UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Quarterly Period Ended March 31, 2019

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 001-35416

U.S. Silica Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**26-3718801**
(State or other jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

24275 Katy Freeway, Suite 600
Katy, Texas 77494
(Address of Principal Executive Offices) (Zip Code)

(281) 258-2170
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

As of April 26, 2019, 73,553,442 shares of common stock, par value $0.01 per share, of the registrant were outstanding.

U.S. SILICA HOLDINGS, INC.
FORM 10-Q
For the Quarter Ended March 31, 2019

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PART I-FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

U.S. SILICA HOLDINGS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

(Unaudited; dollars in thousands)

	March 31, 2019	December 31, 2018
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 161,615	$ 202,498
Accounts receivable, net	258,348	215,486
Inventories, net	143,149	162,087
Prepaid expenses and other current assets	14,572	17,966
Income tax deposits	1,388	2,200
Total current assets	579,072	600,237
Property, plant and mine development, net	1,820,102	1,826,303
Operating lease right-of-use assets	209,699	—
Goodwill	273,524	261,340
Intangible assets, net	190,584	194,626
Other assets	16,459	18,334
Total assets	$ 3,089,440	$ 2,900,840
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable and accrued expenses	$ 223,611	$ 216,400
Current portion of operating lease liabilities	61,583	—
Current portion of long-term debt	13,112	13,327
Current portion of deferred revenue	28,838	31,612
Total current liabilities	327,144	261,339
Long-term debt, net	1,245,242	1,246,428
Deferred revenue	86,930	81,707
Liability for pension and other post-retirement benefits	56,879	57,194
Deferred income taxes, net	131,053	137,239
Operating lease liabilities	149,040	—
Other long-term liabilities	59,054	64,629
Total liabilities	2,055,342	1,848,536
Commitments and Contingencies (Note O)		
Stockholders' Equity:		
Preferred stock, $0.01 par value, 10,000,000 shares authorized; zero issued and outstanding at March 31, 2019 and December 31, 2018	—	—
Common stock, $0.01 par value, 500,000,000 shares authorized; 82,455,734 issued and 73,524,817 outstanding at March 31, 2019; 81,811,977 issued and 73,148,853 outstanding at December 31, 2018	820	818
Additional paid-in capital	1,173,259	1,169,383
Retained earnings	43,920	67,854
Treasury stock, at cost, 8,930,917 and 8,663,124 shares at March 31, 2019 and December 31, 2018, respectively	(180,125)	(178,215)
Accumulated other comprehensive loss	(15,985)	(15,020)
Total U.S. Silica Holdings, Inc. stockholders' equity	1,021,889	1,044,820
Non-controlling interest	12,209	7,484
Total stockholders' equity	1,034,098	1,052,304
Total liabilities and stockholders' equity	$ 3,089,440	$ 2,900,840

The accompanying notes are an integral part of these financial statements.

U.S. SILICA HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited; dollars in thousands, except per share amounts)

	Three Months Ended March 31,	
	2019	2018
Sales:		
Product	$ 296,860	$ 294,788
Service	81,890	74,525
Total sales	378,750	369,313
Cost of sales (excluding depreciation, depletion and amortization):		
Product	234,916	207,239
Service	62,622	53,671
Total cost of sales (excluding depreciation, depletion and amortization)	297,538	260,910
Operating expenses:		
Selling, general and administrative	34,656	34,591
Depreciation, depletion and amortization	44,600	28,592
Total operating expenses	79,256	63,183
Operating income	1,956	45,220
Other (expense) income:		
Interest expense	(23,978)	(7,070)
Other income, net, including interest income	722	665
Total other expense	(23,256)	(6,405)
(Loss) income before income taxes	(21,300)	38,815
Income tax benefit (expense)	1,972	(7,521)
Net (loss) income	$ (19,328)	$ 31,294
Less: Net (loss) income attributable to non-controlling interest	(4)	—
Net (loss) income attributable to U.S. Silica Holdings, Inc.	$ (19,324)	$ 31,294
Earnings (loss) per share attributable to U.S. Silica Holdings, Inc.:		
Basic	$ (0.26)	$ 0.39
Diluted	$ (0.26)	$ 0.39
Weighted average shares outstanding:		
Basic	73,040	79,496
Diluted	73,040	80,309
Dividends declared per share	$ 0.06	$ 0.06

The accompanying notes are an integral part of these financial statements.

U.S. SILICA HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited; dollars in thousands)

	Three Months Ended March 31,	
	2019	2018
Net (loss) income	$ (19,328)	$ 31,294
Other comprehensive (loss) income:		
Unrealized loss on derivatives (net of tax of $(299) and $1 for the three months ended March 31, 2019 and 2018, respectively)	(940)	(2)
Foreign currency translation adjustment (net of tax of $(60) and $1 for the three months ended March 31, 2019 and 2018, respectively)	(199)	3
Pension and other post-retirement benefits liability adjustment (net of tax of $55 and $730 for the three months ended March 31, 2019 and 2018, respectively)	174	2,293
Comprehensive (loss) income	$ (20,293)	$ 33,588
Less: Comprehensive (loss) income attributable to non-controlling interest	(4)	—
Comprehensive (loss) income attributable to U.S. Silica Holdings, Inc.	$ (20,289)	$ 33,588

The accompanying notes are an integral part of these financial statements.

U.S. SILICA HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited; dollars in thousands, except per share amounts)

	Common Stock	Treasury Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total U.S. Silica Holdings Inc., Stockholders' Equity	Non-controlling Interest	Total Stockholders' Equity
Balance at December 31, 2018	$ 818	$ (178,215)	$ 1,169,383	$ 67,854	$ (15,020)	$ 1,044,820	$ 7,484	$ 1,052,304
Net loss	—	—	—	(19,324)	—	(19,324)	(4)	(19,328)
Unrealized loss on derivatives	—	—	—	—	(940)	(940)	—	(940)
Foreign currency translation adjustment	—	—	—	—	(199)	(199)	—	(199)
Pension and post-retirement liability	—	—	—	—	174	174	—	174
Cash dividend declared ($0.0625 per share)	—	—	—	(4,610)	—	(4,610)	—	(4,610)
Contributions from non-controlling interest	—	—	—	—	—	—	4,729	4,729
Common stock-based compensation plans activity:								
Equity-based compensation	—	—	4,045	—	—	4,045	—	4,045
Proceeds from options exercised	—	295	(167)	—	—	128	—	128
Tax payments related to shares withheld for vested restricted stock and stock units	2	(2,205)	(2)	—	—	(2,205)	—	(2,205)
Balance at March 31, 2019	$ 820	$ (180,125)	$ 1,173,259	$ 43,920	$ (15,985)	$ 1,021,889	$ 12,209	$ 1,034,098
Balance at December 31, 2017	$ 812	$ (25,456)	$ 1,147,084	$ 287,992	$ (13,926)	$ 1,396,506	$ —	$ 1,396,506
Net income	—	—	—	31,294	—	31,294	—	31,294
Unrealized loss on derivatives	—	—	—	—	(2)	(2)	—	(2)
Foreign currency translation adjustment	—	—	—	—	3	3	—	3
Pension and post-retirement liability	—	—	—	—	2,293	2,293	—	2,293
Cash dividend declared ($0.0625 per share)	—	—	—	(4,881)	—	(4,881)	—	(4,881)
Common stock-based compensation plans activity:								
Equity-based compensation	—	—	6,254	—	—	6,254	—	6,254
Tax payments related to shares withheld for vested restricted stock and stock units	2	(3,484)	(2)	—	—	(3,484)	—	(3,484)
Repurchase of common stock	—	(75,000)	—	—	—	(75,000)	—	(75,000)
Balance at March 31, 2018	$ 814	$ (103,940)	$ 1,153,336	$ 314,405	$ (11,632)	$ 1,352,983	$ —	$ 1,352,983

The accompanying notes are an integral part of these financial statements.

U.S. SILICA HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited; dollars in thousands)

	Three Months Ended March 31,	
	2019	**2018**
Operating activities:		
Net (loss) income	$ (19,328)	$ 31,294
Adjustments to reconcile net (loss) income to net cash provided by operating activities:		
Depreciation, depletion and amortization	44,600	28,592
Debt issuance amortization	1,322	345
Original issue discount amortization	265	93
Deferred income taxes	(2,553)	7,786
Deferred revenue	(7,576)	3,562
(Gain) loss on disposal of property, plant and equipment	113	(5,799)
Equity-based compensation	4,045	6,254
Bad debt provision, net of recoveries	721	237
Other	(3,872)	(871)
Changes in operating assets and liabilities, net of effects of acquisitions:		
Accounts receivable	(43,583)	(39,077)
Inventories	18,938	15,797
Prepaid expenses and other current assets	3,151	694
Income taxes	812	(961)
Accounts payable and accrued expenses	12,970	(27,930)
Short-term and long-term obligations-vendor incentives	—	57,986
Liability for pension and other post-retirement benefits	924	212
Other noncurrent assets and liabilities	(48)	(605)
Net cash provided by operating activities	10,901	77,609
Investing activities:		
Capital expenditures	(44,376)	(72,327)
Capitalized intellectual property costs	(1,307)	(1,011)
Proceeds from sale of property, plant and equipment	—	25,960
Net cash used in investing activities	(45,683)	(47,378)
Financing activities:		
Dividends paid	(4,690)	(5,069)
Repurchase of common stock	—	(75,000)
Proceeds from options exercised	128	—
Tax payments related to shares withheld for vested restricted stock and stock units	(2,205)	(3,485)
Payments on long-term debt	(4,043)	(1,657)
Contributions from non-controlling interest	4,729	—
Principal payments on finance lease obligations	(20)	(75)
Net cash used in financing activities	(6,101)	(85,286)
Net decrease in cash and cash equivalents	(40,883)	(55,055)
Cash and cash equivalents, beginning of period	202,498	384,567
Cash and cash equivalents, end of period	$ 161,615	$ 329,512
Supplemental cash flow information:		
Cash paid (received) during the period for:		
Interest	$ 21,557	$ 6,592

Taxes, net of refunds	$	(472)	$	770
Related party purchases	$	—	$	672
Non-cash Items:				
Accrued capital expenditures	$	39,239	$	20,170
Capital lease assumed by third-party	$	—	$	119
Asset retirement obligation assumed by third-party	$	—	$	2,116

The accompanying notes are an integral part of these financial statements.

NOTE A—ORGANIZATION AND BASIS OF PRESENTATION

Organization

U.S. Silica Holdings, Inc. (“Holdings,” and together with its subsidiaries “we,” “us” or the “Company”) is a performance materials company and one of the largest domestic producers of commercial silica used in the oil and gas industry and in a wide range of industrial applications. In addition, through our acquisition of EP Minerals, LLC ("EPM") and its affiliated companies, we are an industry leader in the production of industrial minerals, including diatomaceous earth, clay (calcium bentonite and calcium montmorillonite) and perlite. During our 119-year history, we have developed core competencies in mining, processing, logistics and materials science that enable us to produce and cost-effectively deliver products to customers across our end markets. Our operations are organized into two reportable segments based on end markets served: (1) Oil & Gas Proppants and (2) Industrial & Specialty Products. See Note U - Segment Reporting for more information on our reportable segments.

Basis of Presentation and Consolidation

The accompanying unaudited Condensed Consolidated Financial Statements for the quarter ended March 31, 2019 included in this Quarterly Report on Form 10-Q, have been prepared in accordance with generally accepted accounting principles in the United States (“GAAP”) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X issued by the U.S. Securities and Exchange Commission (“SEC”). They do not contain certain information included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018; therefore, the unaudited Condensed Consolidated Financial Statements should be read in conjunction with that Annual Report on Form 10-K. In the opinion of management, all adjustments necessary for a fair presentation have been included. Such adjustments are of a normal, recurring nature.

The Condensed Consolidated Financial Statements include the accounts of Holdings and its direct and indirect wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

We follow Financial Accounting Standards Board ("FASB") Accounting Standards Codification (“ASC”) guidance for identification and reporting of entities over which control is achieved through means other than voting rights. The guidance defines such entities as Variable Interest Entities (“VIEs”). We consolidate VIEs when we have variable interests and are the primary beneficiary. We continually evaluate our involvement with VIEs to determine when these criteria are met.

During the third quarter of 2018 we finalized a shareholders' agreement with unrelated parties to form a limited liability company with the purpose of constructing and operating a water pipeline to transport and sell water. In connection with the shareholders’ agreement, we acquired a 50% equity ownership for $3.2 million, with a maximum capital contribution of $7.0 million, and a water rights intangible asset for $0.7 million. Based on our evaluation, we determined that we are the primary beneficiary of this VIE and therefore we are required to consolidate it, including the current construction work in progress of $19.0 million. During the fourth quarter of 2018 we contributed an additional $3.8 million for a total of $7.0 million in capital contributions for the year ended December 31, 2018. We did not make any capital contributions during the three months ended March 31, 2019.

Throughout this report we refer to (i) our Condensed Consolidated Balance Sheets as our “Balance Sheets,” (ii) our Condensed Consolidated Statements of Operations as our “Income Statements,” and (iii) our Condensed Consolidated Statements of Cash Flows as our “Cash Flows.”

NOTE B—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Use of Estimates and Assumptions

The preparation of Consolidated Financial Statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the related disclosure of contingent assets and liabilities at the date of the Consolidated Financial Statements and the reported amounts of revenues and expenses during the reporting period. The more significant areas requiring the use of management estimates and assumptions relate to the purchase price allocation for businesses acquired; mineral reserves that are the basis for future cash flow estimates utilized in impairment calculations and units-of-production amortization calculations; environmental, reclamation and closure obligations; estimates of recoverable minerals; estimates of allowance for doubtful accounts; estimates of fair value for certain reporting units and asset impairments (including impairments of goodwill, intangible assets and other long-lived assets); write-downs of inventory to net realizable value; equity-based compensation expense; post-employment, post-retirement and other employee benefit liabilities; valuation allowances for deferred tax assets; contingent considerations; reserves for contingencies and litigation and the fair value and accounting treatment of financial instruments, including derivative instruments. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. Accordingly, actual results may differ significantly from these estimates under different assumptions or conditions.

Leases

We lease railroad cars, office space, mining property, mining/processing equipment and transportation and other equipment. Operating leases are included in operating lease right-of-use ("ROU") assets, current portion of operating lease liabilities, and operating lease liabilities in our consolidated balance sheets. Finance leases are included in property, plant and mine development, current portion of long-term debt, and long-term debt in our consolidated balance sheets. Leases with an initial term of 12 months or less are not recorded on the balance sheet. ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at the commencement date of the lease based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. The ROU assets also include any lease payments made at or before the commencement date of the lease and excludes lease incentives. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term. We have lease agreements with lease and non-lease components, the latter of which are generally accounted for separately. See Note Q - Leases

Foreign Operations

Foreign sales were approximately $15.3 million of our consolidated sales; pre-tax income was $0.9 million and net income was $0.8 million for the three months ended March 31, 2019. Foreign operations constituted approximately $10.1 million of consolidated assets as of March 31, 2019. We had no significant foreign operations during the three months ended March 31, 2018.

New Accounting Pronouncements Recently Adopted

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842) and issued ASU 2018-11 Leases (Topic 842): Targeted Improvements. The new standard(s) established a right-of-use ("ROU") model that requires a lessee to record an ROU asset and a corresponding lease liability on the balance sheet for all leases with terms greater than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition. Similarly, lessors will be required to classify leases as sales-type, finance or operating, with classification affecting the pattern of income recognition. Classification for both lessees and lessors will be based on an assessment of whether the lease risks and rewards, as well as substantive control, have been transferred through a lease contract.

On January 1, 2019, we adopted the new accounting standard using the modified retrospective approach. We elected the package of practical expedients permitted under the transition guidance, which allowed us to account for our existing operating leases without reassessing (a) whether the contracts contain a lease under the new standard, (b) whether classification of the operating leases would be different in accordance with the new standard, or (c) whether the unamortized initial direct costs before transition adjustments would have met the definition of initial direct costs in the new standard at lease commencement. Adoption of the new standard resulted in the recognition of operating lease right-of-use assets of $223.0 million and lease liabilities of $222.7 million. The standard did not have a material impact on our consolidated statements of operations or cash flows. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods. See Note Q - Leases.

In February 2018, the FASB issued Accounting Standards Update ASU 2018-02, Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. The ASU provides that the stranded tax effects from the Tax Act in accumulated other comprehensive loss may be reclassified to retained earnings. The ASU is effective January 1, 2019, with early adoption permitted. We adopted the new accounting standard on January 1, 2019, and we do not intend to exercise the option to reclassify stranded tax effects within accumulated other comprehensive income.

New Accounting Pronouncements Not Yet Adopted

In August 2018, the FASB issued ASU 2018-15, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract. The new guidance requires a customer in a cloud computing arrangement (i.e., hosting arrangement) that is a service contract to follow the internal-use software guidance in ASC 350-40 to determine which implementation costs to capitalize as assets or expense as incurred. Capitalized implementation costs related to a hosting arrangement that is a service contract will be amortized over the term of the hosting arrangement, beginning when the module or component of the hosting arrangement is ready for its intended use. The update is effective for calendar-year public business entities in 2020. For all other calendar-year entities, it is effective for annual periods beginning in 2021 and interim periods in 2022. Early adoption is permitted. We are currently evaluating the effect that the guidance will have on our financial statements and related disclosures.

In October 2018, FASB issued ASU 2018-17, Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities. This ASU is intended to reduce the cost and complexity of financial reporting associated with consolidation of VIEs. This ASU affects organizations that are required to determine whether they should consolidate a legal entity under the guidance within Subtopic 810-10, Consolidation. The update is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted. We are currently evaluating the adoption of this standard and the impact to our consolidated financial statements.

In November 2018, the FASB issued 2018-18, Collaborative Arrangements (Topic 808), Clarifying the Interaction between Topic 808 and Topic 606. The amendments in this ASU provide clarification and guidance on whether certain transactions between collaborative arrangement participants should be accounting for with revenue under Topic 606 (Revenue from Contracts with Customers). The amendments provide narrow scope improvements for lessors. The amendments in this ASU are effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. We are currently evaluating the adoption of this standard and the impact to our consolidated financial statements.

In November 2018, FASB issued ASU 2018-19, Codification Improvements to Topic 326, Financial Instruments-Credit Losses. The amendments in this ASU clarified issues related to Topic 326. In Issue 1, the amendment in this ASU mitigates transition complexity by requiring that for nonpublic business entities the amendments in ASU 2016-13 are effective for fiscal years after December 15, 2021, including interim periods within those fiscal years. In Issue 2, the amendment clarifies that receivables arising from operating leases are not within the scope of Subtopic 326-20. Impairment of receivables arising from operating leases should be accounting for in accordance with Topic 842, Leases. The ASU is effective for all entities for fiscal years beginning after December 15, 2019, including interim periods therein. Early adoption is permitted for any eliminated or modified disclosures upon issuance of this ASU. We are currently evaluating the adoption of this standard and the impact to our consolidated financial statements.

NOTE C—EARNINGS PER SHARE

Basic earnings per common share is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted earnings per common share is computed similarly to basic earnings per common share except that the weighted average number of common shares outstanding is increased to include the number of additional common shares that would have been outstanding if the potentially dilutive common shares had been issued.

Diluted net earnings per share assumes the conversion of contingently convertible securities and stock options under the treasury stock method, if dilutive. Contingently convertible securities and stock options are excluded from the calculation of fully diluted earnings per share if they are anti-dilutive, including when we incur a loss from continuing operations.

The following table shows the computation of basic and diluted earnings per share for the three months ended March 31, 2019, and 2018:

In thousands, except per share amounts	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018
Numerator:		
Net (loss) income attributable to U.S. Silica Holdings, Inc.	$ (19,324)	$ 31,294
Denominator:		
Weighted average shares outstanding	73,040	79,496
Diluted effect of stock awards	—	813
Weighted average shares outstanding assuming dilution	73,040	80,309
Earnings (loss) per share attributable to U.S. Silica Holdings, Inc.:		
Basic (loss) earnings per share	$ (0.26)	$ 0.39
Diluted (loss) earnings per share	$ (0.26)	$ 0.39

We excluded potentially dilutive shares of 171 for the three months ended March 31, 2019 from the calculation of diluted weighted average shares outstanding and diluted earnings per share because we were in a net loss position.

Certain stock options, restricted stock awards and performance share units were excluded from the computation of diluted earnings per share because their effect would have been anti-dilutive. Stock awards (in thousands) excluded from the calculation of diluted earnings per common share were as follows:

	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018
Stock options excluded	736	428
Restricted stock and performance share units awards excluded	353	337

NOTE D—CAPITAL STRUCTURE AND ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Common Stock

Our Amended and Restated Certificate of Incorporation authorizes up to 500,000,000 shares of common stock, par value of $0.01. Subject to the rights of holders of any series of preferred stock, all of the voting power of the stockholders of Holdings shall be vested in the holders of the common stock. There were 82,455,734 shares issued and 73,524,817 shares outstanding at March 31, 2019. There were 81,811,977 shares issued and 73,148,853 shares outstanding at December 31, 2018.

During the three months ended March 31, 2019, our Board of Directors declared quarterly cash dividends as follows:

Dividends per Common Share	Declaration Date	Record Date	Payable Date
$ 0.0625	February 15, 2019	March 14, 2019	April 4, 2019

All dividends were paid as scheduled.

Any determination to pay dividends and other distributions in cash, stock, or property by Holdings in the future will be at the discretion of our Board of Directors and will be dependent on then-existing conditions, including our business and financial condition, results of operations, liquidity, capital requirements, contractual restrictions including restrictive covenants contained in our debt agreements, and other factors. Additionally, because we are a holding company, our ability to pay dividends on our common stock may be limited by restrictions on the ability of our subsidiaries to pay dividends or make distributions to us, including restrictions under the terms of the agreements governing our indebtedness.

Preferred Stock

Our Amended and Restated Certificate of Incorporation authorizes our Board of Directors to issue up to 10,000,000 shares, in the aggregate, of preferred stock, par value of $0.01 in one or more series, to fix the powers, preferences and other rights of such series, and any qualifications, limitations or restrictions thereof, including the dividend rate, conversion rights, voting rights, redemption rights and liquidation preference, and to fix the number of shares to be included in any such series, without any further vote or action by our stockholders.

There were no shares of preferred stock issued or outstanding at March 31, 2019 or December 31, 2018. At present, we have no plans to issue any preferred stock.

Share Repurchase Program

We are authorized by our Board of Directors to repurchase shares of our outstanding common stock from time to time on the open market or in privately negotiated transactions. Stock repurchases, if any, will be funded using our available liquidity. The timing and amount of stock repurchases will depend on a variety of factors, including the market conditions as well as corporate and regulatory considerations.

In May 2018, our Board of Directors authorized the repurchase of up to $200 million of our common stock. As of March 31, 2019, we have repurchased a total of 5,036,139 shares of our common stock at an average price of $14.59 and have $126.5 million of remaining availability under this program.

Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss consists of fair value adjustments associated with cash flow hedges, accumulated adjustments for net experience losses and prior service cost related to employee benefit plans and foreign currency translation adjustments, net of tax. The following table presents the changes in accumulated other comprehensive loss by component (in thousands) during the three months ended March 31, 2019:

	For the Three Months Ended March 31, 2019			
	Unrealized loss on cash flow hedges	Foreign currency translation adjustments	Pension and other post-retirement benefits liability	Total
Beginning Balance	$ (1,621)	$ (620)	$ (12,779)	$ (15,020)
Other comprehensive gain (loss) before reclassifications	(940)	(199)	(76)	(1,215)
Amounts reclassified from accumulated other comprehensive loss	—	—	250	250
Ending Balance	$ (2,561)	$ (819)	$ (12,605)	$ (15,985)

Amounts reclassified from accumulated other comprehensive loss related to cash flow hedges are included in interest expense in our Income Statements and amounts reclassified related to pension and other post-retirement benefits are included in the computation of net periodic benefit costs at their pre-tax amounts.

NOTE E—BUSINESS COMBINATIONS

2018 Acquisition:

On May 1, 2018, we completed the acquisition of all of the outstanding capital stock of EP Acquisition Parent, Inc., a Delaware corporation (“EPAP”), and the ultimate parent of EP Minerals, LLC ("EPM"). Contemporaneous with the merger, EPAP was renamed EP Minerals Holdings, Inc. ("EPMH"). The consideration paid consisted of $743.2 million of cash, net of cash acquired of $19.1 million, including $0.5 million of post-closing adjustments. EPM is a global producer of engineered materials derived from industrial minerals, including diatomaceous earth, clay (calcium bentonite and calcium montmorillonite) and perlite. EPM's industrial minerals are used as filter aids, absorbents and functional additives for a variety of industries including food and beverage, biofuels, recreational water, oil and gas, farm and home, landscape, sports turf, paint, plastics, and insecticides. The acquisition of EPM increased our industrial materials product offering in our Industrial & Specialty Products business segment.

We have accounted for the acquisition of EPMH under the acquisition method of accounting in accordance with ASC 805, Business Combinations. Estimates of fair value included in the Consolidated Financial Statements represent our best estimates and valuations. In accordance with the acquisition method of accounting, the allocation of consideration value is subject to adjustment until we complete our analysis, within a period of time not to exceed one year after the date of acquisition, or May 1, 2019, in order to provide us with the time to complete the valuation of its assets and liabilities. We are still completing our analysis of the fair value of property, plant and mine development, mineral rights and intangible assets.

