



COLORADO
**Division of Reclamation,
Mining and Safety**
Department of Natural Resources

1313 Sherman St. Room 215
Denver, CO 80203

June 24, 2021

Ed Lyons
Mountain Valley Excavating LLC
228 County Road 251
PO Box 875
Westcliffe, CO 81252

Re: File No. M-2021-018, Lyons Pit, 110c Decision Letter - Financial and Performance Warranty Request - Construction Material Operation

Ed Lyons:

On June 24, 2021, the Division of Reclamation, Mining and Safety approved your 110c mining permit application.

The amount of financial warranty set by the Division for this operation is \$24,022.00. You must submit a financial warranty in this amount and a performance warranty in order for us to issue a permit. In the event you have requested a financial warranty form, we have enclosed it in this letter. If you have not, please select a type of financial warranty from Rule 4.3. Then contact us so that we can provide you with the appropriate warranty form. We have enclosed a performance warranty form with this letter for your use.

PLEASE NOTE THAT MINING OPERATIONS MAY NOT COMMENCE UNTIL A PERMIT HAS BEEN ISSUED BY THE DIVISION AFTER RECEIPT OF YOUR FINANCIAL WARRANTY AND PERFORMANCE WARRANTY. A PERMIT WILL NOT BE ISSUED UNTIL WE VERIFY THE ADEQUACY OF BOTH YOUR FINANCIAL WARRANTY AND PERFORMANCE WARRANTY.

If you have any questions, please contact me.

Sincerely,

Timothy A. Cazier, P.E.
Environmental Protection Specialist

Enclosures: Performance Warranty & Final Reclamation Cost Estimate



ec: Ed Lyons, Mountain Valley Excavating LLC
Jeff Thompson, DRMS
Michael Cunningham, DRMS

M-AP-18

Ed Lyons
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228 County Road 251
PO Box 875
Westcliffe, CO 81252

COST SUMMARY WORK

Task description: Cost Summary

Site: Lyons Pit

Permit Action: New Permit

Permit/Job#: M2021018

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 6/23/2021

County: Fremont

Filename: M018-000

User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Remove Access Road	TRUCK1	1	3.17	\$1,437
002	Remove Sitewide Berms	TRUCK1	1	1.09	\$493
003	Remove Access Road Culvert	DEMOLISH	1	2.00	\$321
004	Replace Salvaged Overburden/Growth Media	DOZER	1	25.96	\$6,420
006	Reveg 9.93 acres	REVEGE	1	20.00	\$6,217
007	Mob/Demob Equipment	MOBILIZE	1	3.32	\$2,912
<u>SUBTOTALS:</u>				55.54	\$17,800

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$360

Performance bond: 1.05

Total = \$187

Job superintendent: 26.77

Total = \$1,862

Profit: 10.00

Total = \$1,780

TOTAL O & P = \$4,188

CONTRACT AMOUNT (direct + O & P) = \$21,988

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 4.25

Total = \$935

Reclamation management and/or administration: 5.00

\$1,099

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$6,222

TOTAL BOND AMOUNT (direct + indirect) = \$24,022

TRUCK/LOADER TEAM WORKTask description: **Remove Access Road**Site: **Lyons Pit**Permit Action: **New Permit**Permit/Job#: **M2021018****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **6/23/2021**County: **Fremont**Filename: **M018-001**User: **TC1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

	Equipment Description
Truck Loader Team -Truck:	Generic 8-10 cy, 6x4
-Loader:	Cat 319D L 8'-10" Stick
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	75	NA	NA
Ownership cost/hour:	\$16.57	\$36.95	NA	\$116.22	NA	NA
Operating cost/hour:	\$41.05	\$39.39	NA	\$67.32	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Operator cost/hour:	\$0.00	\$37.32	NA	\$41.30	NA	NA
Unit Subtotals:	\$57.62	\$113.66	NA	\$224.84	NA	NA
Number of Units:	2	1	0	1	0	0
Group Subtotals:	Work: \$228.90		Support: \$224.84		Maint: \$0.00	

Total work team cost/hour: **\$453.74****MATERIAL QUANTITIES**Initial volume: **525**

CCY

Swell factor: **1.250**Loose volume: **656**

LCY

Source of estimated volume: **46ft long x 60ft wide**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: **2,650**

Pounds/LCY

Description: **Decomposed rock - 25% Rock, 75% Earth**Rated Payload: **27,280**

Pounds

Payload Capacity: 10.29 LCY

Truck Bed (volume) Basis:

Struck Volume: 8.00 LCY
 Heaped Volume: 10.00 LCY
 Average Volume: 9.00 LCY
 Adjusted Volume: 10.00 LCY

