INDEPENDENT MARKET REVIEW
CRUSHED STONE AGGREGATE USE IN THE CONSTRUCTION INDUSTRY IN NEW YORK CITY AND CONCRETE SAND USE IN NORTHERN NEW JERSEY

RE: ARBITRATION MATTER BETWEEN BILCON OF DELAWARE AND THE GOVERNMENT OF CANADA

Prepared For

NASH JOHNSTON LLP

By

John T. Boyd Company

Mining and Geological Consultants

Pittsburgh, Pennsylvania

Report No. 3807.000

DECEMBER 2016

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5 December 2016
File: 3807.000

Nash Johnston LLP
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Attention: Mr. Gregory Nash

RE: Arbitration Matter Between
Bilcon of Delaware
And the Government of Canada

Subject: Independent Market Review
Crushed Stone Aggregate Use in the Construction Industry in New York City and Concrete Sand Use in Northern New Jersey

Dear Sirs:

This report provides our independent review of the crushed stone aggregates market for use in the construction industry in the New York City (NYC) area and the concrete sand market in the northern New Jersey area. Focus of our review was the stone market(s) which are served by two existing stone sales piers located in Brooklyn. The source of the stone product was assumed to be Canadian seaborne quarries.

In addition to published crushed stone forecasts, John T. Boyd Company (BOYD) conducted field research within the NYC market area. We then used these sources of information within the context of BOYD's

independent expertise in the US aggregates industry, to develop the findings and opinions presented in this report.

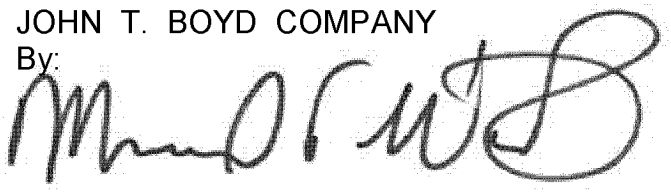
Within the defined scope of work specified by Nash Johnston LLP (Nash), we consider this report to be a fair and reasonable assessment of the crushed stone/concrete sand markets within the specified market areas.

The findings and conclusions presented in this report represent the independent opinions of BOYD and the designated expert for BOYD in this case, Mr. Michael F. Wick.

Following this text is Appendix A: Expert Witness Testimony and Resume

Respectfully submitted,

JOHN T. BOYD COMPANY
By:



Michael F. Wick
Vice President/Expert

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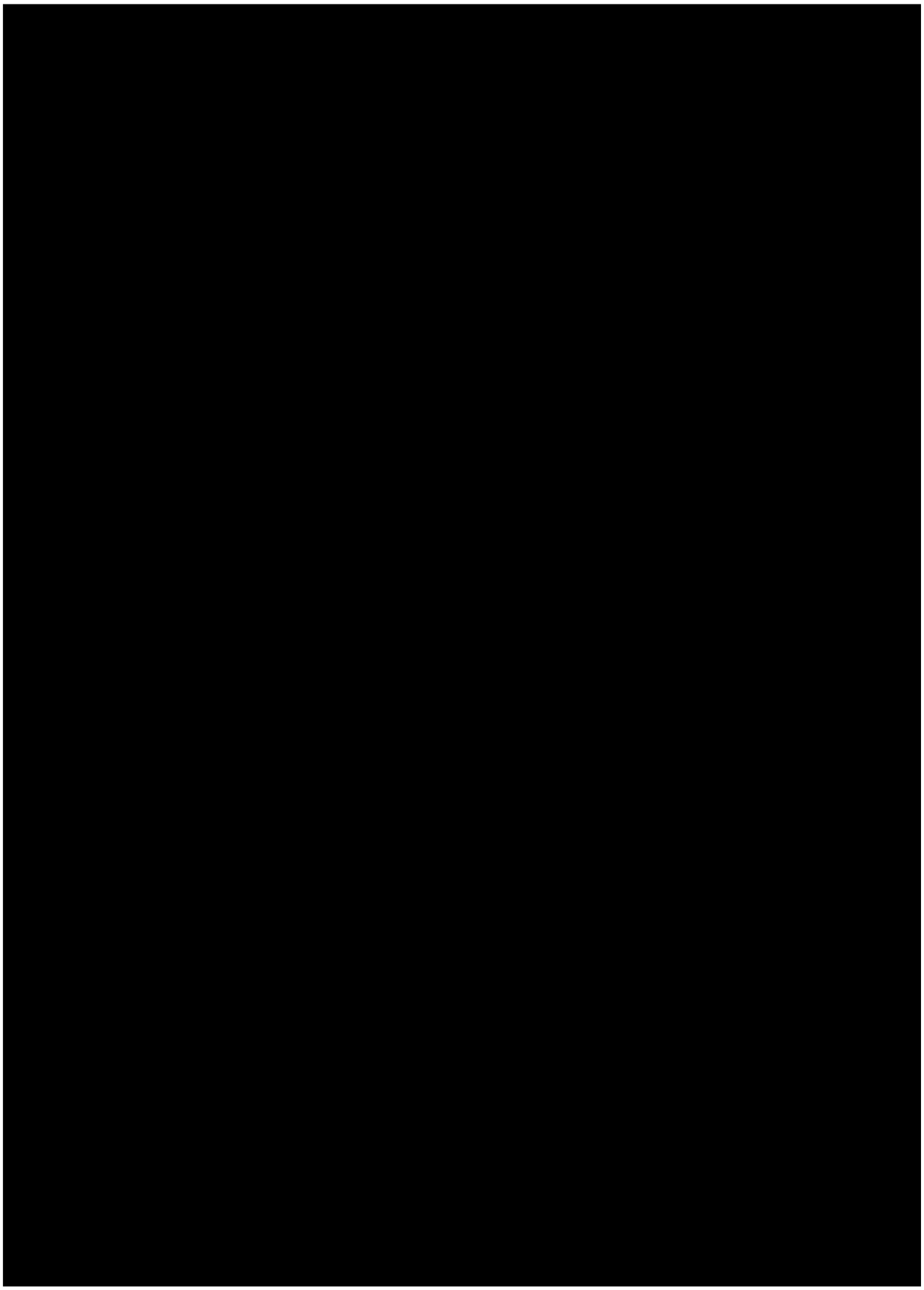

1.2 [redacted]

[redacted] Unlike commodities such as copper, gold, or coal, which have a high level of volume and pricing transparency (as many are traded on public exchanges), the nature of stone pricing and volumes are extremely competitive and subsequently, little public information is available. [redacted]

1.3 [redacted]

[redacted] Should additional information or data become available following the submission of this report, the undersigned and

BOYD reserve the right to alter, modify, change, or otherwise supplement the independent opinions presented herein.

These opinions are considered reasonable and have been derived in a manner consistent with accepted and prudent industry practices. Neither BOYD nor the undersigned have any financial interest or participation with any of the parties in this matter. BOYD's compensation is not related in any way to the opinions presented herein or the outcome of the arbitration hearing.

The Resume and Record of Expert Witness Testimony of Michael F. Wick are contained in Appendix A.

2.0 [redacted]

1. [redacted]

2.

3.0 THE USE OF CRUSHED STONE AGGREGATE IN THE CONSTRUCTION INDUSTRY

3.1 Aggregates Industry Overview

When used in the building industry, the term “aggregate” generally refers to any combination of crushed stone, sand, or gravel used in the construction industry. Aggregate minerals are the most widely mined commodity, not only in the United States, but in the world. Aggregate mining operations are commonly known as “quarries” for crushed stone and “pits” for sand and gravel operations. A growing portion of the aggregates industry also uses recycled aggregates which were previously mined aggregates that were used in the manufacturing of concrete or asphalt. The asphalt or concrete has been removed and reprocessed and the aggregate can be reused in certain applications.

Sand and gravel normally occur in the form of an alluvial deposit (i.e., an unconsolidated mixture of fine and coarse naturally occurring particles found in an ancient or existing stream bed or riverbed or its tributaries). Sand and gravel are usually mined together by a mechanical means of excavation. Deposits above, or slightly below, the water table are excavated by conventional mobile construction equipment such as an excavator. Deposits below the water table utilize a dredge or other specialized equipment designed for extracting material below the water. The mined material, once excavated, is screened into various particle sizes from finer sizes (sand) to coarser sizes (gravel). The total US industry includes approximately 6,300 sand and gravel operations. The majority of the supply is used locally and the areas of greatest production include Texas, the west coast, and the midwestern United States. These areas are geologically where many of the sand and gravel deposits are located.

Crushed stone, the other principal form of construction aggregate, can be composed of limestone, granite, trap rock, basalt, or rock recovered from other hard and sound geologic stone formations. Crushed stone is produced from large areas of consolidated stone deposits that outcrop or occur at shallow depth. The in situ rock strata are often drilled and blasted with explosives, to reduce into a physical size that can be processed. Once the stone has been blasted, it is

transported to a plant where it is processed into saleable products. The majority of the blasted stone must be mechanically reduced in size by crushers that are designed to reduce large pieces of rock into smaller particle sizes. The stone material is then sorted by screens into various saleable product sizes. These product sizes constitute both coarse material products and fine (sand) size material products. Within the total US industry, there are approximately 3,700 crushed stone quarries. The top three states for crushed stone production in 2015 were Texas, Pennsylvania, and Missouri. As with sand and gravel, most crushed stone operations are localized and center around the area of demand as the product is used in large quantities making it very freight sensitive. The exception to this rule are geographic areas that have little or no economically viable aggregate deposits or have extremely high regulatory requirements regarding the ability to permit an operation. Areas with one or both of these attributes, generally import all, or a portion, of their aggregate requirements. Heavily populated areas of New York, many eastern seaboard cities, including the entire state of Florida, populated areas of California, and others, all import aggregate to accommodate demand.