The following table sets forth the preliminary allocation of the purchase price to EPMH's identifiable tangible and intangible assets acquired and liabilities assumed, including measurement period adjustments (in thousands):

Preliminary allocation of purchase price:	Estimate as of December 31, 2018	Measurement Period Adjustments	Purchase Price Allocation
Accounts receivable, net	$ 43,305	$ —	$ 43,305
Inventories	86,112	—	86,112
Property, plant and mine development	148,495	(1,937)	146,558
Mineral rights	419,469	(10,580)	408,889
Identifiable intangible assets - finite lived	10,270	(1,500)	8,770
Identifiable intangible assets - indefinite lived	38,050	(1,250)	36,800
Prepaids and deposits	2,072	(245)	1,827
Other assets	7,474	—	7,474
Goodwill	150,628	12,184	162,812
Total assets acquired	905,875	(3,328)	902,547
Accounts payable	13,435	—	13,435
Accrued expenses and other current liabilities	10,304	—	10,304
Deferred tax liabilities	122,811	(3,328)	119,483
Long term liabilities	16,076	—	16,076
Total liabilities assumed	$ 162,626	$ (3,328)	$ 159,298
Net assets acquired	$ 743,249	$ —	$ 743,249

The acquired intangible assets and the related estimated useful lives consist of the following:

	Approximate Fair Value	Estimated Useful Life
	(in thousands)	*(in years)*
Technology and intellectual property	$ 1,400	15
Customer relationships	7,370	15
Total identifiable intangible assets - finite lived	**$ 8,770**	
Trade names	$ 36,800	
Total identifiable intangible assets - indefinite lived	**$ 36,800**	

Goodwill represents the excess of the purchase price over the fair value of the underlying net assets acquired. Goodwill in this transaction is attributable to planned growth in our industrial materials product offering in our Industrial & Specialty Products business segment. Intangibles and goodwill are not expected to be deductible for tax purposes.

Unaudited Pro Forma Results

The results of EPMH's operations have been included in the Consolidated Financial Statements subsequent to the acquisition date. EPMH's fiscal year end was November 30 and the Company's fiscal year end was December 31. Under SEC regulations, if a target's fiscal year end varies by more than 93 days from the acquirer's fiscal year end, it is required to adjust interim periods until it is within 93 days. Since EPMH's fiscal year end was within 93 days of the Company's fiscal year end, no adjustment is necessary and EPMH's fiscal year end and interim period ends are used as if they coincided with the Company's fiscal year end and interim period end. The following unaudited pro forma consolidated financial information reflects the results of operations as if the EPMH acquisition had occurred on January 1, 2017, after giving effect to certain purchase accounting adjustments. Material non-recurring transaction costs attributable to the business combination were $15.2 million. Pro forma net income includes incremental interest expense due to the related debt financing, incremental depreciation and depletion expense related to the fair value adjustment of property, plant and mine development, amortization expense related to identifiable intangible assets, and tax expense related to the combined tax provisions. This information does not purport to be indicative of the actual results that would have occurred if the acquisition had actually been completed on the date indicated, nor is it necessarily indicative of the future operating results or the financial position of the combined company (in thousands, except per share amounts):

	For the Year Ended December 31, 2018
Sales	$ 1,659,775
Net loss	$ (179,220)
Basic loss per share	$ (2.34)
Diluted loss per share	$ (2.34)

NOTE F—ACCOUNTS RECEIVABLE

At March 31, 2019 and December 31, 2018, accounts receivable (in thousands) consisted of the following:

	March 31, 2019	December 31, 2018
Trade receivables	$ 241,100	$ 198,435
Less: Allowance for doubtful accounts	(7,437)	(6,751)
Net trade receivables	233,663	191,684
Other receivables[1]	24,685	23,802
Total accounts receivable	$ 258,348	$ 215,486

[1] At March 31, 2019 and December 31, 2018, other receivables included $16.0 million of refundable alternative minimum tax credits.

Changes in our allowance for doubtful accounts (in thousands) during the three months ended March 31, 2019 and 2018 are as follows:

	March 31, 2019	March 31, 2018
Beginning balance	$ 6,751	$ 7,100
Bad debt provision	721	237
Write-offs	(35)	(87)
Ending balance	$ 7,437	$ 7,250

Our ten largest customers accounted for approximately 42% and 52% of total sales during the three months ended March 31, 2019 and 2018, respectively. Sales to one of our customers accounted for 12% and 15% of our total sales during the three months ended March 31, 2019 and 2018, respectively. No other customers accounted for 10% or more of our total sales. At March 31, 2019, one of our customers' accounts receivable represented 16% of our total trade accounts receivable, net of allowance. At December 31, 2018, one of our customers' accounts receivable represented 18% of our total trade accounts receivable, net of allowance. No other customers accounted for 10% or more of our total trade accounts receivable.

NOTE G—INVENTORIES

At March 31, 2019 and December 31, 2018, inventories (in thousands) consisted of the following:

	March 31, 2019	December 31, 2018
Supplies	$ 44,479	$ 41,453
Raw materials and work in process	60,910	68,474
Finished goods	37,760	52,160
Total inventories	$ 143,149	$ 162,087

NOTE H—PROPERTY, PLANT AND MINE DEVELOPMENT

At March 31, 2019 and December 31, 2018, property, plant and mine development (in thousands) consisted of the following:

	March 31, 2019	December 31, 2018
Mining property and mine development	$ 983,517	$ 995,759
Asset retirement cost	12,727	12,732
Land	55,502	55,502
Land improvements	68,992	67,729
Buildings	65,047	64,515
Machinery and equipment	1,027,782	958,357
Furniture and fixtures	3,611	3,599
Construction-in-progress	137,982	167,933
	2,355,160	2,326,126
Accumulated depletion, depreciation and amortization	(535,058)	(499,823)
Total property, plant and mine development, net	$ 1,820,102	$ 1,826,303

At March 31, 2019 and December 31, 2018, the aggregate cost of machinery and equipment acquired under finance leases was $0.3 million and $0.9 million, respectively, reduced by accumulated depreciation of $0.1 million and $0.2 million, respectively. The amount of interest costs capitalized in property, plant and mine development was $1.0 million and $1.8 million for the three months ended March 31, 2019 and 2018, respectively.

On March 21, 2018, we completed the sale of three transload facilities located in the Permian, Eagle Ford, and Marcellus Basins to CIG Logistics (“CIG”) for total consideration of $86.1 million, including the assumption by CIG of $2.2 million of Company obligations. Total cash consideration was $83.9 million. The consideration includes receipt of a vendor incentive from CIG to enter into master transloading service arrangements. Of the total consideration, $25.8 million was allocated to the fair value of the transload facilities, which had a net book value of $20.0 million and resulted in a gain on sale of $5.8 million. The consideration included a related asset retirement obligation of $2.1 million and an equipment note of $0.1 million assumed by CIG. In addition, $60.3 million of the consideration received in excess of the facilities' fair value was allocated to vendor incentives to be recognized as a reduction of costs using a service-level methodology over the contract lives of the transloading service arrangements. At March 31, 2019, vendor incentives of $12.1 million and $28.0 million were classified in accounts payable and accrued expenses and in other long-term liabilities, respectively, on our balance sheet.

Separately, on March 21, 2018, we accrued $7.9 million in contract termination costs for facilities contracts operated by third-parties, which will not transfer to CIG. During the second quarter of 2018, as a result of the final settlement of these contracts, we recorded a $2.7 million credit in selling, general and administrative expenses on our Income Statement.

NOTE I—GOODWILL AND INTANGIBLE ASSETS

The changes in the carrying amount of goodwill (in thousands) by business segment consisted of the following:

	Oil & Gas Proppants Segment			Industrial & Specialty Products Segment			Totals
	Goodwill	Impairments		Goodwill	Impairments		
Balance at December, 2018	$ 250,267	$ (164,167)	$ 86,100	$ 175,240	$ —	$ 175,240	$ 261,340
EPM acquisition measurement period adjustment	—	—	—	12,184	—	12,184	12,184
Balance at March 31, 2019	$ 250,267	$ (164,167)	$ 86,100	$ 187,424	—	$ 187,424	$ 273,524

Goodwill and trade names are evaluated for impairment annually as of October 31, or more frequently when indicators of impairment exist. We evaluated events and circumstances since the date of our last qualitative assessment, including macroeconomic conditions, industry and market conditions, and our overall financial performance. After assessing the totality of the events and circumstances, we determined that it was not more likely than not that the fair value of our reporting units was less than their carrying amount and no impairment existed.

The changes in the carrying amount of intangible assets (in thousands) consisted of the following:

		March 31, 2019			December 31, 2018		
	Estimated Useful Life	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
	(in years)						
Technology and intellectual property	15	$ 83,497	$ (12,610)	$ 70,887	$ 83,616	$ (11,168)	$ 72,448
Customer relationships	13 - 15	68,659	(15,052)	53,607	68,664	(13,826)	54,838
Total definite-lived intangible assets:		$ 152,156	$ (27,662)	$ 124,494	$ 152,280	$ (24,994)	$ 127,286
Trade names		65,390	—	65,390	66,640	—	66,640
Other		700	—	700	700	—	700
Total intangible assets:		$ 218,246	$ (27,662)	$ 190,584	$ 219,620	$ (24,994)	$ 194,626

Measurement period adjustments related to the Company's EPMH acquisition impacted the March 31, 2019 gross carrying amounts of the technology and intellectual property intangibles by $(1.5) million and the trade names by $(1.3) million. See Note E - Business Combinations.

Amortization expense was $2.7 million and $2.3 million for the three months ended March 31, 2019 and 2018, respectively.

The estimated amortization expense related to definite-lived intangible assets (in thousands) for the five succeeding years is as follows:

2019	$ 8,022
2020	10,696
2021	10,694
2022	10,679
2023	10,674

NOTE J—DEBT

At March 31, 2019 and December 31, 2018, debt (in thousands) consisted of the following:

	March 31, 2019	December 31, 2018
Senior secured credit facility:		
Revolver expiring May 1, 2023 (8.50% at March 31, 2019 and December 31, 2018)	$ —	$ —
Term Loan facility—final maturity May 1, 2025 (6.50% at March 31, 2019 and 6.56% December 31, 2018)	1,267,200	1,270,400
Less: Unamortized original issue discount	(6,246)	(6,511)
Less: Unamortized debt issuance cost	(29,988)	(31,310)
Note payable secured by royalty interest	26,991	26,511
Equipment notes payable	267	321
Finance leases	130	344
Total debt	1,258,354	1,259,755
Less: current portion	(13,112)	(13,327)
Total long-term portion of debt	$ 1,245,242	$ 1,246,428

Revolving Line-of-Credit

We have a $100.0 million Revolver with zero drawn and $4.8 million allocated for letters of credit as of March 31, 2019, leaving $95.2 million available under the Revolver.

Senior Secured Credit Facility

At March 31, 2019, contractual maturities of our senior secured Credit Facility (in thousands) are as follows:

2019	$ 9,600
2020	12,800
2021	12,800
2022	12,800
2023	12,800
Thereafter	1,206,400
Total	$ 1,267,200

On May 1, 2018, we entered into the Credit Agreement, which increased our existing senior debt by entering into a new $1.380 billion senior secured Credit Facility, consisting of a $1.280 billion Term Loan and a $100 million Revolver that may also be used for swingline loans or letters of credit, and we may elect to increase the term loan in accordance with the terms of the Credit Agreement. Borrowings under the Credit Agreement will bear interest at variable rates as determined at our election, at LIBOR or a base rate, in each case, plus an applicable margin. In addition, under the Credit Agreement, we are required to pay a per annum facility fee and fees for letters of credit. The Credit Agreement is secured by substantially all of our assets and of our domestic subsidiaries' assets and a pledge of the equity interests in such entities. The Term Loan matures on May 1, 2025, and the Revolver expires May 1, 2023. We capitalized $38.7 million in debt issuance costs and original issue discount as a result of the new Credit Agreement.

The Credit Facility contains covenants that, among other things, limit our ability, and certain of our subsidiaries' abilities, to create, incur or assume indebtedness and liens, to make acquisitions or investments, to sell assets and to pay dividends. The Credit Agreement also requires us to maintain a consolidated leverage ratio of no more than 3.75:1.00 as of the last day of any fiscal quarter whenever usage of the Revolver (other than certain undrawn letters of credit) exceeds 30% of the Revolver commitment. These covenants are subject to a number of important exceptions and qualifications. The Credit Agreement includes events of default and other affirmative and negative covenants that are usual for facilities and transactions of this type. As of March 31, 2019, and December 31, 2018, we are in compliance with all covenants in accordance with our senior secured Credit Facility.

Note Payable Secured by Royalty Interest

In conjunction with the acquisition of New Birmingham, Inc. in August 2016, we assumed a note payable secured by a royalty interest. The monthly royalty payment is calculated based on future tonnages and sales related to the sand shipped from our Tyler, Texas facility. The note payable is due by June 30, 2032. The note does not provide a stated interest rate. The minimum payments (in thousands) for the next five years required by the note are as follows:

2019	$	1,750
2020		1,750
2021		1,750
2022		1,750
2023		1,750

Under this agreement once a certain number of tons have been shipped from the Tyler facility, the minimum payments will decrease to $0.5 million per year, subject to proration in the period this threshold is met.

The royalty note payable fair value was estimated to be $22.5 million on the acquisition date. The estimate was made using a discounted cash flow model, which calculated the present value of projected future cash payments required under the agreement using a discounted rate of 14%. As of March 31, 2019, the note payable had a balance of $27.0 million. The increase in the note payable amount is due to interest paid-in-kind. The effective interest rate based on the updated projected future cash payments was 19% at March 31, 2019.

NOTE K—ASSET RETIREMENT OBLIGATIONS

Mine reclamation or future remediation costs for inactive mines are accrued based on management’s best estimate at the end of each period of the costs expected to be incurred at a site. Such cost estimates include, where applicable, ongoing care, maintenance and monitoring costs. Changes in estimates at inactive mines are reflected in earnings in the period an estimate is revised.

As of March 31, 2019 and 2018, we had a liability of $18.8 million and $16.8 million, respectively, in other long-term liabilities related to our asset retirement obligations. Changes in the asset retirement obligations (in thousands) during the three months ended March 31, 2019 and 2018 are as follows:

	Three Months Ended March 31,	
	2019	2018
Beginning balance	$ 18,413	$ 19,032
Accretion	373	326
Additions and revisions of prior estimates	—	(486)
Disposal related to sale of transloads	—	(2,116)
Ending balance	$ 18,786	$ 16,756

NOTE L—FAIR VALUE ACCOUNTING

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

Level 1—Quoted prices in active markets for identical assets or liabilities.

Level 2—Observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3—Inputs that are generally unobservable and typically reflect management’s estimate of assumptions that market participants would use in pricing the asset or liability.

Cash Equivalents

Due to the short-term maturity, we believe our cash equivalent instruments at March 31, 2019 and December 31, 2018, approximate their reported carrying values.

Long-Term Debt, Including Current Maturities

We believe that the fair values of our long-term debt, including current maturities, approximate their carrying values based on their effective interest rates compared to current market rates.

Derivative Instruments

The estimated fair value of our derivative instruments are recorded at each reporting period and are based upon widely accepted valuation techniques, including discounted cash flow analysis on the expected cash flows of each derivative contract. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves and implied volatilities. We also incorporate credit valuation adjustments to appropriately reflect both our nonperformance risk as well as that of the respective counterparty in the fair value measurements.

Although we have determined that the majority of the inputs used to value our derivatives fall within Level 2 of the fair value hierarchy, the credit valuation adjustments associated with our derivatives utilize Level 3 inputs, such as estimates of current credit spreads to evaluate the likelihood of default of ourselves and our counterparties. However, as of March 31, 2019, we have assessed that the impact of the credit valuation adjustments on the overall valuation of our derivative positions is not significant. As a result, we have determined that our derivative valuations in their entirety are classified in Level 2 of the fair value hierarchy. See Note M - Derivative Instruments for more information.

NOTE M—DERIVATIVE INSTRUMENTS

Cash Flow Hedges of Interest Rate Risk

We enter into interest rate swap agreements in connection with our Term Loan facility to add stability to interest expense and to manage our exposure to interest rate movements. The derivative instruments are recorded on the balance sheet within other long-term assets or liabilities at their fair values. As of March 31, 2019, the fair value of our interest rate swaps was a liability of $2.3 million and a liability of $1.0 million and classified within other long-term liabilities on our balance sheet, and the fair value of our interest rate cap was zero. At December 31, 2018, the fair value of our interest rate swaps was a liability of $1.5 million and a liability of $0.7 million and classified within other long-term liabilities on our balance sheet, and the fair value of our interest rate cap was zero. We have designated the interest rate swap agreements as qualified cash flow hedges. Accordingly, the effective portion of the gain or loss on the derivative instrument is reported as a component of other comprehensive income and recognized in earnings in the same period or periods during which the hedged transaction affects earnings.

The following table summarizes the fair value of our derivative instruments (in thousands, except contract/notional amount). See Note L - Fair Value Accounting for more information regarding the estimated fair values of our derivative instruments at March 31, 2019 and December 31, 2018.

	March 31, 2019				December 31, 2018			
	Maturity Date	Contract/Notional Amount	Carrying Amount	Fair Value	Maturity Date	Contract/Notional Amount	Carrying Amount	Fair Value
LIBOR[1] interest rate swap agreement	2020	$440 million	$ (2,332)	$ (2,332)	2020	$440 million	$ (1,475)	$ (1,475)
LIBOR[1] interest rate swap agreement	2020	$200 million	$ (1,046)	$ (1,046)	2020	$200 million	$ (663)	$ (663)
LIBOR interest rate cap agreement	2019	$249 million	$ —	$ —	2019	$249 million	$ —	$ —

[1] Agreements fix the LIBOR interest rate base to 2.74%

During the three months ended March 31, 2019 we had no ineffectiveness for the interest rate swap derivatives.

The following table summarizes the effect of derivative instruments (in thousands) on our income statements and our consolidated statements of comprehensive income for the three months ended March 31, 2019 and 2018.

	Three Months Ended March 31,	
	2019	2018
Deferred losses from derivatives in OCI, beginning of period	$ (1,621)	$ (76)
Loss recognized in OCI from derivative instruments	(940)	—
Loss reclassified from Accumulated OCI	—	2
Deferred losses from derivatives in OCI, end of period	$ (2,561)	$ (74)

NOTE N—EQUITY-BASED COMPENSATION

In July 2011, we adopted the U.S. Silica Holdings, Inc. 2011 Incentive Compensation Plan (the “2011 Plan”), which was amended and restated in May 2015. The 2011 Plan provides for grants of stock options, restricted stock, performance share units and other incentive-based awards. We believe our 2011 Plan aligns the interests of our employees and directors with those of our common stockholders. At March 31, 2019, we have 4,119,834 shares of common stock that may be issued under the 2011 Plan. We use a combination of treasury stock and new shares if necessary to satisfy option exercises or vesting of restricted awards and performance share units.

Stock Options

The following table summarizes the status of, and changes in, our stock option awards during the three months ended March 31, 2019:

	Number of Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value	Weighted Average Remaining Contractual Term in Years
Outstanding at December 31, 2018	901,996	$ 28.52	$ 18,566	4.8 years
Granted	—	—	—	
Exercised	(10,000)	12.87	—	
Forfeited	—	—	—	
Expired	(58,463)	$ 24.42	$ —	
Outstanding at March 31, 2019	833,533	$ 28.99	$ 1,061,512	4.9 years
Exercisable at March 31, 2019	833,533	$ 28.99	$ 1,061,512	4.9 years

There were no grants of stock options during the three months ended March 31, 2019 and 2018.

There were 10,000 and zero stock options exercised during the three months ended March 31, 2019 and 2018, respectively. The total intrinsic value of stock options exercised was $12 thousand for the three months ended March 31, 2019. Cash received from stock options exercised during the three months ended March 31, 2019 was $128 thousand. The tax benefit realized from stock option exercises was $3 thousand for the three months ended March 31, 2019.

We recognized zero and $0.5 million of equity-based compensation expense related to options during the three months ended March 31, 2019 and 2018, respectively. As of March 31, 2019, there was no unrecognized compensation expense related to these options. We account for forfeitures as they occur.

Restricted Stock and Restricted Stock Unit Awards

The following table summarizes the status of, and changes in, our unvested restricted stock awards during the three months ended March 31, 2019:

	Number of Shares	Grant Date Weighted Average Fair Value
Unvested, December 31, 2018	587,577	$ 25.18
Granted	732,860	12.89
Vested	(101,601)	23.32
Forfeited	(9,957)	29.87
Unvested, March 31, 2019	1,208,879	$ 17.85

We granted 732,860 and 3,852 restricted stock and restricted stock unit awards during the three months ended March 31, 2019 and 2018, respectively. The increase is due to changing the timing of our annual equity grants to the first quarter from the second quarter. The fair value of the awards was based on the market price of our stock at date of grant.

We recognized $2.3 million and $1.8 million of equity-based compensation expense related to restricted stock awards during the three months ended March 31, 2019 and 2018, respectively. As of March 31, 2019, there was $16.4 million of unrecognized compensation expense related to these restricted stock awards, which is expected to be recognized over a weighted-average period of 2.0 years.

Performance Share Unit Awards

The following table summarizes the status of, and changes in, our performance share unit awards during the three months ended March 31, 2019:

	Number of Shares	Grant Date Weighted Average Fair Value
Unvested, December 31, 2018	838,188	$ 39.44
Granted	607,130	15.58
Vested	(522,098)	37.76
Forfeited	(11,258)	41.45
Unvested, March 31, 2019	911,962	$ 24.69

We granted 607,130 and zero performance share units during the three months ended March 31, 2019 and 2018, respectively. The increase is due to changing the timing of our annual equity grants to the first quarter from the second quarter.

The grant date fair value for these awards are estimated using a Monte Carlo simulation model. The Monte Carlo simulation model requires the use of highly subjective assumptions. Our key assumptions in the model included the price and the expected volatility of our common stock and our self-determined peer group companies’ stock, risk-free rate of interest, dividend yields and cross-correlations between our common stock and our self-determined peer group companies' stock.

We recognized $1.7 million and $4.3 million of compensation expense related to performance share unit awards during the three months ended March 31, 2019 and 2018, respectively. As of March 31, 2019, there was $13.5 million of unrecognized compensation expense related to these performance share unit awards, which is expected to be recognized over a weighted-average period of 1.5 years.

NOTE O—COMMITMENTS AND CONTINGENCIES

Future Minimum Annual Commitments at March 31, 2019 (in thousands):

Year ending December 31,	Minimum Purchase Commitments
2019	$ 17,803
2020	14,464
2021	8,308
2022	5,640
2023	4,915
Thereafter	6,084
Total future purchase commitments	$ 57,214

Minimum Purchase Commitments

We enter into service agreements with our transload and transportation service providers. Some of these agreements require us to purchase a minimum amount of services over a specific period of time. Any inability to meet these minimum contract requirements requires us to pay a shortfall fee, which is based on the difference between the minimum amount contracted for and the actual amount purchased.

Contingent Liability on Royalty Agreement

On May 17, 2017, we purchased reserves in Crane County, Texas, for $94.4 million cash consideration plus contingent consideration. The contingent consideration is a royalty that is based on the tonnage shipped to third-parties. Because the contingent consideration is dependent on future tonnage sold, the amounts of which are uncertain, it is not currently possible to estimate the fair value of these future payments. The contingent consideration will be capitalized at the time a payment is probable and reasonably estimable, and the related depletion expense will be adjusted prospectively.

Other Commitments and Contingencies

Our operating subsidiary, U.S. Silica Company (“U.S. Silica”), has been named as a defendant in various product liability claims alleging silica exposure causing silicosis. During the three months ended March 31, 2019, one new claim was brought against U.S. Silica. As of March 31, 2019, there were 58 active silica-related products liability claims pending in which U.S. Silica is a defendant. Although the outcomes of these claims cannot be predicted with certainty, in the opinion of management, it is not reasonably possible that the ultimate resolution of these matters will have a material adverse effect on our financial position or results of operations that exceeds the accrual amounts.

We have recorded estimated liabilities for these claims in other long-term liabilities as well as estimated recoveries under the indemnity agreement and an estimate of future recoveries under insurance in other assets on our consolidated balance sheets. As of both March 31, 2019 and December 31, 2018, other non-current assets included zero for insurance for third-party products liability claims. As of March 31, 2019 and December 31, 2018 other long-term liabilities included $0.9 million and $1.0 million, respectively, for third-party products liability claims.

One of our subsidiaries has also been named as a defendant in lawsuits regarding certain labor practices. If we are unsuccessful in defending the litigation, these cases could result in material liability for us.

Obligations under Guarantees

We have indemnified our insurers against any loss they may incur in the event that holders of surety bonds, issued on our behalf, execute the bonds. As of March 31, 2019, there was $41.9 million in bonds outstanding. The majority of these bonds, $30.4 million, relate to reclamation requirements issued by various governmental authorities. Reclamation bonds remain outstanding until the mining area is reclaimed and the authority issues a formal release. The remaining bonds relate to such indefinite purposes as licenses, permits, and tax collection.

