

**SKY QUARRY INC.  
PR SPRING PROJECT PHASE 1**

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**Evaluation of Bitumen Contingent Resources  
Based on Forecast Prices and Costs  
As of December 31, 2020**



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Based on Forecast Prices and Costs  
As of December 31, 2020**

**Prepared For:**

**Sky Quarry Inc.  
Suite 1400, 136 E South Temple  
Salt Lake City, Utah  
84111**

**Prepared By:**

**McDaniel & Associates Consultants Ltd.  
2200, 255 – 5<sup>th</sup> Avenue SW  
Calgary, Alberta  
T2P 3G6**

**June 2021**

# SKY QUARRY INC. PR SPRING PROJECT PHASE 1

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**APPENDIX 1 – NETBACK PRICING FORECAST**

**APPENDIX 2 – ECONOMIC DETAIL – PR SPRING PHASE 1**

June 17, 2021

**Sky Quarry Inc.**  
Suite 2400, 136 East South Temple  
Salt Lake City, Utah  
84111

Attention: Mr. David Sealock, CEO

Reference: **Sky Quarry Inc. – PR Spring Project Phase 1  
Evaluation of Bitumen Contingent Resources as of December 31, 2020  
Forecast Prices and Costs**

Dear Sir:

Pursuant to your request, we have prepared an estimate of the Low, Best and High Estimates of Contingent Resources for Sky Quarry Inc.'s (the "Company" or "Sky Quarry") PR Spring Project Phase 1 as of December 31, 2020. Sky Quarry Inc owns 2020 Resources LLC, as a wholly owned subsidiary, and the owner of the facility. Net present values have also been estimated for the contingent resource categories. The resources and associated future net revenue forecasts have been prepared and presented in accordance with the Canadian standards set out in the Canadian Oil and Gas Evaluation Handbook (COGEH). A detailed discussion of those definitions is presented within the body of this report. The contingent resources are also consistent with the definitions in the Petroleum Resource Management System (PRMS).

Estimates of bitumen contingent resources based on Technology Under Development and associated net present values were prepared as of December 31, 2020 and were based on the 3 consultant average of the future reference crude oil and natural gas product prices and product price differentials as of April 1, 2021.

The Company's share of Low, Best and High Estimates of contingent resources, and the respective net present values assigned to these resources based on forecast prices were estimated as of December 31, 2020. The contingent resources have been sub-classified by project maturity to be considered as "Development Pending" with an associated risk factor of 75 percent. Further detail on contingent resources sub-classification and risking can be found in Section 4.

Note that assurances were given by Sky Quarry that assumptions detailed by the previous owner, US Oil Sands, were still valid. Updated facility, operating and capital cost detail was supplied by Sky Quarry.

**ESTIMATED COMPANY SHARE OF CONTINGENT RESOURCES AS OF DECEMBER 31, 2020 MBBL-UNRISKED** <sup>(1)</sup> <sup>(2)</sup>

Category / Level of Certainty	Gross (Mbbbl) <sup>(1)</sup>	Net (Mbbbl) <sup>(2)</sup>
	Total Company	Total Company
Low Estimate	10,120	9,533
Best Estimate	10,715	10,041
High Estimate	11,311	10,549

(1) Gross resources are the working interest resources and before deductions of royalties payable to others.

(2) Net resources include gross resources after royalties payable to others plus royalty interest based on the 3 Consultant Average April 1, 2021 forecast bitumen netback prices.

**ESTIMATED COMPANY SHARE OF NET PRESENT VALUES BEFORE INCOME TAX AS OF DECEMBER 31, 2020, BASED ON FORECAST PRICES AND COSTS US \$MM - UNRISKED** <sup>(1)</sup> <sup>(2)</sup> <sup>(3)</sup>

Category / Level of Certainty	US \$MM Net Present Value Discounted At						
	0%	5%	8%	10%	12%	15%	20%
Low Estimate	12	8	6	5	4	4	2
Best Estimate	82	55	45	39	35	29	22
High Estimate	152	103	83	73	65	55	43

(1) Based on 3 Consultant Average April 1, 2021 forecast bitumen netback prices.

(2) Interest expenses and corporate overhead, etc. were not included.

(3) The net present values may not necessarily represent the fair market value of the resources.

Total Company share of contingent resources and associated net present values based on forecast prices and costs are presented in additional detail within Appendix 2 of this report. Discussions of the assumptions and methodology employed to prepare the resources and future revenue forecasts are contained within the body of this report.

In preparing this report, we relied upon factual information including ownership, technical well data and other relevant data from public sources as well as non-public data supplied by Sky Quarry. The extent and character of all factual information supplied by Sky Quarry were relied upon by us in preparing this report and have been accepted as represented without independent verification. We have relied upon representations made by Sky Quarry as to the completeness and accuracy of the data provided and that no material changes in the status or ownership of the property has occurred nor is expected to occur, from that which was projected in this report, between the date that the data was obtained for this evaluation and the date of this report, and that no new data has come to light that may result in a material change to the evaluation of the reserves and resources presented in this report.

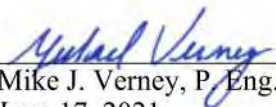
June 17, 2021

This report was prepared by McDaniel & Associates Consultants Ltd. for the exclusive use of Sky Quarry Inc. and is not to be reproduced, distributed or made available, in whole or in part, to any person, company or organization other than Sky Quarry Inc. without the knowledge and consent of McDaniel & Associates Consultants Ltd.

We reserve the right to revise any estimates provided herein if any relevant data existing prior to preparation of this report was not made available, if any data between the effective date of the evaluation and the date of this report were to vary significantly from that forecast, or if any data provided was found to be erroneous.

Sincerely,

**McDANIEL & ASSOCIATES CONSULTANTS LTD.**  
**APEGA PERMIT NUMBER: P3145**

  
Mike J. Verney, P. Eng.  
June 17, 2021

MJV:acs  
[20-0191]



## CERTIFICATE OF QUALIFICATION

I, Michael Verney, Petroleum Engineer of 2200, 255 - 5th Avenue, S.W., Calgary, Alberta, Canada hereby certify:

1. That I am an Executive Vice President of McDaniel & Associates Consultants Ltd., APEGA Permit Number P3145, which Company did prepare, at the request of Sky Quarry Inc., the report entitled "Sky Quarry Inc. – PR Spring Project Phase 1, Evaluation of Bitumen Contingent Resources, Based on Forecast Prices and Costs, As of December 31, 2020", dated June 17, 2021, and that I was involved in the preparation of this report. I am also registered as a Responsible Member as outlined by APEGA for McDaniel & Associates Consultant Ltd. APEGA Permit Number 3145.
2. That I attended the Queen's University in the years 2002 to 2006 and that I graduated with a Bachelor of Science degree in Civil Engineering and a Bachelor of Arts degree in Economics, that I am a registered Professional Engineer with the Association of Professional Engineers and Geoscientists of Alberta and that I have in excess of 15 years of experience in oil and gas reservoir studies and evaluations.
3. That I have no direct or indirect interest in the properties or securities of Sky Quarry Inc., nor do I expect to receive any direct or indirect interest in the properties or securities of Sky Quarry Inc., or any affiliate thereof.
4. That the aforementioned report was not based on a personal field examination of the properties in question, however, such an examination was not deemed necessary in view of the extent and accuracy of the information available on the properties in question.



APEGA ID 90680

Calgary, Alberta

Dated: June 17, 2021



# SKY QUARRY INC.

## PROPERTY DISCUSSION

### 1 PROPERTY OVERVIEW

The PR Spring Project is a surface mining oil sands project located approximately 85 miles south of Vernal, Utah. The initial Phase 1 of the PR Spring Project consists of mining a multiple bed deposit from three separate pits, Mine Pits #1, #2 and #3. In addition to mining, Sky Quarry plans on implementing a new technology of solvent extraction to remove the bitumen from the sand for each of the three defined mine pits. The original solvent extraction technology, adapted from the Clark Hot Water Process, has undergone extensive testing in the previous company's 25 bbl/d Grande Prairie Pilot. Sky Quarry will be investing 6.5 million dollars to adjust the process to the Hildebrandt process, which will not require steam and hot water processing in the process. Due to technological risk, the resources have been included in the Technology Under Development category.

Sky Quarry purchased the properties after it was shut down in the first quarter of 2020.

This report assumes the bitumen is sold. Sky Quarry has plans to also sell Recycled Asphalt Shingles "RAS". The sale is excluded from the main portion of this report.

The location of the PR Spring Property is shown in Figure 1.1.

**Figure 1.1:** Location Map of the PR Spring Property (note certain properties have been relinquished)



McDaniel & Associates Consultants Ltd. ("McDaniel & Associates") was engaged by Sky Quarry to evaluate the contingent resources of PR Spring Project Phase 1 and to prepare estimates of the net present value of the recoverable volumes.

### 2 GEOLOGY

#### 2.1 Regional Geology

The PR Spring oil sands deposit is located along the southeast flank of the Uinta Basin, formed during late Cretaceous and Early Tertiary Period. The deposit is within the Eocene-aged Green River Formation of the Douglas Creek Member. In general, the sands thicken to the southeast, closer to their source, becoming increasingly finer-grained and carbonate rich to the north and northwest.

The location of the project is amongst rugged topography, meaning the overburden thickness of the oil-saturated sands is highly variable. This variability directly effects the total volume to bitumen in-place (TV:BIP ratio) calculations across the property. The target deposit is topographically high, which has resulted in erosion of much of the non-reservoir overburden. The mine pits have been proposed in an ideal location where the target resource is very shallow and thick, outcropping at the surface in some locations.

The reservoir is found within fluvial and lacustrine sand deposits, is oil-wet and quartz-rich, comprising of approximately 55 percent quartz, 25 to 35 percent feldspar, six to 13 percent carbonates and six percent clays, while accessory minerals comprise the remaining portion. The grains of sand within the deposit are consolidated (unlike McMurray sands found within Athabasca which are unconsolidated) with a combination of silica, carbonate, dolomite and ankerite (iron-magnesium rich carbonate) cements.

Lateral variability of ore bed characteristics is present due to the geologic nature of their deposition (inter-tongued/braided fluvial channels versus more laterally uniform lacustrine or marine sediments) increasing the possibility of discontinuous bedding or variations in bitumen saturation over comparatively shorter distances.

Five main oil-saturated sands are present: informally named A Bed at the base of the interval moving upsection to E Bed at the top (A Bed having the lowest average oil saturation and the uppermost E Bed being eroded from the project area). These sequences are separated by five carbonate markers consisting of mostly limestone, which have been correlated across the entire property. Multiple stacked oil saturated zones, separated by non-reservoir facies, will result in operationally complex handling of ore versus interburden material during mining operations.

Ideal pit locations coincide with thick oil-saturated net pays, rich saturations, thin overburden and corresponding low TV:BIP ratios. Multiple phases of mining have been identified for the project, with Phase 1 having the highest density of drilling and greatest availability of geological information.

Well data in the mine pits is very dense and high quality, with 70 core holes in the Phase 1 mine pit locations and over 180 cored wells across PR Spring acreage. A detailed understanding of the reservoir can be achieved by analysis of this data.

### **3 MCDANIEL & ASSOCIATES GEOLOGICAL ASSESSMENT**

#### **3.1 Mining Resource Assessments in Athabasca**

Geological assessments of mining projects in Athabasca employ cutoffs to eliminate low grade ore from the mineable volume calculations. These cutoffs are typically seven percent ore grade, or bulk mass fraction of oil by weight, derived from a Dean Stark core sample analysis, and a minimum three metre mineable thickness of continuous ore. Waste material above, below or within the ore body is determined by a minimum three metre thickness of continuous non-ore (determined by not meeting the two criteria of ore mentioned above). All material situated above the highest occurrence of ore is defined as overburden. All

waste material within the ore body is defined as interburden. Interburden plus overburden thickness is equal to waste thickness.

A critical parameter in determining the economically mineable bitumen is the total volume of material that must be removed to extract the bitumen in-place. This ratio is called total volume to bitumen in-place (TV:BIP). For comparison, the Alberta Energy Regulatory (AER) body, introduced a directive in 2001 defining a minimum grade of ore that must be mined for bitumen mining operations in Alberta. To summarize the essence of the directive: mining operations are required to mine, at minimum, all material within a 12:1 TV:BIP cutoff criteria within the approved mine plans. A TV:BIP limit of 12:1 largely defines the mineable area within a given lease, although not all areas meeting this criteria will necessarily be mined as other considerations may prevent extraction.