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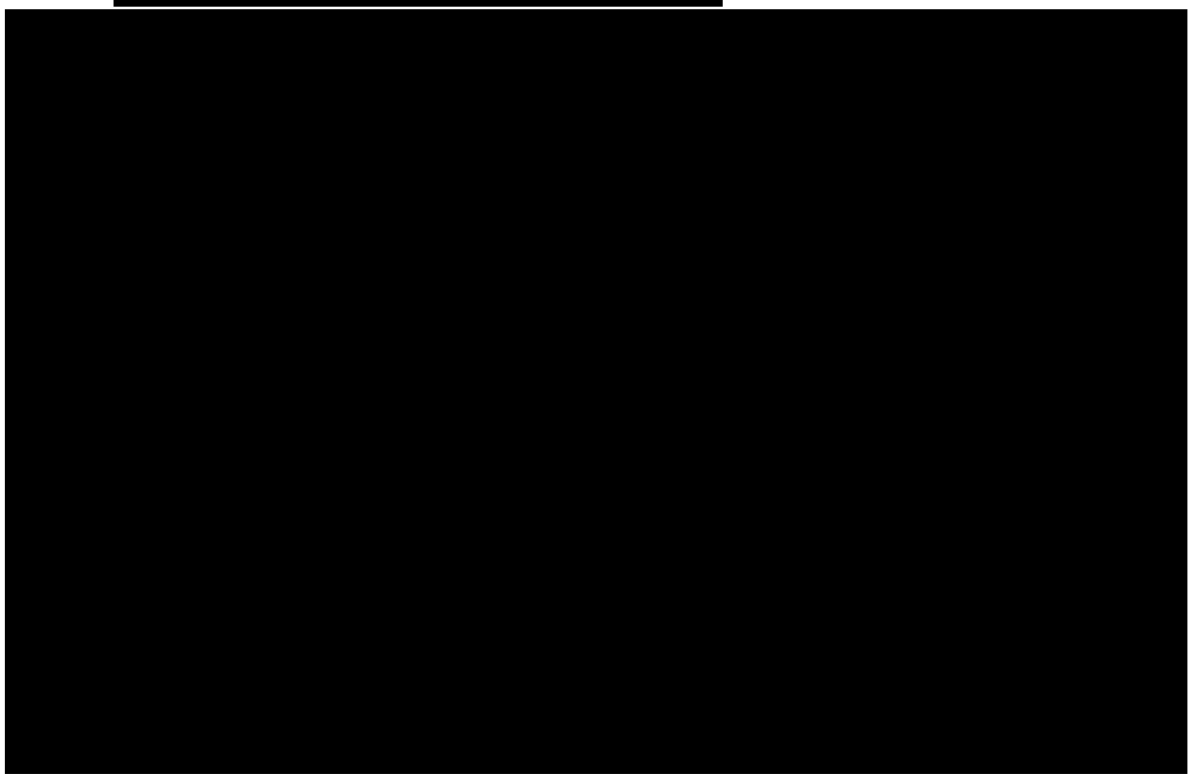
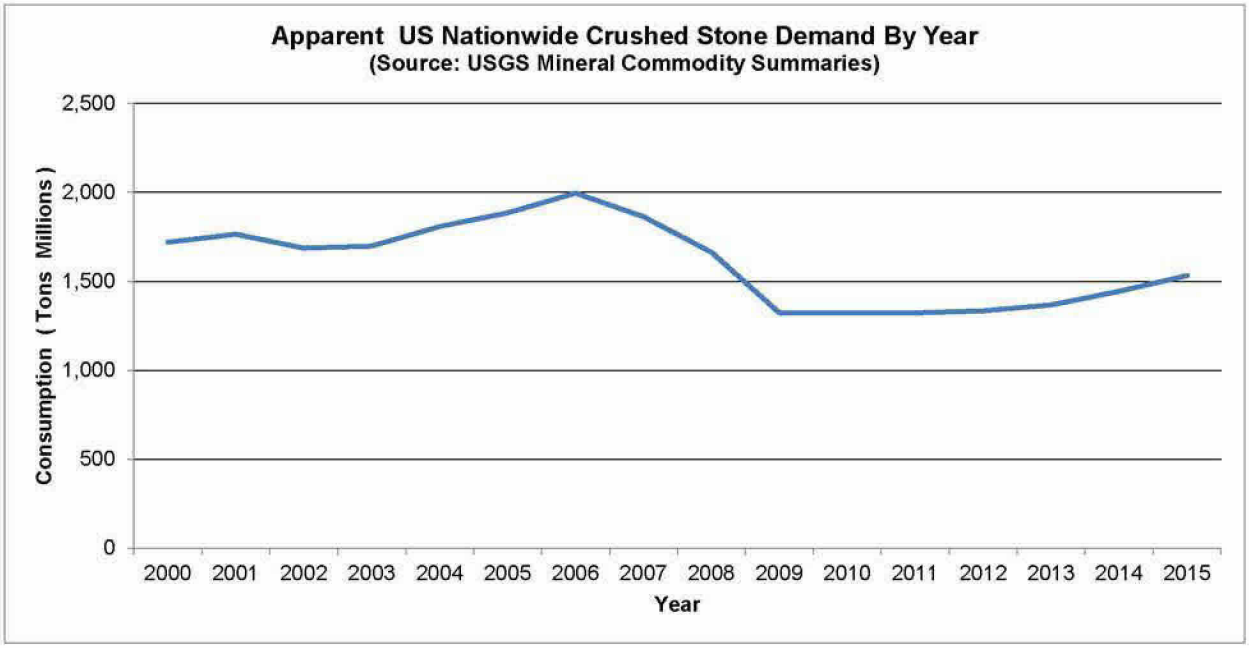


3.2 Use of Aggregates

In 2015, it is estimated that 2.32 billion tons of aggregate were consumed in the United States[1]. Of that amount, approximately 60% was comprised of crushed stone and 40% was sand and gravel. The predominant market consumer categories which utilize aggregates to manufacturer various products are: (1) Portland Cement Concrete (PCC) or ready-mix concrete, and (2) Asphalt or Bituminous Concrete (BC). Other construction applications include foundation base material, pipe bedding, fill material, erosion control, and filtration. Crushed stone aggregate, the subject of this market study, comprised approximately 1.5 billion tons of total US demand in 2015, as is illustrated in the graph below.



Crushed stone aggregate is predominantly used in the manufacturing of concrete and concrete products and asphalt.

3.2.1 Asphalt

Asphalt consumes large amounts of aggregate. Asphalt pavement is one of America's building blocks. The United States has more than 2.6 million miles of paved roads and highways, and 93% of those are surfaced with asphalt. The nation has around 4,000 asphalt plants. Each year, these plants produce 500

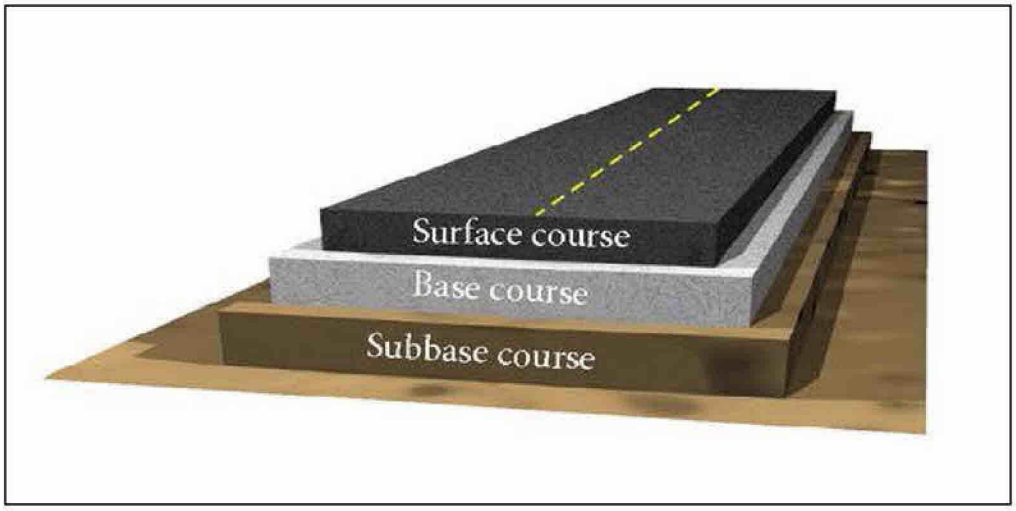
[1] 2016 United States Geologic Survey (USGS) estimated.

million to 550 million tons of asphalt pavement material worth in excess of US$30 billion. The industry employs more than 300,000. Asphalt pavement material is a precisely engineered product composed of about 95% stone, sand, and gravel by weight, and about 5% asphalt cement, a petroleum product. Asphalt cement acts as the glue to bind the pavement together.

Actual Asphalt Roadway Section

The surface, or wearing course, of asphalt is the most critical component of road construction or road rehabilitation. As most of the roadways in the NYC metropolitan area have already been constructed, asphalt is predominantly utilized for resurfacing existing roadways. This process involves the "milling" or removal of the existing worn asphalt roadway surface course and replacing it with new asphalt. Because the surface course of asphalt material comes in direct contact with vehicle tires, it requires a high "skid resistance rating." The majority of the asphalt utilized in the surface course in most jurisdictions, including NYC, requires a high skid resistance rating. To comply with this rating, an asphalt company will utilize mainly crushed stone aggregate that meet stringent specifications to meet this designation. Only certain geologic rock types, from certain approved mining operations, meet this designation.

The local limestone mined from New York and New Jersey area quarries generally does not meet this designation.



Typical Cross Section of an Asphalt Highway

The manufacturing process for asphalt is essentially the measuring and mixing of several materials in the proper proportions. Generally, the fine aggregate and coarse aggregate are combined with the asphalt cement in a large drum mixer which is heated to approximately 300°F (149°C). Asphalt is a highly recycled material. During this mixing process often times recycled asphalt product (RAP) is blended into the mix. This material consists of the asphalt material that was removed from the roadway prior to resurfacing. The proportion of recycled material introduced to the new mix varies from 10% to 30% or more. Generally, 15% RAP material is a reasonable average. Many jurisdictions, including NYC, require the use of RAP in the manufacturing of asphalt. Once the asphalt production process is complete, the material is stored in insulated storage silos before being loaded into trucks to be transported to the construction job site. At the job site, the hot asphalt is dumped into a paving machine that places it onto

the roadway at the proper thickness and width. The material is then compacted by mechanical rollers and allowed to cool.

Paving Machine with Roller in Background

There are many different types of asphalt and each has a specific mix design, or recipe, that must all be approved by the appropriate regulatory agency before manufacturing and placement of the material. Mixes contain a range of RAP, coarse, and fine aggregate proportions depending on the intended design parameters of the roadway or area to be surfaced. Generally, a mix will contain 15% (by weight) RAP material, 5% asphaltic cement or oil, 37% fine aggregate, and 43% coarse aggregate. The coarse aggregate is predominantly an American Association of State Highway and Transportation Officials (AASHTO) # 8 size material (3/8 in. x 3/32 in.). This material is a premium product as it is in high demand and more costly and difficult to produce in the quarry process. The product size also overlaps the concrete size specification to some degree. Therefore, the asphalt and concrete product segments are in competition for the same specification (size) material. Additionally, the coarse aggregate utilized in the surface course of the asphalt must have a high skid resistance designation which eliminates many stone sources as discussed previously. For these reasons, the coarse aggregate commands a premium price. The AASHTO #8 material is typically imported into the Brooklyn Stone Piers.

3.2.2 Concrete

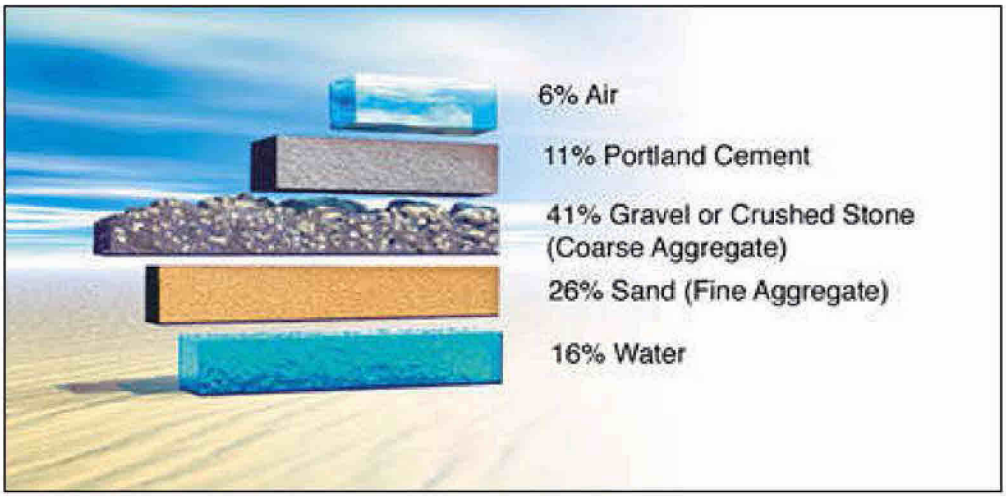
Concrete is another product widely utilized in the construction industry not only for pour-in-place concrete, but also for the growing pre-cast concrete products

market. These products include: concrete pipe and drainage tile, culverts, retaining walls, bridge decks, tilt-up building construction, concrete building block, and many other products. Pre-cast products are manufactured in a controlled warehouse environment and then transported to the construction site. This type of concrete construction has become commonplace in the past decade.

Pre- cast "double T" deck for parking garage

Pre- cast bridge deck sections

Basically, concrete is a mixture of Portland cement, aggregate, and water. The aggregate portion of the concrete mix is composed of coarse aggregate (41%), such as crushed stone or gravel, and fine aggregate (26%) most often natural sand.



General composition of concrete (Portland Cement Assoc.)