NOTE P—PENSION AND POST-RETIREMENT BENEFITS

We maintain single-employer noncontributory defined benefit pension plans covering certain employees. There have been no new entrants to the US Silica Company plan since May 2009 and to the EP Management Corporation plan since January 2007 for salaried participants and January 2010 for hourly participants when the plans were frozen to all new employees. The plans provide benefits based on each covered employee's years of qualifying service. Our funding policy is to contribute amounts within the range of the minimum required and maximum deductible contributions for the plans consistent with a goal of appropriate minimization of the unfunded projected benefit obligations. The pension plans use a benefit level per year of service for covered hourly employees and a final average pay method for covered salaried employees. The plans use the projected unit credit cost method to determine the actuarial valuation.

In addition, we provide defined benefit post-retirement health care and life insurance benefits to some employees. Covered employees become eligible for these benefits at retirement after meeting minimum age and service requirements. The projected future cost of providing post-retirement benefits, such as healthcare and life insurance, is recognized as an expense as employees render services. We previously maintained a Voluntary Employees' Beneficiary Association trust that was used to partially fund health care benefits for future retirees. Benefits were funded to the extent contributions were tax deductible, which under current legislation is limited. In 2017, the trust terminated upon depletion of its assets, which were used in accordance with trust terms. In general, retiree health benefits are paid as covered expenses are incurred.

Net pension benefit cost (in thousands) consisted of the following for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
Service cost	$ 586	$ 279
Interest cost	2,584	978
Expected return on plan assets	(3,184)	(1,243)
Net amortization and deferral	624	631
Net pension benefit costs	$ 610	$ 645

Net post-retirement benefit cost (in thousands) consisted of the following for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
Service cost	$ 24	$ 27
Interest cost	196	188
Net post-retirement benefit costs	$ 220	$ 215

We contributed $0.7 million and $0.3 million to the qualified pension plans for the three months ended March 31, 2019 and 2018, respectively. Our best estimate of expected contributions to the pension and post-retirement medical benefit plans for the 2019 fiscal year are $4.7 million and $1.4 million, respectively.

We contribute to three multiemployer defined benefit pension plans under the terms of collective-bargaining agreements for union-represented employees. A multiemployer plan is subject to collective bargaining for employees of two or more unrelated companies. These plans allow multiple employers to pool their pension resources and realize efficiencies associated with the daily administration of the plan. Multiemployer plans are generally governed by a board of trustees composed of management and labor representatives and are funded through employer contributions. However, in most cases, management is not directly represented. Our contributions to individual multiemployer pension funds did not exceed 5% of the fund's total contributions for the three months ended March 31, 2019 and 2018. Additionally, our contributions to multiemployer post-retirement benefit plans were immaterial for all periods presented in the accompanying consolidated financial statements.

We also sponsor a defined contribution plan covering certain employees. We contribute to the plan in two ways. For certain employees not covered by the defined benefit plan, we make a contribution equal to 4% of their salary. We may also contribute an employee discretionary match of 50 cents for each dollar contributed by an employee, up to 4% of their earnings. Finally, for some employees, we make a catch-up match of one dollar for each dollar contributed by an employee, up to 6% of catch-up contributions. Contributions were $1.3 million and $0.8 million for the three months ended March 31, 2019 and 2018, respectively.

NOTE Q— LEASES

We lease railroad cars, office space, mining property, mining/processing equipment and transportation and other equipment. The majority of our leases have remaining lease terms of one year to 20 years. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. We have lease agreements with lease and non-lease components, the latter of which are generally accounted for separately.

Supplemental balance sheet information related to leases was as follows:

Leases	Classification	March 31, 2019
Assets		
Operating	Operating lease right-of-use assets	$ 209,699
Total leased assets		$ 209,699
Liabilities		
Current		
Operating	Current portion of operating lease liabilities	$ 61,583
Non-current		
Operating	Operating lease liabilities	149,040
Total lease liabilities		$ 210,623
Lease Term and Discount Rate		
Weighted average remaining lease term (years):		
Operating leases		4.7 years
Weighted average discount rate:		
Operating leases		5.6%

The components of lease expense were as follows:

Lease Costs	Classification	Three Months Ended March 31, 2019
Operating lease costs[1]	Cost of sales	$ 25,115
Operating lease costs[2]	Selling, general and administrative	1,169
		$ 26,284

(1) Includes short-term operating lease costs of $6.6 million for the three months ended March 31, 2019.

(2) Includes short-term operating lease costs of $0.2 million for the three months ended March 31, 2019.

Supplemental cash flow information related to leases was as follows:

	Three Months Ended March 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 2,584
Right-of-use assets obtained in exchange for new lease liabilities:	
Operating leases	$ 223,027

Maturities of lease liabilities as of March 31, 2019:

Maturities of lease liabilities	**Operating leases**
2019	$ 55,828
2020	60,066
2021	41,065
2022	31,407
2023	22,042
Thereafter	36,024
Total lease payments	$ 246,432
Less: Interest	35,809
Total	$ 210,623

NOTE R— INCOME TAXES

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the “Tax Act”). The Tax Act makes broad and complex changes to the U.S. tax code including, but not limited to, (1) bonus depreciation that will allow for full expensing of qualified property; (2) reduction of the U.S. federal corporate tax rate; (3) elimination of the corporate alternative minimum tax; (4) a new limitation on deductible interest expense; (5) the repeal of the domestic production activity deduction; (6) limitations on the deductibility of certain executive compensation; and (7) limitations on net operating losses generated after December 31, 2017, to 80 percent of taxable income.

The SEC staff issued SAB 118, which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date for companies to complete the accounting under ASC 740. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Act for which the accounting under ASC 740 is complete. December 22, 2018 marked the end of the measurement period for purposes of SAB 118. As such, we have completed the accounting for the tax effects of the Tax Act.

The Tax Act reduced the corporate tax rate to 21 percent, effective January 1, 2018. Because ASC 740-10-25-47 requires the effect of a change in tax laws or rates to be recognized as of the date of enactment, we were required to adjust deferred tax assets and liabilities as of December 22, 2017. Accordingly, for the year ended December 31, 2017, we recorded a decrease related to deferred tax assets and liabilities of $45.0 million and $80.8 million, respectively, with a corresponding net adjustment to deferred income tax benefit of $35.8 million.

Under the Tax Act, net operating loss (NOL) deductions arising in tax years beginning after December 31, 2017 can only offset up to 80 percent of future taxable income. The Act also prohibits NOL carrybacks, but allows indefinite carryforwards for NOLs arising in tax years beginning after December 31, 2017. Net operating losses arising before January 1, 2018 are accounted for under the previous tax rules that imposed no limit on the amount of the taxable income that can be set off using NOLs and that can be carried back 2 years and carried forward 20 years.

The Tax Act repeals the corporate alternative minimum tax (AMT), effective for tax years beginning after December 31, 2017, but allows an entity to claim portions of any unused AMT credits over the next four years to offset its regular tax liability. An entity with unused AMT credits as of December 31, 2017 can first use these credits to offset its regular tax for 2017 and can then claim up to 50 percent of the remaining AMT credits in 2018, 2019, and 2020, with all remaining AMT credits refundable in 2021.

For interim period reporting, we record income taxes using an estimated annual effective tax rate based upon projected annual income, forecasted permanent tax differences, discrete items and statutory rates in states in which we operate. At the end of each interim period, we update the estimated annual effective tax rate, and if the estimated tax rate changes based on new information, we make a cumulative adjustment in the period. We record the tax effect of an unusual or infrequently occurring item in the interim period in which it occurs as a discrete item of tax.

For the three months ended March 31, 2019, we had a tax benefit of $2.0 million. For the three months ended March 31, 2018, we had a tax expense of $7.5 million. The effective tax rate was 9% and 19% for the three months ended March 31, 2019 and 2018, respectively. The effective tax rate for the three months ended March 31, 2019 and 2018 would have been 29% and 18%, respectively, without the below items recorded discretely.

During the three months ended March 31, 2019 and 2018, we recorded a tax expense of $3.9 million and $0.5 million, respectively, related to equity compensation pursuant to ASU 2016-09.

Historically, our actual effective tax rates have differed from the statutory effective rate primarily due to the benefit received from statutory percentage depletion allowances. The deduction for statutory percentage depletion does not necessarily change proportionately to changes in income before income taxes.

NOTE S— REVENUE

We consider sales disaggregated at the product and service level by business segment to depict how the nature, amount, timing and uncertainty of revenues and cash flow are impacted by changes in economic factors. The following table disaggregates our sales by major source for the three months ended March 31, 2019 (in thousands):

	Three Months Ended March 31, 2019		
Category	**Oil & Gas Proppants**	**Industrial & Specialty Products**	**Total Sales**
Product	$ 178,587	$ 118,273	$ 296,860
Service	81,890	—	81,890
Total Sales	$ 260,477	$ 118,273	$ 378,750

The following tables reflect the changes in our contract assets, which we classify as unbilled receivables and our contract liabilities, which we classify as deferred revenues, for the three months ended March 31, 2019 (in thousands):

	Unbilled Receivables
December 31, 2018	$ 90
Reclassifications to billed receivables	(90)
Revenues recognized in excess of period billings	1,641
March 31, 2019	$ 1,641

	Deferred Revenue
December 31, 2018	$ 113,319
Revenues recognized from balances held at the beginning of the period	(6,704)
Revenues deferred from period collections on unfulfilled performance obligations	10,025
Revenues recognized from period collections	(872)
March 31, 2019	$ 115,768

We have elected to use the practical expedients allowed under ASC 606-10-50-14, pursuant to which we have excluded disclosures of transaction prices allocated to remaining performance obligations and when we expect to recognize such revenue. The majority of our remaining performance obligations are primarily comprised of unfulfilled product, transportation service, and labor service orders, all of which hold a remaining duration of less than one year. The long-term portion of deferred revenue primarily represents a combination of refundable and nonrefundable customer prepayments for which related current performance obligations do not yet exist, but are expected to arise, before the expiration of the contract. Our residual unfulfilled performance obligations are comprised primarily of long-term equipment rental arrangements in which we recognize revenues equal to what we have a right to invoice. Generally, no variable consideration exists related to our remaining performance obligations and no consideration is excluded from the associated transaction prices.

NOTE T— RELATED PARTY TRANSACTIONS

A former employee, who was an officer of one of our operating subsidiaries prior to the third quarter of 2018, held an ownership interest in a transportation brokerage and logistics services vendor, from which we made purchases of approximately $0.9 million for the three months ended March 31, 2018.

NOTE U— SEGMENT REPORTING

Our business is organized into two reportable segments, Oil & Gas Proppants and Industrial & Specialty Products, based on end markets. The reportable segments are consistent with how management views the markets that we serve and the financial information reviewed by the chief operating decision maker. We manage our Oil & Gas Proppants and Industrial & Specialty Products businesses as components of an enterprise for which separate information is available and is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and assess performance.

In the Oil & Gas Proppants segment, we serve the oil and gas recovery market primarily by providing and delivering fracturing sand, or "frac sand," which is pumped down oil and natural gas wells to prop open rock fissures and increase the flow rate of oil and natural gas from the wells.

The Industrial & Specialty Products segment consists of over 400 product types and materials used in a variety of industries, including container glass, fiberglass, specialty glass, flat glass, building products, fillers and extenders, foundry products, chemicals, recreation products and filtration products.

An operating segment's performance is primarily evaluated based on segment contribution margin, which excludes certain corporate costs not directly related to the operations of the segment. These corporate costs are separately stated below and include costs that are related to functional areas such as operations management, corporate purchasing, accounting, treasury, information technology, legal and human resources. We believe that segment contribution margin, as defined above, is an appropriate measure for evaluating the operating performance of our segments. However, segment contribution margin is a non-GAAP measure and should be considered in addition to, not a substitute for, or superior to, net income (loss) or other measures of financial performance prepared in accordance with GAAP. The other accounting policies of each of the two reportable segments are the same as those in Note B - Summary of Significant Accounting Policies to the Consolidated Financial Statements in Item 8 of our 2018 Annual Report on Form 10-K.

The following table presents sales and segment contribution margin (in thousands) for the reportable segments and other operating results not allocated to the reported segments for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
Sales:		
Oil & Gas Proppants	$ 260,477	$ 312,930
Industrial & Specialty Products	118,273	56,383
Total sales	378,750	369,313
Segment contribution margin:		
Oil & Gas Proppants	58,588	99,433
Industrial & Specialty Products	44,561	20,530
Total segment contribution margin	103,149	119,963
Operating activities excluded from segment cost of sales	(21,937)	(11,560)
Selling, general and administrative	(34,656)	(34,591)
Depreciation, depletion and amortization	(44,600)	(28,592)
Interest expense	(23,978)	(7,070)
Other income, net, including interest income	722	665
Income tax benefit (expense)	1,972	(7,521)
Net (loss) income	$ (19,328)	$ 31,294
Less: Net (loss) income attributable to non-controlling interest	(4)	—
Net (loss) income attributable to U.S. Silica Holdings, Inc.	$ (19,324)	$ 31,294

Asset information, including capital expenditures and depreciation, depletion, and amortization, by segment is not included in reports used by management in its monitoring of performance and, therefore, is not reported by segment. At March 31, 2019, goodwill of $273.5 million has been allocated to these segments with $86.1 million assigned to Oil & Gas Proppants and $187.4 million to Industrial & Specialty Products. At December 31, 2018, goodwill of $261.3 million had been allocated to these segments with $86.1 million assigned to Oil & Gas Proppants and $175.2 million to Industrial & Specialty Products.

NOTE V— SUBSEQUENT EVENTS

On April 4, 2019, we paid a cash dividend of $4.6 million or $0.0625 per share to common stockholders of record on March 14, 2019, which had been declared by our Board of Directors on February 15, 2019.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with the Condensed Consolidated Financial Statements and the accompanying notes included in Part I, Item 1 of this Quarterly Report on Form 10-Q as well as the Consolidated Financial Statements, the accompanying notes and the related Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A"), contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 (the "2018 Annual Report").

This discussion contains forward-looking statements as discussed below and elsewhere in this report. These statements are based on current expectations and assumptions and are subject to risks and uncertainties. Actual results could differ materially from those discussed in or implied by forward-looking statements.

Adjusted EBITDA and segment contribution margin as used herein are non-GAAP measures. For a detailed description of Adjusted EBITDA and segment contribution margin and reconciliations to their most comparable GAAP measures, please see the discussion below under "How We Evaluate Our Business."

Forward Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and Section 27A of the Securities Act of 1933, as amended (the "Securities Act"). All statements other than statements of historical fact included in this Quarterly Report on Form 10-Q are forward-looking statements. Forward-looking statements give our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance and business. You can identify forward-looking statements by the fact that they do not relate strictly to historical or current facts. These statements may include words such as "anticipate," "estimate," "expect," "project," "plan," "intend," "believe," "may," "will," "should," "can have," "likely" and other words and terms of similar meaning in connection with any discussion of the timing or nature of future operating or financial performance or other events. For example, all statements we make relating to our estimated and projected costs; reserve and finished products estimates; anticipated expenditures, cash flows, growth rates and financial results; our plans and objectives for future operations, growth or initiatives; strategies and their anticipated effect on our performance and liquidity; and the expected outcome or impact of pending or threatened litigation are forward-looking statements. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those that we expect, including:

- fluctuations in demand for commercial silica, diatomaceous earth, perlite, clay and cellulose;
- the cyclical nature of our customers' businesses;
- operating risks that are beyond our control, such as changes in the price and availability of transportation, transload network access, natural gas or electricity; unusual or unexpected geological formations or pressures; pit wall failures, underground roof falls or rock falls; or unanticipated ground, grade or water conditions;
- our dependence on five of our plants for a significant portion of our sales;
- the level of activity in the natural gas and oil industries;
- fluctuations in demand or prices for frac sand or the development of either effective alternative proppants or new processes to replace hydraulic fracturing;

- federal, state and local legislative and regulatory initiatives relating to hydraulic fracturing and the potential for related regulatory action or litigation affecting our customers’ operations;
- our rights and ability to mine our properties and our renewal or receipt of the required permits and approvals from governmental authorities and other third parties;
- our ability to implement our capacity expansion plans within our current timetable and budget and our ability to secure demand for our increased production capacity, and the actual operating costs once we have completed the capacity expansion;
- our ability to succeed in competitive markets;
- loss of, or reduction in, business from our largest customers;
- operational, regulatory and other risks as a result of our international sales and operations;
- increasing costs or a lack of dependability or availability of transportation services and transload network access or infrastructure;
- extensive regulation of trucking services;
- our ability to recruit and retain truckload drivers;
- increases in the prices of, or interruptions in the supply of, natural gas and electricity, or any other energy sources;
- increases in the price of diesel fuel;
- diminished access to water;
- our ability to successfully complete acquisitions or integrate acquired businesses;
- our ability to make capital expenditures to maintain, develop and increase our asset base and our ability to obtain needed capital or financing on satisfactory terms;
- our substantial indebtedness and pension obligations;
- restrictions imposed by our indebtedness on our current and future operations;
- our ability to comply with contractual obligations that require us to deliver minimum amounts of frac sand, sometimes with certain quality specifications, or purchase minimum amounts of services;
- the accuracy of our estimates of mineral reserves and resource deposits;
- a shortage of skilled labor and rising costs in the mining industry;
- our ability to attract and retain key personnel;
- our ability to maintain satisfactory labor relations;
- our reliance on patents, trade secrets, trademarks, and contractual restrictions to protect our proprietary rights;
- our significant unfunded pension obligations and post-retirement health care liabilities;
- our ability to maintain effective quality control systems at our mining, processing and production facilities;
- seasonal and severe weather conditions;
- fluctuations in our sales and results of operations due to seasonality and other factors;
- interruptions or failures in our information technology systems, due to cybersecurity breaches or for other reasons;
- the impact of a terrorist attack or armed conflict;
- extensive and evolving environmental, mining, health and safety, licensing, reclamation, climate change and other regulation (and changes in their enforcement or interpretation);
- silica-related health issues and corresponding litigation;
- our ability to acquire, maintain or renew financial assurances related to the reclamation and restoration of mining property;
- the impact of the above factors and other future events on the market price and trading volume of our common stock; and

- other factors included and disclosed in Part I, Item 1A. Risk Factors, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations and elsewhere in our 2018 Annual Report on Form 10-K.

We derive many of our forward-looking statements from our operating budgets and forecasts, which are based on many detailed assumptions. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of the known factors described above, and it is impossible for us to anticipate all factors that could affect our actual results. As a result, forward-looking statements are not guarantees of future performance, and you should not place undue reliance on any forward-looking statements we make. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by these cautionary statements as well as other cautionary statements that are made from time to time in our other filings with the Securities and Exchange Commission (the "SEC"), and our other public communications. You should evaluate all forward-looking statements made in this Quarterly Report on Form 10-Q in the context of these risks and uncertainties.

We caution you that the important factors referenced above may not contain all of the factors that are important to you. In addition, we cannot assure you that we will realize the results or developments we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our operations in the way we expect. The forward-looking statements included in this Quarterly Report on Form 10-Q are made only as of the date hereof. We undertake no obligation to update or revise any forward-looking statement as a result of new information, future events or otherwise, except as otherwise required by law.

Overview

We are a performance materials company and one of the largest domestic producers of commercial silica used in the oil and gas industry and in a wide range of industrial applications. In addition, through our acquisition of EP Minerals, LLC ("EPM") and its affiliated companies, we are an industry leader in the production of industrial minerals, including diatomaceous earth, clay (calcium bentonite and calcium montmorillonite) and perlite.

During our 119-year history, we have developed core competencies in mining, processing, logistics and materials science that enable us to produce and cost-effectively deliver over 400 diversified product types to customers across our end markets. As of March 31, 2019, we operate 27 production facilities across the United States. We control 623 million tons of reserves of commercial silica, which can be processed to make 258 million tons of finished products that meet API frac sand specifications, and 56 million tons of reserves of diatomaceous earth, perlite, and clays.

Our operations are organized into two reportable segments based on end markets served and the manner in which we analyze our operating and financial performance: (1) Oil & Gas Proppants and (2) Industrial & Specialty Products. We believe our segments are complementary because our ability to sell to a wide range of customers across end markets in these segments allows us to maximize recovery rates in our mining operations, optimize our asset utilization and reduce the cyclicality of our earnings.

Acquisitions

For a description of our key business acquisitions during the year see Note E - Business Combinations to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Recent Trends and Outlook

Oil and gas proppants end market trends

Increased demand for frac sand has historically been driven by the growth in the use of hydraulic fracturing as a means to extract hydrocarbons from shale formations. According to Rystad Energy's Proppant Market report - 2Q 2019, published on February 26, 2019, U.S. raw sand proppant demand was 43% higher in 2018 than 2017, and is expected to continue to grow in 2019. Oil and gas horizontal rig count increased during 2017 and 2018, leading to more well completion activity. We continue to expect long-term growth in oil and gas drilling in North American shale basins.

During the three months ended March 31, 2019, compared to the three months ended December 31, 2018, as summarized below, sales and tons sold increased due to increased frac sand demand.

Amounts in thousands, except per ton data	**Three Months Ended**		**Percentage Change for the Three Months Ended**
Oil & Gas Proppants	**March 31, 2019**	**December 31, 2018**	**March 31, 2019 vs. December 31, 2018**
Sales	$ 260,477	$ 243,546	7%
Tons Sold	3,864	3,704	4%
Average Selling Price per Ton	$ 67.41	$ 65.75	3%

If oil and gas drilling and completion activity does not continue to grow, demand for frac sand may decline, which could result in us selling fewer tons, selling tons at lower prices, or both. If we sell less frac sand, or sell frac sand at lower prices, our revenue, net income, cash generated from operating activities, and liquidity would be adversely affected. We could incur additional asset impairments. If these events occur, we may evaluate actions to reduce cost and improve liquidity. For instance, depending on market conditions, we could reduce our capital spending by delaying or canceling capital projects.

Oil and natural gas exploration and production companies' and oilfield service providers' preferences and expectations have been evolving in recent years. A proppant supplier's logistics capabilities have become an important differentiating factor when competing for business, on both a spot and contract basis. Many of our customers increasingly seek convenient in-basin and wellhead proppant delivery capability from their proppant supplier. We believe that, over time, proppant customers will prefer to consolidate their purchases across a smaller group of suppliers with robust logistics capabilities and a broad offering of proppants.

Fluctuations in frac sand demand and price may occur as the market adjusts to changing supply and demand due to energy pricing fluctuations. Fluctuations in price may also occur as the supply of local in-basin sand changes. Over the past year, this trend of customers preferring local in-basin sand has accelerated.

Industrial and specialty products end market trends

Demand in the industrial and specialty products end markets has been relatively stable in recent years and is primarily influenced by key macroeconomic drivers such as housing starts, population growth, light vehicle sales, beer and wine production, repair and remodel activity and industrial production. The primary end markets served by our Industrial & Specialty Products segment are building and construction products, fillers and extenders, filtration, glassmaking, absorbents, foundry, and sports and recreation. We have been increasing our value-adding product offerings in the industrial and specialty products end markets organically as well as through acquisitions, such as White Armor and EPM. Sales of these new higher margin products have increased our Industrial & Specialty Products segment's profitability in recent periods.

Our Business Strategy

The key drivers of our growth strategy include:

- increasing our presence and product offering in specialty products end markets
- optimizing our product mix and further developing value-added capabilities to maximize margins
- effectively positioning our Oil & Gas Proppants facilities to optimally serve our customers
- optimizing our supply chain network and leveraging our logistics capabilities to meet our customers' needs
- evaluating both Greenfield and Brownfield expansion opportunities and other acquisitions; and maintaining financial strength and flexibility.

How We Generate Our Sales

Products

We derive our product sales by mining and processing minerals that our customers purchase for various uses. Our product sales are primarily a function of the price per ton and the number of tons sold. We primarily sell our products through individual purchase orders executed under short-term price agreements or at prevailing market rates. The amount invoiced reflects product, transportation and / or additional handling services as applicable, such as storage, transloading the product from railcars to trucks and last mile logistics to the customer site. We invoice most of our product customers on a per shipment basis, although for some larger customers, we consolidate invoices weekly or monthly. Standard collection terms are net 30 days, although extended terms are offered in competitive situations.

Services

We derive our service sales primarily through the provision of transportation, equipment rental, and contract labor services to companies in the oil and gas industry. Transportation services typically consist of transporting customer proppant from storage facilities to proximal well-sites and are contracted through work orders executed under established pricing agreements. The amount invoiced reflects transportation services rendered. Equipment rental services provide customers with use of either dedicated or nonspecific wellhead proppant delivery equipment solutions for contractual periods defined either through formal lease agreements or executed work orders under established pricing agreements. The amounts invoiced reflect the length of time the equipment set was utilized in the billing period. Contract labor services provide customers with proppant delivery equipment operators through work orders executed under established pricing agreements. The amounts invoiced reflect the amount of time our labor services were utilized in the billing period. We typically invoice our customers on a weekly or monthly basis; however, some customers receive invoices upon well-site operation completion. Standard collection terms are net 30 days, although extended terms are offered in competitive situations.

Our ten largest customers accounted for approximately 42% and 52% of total sales during the three months ended March 31, 2019 and 2018, respectively. Sales to one of our customers accounted for 12% and 15% of our total sales during the three months ended March 31, 2019 and 2018, respectively. No other customers accounted for 10% or more of our total sales. At March 31, 2019, one of our customer's accounts receivable represented 16% of our total trade accounts receivable, net of allowance. At December 31, 2018, one of our customers' accounts receivable represented 18% of our total trade accounts receivable, net of allowance. No other customers accounted for 10% or more of our total trade accounts receivable.