When oil prices are high, handling a greater amount of material during mining operations within more marginal areas of the deposit becomes economic and using a higher TV:BIP cutoff, such as 14:1, 16:1, etc. can be included in resources assessments (at the discretion of the operators).

### **3.2 Geological Reference Material**

The following sources of geological information provided by Sky Quarry were used for the evaluation:

1. Bitumen Resource Assessment, PR Spring Property, Uintah and Grand Counties, Utah, USA for Sky Quarry Inc. (As of December 31, 2014), March 3, 2015.
2. US Oil Sands Phase 1 Mine Plan and Cost Estimate, Norwest Corporation, Oct 9, 2014.
3. Comparison of the PR Spring and Asphalt Ridge (UTAH) Oil Sands with Athabasca Oil Sands, Depositional Environments, Mineralogy, and Clay component with Implications for Processing, Petrel Robertson Consulting, Ltd. Aug 2014
4. Geology of the Green River Formation Oil Sands Reservoirs at PR Spring, Utah, Petrel Robertson Consulting, Ltd. Dec 2012, Appendices 1-11 not included.
5. Core Description and XRD well log interpretations, 32 wells, Petrel Robertson Consulting Ltd.

#### **3.2.1 Norwest Corporation**

Norwest Corporation ("Norwest") has outlined the first five years of mining, Phase 1, will recover 10,717 Mbbls from Pits #1, #2, and #3 comprising a total area of 235 acres. Total in-place barrels are estimated at 12,534 Mbbls (these estimates equate to 31 feet net pay, 28 percent porosity and nine percent ore grade). The thicker average net pay of 31 feet for the mining pits is consistent when compared to the thinner whole property estimate of 20 feet. Norwest assumed a 90 percent mining recovery factor and a plant recovery factor of 95 percent.

It was recommended to Sky Quarry to begin mining operations in Pit 1 because it provides easier access to the ore and has the lowest mining depth (lowest TV:BIP), facilitating early cash flow and in-pit backfilling.



Norwest did not outline resource cutoffs employed within their evaluation. However, the lowest average ore grade presented in the report for mine planning was 6.7 percent for Bed C of Year 1, third quarter. It is possible to assume that a minimum zero percent ore grade cutoff was utilized for in-place resource estimation, and six percent ore grade cutoff used for defining mine pit extents. Figure 3.1 below displays the Norwest predicted mine volumes for a five year development scenario.

**Figure 3.1: Mine Plan Summary Yearly Average Material Volumes**

Table 4.13 Material Volumes for Phase 1 (Years 1 – 5)									
Production Table									
Year			Volume (BCY)	Tons (t)	Avg. NSAT (%)	In Place barrels	Recovered barrels	TV/BIP	Strip Ratio
Year 1	Box Cut Pit1	Ore	140,882	252,899	9.0%	132,150	112,988	8.4	0.63
		Waste	89,154	160,042					
	Quarter1 Year1	Ore	56,655	101,702	9.4%	56,117	47,980	11.3	1.32
		Waste	74,737	134,162					
	Quarter2 Year1	Ore	192,899	346,276	9.7%	196,585	168,080	6.7	0.41
		Waste	79,564	142,826					
	Quarter3 Year1	Ore	181,404	325,641	9.7%	186,135	159,145	7.8	0.66
		Waste	120,380	216,095					
	Quarter4 Year1	Ore	231,366	415,328	8.5%	205,837	175,991	10.4	0.93
		Waste	214,208	384,528					
Year 2	Quarter2 Year2	Ore	409,806	735,649	9.0%	386,530	330,483	12	1.36
		Waste	557,325	1,000,462					
	Box Cut Pit2	Ore	111,110	199,456	8.0%	93,867	80,256	16.3	1.87
		Waste	207,635	372,729					
	Year2	Ore	326,611	586,305	8.9%	306,751	262,272	12.7	1.48
		Waste	483,999	868,833					
Year 3	Year3	Ore	4,075,671	7,316,298	8.9%	3,827,502	3,272,514	16.6	2.24
		Waste	9,144,358	16,415,171					
Year 4	Year4	Ore	4,353,058	7,814,239	8.6%	3,947,798	3,375,367	11.4	1.16
		Waste	5,034,325	9,037,191					
Year 5	Year5	Ore	3,345,416	6,005,405	9.1%	3,194,821	2,731,572	8.2	0.62
		Waste	2,072,908	3,721,108					
Total			31,503,471	56,552,345	8.9%	12,534,091	10,716,648	12.1	1.35

### 3.2.2 Sproule – Worldwide Petroleum Consultants (“Sproule”)

Sproule reported for the entire PR Spring Property a total bitumen initially-in-place of 184.3 MMbbls with no ore grade cutoff and 90 MMbbls above six percent ore grade (this equates to approximately 19.5 feet net pay, 28 percent porosity, 25 percent Sw). These numbers are consistent with each other and highlight that approximately 50 percent of the resource is less than six percent ore grade. An ore grade cutoff of six percent equates to 50 percent oil saturation at the average reservoir porosity of 28 percent, and is therefore very reasonable. The estimated six percent ore grade cutoff is similar to the cutoffs employed in the Athabasca Region at seven percent. Conversely, within the report is Figure 13, an Example Pseudo-Log, indicating a pay flag for “Sands with Bitumen Grade >0 wt percent”. The conclusion is that a zero percent ore grade cutoff was utilized for volumetric calculations.

For the 2011 cores holes, the resource was assessed using a visual net-to-gross estimation from core photos applied to core data. The purpose of this method was to increase the resolution of core sampled at three

foot spacings down to one foot resolution. For each cored interval, a net-to-gross oil saturation from core photos was recorded for all pay intervals in one foot increments. The visual net-to gross value was then multiplied with average oil saturation of the sampled interval (acquired at three foot resolution).

Effectively, the data resolution was improved to one foot resolution. This upscaling method is more accurate than applying an average based on the core data alone.

Cores drilled in 2012 were slabbed and photographed in the field with full compositing carried out by the Core Lab prior to Dean Stark assays of the composite samples. A sampling of these composited assays were compared to nearby 2011 samples and a high degree of correlation was observed.

The upscaled geological data was imported into a Petrel Robertson Consulting Ltd. geological model, which employed a pay flag of oil saturation greater than zero weight percent to calculate bitumen in-place. Net pay and BIP maps were created, whereas TV:BIP mapping was completed by Petrel Robertson Consulting Ltd. and not included in the Sproule report.

Sproule concluded discovered bitumen initially-in-place is the most appropriate resource assignment for the mining plan area at this time, pending incorporation of the final mine plan into the geological model and assessing the exploitable volumes and recoverable portion of those volumes before assigning contingent resources. Figure 3.2 displays the Sproule estimated discovered bitumen initially-in-place for the entire PR Spring Lease.

**Figure 3.2: Discovered Bitumen Initially-In-Place Summary for PR Spring Lease (1)**

TABLE S-1 DISCOVERED PETROLEUM (BITUMEN) INITIALLY-IN-PLACE <sup>1</sup> , P.R. SPRING LEASE, UTAH, AS OF December 31, 2014		
Development Area	Area (acres)	Best Estimate <sup>2</sup> (MMbbl)
Permitted Mine Plan Area <sup>3</sup> :		
North Pit	61.8	4.5
West Pit	30.5	2.3
Sub-total	92.2	6.8
Mine Plan Area yet to be permitted <sup>4</sup> :		
South Pit	66.7	2.7
Proposed and Permitted Mine Plan Area Sub-Total	159.0	9.5
Area with no Current Appraisal or Mine Plans <sup>5</sup>	5,771.0	174.8
<b>TOTAL LEASE</b>	<b>5,930.0</b>	<b>184.3</b>

(1) Mine pit designation based on the initial mine design and does not correspond to pit designation boundaries presented in the Norwest Report.

### 3.2.3 Petrel Robertson Consulting Ltd.

The work performed by Petrel Robertson Consulting Ltd. (“Petrel Robertson”) entailed a geologically-focused assessment of reservoir parameters and did not specifically address volumetric estimations. Beds B, C and D were included in their work (A Bed being too deep and lean to be economic and E Bed being too fine-grained and mostly cored to be included). Mapping of ore grade distribution greater than six percent over the mining block using the Micromine software program was provided.

Interestingly, it was noted that high quality sands are present which are barren of oil saturation. Petrel Robertson postulates these barren sands used to be gas caps above oil saturated intervals, which have now bled off due to surface erosion. Also, lean intervals have been noted adjacent to arroyos, or dry channel beds. The speculation is that oil seeps from the formations during spring rains due to an increase in hydraulic head, leaving the reservoir adjacent to canyon walls with notably lower oil saturations.

Petrel Robertson does not provide cutoffs or an estimate of volumes in-place for the resource. Further analysis of the data derived from the mapping and cross section data would be essential to pin-point accurate volumetric comparisons. Figure 3.3 and Table 3.1 below displays the PR Spring mine development sequence and the corresponding TV:BIP for each mine pit, respectively.



**Figure 3.3: PR Spring Mine Pit Development Sequence**



**Table 3.1: PR Spring TV:BIP Summary of Proposed and Permitted Pits**

	Pit #1	Pit #2 (East)	Pit #2 (West)	Pit #3	Pit #4	Pit #5	Pit #6
<b>TV:BIP</b>	~8	~11	~16	~11	~11	~12	~12

## 4 RECOVERABLE VOLUME ESTIMATE

### 4.1 Overview

Estimates of contingent resources have been prepared by McDaniel & Associates and are based primarily on in-place minable bitumen volumes outlined in the Norwest Corporation US Oil Sands Phase 1 Mine Plan and Cost Estimate Report, dated October 9, 2014, and McDaniel & Associates' estimates of reservoir uncertainty and extraction efficiencies. Recoverable volumes were estimated at the following levels of certainty.

**Low Estimate recoverable volumes:** reflect a greater than 90 percent certainty that the recoverable volumes will be greater than the estimated value. Conversely, the probability that the recoverable volume

will be less than the estimated value is less than 10 percent. Low Estimate recoverable volumes include proved reserves (1P) and Low Estimate contingent resources (1C).

**Best Estimate recoverable volumes:** reflect an equal probability that the recoverable volume will be higher or lower than the estimated value. Best Estimate recoverable volumes include proved and probable reserves (2P) and Best Estimate contingent resources (2C).

**High Estimate recoverable volumes:** reflect a greater than 10 percent certainty that the recoverable volumes will be greater than the estimated value. Conversely, the probability that the recoverable volume will be less than the estimated value is greater than 90 percent. High Estimate recoverable volumes include proved, probable and possible reserves (3P) and High Estimate contingent resources (3C).

Additional detail regarding reserves and resources is contained within Section 4.2 of this report.

#### **4.1.1 McDaniel & Associates Methodology**

In determining estimates of recoverable volumes, we relied on the Norwest Report in-place mineable bitumen volumes. In order to estimate the recoverable volume, a recovery factor was applied to the in-place mineable bitumen volumes in order to account for the geological risk associated with the mine pits. Estimates of process extraction efficiency were then applied in order to estimate the total volume of bitumen that will be extracted from the process.

#### **4.2 Classification of Recoverable Volume Estimates**

The scope of this evaluation was to prepare estimates of the contingent resources for the PR Spring Project Phase 1. Included in the scope was to consider of Low, Best and High Estimates of contingent resources.

The estimates of contingent bitumen resources presented in this report have been based on the definitions and guidelines prepared by the Standing Committee on Reserves Definitions of the CIM (Petroleum Society) as presented in the COGE Handbook.

COGEH Volume 1 was published in June 2002 and provided the framework for the classification of reserves and resources within Canada. COGEH was adopted by the Alberta Securities Commission (ASC) and the Canadian Securities Administrators (CSA) and has been used as a guideline for the evaluation and classification of oil and gas volumes since.

In September 2007, COGEH Volume 1 was revised in the form of the Second Edition. The Second Edition of Volume 1 incorporated some significant changes especially in the context of the classification of resources. These changes have been incorporated in part to ensure broad alignment between COGEH and the Society of Petroleum Engineers' Petroleum Resources Management System (SPE-PRMS). Additional changes have been incorporated within the Second Edition to provide clarity on the reporting of resources.

