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HYDROELECTRIC PROJECT

FEDERAL ENERGY REGULATORY COMMISSION
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REGION II
HABITAT DIVISION

HYPOTHETICAL MINING STUDIES AND COAL PRICE ESTIMATES BELUGA AND NENANA COAL FIELDS

PREPARED BY

PAUL WEIR COMPANY

FINAL REPORT

UNDER CONTRACT TO

HARZA-EBASCO
SUSITNA JOINT VENTURE

OCTOBER 1985
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Alaska Power Authority

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HYPOTHETICAL MINING STUDIES AND COAL PRICE ESTIMATES BELUGA AND NENANA COAL FIELDS FOR HARZA-EBASCO SUSITNA JOINT VENTURE

I. INTRODUCTION

The Harza-Ebasco Susitna Joint Venture (H-E) has requested the Paul Weir Company (Weirco) to perform four mining studies to estimate the price of coal from the Beluga and Nenana regions of Alaska. The studies are to be based on hypothetical geologic deposits which are representative of actual geologic conditions in the two regions.

The four study scenarios are:

Case 1 - An 8 million ton per year Beluga mine.

Case 2 - A 12 million ton per year Beluga mine.

Case 3 - An incremental 2 million ton per year Nenana study which would expand a hypothetical existing mine from 2 million to 4 million tons per year.

Case 4 - A 3 million ton per year Nenana mine with a staged build up in 1 million ton per year increments.

For each of these four cases, the study is to estimate the capital and operating costs in constant January, 1985 dollars. From these costs, the f.o.b. mine price is calculated which will provide an appropriate return on investment.

This "Introduction" is followed by a "Summary" section which presents the most pertinent study results. The remainder of the report deals in detail with the geology, mine plans, cost estimates and pricing.

II. SUMMARY

Detailed discussions of the procedures, assumptions and results of the studies are presented in subsequent sections of this report. A summary of the most pertinent results is shown on Table No. 1 (immediately following).

For the two Beluga studies (Cases 1 and 2), the stripping ratio shows a slight increase from 6.7 to 6.9 as the production level increases from 8 to 12 million tons per year. This is a result of mining more of the deeper coal to satisfy the increased total coal requirements. The effect of this increase is reflected in the reduction from 46 to 44 tons per manshift. This seems to indicate that the economy of scale effect is, at best, very slight at these production levels. The capital investment per annual ton and average production cost figures echo this indication.

The Nenana studies (Cases 3 and 4) have nearly identical stripping ratios because the total coal tonnage requirements are very similar. Comparison of these two studies is difficult because of the differences in the scenarios. Case 3 is based on an incremental doubling of the production of an existing mine, while Case 4 is all new production with a completely different production build up schedule. These differences are illustrated by the fact that, although Case 4 has a higher labor efficiency at full production (43 versus 40 tons per manshift), it also shows a slightly higher average operating and maintenance cost ($13.76 versus $13.12 per ton).

Table No. 1

SUMMARY OF RESULTS

HYPOTHETICAL MINE STUDIES

	Case 1	Case 2	Case 3(a)	Case 4(b)
Production Rate (Million Tons Per Year)	8	12	2	3
Mine Life (Years)	30	30	20	25
Average Stripping Ratio (Cu. Yds./Ton)	6.7	6.9	3.7	3.8
Personnel Requirements				
Operating	297	473	93	125
Maintenance	306	505	75	100
Salaried	88	113	34	56
Total	691	1,091	202	281
Tons Per Manshift	46	44	40	43
Capital Investment				
Initial Investment (Millions)	$277	$424	$75	$83
Initial Investment Per Annual Ton	$35	$35	$38	$28
Life of Mine Investment (Millions)	$574	$866	$140	$237
Average Annual Operating & Maintenance Costs (Per Ton)				
Drainage Control & Reclamation	$ 0.15	$ 0.17	$ 0.17	$ 0.20
Overburden Removal	6.24	6.79	6.42	6.25
Coal Mining & Hauling	1.19	1.28	1.82	2.01
Coal Handling	0.23	0.21	0.42	0.49
Road Construction & Maintenance	0.50	0.46	0.64	0.55
General Mine Services	0.55	0.46	0.53	0.67
Supervision & Administration	1.68	1.48	2.26	2.73
Production Taxes & Fees	0.85	0.85	0.85	0.85
Total	$11.38	$11.71	$13.12	$13.76
Average Depreciation of Total Capital	2.48	2.46	3.54	3.65
Average Total Production Costs	$13.86	$14.17	$16.66	$17.41
Levelized Coal Price Per Ton at 8.2% Real Discount Rate (d)	$17.50	$18.34	$22.08	$25.40
Levelized Coal Price Per Million Btu (c) at 8.2% Real Discount Rate (d)	$1.17	$1.22	$1.45	$1.57

Notes:

(a) Incremental production to increase from 2 to 4 million tons per year.

(b) Staged build-up in 1 million ton per year increments.

(c) Assumes 7,500 Btu/lb. for Cases 1 and 2; 7,600 Btu/lb. for Case 3; and 8,100 Btu/lb. for Case 4.

(d) Reflects nominal rate of return of 14.2% and underlying rate of inflation of 5.5%.

A levelized coal price was calculated for each case which would produce a real rate of return of 8.2 percent after taxes. This rate, which was supplied by H-E, reflects a nominal rate of return of 14.2 percent and an underlying rate of inflation of 5.5 percent. The prices include all capital costs for equipment, minesite infrastructure, access, mine development and a townsite for the employees. The operating and maintenance costs cover all labor, materials, power and production taxes required to produce coal at the mine-mouth. Income taxes, royalties and the Alaska Mining License Tax are accounted for in the pricing calculation.

The net result is an indication that coal mined in the Beluga area can be quite competitive on a local or export market, particularly at the high production levels studied. Smaller mines, of less than 3 or 4 million tons per year, would need to be located in very low ratio (less than 3 to 1) areas to be competitive. Such areas very likely do exist, but, in our opinion, are not typical of the conditions one could expect to encounter during the 50 year life span of the Susitna Project.

The Nenana area coals will be somewhat more expensive to mine at the production levels studied, but should be able to compete on a fairly local market. The distance from tidewater is a negative factor for the Nenana area when competing with the Beluga coal for export sales.

III. GEOLOGIC MODELS

Most of the information presented in the following discussion was obtained from the publication, "Surface Coal Mining in Alaska: An Investigation of the Surface Mining Control and Reclamation Act of 1977 in Relation to Alaskan Conditions." This document was compiled from many sources by the:

Committee on Alaskan Coal Mining and Reclamation
Board on Mineral and Energy Resources
Commission on Natural Resources
National Research Council
National Academy of Sciences

It was published in 1980 by the National Academy Press, Washington, D.C. This source will be referred to as the National Research Council throughout this discussion.

Beluga Area

The Beluga area is located in the Susitna Coal Field in south-central Alaska, approximately 50 miles west of Anchorage. The coal resources of the Susitna field are comprised of the Yentna area in the north and the Beluga area in the south. Both areas contain multiple seams of low sulfur, lignite-to-subbituminous coal. Coal thicknesses run from less than 6 feet to 50 feet. Overburden and innerburden lithologies range from massive sandstone and conglomerate to poorly consolidated shales, siltstones

and claystones. The strata are generally gently-to-moderately dipping, although some folding and faulting have occurred, resulting in locally steep dips in some areas. Bedrock is typically overlain by glacial till and muskeg. Topographic relief is moderately rolling, with some areas of steeply incised streams and rivers. Vegetation ranges from grasses and scrub brush in the upper elevations to dense stands of evergreens at lower elevations. The National Research Council has listed the Indicated and Inferred resources for the Susitna field at 2.7 to 10.2 billion tons. Hypothetical resources are listed at 27 billion tons.

The hypothetical Beluga deposit selected for this study contains three minable seams of subbituminous coal designated: L, M and U (for Lower, Middle and Upper). The seams are separated and/or overlain by poorly consolidated shales, sandstones and siltstones. The surface material consists of varying thicknesses (0 to 40 feet) of glacial till, which is overlain by muskeg. The coal seams dip at 3 to 10 degrees, with an average of approximately 5 degrees (8 percent). The Lower Seam thickness ranges from 23 to 38 feet, averaging 26 feet. This seam contains partings of variable thickness which must be removed to preserve the quality of the product. The Middle Seam averages 28 feet in thickness (range 21 to 35 feet) and lies 225 to 325 feet above the Lower Seam. The Upper Seam lies 275 feet above the Middle Seam and averages 18.5 feet thick (range 12 to 24 feet). The deposit is assumed to be broken into two distinct areas (A and B) by an erosional feature which separates the two areas by approximately 8,000 feet.

Area A is the larger area, covering approximately 5,000 acres between the Lower subcrop and the 400 foot cover line on the Upper Seam. Total in-place coal in this area is 250 million tons. Area B covers 3,500 acres and contains 160 million tons in-place. A typical dip-oriented cross section representing the two areas of the deposit is shown in Figure 1. Coal quality is somewhat variable from seam to seam and laterally within each seam. The Lower Seam is assumed to be uniformly lower in quality than the Middle and Upper Seams. The average run-of-mine heating value, including allowance for dilution, is assumed to be 7,500 Btu/lb.

Nenana Area

The Nenana coal basin includes the Healy Creek, Lignite Creek, Jarvis Creek, Wood River, Tatlanika and Teklanic fields. It is located in an area about 200 miles north of Anchorage and 60 miles south of Fairbanks. Alaska's only current significant coal production comes from the Nenana area in the Lignite Creek field. The Nenana resources are contained in multiple seams of low sulfur, subbituminous coal. Seam thicknesses range from 2.5 to 60 feet. The coal bearing strata are comprised of moderately consolidated sandstones and siltstones which have been folded and faulted to form the subbasins referred to above. Discontinuous occurrences of permafrost are present in the area. The attitude of the beds ranges from flat at the axes of the synclines and anticlines to steeply dipping on the flanks of the folds. The surface material is composed of weathered bedrock with peaty layers at the immediate surface and alluvial deposits in the stream

beds. The topography is quite rugged in the vicinity of the streams and moderately steep-to-gently rolling on the upland areas between the watercourses. Vegetation ranges from spruce and hardwood forest to barren ground with some areas of tundra.

The National Research Council lists the resources of the Nenana field at 3.5 billion tons of Proven coal plus 3.5 billion tons of Inferred coal. Total potential is listed at about 15 billion tons.

The hypothetical Nenana deposit selected for this study contains three minable seams designated: B, I and T (Bottom, Intermediate and Top). The seams occur within an area of lightly indurated sandstones and moderately consolidated siltstones. All three seams outcrop along a valley and dip into the valley wall at 8 to 13 degrees (averaging 10 degrees). The deposit consists of two areas (X and Y) separated laterally by approximately 10,000 feet of noncoal bearing area.

In Area X, the Bottom Seam averages 20 feet in thickness, the Intermediate Seam 30 feet, and the Top Seam 22 feet. The Bottom-Intermediate Seam interval is 75 feet, and the Intermediate-Top Seam interval is 140 feet. The total area between the Bottom outcrop and 300 feet depth on the Top Seam covers 850 acres and contains approximately 44 million tons in-place.

Area Y contains the same seams, with average thicknesses being: Bottom Seam 18 feet, Intermediate Seam 30 feet, and Top Seam 15 feet. The average interval thicknesses are: Bottom-Intermediate 90 feet and Intermediate-Top 120 feet. Area Y covers 900 coal bearing acres and contains 35 million tons of coal in-place.

Figure 2 shows a typical cross section of each area of the hypothetical Nenana deposit.

Coal quality is assumed to be somewhat variable but poses no special blending problems. The run-of-mine heating value is assumed to be 7,600 Btu/lb. for Case 3 reserves and 8,100 Btu/lb. for Case 4 reserves. These values were provided by H-E.

IV. MINE PLANNING

Selection of Mining Method

The following surface mining methods were considered for each of the cases:

1. Bucket-wheel excavators (BWE's) and conveyor transport.

2. Shovel-truck (or loader-truck) stripping on the upper levels with a dragline on the bottom waste benches.

3. All shovel-truck (or loader-truck) stripping.

All of these methods present advantages and disadvantages and involve some risks. Following is a brief discussion of these advantages and risks for each method:

1. BWE's, combined with conveyors to transport the materials, offer high productivities and low operating costs in the appropriate application. They do not require large quantities of petroleum products, which may be an advantage if the petroleum market becomes very strong.

Capital requirements are high for this type system. Technical risks in this application are the possible presence of boulders or indurated strata in the overburden, which could cause vibration and breakdown to the BWE system, and the wet sticky nature of the overburden which could cause handling problems (particularly during the winter) in the buckets, on the conveyors, and in the transfer chutes. BWE/conveyor systems are relatively inflexible and present problems when changing short-term operational plans. Historically, BWE/conveyor systems have exhibited low mechanical availabilities (50 to 55 percent).

