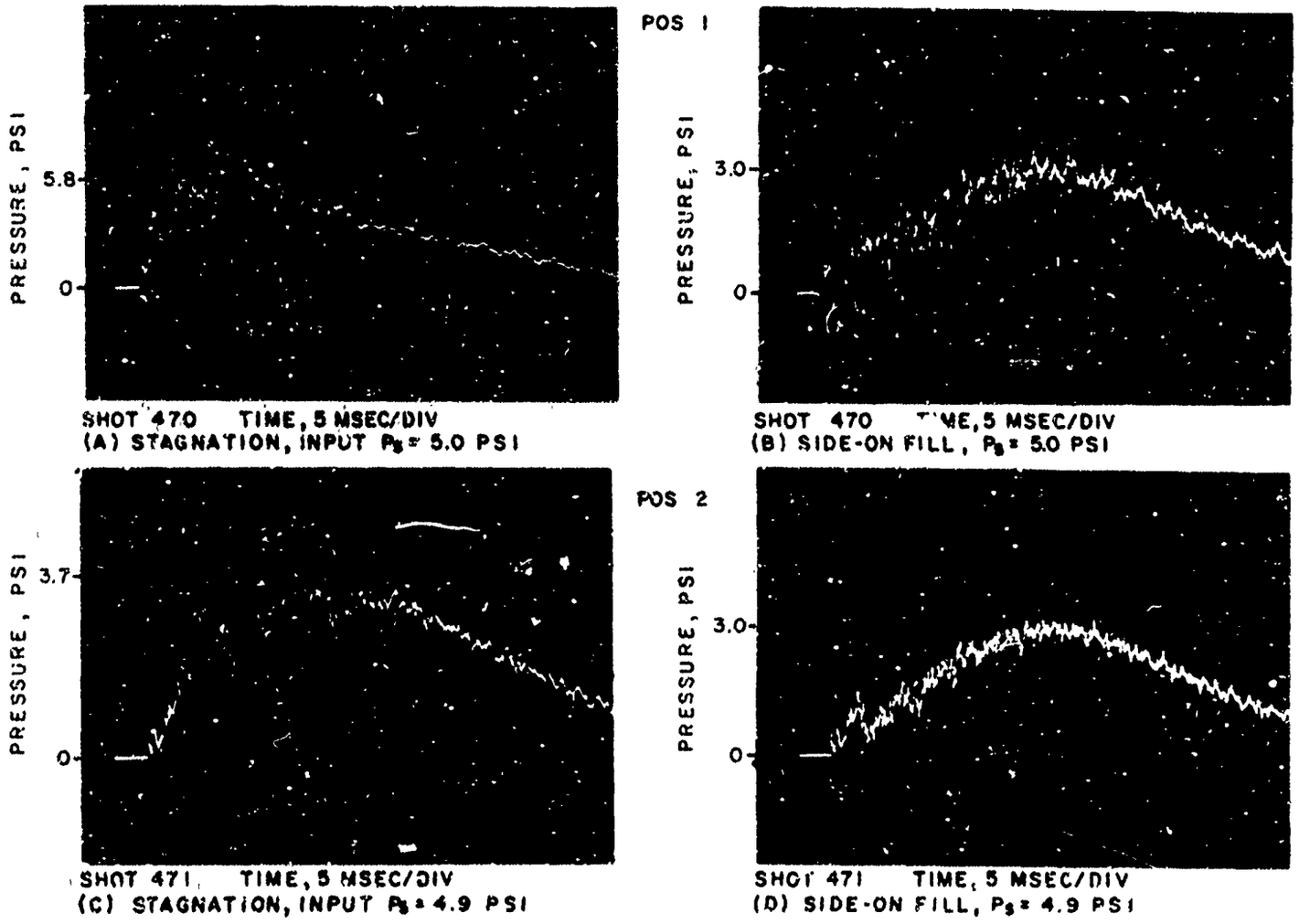


Figure C-13. Records from Position 1, 2 and 3, Model 25-A, P_s = 5 psi

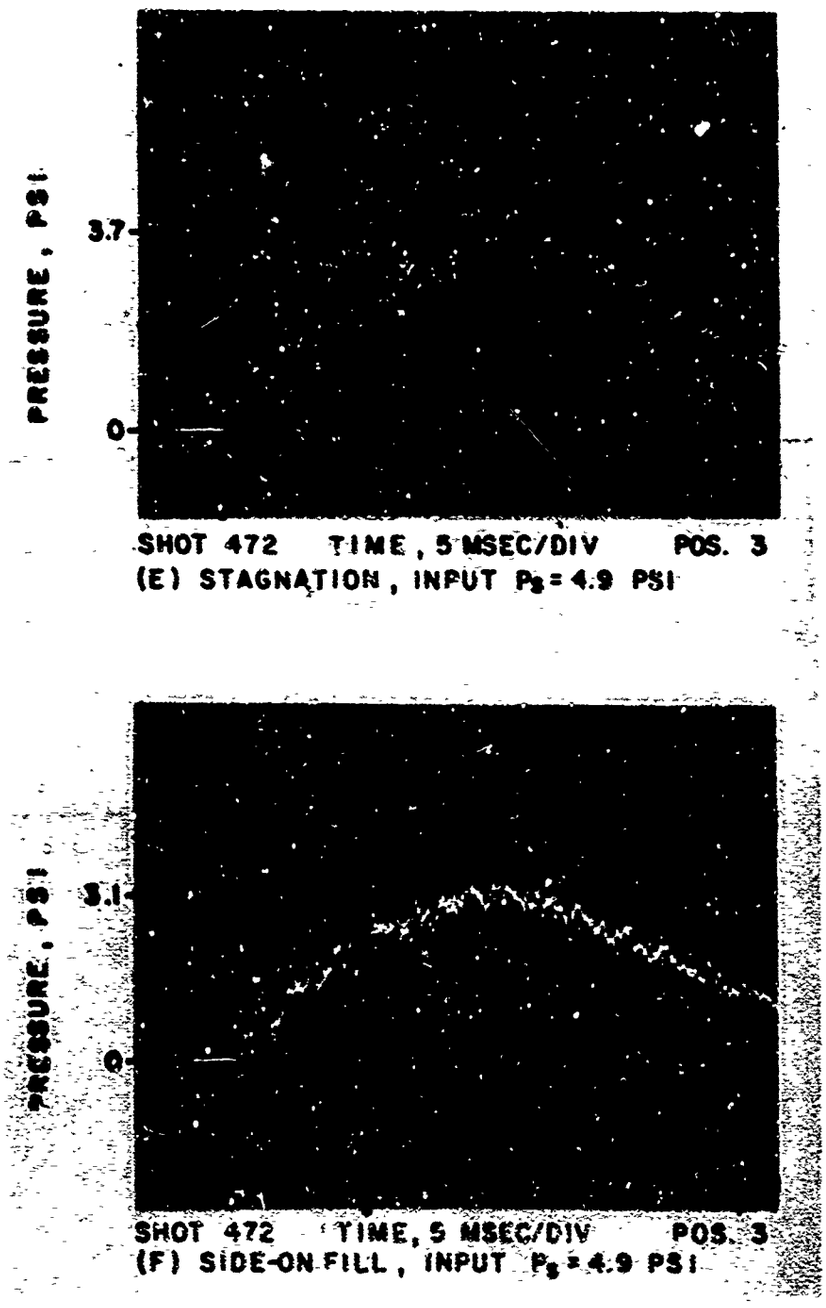


Figure C-13. Records from Position 1, 2 and 3, Model 25-A, P_s = 5 psi (Continued)

