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James Doyle Sell Mining Collection

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Silverspar Minerals Inc.

ASSAY RESULTS

Hole	Total Depth	From	To	Length	Silver (oz/t)	Fluorite (%)
391	175	15	30	15	3.74	0.24
391	175	120	135	15	1.30	4.30
392	185	115	155	40	2.71	6.07
393	200	35	50	15	2.54	4.56
393	200	120	140	20	0.37	11.78
394	245	180	215	35	1.72	14.47
395	220	125	160	35	0.96	12.84
396	195	100	165	65	2.29	15.48
397	145	85	125	40	2.85	8.41
398	215	30	65	35	0.88	10.43
399	145	95	100	5	2.64	1.60
400	125	95	105	10	2.04	5.05
401	175	135	155	20	1.89	7.73
402	185	120	150	30	1.98	2.52
403	110	25	35	10	1.71	10.55
403	110	90	100	10	0.57	13.80
404	115	45	55	10	1.67	26.20
405	305	85	125	40	0.82	13.23
405	305	230	265	35	2.11	9.39
386	160	20	50	30	0.01	10.32
387	145	25	85	60	0.05	11.93
388	105	10	50	40	0.03	7.86
389	115	25	50	25	0.37	12.40
389	115	80	105	25	0.10	34.34

"Reliable Reporting"

NO.132(1992)
JULY 9, 1992

WESTERN CANADIAN INVESTMENTS

[redacted]

Pacee is Carl Seaman. Pacee is Cheng Jan don.

supplying equipment for the Dole Fresh Fruit Co. of

6/24

FROM: J. D. SELL ← Silver West. La Paz Co AZ

TO: W & K

ORBEX Industries Inc (Vancouver) was buying it from people who had options to buy from NWZ Expl- (GCNL, #39, p. 3, Feb 24, 1989)

SILVER GLANCE Resources Inc (Vancouver) also in district GCNL #83 (April 30, p. 4, #203 Oct 19, 1990, and #113 June 12, 1991, said they were starting to drill as of July 10. ~~Their~~ hole No. 242 had 90' of 5.7 opt AZ in the Papago Zone. Tom whose hole?

Silver District Recap:

Produced:

Sec 12, 13, 23, 24, 25 T 45 R 23W

Black Rock Mine 171,000 tons of 4.72 oz Ag = 809,289 oz Ag
of 3.56% Pb = 12,200,000 # Pb
of 10.2% Zn = 34,950,000 # Zn

"

Pacific Mine 404,400 tons of 6 oz Ag = 2,426,000 oz Ag
of 4½% Pb = 36,396,000 # Pb
of 10% Zn = 80,880,000 # Zn

Sec 36, T 35, R 23

Revelation Mine say 200,000 tons of 7.6 oz Ag = 1,520,000 oz Ag
of 0.6% Pb = 2,300,000 # Pb

Sec 9 T 4 R 23

Red Cloud + Clip say 250,000 tons of 6.2 oz Ag = 1,559,000 oz Ag
of 0.5% Pb = 2,329,000 # Pb
= 14,200 # Zn

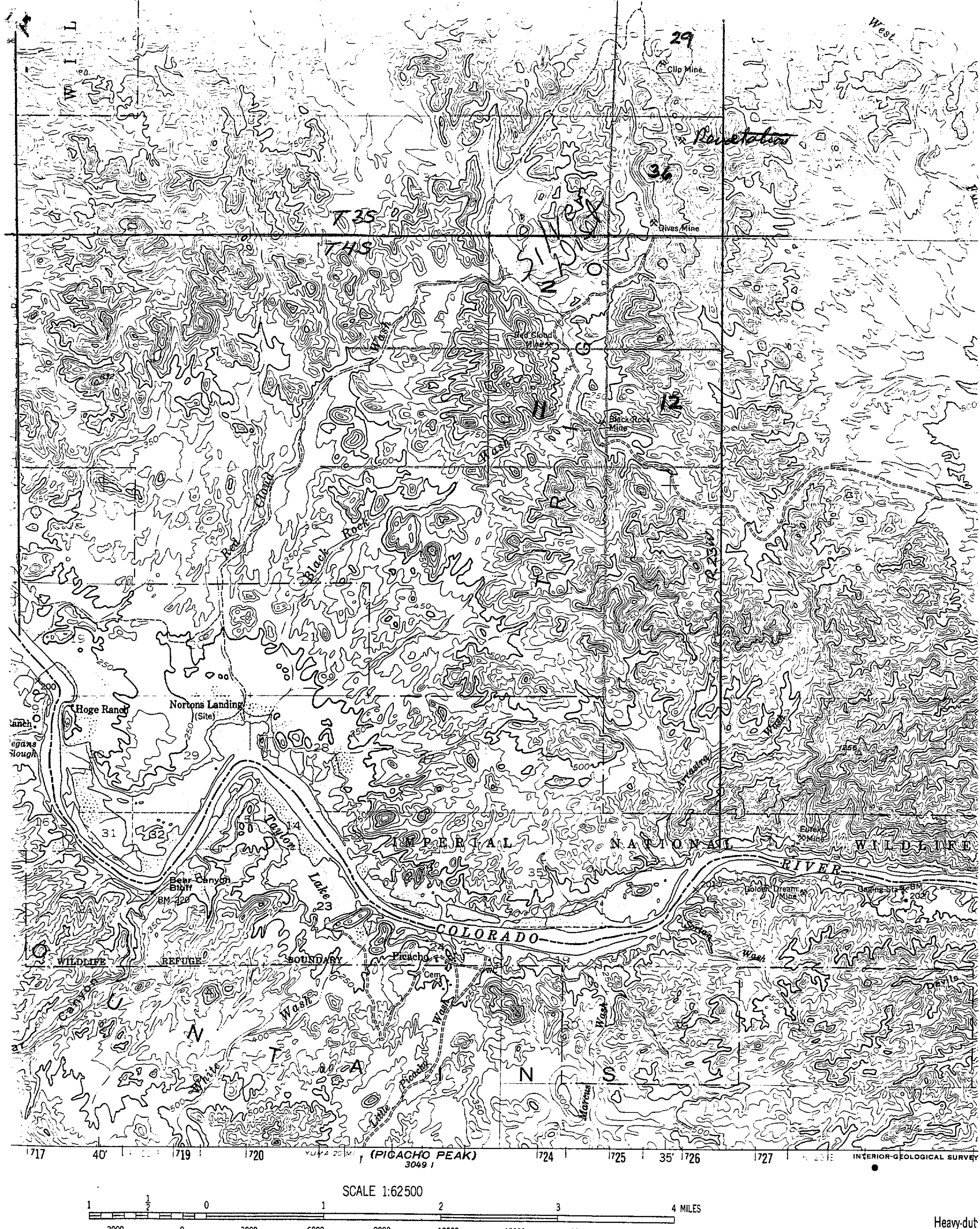
Produced: 1,025,400 tons est of ≅ 6.2 oz Ag = 6,314,288 oz Ag
≅ of 2.6% Pb = 53,225,000 # Pb
≅ of 5.76% Zn = 118,144,200 # Zn

Drilled out estimate:

Revelation Zone (uncomplete drilling) 4 Mill tons 7½ oz = 30,000,000 oz Ag)
NSZ Black Rock 3.58 Mill @ 3.37 oz = 12,064,600 oz Ag
(≅ = 0.30% Pb + (in W. Zone) = 20,000,000 # Pb.