2. Draglines could be applied to the bottom 100 to 125 feet of the overburden. Draglines offer comparatively low operating costs per unit of production and have demonstrated high mechanical availabilities. Petroleum product consumption is low for these machines. The use of shovels (or loaders) and trucks ahead of the dragline would provide some flexibility in dealing with short-term changes in mining plans and production requirements.

The initial capital requirements are quite high for draglines per unit of production. Electrical peak loads are very high compared to shovels or BWE's. Technical risks revolve primarily around the impacts of geotechnical and hydrological considerations on slope stability. Flat highwall and spoil slopes will require added rehandling and reduce the dragline's efficiency.

3. Shovel-truck (or loader-truck) systems have been thoroughly proven throughout the world's mining industry as reliable producers. Initial capital requirements are low relative to BWE's or draglines. The flexibility of a shovel- truck system is extremely high. Peak electrical requirements are fairly low.

   These systems are more labor-intensive than the other systems, which compounds the exposure to labor cost increases or labor relations problems. Trucks are heavy consumers of diesel fuel. The only significant technical risk in this type system is the potentially high cost of haul road construction due to relatively soft ground conditions and high precipitation levels.

In making a coal pricing study, as in a feasibility study, it is very important that the system chosen be technically sound and proven in similar applications. The BWE/conveyor system was rejected because of the uncertainty that the system could effectively dig and convey the materials present in the Beluga and Nenana areas. Therefore, for each case studied, only dragline and shovel-truck (or loader-truck) methods were applied.

Mining Plans

Case 1 (8 Million Tons Per Year - Beluga)

The mining method selected for this case is a combination of shovel-truck plus dragline stripping. The draglines are assigned to strip all material overlying the bottom seam being mined up to a maximum depth of 125 feet. The draglines selected can swing 70 cubic yard buckets at an operating radius of 300 feet. Figure 3 shows a range diagram of the dragline operation at the maximum depth. The shovel-truck fleet is used to remove all other overburden and innerburden in advance of the draglines.

The project area is Area A. This area contains enough reserves for the project life and offers the opportunity to have several long dragline pits for efficiency in scheduling.

The area was subdivided into several pits and further broken down into 600 foot wide strips. These strips represent five cuts 120 feet wide. The quantities of coal, overburden, innerburden and parting were calculated for each strip. Each seam was measured to a maximum depth of 400 feet. When the bottom seam reaches this depth, the dragline will "jump" up and continue stripping the next higher seam.

Initial stripping begins near the Lower Seam cropline in the western portion of the deposit (see Exhibit A). The first dragline opens up

the area near the cropline, while a shovel-truck fleet begins prestripping those areas in advance of the dragline where the cover is greater than 125 feet. This sequence continues until the third year of production when the second dragline begins stripping in the eastern portion of Area A. Thereafter, the two draglines advance downdip (northerly), with shovel-truck stripping at least 1 year in advance.

Due to the high volume of production (8 million tons per year), it is assumed that this will be a multicontract mine. Therefore, the problem of low quality in the Lower Seam may be partially handled by setting lower quality limits in some of the coal sales contracts. As the mine is fully developed, there will be natural blending of the three seams, and the average run-of-mine quality is assumed to be 7,500 Btu/lb.

The mining operation was sequenced in annual increments for the first 15 years and in 5 year blocks thereafter.

Major equipment items for Case 1 include:

Item	Size
Overburden Draglines	70 Cubic Yard
Overburden Shovels	20 Cubic Yard
Coal Loaders (Hydraulic)	18.5 Cubic Yard
Overburden Haulers (Rear Dump)	120 Ton
Coal Haulers (Rear Dump)	120 Ton
Graders	16 Foot Blade
Dozers	300 and 400 Horsepower
Scrapers	31 Cubic Yard, Twin Engine

Case 2 (12 Million Tons Per Year - Beluga)

The mining plan for this case is quite similar to that chosen for Case 1. Stripping is to be done by draglines at depths up to 125 feet over the lowest seam being mined. Shovels and trucks strip all other material in advance of the draglines. The draglines chosen are one 70 cubic yard model plus one 110 cubic yard machine. Both draglines have an operating radius of 300 feet. The range diagram shown in Figure 3 is representative of Case 2, as well as Case 1.

The size of this project dictates the use of both Area A and Area B to satisfy the total reserve requirements.

Both areas were subdivided into pits and strips similar to Case 1 and quantities determined for each strip. Maximum depth of mining is again 400 feet.

The operation begins with the 110 cubic yard dragline stripping at the Lower Seam cropline in the western portion of Area A. By the second half of the second year, it is necessary to bring the 70 cubic yard dragline into Area B and begin uncovering the Lower Seam near the crop. Exhibit B shows the advance of the draglines throughout the project life. The shovel-truck fleets maintain advance stripping at least 1 year ahead of the draglines.

As in Case 1, the coal quality averages 7,500 Btu/lb., as-mined.

The sequencing calculations were done annually for the first 10 years and in 5 year blocks thereafter.

Major items of equipment for Case 2 include:

Item	Size
Overburden Draglines	One 70 Cubic Yard and One 110 Cubic Yard
Overburden Shovels	20 Cubic Yard
Coal Loaders (Hydraulic)	18.5 Cubic Yard
Overburden Haulers (Rear Dump)	120 Ton
Coal Haulers (Rear Dump)	120 Ton
Graders	16 Foot Blade
Dozers	300 and 400 Horsepower
Scrapers	31 Cubic Yard, Twin Engine

Case 3 (2 Million Tons Per Year-Incremental - Nenana)

The combination of dragline plus loaders and trucks was chosen for this case. All overburden and innerburden must be drilled and blasted prior to stripping. Front-end loaders and trucks remove the upper overburden and innerburden zones ahead of the dragline. The dragline will strip the Bottom Seam in the simple sidecasting mode. As the Intermediate Seam is encountered, the dragline will strip up to 60 feet of cover on the Intermediate Seam and then move down on the Bottom Seam innerburden and strip that seam. This will involve some extended bench rehandling, as shown in Figure 4. After reaching the 300 foot depth on the Bottom Seam, that seam will be abandoned, and the dragline will strip the Intermediate Seam (and eventually the Top Seam) in a single seam operation to a maximum of 100 feet of cover. The dragline will carry a 30 cubic yard bucket and have a 300 foot operating radius.

The project area is Area X of the Nenana hypothetical deposit. This area contains sufficient reserves at an attractive stripping ratio. It is also closer to the assumed coal delivery point than Area Y, thus shortening haulage cycles, as well as haul road and power line construction.

The area was subdivided into four pit areas. Two hundred foot wide strips (two 100 foot dragline cuts) were laid out in the areas amenable to dragline stripping. In the other areas, 400 foot square blocks were laid out for loader-truck mining. The quantities of coal, overburden, inner-

burden and parting were calculated from each area. Maximum mining depth was set at 300 feet.

Initial stripping begins with the dragline making a box cut at the Bottom Seam cropline in the eastern portion of the area. By the third year of production, the loader-truck fleet begins operation in the central part of Area X and commences prestripping ahead of the dragline in the eastern portion. The sequence continues until the tenth year, when the dragline moves over to the Bottom Seam cropline in the western portion of the area and strips downdip through the remaining project life. The sequence is shown on Exhibit C. The loader-truck operations are maintained approximately 1 year in advance of the dragline stripping. Average run-of-mine quality is assumed to be 7,600 Btu/lb.

The mining sequence was computed in annual increments for the first 10 years and in 5 year blocks for the next 10 years.

Major equipment items for Case 3 include:

Item	Size
Overburden Dragline	30 Cubic Yard
Overburden Drills	10 Inch Diameter
Overburden Loaders (Front-End Loaders)	13 Cubic Yard
Coal Loaders (Front-End Loaders)	13 Cubic Yard
Overburden Haulers (Rear Dump)	85 Ton
Coal Haulers (Rear Dump)	85 Ton
Graders	16 Foot Blade
Dozers	300 and 400 Horsepower
Scrapers	31 Cubic Yard, Twin Engine

Case 4 (3 Million Tons Per Year-Staged Increase - Nenana)

This case is mined in a similar manner as Case 3. Front-end loaders and trucks strip in advance of the 30 cubic yard dragline. The tonnage requirements necessitate utilizing both Area X and Area Y for this study. The dragline range diagram for the Area Y operations is shown in Figure 5. It is similar to that for Area X, except that the greater thickness of the Bottom Seam innerburden involves more rehandle in the extended bench mode. Overburden and innerburden are drilled and blasted in this case also.

The pit layout for Area X is identical to that used in Case 3. In Area Y, 200 foot wide strips were laid out for four pits, and the coal and waste quantities were calculated for each strip.

The operation begins in the eastern portion of Area Y, with the dragline box cut on the Bottom Seam. Loader-truck prestripping begins in the second year and continues about 1 year in advance of the dragline. By year 7, the dragline moves to the western portion of Area Y and finishes stripping there in year 13. Then, it is moved to the eastern part of Area X and finally finishes up in the western part. Exhibit D shows the stripping sequence for Case 4.

The production level begins at 1 million tons per year, increases to 2 million tons in the third year, and goes to 3 million tons in the ninth year of production. The average heating value is assumed to 8,100 Btu/lb., as mined.

The list of major equipment items is identical to that for Case 3.

Equipment Selection

Selection of the major excavation equipment such as draglines, shovels and trucks was based on the volumes of overburden to be stripped and the tonnage to be produced. Initial estimates were made and later revised as the mining sequence was worked out. Other items of equipment were selected to be compatible with the major equipment items and, also, whenever appropriate, to be common to all the cases studied. Tables No. 2 A through No. 2 D list the equipment items selected for the four cases studied. (Note: All Tables, with the exception of Table No. 1, are found in the back of this report.) The equipment models listed are intended to identify a typical size of equipment which is widely known. No endorsement of this equipment is implied since other similar models could be used.

Major equipment items for Case 1, the 8 million ton per year Beluga case, consisted of 70 cubic yard draglines and 20 cubic yard shovels for overburden stripping and 18.5 cubic yard hydraulic front shovels for coal loading. Overburden and coal were hauled in 120 ton rear dump trucks. The coal trucks had oversized bodies to carry the less dense coal.

Major supporting equipment used consisted of large crawler dozers for reclamation, stripping, coal loading and construction work; smaller crawler dozers to assist the draglines and gravel plant; coal drills for coal shooting; scrapers for reclamation and construction work; and graders, water trucks and wheel dozers for road maintenance.

Productivity Estimates

Projections of the amount of work that the various major items of equipment could perform were made for the differing conditions and equipment mixes that occurred in each mining case. Examples of productivity calculations are appended to this report, and a description of particular productivities used in Case 1 follows.

Basic productivity of the draglines was estimated dependent on machine geometry. This basic productivity was adjusted to give effective productivities dependent on the cut geometry and rehandle requirements. In Case 1, a dragline with a nominal 70 cubic yard bucket was estimated to have a basic productivity index of 255,000 bank cubic yards per year per cubic yard of bucket capacity. The nominal productivity was 17,850 bank cubic yards per shift for 1,000 scheduled shifts per year. Digging in a 120 foot wide pit and excavating 125 feet of material from a bench 80 feet above the coal, a projected 46 percent of the material would have to be rehandled. Effective productivity was therefore 12,250 bank cubic yards per shift scheduled. The 6,125,000 bank cubic yards of overburden removed in the first year of coal production in Case 1 required 500 dragline shifts.

Shovel and loader productivities in overburden stripping, coal loading and parting removal were estimated based on the size of the machine and the size of the truck it was loading. The loading equipment was projected to operate at the average productivity estimated. Enough haul trucks were

scheduled on each load center haul to keep the loaders operating. In Case 1, the 20 cubic yard shovel loading overburden into 120 ton trucks was estimated to have an average productivity of 5,536 bank cubic yards per shift scheduled. In the first year of coal production, 3,272,000 bank cubic yards of overburden were hauled an average of 4,000 feet to a waste dump. The number of shovel shifts required to load this amount of material was 592. The number of truck shifts required to maintain the utilization rate of the shovel was 1,895.

Similarly, the 18.5 cubic yard, hydraulic front shovel loading coal into 120 ton haul trucks had an estimated productivity of 6,361.6 tons per shift scheduled. In the first year of coal production, 2,500,000 tons of coal were loaded in 394 shifts. The coal was hauled from two different load centers an average of 6,820 feet and 8,120 feet to the coal handling hopper. A total of 1,290 truck shifts was required to maintain the utilization rate of the shovel.

Overburden drilling, when required, and coal drilling productivities were estimated from an assumed drilling pattern, bench height and material drillability. In the first year of coal production in Case 1, a dual mast, auger type coal drill was estimated to have productivity of 20,650 tons of coal drilled per shift. A total of 122 drill shifts were scheduled to drill the 2,500,000 tons of coal shot.