In 2014, the guidance on Resources other than Reserves (ROTR) was updated within COGEH and now requires there to be a defined project evaluation scenario and that both contingent and prospective resources



need to be sub-classified by project maturity status. In April 2014, a section on bitumen and SAGD reserves and resources was published in COGEH Volume 3. This section was created to assist in the evaluation and classification of heavy oil and bitumen deposits that are exploited using thermal in-situ or surface mining methods.

The current edition (COGEH – Consolidated Third Edition – October 2019) is an effort to address the inconsistencies, and to consolidate and restructure the materials to reduce redundancies.

Figure 4.1, taken from the ROTR addition to COGEH Volume 2, illustrates on a high level the resource classification system and project maturity sub-class. The definitions for the pertinent classifications (as per COGEH Volume 1, Second Edition) for the purposes of this report are detailed on the following pages. Figure 4.2 presents a modified version of Figure 4.1 where suggested minimum thresholds are included for the sub-classes.

**Figure 4.1: Resources Classification Framework (COGEH, Volume 2, Section 2, Figure 2-3)**

LACE (PIIP)	D PIIP (DPIIP)	COMMERCIAL	PRODUCTION	Project Maturity Sub-classes			
			RESERVES	On Production			
				Approved for Development			
				Justified for Development			
		SUB-COMMERCIAL	CONTINGENT RESOURCES	Development Pending			
				Development on Hold			
				Development Unclassified			
	Development not Viable						
			UNRECOVERABLE				
	UNDISCOVERED PIIP (UPIIP)		PROSPECTIVE RESOURCES	Prospect			
Lead							
Play							
		UNRECOVERABLE					

Figure 2-3. PRMS, Modified to Show Development On Hold and Development Unclassified Separately

**Figure 4.2: Modified Resources Classification Framework – Includes Usual Requirements for Sub-Classes**

Total Petroleum Initially in Place	Discovered PIP (DPIP)	COMMERCIAL	PRODUCTION					Commercial No Risk
			RESERVES	Established	Development Study	Economic	On Production Approved for Development Justified for Development	Increasing Chance of Commerciality Less than 100% CDC
				Established or Under Development	Development Study or Pre-Development Study	Economic	Development Pending	
					Conceptual Study	Economic, Sub-Economic or Undetermined	Development on Hold	
		SUB-COMMERCIAL	CONTINGENT RESOURCES	Experimental			Development Unclassified	
							Development not Viable	
		UNRECOVERABLE		Established or Under Development	Conceptual Study	Economic, Sub-Economic or Undetermined	Prospect	
							Lead	
							Play	
	Undiscovered PIP (UPIP)		PROSPECTIVE RESOURCES	Experimental				
			UNRECOVERABLE					

#### 4.2.1 Definitions of Reserves

Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recovered from known accumulations, as of a given date, based on: the analysis of drilling, geological, geophysical, and engineering data; the use of established technology; and specified economic conditions, which are generally accepted as being reasonable. Reserves are further classified in accordance with the level of certainty associated with the estimates and based on development and production status. To be classified as reserves, estimated recoverable quantities must be associated with projects that have demonstrated commercial viability. Under the fiscal conditions applied in the estimation of reserves, the chance of commerciality is effectively 100 percent.

Reserves are sub-classified based on level of certainty and development status:

*Proved Reserves* – are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.

*Probable Reserves* – are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved + probable reserves.

*Possible Reserves* – are those additional reserves that are less certain to be recovered than probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated proved + probable + possible reserves.

*Developed Producing Reserves* – are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.

*Developed Non-Producing Reserves* – are those reserves that either have not been on production, or have previously been on production, but are shut in, and the date of resumption of production is unknown.

*Undeveloped Reserves* – are those reserves expected to be recovered from known accumulations where a significant expenditure (e.g., when compared with the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves category to which they are assigned.

Additional criteria for the assignment of reserves are contained within Section 1.3 of the COGEH Consolidated Third Edition – October 2020.

#### **4.2.2 Definitions of Resources**

*Discovered Petroleum Initially-In-Place (equivalent to Discovered Resources)* – is that quantity of petroleum that is estimated, as of a given date, to be contained in known accumulations prior to production. The recoverable portion of Discovered Petroleum Initially-In-Place (PIIP) includes production, reserves, and contingent resources; the remainder of the volume is unrecoverable.

*Undiscovered Petroleum Initially-In-Place (equivalent to Undiscovered Resources)* – is that quantity of petroleum that is estimated, on a given date, to be contained in accumulations yet to be discovered. The recoverable portion of Undiscovered Petroleum Initially-In-Place (PIIP) is referred to as Prospective Resources; the remainder is classified as unrecoverable.

*Contingent Resources* – are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingencies may include factors such as economic, legal, environmental, political, and regulatory matters, or a lack of markets. It is also appropriate to classify as contingent resources the estimated discovered recoverable quantities associated with a project in the early evaluation stage. Contingent resources are further classified in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by their economic status.

*Prospective Resources* – are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective resources have both an associated chance of discovery and a chance of development. Prospective resources are further subdivided in accordance with the level of certainty associated with recoverable estimates assuming their discovery and development and may be sub-classified based on project maturity.

In order for contingent or prospective resource volumes to be reclassified as reserves, the projects need to have a chance of commerciality of 100 percent. The *chance of commerciality* is the product of the chance of discovery and chance of development as described below.

*Chance of discovery* – the estimated probability that exploration activities will confirm the existence of a significant accumulation of potentially recoverable petroleum.

*Chance of development* – the estimated probability that, once discovered, a known accumulation will be commercially developed.

Note that for contingent resources the chance of commerciality is equal to the chance of development. For prospective resource, the chance of commerciality includes both the chance of discovery and development.

The following table displays the ranges for the chance of discovery and development and presents a sample, hypothetical calculation of risk resources.

**Table 1: Risked Resources Example**

	Contingent Resources		Prospective Resources	
	Range	Example	Range	Example
Chance of Development	0 - <100%	80%	0 - <100%	80%
Chance of Discovery	Always 100%	100%	0 - <100%	70%
Risked Resources		1,000 Mbbbl X 80% X 100% = 800 Mbbbl		2,000 Mbbbl X 80% X 70% = 1,120 Mbbbl

COGEH (Section 1.3.7.2 Commercial Status) recommends considering the following potential contingencies when determining commerciality:

1. Economic viability of the related development project;
2. A reasonable expectation that there will be a market for the expected sales quantities of production required to justify development;
3. Evidence that the necessary production and transportation facilities are available or can be made available;
4. Evidence that legal, contractual, environmental, governmental, and other social and economic concerns will allow for the actual implementation of the recovery project being evaluated;
5. A reasonable expectation that all required internal and external approvals will be forthcoming. Evidence of this may include items such as signed contracts, budget approvals, and approval for expenditures, etc.
6. Evidence to support a reasonable timetable for development. A reasonable timeframe for the initiation of development depends on the specific circumstances and varies according to the scope of the project. Although five years is recommended as a maximum timeframe for classification of a project as commercial, a longer timeframe could be applied where, for example, development of



economic projects are deferred at the option of the producer for, among other things, market related reasons or to meet contractual or strategic objectives.

Recovery technology and the recovery technology status descriptions are required in order to assign contingent or prospective resources.

*Established technology* – is a recovery method that has been proven to be successful in commercial applications in the subject reservoir and is a prerequisite for assigning reserves.

*Technology under development* – is a recovery process that has been determined to be technically viable via field test and is being further field tested to determine its economic viability in the subject reservoir. Contingent resources may be assigned if the project provides information that is sufficient and of a quality to meet the requirements for this resource class.

*Experimental technology* – is a technology that is being field tested to determine the technical viability of applying a recovery process to unrecoverable discovered petroleum initially in place in a subject reservoir. It cannot be used to assign any class of recoverable resource.

#### **4.2.3 Sub-classification of Contingent Resources based on Economic Status**

A portion of contingent resources may be associated with projects that are economically viable but have not satisfied all requirements for commerciality. Accordingly, it may be desirable to sub-classify contingent resources by economic status:

*Economic Contingent Resources* – are those contingent resources that are currently economically recoverable.

*Sub-economic Contingent Resources* – are those contingent resources that are not currently economically recoverable.

Where evaluations are incomplete such that it is premature to identify the economic viability of a project, it is acceptable to note that project economic status is “undetermined”.

In examining the economic viability, the same fiscal conditions should be applied to contingent resources as in the estimation of reserves, i.e. specified economic conditions, which are generally accepted as being reasonable.

#### 4.2.4 Project Evaluation Scenario Status

A project evaluation scenario is required before contingent or prospective resources can be estimated. The project evaluation scenario status is an assessment of the level of planning that has gone into the project in question and another way of adding clarity to the reader how advanced the project is and what level of detail went into the estimates.

*Conceptual* – A conceptual or scoping study is the initial stage of the development of a project scenario, with limited detail and typically based on limited information. It may be pre-discovery or an objective may be to determine whether to acquire ownership rights. There will usually be limited information available and major parameters will be mostly assumed.

*Pre-Development* – A pre-development study is an intermediate step in the development of a project evaluation scenario. The amount of information that is available for the reservoir of interest is greater than for a conceptual study. In particular, the petroleum initially-in-place has been reasonably well defined and the remaining uncertainty lies largely in the recovery factor and the economic viability.

*Development* – A development study is the most detailed step in the development of a project evaluation scenario. It is based on a detailed geological and engineering study and economic analysis of information on the specific project, and provides sufficient information for the creation of a development plan, from which a development decision can be made.

#### 4.2.5 Sub-classification of Contingent Resources based on Project Maturity Status

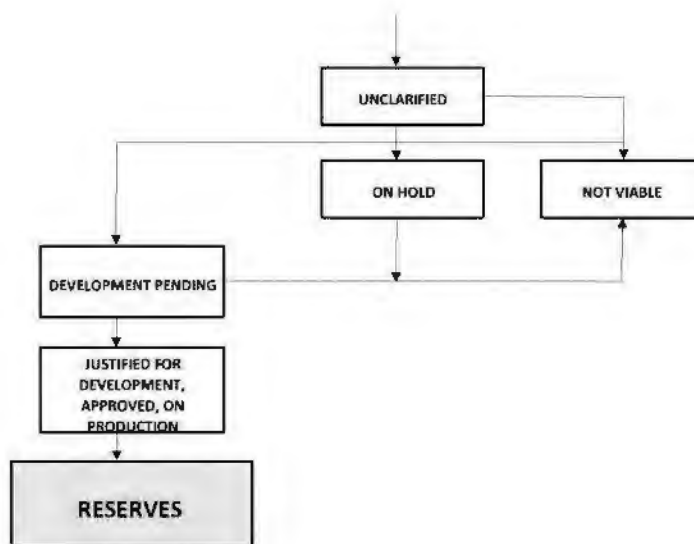
Contingent resources can be sub-classified based on project maturity. From COGEH Volume 2, Guidelines for Estimation and Classification of Resources Other Than Reserves, the typical progression is as follows:

- 1) Initial assessment to confirm the reservoir as a known accumulation with the potential for development. During this process, the project maturity may be Development Unclassified while additional information, in particular test or pilot data, is being acquired. For conventional accumulations, this data-gathering stage may be a short time (e.g., with a drill stem test prior to rig release), but for unconventional accumulations, this may take considerable time, even years, and involve pilot tests; and
- 2) Once the appropriate information to pass beyond development unclassified has been collected and analyzed appropriately, a project may be classified as either:
  - **Development Pending**, where resolution of the final conditions for development is being actively pursued (high chance of development). (If a project cannot be developed within a reasonable timeframe, consideration should be given to reclassification as development on hold); or
  - **Development On Hold**, where there is a reasonable chance of development, but there are major non-technical contingencies to be resolved that are usually beyond the control of the operator; or

- **Development Not Viable**, where no further data acquisition or evaluation is currently planned and hence there is a low chance of development.

A flow chart showing the various project maturity sub-classes is shown below. The dashed lines indicate that Unclarified, Development Pending or On Hold can be maintained only for a limited time, after which reclassification to Not Viable may be appropriate.

**Figure 4.3: Project Maturity Sub-Classes**



\* Dashed lines indicate that Unclarified, Development Pending or On Hold can be maintained only for a limited time, after which reclassification to Not Viable may be appropriate.

Figure 2-4. Flow Chart Illustrating the Relationship Among the Project Maturity Sub-Classes for Contingent Resources

#### 4.2.6 Sub-classification of Prospective Resources based on Project Maturity Status

Prospective resources are also sub-classified by their project maturity status. The sub-classifications are (in increasing maturity status):

*Play* - A family of geologically similar fields, discoveries, prospects and leads.