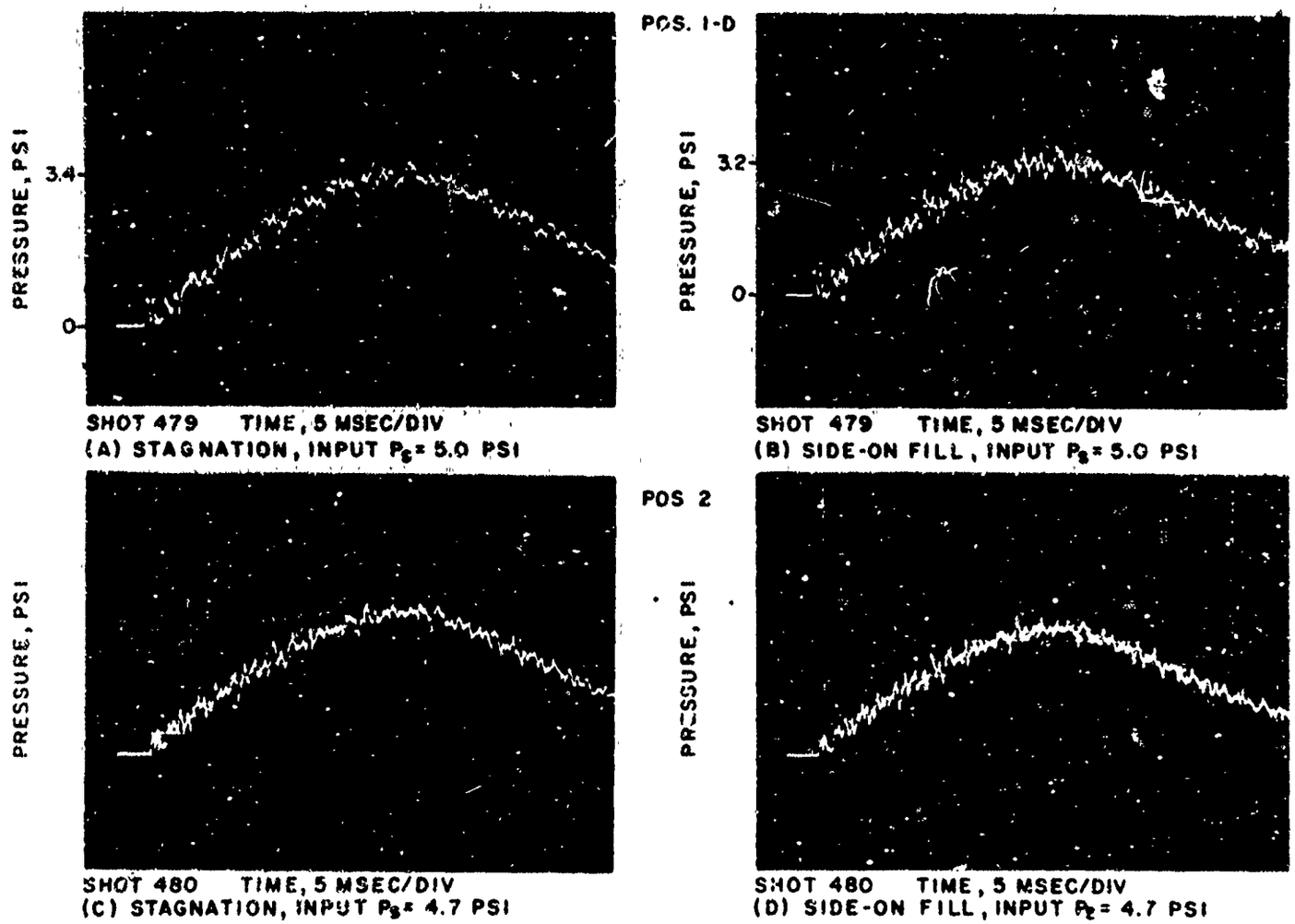
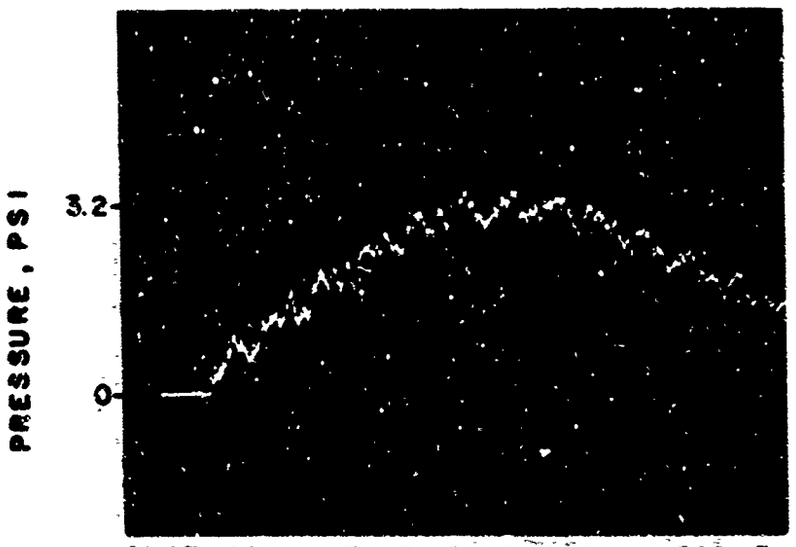
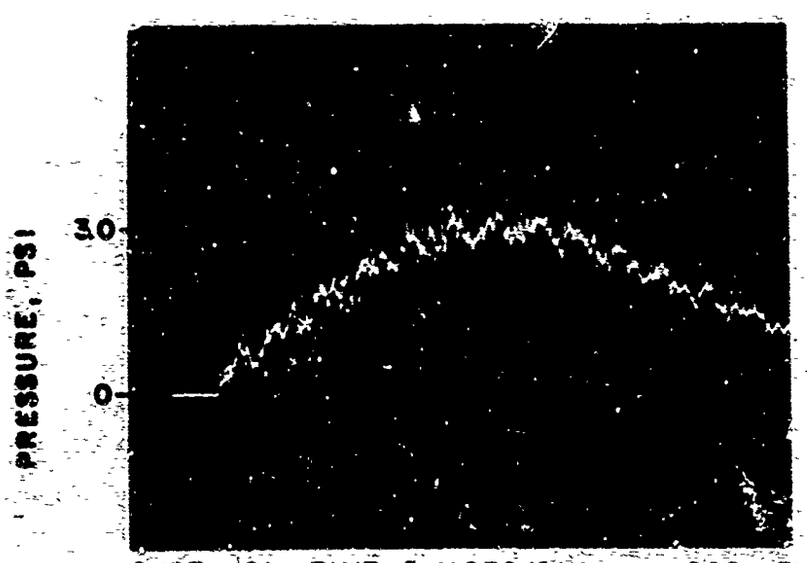