Scraper productivity was estimated based on an assumed haul distance and on the kind of work performed, i.e., removing overburden and parting, constructing roads, etc.

Units of Work

The overburden removal and coal production sequences determine the rest of the work which must be accomplished. After the mining sequence is plotted on maps and the locations of centers of mass of overburden removal are plotted, locations of spoil piles are determined. Dragline yardage is spoiled into adjacent cuts, but shovel-truck yardage must be dumped where it won't interfere with subsequent operations and will facilitate reclamation of the mined area. In most cases, initial shovel-truck spoil was dumped outside the mined area in surface dumps and only backfilled over the top of dragline spoils as the mining operation progressed.

Haul roads were laid out from the centers of mass of overburden and coal removal to the centers of mass of spoil placement or coal dumping. Average haul distances were measured and estimates of truck speeds were made dependent on the haul profiles.

If the coal seam contained removable partings, quantities were estimated and dumping locations were projected depending on the sequence of coal removal. Partings could be handled by dozing short distances in the pit, by scrapers hauling intermediate distances, or by trucks hauling to spoil dumps.

Coal and overburden drilling and blasting requirements were matched to the quantities produced by the mining sequence.

After the haul roads were laid out for the life-of-mine plans, sequences of construction and maintenance were developed.

Finally, reclamation plans were developed summarizing when areas would be disturbed prior to mining and when areas would be reclaimed. Generalized surface water control structure requirements were estimated.

The various measures of work required were used as input parameters for calculating the equipment and manpower requirements. The work was separated into the following mining functions:

- Drainage Control and Reclamation

  An average depth of 1 foot of surface material (topsoil or root medium) was removed by scrapers from the areas projected to be disturbed each period. This material was either replaced on regraded areas or hauled to stockpiles for later replacement if enough regraded area was not available.

  Drainage control structures - perimeter ditches and dams for sedimentation ponds - were constructed by scrapers.

  Rainfall, based on the annual average, was collected in the unreclaimed pits and, together with an equal volume of groundwater, was pumped out of the pits into the sedimentation ponds.

Revegetation supplies and equipment were scheduled following the topsoil replacement. Final post mining reclamation was not included in these operating costs, but was treated as a post operating capital charge.

- Overburden Stripping

Overburden removed by draglines was scheduled according to the productivities estimated for the draglines in the various digging modes.

Drilling and blasting requirements were estimated from the in-place overburden quantities to be removed according to the mine plans.

Overburden removed by shovels or loaders and hauled by trucks was scheduled by the quantity located at each haulage load center. Separate calculations of overburden drilling and blasting requirements, excavator shift requirements, and overburden haulage productivities based on average cycle times were made.

Equipment shifts were scheduled for grading spoil piles where necessary prior to reclamation.

- Mining and Hauling Coal

  Coal production was scheduled by the quantity located at each haulage load center. Separate calculations of coal drilling and blasting requirements, excavator shift requirements, and coal haulage productivities based on average cycle times were made.

  If removable partings were present in the coal seam, equipment was scheduled to remove it based on estimated distances to parting dump sites. Dozers, scrapers or loaders and trucks could be used.

- Coal Handling

  Run-of-mine coal was dumped into a receiving hopper in the mine facilities area. The coal was crushed to a 6 inch topsize for the Beluga area mines and discharged onto a conveyor belt for delivery either to a nearby power plant or to a more distant port. Coal handling costs chargeable to the mining operation stopped at the crusher discharge point. At the Nenana area mines, the coal was crushed to a 2 inch topsize and conveyed to a covered storage building with unit train loadout facilities. Coal handling costs chargeable to the mining operation included discharging the coal into rail cars.

- Haul Road Construction and Maintenance

Two different generalized haul road designs were made for the four cases. A heavy duty road was used in Cases 1 and 2 to support intense traffic by the 120 ton trucks. A light duty road was used Cases 3 and 4 to support traffic by the 85 ton trucks. The descriptions "heavy and light" are relative terms in this context. Road base material was obtained from a mine-operated, gravel screen plant. A source of gravel was assumed to be located within 5 miles of the point of use.

Haul roads were constructed according to the mining schedule, and the length of road in use each year was maintained by a fleet of graders, water trucks and wheel dozers.

- General Mine Services

The summation of shifts worked by operating and maintenance personnel in each of the various pay grades in all the mining functions was used as a base to determine the number of people required to run the mine. An allowance was made for absenteeism of 5 percent of the required shifts for the Beluga area mines and for 3 percent for the Nenana area mines. A work year of 250 man-days was used as a base to determine the number of people required. Extra manshifts were allocated to each pay grade in this function to make full multiples of 250 man-days for all work required.

A general labor crew and construction and custodial manpower were assigned to this function.

An operating supplies allowance based on the size of the workforce was assigned to this function to cover the cost of miscellaneous equipment operation and repairs.

- Supervision and Administration

A supervisory and administrative table of organization was prepared for each mining case. The number of people required depended on the number of wage employees and on the mining activities. The mine was expected to be a self-sufficient operation with the primary exception of legal and marketing personnel.

The operation was assumed to be part of a larger company and was charged a general and administrative overhead allocation equal to 4.5 percent of the average annual mine operating cost plus the average capital cost.

- Production Taxes and Fees

The Federal abandoned mine land reclamation fee of $0.35 per ton and the Black Lung Tax at a rate of $0.50 per ton are included in this function.

V. COST ESTIMATES

Operating Costs

All costs are estimated in January, 1985 dollars. Labor rates are based on the labor agreement at the Usibelli coal mine near Healy, Alaska. Hourly rated personnel are separated into five pay grades based on the classifications in that agreement. Direct wages and salaries used in all the case studies are as follows:

Hourly Rated	Rate Per Shift (8 Hours)
Pay Grade 1	$203.50
Pay Grade 2	195.00
Pay Grade 3	190.00
Pay Grade 4	186.00
Pay Grade 5	185.00

Salaried	Rate Per Year
Exempt (Average)	$69,100
Nonexempt (Average)	57,250

Labor overhead costs (fringe benefits, payroll taxes, etc.) were uniformly estimated to be 40 percent of direct wages and salaries.

Diesel fuel was estimated to cost $0.88 per gallon delivered at the minesite for the Beluga area mines and $0.95 per gallon delivered at the minesite for the Nenana area mines.

Explosives costs for coal shooting at the Beluga area mines and for overburden and coal shooting at the Nenana area mines was estimated to cost $375 per ton delivered in bulk to the minesites.

Electric power costs were estimated from expected average demand and usage requirements for the mines as a whole. Electric power rates were provided by H-E and were based on the rates charged in the Chugatch Electric-Whittier District. The rates used are:

Demand: $6.06 per month per KW demand

Energy: First 100 KWH @ $0.082 per KWH

Next 200 KWH @ $0.066 per KWH

All over 200 KWH @ $0.041 per KWH

Combining the demand and usage costs resulted in an effective rate of $0.053 per KWH in the Beluga area. Costs were estimated to be $0.106 per KWH in the Nenana area, reflecting the higher rates in the Fairbanks-Tanana area.

The costs of repair parts and operating supplies and of fuel and lubricants were estimated for the major equipment items used in each mine plan. Maintenance labor requirements per shift operated were also estimated. Productivity estimates for the major excavating machinery (draglines and shovels) were based on estimates of availability. Other major items of equipment were scheduled to operate a maximum number of shifts per year based on estimated availabilities.

Summaries of the operating costs and shifts for the major equipment items are presented in Tables No. 2 A through No. 2 D for the four mine studies.

The units of work in each mining function calculated from the mining plans, as described in the "Mining Plans" section of this report, are combined with estimated machine and labor productivities to generate the equipment shifts required to do the work during each period of production. The equipment shifts in turn were combined with labor and other unit costs to generate estimated operating costs.

Tables No. 3 A through No. 3 D present, for the four cases, the estimated operating costs by mining function for each period of production. The timing of the mine studies generally reflects a 7 year period leading up to the start of production in year 8 (year 6 for Case 3). Feasibility assessment of a previously explored property and engineering and permitting activities are estimated to take 4 years. Minesite construction and preproduction operations take 3 years (2 years for Case 3).

Basic units of work (i.e., area disturbed, overburden volume, coal produced, etc.) and the major equipment item operating shifts required to do the work are shown for most mining functions.

Annual summaries of the operating costs separated into cost components (labor, supplies, fuel, etc.), annual manpower requirements by pay grade and annual equipment shifts operated are presented in the last pages of these tables.

Some costs such as the Federal Black Lung Tax and an allocation of general and administrative expenses of the hypothetical parent company have been included in the operating cost estimates. Although the Black Lung Tax is partially determined by the selling price of the coal, there is a cap of $0.50 per ton whenever the selling price is more than $12.50 per ton. Since that is true for all the cases examined, the Black Lung Tax is included in this table. An allowance of 4.5 percent of the average annual operating expenses plus average depreciation per ton was included to cover parent company overhead to support this operation.

Capital Costs

Representative models of equipment sized to perform the work required were selected for cost estimating. Equipment prices were based on January, 1985 budget level estimates from our files adjusted to include freight and erection costs; a 5 percent contingency allowance was added to the price of each item of equipment.

The estimated price of tires on rubber-tired equipment items was subtracted from the unit capital cost to arrive at the depreciable base. No allowance was made for salvage value. An estimate of the service life of each item of major equipment was made based on manufacturers' recommendations and the estimated severity of the work load.

Summaries of the capital costs and depreciation bases are presented for the major equipment items in Tables No. 2 A through No. 2 D for the four mine studies.

Estimates of the cost of mine infrastructure items, including offices, shops and warehouses and coal handling facilities, as well as site preparation and townsite cost allocation were estimated based on the equipment fleet requirements and personnel levels at the mines. Townsite costs were provided by H-E based on manpower levels provided by us. A 15 percent contingency allowance was included in the infrastructure costs.

The total annual equipment shifts required to do the work were generated while calculating the operating costs. These shifts were scheduled to determine the number of individual items of equipment required each year. Fleets of equipment were purchased and replaced as the accumulated total of operating shifts equaled the estimated service life of the equipment items. Minor equipment items and auxiliary mine equipment were purchased as required by the buildup in production and manpower. These items were replaced at the end of their estimated lives.

The purchase and replacement schedules thereby generated were used to formulate capital expenditure schedules. Infrastructure item costs were also scheduled to correspond with the development of the mine. Tables No. 4 A through No. 4 D present the schedule of capital cost expenditures for the four cases.

To allocate the cost of capital to the tonnage produced by the capital items, annual depreciation was calculated based on the service life of the equipment.

The costs of exploration and lease acquisition, developmental drilling and engineering and mine permitting were estimated based on the size of the hypothetical deposit. A contingency allowance of 15 percent was included in these estimates. These costs were amortized rateably over the tons of coal produced.

Preproduction operating expenses of the mine such as initial stripping and haul road construction were also amortized rateably over the tons of coal produced by the mine.

VI. COAL PRICES

The minimum levelized coal sale prices were estimated based on the revenues necessary to cause net cash flows after taxes to become zero at the beginning of year 1, when discounted at a real rate of return of 8.2 percent. These prices are presented in Tables No. 5 A through No. 5 D.

The total cost of production includes the following:

- The direct operating costs calculated in Tables No. 3 A through No. 3 D.
- Royalty at an assumed rate of 12½ percent of realization on all coal mined.
- Alaska Mining License Tax beginning with the fourth year of production (except in Case 3 where incremental production is taxed from the start of production). The tax is $4,000 plus 7 percent of gross profit in excess of $100,000 before Federal Income Tax, but after depletion allowance.
- Service life depreciation.

The total cost of production for calculation of Federal Income Tax includes the following:

- The total cost of production described above.

- Accelerated depreciation was substituted for service life depreciation. It was calculated from the capital cost schedule using the accelerated cost recovery system property classes and reduced by one-half the investment tax credit. The amount of accelerated depreciation is shown in Tables No. 5 A through No. 5 D.

Federal Income Tax paid was calculated from income before tax deductions as follows:

- Any tax loss carried forward was taken into account.

- Percentage depletion equal to 8.5 percent of realization minus royalty with a maximum of 50 percent of gross profit. (The statutory depletion allowance of 10 percent was reduced by 15 percent because the adjusted basis of the property is relatively insignificant.)

- Federal Income Tax liability was calculated at a flat rate of 46 percent.

- An investment tax credit was taken in the year capital items were purchased. Items with a 3 year life yielded a 6 percent investment tax credit, longer lived items a 10 percent investment tax credit. The amount of investment tax credit is shown in Tables No. 5 A through No. 5 D.

Net cash flow from operation was calculated as follows:

- Profit after tax equaled profit before tax minus Federal Income Tax paid.

