HARZA-EBASCO
Susitna Joint Venture
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(H) Unit Prices - Backup Calculations

Watana Dam

Breakdown of Equipment Costs:

H5

ACRES

Calculations SUSITNA HYDROELECTRIC PROJECT

SUBJECT: Breakdown of Construction Equipment Costs.

Item : Temporary Cofferdam to Construct Upstream Portals

SJ2.212.

JOB NUMBER P 5700
FILE NUMBER
SHEET 1 OF
BY RDC RCM Feb DATE 10/82
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
End Dumping.						
AVERAGE	0.42	0.08	0.14	0.21	0.15	1.00
Quantity/Prod: ⟹ UNIT COST						

30.04.01 Form 148A

3

ACRES

Calculations SUSITNA HYDROELECTRIC PROJECT

SUBJECT: Breakdown of Construction Equipment Costs.

Item : Upstream Cofferdam "Overburden Removal"

352.221

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY RDC RGA Feb DATE 10/82
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Doze Overburden	0.42	0.00	0.13	0.28	0.17	1.00
Haul and Dump (2 miles)	0.42	0.10	0.14	0.19	0.15	1.00
. Road Maintenance (minor cost - will not significantly effect overall cost breakdowns)	—					
AVERAGE	1.42	0.00	0.14	0.27	0.16	1.00
Quantity/Prod: ⟹ UNIT COST						

60.04.01 Form 148A

HE

Calculations SUSITNA HYDROELECTRIC PROJECT

SUBJECT: Breakdown of Construction Equipment Costs.

Item : Upstream Cofferdam ~ FILL ~ Rock Fill

532.722

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY RDC Feb DATE 10/82
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Rock Fill (as for temporary cofferdam U/S portals).	0.42 (End dump)	0.08	0.14	0.21	0.15	1.00
AVERAGE	0.42	0.08	0.14	0.21	0.15	1.00
Quantity/Prod: ⇒ UNIT COST						

D.04.01 Form 148A

ACRES

Calculations SUSITNA HYDROELECTRIC PROJECT 552. 222.

SUBJECT: Breakdown of Construction Equipment Costs.
Item : Upstream Coffer dam Fine Filter

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Downstream Material						
Excavate	0.51	0.00	0.28	0.14	0.07	1.00
Process	0.45	0.00	0.13	0.27	0.15	1.00
Haul 4 mile	0.44	0.10	0.16	0.18	0.12	1.00
Road Maintenance	N/	—	—	—	—	—
A $\bar{x}$	0.47	0.03	0.19	0.20	0.11	1.00
Add 22% processed gravel						
Aggr. process + install/remove.	N.A	—	—	—	—	—
D/S Material.	N.A.	—	—	—	—	—
Haul and Place (2 miles)	0.44	0.10	0.16	0.18	0.12	1.00
AVERAGE						
Quantity/Prod: ⇒ UNIT COST	0.46	0.06	0.17	0.19	0.12	1.00

60.04.01 Form 148A

ACRES

Calculations SUSITNA HYDROELECTRIC PROJECT 332.222.

SUBJECT: Breakdown of Construction Equipment Costs.

Item : Upstream Coffer-dam Coarse Filter

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
U/S Fill Material						
(a) Processing	0.45	0.00	0.13	0.27	0.15	1.00
(b) Excavation	0.51	0.00	0.28	0.14	0.07	1.00
(c) Haul and Place (4 miles)	0.44	0.10	0.16	0.18	0.12	1.00
(d) Road Maintenance	N.A.	—	—	—	—	—
$\bar{x}$ A	0.47	0.03	0.19	0.20	0.11	1.00
Add 90 % processed gravel	N.A.					
Haul and Place (2 miles)	0.44	0.10	0.16	0.18	0.12	1.00
AVERAGE						
Quantity/Prod: ⇒ UNIT COST	[illegible]	[illegible]	[illegible]	[illegible]	0.12	1.00

60.04.01 Form 148A

HE

ACRES **Calculations** SUSITNA HYDROELECTRIC PROJECT

SUBJECT: Breakdown of Construction Equipment Costs.

Item : Upstream Cofferdam Fill - Rock Shell

SS2. 222

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY RDC Feb DATE 10/82
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Excavation, load, haul 2 miles and spread	0.42	0.08	0.14	0.21	0.15	1.00
AVERAGE	0.42	0.08	0.14	0.21	0.15	1.00
Quantity/Prod: ⇒ UNIT COST						

60.04.01 Form 148A

ACRES

Calculations SUSITNA HYDROELECTRIC PROJECT

SUBJECT: Breakdown of Construction Equipment Costs.

