



# Justin S. Douthat

## **Current Position**

Vice President  
Manager of Engineering  
Services  
Radiation Safety Officer

## **Profession**

Mining Engineer

## **Years' Experience**

21

## **Education**

MBA - The Pennsylvania State  
University, University Park, PA

BS - Mining & Minerals  
Engineering, Virginia Tech,  
Blacksburg, VA

AA&S - Engineering, SVCC,  
Richlands, VA

## **Professional Registrations**

PE - AR, CO, IL, KS, KY,  
LA, MS, NC, VA, WV

SME - Registered Member  
(4028345)

OSHA 40 Hour Health and  
Safety Training

OSHA 8 Hour Supervisory  
Health and Safety Training

MSHA Qualified Impoundment  
Inspector

40 Hour Radiation  
Safety Officer Training

## **Summary of Experience**

Mr. Douthat directs engineering services for the company's energy and mineral resources clients, including those in the aggregates and industrial mineral industries. His experience includes geologic modeling, reserve calculations, mineral valuations, mine planning and production timing using Carlson Mining® computer software. In addition, he performs end-of-mine reclamation and closure cost assessments that meets the requirements of *Accounting Standard Codification Topic 410 (ASC 410) Accounting for Asset Retirement Obligations*. He administers training for the use of Carlson Mining® computer software for geologic modeling and mine planning both in the United States and abroad.

Mr. Douthat also coordinates and supervises a company-wide radiation safety program that includes the safety training of geophysical well logging personnel in order to maintain compliance with federal and state nuclear regulatory authorities.

Specifically, he has:

- > Prepared and/or served as a Qualified Person (QP) on multiple technical reports for the public filing of coal resources and coal reserves including those for the U.S. Securities and Exchange Commission, Canadian National Instrument 43-101 Standards for Disclosure of Mineral Projects (NI 43-101) and the Australasian Joint Ore Reserves Committee (JORC) code
- > Conducted reserve estimations for both aggregates and industrial minerals clientele that included reviews of potential acquisition properties or expansion areas as well as definition of maximum reserve potential for as-configured operating properties
- > Designed pits for quarries that maximized reserves with a focus on erosion and sediment control
- > Completed amendments to mining permits for submittal to state agencies
- > Worked closely with quarry operations personnel to produce overburden removal and disposal plans along with the associated cut and fill volume estimates for future quarry expansion areas
- > Prepared multiple construction bid packages to include overburden removal and disposal area designs, haul road design and relocation, and all associated erosion and sediment control design construction details
- > Coordinated aerial surveys for topographic mapping and stockpile inventory purposes, and prepared stockpile inventory volume calculations
- > Provided detailed mine planning that included reserve/resource assessment and mine production timing for surface and underground operations utilizing Carlson Mining® computer software



## Professional History

2017- Present

### **Vice President / Manager of Engineering Services / Radiation Safety Officer**

*Marshall Miller & Associates, Inc.*

2015 - 2016

### **Business Unit Manager – Mining Advisory Services**

*Cardno, Inc.*

2012 – 2014

### **Director of Engineering Services**

*Cardno MM&A (former Marshall Miller & Associates, Inc.)*

Responsible for coordination and management of various energy and mineral resources engineering services and projects for clients in the coal, aggregates and industrial minerals industries

2001 – 2012

### **Project Engineer**

*Marshall Miller & Associates, Inc.*

Responsible for coordination and management of various energy and mineral resources projects including geologic modeling, reserve calculations, mine planning and production timing for coal reserves using SurvCADD® (now Carlson Mining®) computer software. Performed end-of-mine reclamation and closure cost assessments including requirements of Financial Accounting Standard No. 143 (FAS 143) Accounting for Asset Retirement Obligations. Administered training for the use of SurvCADD® computer software for geologic modeling and mine planning both in the United States and abroad. Either directly provided or managed reserve estimation services to aggregates and industrial minerals clientele, including reviews of potential acquisition properties or expansion areas as well as definition of maximum reserve potential for as-configured operations. Performed ultimate pit design and mine planning for maximization of quarry reserves. Responsible for quarry permitting projects, including erosion and sediment control design, including completion of permit amendment submittals to state agency officials. Worked closely with quarry operations personnel to produce overburden removal and disposal plans along with the associated cut and fill volume estimates for future quarry expansion areas. Prepared multiple construction bid packages to include overburden removal and disposal designs, haul road design and relocation, and all associated erosion and sediment control design construction details. Responsible for the coordination of aerial surveys for topographic mapping and stockpile inventory purposes, and prepared stockpile inventory volume calculations.