- Gross cash flow equaled profit after tax plus service life depreciation.

- Capital expenditures as shown in Tables No. 5 A through No. 5 D were deducted.

- Final reclamation and mine closing costs estimated as $10 million were charged in the year following the end of production.

- An allowance for working capital equal to 3 months operating costs and royalties was maintained throughout the mine life. This working capital was recovered at the end of the mine life.

The stream of cash flows from the properties was discounted at a real rate of return of 8.2 percent in accordance with instructions from H-E. (This real rate of return reflects an underlying rate of inflation of 5.5 percent in all costs as directed by H-E. Nominal rate of return is 14.2 percent.)

Respectfully submitted,

PAUL WEIR COMPANY

By: Robert G. Wilken
Robert G. Wilken

By: Donald L. Schaible
Donald L. Schaible

Dated: October 30, 1985

TABLES

No. 2 A to No. 5 D

Tables No. 2 A to No. 2 D

TABLE 2 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
EQUIPMENT LIST
and OPERATING COSTS

ITEM	TYPICAL MODEL OR SIZE	UNIT PRICE	DEPRECIABLE AMOUNT	SERVICE LIFE	OPERATING SH/YR	DOLLARS PER SHIFT OPERATED PARTS and SUPPLIES	FUEL and LUBE	OTHER	SH/SH MAINTENANCE FACTOR
WALKING DRAGLINE	70 CYD	27400.0 K	27400.0 K	30 LM	1,000	955.00	125.05	1,753.25	5.50
OVERBURDEN SHOVEL	20 CYD	3410.0 K	3410.0 K	30 LM	1,000	457.50	13.60	279.00	2.50
HYDRAULIC EXCAVATOR	18.5 CYD	1550.0 K	1550.0 K	30,000 HR	500	149.85	199.15	0.00	1.23
CRAWLER DOZER	CAT D8-K	332.0 K	332.0 K	12,500 HR	400	113.60	58.90	0.00	.40
CRAWLER DOZER	CAT D9-L	469.0 K	469.0 K	12,500 HR	800	160.70	82.00	0.00	.50
SCRAPER	CAT 637-B	561.0 K	544.0 K	10,000 HR	400	160.50	136.40	0.00	1.40
OVERBURDEN HAULER	120 TON	788.0 K	733.0 K	27,500 HR	800	242.00	143.60	0.00	1.10
COAL HAULER	120 TON	788.0 K	733.0 K	27,500 HR	800	242.00	143.60	0.00	1.10
MOTOR GRADER	CAT 16 G	303.0 K	293.0 K	12,500 HR	337	67.10	42.15	0.00	.55
WHEEL DOZER	CAT 824-C	278.0 K	268.0 K	12,000 HR	337	129.30	62.75	0.00	.45
WATER TRUCK	CAT 631-T	346.0 K	329.0 K	15,000 HR	337	65.20	65.50	0.00	.40
COAL DRILL	4 In.	240.0 K	235.0 K	12,500 HR	250	50.05	26.40	0.00	.60
PUMPS AND PIPING	4 Inch H H	32.8 K	32.8 K	40,000 HR	1,000	28.80	11.25	0.00	.15
RECLAMATION FARM EQUIPMENT		110.0 K	105.0 K	8,000 HR	125	31.50	19.65	0.00	.25
COMPACTOR	CAT 816-B	182.0 K	170.0 K	15,000 HR	250	27.75	49.40	0.00	.40
GRAVEL SCREEN PLANT		94.0 K	94.0 K	24,000 HR	250	66.90	9.75	0.00	1.00
GRAVEL TRUCKS		130.0 K	123.0 K	25,000 HR	250	264.85	66.00	0.00	.80
FRONT END LOADER	CAT 988-B	388.0 K	380.0 K	12,000 HR	200	135.25	71.80	0.00	.75
PICKUPS AND SEDANS		16.9 K	16.9 K	3 YR	-	-	NSE	-	-
POWDER TRUCK		95.8 K	95.8 K	10 YR	-	-	NSE	-	-
PORTABLE SUBSTATION	10 MVA	700.0 K	700.0 K	15 YR	-	-	NSE	-	-
HYDRAULIC CRANE	125 TON	235.0 K	235.0 K	15 YR	-	-	NSE	-	-
MOBIL TIRE CHANGER	IMT 1836	175.0 K	175.0 K	10 YR	-	-	NSE	-	-
FORKLIFT		70.0 K	70.0 K	10 YR	-	-	NSE	-	-
PORTABLE LIGHT PLANT		20.0 K	20.0 K	10 YR	-	-	NSE	-	-
WELDING TRUCK		46.0 K	46.0 K	5 YR	-	-	NSE	-	-
UTILITY BACKHOE	CAT 225	182.3 K	182.3 K	10 YR	-	-	NSE	-	-
TRUCK W/ LOW-BOY TRAILER		98.1 K	98.1 K	10 YR	-	-	NSE	-	-
SERVICE TRUCK W/ CRANE		80.4 K	80.4 K	10 YR	-	-	NSE	-	-
LUBE TRUCK		57.9 K	57.9 K	10 YR	-	-	NSE	-	-
FUEL TRUCK		76.9 K	76.9 K	10 YR	-	-	NSE	-	-
ELECTRICIANS TRUCK		39.0 K	39.0 K	10 YR	-	-	NSE	-	-
LINE TRUCK		57.9 K	57.9 K	10 YR	-	-	NSE	-	-
SUPPLY TRUCK		33.1 K	33.1 K	5 YR	-	-	NSE	-	-
AMBULANCE		63.9 K	63.9 K	10 YR	-	-	NSE	-	-
PERSONNEL VAN		30.7 K	30.7 K	5 YR	-	-	NSE	-	-
FIRE TRUCK		104.0 K	104.0 K	15 YR	-	-	NSE	-	-
FULL TRANSPORTER		92.2 K	92.2 K	15 YR	-	-	NSE	-	-

* UNIT PRICES INCLUDE CONTINGENCY ALLOWANCE
NSE=NOT SEPARATELY ESTIMATED

TABLE 2 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
EQUIPMENT LIST
and OPERATING COSTS

ITEM	TYPICAL MODEL OR SIZE	UNIT PRICE	DEPRECIABLE AMOUNT	SERVICE LIFE	OPERATING SH/YR	DOLLARS PER SHIFT OPERATED PARTS and SUPPLIES	FUEL and LUBE	OTHER	SH/SH MAINTENANCE FACTOR
WALKING DRAGLINE	70 CYD	27400.0 K	27400.0 K	30 YR	1,000	955.00	125.05	1,753.25	5.50
WALKING DRAGLINE	110 CYD	46000.0 K	46000.0 K	30 YR	1,000	1,245.00	208.50	2,948.40	8.00
OVERBURDEN SHOVEL	20 CYD	3410.0 K	3410.0 K	30 YR	1,000	457.50	13.60	279.00	2.50
HYDRAULIC EXCAVATOR	18.5 CYD	1550.0 K	1550.0 K	30,000 HR	500	149.85	199.15	0.00	1.25
CRAWLER DOZER	CAT D8-K	332.0 K	332.0 K	12,500 HR	400	113.60	58.90	0.00	.40
CRAWLER DOZER	CAT D9-L	469.0 K	469.0 K	12,500 HR	800	160.70	82.00	0.00	.50
SCRAPER	CAT 637-B	561.0 K	544.0 K	10,000 HR	400	160.50	136.40	0.00	1.40
OVERBURDEN HAULER	120 TON	788.0 K	733.0 K	27,500 HR	800	242.00	143.60	0.00	1.10
COAL HAULER	120 TON	788.0 K	733.0 K	27,500 HR	800	242.00	143.60	0.00	1.10
MOTOR GRADER	CAT 16 G	303.0 K	293.0 K	12,500 HR	400	67.10	42.15	0.00	.55
WHEEL DOZER	CAT 824-C	278.0 K	268.0 K	12,000 HR	400	129.30	62.75	0.00	.45
WATER TRUCK	CAT 631-T	346.0 K	329.0 K	15,000 HR	337	65.20	65.50	0.00	.40
COAL DRILL	4 In.	240.0 K	235.0 K	12,500 HR	250	50.05	26.40	0.00	.60
PUMPS AND PIPING	4 Inch H H	32.8 K	32.8 K	40,000 HR	1,000	28.80	11.25	0.00	.15
RECLAMATION FARM EQUIPMENT		110.0 K	105.0 K	8,000 HR	125	31.50	19.65	0.00	.25
COMPACTOR	CAT 816-B	182.0 K	170.0 K	15,000 HR	250	27.75	49.40	0.00	.40
GRAVEL SCREEN PLANT		94.0 K	94.0 K	24,000 HR	250	66.90	9.75	0.00	1.00
GRAVEL TRUCKS		130.0 K	123.0 K	25,000 HR	250	264.85	66.00	0.00	.80
FRONT END LOADER	CAT 988-B	388.0 K	380.0 K	12,000 HR	200	135.25	71.80	0.00	.75
PICKUPS AND SEDANS		16.9 K	16.9 K	3 YR	-	-	NSE	-	-
POWDER TRUCK		95.8 K	95.8 K	10 YR	-	-	NSE	-	-
PORTABLE SUBSTATION	10 MVA	700.0 K	700.0 K	15 YR	-	-	NSE	-	-
HYDRAULIC CRANE	125 TON	235.0 K	235.0 K	15 YR	-	-	NSE	-	-
MOBIL TIRE CHANGER	IMT 1836	175.0 K	175.0 K	10 YR	-	-	NSE	-	-
FORKLIFT		70.0 K	70.0 K	10 YR	-	-	NSE	-	-
PORTABLE LIGHT PLANT		20.0 K	20.0 K	10 YR	-	-	NSE	-	-
WELDING TRUCK		46.0 K	46.0 K	5 YR	-	-	NSE	-	-
UTILITY BACKHOE	CAT 225	182.3 K	182.3 K	10 YR	-	-	NSE	-	-
TRUCK w/ LOW-BOY TRAILER		98.1 K	98.1 K	10 YR	-	-	NSE	-	-
SERVICE TRUCK w/ CRANE		80.4 K	80.4 K	10 YR	-	-	NSE	-	-
LUBE TRUCK		57.9 K	57.9 K	10 YR	-	-	NSE	-	-
FUEL TRUCK		76.9 K	76.9 K	10 YR	-	-	NSE	-	-
ELECTRICIANS TRUCK		39.0 K	39.0 K	10 YR	-	-	NSE	-	-
LINE TRUCK		57.9 K	57.9 K	10 YR	-	-	NSE	-	-
SUPPLY TRUCK		33.1 K	33.1 K	5 YR	-	-	NSE	-	-
AMBULANCE		63.9 K	63.9 K	10 YR	-	-	NSE	-	-
PERSONNEL VAN		30.7 K	30.7 K	5 YR	-	-	NSE	-	-
FIRE TRUCK		104.0 K	104.0 K	15 YR	-	-	NSE	-	-
FUEL TRANSPORTER		92.2 K	92.2 K	15 YR	-	-	NSE	-	-

* UNIT PRICES INCLUDE CONTINGENCY ALLOWANCE
NSE=NOT SEPARATELY ESTIMATED

TABLE 2 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
EQUIPMENT LIST
and OPERATING COSTS