Figure C-14. Records from Positions 1-D, 2 and 3, Model 25-A, with Baffle, P_s = 5 psi



SHOT 481 TIME, 5 MSEC/DIV POS 3
(E) STAGNATION, INPUT P_s = 4.8 PSI



SHOT 481 TIME, 5 MSEC/DIV POS 3
(F) SIDE-ON FILL, INPUT P_s = 4.8 PSI

Figure C-14. Records from Positions 1-D, 2 and 3, Model 25-A, with Baffle, P_s = 5 psi (Continued)

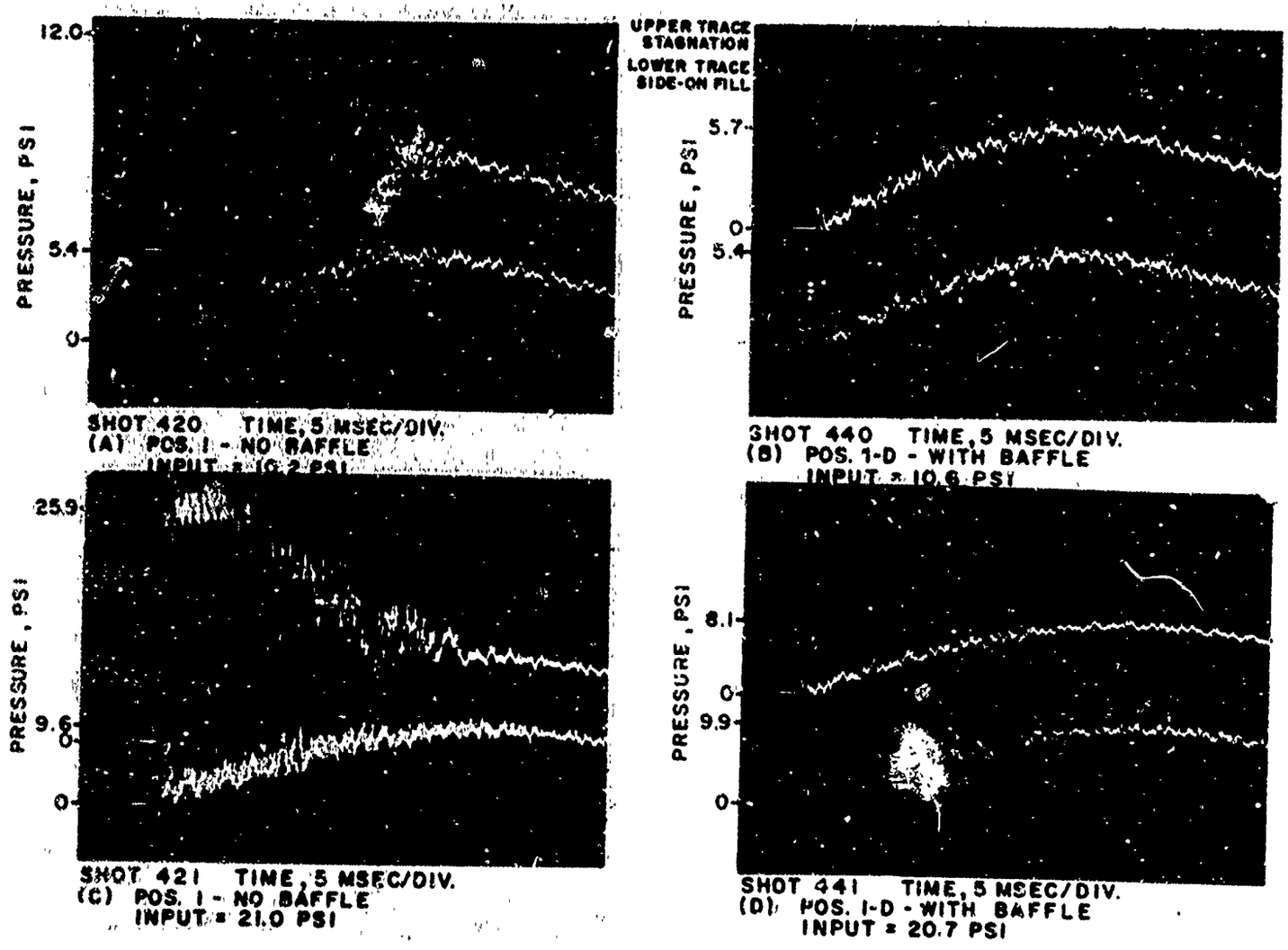