8,405400

Resource 8.61 mill tons of ≅ 5.6 oz Ag of 48,379,000 oz Ag
≅ 0.43% Pb of 73,225,000 # Pb


Clip Mine
Dives Mine
Red Cloud Mine
Black Rock Mine
T35
T4S
29
36
2
11
12
Red Cloud Wash
Black Rock Wash
Arrastra Wash
Hoge Ranch
Nortons Landing
(Site)
Bear Canyon Bluff
BM 320
Taylor Lake
Picacho
Cem
IMPERIAL NATIONAL WILDLIFE
WILDLIFE REFUGE BOUNDARY
COLORADO
RIVER
Golden Dream Mine
Gaging Sta BM 202
Eureka Mine
White Wash
Little Picacho Wash
Marcus Wash
(PICACHO PEAK)
3049 I
INTERIOR-GEOLOGICAL SURVEY
SCALE 1:62500
4 MILES
21000 FEET

Heavy-dut

Cross Reference: Red Cloud Mine La Paz Co, AZ

VEIN MINERALOGY, PARAGENESIS, AND FLUID INCLUSION STUDY OF THE SILVER DISTRICT, LA PAZ COUNTY, ARIZONA

Mark A. Bradley
Dept. of Geosciences
University of Arizona

The Silver District - located 59 km. north of Yuma, Arizona, in the southern end of the Trigo Mountains - produced over 1,500,000 oz. of silver and 2,300,000 lbs. of lead between 1880 and 1949 (Wilson, 1951). In recent years, the district has been best known as the site of the Red Cloud Mine, a major source of high-quality wulfenite, vanadinite, and mimetite specimens (Edson, 1980). The district has been the subject of two previous M.S. theses (Parker, 1966; Pietenpol, 1983) detailing the petrology, mineralogy, and structural geology of the area; this study focuses on mineral paragenesis, formational temperatures, and fluid chemistry as determined through outcrop, thin-section, and fluid inclusion determinations.

The lithologies in the Silver District and elsewhere in the Trigos can be subdivided into four major groups - Precambrian schist, gneiss, and granite; Mesozoic quartz-sericite-K-feldspar schist, correlated to the Pelona-Orocopia Schist of southern California (Haxel and Dillon, 1978); Laramide granodiorite stocks, dated at 73 m.y. (Weaver, 1982); and a 600 - 1000m-thick sequence of Tertiary andesitic and rhyolitic volcanics. This regional lithology is bisected by a large detachment fault, exposed in the northern Trigos and extending beneath the range (Garner et. al., 1982). The upper plate, composed of Tertiary volcanics and Precambrian crystalline rocks, is further deformed into a series of NW- and NE-trending anti- and synforms, cut by NW-trending high-angle normal faults generally dipping SW, indicating that detachment transport was to the southwest (Garner, op. cit.).

The district geology reflects the lithology and structural elements of the Trigos. Precambrian schist crops out in the south and east, showing a baked contact in the south and a fault contact to the east with Laramide granodiorite. The intrusive is also faulted in the west against Tertiary volcanics, which make up most of the exposed lithology in the northern two-thirds of the district. Major structures consist of high-angle normal faults, trending NW to NE and dipping E or W, that form a series of half-grab-

ens and horst blocks across the district. Mineralization in the district is restricted to a set of narrow veins localized along three major fault zones: the Red Cloud Fault in the west, containing the Red Cloud and Geronimo mines; the central McNeal-Padre Kino faults, hosting the Black Rock, Princess-Hamburg and Padre Kino mines; and a large, unnamed fault system on the east side that contains a string of prospects from the Mendevil claims in the south to the Clip Mine in the north.

The primary gangue mineralogy consists of manganiferous, Fe-oxide-bearing "black" calcite, fluorite, barite, and quartz. The veins have been heavily oxidized from the surface to the water table (153.3 m depth) and an extensive secondary mineral suite has developed, including chlorargyrite, cerussite, anglesite, wulfenite, vanadinite, smithsonite, willemite, hemimorphite, mimetite, cinnabar, hematite, Mn-oxides, and a recently discovered occurrence of the rare Hg-Ag halide tocornalite (D. Shannon, pers. commun., 1985). The only sulfide phase present is argentiferous galena; however, the presence of smithsonite and other Zn-oxidation products suggests that sphalerite was also originally deposited. The veins exhibit classic open-space-filling textures, with rhythmic banding, cockade and colloform structures displayed throughout the district. Alteration of the wall rock is limited to silicification, sericitization, and hematization of vein selvages, with weak chloritization developed in the granodiorite and andesite (Parker, op. cit.).

The paragenetic sequence of the primary mineralization can be summarized as follows:

Stage I - Deposition of massive black calcite, fluorite, and quartz, with minor barite; virtually all sulfide and most silver mineralization was deposited in this stage.

Stage II - Brief stage of banded quartz-calcite deposition, with accessory fluorite; minor silver mineralization as Ag-bearing Mn-oxides.

Stage III - Massive white barite, with intergrown quartz and calcite; much hematite and Mn-oxide mineralization, but no Ag-values.

These stages display a district-wide zonation. Stage I mineralization (calcite-fluorite-sulfide) is best developed in the south and along the Red Cloud Fault to the west, while calcite-quartz and barite-quartz mineralization predominates to the north and

east. Galena is contained exclusively within Stage I mineralization, and zinc minerals are also abundant in the south of the district (Wilson, 1951).

Fluid inclusion measurements were obtained from over 40 doubly-polished sections of fluorite, calcite, and quartz, representing all three stages of mineralization. The mean filling temperature of fluorite was 153.5 C. Calcite measurements from Stage I mineralization show a consistent south-to-north trend of decreasing temperature, from means of 164 - 174 C at the Red Cloud and Princess-Hamburg to 138 C at the Clip Mine. Stage III filling temperatures are fairly consistent at 128 C. Salinity measurements made from freezing point observations are more constant, with a total variation from 18 wt% to 14.5% in the north.

The evidence from gangue distribution, sulfide occurrence and fluid inclusion data indicates that the mineralizing solutions entered the district from the south and migrated north along major fault zones, in the process losing temperature and precipitating fluorite and calcite. As transport continued, the solutions also experienced increases in pH and f_{S_2}, as indicated by the change from fluorite- to barite-dominated assembleges. These shifts in chemical parameters were probably generated by boiling and by reaction with hematite-rich wall rocks. The salinity values are high for "normal" epithermal systems, but coincide well with the values obtained by Beane, Wilkins and Hedrick (1985) for epithermal systems in the upper plates of detachment faults. They propose that the fluids in these systems are basinal brines, formed in extensional basins during detachment events and transported via the detachment structure. Certainly, the high salinity values of Silver District minerals strongly support this theory.

The best target areas for future exploration in the district lie to the south and west, where Stage I mineralization and its attendent lead and silver values are concentrated. In particular, the Red Cloud Fault in the vicinity of the Geronimo Mine shows potential for further mineralization at depth.