Final Truck Volume Based on Number of Loader Passes: 8.91 LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity:	<u>1.350</u>	LCY (heaped)
Bucket Fill Factor:	<u>1.100</u>	Other - rock/dirt mixtures (100-120%) <u>1.100</u>
Adjusted Capacity:	<u>1.485</u>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6600 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.920	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.764	

Loading Tool Cycle Time:

Number of Loading Tool Passes Required to Fill
 Truck: 6 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: AVERAGE
 Selected Value within this Basic Rating: AVERAGE
 Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

Cycle Time Factors		Factor (min.)	Source
Material:	NA	NA	(Cat HB)
Stockpile:	NA	NA	(Cat HB)
Truck Ownership:	NA	NA	(Cat HB)
Operation:	NA	NA	(Cat HB)
Dump Target:	NA	NA	(Cat HB)
Net Cycle Time Adjustment:		NA	minutes
Adjusted Loader Cycle Time:		0.282	minutes
Net Load Time per Truck:		1.510	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>1.510</u>	Minutes	Adjusted for site altitude:	<u>1.641</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes

Truck Travel (Haul & Return) Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	3.00	4.00	7.00	1568	0.352

Haul Time: **0.352** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-3.00	4.00	1.00	2913	0.199

Return Time: **0.199** minutesTotal Truck Cycle Time: **3.492** minutes

Loading Tool unit
 Production 249.66 LCY/Hour Adjusted for job efficiency: 207.22 LCY/Hour
 Truck Unit Production
153.08 LCY/Hour Adjusted for job efficiency: 127.06 LCY/Hour
 Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)
 Adjusted hourly truck team production: 254.11 LCY/Hour
 Adjusted single truck/loader team production: 207.22 LCY/Hour
 Adjusted multiple truck/loader team production: **207.22** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **3.17** HoursUnit cost: \$2.190 /LCY Total job cost: **\$1,437**

TRUCK/LOADER TEAM WORKTask description: **Remove Sitewide Berms**Site: **Lyons Pit**Permit Action: New PermitPermit/Job#: M2021018**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 6/23/2021County: FremontFilename: M018-002User: TC1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Generic 8-10 cy, 6x4
-Loader:	Cat 319D L 8'-10" Stick
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	75	NA	NA
Ownership cost/hour:	\$16.57	\$36.95	NA	\$116.22	NA	NA
Operating cost/hour:	\$41.05	\$39.39	NA	\$67.32	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Operator cost/hour:	\$0.00	\$37.32	NA	\$41.30	NA	NA
Unit Subtotals:	\$57.62	\$113.66	NA	\$224.84	NA	NA
Number of Units:	2	1	0	1	0	0
Group Subtotals:	Work: \$228.90		Support: \$224.84		Maint: \$0.00	

Total work team cost/hour: **\$453.74****MATERIAL QUANTITIES**Initial volume: 200

CCY

Swell factor: 1.125Loose volume: **225**

LCY

Source of estimated volume: 600 linear ft of 3ft high bermsSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,650

Pounds/LCY

Description: Decomposed rock - 25% Rock, 75% EarthRated Payload: 27,280

Pounds

Payload Capacity: 10.29 LCY

Truck Bed (volume) Basis:

Struck Volume: 8.00 LCY
 Heaped Volume: 10.00 LCY
 Average Volume: 9.00 LCY
 Adjusted Volume: 10.00 LCY

Final Truck Volume Based on Number of Loader Passes: 8.91 LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity:	<u>1.350</u>	LCY (heaped)
Bucket Fill Factor:	<u>1.100</u>	Other - rock/dirt mixtures (100-120%) <u>1.100</u>
Adjusted Capacity:	<u>1.485</u>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6600 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.920	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.764	

Loading Tool Cycle Time:

Number of Loading Tool Passes Required to Fill
 Truck: 6 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: AVERAGE
 Selected Value within this Basic Rating: AVERAGE
 Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

Cycle Time Factors		Factor (min.)	Source
Material:	NA	NA	(Cat HB)
Stockpile:	NA	NA	(Cat HB)
Truck Ownership:	NA	NA	(Cat HB)
Operation:	NA	NA	(Cat HB)
Dump Target:	NA	NA	(Cat HB)
Net Cycle Time Adjustment:		NA	minutes
Adjusted Loader Cycle Time:		0.282	minutes
Net Load Time per Truck:		1.510	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>1.510</u>	Minutes	Adjusted for site altitude:	<u>1.641</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes

Truck Travel (Haul & Return) Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	3.00	4.00	7.00	1568	0.352

Haul Time: **0.352** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-3.00	4.00	1.00	2913	0.199