Figure C-15. Records from Positions 1, 2 and 3, Model 25-A, P_s = 10-21 psi

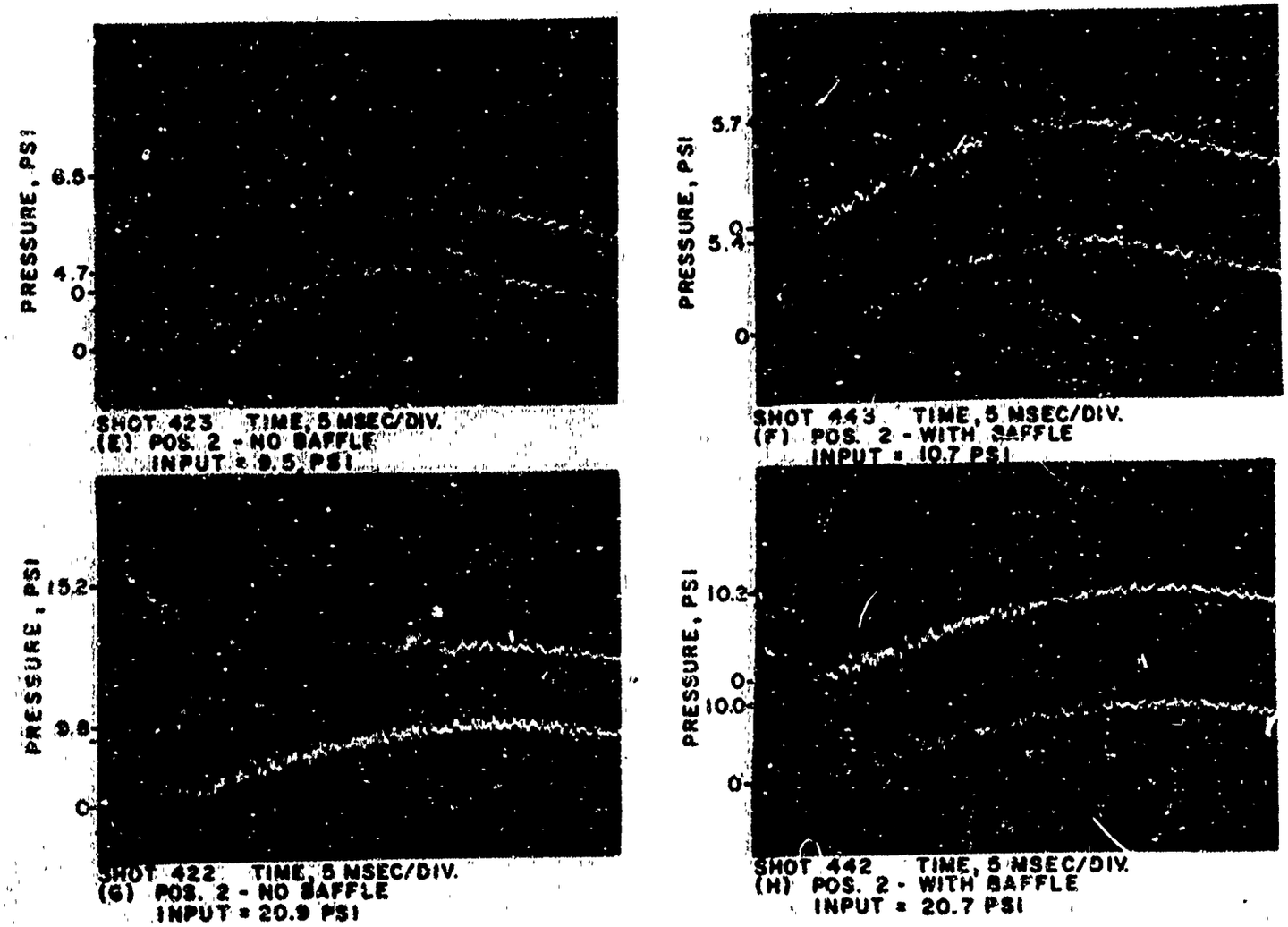


Figure C-15. Records from Positions 1, 2 and 3, Model 25-A, P_s = 10-21 psi (Continued)

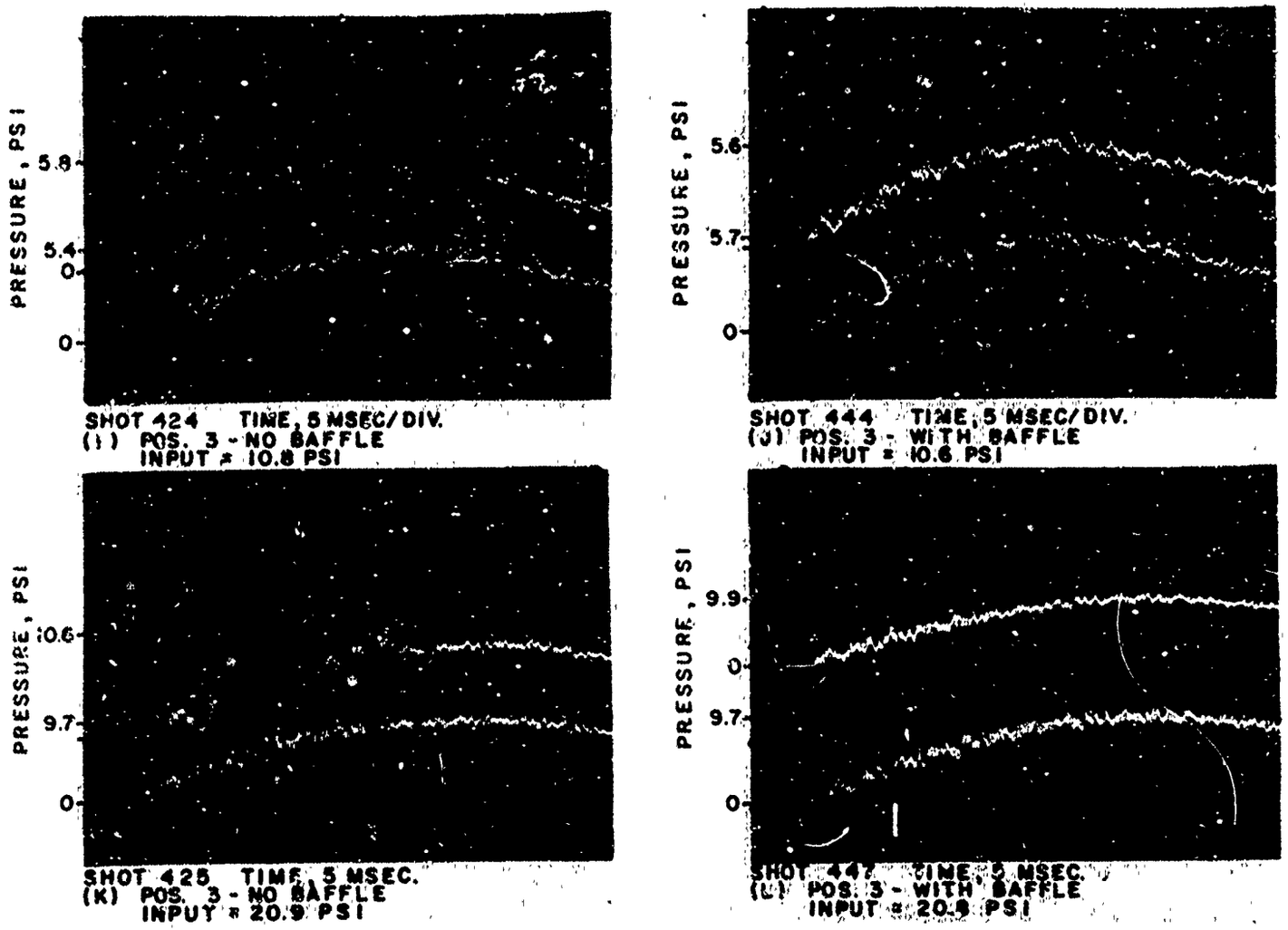


Figure C-15. Records from Positions 1, 2 and 3, Model 25-A, P_s = 10-21 psi (Continued)