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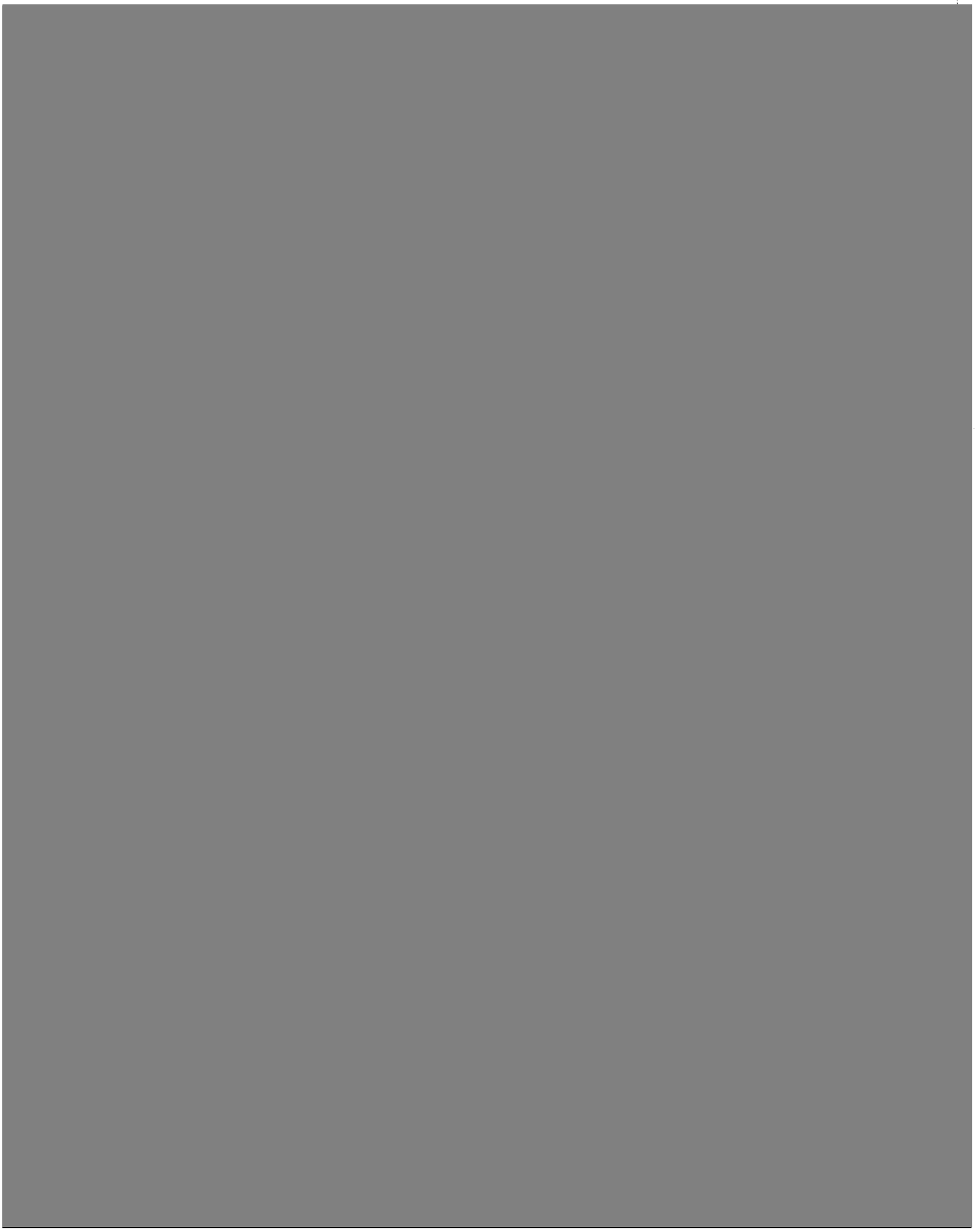
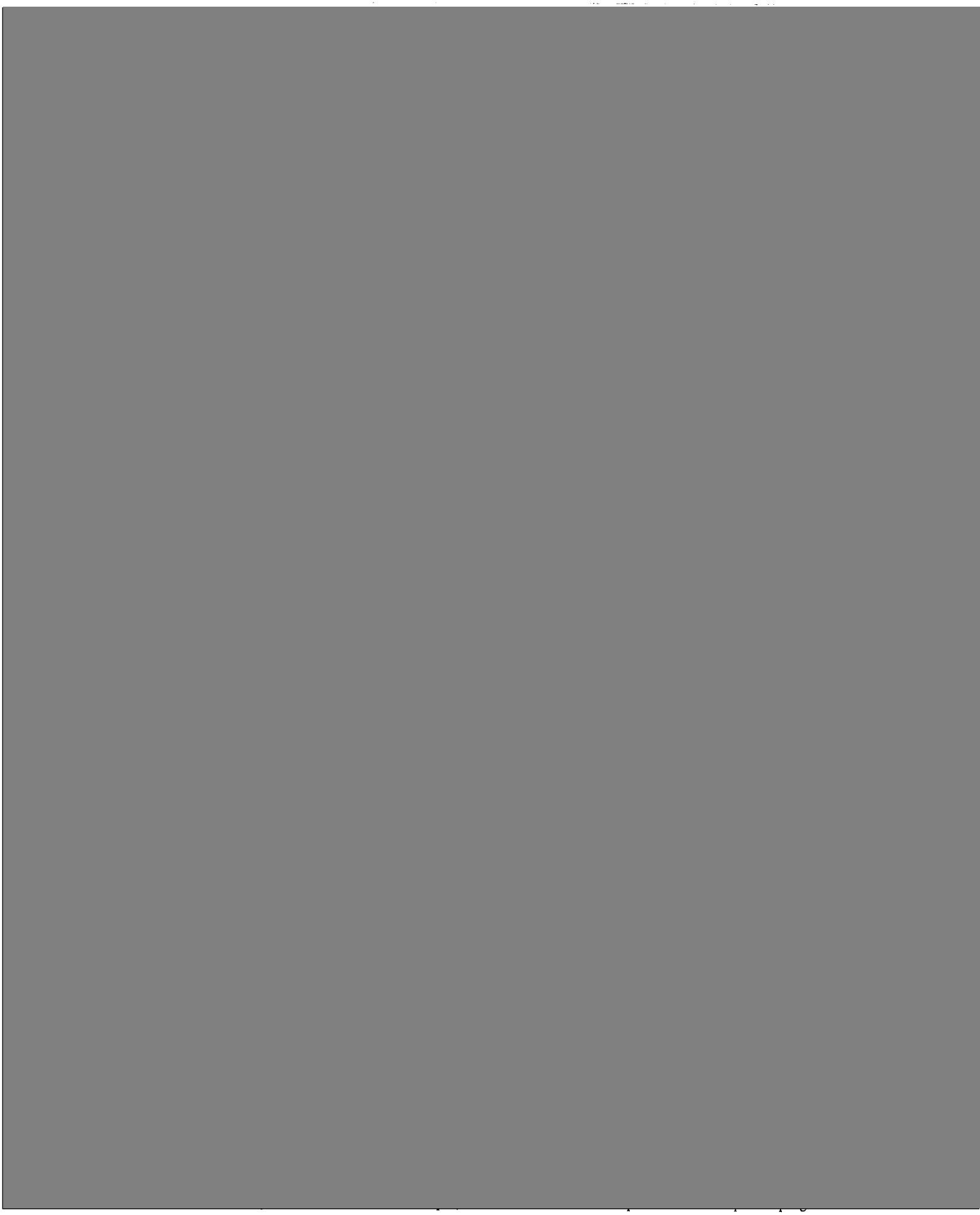