*Lead* - A potential accumulation within a play that requires more data acquisition and/or evaluation in order to be classified as a prospect.

*Prospect* - A potential accumulation within a play that is sufficiently well defined to represent a viable drilling target.

#### 4.2.7 Classification of Recoverable Volume Estimates for PR Spring Phase 1 Lands

Company lands for Phase 1 were booked as economic contingent resources based on Technology Under Development. Contingent resources assigned have been sub-classified based on project maturity sub-class as Development Pending and by Evaluation Scenario Status as Development. Given the status of the

bitumen extraction technology with only pilot plant results to date, the technology has been sub-classified as Technology Under Development (TUD). For the initial development of the project, the Company has a well-defined development study that includes detailed geological and engineering analysis. The project has been defined as Development Pending as there is a high chance of development of 75 percent within a reasonable timeframe. Note that there is no risk factor applied due to the Technology Under Development classification and that the reader should consider this additional factor.

McDaniel & Associates notes that the technology is similar to the mining operations in northern Alberta and that the addition of the solvent does not materially change the major processes required for bitumen extraction. In addition, the solvent recycle ratio appears very promising. However, the technology has not been demonstrated in a commercial application and the runs currently performed were for volumes that are substantially smaller than commercial operations.

Given Sky Quarry has had positive experience from its surface miner, we do not have any reservations about that technology going forward.

Some notes from COGEH that indicate the extraction process should be labelled as Technology Under Development but indicate that Sky Quarry is very close to establishing the technology can be found below:

- Established technology is a recovery method that has been proven to be successful in commercial applications in the subject reservoir, and is a prerequisite for assigning reserves.
- TUD is a recovery process that has been determined to be technically viable via field test and is being further field tested to determine its economic viability in the subject reservoir. Contingent resources may be assigned if the project provides information that is sufficient and of a quality to meet the requirements for this resource class.
- TUD may not be at a scale to provide direct evidence of economic viability, but may be scaled up to provide this information. If this is the case, a report should contain an account that justifies scaling up.
- In rare cases, a single TUD project may provide sufficient high quality information that it may be reasonable to consider it as established technology for that project, in which case, reserves may be assigned, but only to the area of the TUD project and a limited area beyond, for which the reservoir properties are consistent.
- Laboratory tests and simulation may be important parts of this process (TUD), but are not at a level that provide sufficient information for resource classification and are not acceptable on a standalone basis.



## **5 CONSIDERATION OF ANALOGIES**

Analogous, producing bitumen mining in the Athabasca region were examined as part of this evaluation. The Syncrude Oil Sands Project was chosen as the primary analogous project for this evaluation and details of the project is discussed in detail below.

### **5.1 Syncrude Oil Sands Project (Townships 92-96, Ranges 8-12 W4)**

The Syncrude Project is an integrated oil sands project comprising bitumen extraction and upgrading capabilities. Syncrude is joint venture between seven partners: Canadian Oil Sands Partnership, Imperial Oil Resources, Suncor Energy Venture Partnership, Sinopec, Nexen Oil Sands Partnership, Mocal Energy, and Murphy Oil Company.

Construction of Syncrude began in 1973, with first production occurring in 1978. Various expansion projects have occurred throughout the project's lifespan, with the latest major expansion occurring in 2006, bringing the total production capacity to 350 kbpd.

Current production from the Syncrude Project is approximately 340 kbpd of synthetic crude oil from two mine sites: Aurora North and North Mine/East MacKay. In addition to the current operations, the Syncrude Project also has a number of undeveloped expansions at various levels of corporate planning and regulatory status. Future expansions within the project are Aurora South, Leases 29 and 30 and the Mildred Lake Extension.

All project lands are situated within the Athabasca Oil Sands deposit, located north of Fort McMurray, northern Alberta. The leases are positioned within the AER defined Surface Mineable Area of the Athabasca Oil Sands deposit, with the exception of leases located within Township 93 Range 08W4.

The bitumen volumes associated with the Syncrude Project are attributed to the McMurray Formation.

## **6 PRODUCTION FORECAST**

### **6.1 Mine Production**

The production profile outlined in Appendix 2 is based on guidance provided by Sky Quarry. All estimates of future production growth were agreed upon with the Company prior to inclusion within the economic forecasts. Using the in-place mineable volumes provided in the Norwest Report of 12,533 Mbbl, McDaniel & Associates has assumed a 95 percent mining recovery factor, resulting in a total mineable volume of 11,906 Mbbl.

PR Spring Phase 1 is expected to have a production capacity of 2,000 bbl/d with first production expected in 2022.

No additional data was supplied by Sky Quarry to update production forecasts based on operating data from US Oil Sands. US Oil Sands Grand Prairie pilot data was the only pilot data reviewed by McDaniel.

## 6.2 Bitumen Extraction

Bitumen extraction yield was based on provided data from the Sky Quarry Grande Prairie Pilot Plant. McDaniel & Associates investigated trial data from runs 1 to 224, with an average overall bitumen recovery of 85 percent obtained when analyzing 60 PR Spring ore trials.

McDaniel & Associates has assumed higher bitumen extraction recovery factors as to what is seen in historical trial data. Through consultation with Sky Quarry, the development of the extraction process has been an evolution of ore types, equipment types, chemicals, temperatures, water chemistry and design types and a historical average of all the trials does not fully represent the current extraction efficiency of the bitumen extraction process. Taking into the account the variability of each trial, the anticipated bitumen extraction yields are summarized below.

Sky Quarry's Hildebrandt technology is expected to yield higher volumes. Until the process has been implemented in the field, McDaniel has not adjusted the yields.

**Table 6.1:** Bitumen Extraction Yield Estimates

Category / Level of Certainty	Anticipated Bitumen Extraction Yield (%)
Low Estimate	85.0
Best Estimate	90.0
High Estimate	95.0

## 7 CAPITAL COSTS

Forecast capital costs associated with mining and extractions operations were based on cost estimates outlined within Sky Quarry corporate presentations and budget documents.

The original facility was fully constructed and was operational.

Sky Quarry has assumed retrofit capital costs for the PR Spring Phase 1 facility of \$6,500,000.

Maintenance capital costs associated with extraction were largely based on Sky Quarry guidance and has been estimated to be \$1.00/bbl to \$2.00/bbl, depending on certainty level (US Dollars, 2020\$).

Detailed capital cost estimates for each level of certainty can be found within the property detail in Appendix 2.

## **8 OPERATING COSTS**

Operating costs associated with PR Spring Phase 1 consists of two separate metrics, the costs associated with the mining of property lands and the extraction/plant costs to extract the bitumen from the mined sands.

Mining operating costs have been estimated based on operating cost guidance provided by Sky Quarry.

Sky Quarry supplied estimated from Premier RAS which will complete the bitumen mining, delivering the mined and crushed ore to the storage area before the apron feeder. Their cost estimate assumed a minimum 500,000 tons per year and justify the lower mining costs relative to the original US Oil Sands cost estimated.

Operating costs associated with mining is estimated to be \$7.50/bbl (US Dollars, 2020\$) on a Best Estimate Case.

Extraction operating cost have been estimated based on operating cost guidance provided by Sky Quarry. Bitumen extraction consists of a cost associated with the use of/recycle of solvent and a fixed cost component based on various remaining plant operating costs. Operating costs associated with bitumen extraction has been estimated to be \$15.00/bbl (US Dollars, 2020\$) on a Best Estimate Case.

Based on the current development scenario, PR Spring Phase 1 will incur “all-in” operating costs per barrel of bitumen mined of US\$22.50/bbl in the Best Estimate Case over the life of the Phase 1.

Detailed operating cost estimates for each of the three levels of certainty can be found within the property detail in Appendix 2.

## **9 ROYALTIES PAYABLE**

The Utah state royalty is collected through the Division of Oil, Gas & Mining of the Utah Department of Natural Resources. The initial rate Sky Quarry pays is 6.5 percent (net of extraction, transport costs and heavy differential discounts). The initial rate is fixed for the first five years of production and then increased by no more than one percent per year to a maximum of 12.5 percent. Over the life of Phase 1, royalties payable per barrel of bitumen mined were estimated to be \$1.90/bbl (2020\$) on a Best Estimate basis.

## **10 SUMMARY**

In carrying out this evaluation, we relied upon documents prepared by Norwest Corporation including the US Oil Sands Phase 1 Mine Plan and Cost Estimate, dated October 9, 2014, as well as various other Sky Quarry planning and budgetary documents.

Based on the geological and engineering data available at present, recoverable volumes of bitumen contingent resources have been estimated. The net present values attributable to the resources have also been estimated.

Sky Quarry's PR Spring Project Phase 1 is estimated to contain Best Estimate contingent resources of 10,715 Mbbl as of December 31, 2020, Company share.

## **APPENDIX 1**

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### **NETBACK PRICING FORECAST**