In most instances, if available, natural sand is preferred in concrete manufacturing as the fine aggregate component. Conversely, crushed stone is preferred, if available, for the coarse aggregate portion of the mix. The crushed stone has a distinct strength advantage when compared to gravel when used in the concrete mix as a coarse aggregate. The stone must meet many quality specifications and be "approved" in most jurisdictions for use in the concrete mix. This is one of the predominant products that was imported and sold from the Brooklyn Stone Piers. Crushed stone concrete aggregate commands a premium price when compared to other aggregates as it is more costly and difficult to manufacture and the supply is often more limited. Although it varies, a cubic yard of concrete will contain approximately 3/4 to 1 ton of coarse crushed stone and 1/2 ton of natural sand. New York Sand and Stone bought and sold coarse crushed stone at the Brooklyn Stone Piers. They also sold "grit" or fine size crushed stone material to Amboy Aggregates near Perth Amboy, New Jersey. Amboy Aggregates had ongoing contracts to dredge natural sand from the shipping channel. The dredged natural sand from this channel was too fine to pass the concrete sand specification. Coarse material or "grit" from the Canadian quarries was blended with the natural sand to produce an in-specification concrete sand.

3.3 Importance of Aggregates to the US and New York Economy

The United States contains over 14,000 mining operations that directly employ more than 634,000 workers and indirectly create an additional 1.27 million jobs. This sector has an estimated annual payroll of US$118.2 billion, contributes an estimated US$225.1 billion to GDP and pays US$45.8 billion in taxes. Generally, the mining sector is segregated into three segments: coal mining, metal mining, and non-metallic mineral mining. Non-metallic mining includes aggregates mining, which comprise the large majority of this sector. This sector produces 846,850 jobs resulting in US$48.2 billion in labor compensation. Average annual wage in this sector was US$55,220. [2] These estimates only include mining related jobs and jobs that are directly associated to the mining operations such as transportation or services. They do not include the downstream jobs, and

[2] The Economic Contributions of Mining, 2012 National Mining Association (NMA)

revenue, generated in the construction industry, such as ready mix concrete or asphalt operations workers.

Economic Contribution of US Mining, 2012

Item	Direct	Indirect & Induced	Total
Employment	634,600	1,268,800	1,903,400
Labor Income (US$ billions)	46.2	71.9	118.2
Contribution to GDP (US$ billions)	102.1	123.0	225.1
Taxes Paid (US$ billions)	18.9	26.9	45.8

Source: Reproduced from Economic Contributions of US Mining, an NMA publication (2014)

Specific to New York State, non-metallic mines and their support activities employ 33,560 people and contribute US$824 million in tax payments. This employment number is understated as much of the construction aggregates consumed in NYC metro area, the largest area of consumption in the state, are sourced/mined in New Jersey and to a lesser extent in Connecticut, Pennsylvania, and Canada. The downstream construction industry, which includes contractors, engineers, ready mix concrete companies, asphalt producers and pavers, and many other trades, employ an estimated 372,000 people and contribute an estimated US$1.8 billion annually in taxes.[3] The cement and downstream concrete related segment alone produces 20,840 jobs with an annual payroll of US$1.3 billion.[4]

The NYC area construction segment has been reaching historical record spending levels in the past few years. In 2015, employment in this sector

[3] US Bureau of Labor Statistics, New York Report and American Road and Transportation Builders Association.

[4] New York Cement Industry, 2015 Portland Cement Association.

reached the highest level in over 40 years with 145,000 workers contributing to this sector with an average annual wage of US$76,300. [5]

[5] New York State Department of Labor, Current Employment Statistics, May 2016.

4.0 [redacted]

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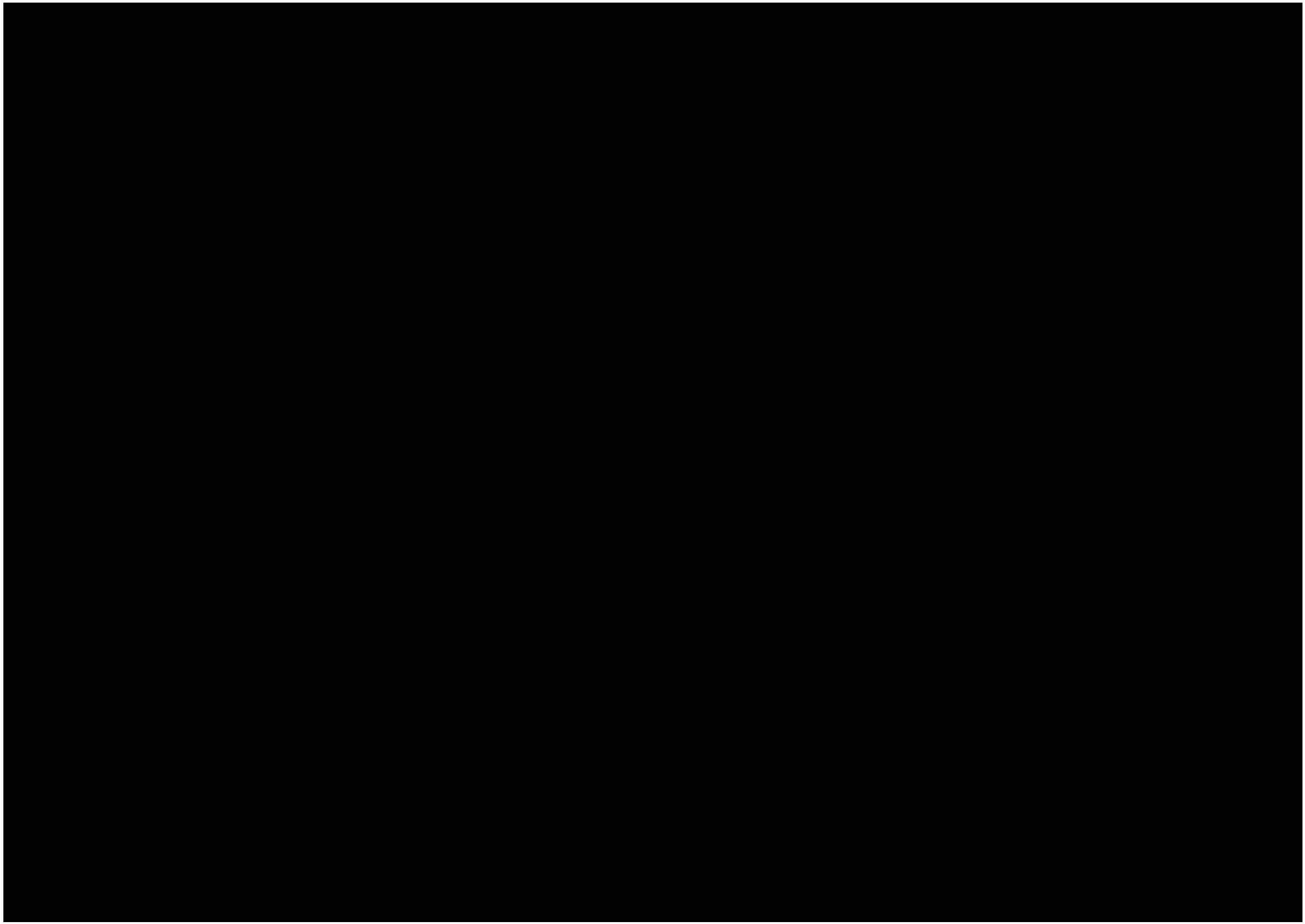
Following this text is Figure 4.1, General Location Map.



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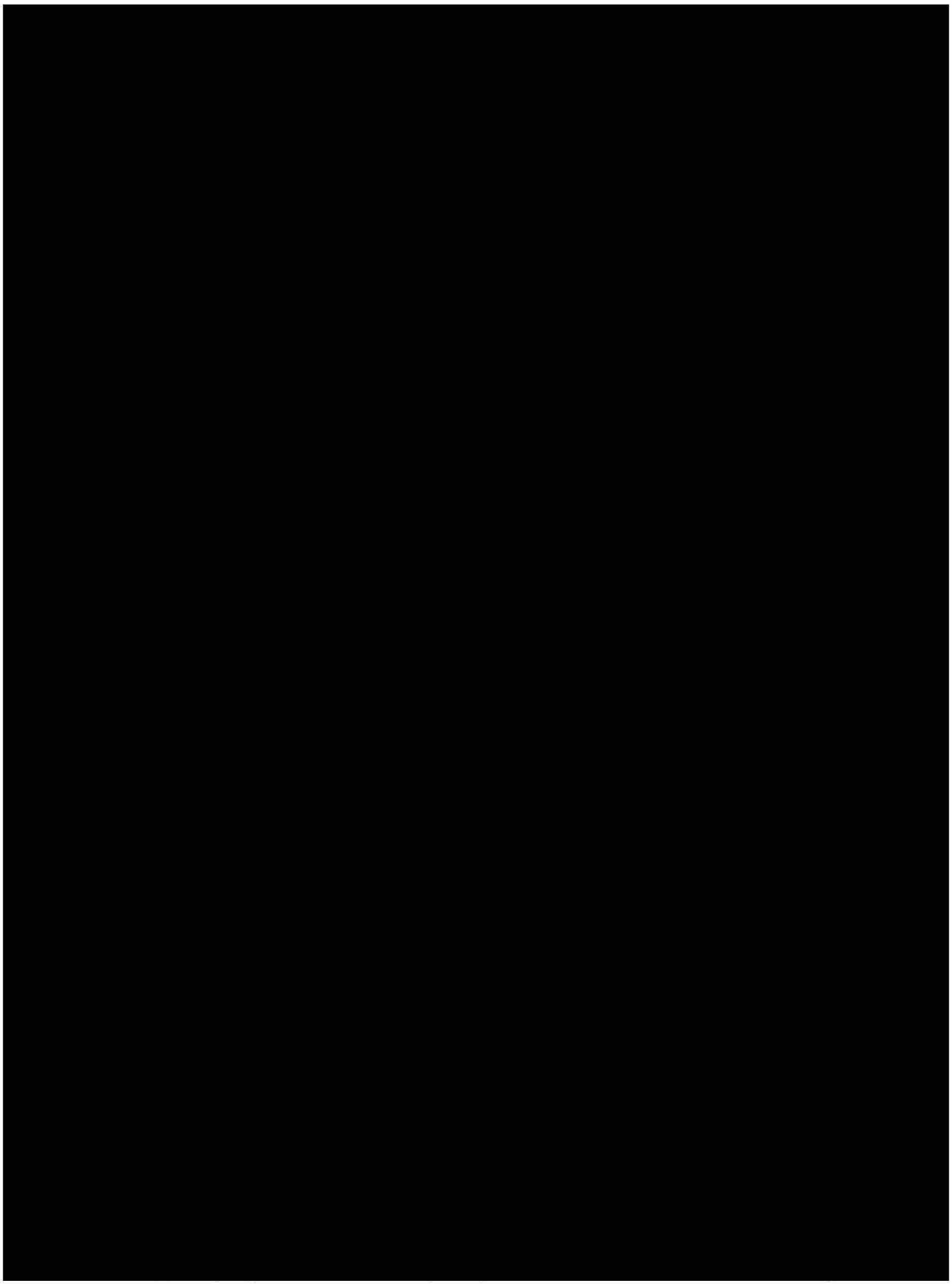
Construction spending has reached record levels over the past few years. Since 2011, overall spending in government, commercial, and residential sectors has increased.



[1] New York Building Congress
[2] National Mining Association, 2016

[redacted]

More specifically, with reference to the "Annual Construction Spending in NYC" chart (page 5-2), there are three broad demand centers for construction activity in NYC: (1) Infrastructure and Public Works projects, (2) Non-residential Development, and (3) Residential Development.