ITEM	TYPICAL MODEL OR SIZE	UNIT PRICE	DEPRECIABLE AMOUNT	SERVICE LIFE	OPERATING SH/YR	DOLLARS PER SHIFT OPERATED PARTS and SUPPLIES	FUEL and LUBE	OTHER	SH/SH MAINTENANCE FACTOR
WALKING DRAGLINE	30 CYD	15500.0 K	15500.0 K	20 LM	1,000	585.00	78.40	1,730.90	2.25
OVERBURDEN DRILL	10 In.	950.0 K	950.0 K	50,000 HR	800	121.10	13.38	105.10	1.75
FRONT END LOADER	13 CYD	840.0 K	840.0 K	15,000 HR	600	180.40	190.00	0.00	1.25
CRAWLER DOZER	CAT D8-K	332.0 K	332.0 K	12,500 HR	400	113.60	63.60	0.00	.40
CRAWLER DOZER	CAT D9-L	469.0 K	469.0 K	12,500 HR	800	160.70	88.50	0.00	.50
SCRAPER	CAT 637-B	561.0 K	544.0 K	10,000 HR	400	160.50	147.25	0.00	1.40
OVERBURDEN HAULER	85 TON	575.0 K	540.0 K	27,500 HR	600	180.00	120.00	0.00	1.00
COAL HAULER	85 TON	575.0 K	540.0 K	27,500 HR	200	180.00	120.00	0.00	1.00
MOTOR GRADER	CAT 16 G	303.0 K	293.0 K	12,500 HR	337	67.10	45.50	0.00	.55
WHEEL DOZER	CAT 824-C	278.0 K	268.0 K	12,000 HR	337	129.30	67.75	0.00	.45
WATER TRUCK	CAT 631-T	346.0 K	329.0 K	15,000 HR	337	65.20	70.70	0.00	.40
COAL DRILL	4 In.	240.0 K	235.0 K	12,500 HR	250	50.05	28.50	0.00	.60
PUMPS AND PIPING	4 Inch H H	32.8 K	32.8 K	40,000 HR	1,000	28.80	12.15	0.00	.15
RECLAMATION FARM EQUIPMENT		110.0 K	105.0 K	8,000 HR	125	31.50	21.20	0.00	.25
COMPACTOR	CAT 816-B	182.0 K	170.0 K	15,000 HR	250	27.75	53.35	0.00	.40
GRAVEL SCREEN PLANT		94.0 K	94.0 K	24,000 HR	250	66.90	10.50	0.00	1.00
GRAVEL TRUCKS		130.0 K	123.0 K	25,000 HR	250	264.85	71.25	0.00	.80
FRONT END LOADER	CAT 988-B	388.0 K	380.0 K	12,000 HR	200	135.25	77.50	0.00	.75
PICKUPS AND SEDANS		16.9 K	16.9 K	3 YR	-	-	NSE	-	-
POWDER TRUCK		95.8 K	95.8 K	10 YR	-	-	NSE	-	-
PORTABLE SUBSTATION	10 MVA	700.0 K	700.0 K	15 YR	-	-	NSE	-	-
HYDRAULIC CRANE	125 TON	235.0 K	235.0 K	15 YR	-	-	NSE	-	-
MOBIL TIRE CHANGER	IMT 1836	175.0 K	175.0 K	10 YR	-	-	NSE	-	-
FORKLIFT		70.0 K	70.0 K	10 YR	-	-	NSE	-	-
PORTABLE LIGHT PLANT		20.0 K	20.0 K	10 YR	-	-	NSE	-	-
WELDING TRUCK		46.0 K	46.0 K	5 YR	-	-	NSE	-	-
UTILITY BACKHOE	CAT 225	182.3 K	182.3 K	10 YR	-	-	NSE	-	-
TRUCK w/ LOW-BOY TRAILER		98.1 K	98.1 K	10 YR	-	-	NSE	-	-
SERVICE TRUCK w/ CRANE		80.4 K	80.4 K	10 YR	-	-	NSE	-	-
LUBE TRUCK		57.9 K	57.9 K	10 YR	-	-	NSE	-	-
FUEL TRUCK		76.9 K	76.9 K	10 YR	-	-	NSE	-	-
ELECTRICIANS TRUCK		39.0 K	39.0 K	10 YR	-	-	NSE	-	-
LINE TRUCK		57.9 K	57.9 K	10 YR	-	-	NSE	-	-
SUPPLY TRUCK		33.1 K	33.1 K	5 YR	-	-	NSE	-	-
AMBULANCE		63.9 K	63.9 K	10 YR	-	-	NSE	-	-
PERSONNEL VAN		30.7 K	30.7 K	5 YR	-	-	NSE	-	-
FIRE TRUCK		104.0 K	104.0 K	15 YR	-	-	NSE	-	-
FUEL TRANSPORTER		92.2 K	92.2 K	15 YR	-	-	NSE	-	-

* UNIT PRICES INCLUDE CONTINGENCY ALLOWANCE
NSE=NOT SEPARATELY ESTIMATED

TABLE 2 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
EQUIPMENT LIST
and OPERATING COSTS

ITEM	TYPICAL MODEL OR SIZE	UNIT PRICE	DEPRECIABLE AMOUNT	SERVICE LIFE	OPERATING SH/YR	DOLLARS PER SHIFT OPERATED PARTS and SUPPLIES	FUEL and LUBE	OTHER	SH/SH MAINTENANCE FACTOR
WALKING DRAGLINE	30 CYD	15500.0 K	15500.0 K	25 YR	1,000	585.00	78.40	1,730.90	2.25
OVERBURDEN DRILL	10 In.	950.0 K	950.0 K	30,000 HR	800	121.10	13.38	105.10	1.75
FRONT END LOADER	13 CYD	840.0 K	840.0 K	15,000 HR	800	180.40	190.00	0.00	1.25
CRAWLER DOZER	CAT D8-K	332.0 K	332.0 K	12,500 HR	400	113.60	63.60	0.00	.40
CRAWLER DOZER	CAT D9 L	469.0 K	469.0 K	12,500 HR	800	160.70	88.50	0.00	.50
SCRAPER	CAT 637-B	561.0 K	544.0 K	10,000 HR	400	160.50	147.25	0.00	1.40
OVERBURDEN HAULER	85 TON	575.0 K	540.0 K	27,500 HR	800	180.00	120.00	0.00	1.00
COAL HAULER	85 TON	575.0 K	540.0 K	27,500 HR	337	180.00	120.00	0.00	1.00
MOTOR GRADER	CAT 16 G	303.0 K	293.0 K	12,500 HR	337	67.10	45.50	0.00	.55
WHEEL DOZER	CAT 824-C	278.0 K	268.0 K	12,000 HR	337	129.30	67.75	0.00	.45
WATER TRUCK	CAT 631-T	346.0 K	329.0 K	15,000 HR	337	65.20	70.70	0.00	.40
COAL DRILL	4 In.	240.0 K	235.0 K	12,500 HR	250	50.05	28.50	0.00	.60
PUMPS AND PIPING	4 Inch H H	32.8 K	32.8 K	40,000 HR	1,000	28.80	12.15	0.00	.15
RECLAMATION FARM EQUIPMENT		110.0 K	105.0 K	8,000 HR	125	31.50	21.20	0.00	.25
COMPACTOR	CAT 816-B	182.0 K	170.0 K	15,000 HR	250	27.75	53.35	0.00	.40
GRAVEL SCREEN PLANT		94.0 K	94.0 K	24,000 HR	250	66.90	10.50	0.00	1.00
GRAVEL TRUCKS		130.0 K	123.0 K	25,000 HR	250	264.85	71.25	0.00	.80
FRONT END LOADER	CAT 988-B	388.0 K	380.0 K	12,000 HR	200	135.25	77.50	0.00	.75
PICKUPS AND SEDANS		16.9 K	16.9 K	3 YR	-	-	NSE	-	-
POWDER TRUCK		95.8 K	95.8 K	10 YR	-	-	NSE	-	-
PORTABLE SUBSTATION	10 MVA	700.0 K	700.0 K	15 YR	-	-	NSE	-	-
HYDRAULIC CRANE	125 TON	235.0 K	235.0 K	15 YR	-	-	NSE	-	-
MOBIL TIRE CHANGER	IMI 1836	175.0 K	175.0 K	10 YR	-	-	NSE	-	-
FORKLIFT		70.0 K	70.0 K	10 YR	-	-	NSE	-	-
PORTABLE LIGHT PLANT		20.0 K	20.0 K	10 YR	-	-	NSE	-	-
WELDING TRUCK		46.0 K	46.0 K	5 YR	-	-	NSE	-	-
UTILITY BACKHOE	CAT 225	182.3 K	182.3 K	10 YR	-	-	NSE	-	-
TRUCK w/ LOW-BOY TRAILER		98.1 K	98.1 K	10 YR	-	-	NSE	-	-
SERVICE TRUCK w/ CRANE		80.4 K	80.4 K	10 YR	-	-	NSE	-	-
LUBE TRUCK		57.9 K	57.9 K	10 YR	-	-	NSE	-	-
FUEL TRUCK		76.9 K	76.9 K	10 YR	-	-	NSE	-	-
ELECTRICIANS TRUCK		39.0 K	39.0 K	10 YR	-	-	NSE	-	-
LINE TRUCK		57.9 K	57.9 K	10 YR	-	-	NSE	-	-
SUPPLY TRUCK		33.1 K	33.1 K	5 YR	-	-	NSE	-	-
AMBULANCE		63.9 K	63.9 K	10 YR	-	-	NSE	-	-
PERSONNEL VAN		30.7 K	30.7 K	5 YR	-	-	NSE	-	-
FIRE TRUCK		104.0 K	104.0 K	15 YR	-	-	NSE	-	-
FUEL TRANSPORTER		92.2 K	92.2 K	15 YR	-	-	NSE	-	-

* UNIT PRICES INCLUDE CONTINGENCY ALLOWANCE
NSE=NOT SEPARATELY ESTIMATED

Tables No. 3 A to No. 3 D

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
DRAINAGE CONTROL AND RECLAMATION								
AREA DISTURBED	497	597	517	176	156	61	191	69
AREA RECLAIMED	0	0	74	295	329	195	169	175
SCRAPER SHIFTS	1,005	820	970	870	870	525	510	465
DOZER SHIFTS	335	275	325	290	290	175	170	155
PUMPING SHIFTS	1,264	2,818	5,453	6,435	6,606	5,244	5,122	4,368
LABOR PRODUCTION	$ 261.	$ 214.	$ 320.	$ 455.	$ 474.	$ 284.	$ 260.	$ 253.
MAINTENANCE	343.	332.	463.	470.	477.	323.	313.	278.
PAYROLL OVERHEAD	242.	218.	313.	370.	380.	243.	230.	212.
SUBTOTAL	$ 846.	$ 764.	$ 1,097.	$ 1,296.	$ 1,331.	$ 850.	$ 803.	$ 744.
PARTS AND SUPPLIES	$ 252.	$ 257.	$ 401.	$ 508.	$ 530.	$ 353.	$ 334.	$ 306.
FUEL AND LUBE	179.	166.	225.	223.	224.	149.	145.	129.
TOTAL	$ 1,276.	$ 1,187.	$ 1,723.	$ 2,026.	$ 2,085.	$ 1,353.	$ 1,282.	$ 1,178.
COST PER TON	$ .51	$ .24	$ .22	$ .25	$ .26	$ .17	$ .16	$ .15
OVERBURDEN STRIPPING AND HAULING: SHOVEL/TRUCK								
SHOVEL OVERBURDEN YARDS	3,272	6,544	13,088	15,392	19,631	26,175	26,175	26,175
SHOVEL SHIFTS	592	1,183	2,365	2,782	3,550	4,731	4,732	4,731
TRUCK SHIFTS	1,895	3,785	10,865	11,930	14,000	18,800	25,005	23,955
DOZER SHIFTS	592	1,183	2,365	2,782	3,550	4,731	4,732	4,731
LABOR PRODUCTION	$ 711.	$ 1,421.	$ 3,468.	$ 3,918.	$ 4,767.	$ 6,395.	$ 7,559.	$ 7,359.
MAINTENANCE	751.	1,500.	3,705.	4,176.	5,067.	6,800.	8,111.	7,886.
PAYROLL OVERHEAD	585.	1,169.	2,869.	3,237.	3,933.	5,278.	6,268.	6,098.
SUBTOTAL	$ 2,047.	$ 4,090.	$ 10,042.	$ 11,331.	$ 13,767.	$ 18,473.	$ 21,938.	$ 21,343.
PARTS AND SUPPLIES	$ 825.	$ 1,647.	$ 4,091.	$ 4,607.	$ 5,583.	$ 7,494.	$ 8,977.	$ 8,722.
FUEL AND LUBE	329.	657.	1,786.	1,979.	2,350.	3,163.	4,043.	3,892.
ELECTRIC POWER	165.	330.	660.	776.	990.	1,320.	1,320.	1,320.
TOTAL	$ 3,366.	$ 6,724.	$ 16,579.	$ 18,693.	$ 22,690.	$ 30,450.	$ 36,278.	$ 35,277.
COST PER TON	$ 1.35	$ 1.34	$ 2.07	$ 2.34	$ 2.84	$ 3.81	$ 4.53	$ 4.41