Return Time: **0.199** minutesTotal Truck Cycle Time: **3.492** minutes

Loading Tool unit

Production 249.66 LCY/HourAdjusted for job efficiency: 207.22 LCY/Hour

Truck Unit Production

153.08 LCY/HourAdjusted for job efficiency: 127.06 LCY/HourOptimal No. of Trucks: 2 Truck(s)Selected Number of Trucks: 2 Truck(s)Adjusted hourly truck team production: 254.11 LCY/HourAdjusted single truck/loader team production: 207.22 LCY/HourAdjusted multiple truck/loader team production: **207.22** LCY/Hour**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: **1.09** HoursUnit cost: \$2.190 /LCYTotal job cost: **\$493**

DEMOLITION WORK

Task description: Remove Access Road Culvert

Site: Lyons Pit Permit Action: New Permit Permit/Job#: M2021018

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 6/23/2021 County: Fremont Filename: M018-003
User: TC1

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 88.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Remove 18" Culvert	18" x 60'	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	60.00	LF	\$5.39	\$323.16
Dispose 18" Culvert	18" x 60'	Loading and 5 mile haul, salvage allowed - Steel frame structures	3.90	CY	\$10.65	\$41.54

Job Hours: 2.00 Subtotal (unadjusted): \$364.70 Total Cost (adjusted for location): \$320.94

BULLDOZER WORKTask description: **Replace Salvaged Overburden/Growth Media**Site: **Lyons Pit**Permit Action: New PermitPermit/Job#: M2021018**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 6/23/2021County: FremontFilename: M018-004User: TC1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$116.22	NA
Operating Cost/Hour:	\$89.77	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$247.28Total Fleet Cost/Hour: **\$247.28****MATERIAL QUANTITIES**Initial Volume: 20,025Swell factor: 1.125Loose volume: **22,528 LCY**Source of estimated volume: NRCS 10-20" of soil/Assume 15" over 9.93 acresSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 1,017.1 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: -15 %Average site altitude: 6,600 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8531

Adjusted unit
production: 867.69 LCY/hr
Adjusted fleet
production: **867.69** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.285/LCY

Total job time: **25.96** Hours
Total job cost: **\$6,420**

REVEGETATION WORKTask description: Reveg 9.93 acresSite: Lyons PitPermit Action: New PermitPermit/Job#: M2021018**PROJECT IDENTIFICATION**Task #: 006State: ColoradoAbbreviation: NoneDate: 6/23/2021County: FremontFilename: M018-006aUser: TC1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$94.63
Total Tilling Cost/Acre	\$94.63

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	0.96	15.67	\$13.18
Indian Ricegrass - Native	0.96	3.11	\$6.24
Mountain Brome - Bromar	3.84	6.17	\$14.59
Bottlebrush Squirreltail	0.96	4.23	\$15.58
Sandberg Bluegrass - VNS	0.96	20.39	\$8.06
Rocky Mountain Fescue	1.92	30.85	\$13.92
Slender Wheatgrass - Native	3.84	14.02	\$17.76
Thickspike Wheatgrass - Critana	2.88	10.18	\$19.80
Needlegrass, Green - Lodorm	2.88	11.97	\$33.91
Totals Seed Mix	19.20	116.58	\$143.04

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Description	Cost /Acre
	\$
Total Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	9.9	Cost /Acre:	\$504.89
Estimated Failure Rate:	30%	Cost /Acre*:	\$410.26
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$4,998.41
Reseeding Job Cost:	\$1,218.47
Total Job Cost:	\$6,217
Job Hours:	20.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob Equipment**Site: **Lyons Pit**Permit Action: New PermitPermit/Job#: M2021018**PROJECT IDENTIFICATION**Task #: 007State: ColoradoAbbreviation: NoneDate: 6/23/2021County: FremontFilename: M018-007User: TC1Agency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8SU	47.71	\$116.22	\$123.81	1	\$240.03	\$123.81	\$250.00
Cat 319D L 8'-10" Stick	21.50	\$36.95	\$67.39	1	\$104.34	\$67.39	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.72	\$67.39	1	\$74.11	\$67.39	\$250.00

Subtotals: **\$418.48** **\$258.59** **\$750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 8-10 cy, 6x4	\$89.53	2	\$179.06	\$179.06

Subtotals: **\$179.06** **\$179.06**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	CAÑON CITY	
Total one-way travel distance:	29.00	miles
Average Travel Speed:	50.00	mph

Total Non-Roadable Mob/Demob Cost *	\$2,703.88
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$207.71
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.58	0.58
Return Time (Hours):	0.58	0.58
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	1.66	1.16

JOB TIME AND COST

Total job time:	3.32	Hours
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Total job cost:	\$2,912
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