**Sky Quarry Inc. – PR Spring Project Phase 1  
Evaluation of Bitumen Contingent Resources**

**Based on 3 Consultant Average April 1, 2021 Prices  
As of December 31, 2020**



**Consultant Average (McDaniel, GLJ and Sproule)**  
**Summary of Price Forecasts**  
**April 1, 2021**

Table 1

Year	Crude Oil Price Forecasts							Liquids Price Forecasts					Gas Price Forecasts										US/CAN Exchange Rate
	WTI Crude Oil	Brent Crude Oil	Bitumen Netback	Edmonton Light Crude Oil	Alberta Bow River Hardisty Crude Oil	Western Canadian Select Crude Oil	Alberta Heavy Crude Oil	Edmonton Ethane	Edmonton Propane	Edmonton Butanes	Edmonton Cond. & Natural Gasolines	U.S. Henry Hub Gas Price	Alberta AECO Spot Price	Alberta Average Plantgate	Alberta Aggregator Plantgate	Empress	Sask. Prov. Gas Plantgate	British Columbia Average Plantgate	British Columbia Station 2	Inflation %			
	\$US/bbl	\$US/bbl	\$US/bbl	\$C/bbl	\$C/bbl	\$C/bbl	\$C/bbl	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$US/MMBtu	\$C/MMBtu	\$C/MMBtu	\$C/MMBtu	\$C/MMBtu	\$C/MMBtu	\$C/MMBtu	\$C/MMBtu	\$C/MMBtu			
	(1)	(2)		(3)	(4)	(5)	(6)						(7)	(8)									
History																							
2011	95.10	111.25		95.05	78.55	77.10	67.90		55.15	76.50	104.20	4.00	3.70	3.50	3.75	3.50	3.55	3.30	3.40	2.90	1.010		
2012	94.20	111.65		86.10	74.35	73.10	63.65		28.60	69.55	100.80	2.75	2.45	2.25	2.25	2.30	2.30	2.25	2.40	1.55	1.000		
2013	97.95	108.60		93.05	76.55	75.25	65.25		38.90	69.40	104.65	3.75	3.20	3.00	3.00	3.10	3.10	2.95	3.10	0.95	0.970		
2014	93.00	99.00		93.50	80.40	79.10	71.20		45.05	69.60	102.40	4.35	4.40	4.20	4.20	4.55	4.40	4.05	4.20	1.90	0.905		
2015	48.80	52.35		57.75	46.10	44.80	39.55		6.60	36.50	60.30	2.60	2.80	2.60	2.60	3.00	2.70	2.00	2.10	1.10	0.785		
2016	43.30	43.55		53.90	40.45	39.15	33.35		13.15	34.35	56.15	2.50	2.10	1.90	1.90	2.30	2.20	1.55	1.65	1.45	0.755		
2017	50.90	54.25		62.85	52.00	50.70	45.20		28.90	44.60	66.85	3.00	2.40	2.20	2.20	2.85	2.40	1.80	1.95	1.60	0.770		
2018	64.95	71.05		69.65	51.25	49.95	40.00		27.55	32.80	79.20	3.05	1.55	1.35	1.35	3.00	1.60	1.20	1.40	2.25	0.770		
2019	57.00	64.35		69.00	60.00	58.70	54.80		17.40	23.55	70.30	2.55	1.60	1.40	1.40	2.75	1.75	1.00	1.15	2.00	0.755		
2020	39.25	41.75		45.00	36.50	35.40	30.70		16.40	22.15	49.15	2.05	2.25	2.05	2.05	2.30	2.45	2.05	2.20	- 0.10	0.745		
2021 (3 mos)	57.75	60.75		66.65	58.00	57.40	52.05		31.25	28.00	73.20	3.55	2.95	2.75	2.75	3.00	3.35	2.65	2.80	2.00	0.790		
Forecast																							
2021 (9 mos)	59.67	62.33	42.17	69.68	60.29	59.64	54.04	8.71	29.79	32.62	74.01	2.77	2.70	2.50	2.50	2.89	2.60	2.43	2.62	0.0	0.792		
2022	57.41	60.26	39.56	67.21	56.95	56.32	50.76	8.72	26.40	35.85	71.12	2.87	2.73	2.52	2.52	2.97	2.62	2.47	2.66	1.3	0.787		
2023	55.62	58.49	37.42	65.03	54.41	53.58	48.29	8.47	25.96	39.06	69.39	2.90	2.66	2.45	2.45	2.93	2.55	2.40	2.59	2.0	0.780		
2024	56.74	59.63	38.16	66.33	55.51	54.65	49.20	8.65	26.48	39.83	70.78	2.96	2.71	2.50	2.50	2.99	2.61	2.45	2.64	2.0	0.780		
2025	57.87	60.80	38.93	67.66	56.62	55.75	50.19	8.82	27.01	40.63	72.20	3.02	2.76	2.55	2.55	3.05	2.66	2.50	2.69	2.0	0.780		
2026	59.03	61.99	39.71	69.01	57.75	56.86	51.20	9.00	27.55	41.44	73.64	3.08	2.82	2.60	2.60	3.11	2.71	2.55	2.75	2.0	0.780		
2027	60.21	63.20	40.50	70.40	58.91	58.00	52.24	9.19	28.10	42.28	75.12	3.14	2.88	2.65	2.65	3.17	2.76	2.60	2.80	2.0	0.780		
2028	61.42	64.44	41.31	71.80	60.08	59.16	53.29	9.37	28.66	43.12	76.62	3.20	2.93	2.71	2.71	3.23	2.82	2.66	2.86	2.0	0.780		
2029	62.64	65.70	42.14	73.24	61.28	60.34	54.36	9.56	29.23	43.98	78.15	3.26	2.99	2.76	2.76	3.29	2.87	2.71	2.91	2.0	0.780		
2030	63.90	67.02	42.98	74.70	62.51	61.55	55.45	9.75	29.82	44.86	79.71	3.33	3.05	2.81	2.81	3.36	2.93	2.77	2.97	2.0	0.780		
2031	65.17	68.36	43.84	76.19	63.76	62.78	56.56	9.95	30.41	45.76	81.31	3.39	3.11	2.87	2.87	3.43	2.99	2.82	3.03	2.0	0.780		
2032	66.48	69.72	44.72	77.72	65.03	64.04	57.69	10.15	31.02	46.67	82.94	3.46	3.17	2.93	2.93	3.50	3.05	2.88	3.09	2.0	0.780		
2033	67.81	71.12	45.61	79.27	66.33	65.32	58.84	10.35	31.64	47.61	84.59	3.53	3.24	2.99	2.99	3.57	3.11	2.94	3.15	2.0	0.780		
2034	69.16	72.54	46.52	80.86	67.66	66.63	60.02	10.56	32.27	48.56	86.29	3.60	3.30	3.05	3.05	3.64	3.17	3.00	3.22	2.0	0.780		
2035	70.55	73.99	47.45	82.48	69.01	67.96	61.22	10.77	32.92	49.53	88.01	3.67	3.37	3.11	3.11	3.71	3.24	3.06	3.28	2.0	0.780		
Thereafter	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	+2%/yr	2.0	0.780		

(1) West Texas Intermediate at Cushing Oklahoma 40 degrees API, 0.5% sulphur

(2) North Sea Brent Blend 37 degrees API, 1.0% sulphur

(3) Edmonton Light Sweet 40 degrees API, 0.3% sulphur

(4) Bow River at Hardisty, Alberta (Heavy stream)

(5) Western Canadian Select at Hardisty, Alberta

(6) Heavy crude oil 12 degrees API at Hardisty, Alberta (after deduction of blending costs to reach pipeline quality)

(7) Historical prices based on AECO 7A (near month prices). 5A (daily price) expected to be equal to 7A over long term. 2019 historical prices: 7A \$1.60/MMBTU, 5A \$1.75/MMBTU

(8) This forecast also applies to direct sales contracts and the Alberta gas reference price used in the Crown royalty calculations

## **APPENDIX 2**

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### **ECONOMIC DETAIL – PR SPRING PHASE 1**

**Sky Quarry Inc. – PR Spring Project Phase 1  
Evaluation of Bitumen Contingent Resources**

**Based on 3 Consultant Average April 1, 2021 Prices  
As of December 31, 2020**





**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Summary of Unrisked Contingent Resources and Net Present Values**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**Uinta Basin**

Table 2 - 1

**Contingent Resources Technology Under Development - Bitumen Pricing**

**Summary of volumes**

<u>Classification and Product</u>	<u>Bitumen Sales</u>		
	Gross <sup>1</sup>	RI <sup>2</sup>	Net <sup>3</sup>
	Mbbl	Mbbl	Mbbl
Low Estimate Contingent Resources - Bitumen	10,120	-	9,533
Best Estimate Contingent Resources - Bitumen	10,715	-	10,041
High Estimate Contingent Resources - Bitumen	11,311	-	10,549

**Summary of Net Present Values Before Income Taxes**

	US \$MM Dollars							
Classification and Product	0.0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%	25.0%
Low Estimate Contingent Resources - Bitumen	12	8	6	5	4	4	2	1
Best Estimate Contingent Resources - Bitumen	82	55	45	39	35	29	22	18
High Estimate Contingent Resources - Bitumen	152	103	83	73	65	55	43	34

**Summary of Net Present Values Before Income Taxes - Per Unit Basis**

	US \$/Bbl of Produced Bitumen							
Classification and Product	0.0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%	25.0%
Low Estimate Contingent Resources - Bitumen	1.17	0.77	0.61	0.52	0.44	0.35	0.23	0.14
Best Estimate Contingent Resources - Bitumen	7.65	5.16	4.18	3.67	3.24	2.72	2.10	1.66
High Estimate Contingent Resources - Bitumen	13.44	9.08	7.38	6.49	5.74	4.85	3.77	3.02

<sup>1</sup> Gross volumes include working interest volumes before royalty deductions

<sup>2</sup> Royalty interest volumes

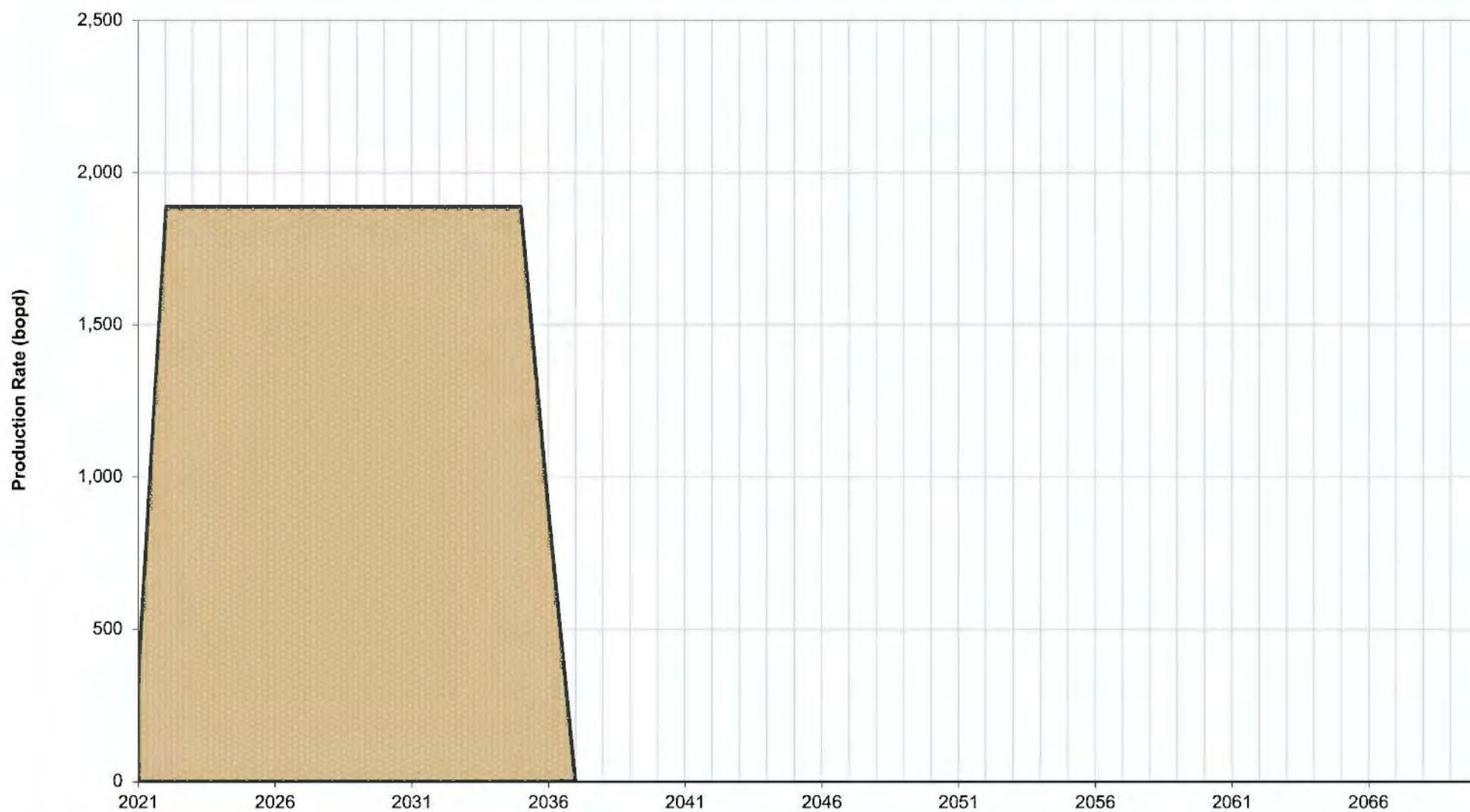
<sup>3</sup> Net volumes are defined as gross volumes, less royalty deductions payable

<sup>4</sup> Rate at which future income must be discounted for the present worth of this income to be equal to the initial investment



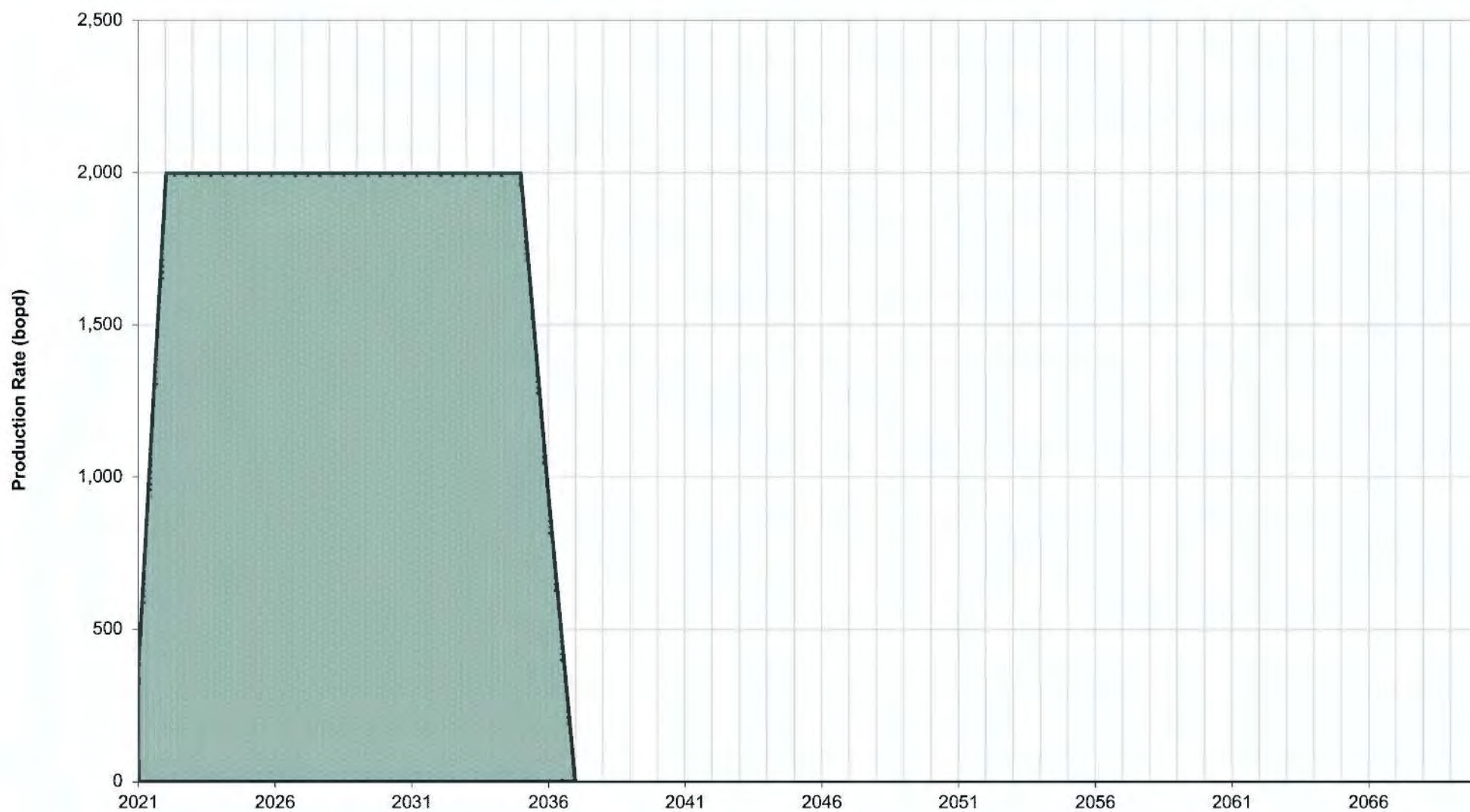
**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Bitumen Production Forecast**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**Low Estimate Contingent Resources**  
**Uinta Basin**