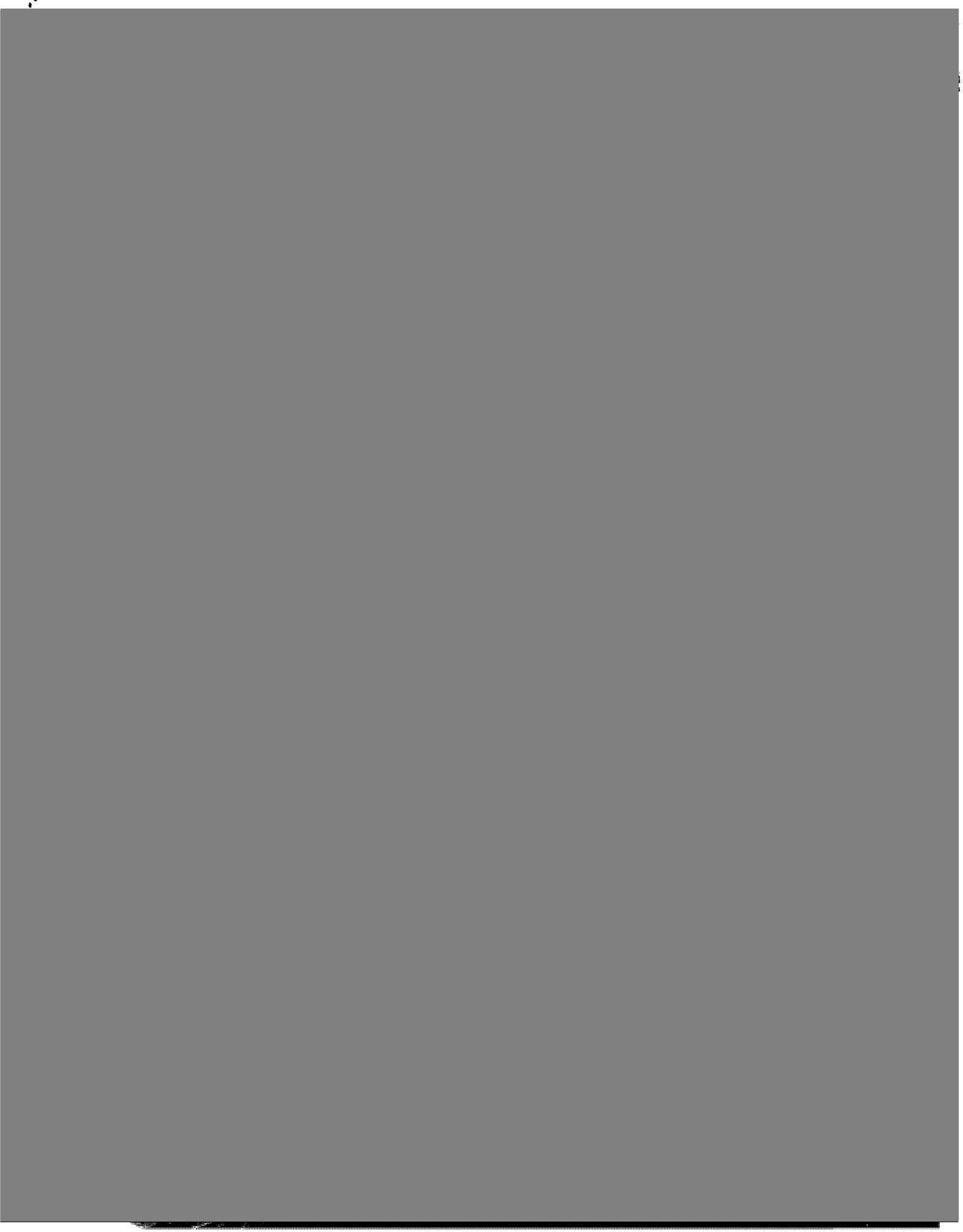
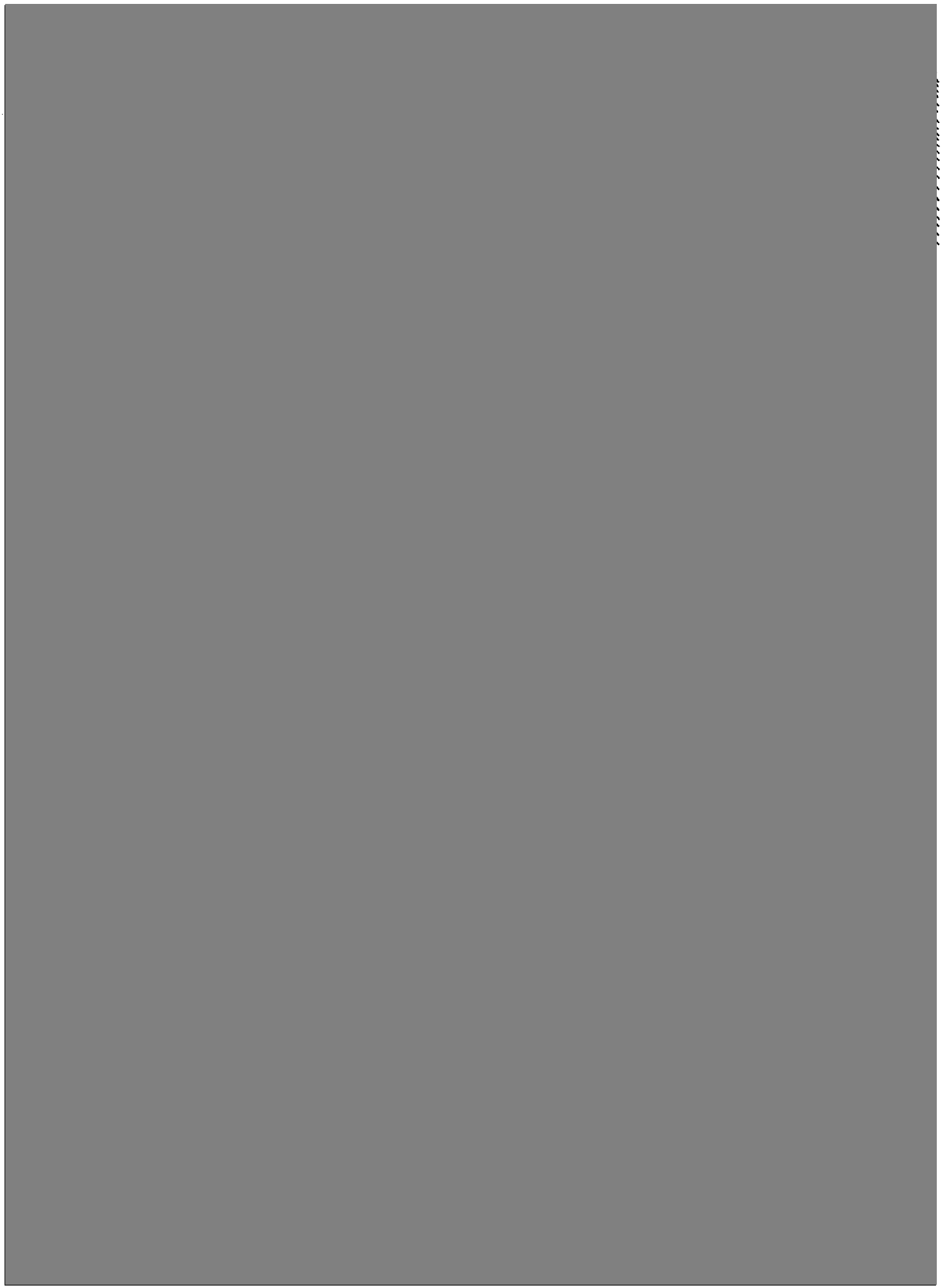
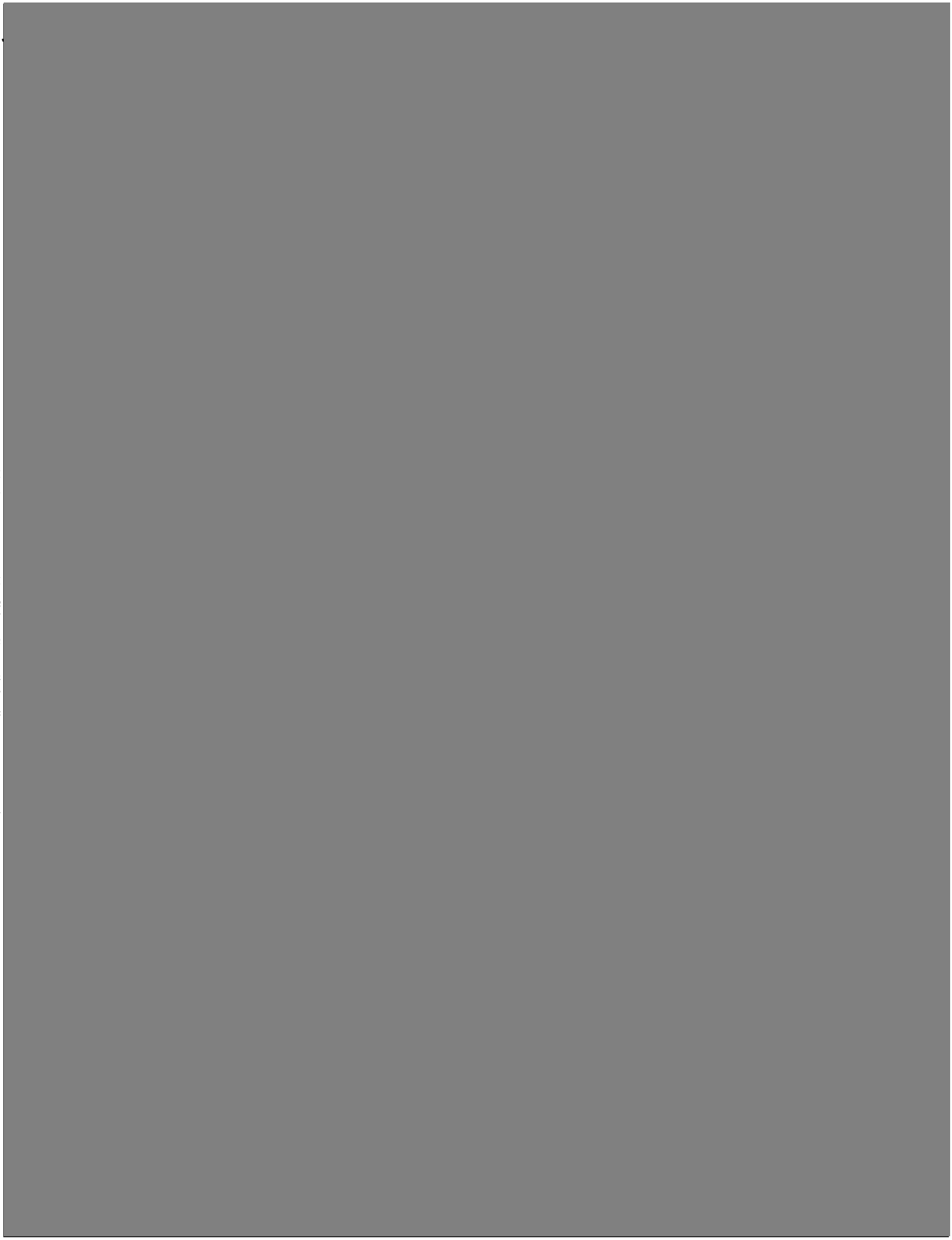