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
DRAINAGE CONTROL AND RECLAMATION								
AREA DISTURBED	120	41	718	561	645	699	4,478	
AREA RECLAIMED	71	69	484	557	622	1,328	4,368	
SCRAPER SHIFTS	335	200	1,875	1,500	1,675	3,350	14,970	
DOZER SHIFTS	115	70	625	500	575	1,125	5,025	
PUMPING SHIFTS	4,133	4,417	20,910	24,415	24,860	21,450	137,575	
LABOR PRODUCTION	$ 142.	$ 105.	$ 856.	$ 815.	$ 912.	$ 1,875.	$ 7,228.	$ .03
MAINTENANCE	227.	194.	1,207.	1,199.	1,270.	1,714.	8,810.	.04
PAYROLL OVERHEAD	148.	120.	825.	805.	873.	1,436.	6,415.	.03
SUBTOTAL	$ 516.	$ 419.	$ 2,888.	$ 2,819.	$ 3,055.	$ 5,025.	$ 22,453.	$ .10
PARTS AND SUPPLIES	$ 224.	$ 202.	$ 1,227.	$ 1,281.	$ 1,364.	$ 1,947.	$ 9,184.	$ .04
FUEL AND LUBE	103.	84.	553.	533.	569.	818.	4,099.	.02
TOTAL	$ 843.	$ 706.	$ 4,668.	$ 4,632.	$ 4,987.	$ 7,789.	$ 35,736.	$ .15
COST PER TON	$ .11	$ .09	$ .12	$ .12	$ .12	$ .19		
OVERBURDEN STRIPPING AND HAULING-SHOVEL/TRUCK								
SHOVEL OVERBURDEN YARDS	26,149	19,090	100,187	163,596	248,664	229,060	923,199	
SHOVEL SHIFTS	4,727	3,451	18,135	29,570	44,930	41,405	166,884	
TRUCK SHIFTS	28,220	18,895	86,200	127,775	177,975	191,850	741,230	
DOZER SHIFTS	4,727	3,451	18,135	29,570	44,930	41,405	166,884	
LABOR PRODUCTION	$ 8,167.	$ 5,638.	$ 27,141.	$ 41,827.	$ 60,481.	$ 61,025.	$ 239,879.	$ 1.04
MAINTENANCE	8,796.	6,056.	29,024.	44,592.	64,294.	65,206.	255,963.	1.11
PAYROLL OVERHEAD	6,785.	4,678.	22,466.	34,567.	49,910.	50,493.	198,337.	.86
SUBTOTAL	$ 23,748.	$ 16,372.	$ 78,632.	$ 120,986.	$ 174,686.	$ 176,724.	$ 694,179.	$ 3.00
PARTS AND SUPPLIES	$ 9,751.	$ 6,706.	$ 32,071.	$ 49,202.	$ 70,846.	$ 72,024.	$ 282,545.	$ 1.22
FUEL AND LUBE	4,504.	3,043.	14,112.	21,175.	29,853.	31,508.	122,395.	.53
ELECTRIC POWER	1,319.	963.	5,060.	8,250.	12,535.	11,552.	46,561.	.20
TOTAL	$ 39,323	$ 27,084	$ 129,875.	$ 199,613.	$ 287,920.	$ 291,808.	$ 1,145,680.	$ 4.95
COST PER TON	$ 4.92	$ 3.39	$ 3.25	$ 4.99	$ 7.20	$ 7.30		

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
OVERBURDEN STRIPPING								
DRAGLINE								
DRAGLINE OVERBURDEN YARDS	6,125	12,250	15,250	24,500	24,500	24,500	22,750	21,000
DRAGLINE SHIFTS	500	1,000	1,245	2,000	2,000	2,000	1,857	1,714
DOZER SHIFTS	500	1,000	1,245	2,000	2,000	2,000	1,857	1,714
LABOR PRODUCTION	$ 389.	$ 779.	$ 969.	$ 1,557.	$ 1,557.	$ 1,557.	$ 1,446.	$ 1,335.
MAINTENANCE	574.	1,148.	1,429.	2,295.	2,295.	2,295.	2,131.	1,967.
PAYROLL OVERHEAD	385.	770.	959.	1,541.	1,541.	1,541.	1,431.	1,321.
SUBTOTAL	$ 1,348.	$ 2,696.	$ 3,357.	$ 5,393.	$ 5,393.	$ 5,393.	$ 5,008.	$ 4,623.
PARTS AND SUPPLIES	$ 534.	$ 1,069.	$ 1,330.	$ 2,137.	$ 2,137.	$ 2,137.	$ 1,985.	$ 1,832.
FUEL AND LUBE	92.	184.	229.	368.	368.	368.	342.	315.
ELECTRIC POWER	877.	1,753.	2,183.	3,507.	3,507.	3,507.	3,256.	3,004.
TOTAL	$ 2,851.	$ 5,702.	$ 7,099.	$ 11,405.	$ 11,405.	$ 11,405.	$ 10,590.	$ 9,775.
COST PER TON	$ 1.14	$ 1.14	$ .89	$ 1.43	$ 1.43	$ 1.43	$ 1.32	$ 1.22
MINING AND HAULING COAL and PARTING REMOVAL								
PRODUCTION,TONS	2,500	5,000	8,000	8,000	8,000	8,000	8,000	8,000
PARTING,CUBIC YARDS	204	328	592	561	461	542	443	401
DRILL SHIFTS	122	243	389	390	389	391	390	390
SHOVEL SHIFTS	394	787	1,260	1,260	1,259	1,259	1,331	1,325
COAL TRUCK SHIFTS	1,290	2,670	4,965	4,855	5,535	5,415	5,475	6,130
PARTING TRUCK SHIFTS	0	0	0	0	0	0	120	110
DOZER SHIFTS	431	847	1,370	1,364	1,343	1,360	1,331	1,325
SCRAPER SHIFTS	110	180	325	310	250	300	0	0
LABOR PRODUCTION	$ 455.	$ 915.	$ 1,606.	$ 1,581.	$ 1,694.	$ 1,685.	$ 1,670.	$ 1,790.
MAINTENANCE	458.	922.	1,636.	1,608.	1,734.	1,724.	1,670.	1,808.
PAYROLL OVERHEAD	365.	735.	1,297.	1,276.	1,371.	1,364.	1,336.	1,439.
SUBTOTAL	$ 1,277.	$ 2,572.	$ 4,539.	$ 4,465.	$ 4,800.	$ 4,773.	$ 4,675.	$ 5,037.
PARTS AND SUPPLIES	$ 464.	$ 941.	$ 1,682.	$ 1,652.	$ 1,804.	$ 1,785.	$ 1,787.	$ 1,941.
FUEL AND LUBE	317.	641.	1,131.	1,113.	1,200.	1,191.	1,188.	1,279.
EXPLOSIVES	153.	300.	483.	482.	476.	480.	475.	473.
TOTAL	$ 2,211.	$ 4,454.	$ 7,835.	$ 7,711.	$ 8,280.	$ 8,230.	$ 8,125.	$ 8,729.
COST PER TON	$ .88	$ .89	$ .98	$ .96	$ 1.03	$ 1.03	$ 1.02	$ 1.09

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
OVERBURDEN STRIPPING DRAGLINE								
DRAGLINE OVERBURDEN YARDS	21,000	21,000	105,000	113,750	105,000	122,500	639,125	
DRAGLINE SHIFTS	1,714	1,714	8,571	9,286	8,571	10,000	52,173	
DOZER SHIFTS	1,714	1,714	8,571	9,286	8,571	10,000	52,173	
LABOR PRODUCTION	$ 1,335.	$ 1,335.	$ 6,673.	$ 7,229.	$ 6,673.	$ 7,785.	$ 40,617.	$ .18
MAINTENANCE	1,967.	1,967.	9,836.	10,656.	9,836.	11,476.	59,872.	.26
PAYROLL OVERHEAD	1,321.	1,321.	6,604.	7,154.	6,604.	7,704.	40,195.	.17
SUBTOTAL	$ 4,623.	$ 4,623.	$ 23,113.	$ 25,039.	$ 23,113.	$ 26,965.	$ 140,684.	$ .61
PARTS AND SUPPLIES	$ 1,832.	$ 1,832.	$ 9,159.	$ 9,923.	$ 9,159.	$ 10,686.	$ 55,753.	$ .24
FUEL AND LUBE	315.	315.	1,577.	1,708.	1,577.	1,840.	9,597.	.04
ELECTRIC POWER	3,006.	3,006.	15,028.	16,281.	15,028.	17,533.	91,476.	.40
TOTAL	$ 9,775.	$ 9,775.	$ 48,877.	$ 52,950.	$ 48,877.	$ 57,023.	$ 297,510.	$ 1.29
COST PER TON	$ 1.22	$ 1.22	$ 1.22	$ 1.32	$ 1.22	$ 1.43		
MINING AND HAULING COAL and PARTING REMOVAL								
PRODUCTION, TONS	8,000	8,000	40,000	40,000	40,000	40,000	231,500	
PARTING, CUBIC YARDS	515	567	1,355	0	0	0	5,969	
DRILL SHIFTS	389	390	1,945	1,950	1,945	1,945	11,268	
SHOVEL SHIFTS	1,260	1,260	6,520	6,300	6,300	6,295	36,810	
COAL TRUCK SHIFTS	6,210	5,815	35,025	38,875	41,600	39,550	203,410	
PARTING TRUCK SHIFTS	0	0	350	0	0	0	580	
DOZER SHIFTS	1,356	1,381	6,520	6,300	6,300	6,295	37,523	
SCRAPER SHIFTS	285	360	0	0	0	0	2,120	
LABOR PRODUCTION	$ 1,832.	$ 1,777.	$ 9,699.	$ 10,277.	$ 10,794.	$ 10,402.	$ 56,177.	$ .24
MAINTENANCE	1,890.	1,828.	9,940.	10,689.	11,272.	10,831.	58,010.	.25
PAYROLL OVERHEAD	1,489.	1,442.	7,855.	8,387.	8,826.	8,493.	45,675.	.20
SUBTOTAL	$ 5,211.	$ 5,047.	$ 27,494.	$ 29,353.	$ 30,892.	$ 29,727.	$ 159,862.	$ .69
PARTS AND SUPPLIES	$ 1,975.	$ 1,895.	$ 10,683.	$ 11,462.	$ 12,121.	$ 11,623.	$ 61,816.	$ .27
FUEL AND LUBE	1,303	1,259	6,964.	7,405.	7,796.	7,501.	40,287.	.17
EXPLOSIVES	479	462	2,526.	2,250.	2,250.	2,250.	13,358.	.06
TOTAL	$ 8,968.	$ 8,683.	$ 47,467.	$ 50,470.	$ 53,059.	$ 51,101.	$ 275,322.	$ 1.19
	$ 1.12	$ 1.09	$ 1.19	$ 1.26	$ 1.33	$ 1.28		

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
COAL LOADOUT								
PRODUCTION, TONS	2,500	5,000	8,000	8,000	8,000	8,000	8,000	8,000
LABOR PRODUCTION	$ 420.	$ 420.	$ 420.	$ 420.	$ 420.	$ 420.	$ 420.	$ 420.
MAINTENANCE	292.	292.	292.	292.	292.	292.	292.	292.
PAYROLL OVERHEAD	285.	285.	285.	285.	285.	285.	285.	285.
SUBTOTAL	$ 996.	$ 996.	$ 996.	$ 996.	$ 996.	$ 996.	$ 996.	$ 996.
PARTS AND SUPPLIES	$ 149.	$ 298.	$ 476.	$ 476.	$ 476.	$ 476.	$ 476.	$ 476.
FUEL AND LUBE	26.	53.	84.	84.	84.	84.	84.	84.
ELECTRIC POWER	75.	150.	240.	240.	240.	240.	240.	240.
TOTAL	$ 1,246.	$ 1,496.	$ 1,796.	$ 1,796.	$ 1,796.	$ 1,796.	$ 1,796.	$ 1,796.
COST PER TON	$ .50	$ .30	$ .22	$ .22	$ .22	$ .22	$ .22	$ .22
HAUL ROAD CONSTRUCTION AND MAINTENANCE								
LENGTH OF ROAD CONSTRUCTED	2,000	6,000	28,440	22,170	33,440	24,240	35,000	20,960
DOZER SHIFTS	42	135	650	485	739	525	777	464
SCRAPER SHIFTS	25	146	769	513	806	546	835	453
GRADER SHIFTS	321	312	700	774	1,030	885	1,272	1,243
WATER TRUCK SHIFTS	415	398	879	984	1,306	1,127	1,617	1,594
WHEEL DOZER SHIFTS	1,000	1,000	1,000	1,000	1,116	1,000	1,401	1,423
GRAVEL PLANT SHIFTS	34	86	394	314	470	343	499	313
GRAVEL TRUCK SHIFTS	50	127	583	465	696	508	740	464
LABOR PRODUCTION	$ 378.	$ 464.	$ 1,142.	$ 1,011.	$ 1,396.	$ 1,100.	$ 1,596.	$ 1,280.
MAINTENANCE	184.	253.	728.	612.	868.	664.	971.	727.
PAYROLL OVERHEAD	225.	287.	748.	649.	905.	705.	1,027.	803.
SUBTOTAL	$ 786.	$ 1,005.	$ 2,619.	$ 2,273.	$ 3,169.	$ 2,469.	$ 3,593.	$ 2,809.
PARTS AND SUPPLIES	$ 205.	$ 263.	$ 653.	$ 558.	$ 775.	$ 601.	$ 874.	$ 671.
FUEL AND LUBE	116.	147.	374.	322.	448.	340.	508.	398.
TOTAL	$ 1,107.	$ 1,415.	$ 3,646.	$ 3,153.	$ 4,392.	$ 3,418.	$ 4,975.	$ 3,878.
COST PER TON	$ .44	$ .28	$ .46	$ .39	$ .55	$ .43	$ .62	$ .48