1998 - 2016

### **Radiation Safety Officer**

*Cardno, Inc. / Cardno MM&A (former Marshall Miller & Associates, Inc.)*

Coordinate and supervise company-wide radiation safety program including the safety training of geophysical well logging personnel, and ensure compliance with federal and state nuclear regulatory authorities.



1996 - 2000

### **Mining Engineer, Assistant Geophysical Director**

*Marshall Miller & Associates, Inc.*

Responsible for detailed mine planning including reserve/resource assessment and mine production timing for surface and underground operations using SurvCADD® (now Carlson Mining®) computer software. Conducted geotechnical and ground control investigations for underground mine roof support requirements, including special requirements for shallow-cover stream crossings. Performed mine subsidence assessments including computer prediction modeling and mitigation recommendations. Assessed shaft and portal site locations based on geotechnical analysis. Responsible for analyzing mine ventilation requirements, shaft-sizing, and ventilation network analysis using VNETPC computer software. Conducted operations analyses including coal processing, materials handling and product allocation, and detailed cut/fill volume calculations using computer methods. Performed valuations of mining operations and properties, as well as equipment and related facilities. Conducted assessments of end-of-mine life reclamation liabilities including calculation of earthwork quantities and costs. Provided engineering support in assessing damage claims due to blasting and subsidence, as well as assessing dust control measures as a result of complaints from public. Managed daily operations of Geophysical Logging Department.

1995 - 1996

### **Geophysical Logging Engineer**

*Geophysical Logging Services*

Gamma-Density geophysical logging of coal exploration wells, hydrogeological and video logging for the purpose of determining ground water infiltration points and fracture/bedding plane locations for environmental wells.

Summer 1994

### **Engineering Assistant**

*Tarmac Mid-Atlantic (Jack Plant)*

Performed time studies of work cycle times in quarry pit. Updated and maintained equipment maintenance schedule. Assisted in collection of crushed stone samples for quality control. Assisted in construction activities of crushing and screening plant upgrades.

1993

### **Underground Utility Assistant**

*Consolidation Coal Company (Buchanan Mine)*

Assisted in maintenance of underground mine including construction of seals and overcasts, conveyor belt moves for new production sections and other general utility tasks.

### **Publications**

- > "Engineering Aspects of Synfuel Plant Projects," April 20, 2001, Lexington, Kentucky, presented at the Central Appalachian Section of the Society of Mining Engineers Conference, co-author John E. Feddock, P.E.

### **Certifications**

- > Registered Professional Engineer, Arkansas, Certification No. 13918
- > Registered Professional Engineer, Colorado, Certification No. 48463



- > Registered Professional Engineer, Illinois, Certification No. 062-060237
  - > Registered Professional Engineer, Kansas, Certification No. 19273
  - > Registered Professional Engineer, Kentucky, Certification No. 25239
  - > Registered Professional Engineer, Louisiana, Certification No. 34909
  - > Registered Professional Engineer, Mississippi, Certification No. 25711
  - > Registered Professional Engineer, North Carolina, Certification No. 033311
  - > Registered Professional Engineer, Virginia, Certification No. 035270
  - > Registered Professional Engineer, West Virginia, Certification No. 17219
  - > OSHA 40 Hr. Health and Safety Training, 29 CFR 1910.120, Certification No. 7432
  - > OSHA 8 Hr. Supervisory Health & Safety Training, 29 CFR 1910.120, Certification No. 2717
  - > MSHA Qualified Impoundment Inspector
  - > 40 Hour Radiation Safety Officer Training
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- > Registered Member of the Society for Mining, Metallurgy and Exploration (SME) of AIME, Member No. 4028345

## ***Memberships***