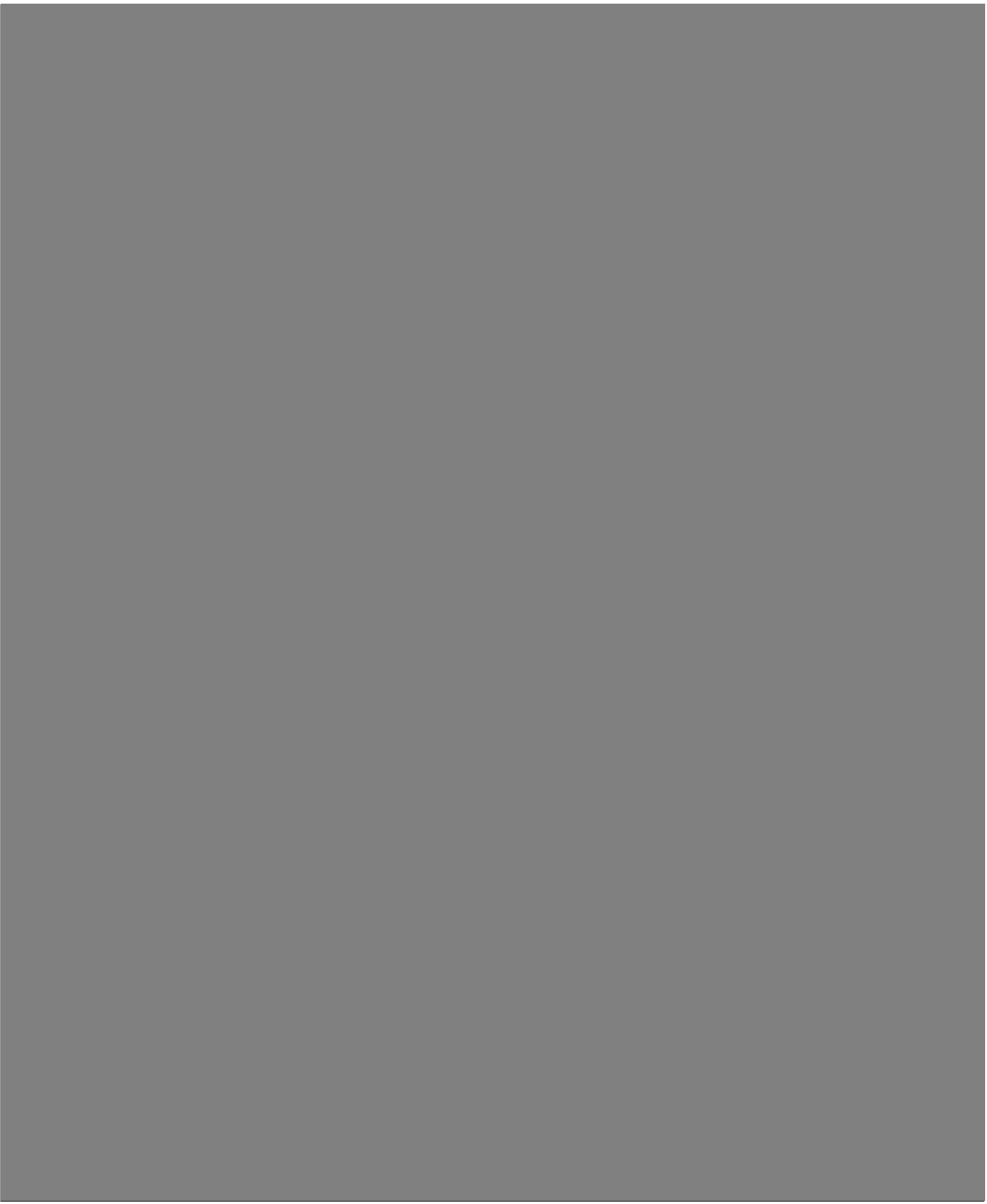


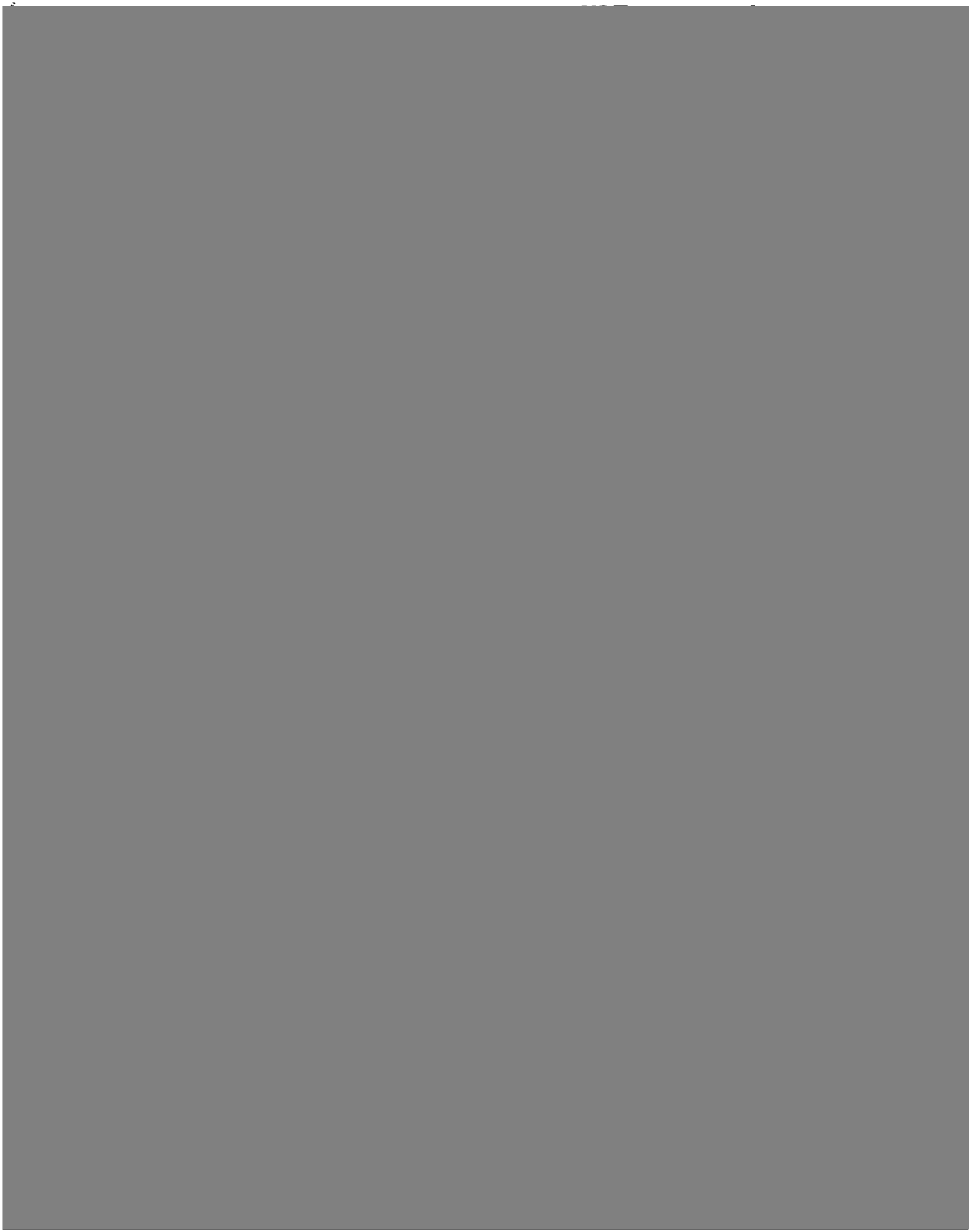


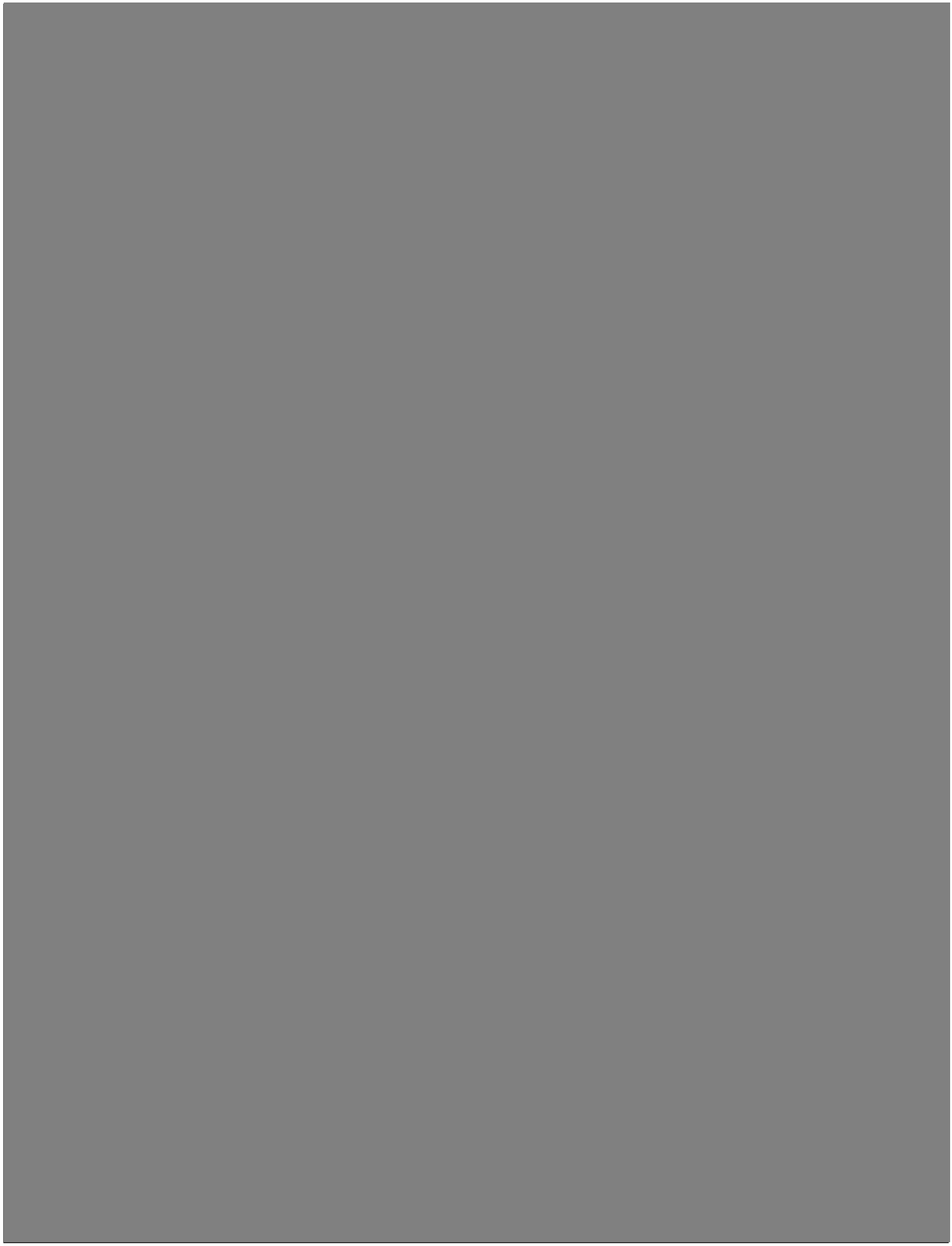
From Hamburg Papers

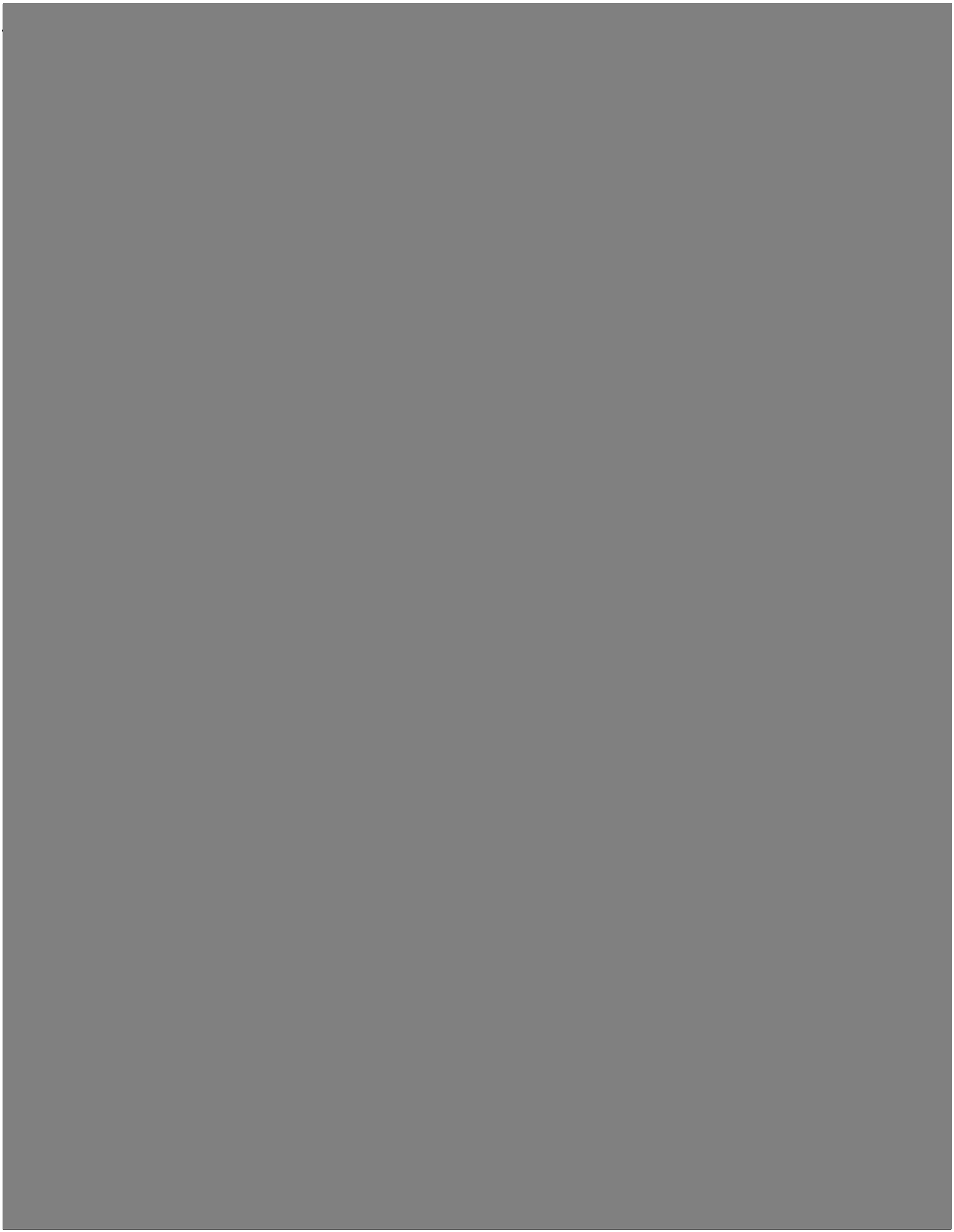


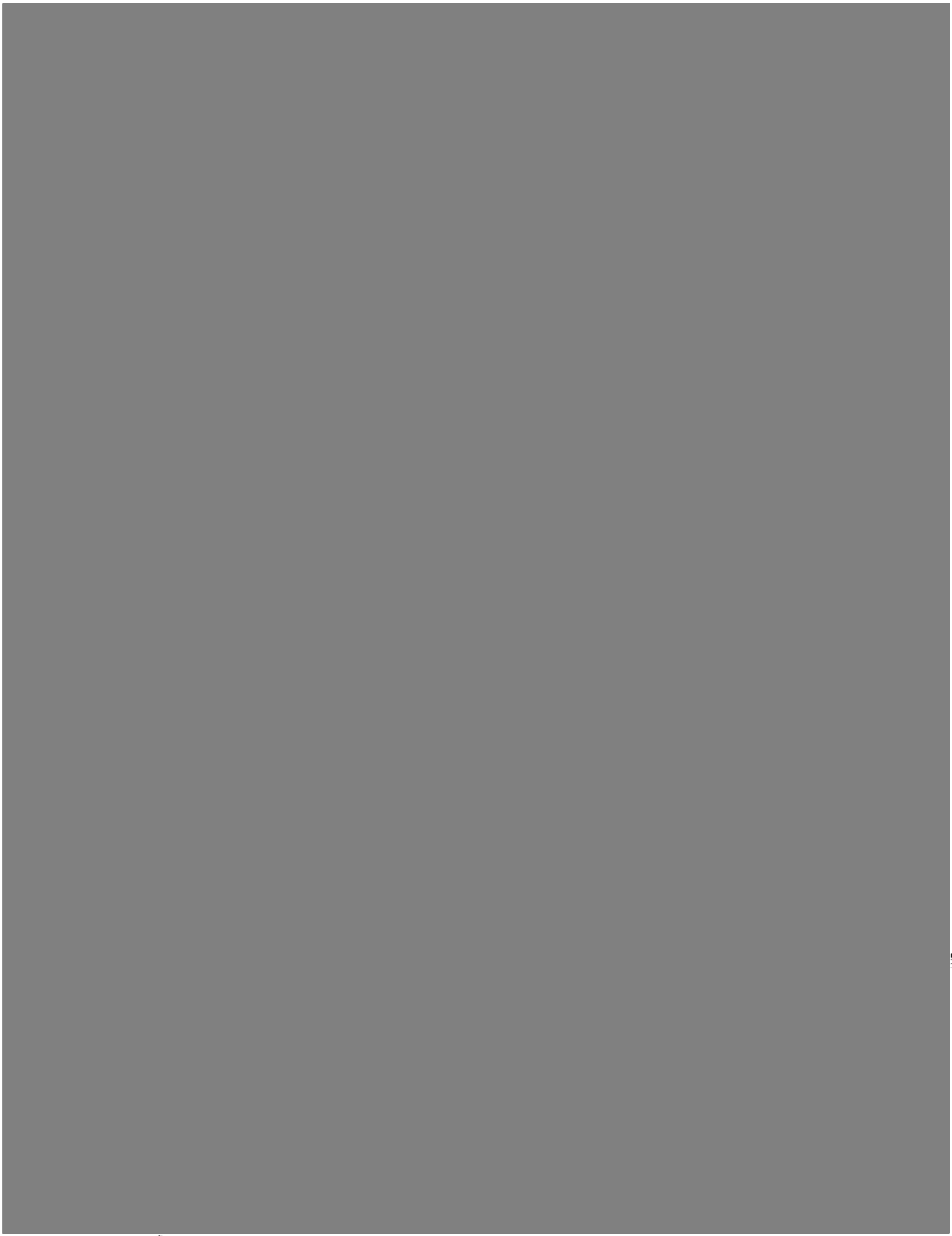


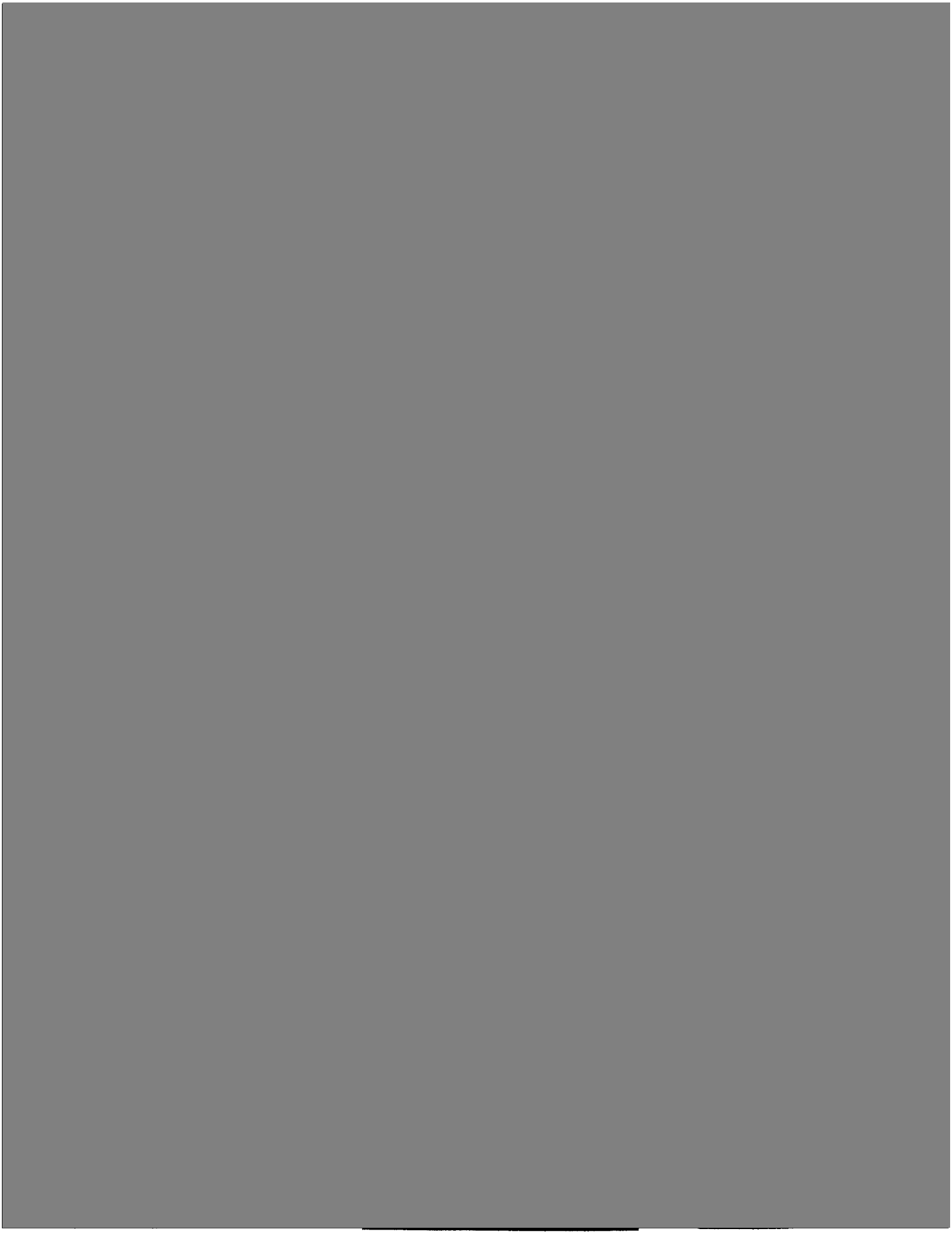












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Volume Eleven, Number Three
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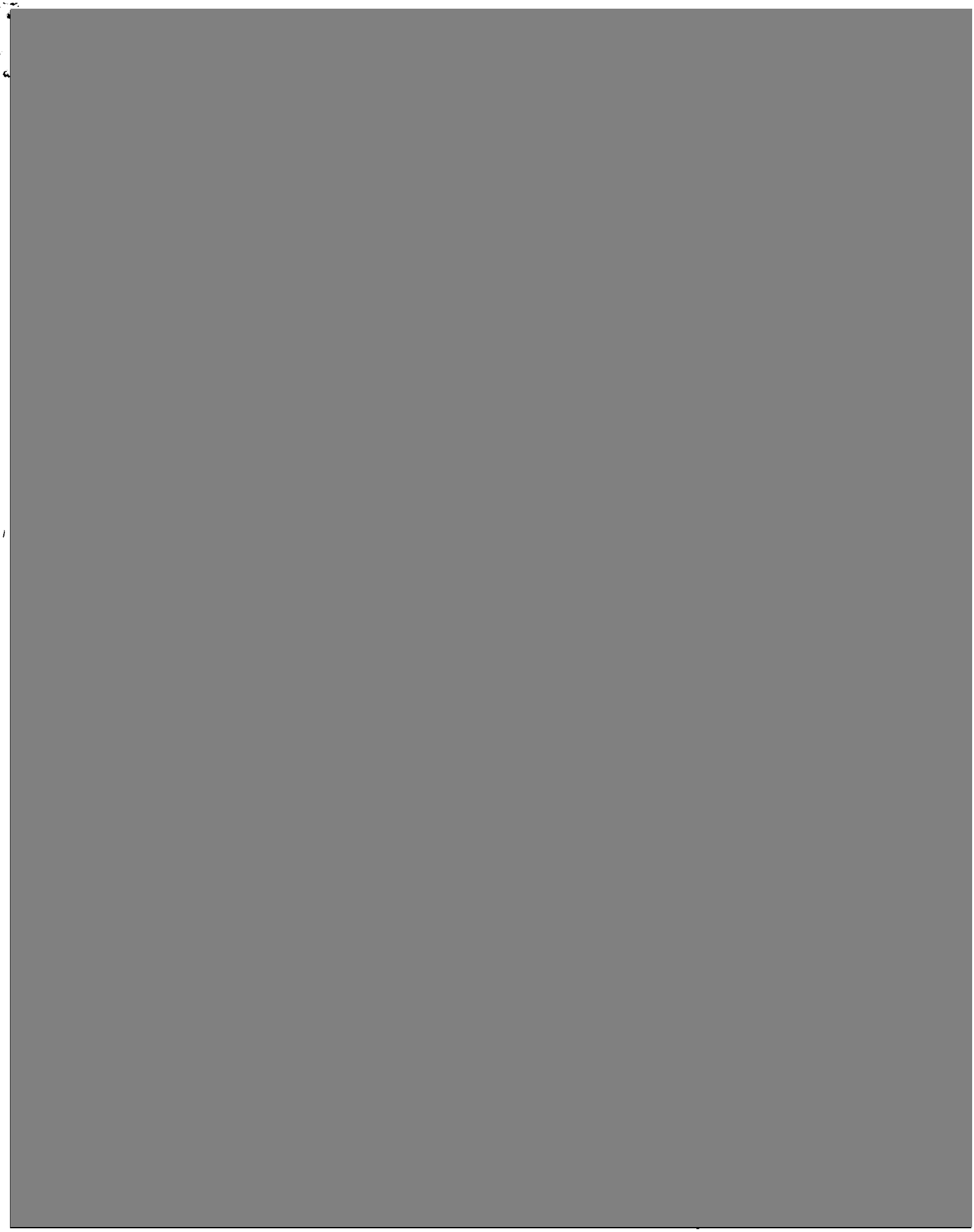

Silver Glance Resources Inc.

Hole #	Intersection (feet)	Fluorite %	Silver oz/ton
294	50	7.1	1.49
295	30	8.7	8.83
296	assays pending	-	-
297	5	8.0	.58
298	10	17.5	.56