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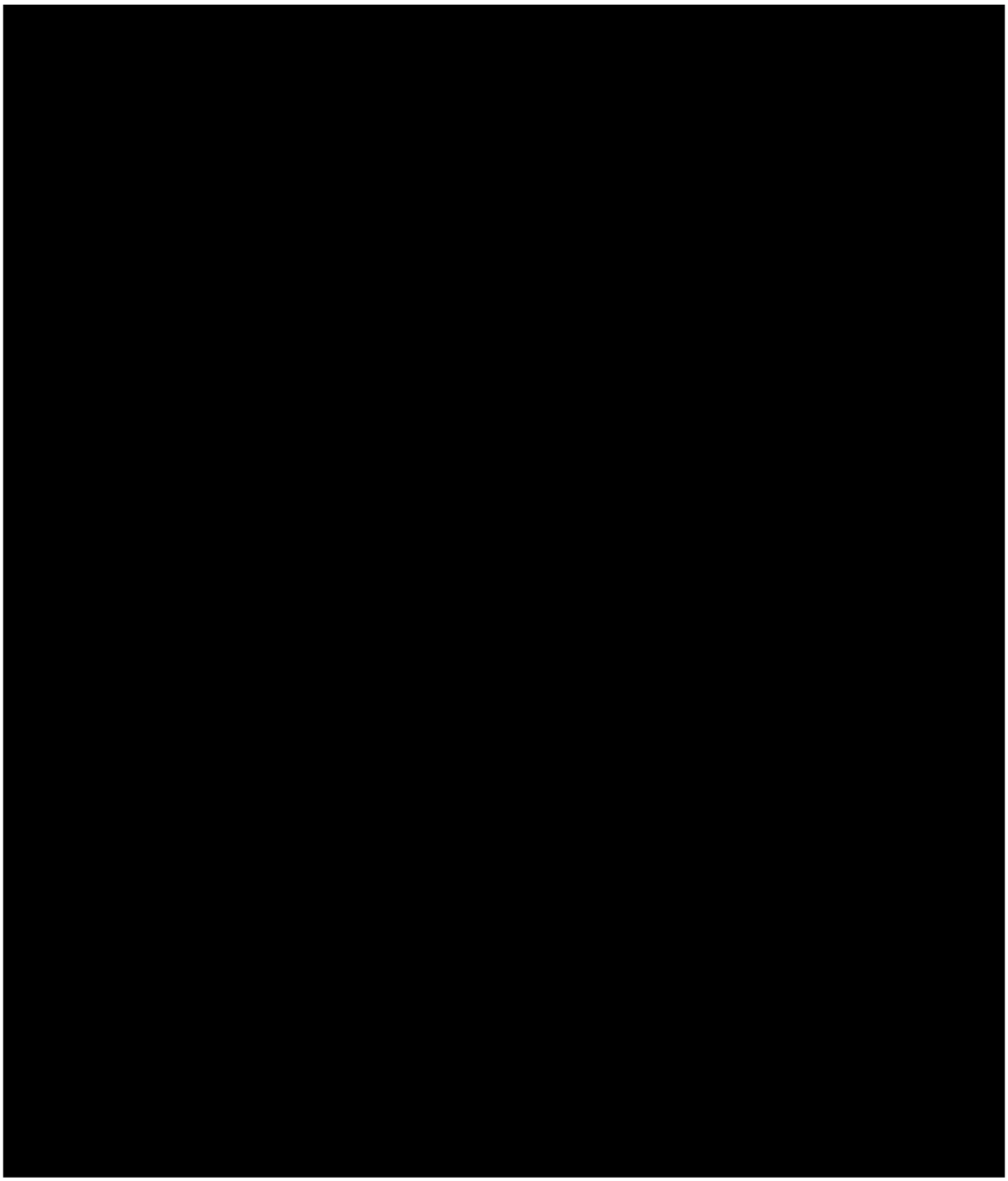

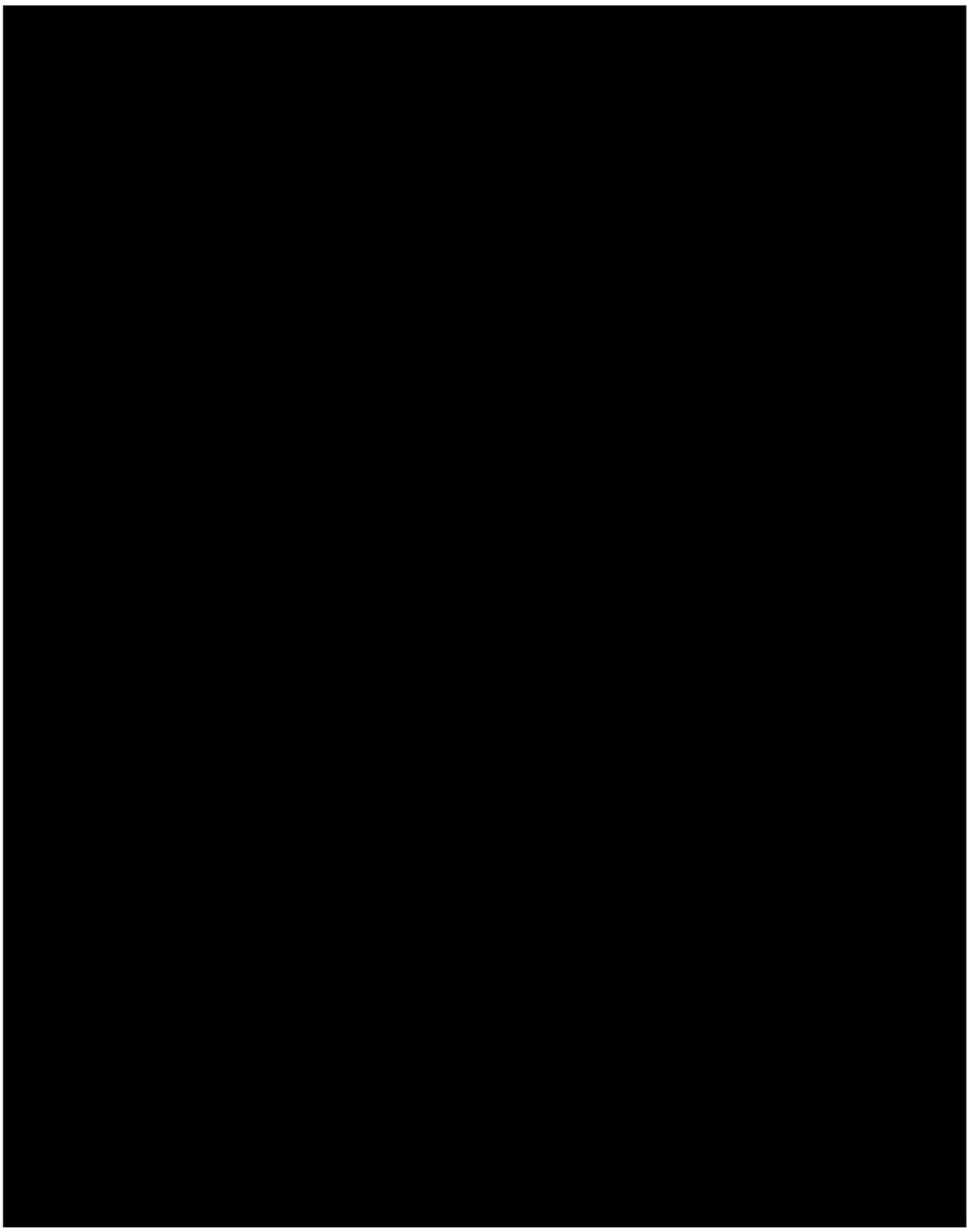

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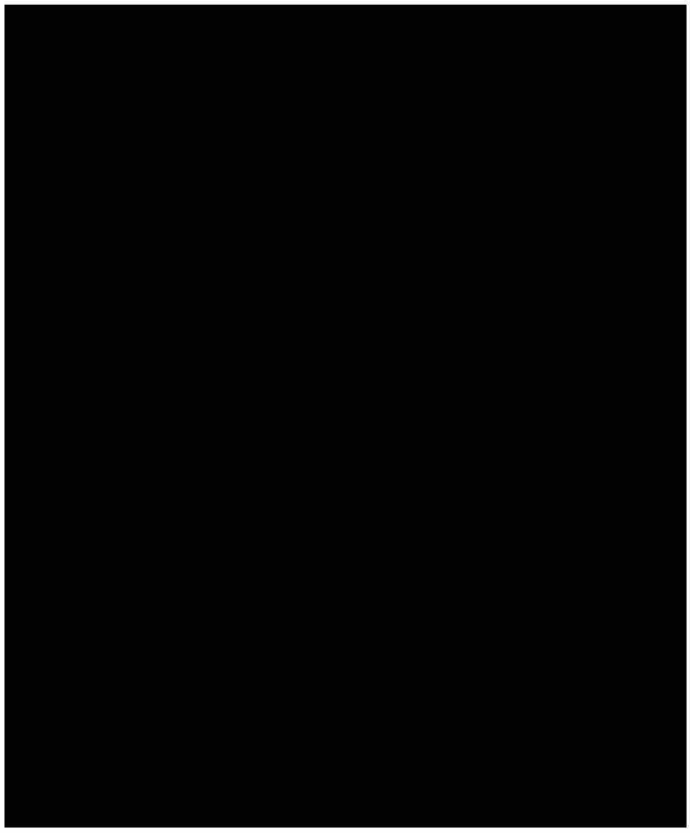

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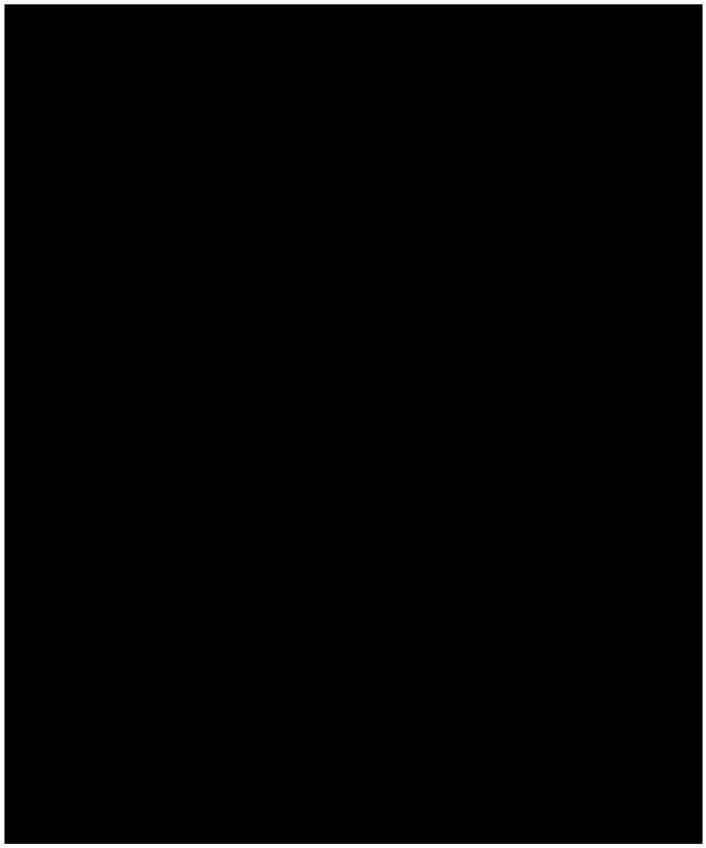