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
COAL LOADOUT								
PRODUCTION, TONS	8,000	8,000	40,000	40,000	40,000	40,000	231,500	
LABOR PRODUCTION	$ 420.	$ 420.	$ 2,100.	$ 2,100.	$ 2,100.	$ 2,100.	$ 12,600.	$ .05
MAINTENANCE	292.	292.	1,459.	1,459.	1,459.	1,459.	8,753.	.04
PAYROLL OVERHEAD	285.	285.	1,424.	1,424.	1,424.	1,424.	8,541.	.04
SUBTOTAL	$ 996.	$ 996.	$ 4,982.	$ 4,982.	$ 4,982.	$ 4,982.	$ 29,894.	$ .13
PARTS AND SUPPLIES	$ 476.	$ 476.	$ 2,380.	$ 2,380.	$ 2,380.	$ 2,380.	$ 13,774.	$ .06
FUEL AND LUBE	84.	84.	420.	420.	420.	420.	2,431.	.01
ELECTRIC POWER	240.	240.	1,200.	1,200.	1,200.	1,200.	6,945.	.03
TOTAL	$ 1,796.	$ 1,796.	$ 8,982.	$ 8,982.	$ 8,982.	$ 8,982.	$ 53,044.	$ .23
COST PER TON	$ .22	$ .22	$ .22	$ .22	$ .22	$ .22		
HAUL ROAD CONSTRUCTION AND MAINTENANCE								
LENGTH OF ROAD CONSTRUCTED	23,240	22,680	74,280	78,920	75,170	95,440	541,980	
DOZER SHIFTS	525	501	1,554	1,673	1,706	2,141	11,918	
SCRAPER SHIFTS	541	499	1,138	1,255	1,547	1,652	10,725	
GRADER SHIFTS	1,296	1,211	6,515	7,066	6,690	10,104	39,418	
WATER TRUCK SHIFTS	1,659	1,552	8,401	9,111	8,613	13,033	50,689	
WHEEL DOZER SHIFTS	1,473	1,379	7,647	8,291	7,796	11,876	47,403	
GRAVEL PLANT SHIFTS	345	335	1,175	1,255	1,190	1,590	8,343	
GRAVEL TRUCK SHIFTS	511	496	1,745	1,865	1,765	2,355	12,370	
LABOR PRODUCTION	$ 1,373.	$ 1,294.	$ 5,879.	$ 6,365.	$ 6,138.	$ 8,859.	$ 38,275.	$ .17
MAINTENANCE	791.	745.	3,141.	3,400.	3,327.	4,685.	21,095.	.09
PAYROLL OVERHEAD	866.	816.	3,608.	3,906.	3,786.	5,418.	23,748.	.10
SUBTOTAL	$ 3,029.	$ 2,855.	$ 12,628.	$ 13,671.	$ 13,251.	$ 18,962.	$ 83,118.	$ .36
PARTS AND SUPPLIES	$ 725.	$ 684.	$ 2,976.	$ 3,220.	$ 3,119.	$ 4,442.	$ 19,764.	$ .09
FUEL AND LUBE	430.	404.	1,770.	1,928.	1,882.	2,684.	11,767.	.05
TOTAL	$ 4,184.	$ 3,942.	$ 17,302.	$ 18,818.	$ 18,251.	$ 26,088.	$ 114,649.	$ .50
COST PER TON	$ .52	$ .49	$ .43	$ .47	$ .46	$ .65		

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
GENERAL MINE SERVICES								
LABOR PRODUCTION	$ 341.	$ 414.	$ 618.	$ 857.	$ 984.	$ 1,011.	$ 1,123.	$ 1,061.
MAINTENANCE	493.	485.	718.	890.	1,082.	1,124.	1,254.	1,303.
PAYROLL OVERHEAD	333.	360.	534.	699.	827.	854.	951.	946.
SUBTOTAL	$ 1,167.	$ 1,259.	$ 1,871.	$ 2,445.	$ 2,893.	$ 2,988.	$ 3,327.	$ 3,309.
PARTS AND SUPPLIES	$ 511.	$ 484.	$ 646.	$ 635.	$ 778.	$ 737.	$ 810.	$ 836.
FUEL AND LUBE	37.	35.	47.	46.	57.	54.	59.	61.
ELECTRIC POWER	40.	40.	40.	40.	40.	40.	40.	40.
TOTAL	$ 1,755.	$ 1,818.	$ 2,603.	$ 3,166.	$ 3,768.	$ 3,819.	$ 4,236.	$ 4,246.
COST PER TON	$ .70	$ .36	$ .33	$ .40	$ .47	$ .48	$ .53	$ .53
SUPERVISION AND ADMINISTRATION								
LABOR SALARIED EXEMPT	$ 1,313.	$ 1,313.	$ 1,382.	$ 1,382.	$ 1,382.	$ 1,382.	$ 1,382.	$ 1,382.
SALARIED NON-EXEMPT	2,462.	2,462.	3,721.	4,122.	4,122.	4,237.	4,237.	4,237.
PAYROLL OVERHEAD	1,510.	1,510.	2,041.	2,202.	2,202.	2,247.	2,247.	2,247.
SUBTOTAL	$ 5,285.	$ 5,285.	$ 7,145.	$ 7,706.	$ 7,706.	$ 7,866.	$ 7,866.	$ 7,866.
PARTS AND SUPPLIES	$ 455.	$ 455.	$ 609.	$ 656.	$ 656.	$ 668.	$ 668.	$ 668.
FUEL AND LUBE	23.	23.	26.	27.	27.	27.	27.	27.
GEN. & ADMIN. ALLOCATION	1,493.	2,985.	4,776.	4,776.	4,776.	4,776.	4,776.	4,776.
TOTAL	$ 7,255.	$ 8,747.	$ 12,555.	$ 13,164.	$ 13,164.	$ 13,337.	$ 13,337.	$ 13,337.
COST PER TON	$ 2.90	$ 1.75	$ 1.57	$ 1.65	$ 1.65	$ 1.67	$ 1.67	$ 1.67
PRODUCTION TAXES AND FEES								
BLACK LUNG TAX	$ 1,250.	$ 2,500.	$ 4,000.	$ 4,000.	$ 4,000.	$ 4,000.	$ 4,000.	$ 4,000.
RECLAMATION TAX	875.	1,750.	2,800.	2,800.	2,800.	2,800.	2,800.	2,800.
TOTAL	$ 2,125.	$ 4,250.	$ 6,800.	$ 6,800.	$ 6,800.	$ 6,800.	$ 6,800.	$ 6,800.
COST PER TON	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
GENERAL MINE SERVICES								
LABOR PRODUCTION	$ 1,003.	$ 949.	$ 5,017.	$ 5,907.	$ 6,277.	$ 6,793.	$ 32,435.	$ .14
MAINTENANCE	1,346.	1,154.	6,142.	7,109.	8,074.	7,970.	39,144.	.17
PAYROLL OVERHEAD	972.	841.	4,464.	5,206.	5,740.	5,905.	28,632.	.12
SUBTOTAL	$ 3,402.	$ 2,944.	$ 15,623.	$ 18,222.	$ 20,091.	$ 20,668.	$ 100,210.	$ .43
PARTS AND SUPPLIES	$ 818.	$ 779.	$ 4,425.	$ 4,570.	$ 4,194.	$ 4,173.	$ 24,395.	$ .11
FUEL AND LUBE	60.	57.	323.	334.	306.	305.	1,782.	.01
ELECTRIC POWER	40.	40.	198.	198.	198.	198.	1,189.	.01
TOTAL	$ 4,319.	$ 3,820.	$ 20,570.	$ 23,324.	$ 24,790.	$ 25,344.	$ 127,577.	$ .55
COST PER TON	$ .54	$ .48	$ .51	$ .58	$ .62	$ .63		
SUPERVISION AND ADMINISTRATION								
LABOR SALARIED EXEMPT	$ 1,382.	$ 1,382.	$ 6,910.	$ 6,910.	$ 6,910.	$ 6,910.	$ 41,322.	$ .18
SALARIED NON-EXEMPT	4,237.	4,237.	21,183.	21,183.	21,183.	21,183.	122,801.	.53
PAYROLL OVERHEAD	2,247.	2,247.	11,237.	11,237.	11,237.	11,237.	65,649.	.28
SUBTOTAL	$ 7,866.	$ 7,866.	$ 39,330.	$ 39,330.	$ 39,330.	$ 39,330.	$ 229,772.	$ .99
PARTS AND SUPPLIES	$ 668.	$ 668.	$ 3,341.	$ 3,341.	$ 3,341.	$ 3,341.	$ 19,533.	$ .08
FUEL AND LUBE	27.	27.	134.	134.	134.	134.	797.	.00
GEN. & ADMIN. ALLOCATION	4,776.	4,776.	23,880.	23,880.	23,880.	23,880.	138,206.	.60
TOTAL	$ 13,337.	$ 13,337.	$ 66,685.	$ 66,685.	$ 66,685.	$ 66,685.	$ 388,308.	$ 1.68
COST PER TON	$ 1.67	$ 1.67	$ 1.67	$ 1.67	$ 1.67	$ 1.67		
PRODUCTION TAXES AND FEES								
BLACK LUNG TAX	$ 4,000	$ 4,000.	$ 20,000.	$ 20,000.	$ 20,000.	$ 20,000.	$ 115,750.	$ .50
RECLAMATION TAX	2,800	2,800	14,000.	14,000.	14,000.	14,000.	81,025.	.35
TOTAL	$ 6,800	$ 6,800.	$ 34,000.	$ 34,000.	$ 34,000.	$ 34,000.	$ 196,775.	$ .85
COST PER TON	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85		

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

ANNUAL OPERATING COSTS	8	9	10	11	12	13	14	15
PRODUCTION, TONS	2,500	5,000	8,000	8,000	8,000	8,000	8,000	8,000
OVERBURDEN, CUBIC YARDS	9,397	18,794	28,338	39,092	44,131	50,675	48,925	47,175
PARTING, CUBIL YARDS	204	328	592	561	461	542	443	401
LABOR PRODUCTION	$ 2,955.	$ 4,627.	$ 8,544.	$ 9,800.	$ 11,292.	$ 12,453.	$ 14,074.	$ 13,498.
MAINTENANCE	3,094.	4,933.	8,970.	10,342.	11,814.	13,222.	14,743.	14,261.
SALARIED EXEMPT	1,313.	1,313.	1,382.	1,382.	1,382.	1,382.	1,382.	1,382.
SALARILD NON-EXEMPT	2,462.	2,462.	3,721.	4,122.	4,122.	4,237.	4,237.	4,237.
PAYROLL OVERHEAD	3,930.	5,334.	9,047.	10,258.	11,444.	12,516.	13,773.	13,351.
SUBTOTAL	$ 13,754.	$ 18,668.	$ 31,665.	$ 35,904.	$ 40,054.	$ 43,810.	$ 48,209.	$ 46,729.
PARTS AND SUPPLIES	$ 3,395.	$ 5,413.	$ 9,888.	$ 11,230.	$ 12,738.	$ 14,251.	$ 15,910.	$ 15,451.
FUEL AND LUBE	1,119.	1,905.	3,902.	4,161.	4,758.	5,385.	6,395.	6,185.
ELECTRIC POWER	1,156.	2,273.	3,122.	4,562.	4,777.	5,106.	4,856.	4,605.
EXPLOSIVES	152.	300.	483.	482.	476.	480.	475.	473.
PRODUCTION TAXES	2,125.	4,250.	6,800.	6,800.	6,800.	6,800.	6,800.	6,800.
GEN. & ADMIN. ALLOCATION	1,493.	2,985.	4,776.	4,776.	4,776.	4,776.	4,776.	4,776.
TOTAL	$ 23,193.	$ 35,794.	$ 60,637.	$ 67,915.	$ 74,378.	$ 80,608.	$ 87,421.	$ 85,018.
COST PER TON	$ 9.28	$ 7.16	$ 7.58	$ 8.49	$ 9.30	$ 10.08	$ 10.93	$ 10.63