Figure 2 - 1



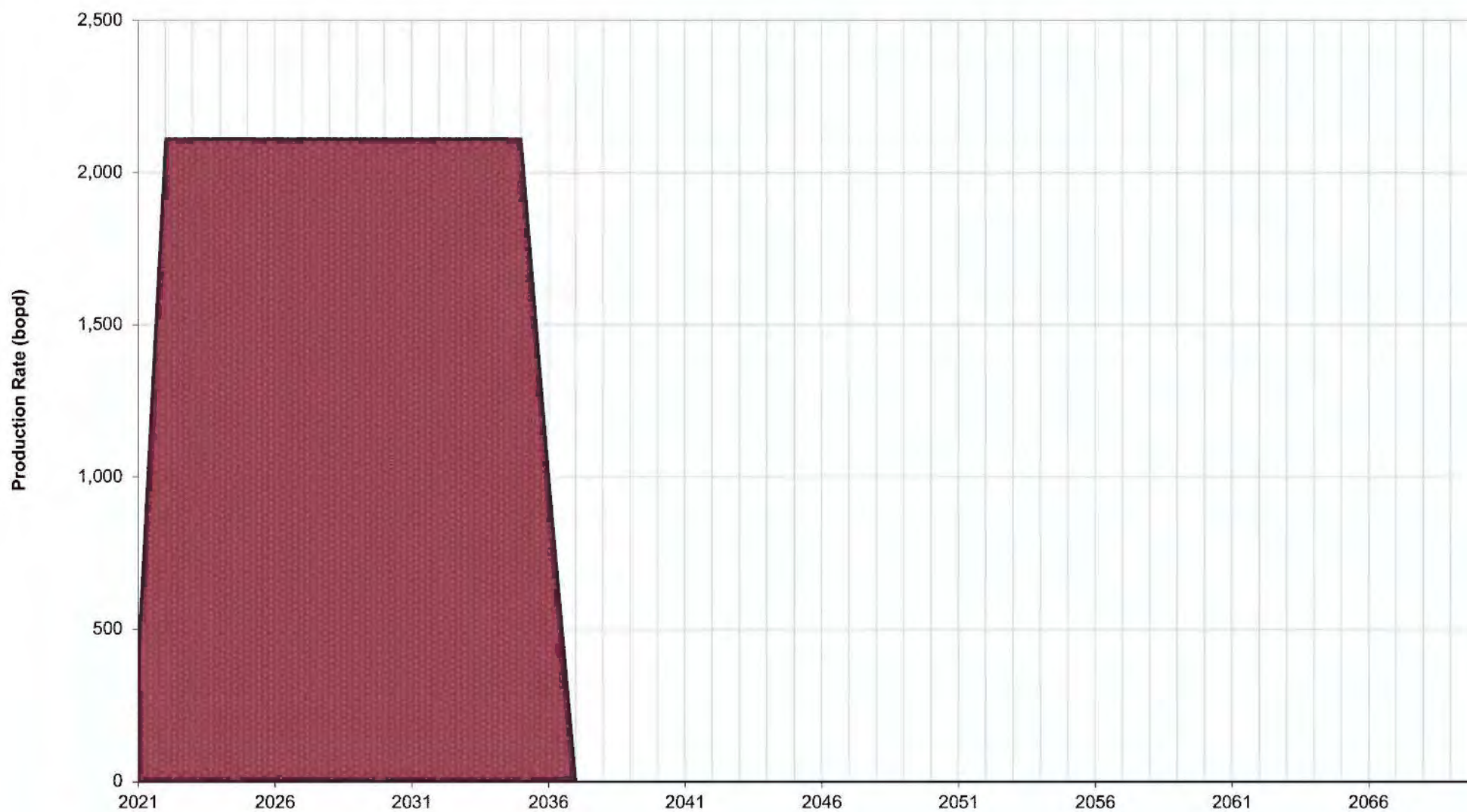
**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Bitumen Production Forecast**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**Best Estimate Contingent Resources**  
**Uinta Basin**

Figure 2 - 2



**Sky Quarry Inc. - PR Spring Project Phase 1  
Bitumen Production Forecast  
April Consultant Average Prices (US\$) as of December 31, 2020  
High Estimate Contingent Resources  
Uinta Basin**

Figure 2 - 3



**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Forecast of Company Share Production and Revenues**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**Low Estimate Contingent Resources**  
**Uinta Basin**

Table 2 - 2

**NOTE: ALL VALUES SHOWN AS COMPANY-SHARE**

**Contingent Resources Technology Under Development - Bitumen Pricing**

Year	Daily Bitumen Mined Bopd	Annual Bitumen Mined MBbl	Plant Yield frac.	Daily Bitumen Prod. Bopd	Annual Bitumen Prod. MBbl	Bitumen Price \$/Bbl	Annual Bitumen Sales \$M	Mining Operating Costs \$M	Extraction Operating Costs \$M	Total Operating Costs \$M	Total Operating Costs \$/Bbl Bit. Mined	Total Royalties \$M	Total Royalties % of Rev.	Growth Capital Costs \$M	Sustaining Capital Costs \$M	Abandonment Costs \$M	Net Revenue Before Tax \$M	Cumulative Net Revenue Before Tax \$M	NPV B.T. at 5.0% \$M	NPV B.T. at 8.0% \$M	NPV B.T. at 10.0% \$M	NPV B.T. at 12.0% \$M	NPV B.T. at 15.0% \$M	
2021	444	162	0.85	378	138	42.17	5,814	1,379	2,758	4,137	25.50	(185)	(3.2)	6,500	432	-	(5,069)	(5,069)	(4,947)	(4,877)	(4,833)	(4,780)	(4,727)	
2022	2,222	811	0.85	1,889	699	39.56	27,274	7,032	14,065	21,097	26.01	1,064	3.9	-	1,655	-	3,459	(1,610)	3,215	3,082	2,998	2,918	2,805	
2023	2,222	811	0.85	1,889	699	37.42	25,797	7,173	14,346	21,519	26.53	931	3.6	-	1,668	-	1,660	50	1,469	1,369	1,308	1,250	1,170	
2024	2,222	811	0.85	1,889	699	38.16	26,312	7,316	14,633	21,949	27.06	1,095	4.2	-	1,722	-	1,546	1,596	1,303	1,181	1,107	1,040	948	
2025	2,222	811	0.85	1,889	699	38.93	26,839	7,463	14,926	22,388	27.60	1,266	4.7	-	1,756	-	1,429	3,024	1,147	1,010	930	858	762	
2026	2,222	811	0.85	1,889	699	39.71	27,376	7,612	15,224	22,836	28.15	1,443	5.3	-	1,791	-	1,305	4,330	998	855	773	700	605	
2027	2,222	811	0.85	1,889	699	40.50	27,924	7,764	15,529	23,293	28.72	1,627	5.8	-	1,827	-	1,178	5,507	858	714	634	564	475	
2028	2,222	811	0.85	1,889	699	41.31	28,483	7,920	15,839	23,759	29.29	1,818	6.4	-	1,863	-	1,043	6,550	724	586	510	446	366	
2029	2,222	811	0.85	1,889	699	42.14	29,052	8,078	16,156	24,234	29.88	2,015	6.9	-	1,901	176	726	7,277	480	378	323	277	221	
2030	2,222	811	0.85	1,889	699	42.96	29,633	8,239	16,479	24,718	30.47	2,056	6.9	-	1,939	179	741	8,018	466	357	300	252	196	
2031	2,222	811	0.85	1,889	699	43.84	30,226	8,404	16,809	25,213	31.08	2,097	6.9	-	1,977	183	756	8,774	453	337	278	230	174	
2032	2,222	811	0.85	1,889	699	44.72	30,830	8,572	17,145	25,717	31.71	2,139	6.9	-	2,017	187	771	9,544	440	318	258	209	155	
2033	2,222	811	0.85	1,889	699	45.61	31,447	8,744	17,488	26,231	32.34	2,181	6.9	-	2,057	190	786	10,331	427	300	239	191	137	
2034	2,222	811	0.85	1,889	699	46.52	32,076	8,919	17,837	26,756	32.99	2,225	6.9	-	2,099	194	802	11,133	415	284	222	174	122	
2035	2,222	811	0.85	1,889	699	47.45	32,717	9,097	18,194	27,291	33.65	2,270	6.9	-	2,140	198	818	11,951	403	268	205	158	108	
2036	1,064	389	0.85	904	330	48.40	15,973	4,441	8,882	13,324	34.32	1,108	6.9	-	1,045	202	294	12,245	138	89	67	51	34	
2037	-	-	0.85	-	-	49.37	-	-	-	-	-	-	-	-	-	-	206	(206)	12,039	(92)	(58)	(43)	(32)	(21)
2038	-	-	0.85	-	-	50.36	-	-	-	-	-	-	-	-	-	-	210	(210)	11,829	(89)	(55)	(40)	(29)	(18)
2039	-	-	0.85	-	-	51.37	-	-	-	-	-	-	-	-	-	-	-	11,629	-	-	-	-	-	-
2040	-	-	0.85	-	-	52.39	-	-	-	-	-	-	-	-	-	-	-	11,429	-	-	-	-	-	-
2041	-	-	0.85	-	-	53.44	-	-	-	-	-	-	-	-	-	-	-	11,229	-	-	-	-	-	-
2042	-	-	0.85	-	-	54.51	-	-	-	-	-	-	-	-	-	-	-	11,029	-	-	-	-	-	-
2043	-	-	0.85	-	-	55.60	-	-	-	-	-	-	-	-	-	-	-	11,829	-	-	-	-	-	-
2044	-	-	0.85	-	-	56.71	-	-	-	-	-	-	-	-	-	-	-	11,629	-	-	-	-	-	-
2045	-	-	0.85	-	-	57.85	-	-	-	-	-	-	-	-	-	-	-	11,429	-	-	-	-	-	-
2046	-	-	0.85	-	-	59.00	-	-	-	-	-	-	-	-	-	-	-	11,229	-	-	-	-	-	-
2047	-	-	0.85	-	-	60.18	-	-	-	-	-	-	-	-	-	-	-	11,029	-	-	-	-	-	-
2048	-	-	0.85	-	-	61.39	-	-	-	-	-	-	-	-	-	-	-	11,829	-	-	-	-	-	-
2049	-	-	0.85	-	-	62.62	-	-	-	-	-	-	-	-	-	-	-	11,629	-	-	-	-	-	-
2050	-	-	0.85	-	-	63.87	-	-	-	-	-	-	-	-	-	-	-	11,429	-	-	-	-	-	-
2051	-	-	0.85	-	-	65.14	-	-	-	-	-	-	-	-	-	-	-	11,229	-	-	-	-	-	-
2052	-	-	0.85	-	-	66.45	-	-	-	-	-	-	-	-	-	-	-	11,029	-	-	-	-	-	-
2053	-	-	0.85	-	-	67.78	-	-	-	-	-	-	-	-	-	-	-	11,829	-	-	-	-	-	-
2054	-	-	0.85	-	-	69.13	-	-	-	-	-	-	-	-	-	-	-	11,629	-	-	-	-	-	-
2055	-	-	0.85	-	-	70.51	-	-	-	-	-	-	-	-	-	-	-	11,429	-	-	-	-	-	-
2056	-	-	0.85	-	-	71.93	-	-	-	-	-	-	-	-	-	-	-	11,229	-	-	-	-	-	-
2057	-	-	0.85	-	-	73.36	-	-	-	-	-	-	-	-	-	-	-	11,029	-	-	-	-	-	-
2058	-	-	0.85	-	-	74.83	-	-	-	-	-	-	-	-	-	-	-	11,829	-	-	-	-	-	-
2059	-	-	0.85	-	-	76.33	-	-	-	-	-	-	-	-	-	-	-	11,629	-	-	-	-	-	-
2060	-	-	0.85	-	-	77.85	-	-	-	-	-	-	-	-	-	-	-	11,429	-	-	-	-	-	-
2061	-	-	0.85	-	-	79.41	-	-	-	-	-	-	-	-	-	-	-	11,229	-	-	-	-	-	-
2062	-	-	0.85	-	-	81.00	-	-	-	-	-	-	-	-	-	-	-	11,029	-	-	-	-	-	-
2063	-	-	0.85	-	-	82.62	-	-	-	-	-	-	-	-	-	-	-	11,829	-	-	-	-	-	-
2064	-	-	0.85	-	-	84.27	-	-	-	-	-	-	-	-	-	-	-	11,629	-	-	-	-	-	-
2065	-	-	0.85	-	-	85.96	-	-	-	-	-	-	-	-	-	-	-	11,429	-	-	-	-	-	-
2066	-	-	0.85	-	-	87.68	-	-	-	-	-	-	-	-	-	-	-	11,229	-	-	-	-	-	-
2067	-	-	0.85	-	-	89.43	-	-	-	-	-	-	-	-	-	-	-	11,029	-	-	-	-	-	-
2068	-	-	0.85	-	-	91.22	-	-	-	-	-	-	-	-	-	-	-	11,829	-	-	-	-	-	-
2069	-	-	0.85	-	-	93.04	-	-	-	-	-	-	-	-	-	-	-	11,629	-	-	-	-	-	-
2070	-	-	0.85	-	-	94.90	-	-	-	-	-	-	-	-	-	-	-	11,429	-	-	-	-	-	-
TOTALS		11,906			10,120	42.27	427,772	118,154	236,308	354,462	29.77	25,149	5.9	6,500	27,908	1,924	11,829		7,807	6,138	5,237	4,468	3,511	