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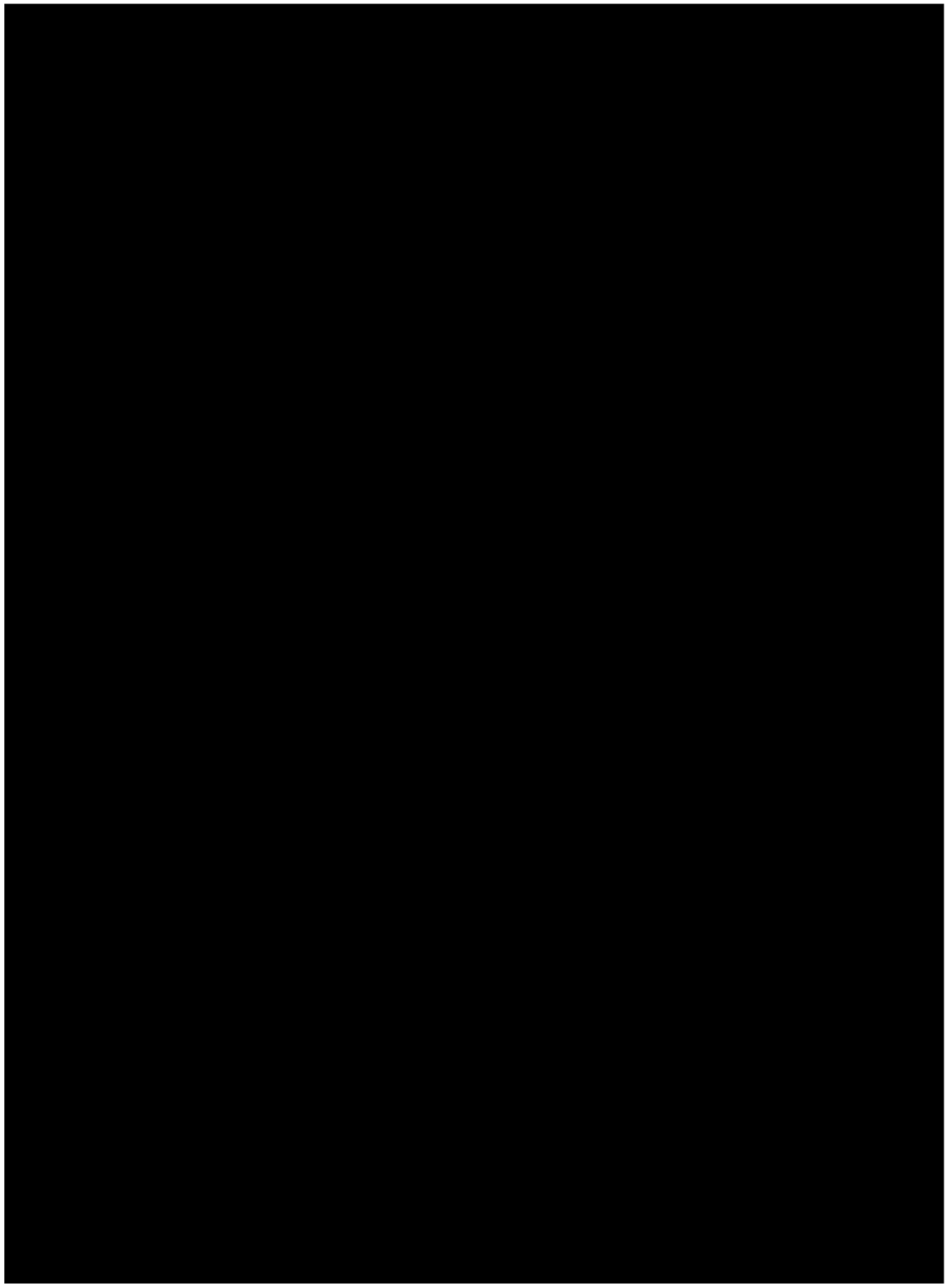