Item: RIP RAP ~ U/S SLOPE PROTECTION

332.222

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Rip Rap	0.39	0.05	0.14	0.24	0.18	1.00
AVERAGE						
Quantity/Prod: ⇒ UNIT COST	0.[illegible]1	0.05	0.14	0.24	0.18	1.00

60.04.01 Form 148A

H10

ACRES

Calculations SUSITNA HYDROELECTRIC PROJECT 532.223.

SUBJECT: Breakdown of Construction Equipment Costs.

Item: U/S Cofferdam Slurry Wall Excavation

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Slurry Wall	0.51	0.00	0.28	0.14	0.07	1.00
AVERAGE						
Quantity/Prod: ⇒ UNIT COST	0.51	0.00	0.28	0.14	0.07	1.00

60.04.01 Form 148A

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H11

ACRES **Calculations** SUSITNA HYDROELECTRIC PROJECT 552.231.

SUBJECT: Breakdown of Construction Equipment Costs.

Item: Downstream Coffordam ~ Removal of Cofferdam.

JCB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Dragline excavation	0.51	0.00	0.28	0.14	0.07	1.00
Load, haul dump 2 miles.	0.42	0.10	0.14	0.19	0.15	1.00
AVERAGE						
Quantity/Prod: ⇒ UNIT COST	0.47	[illegible]	[illegible]	0.16	0.11	1.00

60.04.01 Form 148A

H 12

Calculations SUSITNA HYDROELECTRIC PROJECT

SUBJECT: Breakdown of Construction Equipment Costs.

Item : Main Dam : Excavation Overburden above 1470 M.

J52. J11.

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Dozing	0.42	0.00	0.13	0.28	0.17	1.00
Road Maintenance	N.A.	—	—	—	—	—
Haul and dump (2 miles)	0.42	0.10	0.14	0.19	0.15	1.00
AVERAGE						
Quantity/Prod: ⇒ UNIT COST	0.42	0.05	0.14	0.23	0.16	1.00

60.04.01 Form 148A

ACRES

Calculations SUSITNA HYDROELECTRIC PROJECT 552.517

SUBJECT: Breakdown of Construction Equipment Costs.
Item: Main Dam: Overburden Excavation Below 1470 ft.

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Excavation plus haul and dump	0.44	0.08	0.16	0.18	0.14	1.00
Road Maintenance	NA	—	—	—	—	—
AVERAGE						
Quantity/Prod: ⇒ UNIT COST	0.44	0.08	0.16	0.17	0.14	1.00

30.04.01 Form 148A

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ACRES **Calculations** SUSITNA HYDROELECTRIC PROJECT 552-511.

SUBJECT: Breakdown of Construction Equipment Costs.

Item: Main Dam: Rock Excavation Above 1470'

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Drill	0.44	0.01	0.17	0.22	0.16	1.00
Blast	N/A	—	—	—	—	—
Doze	0.42	0.00	0.13	0.28	0.17	1.00
Lower and finish	0.42	0.00	0.13	0.28	0.17	1.00
Haul 2 miles and dump.	0.42	0.10	0.14	0.19	0.15	1.00
AVERAGE	0.42	0.04	0.14	0.24	0.16	1.00
Quantity/Prod: ⟹ UNIT COST	0.42	0.04	0.14	[illegible]	0.16	1.00

90.C4.31 Form 148A

H15

Calculations SUSITNA HYDROELECTRIC PROJECT 532-541

SUBJECT: Breakdown of Construction Equipment Costs.

Item : Main Dam: Rock Usable Below 1470 ft.

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Drill	0.44	0.01	0.17	0.22	0.16	1.00
Blast	N.A.	—	—	—	—	—
Haul D/S and spread	0.41	0.07	0.14	0.22	0.16	1.00
AVERAGE						
Quantity/Prod: % ⟹ UNIT COST	0.42	0.04	0.16	0.22	0.16	1.00

15

60.04.01 Form 148A

H 16

ACRES

Calculations SUSITNA HYDROELECTRIC PROJECT

SUBJECT: Breakdown of Construction Equipment Costs.

Item : Main Dam : Rock Waste Below 1470'

JOB NUMBER P 5700
FILE NUMBER
SHEET OF
BY DATE
APP DATE

Description	Depreciation (per hour)	Tire (per hour)	Fuel and Lube (per hour)	Repair Parts (per hour)	Repair Labour (per hour)	TOTAL (per hour)
Drill	0.44	0.01	0.17	0.22	0.16	1.00
Blast	N.A.	—	—	—	—	—
Haul U/S and Waste	0.42	0.08	0.15	0.21	0.14	1.00
AVERAGE						
Quantity/Prod: ⟹ UNIT COST	[illegible]	0.05	0.14	[illegible]	0.15	

60.04.01 Form 148A