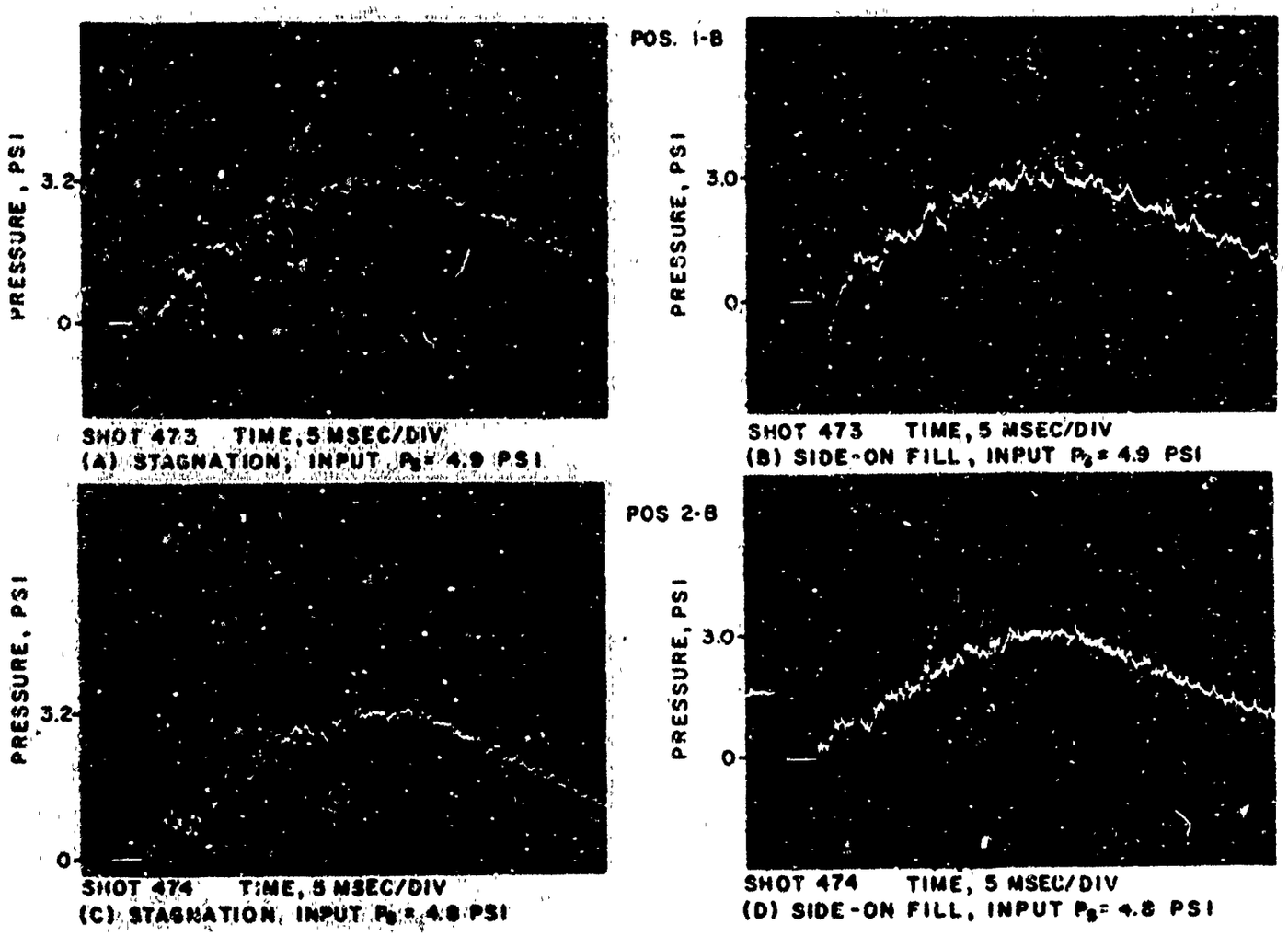
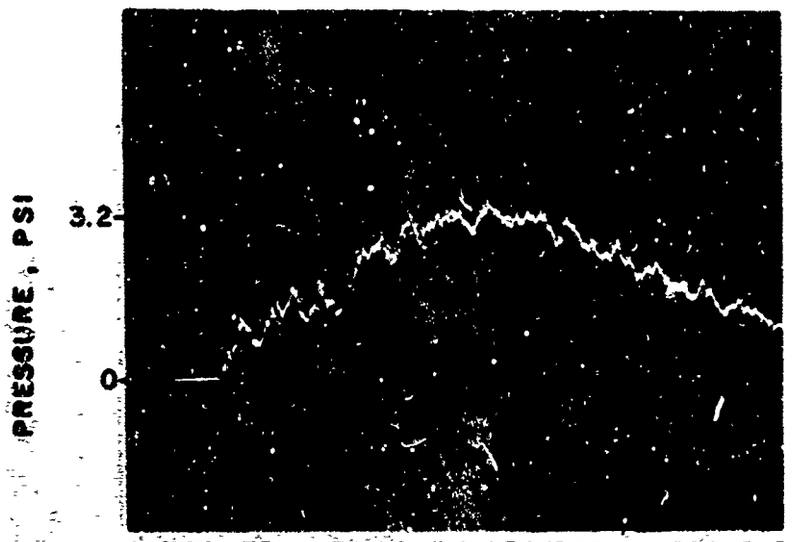


Figure C-16. Records from Positions 1-B, 2-B and 3-B, Model 25-A, P_s = 5 psi



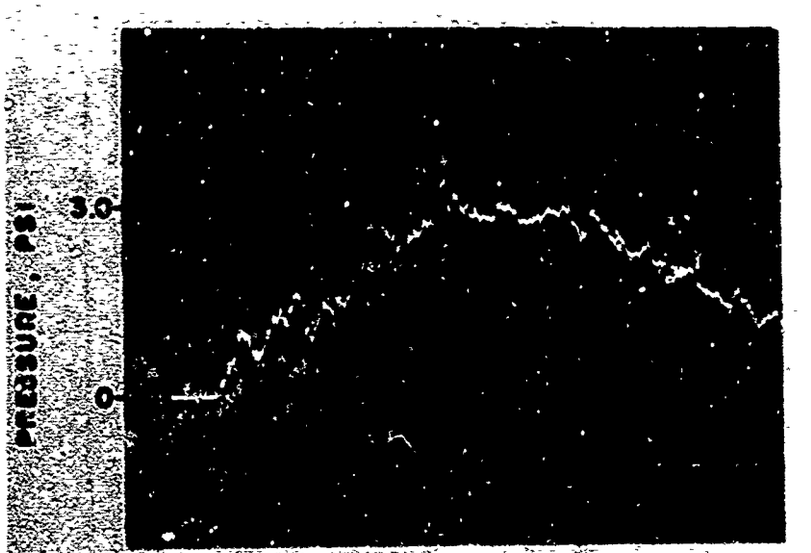


Figure C-16. Records from Positions 1-B, 2-B and 3-B, Model 25-A, P_s - 5 psi (Continued)