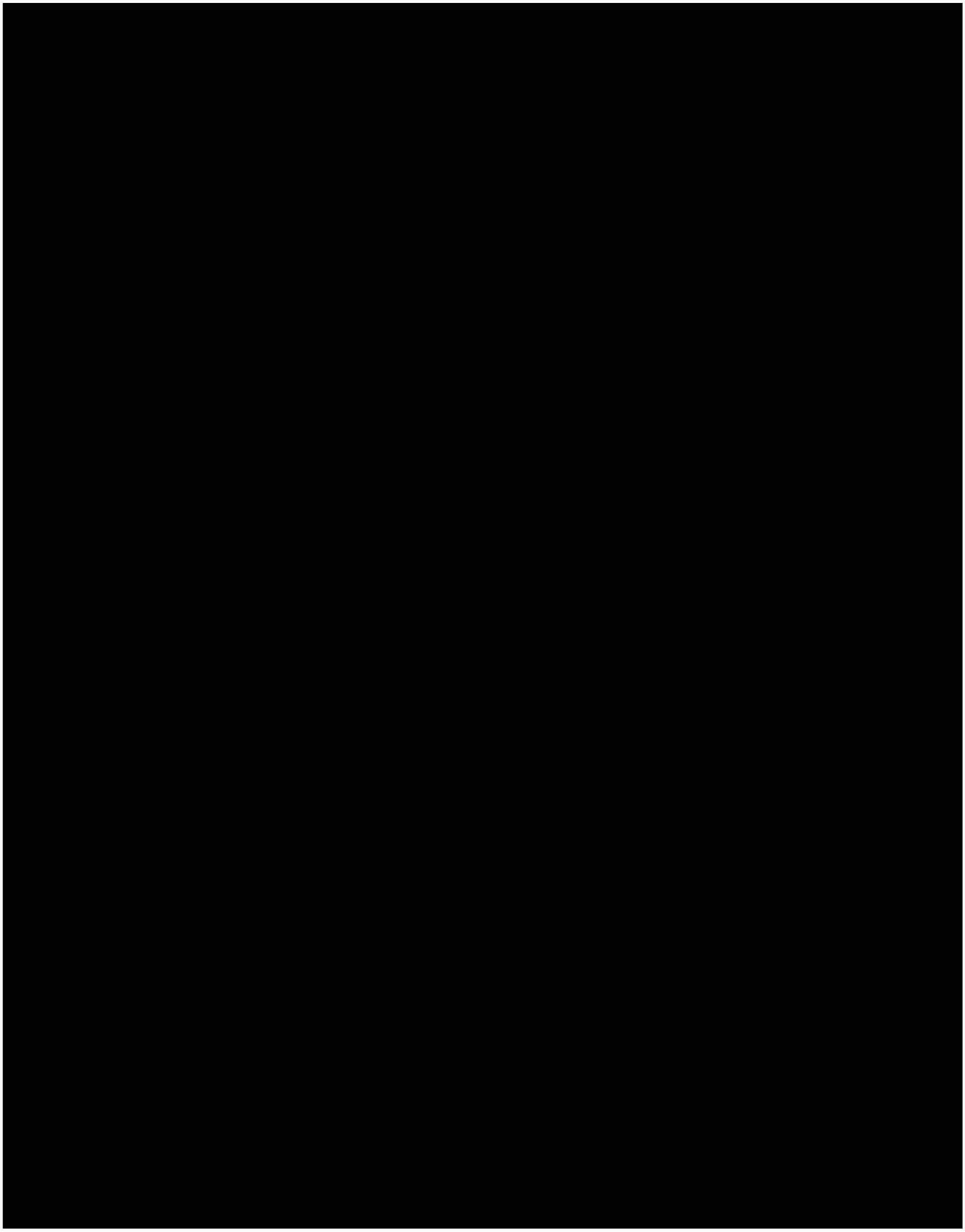

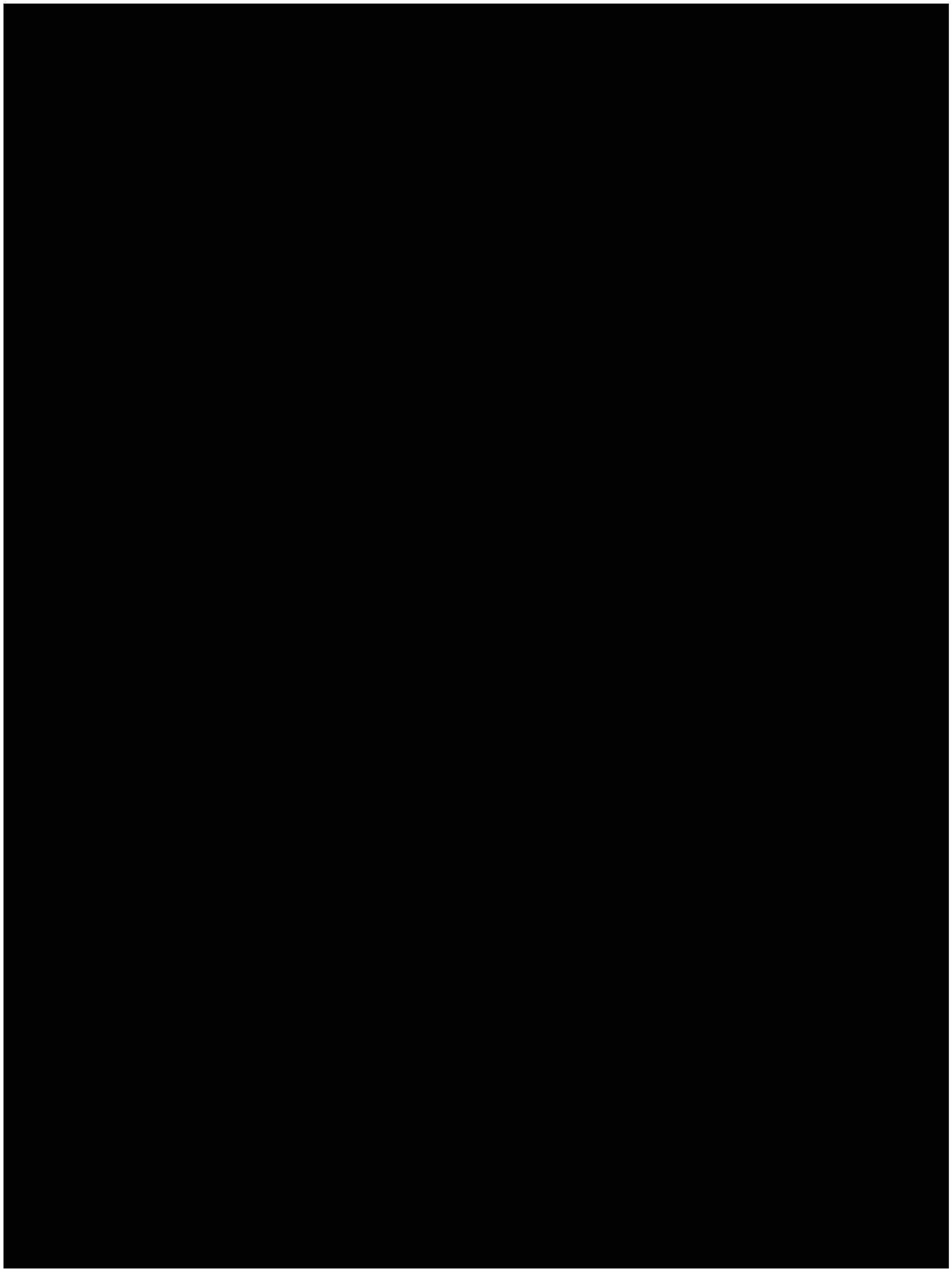

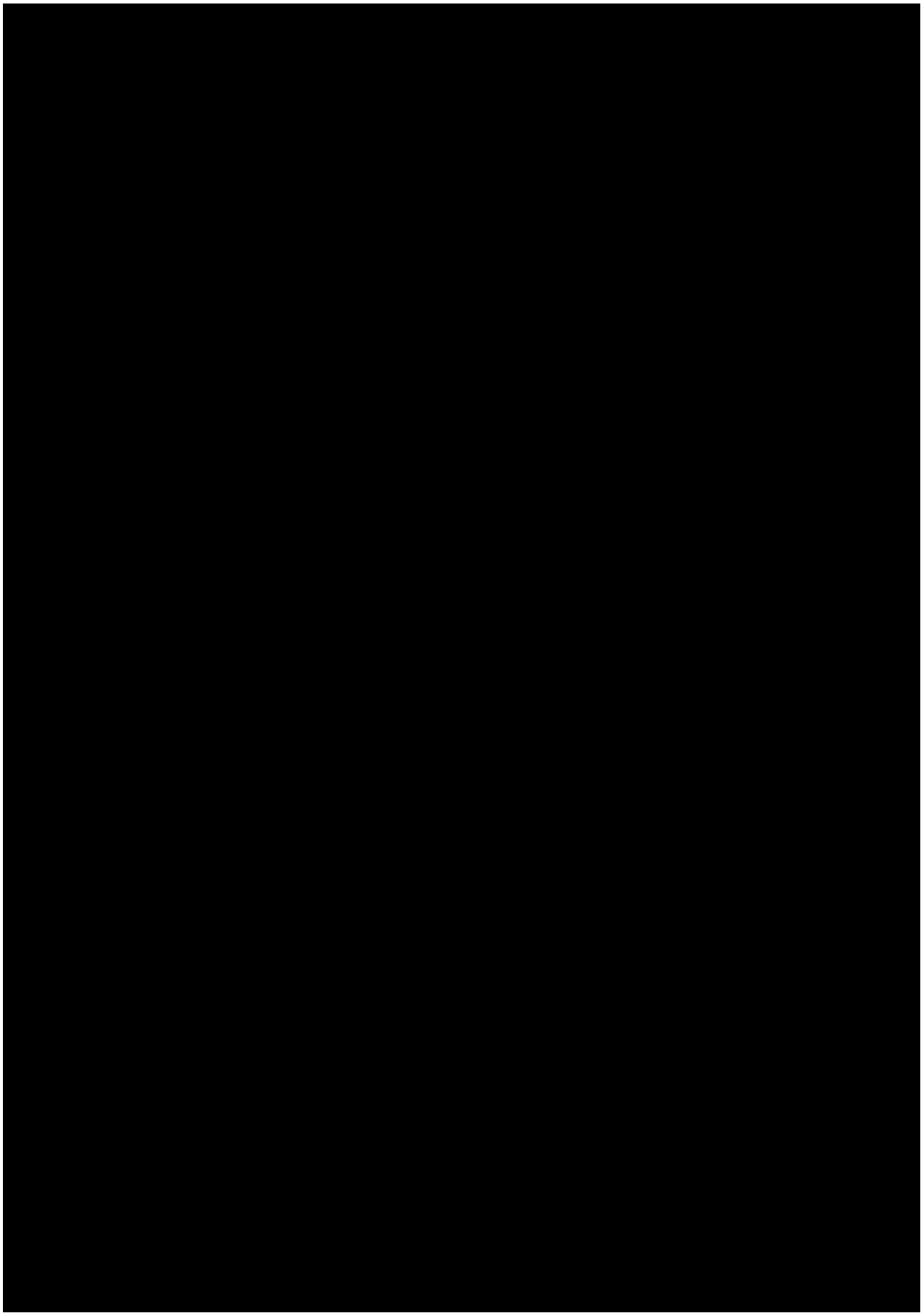

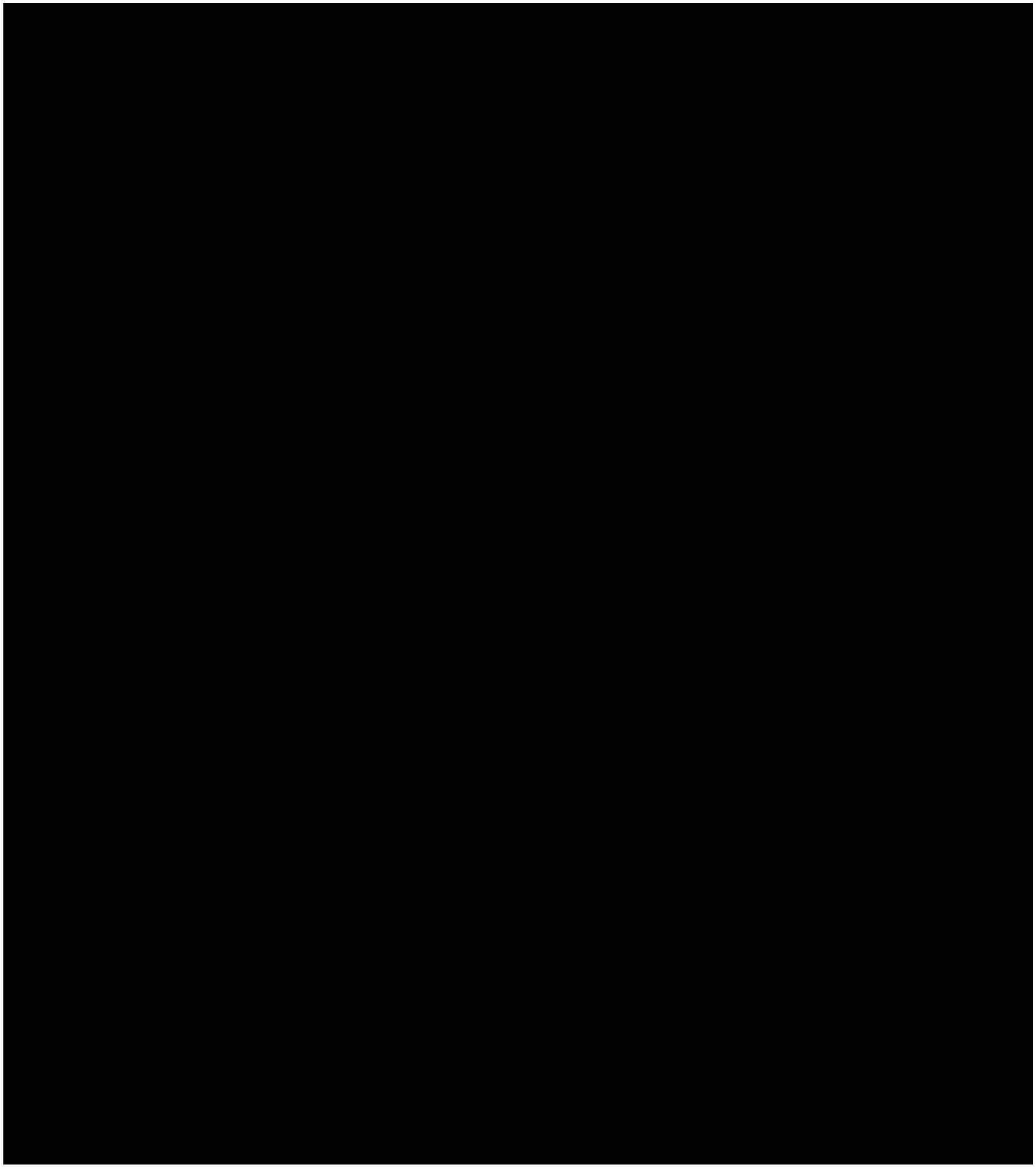

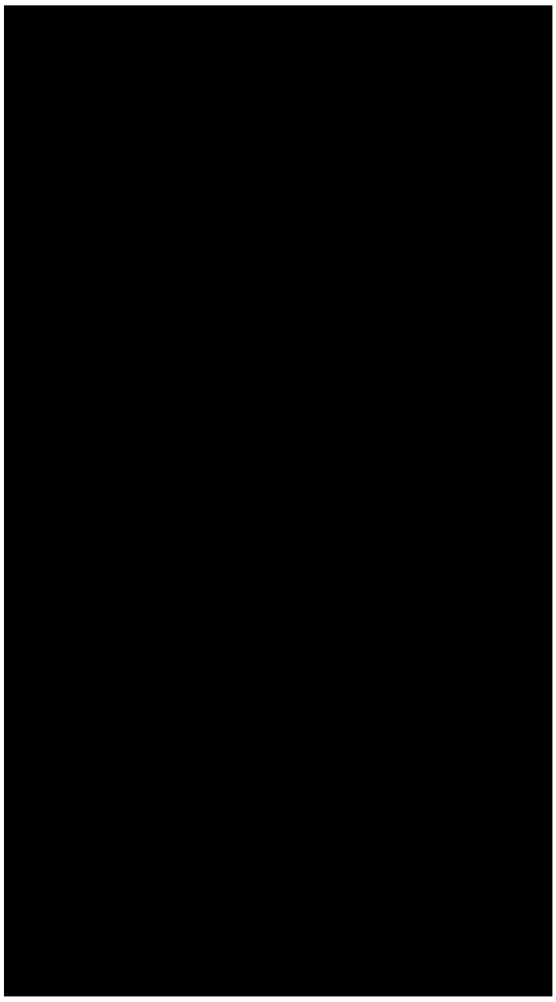

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7.1 [redacted]

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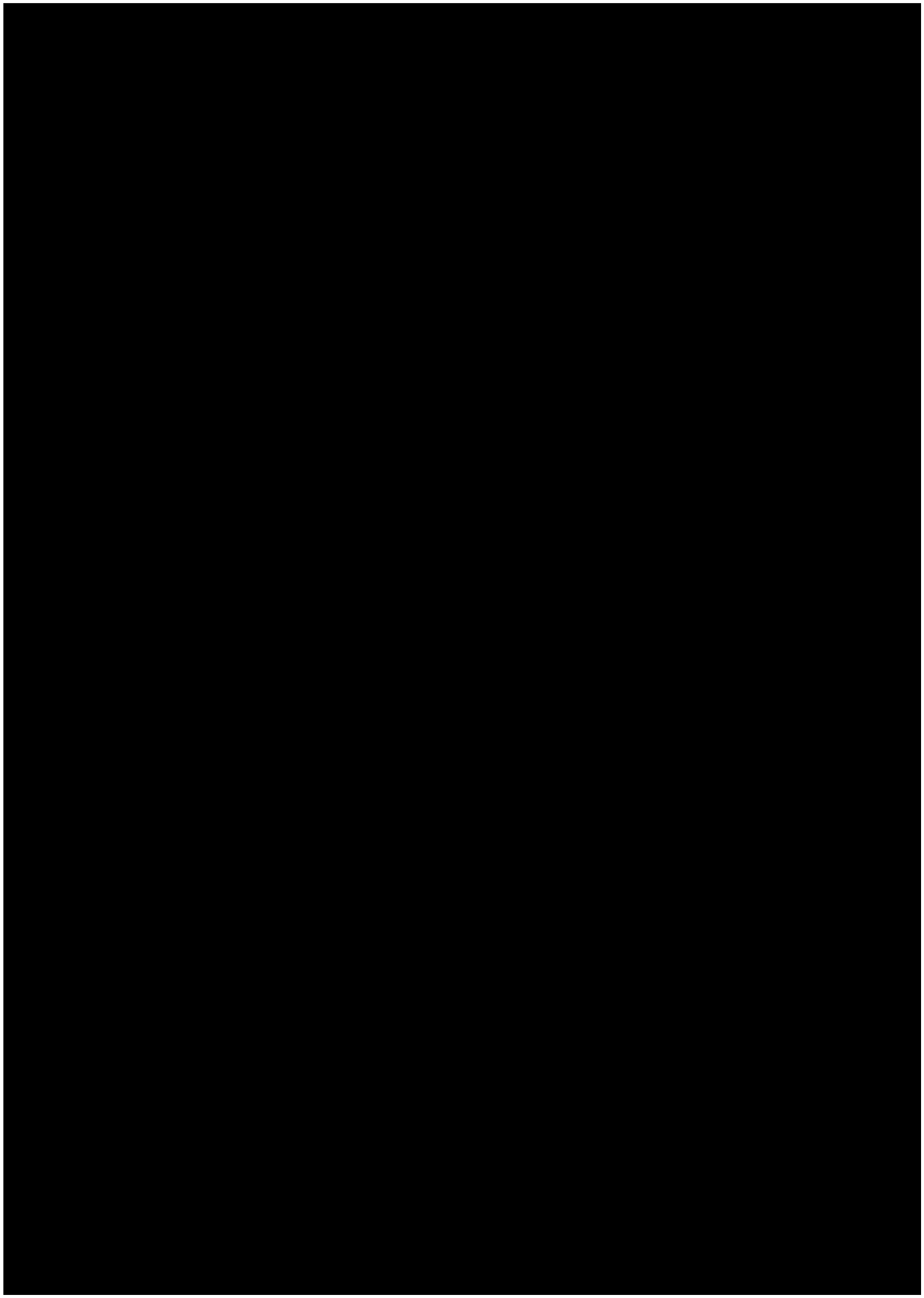