For a limited number of customers, we sell under long-term, minimum purchase supply agreements. These agreements define, among other commitments, the volume of product that our customers must purchase, the volume of product that we must provide and the price that we will charge and that our customers will pay for each product. Prices under these agreements are generally fixed and subject to certain contractual adjustments. Sometimes these agreements may undergo negotiations regarding pricing and volume requirements, which may occur in volatile market conditions. When these negotiations are occurring, we may deliver sand at prices or at volumes below the requirements in our existing supply agreements. We do not consider these agreements solely representative of contracts with customers. An executed order specifying the type and quantity of product to be delivered, in combination with the noted agreements, comprise our contracts in these arrangements. Selling more tons under supply contracts enables us to be more efficient from a production, supply chain and logistics standpoint. As discussed in Part I, Item 1A., Risk Factors of our 2018 Annual Report on Form 10-K, these customers may not continue to purchase the same levels of product in the future due to a variety of reasons, contract requirements notwithstanding.

As of March 31, 2019, we have twenty-two minimum purchase supply agreements in the Oil & Gas Proppants segment with initial terms expiring between 2019 and 2034. As of March 31, 2018, we had twenty-one minimum purchase supply agreements in the Oil & Gas Proppants segment with initial terms expiring between 2018 and 2022. Collectively, sales to customers with minimum purchase supply agreements accounted for 42% and 37% of Oil & Gas Proppants segment sales during the three months ended March 31, 2019 and 2018, respectively. Although sales under minimum purchase supply agreements may result in us realizing lower margins than we otherwise might during periods of high market prices, we believe such lower margins are offset by the benefits derived from the product mix and sales volume stability afforded by such supply agreements, which helps us lower market risk arising from adverse changes in spot prices and market conditions.

In the industrial and specialty products end markets we have not historically entered into long-term minimum purchase supply agreements with our customers because of the high cost to our customers of switching providers. We may periodically do so when capital or other investment is required to meet customer needs. Instead, we often enter into supply agreements with our customers with targeted volumes and terms of one to five years. Prices under these agreements are generally fixed and subject to annual increases.

The Costs of Conducting Our Business

The principal expenses involved in conducting our business are transportation costs, labor costs, electricity and drying fuel costs, and maintenance and repair costs for our mining and processing equipment and facilities. Transportation and related costs include freight charges, fuel surcharges, transloading fees, switching fees, railcar lease costs, demurrage costs, storage fees and labor costs. We believe the majority of our operating costs are relatively stable in price, but they can vary significantly based on the volume of product produced. We benefit from owning the majority of the mineral deposits that we mine and having long-term mineral rights leases or supply agreements for our other primary sources of raw material, which limits royalty payments.

Additionally, we incur expenses related to our corporate operations, including costs for sales and marketing; research and development; and the finance, legal, environmental, health and safety functions of our organization. These costs are principally driven by personnel expenses.

How We Evaluate Our Business

Our management team evaluates our business using a variety of financial and operating metrics. We evaluate the performance of our two segments based on their tons sold, average selling price and contribution margin earned. Additionally, we consider a number of factors in evaluating the performance of our business as a whole, including total tons sold, average selling price, total segment contribution margin, and Adjusted EBITDA. We view these metrics as important factors in evaluating our profitability and review these measurements frequently to analyze trends and make decisions, and we believe the presentation of these metrics provides useful information to our investors regarding our financial condition and results of operations for the same reasons.

Segment Contribution Margin

Segment contribution margin, a non-GAAP measure, is a key metric that management uses to evaluate our operating performance and to determine resource allocation between segments. Segment contribution margin excludes certain corporate costs not directly related to the operations of the segment. These unallocated costs include costs that are related to corporate functional areas such as operations management, corporate purchasing, accounting, treasury, information technology, legal and human resources.

Segment contribution margin is not a measure of our financial performance under GAAP and should not be considered an alternative or superior to measures derived in accordance with GAAP. For more information about segment contribution margin, including a reconciliation of this measure to its most directly comparable GAAP financial measure, net income (loss), see Note U - Segment Reporting to our Consolidated Financial Statements in Part I, Item 1. of this Quarterly Report on Form 10-Q.

Adjusted EBITDA

Adjusted EBITDA, a non-GAAP measure, is included in this report because it is a key metric used by management to assess our operating performance and by our lenders to evaluate our covenant compliance. Adjusted EBITDA excludes certain income and/or costs, the removal of which improves comparability of operating results across reporting periods. Our target performance goals under our incentive compensation plan are tied, in part, to our Adjusted EBITDA.

Adjusted EBITDA is not a measure of our financial performance or liquidity under GAAP and should not be considered as an alternative or superior to net income (loss) as a measure of operating performance, cash flows from operating activities as a measure of liquidity or any other performance measure derived in accordance with GAAP. Additionally, Adjusted EBITDA is not intended to be a measure of free cash flow for management's discretionary use, as it does not consider certain cash requirements such as interest payments, tax payments and debt service requirements. Adjusted EBITDA contains certain other limitations, including the failure to reflect our cash expenditures, cash requirements for working capital needs and cash costs to replace assets being depreciated and amortized, and excludes certain charges that may recur in the future. Management compensates for these limitations by relying primarily on our GAAP results and by using Adjusted EBITDA only supplementally. Our measure of Adjusted EBITDA is not necessarily comparable to other similarly titled captions of other companies due to potential inconsistencies in the methods of calculation.

The following table sets forth a reconciliation of net (loss) income, the most directly comparable GAAP financial measure, to Adjusted EBITDA.

(amounts in thousands)	Three Months Ended March 31,	
	2019	2018
Net (loss) income attributable to U.S. Silica Holdings, Inc.	$ (19,324)	$ 31,294
Total interest expense, net of interest income	22,920	5,855
Provision for taxes	(1,972)	7,521
Total depreciation, depletion and amortization expenses	44,600	28,592
EBITDA	46,224	73,262
Non-cash incentive compensation [1]	4,045	6,254
Post-employment expenses (excluding service costs) [2]	552	555
Merger and acquisition related expenses [3]	4,783	2,507
Plant capacity expansion expenses [4]	8,571	9,380
Contract termination expenses [5]	1,000	—
Business optimization projects [6]	6	—
Other adjustments allowable under the Credit Agreement [7]	3,638	3,408
Adjusted EBITDA	$ 68,819	$ 95,366

[1] Reflects equity-based, non-cash compensation expense.

[2] Includes net pension cost and net post-retirement cost relating to pension and other post-retirement benefit obligations during the applicable period, but in each case excluding the service cost relating to benefits earned during such period. Non-service net periodic benefit costs are not considered reflective of our operating performance because these costs do not exclusively originate from employee services during the applicable period and may experience periodic fluctuations as a result of changes in non-operating factors, including changes in discount rates, changes in expected returns on benefit plan assets, and other demographic actuarial assumptions. See Note P - Pension and Post-Retirement Benefits to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

[3] Merger and acquisition related expenses include legal fees, consulting fees, bank fees, severance costs, certain purchase accounting items such as the amortization of inventory fair value step-up, information technology integration costs and similar charges. While these costs are not operational in nature and are not expected to continue for any singular transaction on an ongoing basis, similar types of costs, expenses and charges have occurred in prior periods and may recur in the future as we continue to integrate prior acquisitions and pursue any future acquisitions.

[4] Plant capacity expansion expenses include expenses that are not inventoriable or capitalizable as related to plant expansion projects greater than $5 million in capital expenditures or plant start up projects. While these expenses are not operational in nature and are not expected to continue for any singular project on an ongoing basis, similar types of expenses have occurred in prior periods and may recur in the future as we continue to pursue future plant capacity expansion.

[5] Reflects contract termination expenses related to strategically exiting a service contract. While these expenses are not operational in nature and are not expected to continue for any singular event on an ongoing basis, similar types of expenses have occurred in prior periods and may recur in the future as we continue to strategically evaluate our contracts.

[6] Reflects costs incurred related to business optimization projects within our corporate center, which aim to measure and improve the efficiency, productivity and performance of our organization. While these costs are not operational in nature and are not expected to continue for any singular project on an ongoing basis, similar types of expenses may recur in the future.

[7] Reflects miscellaneous adjustments permitted under the Credit Agreement. The first quarter of 2019 includes $2.4 million related to facility closure costs and $2.2 million of loss contingencies reserve, partially offset by insurance proceeds of $2.2 million. The first quarter of 2018 includes a net loss of $3.4 million on divestitures of assets, consisting of $7.9 million of contract termination costs and $1.3 million of divestiture related expenses such as legal fees and consulting fees, partially offset by a $5.8 million gain on sale of assets.

Adjusted EBITDA-Trailing Twelve Months

Our Revolver contains a consolidated total net leverage ratio that we must meet as of the last day of any fiscal quarter whenever usage of the Revolver (other than certain undrawn letters of credit) exceeds 30% of the Revolver commitment, which is calculated based on our Adjusted EBITDA for the trailing twelve months. Noncompliance with this financial ratio covenant could result in the acceleration of our obligations to repay all amounts outstanding under the Revolver and the Term Loan. Moreover, the Revolver and the Term Loan contain covenants that restrict, subject to certain exceptions, our ability to make permitted acquisitions, incur additional indebtedness, make restricted payments (including dividends) and retain excess cash flow based, in some cases, on our ability to meet leverage ratios calculated based on our Adjusted EBITDA for the trailing twelve months.

See the description under "Adjusted EBITDA" above for certain important information about Adjusted EBITDA-trailing twelve months, including certain limitations and management's use of this metric in light of its status as a non-GAAP measure.

As of March 31, 2019, we are in compliance with all covenants in accordance with our Revolver and Term Loan. The Revolver and Term Loan require us to maintain a consolidated leverage ratio of no more than 3.75:1.00 as of the last day of any fiscal quarter whenever usage of the Revolver (other than certain undrawn letters of credit) exceeds 30% of the Revolver commitment. As of March 31, 2019, our Revolver usage was zero (other than certain undrawn letters of credit). Since the Revolver usage did not exceed 30% of the Revolver commitment, the consolidated leverage ratio covenant did not apply. The calculation of the consolidated leverage ratio incorporates the Adjusted EBITDA-trailing twelve months as follows:

(All amounts in thousands)	March 31, 2019
Total debt	$ 1,258,224
Finance leases	130
Total consolidated debt	$ 1,258,354
Adjusted EBITDA-trailing twelve months	$ 365,964
Pro forma Adjusted EBITDA including impact of acquisitions [1]	4,121
Other adjustments for covenant calculation [2]	265
Total Adjusted EBITDA-trailing twelve months for covenant calculation	$ 370,350
Consolidated leverage ratio[3]	3.40

[1] Covenant calculation allows for the Adjusted EBITDA-trailing twelve months to include the impact of acquisitions on a pro forma basis.

[2] Covenant calculation excludes activity at legal entities above the operating company, which is mainly interest income offset by public company operating expenses.

[3] Calculated by dividing Total consolidated debt by Total Adjusted EBITDA-trailing twelve months for covenant calculation.

Results of Operations for the Three Months Ended March 31, 2019 and 2018

Sales

(In thousands except per ton data)	Three Months Ended March 31,		Percent Change
	2019	2018	'19 vs.'18
Sales:			
Oil & Gas Proppants	$ 260,477	$ 312,930	(17)%
Industrial & Specialty Products	118,273	56,383	110 %
Total sales	$ 378,750	$ 369,313	3 %
Tons:			
Oil & Gas Proppants	3,864	3,252	19 %
Industrial & Specialty Products	966	877	10 %
Total Tons	4,830	4,129	17 %
Average Selling Price per Ton:			
Oil & Gas Proppants	$ 67.41	$ 96.23	(30)%
Industrial & Specialty Products	122.44	64.29	90 %
Overall Average Selling Price per Ton	$ 78.42	$ 89.44	(12)%

Total sales increased 3% for the three months ended March 31, 2019 compared to the three months ended March 31, 2018, driven by a 17% increase in total tons sold, partially offset by a 12% decrease in overall average selling price.

The increase in total sales was driven by Industrial & Specialty Products sales, which increased 110% for the three months ended March 31, 2019 compared to the three months ended March 31, 2018. Industrial & Specialty Products tons sold increased 10% and average selling price increased 90%. The increase in tons sold was mainly due to the acquisition of EPM. The increase in average selling price was due to the acquisition of EPM, additional higher-margin product sales and price increases.

The increase in total sales was partially offset by Oil & Gas Proppants sales, which decreased 17% for the three months ended March 31, 2019 compared to the three months ended March 31, 2018. Oil & Gas Proppants tons sold increased 19% and average selling price decreased 30%. The increase in tons sold was driven by year over year growth in demand for our frac sand. The decrease in average selling price was mainly driven by more tons sold from local in-basin plants which have lower logistics costs, increased proppant supply, and decreased sand pricing.

Cost of Sales (excluding depreciation, depletion, and amortization)

Cost of sales increased by $36.6 million, or 14%, to $297.5 million for the three months ended March 31, 2019 compared to $260.9 million for the three months ended March 31, 2018. These changes result from the main components of cost of sales as discussed below. As a percentage of sales, cost of sales represented 79% for the three months ended March 31, 2019 compared to 71% for the same period in 2018.

We incurred $129.9 million and $134.2 million of transportation and related costs for the three months ended March 31, 2019 and 2018, respectively. This decrease was mainly due to a decline in demand for Northern White sand caused by some of our customers shifting to local in-basin frac sands with lower logistics cost, partially offset by costs related to additional Sandbox operations and the acquisition of EPM. As a percentage of sales, transportation and related costs decreased to 34% for the three months ended March 31, 2019 compared to 36% for the same period in 2018.

We incurred $53.7 million and $44.9 million of operating labor costs for the three months ended March 31, 2019 and 2018, respectively. The $8.8 million increase in labor costs incurred was due to more tons sold, costs related to additional Sandbox operations and the acquisition of EPM. As a percentage of sales, operating labor costs represented 14% for the three months ended March 31, 2019 compared to 12% for the same period in 2018.

We incurred $16.3 million and $10.0 million of electricity and drying fuel (principally natural gas) costs for the three months ended March 31, 2019 and 2018, respectively. The $6.3 million increase in electricity and drying fuel costs incurred was due to more tons sold and the acquisition of EPM. As a percentage of sales, electricity and drying fuel costs represented 4% for the three months ended March 31, 2019 compared to 3% for the same period in 2018.

We incurred $23.5 million and $19.1 million of maintenance and repair costs for the three months ended March 31, 2019 and 2018, respectively. The increase in maintenance and repair costs incurred was due to plant capacity expansion expenses, higher production volume, additional Sandbox operations and the acquisition of EPM. As a percentage of sales, maintenance and repair costs represented 6% for the three months ended March 31, 2019 compared to 5% for the same period in 2018.

Segment Contribution Margin

Industrial & Specialty Products contribution margin increased by $24.0 million to $44.6 million for the three months ended March 31, 2019 compared to $20.5 million for the three months ended March 31, 2018, driven by a $61.9 million increase in revenue, partially offset by $37.9 million in higher cost of sales. The increase in segment contribution margin was due to the acquisition of EPM, new higher-margin product sales and price increases.

Oil & Gas Proppants contribution margin decreased by $40.8 million to $58.6 million for the three months ended March 31, 2019 compared to $99.4 million for the three months ended March 31, 2018, driven by a $52.5 million decrease in sales, partially offset by an $11.6 million decrease in cost of sales. The decrease in segment contribution margin was mainly driven by the decrease in average selling price due to more tons sold from local in-basin plants which have lower logistics costs, increased proppant supply, and decreased sand pricing.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased by $0.1 million, or 0%, to $34.7 million for the three months ended March 31, 2019 compared to $34.6 million for the three months ended March 31, 2018. The net increase was due to the following factors:

- Compensation related expense increased by $5.3 million for the three months ended March 31, 2019 compared to the three months ended March 31, 2018, mainly due to the acquisition of EPM.
- Merger and acquisition related expense decreased by $2.1 million to $0.4 million for the three months ended March 31, 2019 compared to $2.5 million for the three months ended March 31, 2018. The decrease was mainly due to lower costs related to growth and expansion initiatives.
- A net loss of $3.4 million on divestiture of assets during the three months ended March 31, 2018 did not recur during the three months ended March 31, 2019.

In total, our selling, general and administrative expenses represented approximately 9% of our sales for both the three months ended March 31, 2019 and 2018.

Depreciation, Depletion and Amortization

Depreciation, depletion and amortization expense increased by $16.0 million, or 56%, to $44.6 million for the three months ended March 31, 2019 compared to $28.6 million for the three months ended March 31, 2018. The increase was mainly driven by our plant capacity expansions and our acquisition of EPM, as well as other continued capital spending. Depreciation, depletion and amortization expense represented approximately 12% and 8% of our sales for the three months ended March 31, 2019 and 2018, respectively.

Operating Income

Operating income decreased by $43.3 million to $2.0 million for the three months ended March 31, 2019 compared to operating income of $45.2 million for the three months ended March 31, 2018. The decrease was driven by a 14% increase in cost of sales and a 56% increase in depreciation, depletion and amortization expense, partially offset by a 3% increase in total sales.

Interest Expense

Interest expense increased by $16.9 million, or 239%, to $24.0 million for the three months ended March 31, 2019 compared to $7.1 million for the three months ended March 31, 2018, mainly driven by the increase in our Credit Facility to finance the acquisition of EPM.

Provision for Income Taxes

For the three months ended March 31, 2019, we had a tax benefit of $2.0 million. For the three months ended March 31, 2018, we had a tax expense of $7.5 million. The effective tax rate was 9% and 19% for the three months ended March 31, 2019 and 2018, respectively. The effective tax rate for the three months ended March 31, 2019 and 2018 would have been 29% and 18%, respectively, without the below items recorded discretely.

During the three months ended March 31, 2019 and 2018, we recorded a tax expense of $3.9 million and $0.5 million, respectively, related to equity compensation pursuant to ASU 2016-09.

Historically, our actual effective tax rates have differed from the statutory effective rate primarily due to the benefit received from statutory percentage depletion allowances. The deduction for statutory percentage depletion does not necessarily change proportionately to changes in income before income taxes.

Net (Loss) Income

Net (loss) income attributable to U.S. Silica Holdings, Inc., was a net loss of $19.3 million and net income of $31.3 million for the three months ended March 31, 2019 and 2018, respectively. The year over year changes were due to the factors noted above.

Liquidity and Capital Resources

Overview

Our principal liquidity requirements have historically been to service our debt, to meet our working capital, capital expenditure and mine development expenditure needs, to return cash to our stockholders, and to finance acquisitions. We have historically met our liquidity and capital investment needs with funds generated through operations. We have historically funded our acquisitions through cash on hand, borrowings under our credit facilities, or equity issuances. Our working capital is the amount by which current assets exceed current liabilities and is a measure of our ability to pay our liabilities as they become due. As of March 31, 2019, our working capital was $251.9 million and we had $95.2 million of availability under the Revolver.

In connection with the EPMH acquisition, on May 1, 2018, we entered into the Credit Agreement with BNP Paribas, as administrative agent, and the lenders named therein. The Credit Agreement increases our existing senior debt by entering into a new $1.380 billion senior secured Credit Facility, consisting of a $1.280 billion Term Loan and a $100 million Revolver that may also be used for swingline loans or letters of credit, and we may elect to increase the Term Loan in accordance with the terms of the Credit Agreement. The amounts owed under the Credit Agreement use LIBOR as a benchmark for establishing the rate at which interest accrues. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms and other pressures may cause LIBOR to disappear entirely or to perform differently than in the past. The consequences of these developments cannot be entirely predicted but could include an increase in the cost to us of this indebtedness. For more information on the Credit Agreement see Note J - Debt to our Consolidated Financial Statements in Part I, Item 1. of this Quarterly Report on Form 10-Q.

We believe that cash on hand, cash generated through operations and cash generated from financing arrangements will be sufficient to meet our working capital requirements, anticipated capital expenditures, scheduled debt payments and any dividends declared for at least the next 12 months.

Management and our Board remain committed to evaluating additional ways of creating shareholder value. Any determination to pay dividends or other distributions in cash, stock, or property in the future or otherwise return capital to our stockholders, including decisions about existing or new share repurchase programs, will be at the discretion of our Board and will be dependent on then-existing conditions, including industry and market conditions, our financial condition, results of operations, liquidity and capital requirements, contractual restrictions including restrictive covenants contained in debt agreements, and other factors. Additionally, because we are a holding company, our ability to pay dividends on our common stock may be limited by restrictions on the ability of our subsidiaries to pay dividends or make distributions to us, including restrictions under the terms of the agreements governing our indebtedness.

Cash Flow Analysis

A summary of operating, investing and financing activities (in thousands) is shown in the following table:

	Three Months Ended March 31,	
	2019	2018
Net cash provided by (used in):		
Operating activities	$ 10,901	$ 77,609
Investing activities	(45,683)	(47,378)
Financing activities	(6,101)	(85,286)

Net Cash Provided by / Used in Operating Activities

Operating activities consist primarily of net income adjusted for certain non-cash and working capital items. Adjustments to net income for non-cash items include depreciation, depletion and amortization, deferred revenue, deferred income taxes, equity-based compensation and bad debt provision. In addition, operating cash flows include the effect of changes in operating assets and liabilities, principally accounts receivable, inventories, prepaid expenses and other current assets, income taxes payable and receivable, accounts payable and accrued expenses.

Net cash provided by operating activities was $10.9 million for the three months ended March 31, 2019. This was mainly due to a $19.3 million net loss adjusted for non-cash items, including $44.6 million in depreciation, depletion and amortization, $2.6 million in deferred income taxes, $4.0 million in equity-based compensation, $7.6 million in deferred revenue, and $1.5 million in other miscellaneous non-cash items. Also contributing to the change was a $43.6 million increase in accounts receivable, a $18.9 million decrease in inventories, a $3.2 million decrease in prepaid expenses and other current assets, a $13.0 million increase in accounts payable and accrued liabilities, and $1.7 million in other operating assets and liabilities.

Net cash provided by operating activities was $77.6 million for the three months ended March 31, 2018. This was mainly due to $31.3 million in net income adjusted for non-cash items, including $28.6 million in depreciation, depletion and amortization, $7.8 million in deferred income taxes, $6.3 million in equity-based compensation, $5.8 million gain on sale of three transload facilities, and $3.4 million in other miscellaneous non-cash items. Also contributing to the change was a $39.1 million increase in accounts receivable, a $15.8 million decrease in inventories, a $27.9 million decrease in accounts payable and accrued liabilities, $58.0 million in short-term and long-term vendor incentives, and $0.7 million in other operating assets and liabilities.

Net Cash Provided by / Used in Investing Activities

Investing activities consist primarily of cash consideration paid to acquire businesses and capital expenditures for growth and maintenance.

Net cash used in investing activities was $45.7 million for the three months ended March 31, 2019. This was due to capital expenditures of $44.4 million, and capitalized intellectual property costs of $1.3 million. Capital expenditures for the three months ended March 31, 2019 were mainly for engineering, procurement and construction of our growth projects, primarily Lamesa and equipment to expand our Sandbox operations, and other maintenance and cost improvement capital projects.

Net cash used in investing activities was $47.4 million for the three months ended March 31, 2018. This was mainly due to capital expenditures of $72.3 million, and capitalized intellectual property costs of $1.0 million, partially offset by proceeds from the sale of three transload facilities of $26.0 million. Capital expenditures for the three months ended March 31, 2018 were mainly for engineering, procurement and construction of our growth projects and other maintenance and cost improvement capital projects.

Subject to our continuing evaluation of market conditions, we anticipate that our capital expenditures in 2019 will be in the range of approximately $100 million to $125 million, which is primarily associated with previously announced growth projects and other maintenance and cost improvement capital projects. We expect to fund our capital expenditures through cash on hand and cash generated from our operations.

Net Cash Provided by / Used in Financing Activities

Financing activities consist primarily of equity issuances, dividend payments, share repurchases, borrowings and repayments related to the Revolver and Term Loan, as well as fees and expenses paid in connection with our credit facilities.

Net cash used in financing activities was $6.1 million for the three months ended March 31, 2019. This was mainly due to $4.0 million of long-term debt payments, $4.7 million of dividends paid, and $2.2 million of tax payments related to shares withheld for vested restricted stock and stock units, partially offset by $4.7 million of capital contribution from a non-controlling interest.

Net cash used in financing activities was $85.3 million for the three months ended March 31, 2018. This was mainly due to $75.0 million in common stock repurchases, $5.1 million of dividends paid, $1.7 million of long-term debt payments, and $3.5 million of tax payments related to shares withheld for vested restricted stock and restricted stock units.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements that have a current material effect or are reasonably likely to have a future material effect on our financial condition, changes in financial condition, sales, expenses, results of operations, liquidity, capital expenditures or capital resources.

Contractual Obligations

There have been no significant changes outside the ordinary course of business to our “Contractual Obligations” table in Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” of our 2018 Annual Report on Form 10-K. For more details on future minimum annual purchase commitments and operating leases commitments, please see accompanying Note O - Commitments and Contingencies and Note Q - Leases to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Environmental Matters

We are subject to various federal, state and local laws and regulations governing, among other things, hazardous materials, air and water emissions, environmental contamination and reclamation and the protection of the environment and natural resources. We have made, and expect to make in the future, expenditures to comply with such laws and regulations, but cannot predict the full amount of such future expenditures. As of March 31, 2019, we had $18.8 million accrued for future reclamation costs, as compared to $18.4 million as of December 31, 2018.