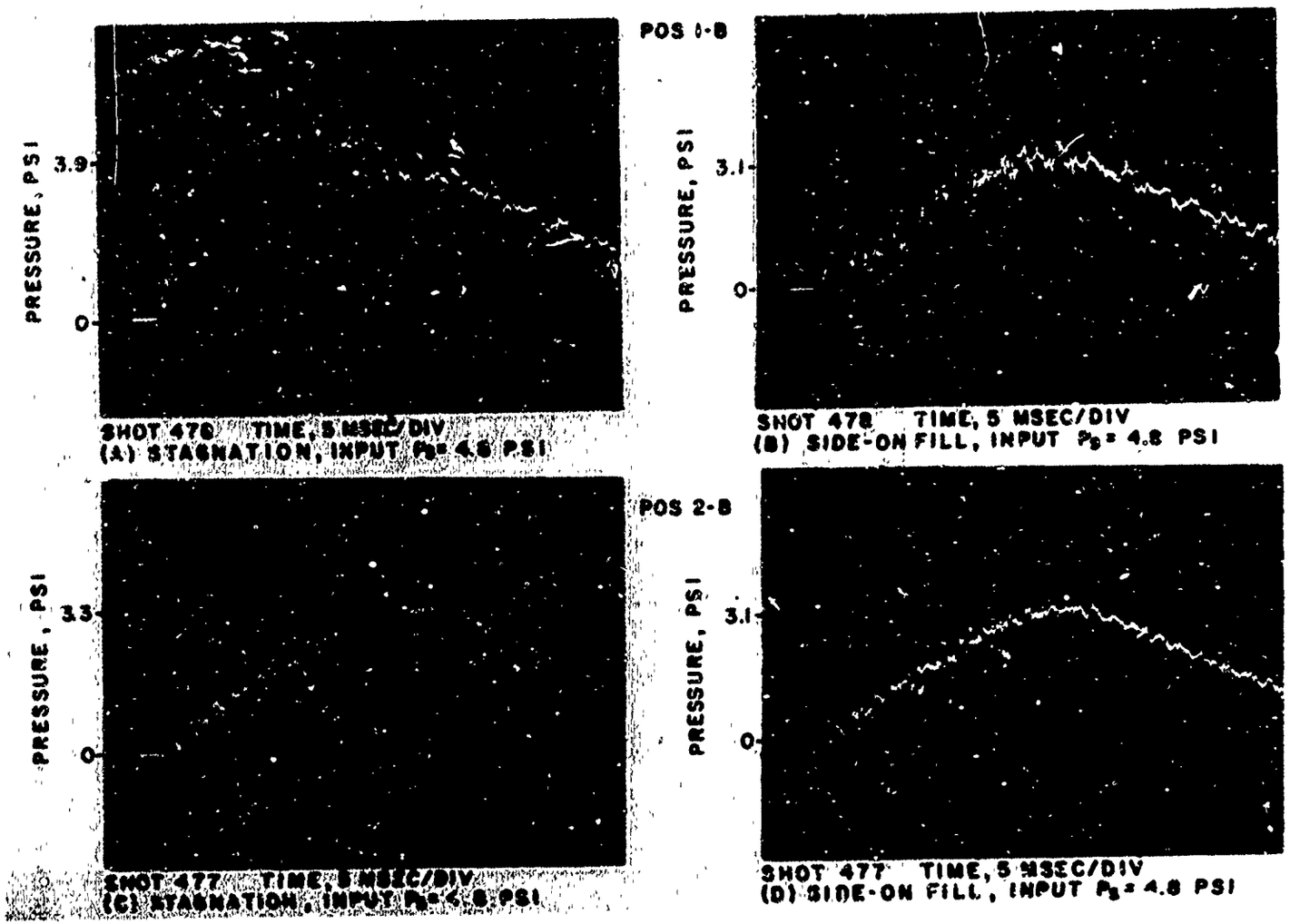
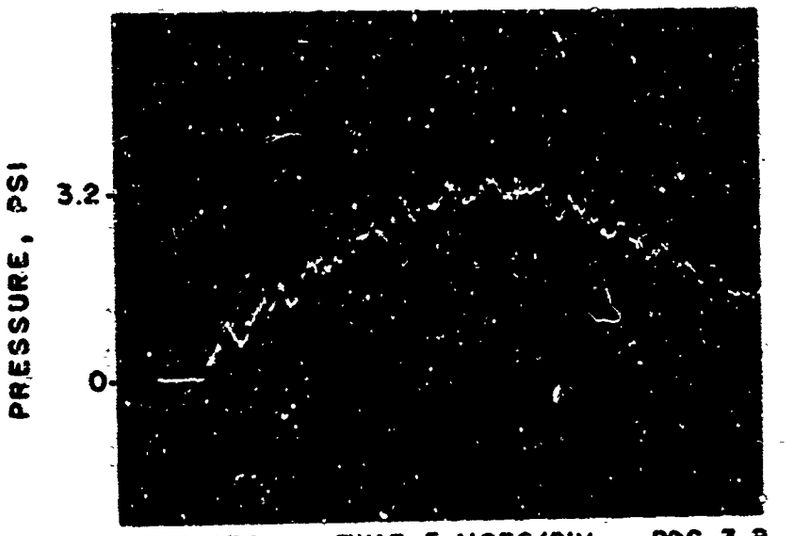
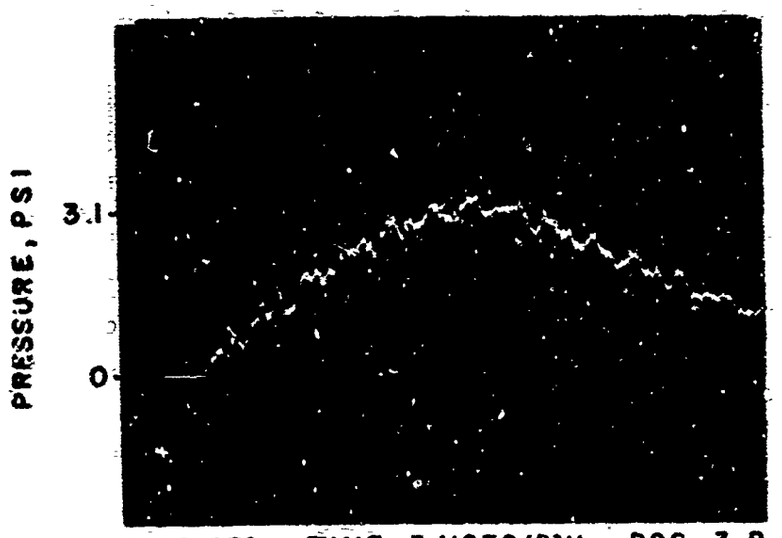


Figure C-17. Records from Positions 1-B, 2-B and 3-B, Model 25-A, with Baffle, P_s = 5 psi



SHOT 476 TIME, 5 MSEC/DIV POS. 3-B
(E) STAGNATION, INPUT P_s = 4.7 PSI



SHOT 476 TIME, 5 MSEC/DIV POS. 3-B
(F) SIDE-ON FILL, INPUT P_s = 4.7 PSI

Figure C-17. Records from Positions 1-B, 2-B and 3-B, Model 25-A, with Baffle, P_s = 5 psi (Continued)