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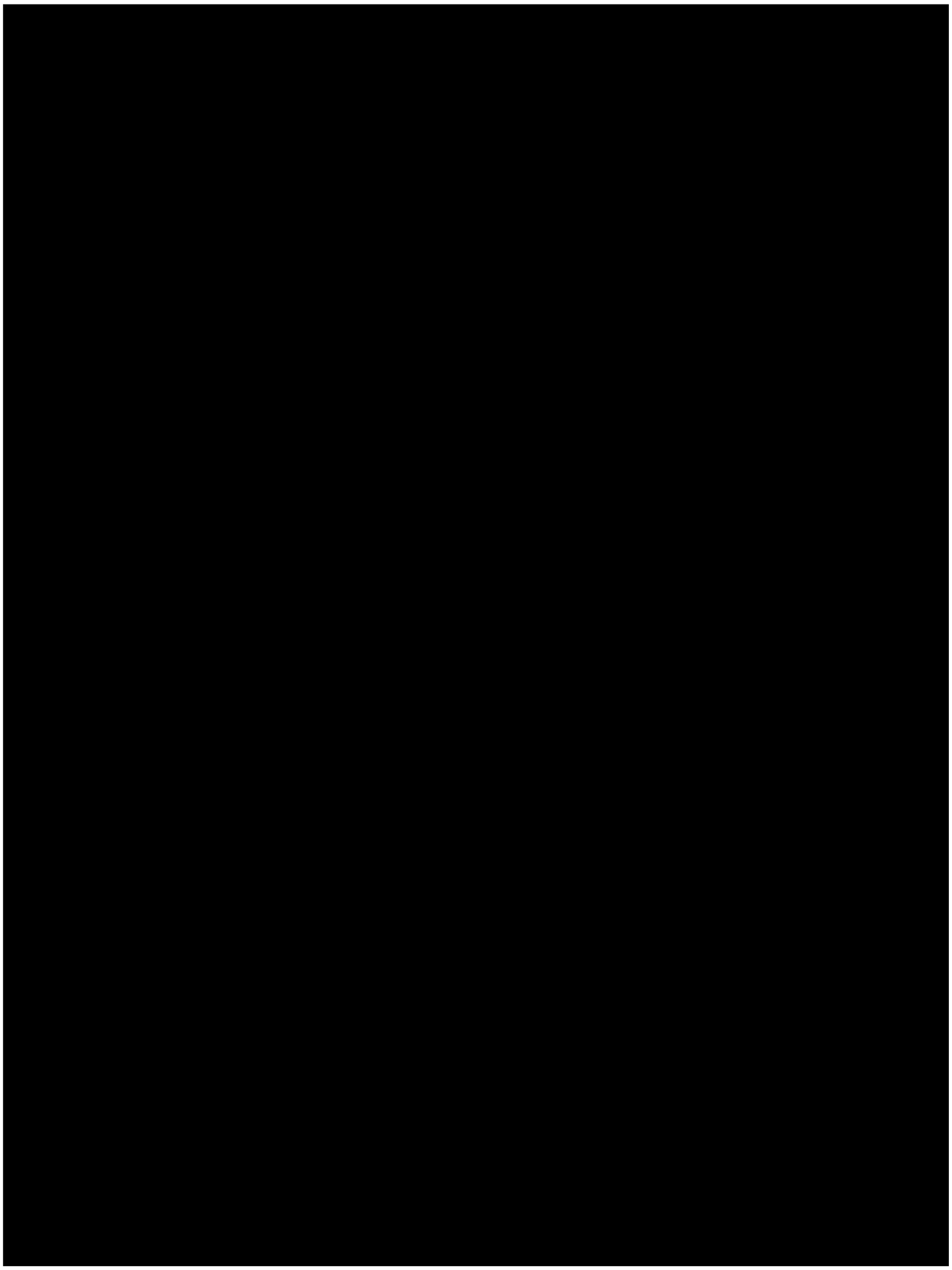

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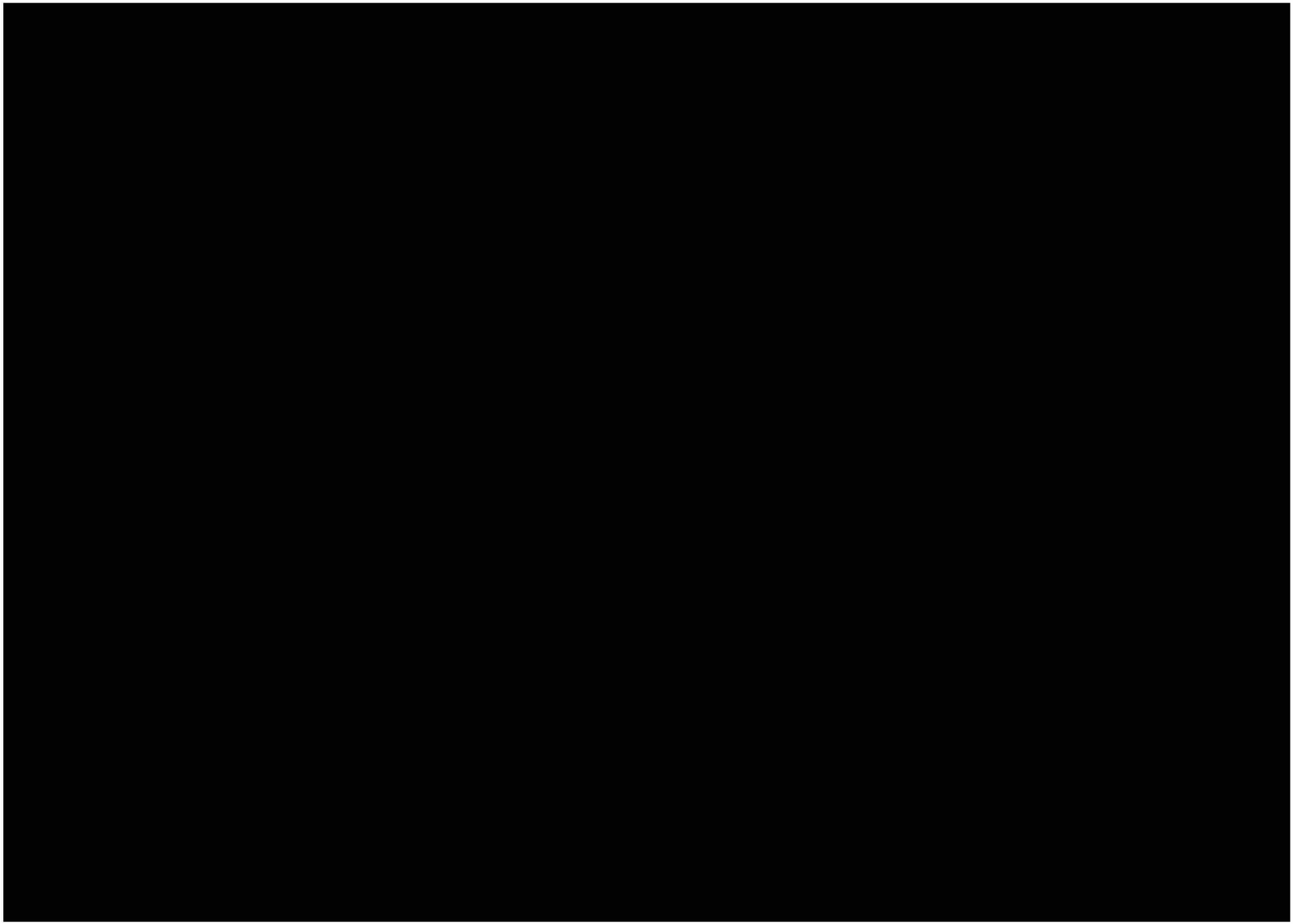

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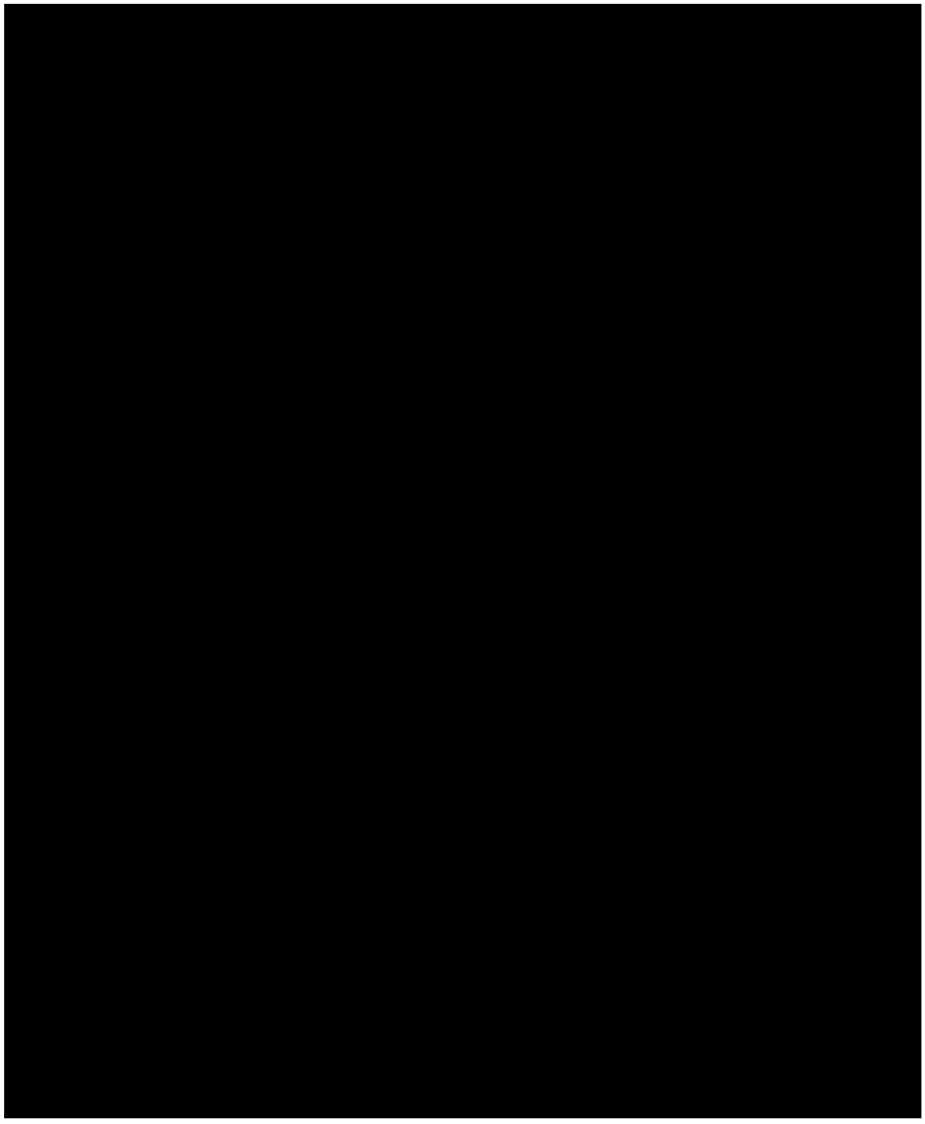
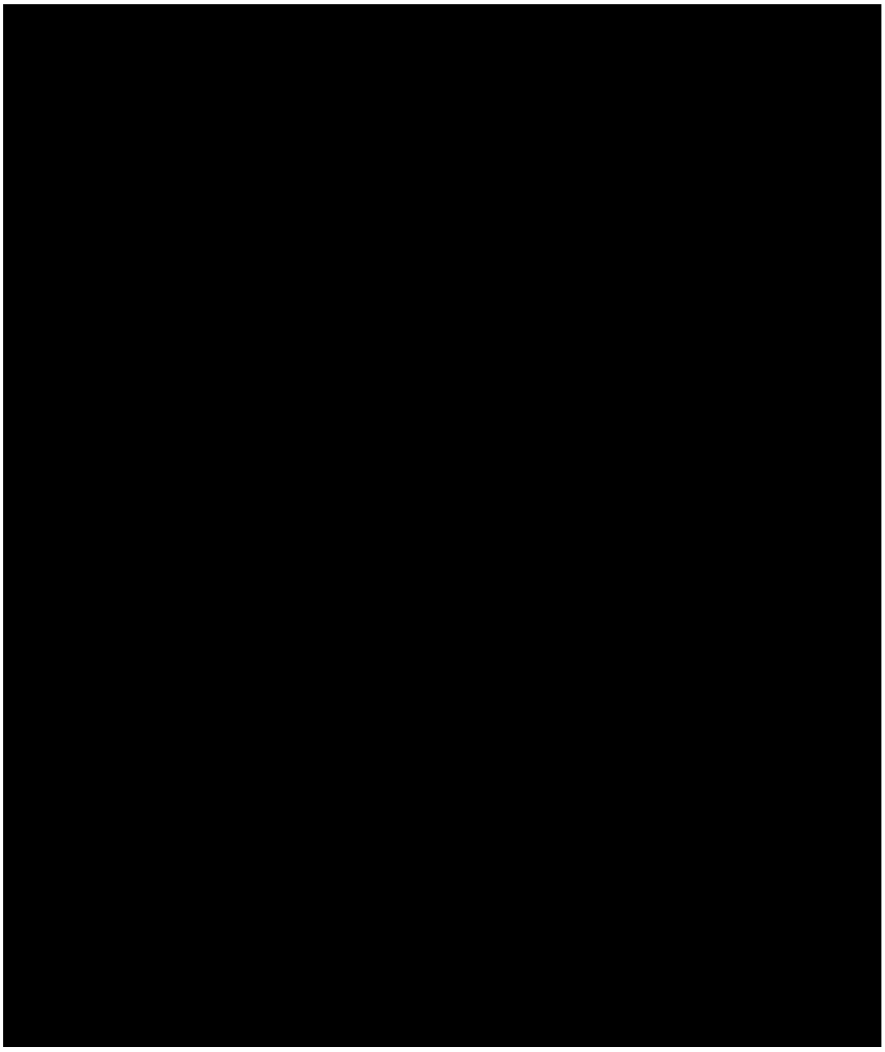