We discuss certain environmental matters relating to our various production and other facilities, certain regulatory requirements relating to human exposure to crystalline silica and our mining activity and how such matters may affect our business in the future under Item 1, "Business", Item 1A, “Risk Factors”, Item 3, “Legal Proceedings” and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations-Environmental Matters" in our 2018 Annual Report.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the dates of the financial statements and the reported revenues and expenses during the reporting periods. We evaluate these estimates and assumptions on an ongoing basis and base our estimates on historical experience, current conditions and various other assumptions that are believed to be reasonable under the circumstances. The results of these estimates form the basis for making judgments about the carrying values of assets and liabilities as well as identifying and assessing the accounting treatment with respect to commitments and contingencies. Our actual results may materially differ from these estimates.

A summary of our significant accounting policies, including certain critical accounting policies and estimates, are included in Note B - Summary of Significant Accounting Policies to the Consolidated Financial Statements in Item 8 of our 2018 Annual Report on Form 10-K. Management believes that the application of these policies on a consistent basis enables us to provide the users of the Consolidated Financial Statements with useful and reliable information about our operating results and financial condition.

Recent Accounting Pronouncements

New accounting pronouncements that have been recently adopted are described in Note B - Summary of Significant Accounting Policies to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Availability of Reports; Website Access; Other Information

Our Internet address is http://www.ussilica.com. Through “Investors” — “SEC Filings” on our home page, we make available free of charge our annual reports on Form 10-K, our quarterly reports on Form 10-Q, our proxy statements, our current reports on Form 8-K, SEC Forms 3, 4 and 5 and any amendments to those reports filed or furnished pursuant to Sections 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Our reports filed with the SEC are also available on its website at http://www.sec.gov.

Stockholders may also request a free copy of these documents from: U.S. Silica Holdings, Inc., attn.: Investor Relations, 24275 Katy Freeway, Suite 600, Katy, Texas 77494 or view them on our website at http://www.ussilica.com/investors.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk

We are exposed to certain market risks, which exist as a part of our ongoing business operations. Such risks arise from adverse changes in market rates, prices and conditions. We address such market risks in “Recent Trends and Outlook” and "How We Generate Our Sales" in Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Interest Rate Risk

We are exposed to interest rate risk arising from adverse changes in interest rates. As of March 31, 2019, we had $1.267 billion of debt outstanding under the Credit Agreement. Assuming LIBOR is greater than the 1.0% minimum base rate on the Term Loan, a hypothetical increase in interest rates by 1.0% would have changed our interest expense by $3.2 million per year.

We use interest rate derivatives in the normal course of our business to manage both our interest cost and the risks associated with changing interest rates. We do not use derivatives for trading or speculative purposes. As of March 31, 2019, the fair value of our interest rate swaps was a liability of $2.3 million and $1.0 million and classified within other long-term liabilities on our balance sheet, and the fair value of our interest rate cap was zero. For more information see Note M - Derivative Instruments to our Consolidated Financial Statements in Part I, Item 1. of this Quarterly Report on Form 10-Q.

Credit Risk

We are subject to risks of loss resulting from nonpayment or nonperformance by our customers. We examine the creditworthiness of third-party customers to whom we extend credit and manage our exposure to credit risk through credit analysis, credit approval, credit limits and monitoring procedures, and for certain transactions, we may request letters of credit, prepayments or guarantees, although collateral is generally not required.

Despite enhancing our examination of our customers' creditworthiness, we may still experience delays or failures in customer payments. Some of our customers have reported experiencing financial difficulties. With respect to customers that may file for bankruptcy protection, we may not be able to collect sums owed to us by these customers and we also may be required to refund pre-petition amounts paid to us during the preference period (typically 90 days) prior to the bankruptcy filing.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2019. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Based on the evaluation of our disclosure controls and procedures as of March 31, 2019, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable, and not absolute, assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in management’s evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during the quarter ended March 31, 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

During the quarter ended March 31, 2019 we continue to integrate EP Minerals, LLC ("EPM") processes, information technology systems and other components of internal control over financial reporting into our internal control structure.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

In addition to the matters described below, we are subject to various legal proceedings, claims, and governmental inspections, audits or investigations incidental to our business, which can cover general commercial, governmental regulations, antitrust and trade regulations, product liability, environmental, intellectual property, employment and other matters. Although the outcomes of these ordinary routine claims cannot be predicted with certainty, in the opinion of management, the ultimate resolution of these matters will not have a material adverse effect on our financial position or results of operations.

Prolonged inhalation of excessive levels of respirable crystalline silica dust can result in silicosis, a disease of the lungs. Breathing large amounts of respirable silica dust over time may injure a person's lungs by causing scar tissue to form. Crystalline silica in the form of quartz is a basic component of soil, sand, granite and most other types of rock. Cutting, breaking, crushing, drilling, grinding and abrasive blasting of or with crystalline silica containing materials can produce fine silica dust, the inhalation of which may cause silicosis, lung cancer and possibly other diseases including immune system disorders such as scleroderma. Sources of exposure to respirable crystalline silica dust include sandblasting, foundry manufacturing, crushing and drilling of rock, masonry and concrete work, mining and tunneling, and cement and asphalt pavement manufacturing.

Since at least 1975, we and/or our predecessors have been named as a defendant, usually among many defendants, in numerous lawsuits brought by or on behalf of current or former employees of our customers alleging damages caused by silica exposure. Prior to 2001, the number of silicosis lawsuits filed annually against the commercial silica industry remained relatively stable and was generally below 100, but between 2001 and 2004 the number of silicosis lawsuits filed against the commercial silica industry substantially increased. This increase led to greater scrutiny of the nature of the claims filed, and in June 2005 the U.S. District Court for the Southern District of Texas issued an opinion in the former federal silica multi-district litigation remanding almost all of the 10,000 cases then pending in the multi-district litigation back to the state courts from which they originated for further review and medical qualification, leading to a number of silicosis case dismissals across the United States. In conjunction with this and other favorable court rulings establishing "sophisticated user" and "no duty to warn" defenses for silica producers, several states, including Texas, Ohio and Florida, have passed medical criteria legislation that requires proof of actual impairment before a lawsuit can be filed.

As a result of the above developments, the filing rate of new claims against us over the past few years has decreased to below pre-2001 levels, and we were named as a defendant in 20, zero and two new silicosis cases filed in 2018, 2017 and 2016, respectively. The main driver of the increase in cases filed in 2018 is 16 claims arising out of a single location in Mississippi. During the three months ended March 31, 2019, one new claim was brought against U.S. Silica. As of March 31, 2019, there were 58 active silica-related product liability claims pending in which U.S. Silica is a defendant. Almost all of the claims pending against us arise out of the alleged use of our silica products in foundries or as an abrasive blast media and involve various other defendants. Prior to the fourth quarter of 2012, we had insurance policies for both our predecessors that cover certain claims for alleged silica exposure for periods prior to certain dates in 1985 and 1986 (with respect to certain insurance). As a result of a settlement with a former owner and its insurers in the fourth quarter of 2012, some of these policies are no longer available to us and we will not seek reimbursement for any defense costs or claim payments from these policies. Other insurance policies, however, continue to remain available to us and will continue to make such payments on our behalf.

The silica-related litigation brought against us to date has not resulted in material liability to us. However, we continue to have silica-related product liability claims filed against us, including claims that allege silica exposure for periods for which we do not have insurance coverage. Although the outcomes of these claims cannot be predicted with certainty, in the opinion of management, it is not reasonably possible that the ultimate resolution of these matters will have a material adverse effect on our financial position or results of operations that exceeds the accrual amounts.

For more information regarding silica-related litigation, see Part I, Item 1A. Risk Factors of our 2018 Annual Report on Form 10-K.

One of our subsidiaries has also been named as a defendant in lawsuits regarding certain labor practices. If we are unsuccessful in defending the litigation, these cases could result in material liability for us.

ITEM 1A. RISK FACTORS

As of March 31, 2019 there have been no material changes to the risk factors disclosed in Part I, Item 1A. Risk Factors of our 2018 Annual Report on Form 10-K.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Share Repurchase Program

The following table presents the total number of shares of our common stock that we purchased during the first quarter of 2019, the average price paid per share, the number of shares that we purchased as part of our publicly announced repurchase program, and the approximate dollar value of shares that still could have been purchased at the end of the applicable fiscal period pursuant to our publicly announced share repurchase program:

Period	Total Number of Shares Purchased		Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Program[1]	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Program[1]
January 1, 2019 - January 31, 2019	44	[2]	$ 13.25	—	126,540,060
February 1, 2019 - February 28, 2019	120,286	[2]	$ 12.91	—	126,540,060
March 1, 2019 - March 31, 2019	37,910	[2]	$ 17.17	—	126,540,060
Total	158,240		$ 13.93	—	—

[1] In May 2018, our Board of Directors authorized and announced the repurchase of up to $200 million of our common stock.

[2] Shares withheld by U.S. Silica to pay taxes due upon the vesting of employee restricted stock and restricted stock units for the months ended January 31, February 28, and March 31, 2019, respectively.

From March 31, 2019 to the date of the filing of this Quarterly Report on Form 10-Q, we have not repurchased any shares of our common stock except in connection with the vesting of employee restricted stock and restricted stock units.

For more details on the stock repurchase program, see Note D - Capital Structure and Accumulated Comprehensive Income (Loss) to our Financial Statements in Part I, Item I of this Quarterly Report on Form 10-Q.

ITEM 3. DEFAULT UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Safety is one of our core values and we strive to achieve a workplace free of injuries and occupational illnesses. Our health and safety leadership team has developed comprehensive safety policies and standards, which include detailed standards and procedures for safe production and address topics such as employee training, risk management, workplace inspection, emergency response, accident investigation and program auditing. We place special emphasis on the importance of continuous improvement in occupational health, personal injury avoidance and prevention, emergency preparedness, and property damage elimination. In addition to strong leadership and involvement from all levels of the organization, these programs and procedures form the cornerstone of our safety initiatives and are intended as a means to reduce workplace accidents, incidents and losses, comply with all mining-related regulations and provide support for both regulators and the industry to improve mine safety. While we want to have productive operations in full regulatory compliance, we know it is equally essential that we motivate and train our people to think, practice and feel a personal responsibility for health and safety on and off the job.

All of our production facilities, with the exception of our EPM's, Blair, Nebraska, facility, are classified as mines and are subject to regulation by MSHA under the Mine Act. MSHA inspects our mines on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act. Following passage of The Mine Improvement and New Emergency Response Act of 2006, MSHA significantly increased the numbers of citations and orders charged against mining operations. The dollar penalties assessed for citations issued has also increased in recent years. Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K (17 CFR 229.104) is included in Exhibit 95.1 to this Quarterly Report filed on Form 10-Q.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

The information called for by this Item is incorporated herein by reference from the Exhibit Index included in this Quarterly Report on Form 10-Q.

EXHIBIT INDEX

		Incorporated by Reference			
Exhibit Number	Description	Form	File No.	Exhibit	Filing Date
10.1*+	Form of Performance Share Unit Agreement (Adjusted Cash Flow) Pursuant to the Amended and Restated U.S. Silica Holdings, Inc. 2011 Incentive Compensation Plan				
10.2*+	Form of Performance Share Unit Agreement (Relative TSR) Pursuant to the Amended and Restated U.S. Silica Holdings, Inc. 2011 Incentive Compensation Plan				
10.3*+	Form of Restricted Stock Unit Agreement Pursuant to the Amended and Restated U.S. Silica Holdings, Inc. 2011 Incentive Compensation Plan				
10.4*+	Separation, Severance and General Release Agreement entered into by and between Billy Ray Smith and U.S. Silica Company effective March 27, 2019				
31.1*	Rule 13a-14(a)/15(d)-14(a) Certification by Bryan A. Shinn, Chief Executive Officer.				
31.2*	Rule 13a-14(a)/15(d)-14(a) Certification by Donald A. Merril, Chief Financial Officer.				
32.1*	Section 1350 Certification by Bryan A. Shinn, Chief Executive Officer.				
32.2*	Section 1350 Certification by Donald A. Merril, Chief Financial Officer.				
95.1*	Mine Safety Disclosure.				
99.1*	Consent of Rystad Energy.				
101*	101.INS XBRL Instance - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document 101.SCH XBRL Taxonomy Extension Schema 101.CAL XBRL Taxonomy Extension Calculation 101.LAB XBRL Taxonomy Extension Labels 101.PRE XBRL Taxonomy Extension Presentation 101.DEF XBRL Taxonomy Extension Definition				

+ Management contract or compensatory plan/arrangement

* Filed herewith

We will furnish to any of our stockholders a copy of any of the above exhibits upon the written request of such stockholder and the payment to U.S. Silica Holdings, Inc. of the reasonable expenses incurred in furnishing such copy or copies.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized, this 1st day of May, 2019.

U.S. Silica Holdings, Inc.

/s/ DONALD A. MERRIL

Name:	Donald A. Merril
Title:	Executive Vice President & Chief Financial Officer

Exhibit 10.1

PERFORMANCE SHARE UNIT AGREEMENT
(ADJUSTED CASH FLOW)
PURSUANT TO THE
AMENDED AND RESTATED U.S. SILICA HOLDINGS, INC.
2011 INCENTIVE COMPENSATION PLAN

*** * * * ***

Participant:

Grant Date:

Number of Performance Share Units Granted at Target Performance:

Number of Performance Share Units Granted at Maximum Performance:

*** * * * ***

THIS PERFORMANCE SHARE UNIT AWARD AGREEMENT (this "Agreement"), dated as of the Grant Date specified above, is entered into by and between U.S. Silica Holdings, Inc., a corporation organized in the State of Delaware (the "Company"), and the Participant specified above, pursuant to the Amended and Restated U.S. Silica Holdings, Inc. 2011 Incentive Compensation Plan, as in effect and as amended from time to time (the "Plan"), which is administered by the Committee; and

WHEREAS, it has been determined under the Plan that it would be in the best interests of the Company to grant the performance share units ("PSUs") provided herein to the Participant.

NOW, THEREFORE, in consideration of the mutual covenants and promises hereinafter set forth and for other good and valuable consideration, the parties hereto hereby mutually covenant and agree as follows:

1. **Incorporation By Reference; Plan Document Receipt**. This Agreement is subject in all respects to the terms and provisions of the Plan and the Company's Executive Compensation Clawback Policy (including, without limitation, any amendments thereto adopted at any time and from time to time unless such amendments are expressly intended not to apply to the Award provided hereunder), all of which terms and provisions are made a part of and incorporated in this Agreement as if they were each expressly set forth herein. Any capitalized term not defined in this Agreement (including Exhibit A hereto) shall have the same meaning as is ascribed thereto in the Plan. The Participant hereby acknowledges receipt of a true copy of the Plan and the Executive Compensation Clawback Policy and that the Participant has read the Plan and the Executive Compensation Clawback Policy carefully and fully understands its content. In the event of any

conflict between the terms of this Agreement and the terms of the Plan, the terms of the Plan shall control.

2. **Grant of Performance Share Unit Award**. The Company hereby grants to the Participant, as of the Grant Date specified above, the number of PSUs specified above. Except as otherwise provided by the Plan, the Participant agrees and understands that nothing contained in this Agreement provides, or is intended to provide, the Participant with any protection against potential future dilution of the Participant's interest in the Company for any reason, and no adjustments shall be made for dividends in cash or other property, distributions or other rights in respect of the shares of Common Stock underlying the PSUs, except as otherwise specifically provided for in the Plan or this Agreement.

3. **Vesting**.

(a) Performance-Based Vesting. Subject to the provisions of Sections 3(b) through 3(d) hereof, one-third of the PSUs subject to this grant (each such third, a "Tranche") shall become performance vested based on the level of achievement of the Performance Goal (as defined in Exhibit A hereto) for the applicable performance period set forth on Exhibit A hereto (each, a "Performance Period"), in accordance with the schedule below and Exhibit A hereto, provided that (subject to the provisions of Sections 3(c) and 3(d) hereof), the Participant remains employed with the Company or its Affiliates through the end of the third Performance Period:

Performance Goal Achievement	**Number of PSUs Vested as Percentage of Target**
Less Than Threshold Amount	0%
Threshold Amount	50% (Threshold)
Target Amount	100% (Target)
Equal to or Greater Than Maximum Amount	200% (Maximum)

To the extent that the actual level of achievement of the Performance Goal for a Performance Period hereunder is between any two levels provided in the table above, the number of PSUs to become performance vested with respect to the corresponding Tranche shall be determined on a pro rata basis using straight line interpolation; provided that no PSUs shall become vested with respect to a Tranche if the actual level of achievement of the Performance Goal for the corresponding Performance Period is less than the Threshold level of performance set forth in the schedule above; and provided, further, that the maximum number of PSUs that may become vested with respect to a Tranche shall not exceed the number of PSUs set forth in the schedule above corresponding to the Maximum level of performance set forth in the schedule above.

Notwithstanding the foregoing, in the event that a Change in Control occurs prior to the last day of the third Performance Period, the number of PSUs that will become performance vested hereunder will be determined in accordance with this paragraph. For any Performance Period that ends on or prior to the date on which such Change in Control occurs, the number of PSUs that will become performance vested with respect to the corresponding Tranche will be determined in accordance with the schedule above based on the actual level of achievement of the corresponding Performance Goal. For any Performance Period that is in effect on the date on which such Change in Control occurs, the number of PSUs that will become performance vested with respect to the corresponding Tranche will equal the number of PSUs that would have become performance vested in accordance with the schedule above based on (i) the actual level of achievement of the corresponding Performance Goal as of the date of such Change in Control (assuming for such purpose that such Change in Control had occurred on the last day of the Performance Period)] or (ii) the Target level of performance set forth in the schedule above, whichever is greater. For any Performance Period that was scheduled to commence after the date on which such Change in Control occurs, the number of PSUs that will become performance vested with respect to the corresponding Tranche will equal the number of PSUs that would have become performance vested in accordance with the schedule above based on the Target level of performance set forth in the schedule above. Following such Change in Control, the number of PSUs determined in accordance with the immediately preceding sentence will vest (x) on the last day of the Performance Period, if the Participant remains employed with the Company or its Affiliates through the end of the third Performance Period, or (y) if applicable, in accordance with the provisions of Sections 3(b) and 3(c) hereof.

(b) Termination due to death or Disability, without Cause or due to Retirement. Subject to the provisions of Sections 3(c) and 3(d) hereof, in the event of the Participant's Termination as a result of death or Disability, by the Company without Cause, or due to the Participant's "Retirement" (as defined below) at any time prior to the end of the third Performance Period, the requirement that the Participant remain in the continued employment of the Company or its Subsidiaries through the end of the third Performance Period in order for the time-based vesting condition to be satisfied under Section 3(a) hereof shall be waived as of the date of such Termination. Thereafter, the PSUs shall continue to remain outstanding until the Committee can certify the actual level of achievement of the Performance Goal for the third Performance Period, and the PSUs shall become vested or be forfeited based on actual performance on a pro rata basis (as determined in accordance with the following sentence) in accordance with the otherwise applicable vesting conditions set forth in Section 3(a) hereof, and shall be paid, to the extent so vested, as provided in Section 4 hereof. For purposes of determining the pro rata number of PSUs to become vested under this Section 3(b), the number of PSUs that would have become vested based on actual performance for all three Performance Periods in accordance with Section 3(a) hereof shall be multiplied by a fraction, the numerator of which is the number of calendar days in the period beginning with the date of commencement of the first Performance Period and ending on the date of such Termination, and the denominator of which is one thousand ninety six (1,096). For purposes hereof, the term "Retirement" shall mean the Participant's voluntary Termination of Employment at or after age sixty-five (65) or such earlier date after age fifty (50), in either case, as may be approved by the Committee in its sole discretion with regard to the Participant.

(c) Change in Control. Notwithstanding the provisions of Sections 3(a) and 3(b) hereof, in the event of the Participant's Termination as a result of death or Disability, by the Company without Cause, by the Participant for "Good Reason" (as defined below) or as a result of the Participant's Retirement, in any case, at any time upon or following a Change in Control but prior to the end of the third Performance Period, the PSUs shall become vested as of the date of such Termination to the extent that the Performance Goals for the Performance Periods, as determined in accordance with Section 3(a), were achieved as of the date of such Change in Control, and shall be paid, to the extent so vested, as provided in Section 4 hereof. For purposes hereof, the term "Good Reason" shall mean (i) a material reduction in the Participant's annual base salary rate of compensation; (ii) a required relocation of more than 50 miles from the Participant's primary place of employment with the Company or its Affiliates; or (iii) a material, adverse change in the Participant's title, reporting relationship, authority, duties or responsibilities; provided, however, that to invoke a Termination for Good Reason, (A) the Participant must provide written notice to the Company within thirty (30) days of the event the Participant believes constitutes Good Reason, (B) the Company must fail to cure such event within thirty (30) days of the receipt of such written notice and (C) the Participant must terminate employment within five (5) days following the expiration of the Company's cure period described above.

(d) Committee Discretion to Accelerate Vesting. Notwithstanding the foregoing, the Committee may, in its sole discretion, provide for accelerated vesting of the PSUs at any time and for any reason.

(e) Effect of Detrimental Activity. The provisions of Section 10.4 of the Plan regarding Detrimental Activity shall apply to the PSUs.

(f) Forfeiture. Subject to the provisions of Sections 3(b) through 3(d) hereof, all unvested PSUs shall be immediately forfeited upon the Participant's Termination for any reason.

4. **Delivery of Shares**.

(a) General. Subject to the provisions of Sections 4(b) and 4(c) hereof, within two and one-half months following the vesting of the PSUs, the Participant shall receive the number of shares of Common Stock that correspond to the number of PSUs that have become vested hereunder; provided that the Participant shall be obligated to pay to the Company the aggregate par value of the shares of Common Stock to be issued within ten (10) days following the issuance of such shares unless such shares have been issued by the Company from the Company's treasury.

(b) Blackout Periods. If the Participant is subject to any Company "blackout" policy or other trading restriction imposed by the Company on the date such distribution would otherwise be made pursuant to Section 4(a) hereof, such distribution shall be instead made on the earlier of (i) the date that the Participant is not subject to any such policy or restriction and (ii) the later of (A) the end of the calendar year in which such distribution would otherwise have been made, and (B) a date that is immediately prior to the expiration of two and one-half months following the date such distribution would otherwise have been made hereunder.

(c) Deferrals. If permitted by the Company, the Participant may elect, subject to the terms and conditions of the Plan and any other applicable written plan or procedure adopted by the Company from time to time for purposes of such election, to defer the distribution of all or any portion of the shares of Common Stock that would otherwise be distributed to the Participant hereunder (the "Deferred Shares"), consistent with the requirements of Section 409A of the Code. Upon the vesting of PSUs that have been so deferred, the applicable number of Deferred Shares shall be credited to a bookkeeping account established on the Participant's behalf (the "Account").

Subject to Section 5 hereof, the number of shares of Common Stock equal to the number of Deferred Shares credited to the Participant's Account shall be distributed to the Participant in accordance with the terms and conditions of the Plan and the other applicable written plans or procedures of the Company, consistent with the requirements of Section 409A of the Code.

5. **Dividends; Rights as Stockholder**. Cash dividends on shares of Common Stock issuable hereunder shall be credited to a dividend book entry account on behalf of the Participant with respect to each PSU granted to the Participant, provided that such cash dividends shall not be deemed to be reinvested in shares of Common Stock and shall be held uninvested and without interest and paid in cash at the same time that the shares of Common Stock underlying the PSUs are delivered to the Participant in accordance with the provisions hereof. Stock dividends on shares of Common Stock shall be credited to a dividend book entry account on behalf of the Participant with respect to each PSU granted to the Participant, provided that such stock dividends shall be paid in shares of Common Stock at the same time that the shares of Common Stock underlying the PSUs are delivered to the Participant in accordance with the provisions hereof. For clarity, no such cash or shares shall be paid to the Participant with respect to any PSUs that are not earned or are forfeited. Except as otherwise provided herein, the Participant shall have no rights as a stockholder with respect to any shares of Common Stock covered by any PSU unless and until the Participant has become the holder of record of such shares.

6. **Non-Transferability**. No portion of the PSUs may be sold, assigned, transferred, encumbered, hypothecated or pledged by the Participant, other than to the Company as a result of forfeiture of the PSUs as provided herein, unless and until payment is made in respect of vested PSUs in accordance with the provisions hereof and the Participant has become the holder of record of the vested shares of Common Stock issuable hereunder.

7. **Governing Law**. All questions concerning the construction, validity and interpretation of this Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, without regard to the choice of law principles thereof.

8. **Withholding of Tax**. The Company shall have the power and the right to deduct or withhold, or require the Participant to remit to the Company, an amount sufficient to satisfy any federal, state, local and foreign taxes of any kind (including, but not limited to, the Participant's FICA and SDI obligations) which the Company, in its sole discretion, deems necessary to be withheld or remitted to comply with the Code and/or any other applicable law, rule or regulation with respect to the PSUs and, if the Participant fails to do so, the Company may otherwise refuse to issue or transfer any shares of Common Stock otherwise required to be issued pursuant to this Agreement. Any minimum statutorily required withholding obligation with regard to the Participant may be satisfied by reducing the amount of cash or shares of Common Stock otherwise deliverable to the Participant hereunder; provided, however, that, at the Participant's discretion, the number of shares of Common Stock otherwise deliverable to the Participant may be further reduced in an amount up to the maximum individual tax rate in the Participant's particular jurisdiction, and only if the Company has a statutory obligation to withhold taxes on the Participant's behalf, in such case only if such reduction would not result in adverse financial accounting treatment, as determined by the Company (and in particular in connection with the effectiveness of the amendments to FASB

Accounting Standards Codification Topic 718, Compensation – Stock Compensation, as amended by FASB Accounting Standards Update No. 2016-09, Improvements to Employee Share-Based Payment Accounting).