299	barren	-	-
300	35	11.2	.61
301	30 35	7.8 15.2	1.69 1.36
302	45	10.5	3.06
303	20	11.0	1.22
304	30	2.35	3.59
305	20	4.2	4.94
306	5	.8	5.07
307	10	16.2	.77
308	10	6.3	1.84
309	65	12.1	3.65
310	55 50	15.8 16.1	.58 3.62
311	85	9.9	4.80
312	25	8.6	3.17
313	barren	-	-
314	30	7.1	1.30
315	15	18.6	.68
316	5	10.9	.59
317	5	12.1	.47
318	35	10.8	.63
319	20	15.4	1.33
320	20	8.6	1.42
321	10	5.6	1.73

Silver Glance Resources Inc.

Zone	Hole #	Intersection (ft)	Fluorite %	Silver oz/ton
Padre Kino	322	30	15.4	.41
	323	35	9.1	.13
	324	60	12.4	.06
	325	20	22.9	.11
	326	45	19.2	.03
	327	40	11.6	.01
	328	55	15.5	.13
	329	90	8.5	.03
	330	80	17.6	.09
	331	55	11.6	.03
	332	20	3.4	1.07
	333	45	5.0	.01
	334	35	8.4	.01
Princess	335	5	1.4	2.0
	336	10	5.8	.09
	337	nil	nil	nil
	338	nil	nil	nil
	339	15	6.2	1.27
Princess	340	15	20.4	.02
	341	30	14.5	.05
	342	nil	nil	nil
	343	20	6.7	.01
	344	15	13.7	.02
	345	10	11.2	.01
	346	15	19.4	.01
	347	15	23.2	.37
	348	5	28.8	.03
Silver King	349	20	5.2	.01
	350	nil	nil	nil
	351	15	22.5	.37
	352	5	41.1	.03
	353	35	21.5	.01
	354	45	21.1	.01
	355	15	42.6	.01
	356	5	7.8	.01
	357	nil	nil	nil
	358	nil	nil	nil
	359	5	37.0	.68
	360	40	5.2	.02
	361	115	24.5	.06
Silver Glance	370	45	16.4	1.24
	371	30	4.77	1.77
	372	15	6.6	15.74
	373	5	9.0	.51
	374	50	8.5	1.02
	375	5	9.0	.10
	376	15	7.1	1.36
	377	20	11.8	3.33
	378	25	.3	3.12

[redacted]

TEACHING EXPERIENCE

Pima College — Spring 1986-Spring 1987
Instuctor
-Taught Mineralogy and Petrology
-Led, Organized Field Trips

Tucson Gem and Mineral Society — Spring 1984-Spring 1986
Instructor
-Taught Mineralogy
-Led, Organized Field Trips

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Brian Robert Bond

3/9/88 chat

Self-starter
Eager, ready + willing
Work, field, orientated
Detailed mapping, evaluation, thesis
Taking AZ state Exam April 15
Ready shortly after 15th
Could work after Sept
Talked to Walter a year ago.
Single