9.0 [redacted]

[redacted] "Grit" is a fine stone byproduct of the crushing and screening process at a quarry operation. In many operations this product is considered a waste product and must be disposed of in a waste storage area. The product has an approximate top size of 1/4 in. and bottom size of 1/8 in. (1/4 x 1/8). This size interval product does not meet construction industry specifications for concrete sand. However, when this material is blended with fine natural silica sand, it produces an in-specification concrete sand. [redacted]



10.0 REPORT QUALIFICATIONS

Our review provides our independent professional opinions on the potential crushed stone sales market in the greater NYC area. Additionally, we have presented our analysis of the potential estimated concrete sand market in the northern New Jersey area. The opinions expressed herein are based on data obtained from public sources, trade organizations, and in-field diligence. BOYD's background and experience with building materials markets provide our foundation used in preparing this report.

The mineral processing and marketing business is a unique and specialized area. The competency of BOYD as a consultancy and the principal staff assigned to this project are well established by:

- Reputation and experience developed over the 70-plus years of company existence.
- Educational and work background of individuals completing work under this engagement.
- Recognition and acceptance of BOYD's senior management and staff as individual experts in minerals valuation in numerous county, state, and federal (US) courts, as well as international venues.
- Experience with review and valuation of numerous major US industrial minerals producers.

While we do not warrant the findings and conclusions in any manner, we believe they are reasonable and realistic. BOYD certifies that, to the best of our knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are our impartial and unbiased professional analyses, opinions, and conclusions.
- We have no present or prospective interest in the property that is the subject of this report, and we have no personal interest with respect to the parties involved.

- We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- Our engagement in this assignment was not contingent upon developing or reporting predetermined results.
- Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- No one provided significant professional assistance to the person signing this report.

In preparing this report, we have assumed that the information were prepared by competent staff and are accurate. Such information was accepted as presented; any misrepresentations, errors, and/or omissions in the provided data could change the BOYD findings presented herein.

Opinions expressed are subjective in nature and are based on the knowledge and experience of the BOYD staff and management.

APPENDIX A

RESUME AND EXPERT WITNESS TESTIMONY
OF MICHAEL F. WICK

Michael F. Wick, P.E.
Vice President

Summary of Expertise

Thirty-one years of experience in engineering, operations, and management. Background includes industrial minerals, metals, and coal, and all aspects of mining operations including: reserve evaluation and planning, capital budget planning and management, operational efficiency, productivity and utilization management, productivity improvement process (Six Sigma), safety (MSHA) and environmental project reviews and procedure implementation, M&A-business (market) development, due diligence, valuation experience, and expert witness experience.

Experience

2009 to Date – John T. Boyd Company, Mining and Geological Consultants.

- Develop a comprehensive technical and business plan to attract investors to Egypt to explore and exploit gold, zinc, phosphate, and granite minerals within the Red Sea region of the country.
- Mining expert and financial expert in placer gold mining dispute against the Republic of Ghana. Direct testimony at ICSID in London.
- Advisor and reserve evaluations to SEC standards for large industrial minerals companies filing IPOs.
- Mining and valuation expert in regard to a titanium sands expropriation in Gambia, with testimony before an arbitration panel in London, UK. (ICSID).
- Valuation of a surface dolomite operation in Peru owned by Chinese steelmaker, Shogung for CF Industries. Review economically mineable reserves and business plan.
- Complete feasibility level study pertaining to an investment dispute between Sultanate of Oman and an American investor concerning a large industrial minerals complex. Direct testimony in London.
- Expert witness in regard to a mineral processing equipment fatality in New Mexico. Retained by major insurance company.
- Prepared an opinion on operating practices at an openpit mine in Colorado that experienced a massive slope failure and property damage. Retained by major insurance company.
- Strategic analysis of options regarding purchase of existing, or development of greenfield, proppant sand operations.
- Expert witness in regard to a dispute over a large capital project in an underground salt mine. Retained by major insurance company.

Experience - Continued

2005 to 2009 – Rogers Group, Nashville, Tennessee. Vice President of Mining Operations. (Largest private building materials company in the US with 48 surface and 5 underground mining operations in 5 states)

- Allocated and managed annual capital budget of $60 million–$80 million. Five Directors reporting to this position. Operations Managers had dotted line reporting on production-related issues and personnel issues.
- Managed 2,500 unit mobile equipment fleet with automated metrics reporting integrated into company ERP system for productivity, utilization and replacement reporting.
- Managed environmental services to include mining, NPDES, and NSPS permitting and site inspections/audits.
- Managed process efficiency and cost reduction opportunities of existing operations through six-sigma (DMAIC) process in addition to identifying cost synergies in potential acquisition targets.
- Managed fixed plant expansion/replacement/automation projects from concept through commissioning. Included: process simulations, evaluating options, cost estimates, ROI calculations, project approval, work scope/bid preparation, contract negotiation, engineering layout and benchmark scheduling, on-site project management, purchasing and fiscal responsibility/budgeting, cash flow projections, start-up, safety audits and training
- Conducted detailed due diligence on potential acquisitions and managed greenfield development process, including: land optioning/leasing/acquiring, exploration and analysis, environmental assessment and permitting, zoning, site planning/development, and commissioning. Opened two new quarries and two under development.
- Managed mine planning and geology function to include: detailed mine plans at critical operations, life-of-company proven and probable reserve database. Extensive ongoing drilling and mapping of four high-calcium operations (three underground, one surface) to ensure utility FGD contract compliance and determination of bid specifications for future contracts.

2000 to 2005 – Lafarge North America, Towson, Maryland. Manager of Greenfield and Business Development (Eastern US Region).

- Instrumental in establishing Lafarge aggregate and cement operations in the Chicago market. Performed detailed market study identifying relative positioning of all producers and consumers (down to the specific customer level). Identified greenfield sites and most likely acquisition targets. Lead person on exclusive bridgehead aggregate transaction that now yields Lafarge a 14-million-ton presence in the Chicago market. Constructed business case and specific line item P&L utilized in DCF model to determine LOI range.

Experience - Continued

- Initiated construction of joint cement and aggregate rail facility in the Pittsburgh market. Obtained rail transportation grant to construct facility. Negotiated rail rates with NS for long-term contract. Visited potential and existing customers to assess market demand and negotiate supply agreements. Currently this yard is operating.
- Performed detailed aggregate market studies for New Jersey, New York, and Pennsylvania utilizing cement division data and other relevant resources assessing supply/demand balance, market structure, pricing umbrella, and relative positioning of potential acquisitions.
- Initiated project to ship aggregate from Canada into cement dock in Waukegan Harbor. The project would provide aggregates to the North Chicago area, which has limited stone resources.

1995 to 2000 – ASARCO – American Limestone/TN Zinc Division, Knoxville, Tennessee. Manager of Operational Services (Now Cemex)

- Managed all fixed plant capital projects in four states. Included: process flow, cost estimates, capital submittal with IRR, scheduling, equipment purchasing and tracking via SAP system, field project/construction management, start-up, and training.
- Led Operational Improvement Team (OIT) on plant efficiency studies, cost improvement action plans, and Best Practice Implementation throughout the company. These cost improvement commitments were incorporated into the yearly business plans.
- Performed detailed operational and reserve due diligence on potential acquisitions.
- Managed all environmental NPDES and NSPS permitting.
- Involved with underground zinc mine planning, equipment reporting and operational parameters to process and market zinc tailings from three underground mines.

1991 to 1995 – Franklin Industries, Nashville, Tennessee (Now Lhoist). Senior Mining Engineer.

- Responsible for chemical mapping (isochem)/surveying/planning of two underground operations. Coordination of underground production drill cuttings sampling and advanced core drilling to determine chemical stone quality in advance of mining.
- Responsible for exploration drilling, reserve analysis, and environmental. permitting (NPDES and NSPS).

Experience - Continued

1984 to 1991 – Solite Corporation (Coal Division), Harlan, Kentucky. Engineering Manager.

- Developed/trained an in-house engineering group to perform all underground/surface surveying and mapping, ventilation plans and reviews with MSHA, roof control plans and studies, mine projections and planning, equipment availability reporting,
- Responsible for land management including coal exploration, lease negotiations, royalty calculations and reserve analysis and quantification, and reporting.
- Transferred to Northeast Solite as Operations Manager at a 700,000 tpy rotary kiln, lightweight aggregate plant in Mt. Marion, New York (1989–1991).

1982 to 1984 – Pontiki Coal Corporation (MAPCO), Inez, Kentucky. Engineering/Production Intern.

- Worked in all aspects of production and engineering of this underground, room-and-pillar coal operation. Two six-month internships.

Education

2006 Six-Sigma Greenbelt Certified.

1999 MBA: Finance – Lincoln Memorial University, Harrogate, Tennessee.

1984 BS: Mining Engineering – The Pennsylvania State University, State College, Pennsylvania.

Registrations

Professional Engineering License (PE), Tennessee, Kentucky, Pennsylvania.

Registered Member- Society of Mining, Metallurgy and Exploration.

Michael F. Wick – Vice President
Record of Expert Witness Testimony

Date(s) of Testimony	Body/Agency Testified Before	Subject of Testimony	Client/Law Firm
7/2016	Deposition Testimony Chancery Court of Pearl River, Mississippi	Land Lease Dispute Industrial Minerals	Dry Facility Asset Holding McGlinchey Stafford PLLC
5/2016	Deposition Testimony US District Court Western District of Wisconsin	Contract Dispute Industrial Minerals	GQ Sand Kramer, Elkins & Watt LLP
10/09 &10/10/2014	Direct Testimony ICC Case # 18294/ARP/MD London, England	Dunkwa Continental Goldfields VS Republic of Ghana Mining Technical Expert	Dunkwa Continental Goldfields Jones Day
5/5/2014	Direct Testimony ICSID Case # ARB/11/33 London, England	Adel Al Tamimi versus Sultanate of Oman Mining Expropriation Technical and Financial Expert	Adel Tamimi Debevoise & Plimpton LLP
4/17/2014	Deposition United States Bankruptcy Court Southern District of Mississippi	Industrial sand mining company bankruptcy valuation	Spectrum Origination Inc. Haynes and Boone, LLP
7/11/2012	Deposition United States District Court for the District of Kansas	Capital expenditure review, underground salt mine	Fisher Kanaris P.C. Lexington Insurance Company
6/28/2012	Deposition United States District Court for the District of Colorado	Standard of care, Colorado Springs surface mine	Yates Law Firm Affiliated FM Insurance Company
2/27 to 2/29/2012	Direct Testimony ICSID Case # ARB/09/19 London, England	Technical and financial aspects related to the mining of mineral sands	The Republic of Gambia Mayer Brown
2/27/2011	Deposition State of New Mexico, 2nd Judicial District	Cause of fatality involving a crusher at a surface mine. Standard of care.	NC Ribble Company Modrall Sperling