9. **Legend**. The Company may at any time place legends referencing any applicable federal, state or foreign securities law restrictions on all certificates representing shares of Common Stock issued pursuant to this Agreement. The Participant shall, at the request of the Company, promptly present to the Company any and all certificates representing shares of Common Stock acquired pursuant to this Agreement in the possession of the Participant in order to carry out the provisions of this Section 9.

10. **Securities Representations**. This Agreement is being entered into by the Company in reliance upon the following express representations and warranties of the Participant. The Participant hereby acknowledges, represents and warrants that:

(a) The Participant has been advised that the Participant may be an “affiliate” within the meaning of Rule 144 under the Securities Act and in this connection the Company is relying in part on the Participant’s representations set forth in this Section 10.

(b) If the Participant is deemed an affiliate within the meaning of Rule 144 of the Securities Act, the shares of Common Stock issuable hereunder must be held indefinitely unless an exemption from any applicable resale restrictions is available or the Company files an additional registration statement (or a “re-offer prospectus”) with regard to such shares of Common Stock and the Company is under no obligation to register such shares of Common Stock (or to file a “re-offer prospectus”).

(c) If the Participant is deemed an affiliate within the meaning of Rule 144 of the Securities Act, the Participant understands that (i) the exemption from registration under Rule 144 will not be available unless (A) a public trading market then exists for the Common Stock of the Company, (B) adequate information concerning the Company is then available to the public, and (C) other terms and conditions of Rule 144 or any exemption therefrom are complied with, and (ii) any sale of the shares of Common Stock issuable hereunder may be made only in limited amounts in accordance with the terms and conditions of Rule 144 or any exemption therefrom.

11. **Entire Agreement; Amendment**. This Agreement, together with the Plan and the Executive Compensation Clawback Policy, contains the entire agreement between the parties hereto with respect to the subject matter contained herein, and supersedes all prior agreements or prior understandings, whether written or oral, between the parties relating to such subject matter. The Committee shall have the right, in its sole discretion, to modify or amend this Agreement from time to time in accordance with and as provided in the Plan. This Agreement may also be modified or amended by a writing signed by both the Company and the Participant. The Company shall give written notice to the Participant of any such modification or amendment of this Agreement as soon as practicable after the adoption thereof.

12. **Notices**. Any notice hereunder by the Participant shall be given to the Company in writing and such notice shall be deemed duly given only upon receipt thereof by the

General Counsel of the Company. Any notice hereunder by the Company shall be given to the Participant in writing and such notice shall be deemed duly given only upon receipt thereof at such address as the Participant may have on file with the Company.

13. **No Right to Employment**. Any questions as to whether and when there has been a Termination and the cause of such Termination shall be determined in the sole discretion of the Committee. Nothing in this Agreement shall interfere with or limit in any way the right of the Company, its Subsidiaries or its Affiliates to terminate the Participant's employment or service at any time, for any reason and with or without Cause.

14. **Transfer of Personal Data**. The Participant authorizes, agrees and unambiguously consents to the transmission by the Company (or any Subsidiary) of any personal data information related to the PSUs awarded under this Agreement for legitimate business purposes (including, without limitation, the administration of the Plan). This authorization and consent is freely given by the Participant.

15. **Compliance with Laws**. The grant of PSUs and the issuance of shares of Common Stock hereunder shall be subject to, and shall comply with, any applicable requirements of any foreign and U.S. federal and state securities laws, rules and regulations (including, without limitation, the provisions of the Securities Act, the Exchange Act and in each case any respective rules and regulations promulgated thereunder) and any other law, rule regulation or exchange requirement applicable thereto. The Company shall not be obligated to issue the PSUs or any shares of Common Stock pursuant to this Agreement if any such issuance would violate any such requirements. As a condition to the settlement of the PSUs, the Company may require the Participant to satisfy any qualifications that may be necessary or appropriate to evidence compliance with any applicable law or regulation.

16. **Binding Agreement; Assignment**. This Agreement shall inure to the benefit of, be binding upon, and be enforceable by the Company and its successors and assigns. The Participant shall not assign (except in accordance with Section 6 hereof) any part of this Agreement without the prior express written consent of the Company.

17. **Headings**. The titles and headings of the various sections of this Agreement have been inserted for convenience of reference only and shall not be deemed to be a part of this Agreement.

18. **Counterparts**. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute one and the same instrument.

19. **Further Assurances**. Each party hereto shall do and perform (or shall cause to be done and performed) all such further acts and shall execute and deliver all such other agreements, certificates, instruments and documents as either party hereto reasonably may request in order to carry out the intent and accomplish the purposes of this Agreement and the Plan and the consummation of the transactions contemplated thereunder.

20. **Severability**. The invalidity or unenforceability of any provisions of this Agreement in any jurisdiction shall not affect the validity, legality or enforceability of the remainder of this Agreement in such jurisdiction or the validity, legality or enforceability of any provision of this Agreement in any other jurisdiction, it being intended that all rights and obligations of the parties hereunder shall be enforceable to the fullest extent permitted by law.

21. **Acquired Rights**. The Participant acknowledges and agrees that: (a) the Company may terminate or amend the Plan at any time; (b) the Award of PSUs made under this Agreement is completely independent of any other award or grant and is made at the sole discretion of the Company; (c) no past grants or awards (including, without limitation, the PSUs awarded hereunder) give the Participant any right to any grants or awards in the future whatsoever; and (d) any benefits granted under this Agreement are not part of the Participant's ordinary salary, and shall not be considered as part of such salary in the event of severance, redundancy or resignation.

*** * * * ***

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first written above.

U.S. SILICA HOLDINGS, INC.

By:____________

Name: Bryan A. Shinn

Title: President and Chief Executive Officer

PARTICIPANT

—

Name:

Exhibit A

1. **Performance Periods**. The Performance Periods are as follows:

(a) The first Performance Period is the 2019 calendar year;

(b) The second Performance Period is the 2020 calendar year; and

(c) The third Performance Period is the 2021 calendar year.

2. **Performance Goal**. The Performance Goal for each Performance Period is Adjusted Cash Flow.

(a) "Adjusted Cash Flow" means Adjusted EBITDA, *minus* Capital Expenditures, *plus or minus* the change in Working Capital, *plus or minus* Other Adjustments (as each such term is defined below).

(b) "Adjusted EBITDA" means Adjusted EBITDA as reported in the Company's Management's Discussion & Analysis set forth in the Company's Annual Report on Form 10-K as filed with the U.S, Securities and Exchange Commission (the "Form 10-K"); provided, however, that if the Form 10-K does not set forth Adjusted EBITDA, "Adjusted EBITDA" shall mean Adjusted EBITDA as reported in the Company's press release announcing full year financial results for the applicable year.

(c) "Capital Expenditures" means "Capital expenditures" as set forth in the Company's year-end Consolidated Statements of Cash Flows as reported in the Company's Form 10-K.

(d) "Other Adjustments" means other adjustments impacting the Company's cash flows approved by the Committee, which were not anticipated or budgeted for by the Company in the Company's annual budget for the particular year, including, without limitation, adjustments relating to the impact from asset sales; mergers & acquisition activities (including the impact of assumption of post-closing liabilities); unanticipated insurance proceeds or settlements; unanticipated legal expenses and judgments; cash incentive compensation paid to the Company's employees; non-recurring items as determined in accordance with U.S. generally accepted accounting principles ("GAAP"); changes in accounting standards; changes in pension costs and discontinued operations; changes in currency exchange rates; changes in interest rates; and extraordinary items as determined in accordance with GAAP.

(e) "Working Capital" means the change in net trade payables, *plus* net trade accounts receivable, *plus* net inventory, in each case of the Company and its Subsidiaries.

3. **Establishment of Threshold, Target and Maximum Amounts**. The Committee will establish the amounts of Adjusted Cash Flow that must be achieved for each Performance Period in order for the PSUs to become performance vested at the percentages corresponding to the Threshold Amount, Target Amount and Maximum Amount in the schedule set forth in Section 3(a) of the Agreement, no later than March 31st of such Performance Period.

4. **Determination of Achievement of Performance Goal**. The Committee will certify the level of achievement of the Performance Goal for each Performance Period within 60 days after the end of such Performance Period (or the date on which a

Change in Control occurs, if applicable); provided that, if a Change in Control occurs prior to the last day of a Performance Period, the Committee will certify the level of achievement of the Performance Goal for such Performance Period, no later than 30 days after the date of such Change in Control.

Exhibit 10.2

PERFORMANCE SHARE UNIT AGREEMENT
(RELATIVE TSR)
PURSUANT TO THE
AMENDED AND RESTATED U.S. SILICA HOLDINGS, INC.
2011 INCENTIVE COMPENSATION PLAN

*** * * * ***

Participant:

Grant Date:

Number of Performance Share Units Granted at Target Performance:

Number of Performance Share Units Granted at Maximum Performance:

*** * * * ***

THIS PERFORMANCE SHARE UNIT AWARD AGREEMENT (this "Agreement"), dated as of the Grant Date specified above, is entered into by and between U.S. Silica Holdings, Inc., a corporation organized in the State of Delaware (the "Company"), and the Participant specified above, pursuant to the Amended and Restated U.S. Silica Holdings, Inc. 2011 Incentive Compensation Plan, as in effect and as amended from time to time (the "Plan"), which is administered by the Committee; and

WHEREAS, it has been determined under the Plan that it would be in the best interests of the Company to grant the performance share units ("PSUs") provided herein to the Participant.

NOW, THEREFORE, in consideration of the mutual covenants and promises hereinafter set forth and for other good and valuable consideration, the parties hereto hereby mutually covenant and agree as follows:

1. **Incorporation By Reference; Plan Document Receipt**. This Agreement is subject in all respects to the terms and provisions of the Plan and the Company's Executive Compensation Clawback Policy (including, without limitation, any amendments thereto adopted at any time and from time to time unless such amendments are expressly intended not to apply to the Award provided hereunder), all of which terms and provisions are made a part of and incorporated in this Agreement as if they were each expressly set forth herein. Any capitalized term not defined in this Agreement (including Exhibit A hereto) shall have the same meaning as is ascribed thereto in the Plan. The Participant hereby acknowledges receipt of a true copy of the Plan and the Executive Compensation Clawback Policy and that the Participant has read the Plan and the Executive Compensation Clawback Policy carefully and fully understands its content. In the event of any

conflict between the terms of this Agreement and the terms of the Plan, the terms of the Plan shall control.

2. **Grant of Performance Share Unit Award**. The Company hereby grants to the Participant, as of the Grant Date specified above, the number of PSUs specified above. Except as otherwise provided by the Plan, the Participant agrees and understands that nothing contained in this Agreement provides, or is intended to provide, the Participant with any protection against potential future dilution of the Participant's interest in the Company for any reason, and no adjustments shall be made for dividends in cash or other property, distributions or other rights in respect of the shares of Common Stock underlying the PSUs, except as otherwise specifically provided for in the Plan or this Agreement.

3. **Vesting**.

(a) Performance-Based Vesting. Subject to the provisions of Sections 3(b) through 3(d) hereof, the PSUs subject to this grant shall become performance vested based on the Company's total shareholder return, or "TSR" (as defined in Exhibit A hereto) for the performance period beginning on January 1, 2019 and ending December 31, 2021 (the "Performance Period"), expressed as a percentile ranking (the "TSR Ranking") as compared to the TSR for the Performance Period of each of the companies in the "Peer Group" (as defined in Exhibit A hereto), in accordance with the following schedule, provided that (subject to the provisions of Sections 3(c) and 3(d) hereof), the Participant remains employed with the Company or its Affiliates through the end of the Performance Period:

TSR Ranking **January 1, 2019 through December 31, 2021**	**Number of PSUs Vested as Percentage of Target**
Less Than 30th percentile	0%
30th percentile	50% (Threshold)
50th percentile	100%
75th percentile	150%
Equal to or Greater Than 90th percentile	200% (Maximum)

To the extent that actual TSR Ranking for the Performance Period hereunder is between any two levels provided in the table above, the number of PSUs to become performance vested hereunder shall be determined on a pro rata basis using straight line interpolation; provided that no PSUs shall become vested if the actual TSR Ranking for the Performance Period is less than the Threshold level of performance set forth in the schedule above; and provided, further, that the maximum number of PSUs that may become vested shall not exceed the number of PSUs set forth in the schedule above corresponding to the Maximum level of performance set forth in the schedule above.

Notwithstanding the foregoing, in the event that a Change in Control occurs prior to the last day of the Performance Period, the number of PSUs that will become performance vested hereunder will equal the number of PSUs that would have become performance vested in accordance with the schedule above based on (i) actual performance measured as of the date of such Change in Control (assuming for such purpose that such Change in Control had occurred on the last day of the Performance Period) or (ii) the Target level of performance set forth in the schedule above, whichever is greater. Following such Change in Control, the number of PSUs determined in accordance with the immediately preceding sentence will vest (x) on the last day of the Performance Period, if the Participant remains employed with the Company or its Affiliates through the end of the Performance Period, or (y) if applicable, in accordance with the provisions of Sections 3(b) and 3(c) hereof.

(b) Termination due to death or Disability, without Cause or due to Retirement. Subject to the provisions of Sections 3(c) and 3(d) hereof, in the event of the Participant's Termination as a result of death or Disability, by the Company without Cause, or due to the Participant's "Retirement" (as defined below) at any time prior to the end of the Performance Period, the requirement that the Participant remain in the continued employment of the Company or its Subsidiaries through the end of the Performance Period in order for the time-based vesting condition to be satisfied under Section 3(a) hereof shall be waived as of the date of such Termination. Thereafter, the PSUs shall continue to remain outstanding until the Committee can certify the Company's TSR Ranking for the Performance Period, and the PSUs shall become vested or be forfeited based on actual performance on a pro rata basis (as determined in accordance with the following sentence) in accordance with the otherwise applicable vesting conditions set forth in Section 3(a) hereof, and shall be paid, to the extent so vested, as provided in Section 4 hereof. For purposes of determining the pro rata number of PSUs to become vested under this Section 3(b), the number of PSUs that would have become vested based on actual performance for the full Performance Period in accordance with Section 3(a) hereof shall be multiplied by a fraction, the numerator of which is the number of calendar days in the period beginning with the date of commencement of the Performance Period and ending on the date of such Termination, and the denominator of which is one thousand ninety six (1,096). For purposes hereof, the term "Retirement" shall mean the Participant's voluntary Termination of Employment at or after age sixty-five (65) or such earlier date after age fifty (50), in either case, as may be approved by the Committee in its sole discretion with regard to the Participant.

(c) Change in Control. Notwithstanding the provisions of Sections 3(a) and 3(b) hereof, in the event of the Participant's Termination as a result of death or Disability, by the Company without Cause, by the Participant for "Good Reason" (as defined below) or as a result of the Participant's Retirement, in any case, at any time upon or following a Change in Control but prior to the end of the Performance Period, the PSUs shall become vested as of the date of such Termination to the extent that the TSR Ranking, as determined in accordance with Section 3(a), was achieved as of the date of such Change in Control, and shall be paid, to the extent so vested, as provided in Section 4 hereof. For purposes hereof, the term "Good Reason" shall mean (i) a material reduction in the Participant's annual base salary rate of compensation; (ii) a required relocation of more than 50 miles from the Participant's primary place of employment with the Company or its Affiliates; or (iii) a material, adverse change in the Participant's title, reporting relationship, authority, duties or responsibilities; provided, however, that to invoke a Termination for Good Reason, (A) the Participant must provide written notice to the Company within thirty (30) days of the event the Participant believes constitutes Good Reason, (B) the Company must fail to cure such event within thirty (30) days of the receipt of such written notice and (C) the Participant must terminate employment within five (5) days following the expiration of the Company's cure period described above.

(d) Committee Discretion to Accelerate Vesting. Notwithstanding the foregoing, the Committee may, in its sole discretion, provide for accelerated vesting of the PSUs at any time and for any reason.

(e) Effect of Detrimental Activity. The provisions of Section 10.4 of the Plan regarding Detrimental Activity shall apply to the PSUs.

(f) Forfeiture. Subject to the provisions of Sections 3(b) through 3(d) hereof, all unvested PSUs shall be immediately forfeited upon the Participant's Termination for any reason.

4. **Delivery of Shares**.

(a) General. Subject to the provisions of Sections 4(b) and 4(c) hereof, within two and one-half months following the vesting of the PSUs, the Participant shall receive the number of shares of Common Stock that correspond to the number of PSUs that have become vested hereunder; provided that the Participant shall be obligated to pay to the Company the aggregate par value of the shares of Common Stock to be issued within ten (10) days following the issuance of such shares unless such shares have been issued by the Company from the Company's treasury.

(b) Blackout Periods. If the Participant is subject to any Company "blackout" policy or other trading restriction imposed by the Company on the date such distribution would otherwise be made pursuant to Section 4(a) hereof, such distribution shall be instead made on the earlier of (i) the date that the Participant is not subject to any such policy or restriction and (ii) the later of (A) the end of the calendar year in which such distribution would otherwise have been made, and (B) a date that is immediately prior to the expiration of two and one-half months following the date such distribution would otherwise have been made hereunder.

(c) Deferrals. If permitted by the Company, the Participant may elect, subject to the terms and conditions of the Plan and any other applicable written plan or procedure adopted by the Company from time to time for purposes of such election, to defer the distribution of all or any portion of the shares of Common Stock that would otherwise be distributed to the Participant hereunder (the "Deferred Shares"), consistent with the requirements of Section 409A of the Code. Upon the vesting of PSUs that have been so deferred, the applicable number of Deferred Shares shall be credited to a bookkeeping account established on the Participant's behalf (the "Account"). Subject to Section 5 hereof, the number of shares of Common Stock equal to the number of Deferred Shares credited to the Participant's Account shall be distributed to the Participant in accordance with the terms and conditions of the Plan and the other applicable written plans or procedures of the Company, consistent with the requirements of Section 409A of the Code.

5. **Dividends; Rights as Stockholder**. Cash dividends on shares of Common Stock issuable hereunder shall be credited to a dividend book entry account on behalf of the Participant with respect to each PSU granted to the Participant, provided that such cash dividends shall not be deemed to be reinvested in shares of Common Stock and shall be held uninvested and

without interest and paid in cash at the same time that the shares of Common Stock underlying the PSUs are delivered to the Participant in accordance with the provisions hereof. Stock dividends on shares of Common Stock shall be credited to a dividend book entry account on behalf of the Participant with respect to each PSU granted to the Participant, provided that such stock dividends shall be paid in shares of Common Stock at the same time that the shares of Common Stock underlying the PSUs are delivered to the Participant in accordance with the provisions hereof. For clarity, no such cash or shares shall be paid to the Participant with respect to any PSUs that are not earned or are forfeited. Except as otherwise provided herein, the Participant shall have no rights as a stockholder with respect to any shares of Common Stock covered by any PSU unless and until the Participant has become the holder of record of such shares.

6. **Non-Transferability**. No portion of the PSUs may be sold, assigned, transferred, encumbered, hypothecated or pledged by the Participant, other than to the Company as a result of forfeiture of the PSUs as provided herein, unless and until payment is made in respect of vested PSUs in accordance with the provisions hereof and the Participant has become the holder of record of the vested shares of Common Stock issuable hereunder.

7. **Governing Law**. All questions concerning the construction, validity and interpretation of this Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, without regard to the choice of law principles thereof.

8. **Withholding of Tax**. The Company shall have the power and the right to deduct or withhold, or require the Participant to remit to the Company, an amount sufficient to satisfy any federal, state, local and foreign taxes of any kind (including, but not limited to, the Participant’s FICA and SDI obligations) which the Company, in its sole discretion, deems necessary to be withheld or remitted to comply with the Code and/or any other applicable law, rule or regulation with respect to the PSUs and, if the Participant fails to do so, the Company may otherwise refuse to issue or transfer any shares of Common Stock otherwise required to be issued pursuant to this Agreement. Any minimum statutorily required withholding obligation with regard to the Participant may be satisfied by reducing the amount of cash or shares of Common Stock otherwise deliverable to the Participant hereunder; provided, however, that, at the Participant’s discretion, the number of shares of Common Stock otherwise deliverable to the Participant may be further reduced in an amount up to the maximum individual tax rate in the Participant’s particular jurisdiction, and only if the Company has a statutory obligation to withhold taxes on the Participant’s behalf, in such case only if such reduction would not result in adverse financial accounting treatment, as determined by the Company (and in particular in connection with the effectiveness of the amendments to FASB Accounting Standards Codification Topic 718, Compensation – Stock Compensation, as amended by FASB Accounting Standards Update No. 2016-09, Improvements to Employee Share-Based Payment Accounting).

9. **Legend**. The Company may at any time place legends referencing any applicable federal, state or foreign securities law restrictions on all certificates representing shares of Common Stock issued pursuant to this Agreement. The Participant shall, at the request of the Company, promptly present to the Company any and all certificates representing shares of Common

Stock acquired pursuant to this Agreement in the possession of the Participant in order to carry out the provisions of this Section 9.

10. **Securities Representations**. This Agreement is being entered into by the Company in reliance upon the following express representations and warranties of the Participant. The Participant hereby acknowledges, represents and warrants that:

(a) The Participant has been advised that the Participant may be an "affiliate" within the meaning of Rule 144 under the Securities Act and in this connection the Company is relying in part on the Participant's representations set forth in this Section 10.

(b) If the Participant is deemed an affiliate within the meaning of Rule 144 of the Securities Act, the shares of Common Stock issuable hereunder must be held indefinitely unless an exemption from any applicable resale restrictions is available or the Company files an additional registration statement (or a "re-offer prospectus") with regard to such shares of Common Stock and the Company is under no obligation to register such shares of Common Stock (or to file a "re-offer prospectus").

(c) If the Participant is deemed an affiliate within the meaning of Rule 144 of the Securities Act, the Participant understands that (i) the exemption from registration under Rule 144 will not be available unless (A) a public trading market then exists for the Common Stock of the Company, (B) adequate information concerning the Company is then available to the public, and (C) other terms and conditions of Rule 144 or any exemption therefrom are complied with, and (ii) any sale of the shares of Common Stock issuable hereunder may be made only in limited amounts in accordance with the terms and conditions of Rule 144 or any exemption therefrom.

11. **Entire Agreement; Amendment**. This Agreement, together with the Plan and the Executive Compensation Clawback Policy, contains the entire agreement between the parties hereto with respect to the subject matter contained herein, and supersedes all prior agreements or prior understandings, whether written or oral, between the parties relating to such subject matter. The Committee shall have the right, in its sole discretion, to modify or amend this Agreement from time to time in accordance with and as provided in the Plan. This Agreement may also be modified or amended by a writing signed by both the Company and the Participant. The Company shall give written notice to the Participant of any such modification or amendment of this Agreement as soon as practicable after the adoption thereof.

12. **Notices**. Any notice hereunder by the Participant shall be given to the Company in writing and such notice shall be deemed duly given only upon receipt thereof by the General Counsel of the Company. Any notice hereunder by the Company shall be given to the Participant in writing and such notice shall be deemed duly given only upon receipt thereof at such address as the Participant may have on file with the Company.

13. **No Right to Employment**. Any questions as to whether and when there has been a Termination and the cause of such Termination shall be determined in the sole discretion of the Committee. Nothing in this Agreement shall interfere with or limit in any way the right of the

Company, its Subsidiaries or its Affiliates to terminate the Participant's employment or service at any time, for any reason and with or without Cause.

14. **Transfer of Personal Data**. The Participant authorizes, agrees and unambiguously consents to the transmission by the Company (or any Subsidiary) of any personal data information related to the PSUs awarded under this Agreement for legitimate business purposes (including, without limitation, the administration of the Plan). This authorization and consent is freely given by the Participant.

15. **Compliance with Laws**. The grant of PSUs and the issuance of shares of Common Stock hereunder shall be subject to, and shall comply with, any applicable requirements of any foreign and U.S. federal and state securities laws, rules and regulations (including, without limitation, the provisions of the Securities Act, the Exchange Act and in each case any respective rules and regulations promulgated thereunder) and any other law, rule regulation or exchange requirement applicable thereto. The Company shall not be obligated to issue the PSUs or any shares of Common Stock pursuant to this Agreement if any such issuance would violate any such requirements. As a condition to the settlement of the PSUs, the Company may require the Participant to satisfy any qualifications that may be necessary or appropriate to evidence compliance with any applicable law or regulation.

16. **Binding Agreement; Assignment**. This Agreement shall inure to the benefit of, be binding upon, and be enforceable by the Company and its successors and assigns. The Participant shall not assign (except in accordance with Section 6 hereof) any part of this Agreement without the prior express written consent of the Company.

17. **Headings**. The titles and headings of the various sections of this Agreement have been inserted for convenience of reference only and shall not be deemed to be a part of this Agreement.

18. **Counterparts**. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute one and the same instrument.

19. **Further Assurances**. Each party hereto shall do and perform (or shall cause to be done and performed) all such further acts and shall execute and deliver all such other agreements, certificates, instruments and documents as either party hereto reasonably may request in order to carry out the intent and accomplish the purposes of this Agreement and the Plan and the consummation of the transactions contemplated thereunder.

20. **Severability**. The invalidity or unenforceability of any provisions of this Agreement in any jurisdiction shall not affect the validity, legality or enforceability of the remainder of this Agreement in such jurisdiction or the validity, legality or enforceability of any provision of this Agreement in any other jurisdiction, it being intended that all rights and obligations of the parties hereunder shall be enforceable to the fullest extent permitted by law.