**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Forecast of Volumes and Capital Costs**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**Low Estimate Contingent Resources**  
**Uinta Basin**

Table 2 - 3

Year	Project Year	Production Rate bopd	Project Capacity Calendar Day bopd	Growth Capital \$M 2021	Sustaining Capital \$M 2021	Total \$M 2021	Total \$M Current
2021	1	444	2,000	6,500	432	6,932	6,932
2022	2	2,222	2,000	-	1,622	1,622	1,655
2023	3	2,222	2,000	-	1,622	1,622	1,688
2024	4	2,222	2,000	-	1,622	1,622	1,722
2025	5	2,222	2,000	-	1,622	1,622	1,756
2026	6	2,222	2,000	-	1,622	1,622	1,791
2027	7	2,222	2,000	-	1,622	1,622	1,827
2028	8	2,222	2,000	-	1,622	1,622	1,863
2029	9	2,222	2,000	-	1,622	1,622	1,901
2030	10	2,222	2,000	-	1,622	1,622	1,939
2031	11	2,222	2,000	-	1,622	1,622	1,977
2032	12	2,222	2,000	-	1,622	1,622	2,017
2033	13	2,222	2,000	-	1,622	1,622	2,057
2034	14	2,222	2,000	-	1,622	1,622	2,099
2035	15	2,222	2,000	-	1,622	1,622	2,140
2036	16	1,064	2,000	-	776	776	1,045
2037	17	-	-	-	-	-	-
2038	18	-	-	-	-	-	-
2039	19	-	-	-	-	-	-
2040	20	-	-	-	-	-	-
2041	21	-	-	-	-	-	-
2042	22	-	-	-	-	-	-
2043	23	-	-	-	-	-	-
2044	24	-	-	-	-	-	-
2045	25	-	-	-	-	-	-
2046	26	-	-	-	-	-	-
2047	27	-	-	-	-	-	-
2048	28	-	-	-	-	-	-
2049	29	-	-	-	-	-	-
2050	30	-	-	-	-	-	-
2051	31	-	-	-	-	-	-
2052	32	-	-	-	-	-	-
2053	33	-	-	-	-	-	-
2054	34	-	-	-	-	-	-
2055	35	-	-	-	-	-	-
2056	36	-	-	-	-	-	-
2057	37	-	-	-	-	-	-
2058	38	-	-	-	-	-	-
2059	39	-	-	-	-	-	-
2060	40	-	-	-	-	-	-
2061	41	-	-	-	-	-	-
2062	42	-	-	-	-	-	-
2063	43	-	-	-	-	-	-
2064	44	-	-	-	-	-	-
2065	45	-	-	-	-	-	-
2066	46	-	-	-	-	-	-
2067	47	-	-	-	-	-	-
2068	48	-	-	-	-	-	-
2069	49	-	-	-	-	-	-
2070	50	-	-	-	-	-	-
Total				6,500	23,919	30,419	34,408

**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Forecast of Company Share Production and Revenues**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**Best Estimate Contingent Resources**  
**Uinta Basin**

Table 2 - 4

**NOTE: ALL VALUES SHOWN AS COMPANY-SHARE**

**Contingent Resources Technology Under Development - Bitumen Pricing**

Year	Daily Bitumen Mined Bopd	Annual Bitumen Mined MBbl	Plant Yield frac.	Daily Bitumen Prod. Bopd	Annual Bitumen Prod. MBbl	Bitumen Price \$/Bbl	Annual Bitumen Sales \$M	Mining Operating Costs \$M	Extraction Operating Costs \$M	Total Operating Costs \$M	Total Operating Costs \$/Bbl Bit. Mined	Total Royalties \$M	Total Royalties % of Rev.	Growth Capital Costs \$M	Sustaining Capital Costs \$M	Abandonment Costs \$M	Net Revenue Before Tax \$M	Cumulative Net Revenue Before Tax \$M	NPV B.T. at 5.0% \$M	NPV B.T. at 8.0% \$M	NPV B.T. at 10.0% \$M	NPV B.T. at 12.0% \$M	NPV B.T. at 15.0% \$M
2021	444	162	0.90	400	146	42.17	6,156	1,217	2,433	3,650	22.50	(157)	(2.6)	6,500	324	-	(4,180)	(4,180)	(4,060)	(4,003)	(3,967)	(3,931)	(3,879)
2022	2,222	811	0.90	2,000	730	39.56	28,879	6,205	12,410	18,615	22.95	1,198	4.1	-	1,241	-	7,824	3,064	7,272	6,971	6,782	6,601	6,345
2023	2,222	811	0.90	2,000	730	37.42	27,314	6,329	12,858	18,987	23.41	1,068	3.9	-	1,266	-	5,894	9,658	5,305	4,945	4,723	4,515	4,226
2024	2,222	811	0.90	2,000	730	38.16	27,860	6,456	12,911	19,367	23.88	1,256	4.5	-	1,291	-	5,945	15,603	5,012	4,541	4,259	3,998	3,645
2025	2,222	811	0.90	2,000	730	38.93	28,418	6,585	13,170	19,754	24.35	1,453	5.1	-	1,317	-	5,894	21,497	4,732	4,169	3,838	3,539	3,142
2026	2,222	811	0.90	2,000	730	39.71	28,986	6,716	13,433	20,149	24.84	1,656	5.7	-	1,343	-	5,837	27,334	4,463	3,823	3,456	3,130	2,706
2027	2,222	811	0.90	2,000	730	40.50	29,567	6,851	13,702	20,552	25.34	1,867	6.3	-	1,370	-	5,777	33,111	4,207	3,503	3,109	2,766	2,329
2028	2,222	811	0.90	2,000	730	41.31	30,159	6,988	13,978	20,964	25.85	2,086	6.9	-	1,398	-	5,712	38,823	3,951	3,207	2,795	2,441	2,002
2029	2,222	811	0.90	2,000	730	42.14	30,761	7,128	14,265	21,383	26.36	2,312	7.5	-	1,426	176	5,464	44,288	3,609	2,841	2,431	2,085	1,666
2030	2,222	811	0.90	2,000	730	42.98	31,376	7,270	14,540	21,810	26.89	2,359	7.5	-	1,454	179	5,574	49,861	3,506	2,683	2,254	1,899	1,478
2031	2,222	811	0.90	2,000	730	43.84	32,004	7,416	14,831	22,247	27.43	2,406	7.5	-	1,483	183	5,685	55,547	3,406	2,534	2,090	1,730	1,310
2032	2,222	811	0.90	2,000	730	44.72	32,644	7,564	15,128	22,692	27.98	2,454	7.5	-	1,513	187	5,799	61,346	3,309	2,393	1,938	1,575	1,162
2033	2,222	811	0.90	2,000	730	45.61	33,297	7,715	15,430	23,145	28.54	2,503	7.5	-	1,543	190	5,815	67,261	3,214	2,260	1,797	1,425	1,031
2034	2,222	811	0.90	2,000	730	46.52	33,963	7,869	15,739	23,608	29.11	2,553	7.5	-	1,574	194	6,033	73,294	3,123	2,135	1,686	1,307	914
2035	2,222	811	0.90	2,000	730	47.45	34,642	8,027	16,054	24,080	29.69	2,604	7.5	-	1,605	198	6,154	79,448	3,033	2,016	1,545	1,190	811
2036	1,064	388	0.90	957	349	48.40	16,912	3,919	7,837	11,756	30.28	1,271	7.5	-	784	202	2,899	82,347	1,361	879	662	500	332
2037	-	-	0.90	-	-	49.37	-	-	-	-	-	-	-	-	-	-	(206)	82,142	(92)	(58)	(43)	(32)	(21)
2038	-	-	0.90	-	-	50.36	-	-	-	-	-	-	-	-	-	-	(210)	81,931	(89)	(55)	(40)	(29)	(18)
2039	-	-	0.90	-	-	51.37	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2040	-	-	0.90	-	-	52.39	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2041	-	-	0.90	-	-	53.44	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2042	-	-	0.90	-	-	54.51	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2043	-	-	0.90	-	-	55.60	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2044	-	-	0.90	-	-	56.71	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2045	-	-	0.90	-	-	57.85	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2046	-	-	0.90	-	-	59.00	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2047	-	-	0.90	-	-	60.18	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2048	-	-	0.90	-	-	61.39	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2049	-	-	0.90	-	-	62.62	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2050	-	-	0.90	-	-	63.87	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2051	-	-	0.90	-	-	65.14	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2052	-	-	0.90	-	-	66.45	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2053	-	-	0.90	-	-	67.78	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2054	-	-	0.90	-	-	69.13	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2055	-	-	0.90	-	-	70.51	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2056	-	-	0.90	-	-	71.93	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2057	-	-	0.90	-	-	73.36	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2058	-	-	0.90	-	-	74.83	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2059	-	-	0.90	-	-	76.33	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2060	-	-	0.90	-	-	77.85	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2061	-	-	0.90	-	-	79.41	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2062	-	-	0.90	-	-	81.00	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2063	-	-	0.90	-	-	82.62	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2064	-	-	0.90	-	-	84.27	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2065	-	-	0.90	-	-	85.96	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2066	-	-	0.90	-	-	87.68	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2067	-	-	0.90	-	-	89.43	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2068	-	-	0.90	-	-	91.22	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2069	-	-	0.90	-	-	93.04	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
2070	-	-	0.90	-	-	94.90	-	-	-	-	-	-	-	-	-	-	-	81,931	-	-	-	-	-
TOTALS		11,906			10,715	42.27	452,936	104,254	208,507	312,761	28.27	28,888	8.4	8,500	20,931	1,924	81,931		55,274	44,785	39,295	34,720	29,183