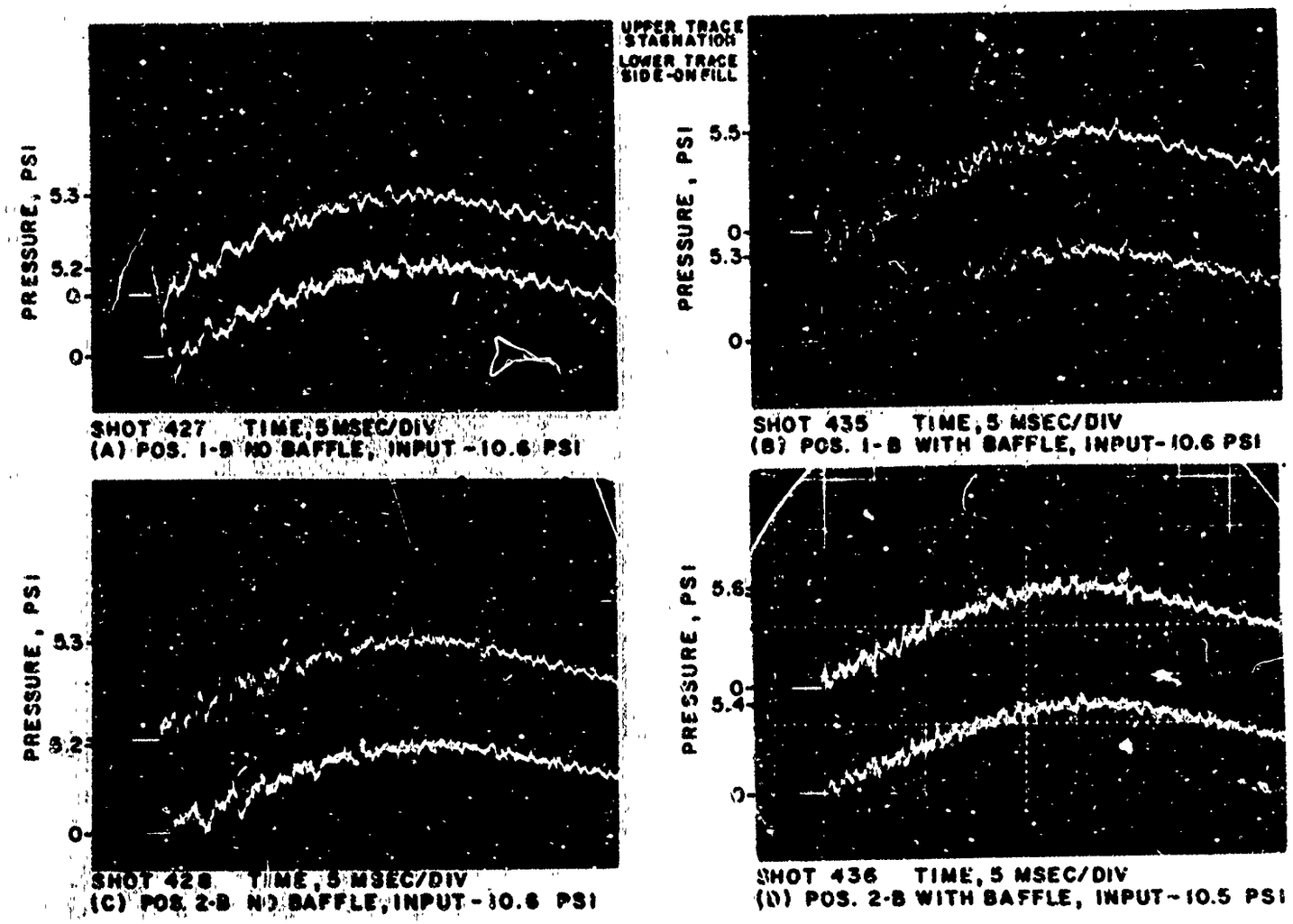


Figure C-18. Records from Positions 1-B, 2-B and 3-B, Model 25-A, P_s = 10.6 psi

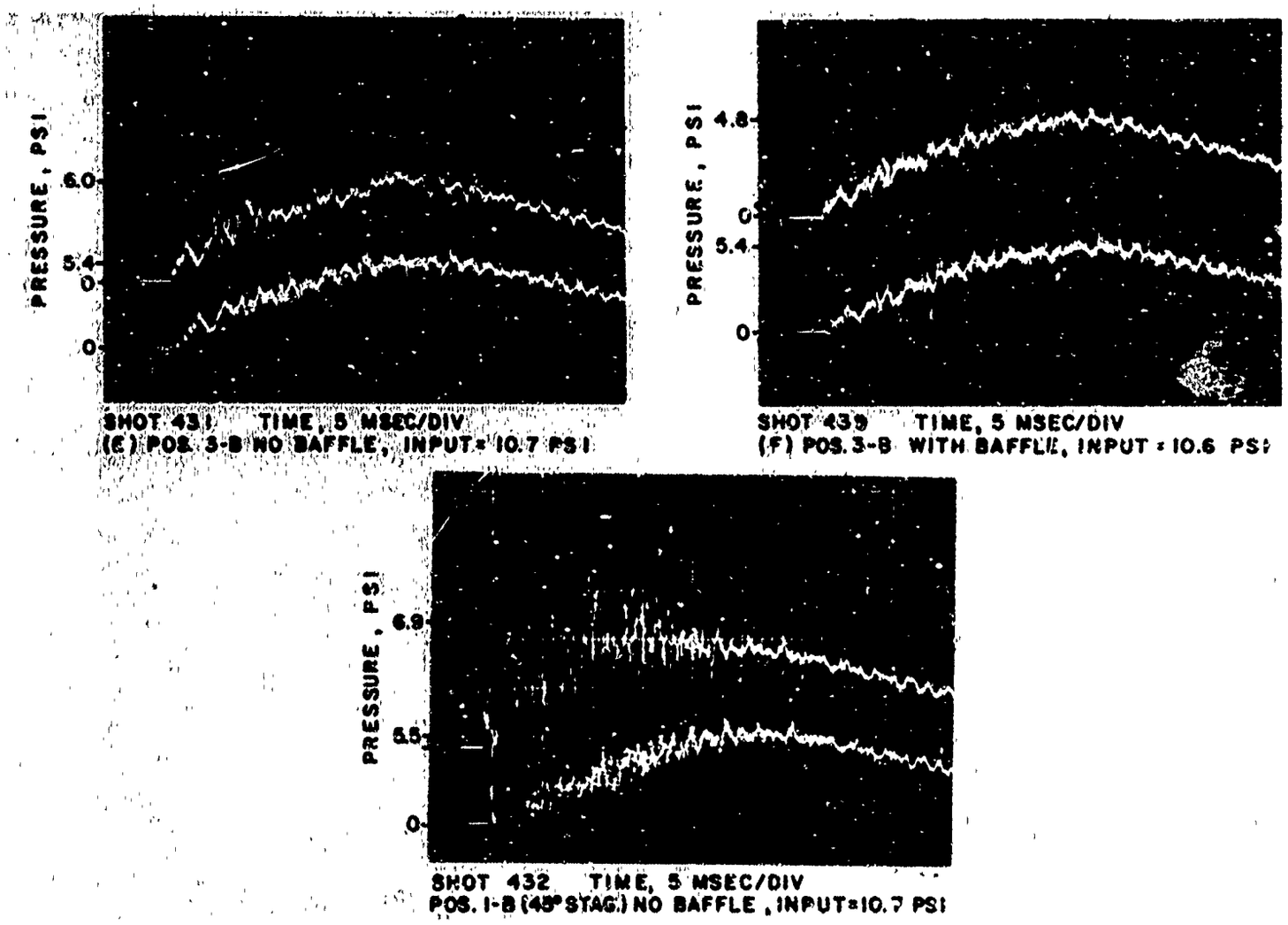


Figure C-18. Records from Positions 1-B, 2-B and 3-B, Model 25-A, P_s = 10.6 psi (Continued)