21. **Acquired Rights**. The Participant acknowledges and agrees that: (a) the Company may terminate or amend the Plan at any time; (b) the Award of PSUs made under this Agreement is completely independent of any other award or grant and is made at the sole discretion of the Company; (c) no past grants or awards (including, without limitation, the PSUs awarded hereunder) give the Participant any right to any grants or awards in the future whatsoever; and (d) any benefits granted under this Agreement are not part of the Participant’s ordinary salary, and shall not be considered as part of such salary in the event of severance, redundancy or resignation.

*** * * * ***

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first written above.

U.S. SILICA HOLDINGS, INC.

By:_____________

Name: Bryan A. Shinn

Title: President and Chief Executive Officer

PARTICIPANT

Name:

Exhibit A

Certain Definitions

"Beginning Stock Price" for the Company or a company in the Peer Group shall mean the average closing price on the applicable stock exchange of one share of Common Stock or the stock of such company, as applicable, for the sixty (60) days immediately prior to the first day of the Performance Period; provided that the Committee shall adjust equitably the Beginning Stock Price with respect to such share, as calculated in accordance with the preceding clause, to reflect any Section 4.2 Event or Other Extraordinary Event that occurs during such 60-day period and that affects such share if such adjustment is necessary or appropriate to prevent dilution or enlargement of benefits or potential benefits intended to be made available under this Agreement.

"Ending Stock Price" for the Company or a company in the Peer Group shall mean the average closing price on the applicable stock exchange of one share of Common Stock or the stock of such company, as applicable, for the sixty (60) days immediately prior to the earlier of (a) the last day of the Performance Period and (b) the date on which a Change in Control occurs; provided that the Committee shall adjust equitably the Ending Stock Price with respect to a share of the stock of any company in the Peer Group, as calculated in accordance with the preceding clause, to reflect any Section 4.2 Event or Other Extraordinary Event that occurs during the Performance Period and that affects such share if such adjustment is necessary or appropriate to prevent dilution or enlargement of benefits or potential benefits intended to be made available under this Agreement.

"Insolvency Event" shall mean, with respect to a company in the Peer Group, (x) that such company files a petition under chapter 7 or 11 of the U.S. Bankruptcy Code or (y) the Committee determines, in its sole discretion, that such company has become insolvent.

"Peer Group" shall mean the companies set forth on Schedule 1. Notwithstanding the foregoing, if a Section 4.2 Event or Other Extraordinary Event (for clarity, other than an Insolvency Event) occurs with respect to any such company and, thereafter, the shares of such company's stock are not publicly traded, the Peer Group shall not include such company.

"TSR" shall mean total shareholder return for the Company or a company in the Peer Group, expressed as a percentage, determined by dividing (a) an amount equal to the sum of (i) the difference between the Beginning Stock Price (as defined above) and the Ending Stock Price (as defined above) and (ii) the sum of all dividends paid on one share of such company's stock during the Performance Period (provided that dividends shall be treated as reinvested on the ex-dividend date at the closing price on that date) by (b) the Beginning Stock Price, as calculated in good faith by the Committee. Notwithstanding the foregoing or any other provision of this Agreement, in the event that, during the Performance Period, an Insolvency Event occurs with respect to a company in the Peer Group, the TSR of such company shall equal negative 100%.

Schedule 1

C&J Energy Services, Inc.*	Abraxas Petroleum Corporation
CARBO Ceramics Inc.	Apache Corporation
Covia Holdings Corporation	Callon Petroleum Company
Ensco plc	Carrizo Oil & Gas, Inc.
Forum Energy Technologies, Inc.	Continental Resources, Inc.
Helix Energy Solutions Group, Inc.	Devon Energy Corporation
Helmerich & Payne, Inc.	Diamondback Energy, Inc.
Keane Group, Inc.*	Extraction Oil & Gas, Inc.
Mammoth Energy Services, Inc.*	Laredo Petroleum, Inc.
Nabors Industries Ltd.	Marathon Oil Corporation
Newpark Resources, Inc.	Matador Resources Company
Noble Corporation plc	Murphy Oil Corporation
Oil States International, Inc.	Newfield Exploration Company
Patterson-UTI Energy, Inc.*	Oasis Petroleum Inc.
ProPetro Holding Corp.*	Parsley Energy, Inc.
Rowan Companies plc	PDC Energy, Inc.
RPC, Inc.	QEP Resources, Inc.
Select Energy Services, Inc.*	SM Energy Company
Smart Sand, Inc.	Whiting Petroleum Corporation
Superior Energy Services, Inc.*	WPX Energy, Inc.
TETRA Technologies, Inc.	
Transocean Ltd.	
Unit Corporation	

Exhibit 10.3

RESTRICTED STOCK UNIT AGREEMENT
PURSUANT TO THE
AMENDED AND RESTATED U.S. SILICA HOLDINGS, INC.
2011 INCENTIVE COMPENSATION PLAN

* * * * *

Participant:

Grant Date:

Number of Restricted Stock Units Granted:

* * * * *

THIS RESTRICTED STOCK UNIT AWARD AGREEMENT (this "Agreement"), dated as of the Grant Date specified above, is entered into by and between U.S. Silica Holdings, Inc., a corporation organized in the State of Delaware (the "Company"), and the Participant specified above, pursuant to the Amended and Restated U.S. Silica Holdings, Inc. 2011 Incentive Compensation Plan, as in effect and as amended from time to time (the "Plan"), which is administered by the Committee; and

WHEREAS, it has been determined under the Plan that it would be in the best interests of the Company to grant the Restricted Stock Units ("RSUs") provided herein to the Participant.

NOW, THEREFORE, in consideration of the mutual covenants and promises hereinafter set forth and for other good and valuable consideration, the parties hereto hereby mutually covenant and agree as follows:

1. **Incorporation By Reference; Plan Document Receipt**. This Agreement is subject in all respects to the terms and provisions of the Plan (including, without limitation, any amendments thereto adopted at any time and from time to time unless such amendments are expressly intended not to apply to the Award provided hereunder), all of which terms and provisions are made a part of and incorporated in this Agreement as if they were each expressly set forth herein. Any capitalized term not defined in this Agreement shall have the same meaning as is ascribed thereto in the Plan. The Participant hereby acknowledges receipt of a true copy of the Plan and that the Participant has read the Plan carefully and fully understands its content. In the event of any conflict between the terms of this Agreement and the terms of the Plan, the terms of the Plan shall control.

2. **Grant of Restricted Stock Unit Award**. The Company hereby grants to the Participant, as of the Grant Date specified above, the number of RSUs specified above. Except as otherwise provided by the Plan, the Participant agrees and understands that nothing contained in this Agreement provides, or is intended to provide, the Participant with any protection against

potential future dilution of the Participant’s interest in the Company for any reason, and no adjustments shall be made for dividends in cash or other property, distributions or other rights in respect of the shares of Common Stock underlying the RSUs, except as otherwise specifically provided for in the Plan or this Agreement.

3. **Vesting**.

(a) The RSUs subject to this Award shall become vested as follows, provided that the Participant has not incurred a Termination prior to each such vesting date:

Vesting Date	**Number of RSUs**
[ ]	[ ]
[ ]	[ ]
[ ]	[ ]

There shall be no proportionate or partial vesting in the periods prior to each vesting date and all vesting shall occur only on the appropriate vesting date, subject to the Participant’s continued service with the Company or any of its Affiiliates on each applicable vesting date.

(b) Termination due to death or Disability, without Cause or due to Retirement. Subject to the provisions of Sections 3(c) and 3(d) hereof, in the event of the Participant’s Termination as a result of death or Disability, by the Company without Cause or due to the Participant’s “Retirement” (as defined below), the unvested RSUs that would have become vested at the vesting date immediately following such Termination as provided in Section 3(a) hereof shall become vested on a pro rata basis (determined by multiplying the number of such unvested RSUs by a fraction, the numerator of which is the number of calendar days in the period beginning with, if prior to the first vesting date as set forth in Section 3(a) hereof, the Grant Date or, if after the first vesting date as set forth in Section 3(a) hereof, the vesting date immediately preceding the date of such Termination as set forth in Section 3(a) hereof, and ending on the date of such Termination, and the denominator of which is three hundred sixty five (365)), and shares of Common Stock shall be delivered in respect thereof as provided in Section 4 hereof.

For purposes hereof, the term “Retirement” shall mean the Participant’s voluntary Termination of Employment at or after age sixty-five (65) or such earlier date after age fifty (50), in either case, as may be approved by the Committee in its sole discretion with regard to the Participant.

(c) Change in Control. Notwithstanding the provisions of Sections 3(a) and 3(b) hereof, in the event of the Participant’s Termination as a result of death or Disability, by the Company without Cause, by the Participant for “Good Reason” (as defined below) or as a result of the Participant’s Retirement, in any case, at any time upon or following a Change in Control, the unvested RSUs shall become fully vested, and shares of Common Stock shall be delivered in respect thereof, as provided in Section 4 hereof. For purposes hereof, the term “Good Reason” shall mean (i) a material reduction in the Participant’s annual base salary rate of compensation; (ii) a required relocation of more than 50 miles from the Participant’s primary place of employment with the

Company or its Affiliates; or (iii) a material, adverse change in the Participant's title, reporting relationship, authority, duties or responsibilities; provided, however, that to invoke a Termination for Good Reason, (A) the Participant must provide written notice to the Company within thirty (30) days of the event the Participant believes constitutes Good Reason, (B) the Company must fail to cure such event within thirty (30) days of the receipt of such written notice and (C) the Participant must terminate employment within five (5) days following the expiration of the Company's cure period described above.

(d) Committee Discretion to Accelerate Vesting. Notwithstanding the foregoing, the Committee may, in its sole discretion, provide for accelerated vesting of the RSUs at any time and for any reason.

(e) Effect of Detrimental Activity. The provisions of Section 10.4 of the Plan regarding Detrimental Activity shall apply to the RSUs.

(f) Forfeiture. Subject to the provisions of Sections 3(b) through 3(d) hereof, all unvested RSUs shall be immediately forfeited upon the Participant's Termination for any reason.

4. **Delivery of Shares**.

(a) General. Subject to the provisions of Sections 4(b) and 4(c) hereof, within thirty (30) days following the vesting of the RSUs, the Participant shall receive the number of shares of Common Stock that correspond to the number of RSUs that have become vested on the applicable vesting date; provided that the Participant shall be obligated to pay to the Company the aggregate par value of the shares of Common Stock to be issued within ten (10) days following the issuance of such shares unless such shares have been issued by the Company from the Company's treasury.

(b) Blackout Periods. If the Participant is subject to any Company "blackout" policy or other trading restriction imposed by the Company on the date such distribution would otherwise be made pursuant to Section 4(a) hereof, such distribution shall be instead made on the earlier of (i) the date that the Participant is not subject to any such policy or restriction and (ii) the later of (A) the end of the calendar year in which such distribution would otherwise have been made, and (B) a date that is immediately prior to the expiration of two and one-half months following the date such distribution would otherwise have been made hereunder.

(c) Deferrals. If permitted by the Company, the Participant may elect, subject to the terms and conditions of the Plan and any other applicable written plan or procedure adopted by the Company from time to time for purposes of such election, to defer the distribution of all or any portion of the shares of Common Stock that would otherwise be distributed to the Participant hereunder (the "Deferred Shares"), consistent with the requirements of Section 409A of the Code. Upon the vesting of RSUs that have been so deferred, the applicable number of Deferred Shares shall be credited to a bookkeeping account established on the Participant's behalf (the "Account"). Subject to Section 5 hereof, the number of shares of Common Stock equal to the number of Deferred Shares credited to the Participant's Account shall be distributed to the Participant in accordance with the terms and conditions of the Plan and the other applicable written plans or procedures of the Company, consistent with the requirements of Section 409A of the Code.

5. **Dividends; Rights as Stockholder**. Cash dividends on shares of Common Stock issuable hereunder shall be credited to a dividend book entry account on behalf of the Participant with respect to each RSU granted to the Participant, provided that such cash dividends shall not be deemed to be reinvested in shares of Common Stock and shall be held uninvested and without interest and paid in cash at the same time that the shares of Common Stock underlying the RSUs are delivered to the Participant in accordance with the provisions hereof. Stock dividends on shares of Common Stock shall be credited to a dividend book entry account on behalf of the Participant with respect to each RSU granted to the Participant, provided that such stock dividends shall be paid in shares of Common Stock at the same time that the shares of Common Stock underlying the RSUs are delivered to the Participant in accordance with the provisions hereof. Except as otherwise provided herein, the Participant shall have no rights as a stockholder with respect to any shares of Common Stock covered by any RSU unless and until the Participant has become the holder of record of such shares.

6. **Non-Transferability**. No portion of the RSUs may be sold, assigned, transferred, encumbered, hypothecated or pledged by the Participant, other than to the Company as a result of forfeiture of the RSUs as provided herein, unless and until payment is made in respect of vested RSUs in accordance with the provisions hereof and the Participant has become the holder of record of the vested shares of Common Stock issuable hereunder.

7. **Governing Law**. All questions concerning the construction, validity and interpretation of this Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, without regard to the choice of law principles thereof.

8. **Withholding of Tax**. The Company shall have the power and the right to deduct or withhold, or require the Participant to remit to the Company, an amount sufficient to satisfy any federal, state, local and foreign taxes of any kind (including, but not limited to, the Participant’s FICA and SDI obligations) which the Company, in its sole discretion, deems necessary to be withheld or remitted to comply with the Code and/or any other applicable law, rule or regulation with respect to the RSUs and, if the Participant fails to do so, the Company may otherwise refuse to issue or transfer any shares of Common Stock otherwise required to be issued pursuant to this Agreement. Any minimum statutorily required withholding obligation with regard to the Participant may be satisfied by reducing the amount of cash or shares of Common Stock otherwise deliverable to the Participant hereunder; provided, however, that, at the Participant’s discretion, the number of shares of Common Stock otherwise deliverable to the Participant may be further reduced in an amount up to the maximum individual tax rate in the Participant’s particular jurisdiction, and only if the Company has a statutory obligation to withhold taxes on the Participant’s behalf, in such case only if such reduction would not result in adverse financial accounting treatment, as determined by the Company (and in particular in connection with the effectiveness of the amendments to FASB Accounting Standards Codification Topic 718, Compensation – Stock Compensation, as amended by FASB Accounting Standards Update No. 2016-09, Improvements to Employee Share-Based Payment Accounting).

9. **Legend**. The Company may at any time place legends referencing any applicable federal, state or foreign securities law restrictions on all certificates representing shares

of Common Stock issued pursuant to this Agreement. The Participant shall, at the request of the Company, promptly present to the Company any and all certificates representing shares of Common Stock acquired pursuant to this Agreement in the possession of the Participant in order to carry out the provisions of this Section 9.

10. **Securities Representations**. This Agreement is being entered into by the Company in reliance upon the following express representations and warranties of the Participant. The Participant hereby acknowledges, represents and warrants that:

(a) The Participant has been advised that the Participant may be an "affiliate" within the meaning of Rule 144 under the Securities Act and in this connection the Company is relying in part on the Participant's representations set forth in this Section 10.

(b) If the Participant is deemed an affiliate within the meaning of Rule 144 of the Securities Act, the shares of Common Stock issuable hereunder must be held indefinitely unless an exemption from any applicable resale restrictions is available or the Company files an additional registration statement (or a "re-offer prospectus") with regard to such shares of Common Stock and the Company is under no obligation to register such shares of Common Stock (or to file a "re-offer prospectus").

(c) If the Participant is deemed an affiliate within the meaning of Rule 144 of the Securities Act, the Participant understands that (i) the exemption from registration under Rule 144 will not be available unless (A) a public trading market then exists for the Common Stock of the Company, (B) adequate information concerning the Company is then available to the public, and (C) other terms and conditions of Rule 144 or any exemption therefrom are complied with, and (ii) any sale of the shares of Common Stock issuable hereunder may be made only in limited amounts in accordance with the terms and conditions of Rule 144 or any exemption therefrom.

11. **Entire Agreement; Amendment**. This Agreement, together with the Plan, contains the entire agreement between the parties hereto with respect to the subject matter contained herein, and supersedes all prior agreements or prior understandings, whether written or oral, between the parties relating to such subject matter. The Committee shall have the right, in its sole discretion, to modify or amend this Agreement from time to time in accordance with and as provided in the Plan. This Agreement may also be modified or amended by a writing signed by both the Company and the Participant. The Company shall give written notice to the Participant of any such modification or amendment of this Agreement as soon as practicable after the adoption thereof.

12. **Notices**. Any notice hereunder by the Participant shall be given to the Company in writing and such notice shall be deemed duly given only upon receipt thereof by the General Counsel of the Company. Any notice hereunder by the Company shall be given to the Participant in writing and such notice shall be deemed duly given only upon receipt thereof at such address as the Participant may have on file with the Company.

13. **No Right to Employment**. Any questions as to whether and when there has been a Termination and the cause of such Termination shall be determined in the sole discretion of the Committee. Nothing in this Agreement shall interfere with or limit in any way the right of the

Company, its Subsidiaries or its Affiliates to terminate the Participant’s employment or service at any time, for any reason and with or without Cause.

14. **Transfer of Personal Data**. The Participant authorizes, agrees and unambiguously consents to the transmission by the Company (or any Subsidiary) of any personal data information related to the RSUs awarded under this Agreement for legitimate business purposes (including, without limitation, the administration of the Plan). This authorization and consent is freely given by the Participant.

15. **Compliance with Laws**. The grant of RSUs and the issuance of shares of Common Stock hereunder shall be subject to, and shall comply with, any applicable requirements of any foreign and U.S. federal and state securities laws, rules and regulations (including, without limitation, the provisions of the Securities Act, the Exchange Act and in each case any respective rules and regulations promulgated thereunder) and any other law, rule regulation or exchange requirement applicable thereto. The Company shall not be obligated to issue the RSUs or any shares of Common Stock pursuant to this Agreement if any such issuance would violate any such requirements. As a condition to the settlement of the RSUs, the Company may require the Participant to satisfy any qualifications that may be necessary or appropriate to evidence compliance with any applicable law or regulation.

16. **Binding Agreement; Assignment**. This Agreement shall inure to the benefit of, be binding upon, and be enforceable by the Company and its successors and assigns. The Participant shall not assign (except in accordance with Section 6 hereof) any part of this Agreement without the prior express written consent of the Company.

17. **Headings**. The titles and headings of the various sections of this Agreement have been inserted for convenience of reference only and shall not be deemed to be a part of this Agreement.

18. **Counterparts**. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute one and the same instrument.

19. **Further Assurances**. Each party hereto shall do and perform (or shall cause to be done and performed) all such further acts and shall execute and deliver all such other agreements, certificates, instruments and documents as either party hereto reasonably may request in order to carry out the intent and accomplish the purposes of this Agreement and the Plan and the consummation of the transactions contemplated thereunder.

20. **Severability**. The invalidity or unenforceability of any provisions of this Agreement in any jurisdiction shall not affect the validity, legality or enforceability of the remainder of this Agreement in such jurisdiction or the validity, legality or enforceability of any provision of this Agreement in any other jurisdiction, it being intended that all rights and obligations of the parties hereunder shall be enforceable to the fullest extent permitted by law.

21. **Acquired Rights**. The Participant acknowledges and agrees that: (a) the Company may terminate or amend the Plan at any time; (b) the Award of RSUs made under this Agreement is completely independent of any other award or grant and is made at the sole discretion of the Company; (c) no past grants or awards (including, without limitation, the RSUs awarded hereunder) give the Participant any right to any grants or awards in the future whatsoever; and (d) any benefits granted under this Agreement are not part of the Participant's ordinary salary, and shall not be considered as part of such salary in the event of severance, redundancy or resignation.

* * * * *

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first written above.

U.S. SILICA HOLDINGS, INC.

By:_____________

Name: Bryan A. Shinn

Title: President and Chief Executive Officer

PARTICIPANT

__

Name:

Exhibit 10.4

EMPLOYEE IS AFFIRMATIVELY ADVISED, INSTRUCTED, CAUTIONED AND RECOMMENDED TO CONSULT WITH AN ATTORNEY PRIOR TO THE EXECUTION OF THIS AGREEMENT. PLEASE READ CAREFULLY. THIS AGREEMENT CONTAINS A RELEASE OF ALL KNOWN AND UNKNOWN CLAIMS.

DATE AGREEMENT FIRST DELIVERED TO EMPLOYEE: MARCH 27, 2019

SEPARATION, SEVERANCE AND GENERAL RELEASE AGREEMENT

This Separation, Severance and General Release Agreement ("the Agreement") is entered into by and between Billy Ray Smith, (the “Employee”) and U.S. Silica Company (the “Company,” and together with the Employee, the “Parties”).

WHEREAS:

Employee’s employment with the Company will terminate (the “Separation”) effective March 27, 2019 (the “Separation Date”); and

The Company is willing to provide Employee with the severance benefits described herein; and

This Agreement represents the waiver and release of any claims Employee might have against the Releasees (as such term is defined below) as of the date of his/her execution of this Agreement.

NOW, THEREFORE, for mutual consideration the adequacy and sufficiency of which is hereby acknowledged by the Parties:

1. Severance Benefits. Subject to the execution and non-revocation of this Agreement as set forth in Section 9 below, and subject further to compliance with all obligations under this Agreement, Employee will be entitled to receive from the Company the following severance benefits (the “Severance Benefits”):

(a) Severance Pay. Payment equal to twelve (12) months of salary, calculated at the annual base salary in effect as of the Separation Date, being $XXXXXX, payable in a single lump sum. The Parties agree that the gross amount of such payment before withholdings is $XXXXXX (the “Severance Payment”), and that the Severance Payment will be subject to all applicable tax withholdings. Such Severance

Payment shall be made promptly, provided the conditions for payment as set forth in Section 1(e) are met, and (ii) Employee has not revoked this Agreement in accordance with Section 9.

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(b) RSU Vesting. Within 15 days after Employee's execution of this Agreement, and provided that Employee has not revoked this Agreement in accordance with Section 9, employee will receive XXXXXX shares of U.S. Silica Holdings, Inc. stock constituting XXXXXX (XXXXXX) of the previously awarded 2017 Restricted Stock Award ("RSA") grant. Employee will also receive XXXXXX shares of U.S. Silica Holdings, Inc. stock constituting XXXXXX (XXXXXX) of the previously awarded 2018 Restricted Stock Unit ("RSU") grant.

(c) PSU Vesting. Employee will receive a pro-rated number of shares following the pro-ration guidelines and subject to the company achieving the performance conditions set forth in the previously awarded 2018 Performance Share Units ("PSU") grant agreement. The shares will be transferred to an account of the Employee's choosing no later than April 1st, 2021

(d) Health Insurance; COBRA Rights. Effective as of the Separation Date, as required by the continuation coverage provisions of Section 4980B of the U. S. Internal Revenue Code of 1986, as amended (the "Code"), Employee will be offered the opportunity to elect continuation coverage under the group medical plan(s) of the Company ("COBRA coverage"). Employee will be provided with the appropriate COBRA coverage notice and election form for this purpose. Such eligibility for COBRA shall not be subject to the provisions in Section 1(e) below.

(i) If Employee elects COBRA coverage and complies with the requirements of Section 1(e) below, the Company will pay 100% of Employee's health insurance premium for XXXXXX (XXXXXX) months, beginning with April 2019.

(ii) Payment in accordance with the above will be dependent upon the Company determining that payment of such amounts would not result in the imposition of excise taxes on the Company for any failure to comply with the nondiscrimination requirements of the Patient Protection and Affordable Care Act of 2010, as amended, and the Health Care and Education Reconciliation Act of 2010, as amended. The existence and duration of Employee's rights and/or the COBRA rights of any of his/her eligible dependents will be determined in accordance with Section 4980B of the Code.

(e) Payment of all amounts in Section 1(a) above is **expressly conditioned upon the following:**

(i) Employee has not revoked this Agreement;

(ii) The Company has received adequate proof that there is a zero balance owed on Employee's Company credit card;

(iii) Employee has returned to the Company all Company property in his/her possession; and

(iv) Employee has otherwise cooperated with the Company in all matters related to his separation from the Company.

(f) Vacation Pay. Upon separation, Employee will also be paid a sum equal to all accrued but unused vacation, less applicable payroll taxes and withholdings, in accordance with Company policy.

(g) Agreement to Repay. The Company acknowledges and agrees that Employee's termination of employment does not constitute an "Employment Separation" under any Authorization for Payroll Deduction and Agreement to Repay, and as such, Employee is not required to repay any relocation expenses paid by the Company.

(h) No Other Entitlements. Employee acknowledges and agrees that the payments and benefits provided in Sections 1(a) through (h) constitute consideration beyond that which, but for the mutual covenants set forth in this Agreement, the Company otherwise would not be obligated to provide to Employee as of the Separation Date. Employee acknowledges that he will no longer be entitled to any other benefits, payments or contributions from the Company or its subsidiaries other than those specifically provided for in this Agreement or under an employee benefit plan governed by the Employee Retirement Income Security Act of 1974, as amended.