**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Forecast of Volumes and Capital Costs**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**Best Estimate Contingent Resources**  
**Uinta Basin**

Table 2 - 5

Year	Project Year	Production Rate bopd	Project Capacity Calendar Day bopd	Growth Capital \$M 2021	Sustaining Capital \$M 2021	Total \$M 2021	Total \$M Current
2021	1	444	2,222	6,500	324	6,824	6,824
2022	2	2,222	2,222	-	1,217	1,217	1,241
2023	3	2,222	2,222	-	1,217	1,217	1,266
2024	4	2,222	2,222	-	1,217	1,217	1,291
2025	5	2,222	2,222	-	1,217	1,217	1,317
2026	6	2,222	2,222	-	1,217	1,217	1,343
2027	7	2,222	2,222	-	1,217	1,217	1,370
2028	8	2,222	2,222	-	1,217	1,217	1,398
2029	9	2,222	2,222	-	1,217	1,217	1,426
2030	10	2,222	2,222	-	1,217	1,217	1,454
2031	11	2,222	2,222	-	1,217	1,217	1,483
2032	12	2,222	2,222	-	1,217	1,217	1,513
2033	13	2,222	2,222	-	1,217	1,217	1,543
2034	14	2,222	2,222	-	1,217	1,217	1,574
2035	15	2,222	2,222	-	1,217	1,217	1,605
2036	16	1,064	2,222	-	582	582	784
2037	17	-	-	-	-	-	-
2038	18	-	-	-	-	-	-
2039	19	-	-	-	-	-	-
2040	20	-	-	-	-	-	-
2041	21	-	-	-	-	-	-
2042	22	-	-	-	-	-	-
2043	23	-	-	-	-	-	-
2044	24	-	-	-	-	-	-
2045	25	-	-	-	-	-	-
2046	26	-	-	-	-	-	-
2047	27	-	-	-	-	-	-
2048	28	-	-	-	-	-	-
2049	29	-	-	-	-	-	-
2050	30	-	-	-	-	-	-
2051	31	-	-	-	-	-	-
2052	32	-	-	-	-	-	-
2053	33	-	-	-	-	-	-
2054	34	-	-	-	-	-	-
2055	35	-	-	-	-	-	-
2056	36	-	-	-	-	-	-
2057	37	-	-	-	-	-	-
2058	38	-	-	-	-	-	-
2059	39	-	-	-	-	-	-
2060	40	-	-	-	-	-	-
2061	41	-	-	-	-	-	-
2062	42	-	-	-	-	-	-
2063	43	-	-	-	-	-	-
2064	44	-	-	-	-	-	-
2065	45	-	-	-	-	-	-
2066	46	-	-	-	-	-	-
2067	47	-	-	-	-	-	-
2068	48	-	-	-	-	-	-
2069	49	-	-	-	-	-	-
2070	50	-	-	-	-	-	-
Total				6,500	17,939	24,439	27,431

**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Forecast of Company Share Production and Revenues**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**High Estimate Contingent Resources**  
**Uinta Basin**

Table 2 - 6

**NOTE: ALL VALUES SHOWN AS COMPANY-SHARE**

**Contingent Resources Technology Under Development - Bitumen Pricing**

Year	Daily Bitumen Mined Bopd	Annual Bitumen Mined MBbl	Plant Yield frac.	Daily Bitumen Prod. Bopd	Annual Bitumen Prod. MBbl	Bitumen Price \$/Bbl	Annual Bitumen Sales \$M	Mining Operating Costs \$M	Extraction Operating Costs \$M	Total Operating Costs \$M	Total Operating Costs \$/Bbl Bit. Mined	Total Royalties \$M	Total Royalties % of Rev.	Growth Capital Costs \$M	Sustaining Capital Costs \$M	Abandonment Costs \$M	Net Revenue Before Tax \$M	Cumulative Net Revenue Before Tax \$M	NPV B.T. at 5.0% \$M	NPV B.T. at 8.0% \$M	NPV B.T. at 10.0% \$M	NPV B.T. at 12.0% \$M	NPV B.T. at 15.0% \$M
2021	444	162	0.95	422	164	42.17	6,498	1,054	2,109	3,163	19.50	(129)	(2.0)	6,500	216	-	(3,252)	(3,252)	(3,173)	(3,129)	(3,100)	(3,073)	(3,032)
2022	2,222	811	0.95	2,111	771	39.55	30,493	5,378	10,755	16,133	19.89	1,333	4.4	-	827	-	12,190	8,938	11,330	10,861	10,568	10,284	9,985
2023	2,222	811	0.95	2,111	771	37.42	28,832	5,485	10,970	16,456	20.29	1,205	4.2	-	844	-	10,327	19,266	9,142	8,520	8,138	7,779	7,282
2024	2,222	811	0.95	2,111	771	38.16	29,407	5,595	11,190	16,785	20.69	1,418	4.8	-	861	-	10,344	29,610	8,720	7,901	7,410	6,957	6,342
2025	2,222	811	0.95	2,111	771	38.93	29,996	5,707	11,414	17,120	21.11	1,639	5.5	-	878	-	10,359	39,469	8,317	7,327	6,746	6,221	5,523
2026	2,222	811	0.95	2,111	771	39.71	30,596	5,821	11,642	17,463	21.53	1,869	6.1	-	896	-	10,369	50,338	7,929	6,791	6,139	5,580	4,807
2027	2,222	811	0.95	2,111	771	40.50	31,210	5,937	11,875	17,812	21.96	2,107	6.8	-	913	-	10,377	60,715	7,557	6,293	5,585	4,968	4,184
2028	2,222	811	0.95	2,111	771	41.31	31,834	6,056	12,112	18,168	22.40	2,354	7.4	-	932	-	10,380	71,096	7,199	5,828	5,079	4,437	3,639
2029	2,222	811	0.95	2,111	771	42.14	32,470	6,177	12,354	18,532	22.85	2,609	8.0	-	950	176	10,203	81,298	6,739	5,304	4,538	3,894	3,110
2030	2,222	811	0.95	2,111	771	42.98	33,119	6,301	12,602	18,902	23.30	2,861	8.0	-	969	179	10,407	91,705	6,547	5,009	4,208	3,546	2,759
2031	2,222	811	0.95	2,111	771	43.84	33,782	6,427	12,854	19,280	23.77	3,115	8.0	-	989	183	10,615	102,320	6,360	4,731	3,902	3,229	2,447
2032	2,222	811	0.95	2,111	771	44.72	34,457	6,555	13,111	19,666	24.25	3,369	8.0	-	1,009	187	10,827	113,147	6,178	4,468	3,618	2,941	2,170
2033	2,222	811	0.95	2,111	771	45.61	35,146	6,686	13,373	20,059	24.73	3,624	8.0	-	1,029	190	11,044	124,191	6,001	4,220	3,365	2,679	1,925
2034	2,222	811	0.95	2,111	771	46.52	35,849	6,820	13,640	20,461	25.23	3,881	8.0	-	1,049	194	11,265	135,456	5,830	3,986	3,111	2,439	1,707
2035	2,222	811	0.95	2,111	771	47.45	36,566	6,957	13,913	20,870	25.73	4,139	8.0	-	1,070	198	11,490	146,946	5,663	3,764	2,885	2,222	1,514
2036	1,064	389	0.95	1,010	369	48.40	17,852	3,396	6,792	10,188	26.24	1,435	8.0	-	522	202	5,504	152,450	2,584	1,670	1,256	850	631
2037	-	-	0.95	-	-	49.37	-	-	-	-	-	-	-	-	-	206	(206)	152,244	(92)	(58)	(43)	(32)	(21)
2038	-	-	0.95	-	-	50.36	-	-	-	-	-	-	-	-	-	210	(210)	152,034	(89)	(55)	(40)	(29)	(18)
2039	-	-	0.95	-	-	51.37	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2040	-	-	0.95	-	-	52.39	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2041	-	-	0.95	-	-	53.44	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2042	-	-	0.95	-	-	54.51	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2043	-	-	0.95	-	-	55.60	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2044	-	-	0.95	-	-	56.71	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2045	-	-	0.95	-	-	57.85	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2046	-	-	0.95	-	-	59.00	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2047	-	-	0.95	-	-	60.18	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2048	-	-	0.95	-	-	61.39	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2049	-	-	0.95	-	-	62.62	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2050	-	-	0.95	-	-	63.87	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2051	-	-	0.95	-	-	65.14	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2052	-	-	0.95	-	-	66.45	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2053	-	-	0.95	-	-	67.78	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2054	-	-	0.95	-	-	69.13	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2055	-	-	0.95	-	-	70.51	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2056	-	-	0.95	-	-	71.93	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2057	-	-	0.95	-	-	73.36	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2058	-	-	0.95	-	-	74.83	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2059	-	-	0.95	-	-	76.33	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2060	-	-	0.95	-	-	77.85	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2061	-	-	0.95	-	-	79.41	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2062	-	-	0.95	-	-	81.00	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2063	-	-	0.95	-	-	82.62	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2064	-	-	0.95	-	-	84.27	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2065	-	-	0.95	-	-	85.96	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2066	-	-	0.95	-	-	87.68	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2067	-	-	0.95	-	-	89.43	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2068	-	-	0.95	-	-	91.22	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2069	-	-	0.95	-	-	93.04	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
2070	-	-	0.95	-	-	94.90	-	-	-	-	-	-	-	-	-	-	-	152,034	-	-	-	-	-
TOTALS		11,906			11,311	42.27	478,099	90,353	180,706	271,060	22.77	32,827	8.8	8,500	13,954	1,924	152,034		102,741	83,432	73,354	64,973	54,854

**Sky Quarry Inc. - PR Spring Project Phase 1**  
**Forecast of Volumes and Capital Costs**  
**April Consultant Average Prices (US\$) as of December 31, 2020**  
**High Estimate Contingent Resources**  
**Uinta Basin**

Table 2 - 7

Year	Project Year	Production Rate bopd	Project Capacity Calendar Day bopd	Growth Capital \$M 2021	Sustaining Capital \$M 2021	Total \$M 2021	Total \$M Current
2021	1	444	2,222	6,500	216	6,716	6,716
2022	2	2,222	2,222	-	811	811	827
2023	3	2,222	2,222	-	811	811	844
2024	4	2,222	2,222	-	811	811	861
2025	5	2,222	2,222	-	811	811	878
2026	6	2,222	2,222	-	811	811	896
2027	7	2,222	2,222	-	811	811	913
2028	8	2,222	2,222	-	811	811	932
2029	9	2,222	2,222	-	811	811	950
2030	10	2,222	2,222	-	811	811	969
2031	11	2,222	2,222	-	811	811	989
2032	12	2,222	2,222	-	811	811	1,009
2033	13	2,222	2,222	-	811	811	1,029
2034	14	2,222	2,222	-	811	811	1,049
2035	15	2,222	2,222	-	811	811	1,070
2036	16	1,064	2,222	-	388	388	522
2037	17	-	-	-	-	-	-
2038	18	-	-	-	-	-	-
2039	19	-	-	-	-	-	-
2040	20	-	-	-	-	-	-
2041	21	-	-	-	-	-	-
2042	22	-	-	-	-	-	-
2043	23	-	-	-	-	-	-
2044	24	-	-	-	-	-	-
2045	25	-	-	-	-	-	-
2046	26	-	-	-	-	-	-
2047	27	-	-	-	-	-	-
2048	28	-	-	-	-	-	-
2049	29	-	-	-	-	-	-
2050	30	-	-	-	-	-	-
2051	31	-	-	-	-	-	-
2052	32	-	-	-	-	-	-
2053	33	-	-	-	-	-	-
2054	34	-	-	-	-	-	-
2055	35	-	-	-	-	-	-
2056	36	-	-	-	-	-	-
2057	37	-	-	-	-	-	-
2058	38	-	-	-	-	-	-
2059	39	-	-	-	-	-	-
2060	40	-	-	-	-	-	-
2061	41	-	-	-	-	-	-
2062	42	-	-	-	-	-	-
2063	43	-	-	-	-	-	-
2064	44	-	-	-	-	-	-
2065	45	-	-	-	-	-	-
2066	46	-	-	-	-	-	-
2067	47	-	-	-	-	-	-
2068	48	-	-	-	-	-	-
2069	49	-	-	-	-	-	-
2070	50	-	-	-	-	-	-
Total				6,500	11,960	18,460	20,454