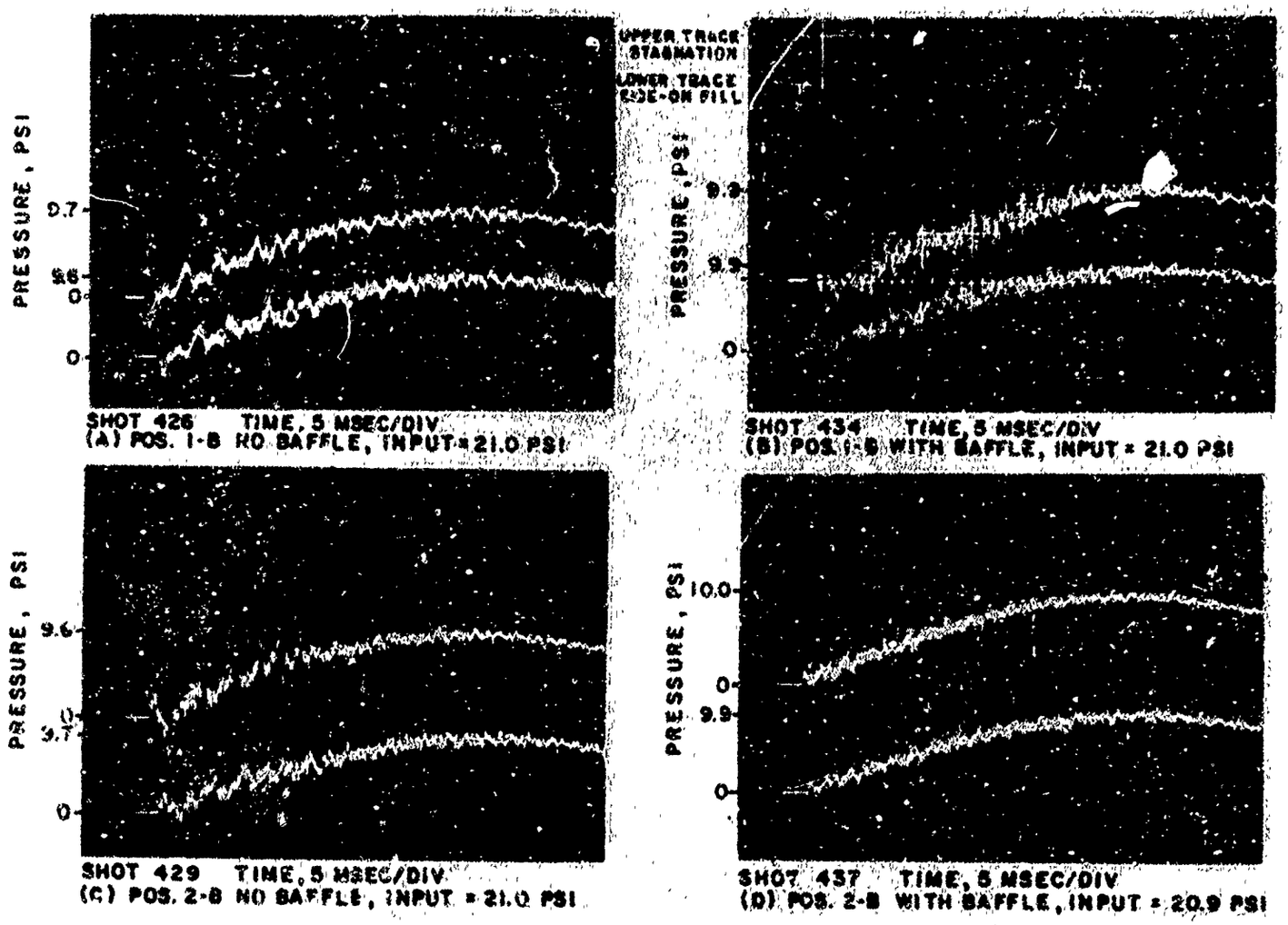


Figure C-19. Records from Positions 1-B, 2-B and 3-B, Model 25-A, P_s = 21 psi

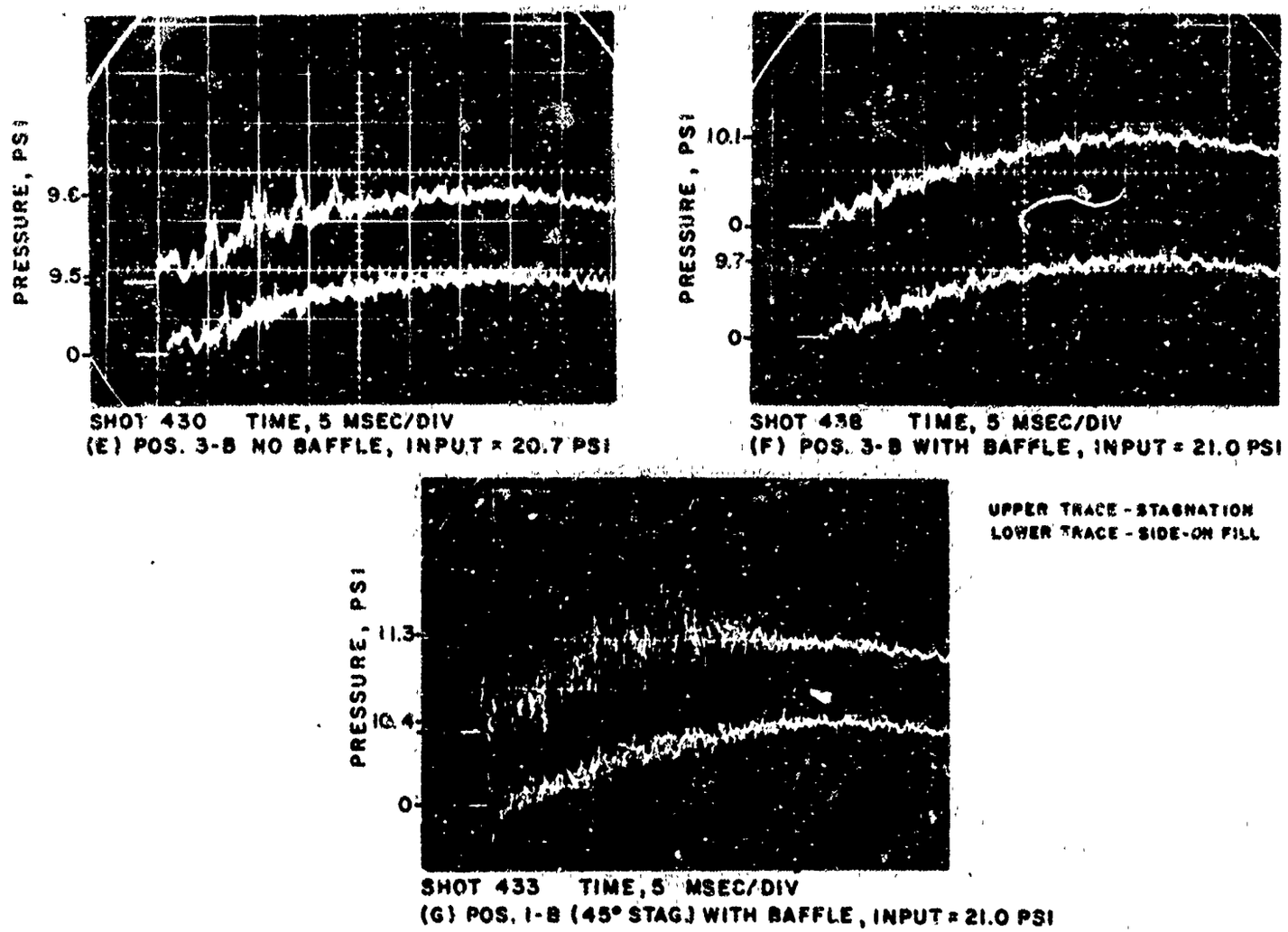


Figure C-19. Records from Positions 1-B, 2-B and 3-B, Model 25-A, P_s = 21 psi (Continued)

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13. ABSTRACT
Experimental results and two-dimensional computer code predictions are shown which illustrate the internal air flow inside model rooms when loaded externally by air shock waves in a 5-20 psi range. Stagnation and side-on fill pressure records are presented for three-dimensional models which indicate that flow patterns similar to those observed in the two-dimensional study are present inside the three-dimensional models. Baffles were placed inside the entrances of the models which re-directed the air flow to positions off the entrance centerline and gave more safe floor area.

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