2. Earned Compensation. Except for his final salary pay check, Employee specifically acknowledges that, as of the date of execution of this Agreement, he has been paid all wages, commissions, compensation, accrued time-off, benefits, and other amounts that Employee is or was owed under the Fair Labor Standards Act ("FLSA"), or any other applicable federal, state, or local law or regulation providing for the payment of wages, commissions, compensation, accrued time-off, and benefits ("Wage Law") to which he is entitled through and including the Separation Date. Except for the PSU Vesting set forth in Section 1(c) Employee is not owed any back-pay, damages, penalties, or any other amounts due under the FLSA, or any other applicable federal, state, or local Wage Law. Employee shall not be eligible for any other payment beyond the aforementioned.

3. **Non-Admission.** The Parties understand and agree that this Agreement does not represent any admission of liability or misconduct by any person or entity for any purpose. Rather, Employee and the Releasees are resolving all matters arising out of their employer-employee relationship and with all other relationships between Employee and the Releasees.

4. **Release.** In exchange for the benefits and undertakings described herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Employee hereby fully and forever releases and discharges the Company, its parents, subsidiaries and affiliates, and each of its and their general and limited partners and members and managers, including, without limitation, each of their respective predecessors, successors, assigns, subsidiaries, affiliates, affiliated partnerships and companies, as well as its and their current and former shareholders, directors, officers, employees, partners, members, trustees, attorneys, representatives, fiduciaries and/or agents, both individually and in their official capacities (collectively, the "Releasees") from any and all claims, suits, controversies, actions, causes of action, cross-claims, counter-claims, demands, debts, compensatory damages, liquidated damages, punitive or exemplary damages, other damages, claims for costs and attorneys' fees, or liabilities of any nature whatsoever, both past and present and whether known or unknown, suspected, or claimed against the Company or any of the Releasees which Employee or any of Employee's heirs, executors, administrators or assigns, may have, including (without limitation) those claims which arise in whole or in part in connection with his/her hiring and employment by the Company and the Separation, including but not limited to his/her pay in whatever form, and specifically including the Age Discrimination in Employment Act, as amended (the "ADEA"); the Americans with Disabilities Act of 1990; the Family and Medical Leave Act; the Fair Labor Standards Act, as amended; the National Labor Relations Act, as amended; the Labor-Management Relations Act, as amended; the Worker Adjustment Retraining and Notification Act of 1988; the Rehabilitation Act of 1973, as amended; the Employee Retirement Income Security Act of 1974 (except as to rights which already may have vested); the Equal Pay Act of 1963, as amended; the Uniformed Services Employment and Reemployment Rights Act of 1994; Employment Discrimination, Texas Lab. Code Ann. §21.001, et. seq., as amended; the Texas Payday Law, Texas Lab. Code Ann. §61.001, et. seq., as amended; the Texas Minimum Wage Act, Texas Lab. Code Ann. §62.001, et. seq., as amended; the anti-retaliation provisions of the Texas Workers' Compensation Act, Texas Lab. Code Ann § 451.001, et. seq., as amended, and other applicable Texas statutes or regulations; and the common law of the state of Texas, in all cases except to the extent such claims cannot be waived as a matter of law, and all other federal, state or local laws, statutes, regulations or ordinances, any and all claims in contract, tort, public policy, or common law, and any and all claims for costs and attorney fees ("Claims"). It is the intention of Employee in executing this Agreement that it will be effective as a bar to each and every claim, demand, and cause of action mentioned or implied in this Agreement. Each Party understands the significance of his/her or its release of unknown claims and his/her or its waiver of statutory protection against a release of unknown claims. In waiving and releasing any and all claims against the Released Parties, *whether or not now known* to Employee, Employee understands that this means that, if Employee later discovers facts different from or facts in addition to those facts currently known by Employee, or believed by Employee to be true, the waivers and releases of this Agreement will remain effective in all respects -- despite such different or additional facts and Employee's later discovery of such facts, even if Employee would not have agreed to this Agreement if Employee had prior knowledge of such facts.

5. Representations and Acknowledgements. Employee represents to each of the Releasees that at no time prior to execution of this Agreement has Employee filed or caused or permitted the filing of any Claim which s/he may now have or has ever had against any of the Releasees which is based in whole or in part on any matter referred to in Section 4 above; and Employee acknowledges that, subject to the Company's performance under this Agreement, to the maximum extent permitted by law, s/he is prohibited from doing so. Employee further agrees that if any person, organization, or other entity should bring a claim against the Released Parties involving any such matter, Employee will not accept any personal relief in such action.

6. EXCEPTIONS FOR CLAIMS NOT BEING WAIVED OR RELEASED BY EMPLOYEE. The only claims that are not being waived and released by Employee under this Agreement are claims Employee may have for:

(a) unemployment benefits, workers' compensation benefits, state disability benefits and/or paid family leave insurance benefits pursuant to the terms of applicable state law;

(b) any benefit entitlements that are vested as of the Separation Date pursuant to the terms of an Employer-sponsored benefit plan governed by the federal law known as "ERISA;"

(c) violation of any federal, state or local statutory and/or public policy right or entitlement that, by applicable law, is not waivable;

(d) any wrongful act or omission occurring after the date Employee signs this Agreement;

(e) any claim under the Fair Labor Standards Act or claim for health insurance benefits under the Consolidated Omnibus Budget Reconciliation Act ("COBRA");

(f) any claim Employee may have to challenge the knowing and voluntary nature of this Agreement under the Older Workers' Benefit Protection Act ("OWBPA"); or

(g) any other claim, as determined by a court of competent jurisdiction, that cannot be waived as a matter of law.

6. **GOVERNMENT AGENCY CLAIMS EXCEPTION.**

(a) Nothing in this Agreement prevents or prohibits Employee from filing a claim with or participating in an administrative investigation or proceeding of a government agency, such as the U.S. Equal Employment Opportunity Commission, that is responsible for enforcing a law on behalf of the government. However, Employee understands that, because Employee is waiving and releasing all claims for monetary damages and any other form of personal relief, except as set forth above, Employee may only seek and receive non-personal forms of relief through any such claim.

(b) Employee further understands and acknowledges that nothing in this Agreement prohibits, penalizes, or otherwise discourages Employee from reporting, providing testimony regarding, or otherwise communicating any nuclear safety concern, workplace safety concern, public safety concern, or concern of any sort, to the U.S. Department of Labor or any federal or state government agency.

(c) Employee also understands and acknowledges that nothing in this Agreement shall be construed to prohibit him/her from engaging in any activity protected by the Sarbanes-Oxley Act, 18 U.S.C. § 1514A and the Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, H.R. 4173.

(d) Nothing in this Agreement prohibits or restricts Employee from: (i) making any disclosure of information required by law; and (ii) providing information to, or testifying or otherwise assisting or cooperating in any investigation or proceeding brought by, any federal regulatory or law enforcement agency or legislative body, any self-regulatory organization or the Company's designated legal compliance officer.

8**.** **Non-Disparagement; Employment References.** Employee agrees that s/he will not criticize or otherwise disparage the Company or any of the Releasees, or any of their respective officers, directors, employees, products or services. The Company agrees that Company executives (Vice President level and above) will not criticize or otherwise disparage the Employee or his services to the Company during the term of his employment. The Parties agree that, in response to any inquiry from a prospective employer of Employee, the Company will advise such prospective employer of Employee's starting and ending dates of employment, his/her job title as of the Separation Date , will verify previous compensation *only* if the requesting party provides salary data for confirmation, and if asked whether Employee is subject for rehire, the Company shall answer "Yes".

9**.** **Voluntary Execution; ADEA Compliance.** Employee acknowledges that s/he has entered into this Agreement freely and without coercion, that s/he has been advised orally and is being advised herein in writing by the Company to consult with counsel of his/her choice, that s/he has had adequate opportunity to so consult, and that s/he has been given all time periods required by law to consider this Agreement (the "Consideration Period"), including but not limited to the 21-day period required by the ADEA. Employee acknowledges that everything Employee is receiving for signing this Agreement is described in this Agreement itself, and no other promises or representations have been made to cause Employee to sign it. Employee acknowledges that Employee has had at least twenty-one (21) days after receipt of this information and Agreement to consider whether to accept or reject this Agreement. Employee understands that Employee may sign this Agreement prior to the end of such twenty-one (21) day period, but is not required to do so. Employee understands that if s/he chooses to execute this Agreement less than 21 days from his/her receipt from the Company, such execution will represent his/her knowing waiver of such Consideration Period. Employee further acknowledges that within the 7-day period following his/

her execution of this Agreement (the “Revocation Period”) s/he will have the unilateral right to revoke this Agreement, and that the Company’s obligations hereunder will become effective only upon the expiration of the Revocation Period without his/her revocation hereof. In order to be effective, notice of Employee’s revocation of this Agreement must be received by the Company on or before the last day of the Revocation Period. Any notice of revocation must be hand delivered, or sent by e-mail and express courier (UPS or Federal Express only), pre-paid next-day air, to the Company in care of its attorney, W.Andrew Macan, SVP General Counsel and Corporate Secretary, U.S. Silica Company, 24275 Katy Freeway, S. 600, Katy, TX 77494, 346-307-8631, macan@ussilica.com.

10. **Confidential Information/Non-Solicitation of Employees.** (a) Employee acknowledges that the information, observations and data obtained by him/her during the course of his/her employment with the Company concerning (1) any business information not otherwise publicly available concerning the organization, business, investments, prospective investments or finances of the Company or any of the Releasees; (2) any personal information concerning the present or former partners, employees, officers and directors of the Company or any of the Releasees, (3) information received from any third party which any Releasee is under an obligation to keep confidential (collectively, "Confidential Information") is the property of the respective Releasee. Employee agrees that s/he will not, directly or indirectly, disclose to any unauthorized person or use for his/her own account any of such Confidential Information unless, and only to the extent that, (i) such matters become generally known to and available for use by the public other than as a result of Employee’s acts or omissions, or (ii) s/he is required to do so by order of a court of competent jurisdiction (by subpoena or similar process), in which event Employee will reasonably cooperate with the Company or the Releasees in connection with any action to restrict, limit or suppress such disclosure. Employee represents, warrants and covenants that at no time prior to or contemporaneous with his/her execution of this Agreement has s/he, directly or indirectly, disclosed Confidential Information to any unauthorized person or used such Confidential Information for his/her own purposes or benefit.

(b) Employee further agrees that for a period of two (2) years following the Separation Date, s/he shall not, directly or indirectly, employ, retain, solicit for employment or retention, knowingly assist in the employment or retention of, or seek to influence or induce to leave the Company’s employment or service, any person who was employed or otherwise engaged by the Company or any of its subsidiaries at any time during the one-year period prior to the Separation Date.

11**.** **Confidentiality of Agreement.** The Company and Employee agree that the terms and conditions of this Agreement are to be strictly confidential, except that Employee may disclose the terms and conditions to his/her family, attorneys, accountants, tax consultants, state and federal tax authorities or as may otherwise be required by law. The Company may disclose the terms and conditions of this Agreement as the Company deems necessary to its officers, employees, board of directors, stockholders, insurers, attorneys, accountants, state and federal tax authorities, or as may otherwise be required by law. Employee warrants that s/he has not discussed, and agrees that except as expressly authorized by the Company s/he will not discuss, this Agreement or the circumstances of his/her Separation with any employee of the Company, and that s/he will take affirmative steps to avoid or absent him/herself from any such discussion even if s/he is not an active participant in the discussion. Employee understands and agrees that his/her breach of this Agreement, as determined by a court with competent jurisdiction, will eliminate his/her entitlement to any Severance Benefits under this Agreement, including such benefits already received and, with respect to benefits received, upon request from the Company, Employee will be required to immediately return such amounts or monetary equivalent of such benefit requested by the Company in the event of a breach. EMPLOYEE ACKNOWLEDGES THE SIGNIFICANCE AND MATERIALITY OF THIS PROVISION TO THIS AGREEMENT, AND HIS/HER UNDERSTANDING OF THIS PROVISION.

12. **Third Party Beneficiaries.** As third-party beneficiaries of this Agreement, the Releasees (or any of them) will be entitled to enforce this Agreement in accordance with its terms in respect of the rights granted to such Releasees. There are no other third-party beneficiaries to this Agreement.

13. **No Precedential Effect.** By entering into this Agreement, it is not the intention of the Company to establish any policy, procedure, course of dealing or plan of general application irrespective of any similarity in facts or circumstances involving such other employee, on the one hand, and Employee, on the other hand.

14. **Entire Agreement.** This Agreement contains the entire agreement between the Parties with respect to the subject matter set forth in this Agreement, and supersedes and preempts all other agreements and obligations between the Parties; provided however, that this Agreement does not merge, supersede or replace the terms of any “Ownership of Proprietary Information, Assignment of Inventions, Non-solicitation, and Non-disclosure Agreement for Employees” (the “Surviving Agreement”), or any other restrictive covenant or non-compete agreements which shall remain in full and effect according to their own terms, except to the extent there is a conflict between the terms of this Agreement and the Surviving Agreement, the terms of this Agreement shall govern. The terms and conditions of this Agreement are contractual and not a mere recital. No part of this Agreement may be changed except in writing executed by the Parties.

17. **Choice of Law.** This Agreement will be interpreted in accordance with the laws of the State of Texas. Whenever possible, each provision of this Agreement will be interpreted in such a manner as to be effective and valid under applicable law, but if any provision of this Agreement will be held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating or affecting in any manner whatsoever the remainder of such provision or the remaining provisions of this Agreement.

18. **Headings.** Any titles, captions and headings contained in this Agreement are inserted for convenience of reference only and are not intended to be a part of or to affect in any way the meaning or interpretation of this Agreement.

19. **No Right to Re-Employment.** Employee acknowledges and agrees that neither the Company nor any of the Releasees is obligated to offer him/her employment (or to accept services or the performance of work from him/her, whether directly or indirectly) now or in the future.

20. Code Section 409A. This Agreement is intended to comply with the requirements of Code Section 409A and the Treasury Regulations and other guidance issued thereunder, as in effect from time to time, to the extent a payment hereunder is, or shall become subject to the application of Code Section 409A. To the extent a provision of this Agreement is contrary to or fails to address the requirements of Code Section 409A and related Treasury Regulations, this Agreement shall be construed and administered as necessary to comply with such requirements to the extent allowed under applicable Treasury Regulations until this Agreement is appropriately amended to comply with such requirements. If as of the Separation Date Employee is determined to be a "specified employee" as defined in Treasury Regulation Section 1.409A-1(i), then the payment shall be delayed until a date that is six months after the date of Employee's Separation Date to the extent necessary to comply with the requirements of Code Section 409A and related Treasury Regulations; provided, however that the payments to which Employee would have been entitled during such 6-month period, but for this subparagraph, shall be accumulated and paid to Employee without interest in a lump sum within ten days following the date that is six months following Employee's Separation Date, and any remaining payments shall continue to be paid to Employee on their original schedule. If Employee dies during such six-month period and prior to the payment of the portion that is required to be delayed on account of Code Section 409A, such amount shall be paid to Employee's estate within 60 days after Employee's death.

[Remainder of page intentionally blank]

IN WITNESS WHEREOF, the Parties have executed this Agreement effective as of the date of the last signature affixed below.

READ CAREFULLY BEFORE SIGNING

> **WITH MY SIGNATURE BELOW, I ACKNOWLEDGE THAT I HAVE CAREFULLY READ THIS AGREEMENT, I HAVE HAD REASONABLE AND SUFFICIENT OPPORTUNITY TO CONSULTANT WITH AN INDEPENDENT LEGAL REPRESENTATIVE OF MY OWN CHOOSING, AND I UNDERSTAND ALL OF ITS TERMS INCLUDING THE FULL AND FINAL RELEASE OF CLAIMS SET FORTH ABOVE.**
>
> **I FURTHER ACKNOWLEDGE THAT I HAVE FREELY AND VOLUNTARILY AND WITHOUT DURESS OR UNDUE PRESSURE OR INFLUENCE OF ANY KIND OR NATURE, ENTERED INTO THIS AGREEMENT, THAT I HAVE NOT RELIED UPON ANY REPRESENTATION, PROMISE, WARRANTY OR STATEMENT, WRITTEN OR ORAL, NOT SET FORTH IN THIS AGREEMENT, THAT I HAVE BEEN GIVEN THE OPPORTUNITY TO HAVE THIS AGREEMENT REVIEWED BY MY ATTORNEY AND THAT I HAVE BEEN ENCOURAGED BY THE COMPANY TO DO SO.**
>
> **I ALSO ACKNOWLEDGE THAT I HAVE BEEN AFFORDED AT LEAST 21 DAYS TO CONSIDER THIS AGREEMENT AND THAT I HAVE 7 DAYS AFTER SIGNING THIS AGREEMENT TO REVOKE IT BY DELIVERING WRITTEN NOTIFICATION OF MY REVOCATION AS SET FORTH ABOVE. IF THIS AGREEMENT IS NOT REVOKED IN THIS MANNER, IT WILL BECOME EFFECTIVE ON THE EIGHTH DAY AFTER I SIGN IT. FURTHERMORE, I UNDERSTAND THAT IF I REVOKE THIS AGREEMENT, THIS AGREEMENT WILL BECOME NULL AND VOID AND I WILL NOT BE ENTITLED TO THE BENEFITS CONFERRED BY THIS AGREEMENT, INCLUDING PAYMENTS SET FORTH HEREIN IF THE AGREEMENT IS REVOKED.**

____
Billy Ray Smith

Dated: _______________, 2019

U. S. SILICA COMPANY

By: ____
David D. Murry
Senior Vice President and CHRO

Dated: _______________, 2019

Exhibit 31.1

CERTIFICATION

I, Bryan A. Shinn, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of U.S. Silica Holdings, Inc. (the “Company”) for the quarter ended March 31, 2019;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Dated: May 1, 2019

/s/ BRYAN A. SHINN
Name: Bryan A. Shinn
Title: President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Donald A. Merril, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of U.S. Silica Holdings, Inc. (the “Company”) for the quarter ended March 31, 2019;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Dated: May 1, 2019

/s/ DONALD A. MERRIL

Name: Donald A. Merril

Title: Executive Vice President and Chief Financial Officer

Exhibit 32.1

SECTION 1350 CERTIFICATION

I, Bryan A. Shinn, Chief Executive Officer, U.S. Silica Holdings, Inc. (the “Company”), hereby certify, on the date hereof, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

i. The Quarterly Report on Form 10-Q of the Company for the quarter ended March 31, 2019 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

ii. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 1, 2019

/s/ BRYAN A. SHINN

Name: Bryan A. Shinn

Title: President and Chief Executive Officer

A signed copy of this original statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff on request.

Exhibit 32.2

SECTION 1350 CERTIFICATION

I, Donald A. Merril, Chief Financial Officer, U.S. Silica Holdings, Inc. (the "Company"), hereby certify, on the date hereof, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

i. The Quarterly Report on Form 10-Q of the Company for the quarter ended March 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

ii. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 1, 2019

/s/ DONALD A. MERRIL

Name: Donald A. Merril

Title: Executive Vice President and Chief Financial Officer

A signed copy of this original statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff on request.

Exhibit 95.1

Mine Safety Disclosure

The following disclosures are provided pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Act”) and Item 104 of Regulation S-K, which requires certain disclosures by companies required to file periodic reports under the Securities Exchange Act of 1934, as amended, that operate mines regulated under the Federal Mine Safety and Health Act of 1977 (the “Mine Act”).

Mine Safety Information. Whenever the Federal Mine Safety and Health Administration (“MSHA”) believes a violation of the Mine Act, any health or safety standard or any regulation has occurred, it may issue a citation which describes the alleged violation and fixes a time within which the U.S. mining operator must abate the alleged violation. In some situations, such as when MSHA believes that conditions pose a hazard to miners, MSHA may issue an order removing miners from the area of the mine affected by the condition until the alleged hazards are corrected. When MSHA issues a citation or order, it generally proposes a civil penalty, or fine, as a result of the alleged violation, that the operator is ordered to pay. Citations and orders can be contested and appealed, and as part of that process, are often reduced in severity and amount, and are sometimes dismissed. The number of citations, orders and proposed assessments vary depending on the size and type (underground or surface) of the mine as well as by the MSHA inspector(s) assigned.

Mine Safety Data. The following provides additional information about references used in the table below to describe the categories of violations, orders or citations issued by MSHA under the Mine Act:

- *Section 104 S&S Citations:* Citations received from MSHA under section 104 of the Mine Act for violations of mandatory health or safety standards that could significantly and substantially contribute to the cause and effect of a mine safety or health hazard.
- *Section 104(b) Orders:* Orders issued by MSHA under section 104(b) of the Mine Act, which represents a failure to abate a citation under section 104(a) within the period of time prescribed by MSHA. This results in an order of immediate withdrawal from the area of the mine affected by the condition until MSHA determines that the violation has been abated.
- *Section 104(d) Citations and Orders:* Citations and orders issued by MSHA under section 104(d) of the Mine Act for unwarrantable failure to comply with mandatory health or safety standards.
- *Section 110(b)(2) Violations:* Flagrant violations issued by MSHA under section 110(b)(2) of the Mine Act.
- *Section 107(a) Orders:* Orders issued by MSHA under section 107(a) of the Mine Act for situations in which MSHA determined an “imminent danger” (as defined by MSHA) existed.

The following table details the violations, citations and orders issued to us by MSHA during the quarter ended March 31, 2019:

Mine(a)	Section 104 S&S Citations(#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Proposed Assessments(b) ($, amounts in dollars)	Mining Related Fatalities (#)
Ottawa, IL	—	—	—	—	—	$ 493	
Mill Creek, OK	—	—	—	—	—	121	—
Pacific, MO	—	—	—	—	—	—	—
Berkeley Springs, WV	—	—	—	—	—	—	—
Mapleton Depot, PA	—	—	—	—	—	—	—
Kosse, TX	1	—	—	—	—	—	—
Mauricetown, NJ	—	—	—	—	—	—	—
Port Elizabeth	—					—	
Columbia, SC	—	—	—	—	—	—	—
Montpelier, VA	—	—	—	—	—	—	—
Rockwood, MI	1	—	—	—	—	—	—
Jackson, TN	—	—	—	—	—	—	—
Dubberly, LA	—	—	—	—	—	—	—
Hurtsboro, AL	—	—	—	—	—	—	—
Sparta, WI	1	—	—	—	—	—	—
Voca, TX	—	—	—	—	—	—	—
Peru, IL	—	—	—	—	—	—	—
Utica, IL	—	—	—	—	—	—	—
Tyler, TX	—	—	—	—	—	242	—
Festus, MO	1	—	—	—	—	405	—
Seagraves, TX	—	—	—	—	—	—	—
Lamesa, TX	3	—	—	—	—	1,177	—
Crane County, TX	10	—	—	—	—	901	—
Jackson, MS	1	—	—	—	—	—	—
Middletown, TN	—	—	—	—	—	121	—
Clark, NV	3	—	—	—	—	5,194	—
Lovelock, NV	7	—	2	—	—	1,818	—
Fernley, NV	—	—	—	—	—	—	—
Vale, OR	—	—	—	—	—	—	—
Fowlkes Mine, MS	—	—	—	—	—	—	—
Hazen Mine, NV	—	—	—	—	—	—	—
Popcorn Mine, NV	—	—	—	—	—	—	—
Colado Mine, NV	—	—	—	—	—	—	—
Celaton Mine, OR	—	—	—	—	—	142	—
Cheto Mine - AZ	—	—	—	—	—	—	—

(a) The definition of mine under section 3 of the Mine Act includes the mine, as well as other items used in, or to be used in, or resulting from, the work of extracting minerals, such as land, structures, facilities, equipment, machines, tools and minerals preparation facilities. Unless otherwise indicated, any of these other items associated with a single mine have been aggregated in the totals for that mine. MSHA assigns an identification number to each mine and may or may not assign separate identification numbers to related facilities such as preparation facilities. We are providing the information in the table by mine rather than MSHA identification number because that is how we manage and operate our mining business and we believe this presentation will be more useful to investors than providing information based on MSHA identification numbers.

(b) Represents the total dollar value of proposed assessments from MSHA under the Mine Act relating to any type of citation or order issued during the quarter ended March 31, 2019.

Pattern or Potential Pattern of Violations. During the quarter ended March 31, 2019, none of the mines operated by us received written notice from MSHA of (a) a pattern of violations of mandatory health or safety standards that are of such nature as could have significantly and substantially contributed to the cause and effect of mine health or safety hazards under section 104(e) of the Mine Act or (b) the potential to have such a pattern.

Pending Legal Actions. There were 75 legal actions pending before the Federal Mine Safety and Health Review Commission (the "Commission") as of March 31, 2019, each of which is a contest proceeding filed by us to challenge a citation or order issued by MSHA under the Mine Act and includes 26 contests challenging Section 104 S&S citations. During the quarter ended March 31, 2019, 10 legal actions were instituted and 12 legal actions were resolved. Citation, order and proposed fine totals for EP Minerals sites include enforcement activities commenced prior to the acquisition. The Commission is an independent adjudicative agency established by the Mine Act that provides administrative trial and appellate review of legal disputes arising under the Mine Act.

Exhibit 99.1

CONSENT OF RYSTAD ENERGY.

We hereby consent to the references to our company's name in the Quarterly Report on Form 10-Q for the Quarterly Period Ended March 31, 2019 (the "Quarterly Report") of U.S. Silica Holdings, Inc. (the "Company") and the quotation by the Company of our Proppant Market report - 2Q 2019, published on February 26, 2019. We also hereby consent to the filing of this letter as an exhibit to the Quarterly Report.

RYSTAD ENERGY

By:	/s/ Andrew Conacher	
	Name:	Andrew Conacher
	Title:	SVP Business Development

May 1, 2019