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
ANNUAL OPERATING COSTS								
PRODUCTION, TONS	8,000	8,000	8,000	8,000	8,000	8,000	231,500	
OVERBURDEN, CUBIC YARDS	47,149	40,090	41,037	55,469	70,733	70,312	1,562,321	
PARTING, CUBIC YARDS	515	567	271	0	0	0	5,969	
LABOR PRODUCTION	$ 14,352.	$ 11,516.	$ 11,473.	$ 14,904.	$ 18,676.	$ 19,768.	$ 427,218.	$ 1.85
MAINTENANCE	15,309.	12,237.	12,149.	15,821.	19,906.	20,668.	451,645.	1.95
SALARIED EXEMPT	1,382.	1,382.	1,382.	1,382.	1,382.	1,382.	41,322.	.18
SALARIED NON-EXEMPT	4,237.	4,237.	4,237.	4,237.	4,237.	4,237.	122,801.	.53
PAYROLL OVERHEAD	14,112.	11,749.	11,697.	14,537.	17,680.	18,423.	417,198.	1.80
SUBTOTAL	$ 49,392.	$ 41,123.	$ 40,938.	$ 50,881.	$ 61,881.	$ 64,478.	$ 1,460,184.	$ 6.31
PARTS AND SUPPLIES	$ 16,469.	$ 13,242.	$ 13,252.	$ 17,075.	$ 21,305.	$ 22,123.	$ 486,762.	$ 2.10
FUEL AND LUBE	6,827.	5,273.	5,173.	6,727.	8,508.	9,042.	193,157.	.83
ELECTRIC POWER	4,604.	4,248.	4,297.	5,186.	5,792.	6,097.	146,170.	.63
EXPLOSIVES	479.	482.	465.	450.	450.	450.	13,358.	.06
PRODUCTION TAXES	6,800.	6,800.	6,800.	6,800.	6,800.	6,800.	196,775.	.85
GEN. & ADMIN. ALLOCATION	4,776.	4,776.	4,776.	4,776.	4,776.	4,776.	138,206.	.60
TOTAL	$ 89,346.	$ 75,944.	$ 75,700.	$ 91,895.	$ 109,511.	$ 113,765.	$ 2,634,611.	$ 11.38
COST PER TON	$ 11.17	$ 9.49	$ 9.46	$ 11.49	$ 13.69	$ 14.22		

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

	8	9	10	11	12	13	14	15
[illegible]								
[illegible]								
OPERATION GRADE 5	6	12	20	25	28	32	32	32
GRADE 4	41	51	54	59	70	73	78	72
GRADE 3	24	41	87	107	115	134	163	158
GRADE 1	11	12	17	19	22	20	20	19
SUBTOTAL	81	96	178	205	235	259	293	281
MAINTENANCE GRADE 5	3	4	8	9	11	12	14	13
GRADE 4	19	30	54	61	70	79	88	86
GRADE 3	21	37	71	86	97	111	123	119
GRADE 2	11	17	29	33	38	42	47	46
GRADE 1	6	9	17	19	22	25	28	27
SUBTOTAL	60	98	179	208	238	269	300	291
WAGE SUBTOTAL	121	194	357	413	473	528	593	572
SALARIED EXEMPT	19	19	20	20	20	20	20	20
SALARIED NON EXEMPT	43	43	65	72	72	74	74	74
SALARIED SUBTOTAL	62	62	85	92	92	94	94	94
TOTAL	183	256	442	505	565	622	687	666
[illegible]								
[illegible]								
WALKING DRAGLINE	500	1,000	1,245	2,000	2,000	2,000	1,857	1,714
OVERBURDEN SHOVEL	592	1,183	2,365	2,782	3,550	4,731	4,732	4,731
HYDRAULIC EXCAVATOR	394	787	1,260	1,260	1,259	1,259	1,331	1,325
CRAWLER DOZER	534	1,086	1,639	2,314	2,470	2,343	2,356	2,027
CRAWLER DOZER	1,366	2,353	4,316	4,607	5,451	6,448	6,511	6,362
SCRAPER	1,140	1,145	2,063	1,692	1,925	1,370	1,343	917
OVERBURDEN HAULER	1,895	3,785	10,865	11,930	14,000	18,880	25,125	24,065
COAL HAULER	1,290	2,670	4,965	4,855	5,535	5,415	5,475	6,130
MOTOR GRADER	321	311	700	774	1,030	885	1,272	1,243
WHEEL DOZER	1,000	1,000	1,000	1,000	1,116	1,000	1,401	1,423
WATER TRUCK	415	398	879	984	1,305	1,127	1,617	1,594
COAL DRILL	122	243	389	390	389	391	390	390
PUMPS AND PIPING	1,264	2,610	5,451	6,435	6,686	5,244	5,122	4,368
RECLAMATION FARM EQUIPMENT	0	0	75	295	329	196	169	175
CONSTRUCTION	5	18	156	104	106	73	109	62
GRAVEL SCREEN PLANT	34	86	394	314	470	343	499	313
GRAVEL TRUCKS	50	147	583	465	696	508	740	464
FRONT END LOADER	34	86	394	314	470	343	499	313

TABLE 3 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

	16	17	18- 22	23- 27	28- 32	33- 37
ANNUAL						
PERSONNEL REQUIREMENTS						
PRODUCTION GRADE 5	31	26	27	37	48	47
GRADE 4	74	62	61	81	104	109
GRADE 3	176	135	133	175	219	236
GRADE 1	18	18	18	18	18	20
SUBTOTAL	299	241	239	311	389	412
MAINTENANCE GRADE 5	14	11	11	15	19	19
-GRADE 4	92	74	73	95	119	123
-GRADE 3	129	102	101	132	168	176
-GRADE 2	49	40	40	51	63	65
GRADE 1	29	23	23	30	38	39
SUBTOTAL	313	250	248	323	407	422
WAGE SUBTOTAL	612	491	487	634	796	834
SALARIED EXEMPT	20	20	20	20	20	20
SALARIED NON EXEMPT	74	74	74	74	74	74
SALARIED SUBTOTAL	94	94	94	94	94	94
TOTAL	706	585	581	728	890	928
ANNUAL						
EQUIPMENT SHIFTS						
WALKING DRAGLINE	1,714	1,714	1,714	1,857	1,714	2,000
OVERBURDEN SHOVEL	4,727	3,451	3,627	5,914	8,986	8,281
HYDRAULIC EXCAVATOR	1,260	1,260	1,304	1,260	1,260	1,259
CRAWLER DOZER	2,059	2,049	1,949	2,108	1,952	2,318
CRAWLER DOZER	6,378	5,060	5,132	7,357	10,464	9,875
SCRAPER	1,160	1,058	602	550	643	999
OVERBURDEN HAULER	28,220	18,095	17,310	25,555	35,595	38,370
COAL HAULER	6,210	5,815	7,005	7,775	8,320	7,910
MOTOR GRADER	1,295	1,211	1,303	1,413	1,338	2,021
WHEEL DOZER	1,474	1,379	1,530	1,658	1,559	2,375
WATER TRUCK	1,659	1,552	1,680	1,822	1,723	2,607
COAL DRILL	389	390	389	390	389	389
PUMP AND PIPING	4,433	4,417	4,107	4,883	4,972	4,290
RECLAMATION FARM EQUIPMENT	71	69	97	112	125	266
COMPACTOR	73	67	33	36	44	46
GRAVEL SCREEN PLANT	345	335	235	251	238	318
GRAVEL TRUCKS	511	496	349	373	353	471
FRONT END LOADER	345	335	235	251	238	318

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
DRAINAGE CONTROL AND RECLAMATION								
AREA DISTURBED	296	559	459	349	575	393	147	55
AREA RECLAIMED	0	25	65	133	288	340	352	419
SCRAPER SHIFTS	760	1,410	1,360	1,010	1,520	1,025	910	1,055
DOZER SHIFTS	255	470	455	340	510	345	305	355
PUMPING SHIFTS	3,241	5,993	8,420	9,505	12,755	14,377	15,004	13,605
LABOR PRODUCTION	$ 198.	$ 386.	$ 416.	$ 372.	$ 617.	$ 524.	$ 503.	$ 591.
MAINTENANCE	326.	606.	669.	595.	852.	749.	733.	740.
PAYROLL OVERHEAD	210.	397.	434.	387.	587.	509.	494.	532.
SUBTOTAL	$ 734.	$ 1,389.	$ 1,519.	$ 1,353.	$ 2,056.	$ 1,783.	$ 1,730.	$ 1,863.
PARTS AND SUPPLIES	$ 256.	$ 486.	$ 565.	$ 553.	$ 826.	$ 790.	$ 789.	$ 811.
FUEL AND LUBE	161.	299.	322.	277.	400.	337.	325.	335.
TOTAL	$ 1,151.	$ 2,173.	$ 2,407.	$ 2,183.	$ 3,281.	$ 2,910.	$ 2,845.	$ 3,009.
COST PER TON	$ .18	$ .22	$ .20	$ .18	$ .27	$ .24	$ .24	$ .25
OVERBURDEN STRIPPING AND HAULING-SHOVEL/TRUCK								
SHOVEL OVERBURDEN YARDS	9,000	18,000	37,500	52,500	52,500	52,501	45,000	52,501
SHOVEL SHIFTS	1,626	3,253	6,775	9,487	9,486	9,485	8,131	9,487
TRUCK SHIFTS	6,505	14,875	34,285	42,920	45,555	43,890	37,825	43,805
DOZER SHIFTS	1,626	3,253	6,775	9,487	9,486	9,485	8,131	9,487
LABOR PRODUCTION	$ 2,201.	$ 4,757.	$ 10,535.	$ 13,785.	$ 14,285.	$ 13,968.	$ 12,012.	$ 13,953.
MAINTENANCE	2,341.	5,081.	11,288.	14,718.	15,282.	14,925.	12,837.	14,908.
PAYROLL OVERHEAD	1,817.	3,935.	8,729.	11,401.	11,827.	11,557.	9,940.	11,544.
SUBTOTAL	$ 6,358.	$ 13,773.	$ 30,553.	$ 39,905.	$ 41,394.	$ 40,450.	$ 34,789.	$ 40,406.
PARTS AND SUPPLIES	$ 2,579.	$ 5,611.	$ 12,485.	$ 16,252.	$ 16,889.	$ 16,485.	$ 14,180.	$ 16,466.
FUEL AND LUBE	1,090.	2,447.	5,571.	7,070.	7,449.	7,209.	6,209.	7,197.
ELECTRIC POWER	454.	908.	1,890.	2,647.	2,647.	2,646.	2,269.	2,647.
TOTAL	$ 10,481.	$ 22,738.	$ 50,500.	$ 65,874.	$ 68,377.	$ 66,791.	$ 57,447.	$ 66,716.
COST PER TON	$ 1.61	$ 2.27	$ 4.21	$ 5.49	$ 5.70	$ 5.57	$ 4.79	$ 5.56

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
DRAINAGE CONTROL AND RECLAMATION								
AREA DISTURBED	121	255	694	1,307	967	588	6,767	
AREA RECLAIMED	241	302	539	1,222	1,210	1,083	6,218	
SCRAPER SHIFTS	640	805	1,875	3,400	3,100	2,775	21,645	
DOZER SHIFTS	215	270	625	1,150	1,050	925	7,270	
PUMPING SHIFTS	11,509	10,699	59,350	54,955	46,345	28,845	294,603	
LABOR PRODUCTION	$ 349.	$ 438.	$ 902.	$ 1,811.	$ 1,725.	$ 1,540.	$ 10,373.	$ .03
MAINTENANCE	543.	573.	2,333.	2,702.	2,359.	1,742.	15,523.	.04
PAYROLL OVERHEAD	357.	404.	1,294.	1,805.	1,634.	1,313.	10,358.	.03
SUBTOTAL	$ 1,250.	$ 1,416.	$ 4,529.	$ 6,319.	$ 5,719.	$ 4,595.	$ 36,254.	$ .10
PARTS AND SUPPLIES	$ 579.	$ 620.	$ 2,360.	$ 2,875.	$ 2,557.	$ 1,922.	$ 15,990.	$ .05
FUEL AND LUBE	240.	259.	988.	1,202.	1,055.	801.	7,001.	.02
TOTAL	$ 2,069.	$ 2,294.	$ 7,877.	$ 10,395.	$ 9,332.	$ 7,319.	$ 59,245.	$ .17
COST PER TON	$ .17	$ .19	$ .13	$ .17	$ .16	$ .12		
OVERBURDEN STRIPPING AND HAULING SHOVEL/TRUCK								
SHOVEL OVERBURDEN YARDS	45,000	52,500	269,996	292,500	262,501	292,096	1,534,093	
SHOVEL SHIFTS	8,132	9,488	48,790	52,870	47,430	52,790	277,230	
TRUCK SHIFTS	39,475	44,825	235,550	258,100	224,700	261,300	1,333,610	
DOZER SHIFTS	8,132	9,488	48,790	52,870	47,430	52,790	277,230	
LABOR PRODUCTION	$ 12,327.	$ 14,148.	$ 73,711.	$ 80,417.	$ 70,843.	$ 80,978.	$ 417,922.	$ 1.19
MAINTENANCE	13,191.	15,127.	78,865.	86,070.	75,750.	86,708.	447,090.	1.27
PAYROLL OVERHEAD	10,207.	11,710.	61,031.	66,595.	58,637.	67,074.	346,005.	.98
SUBTOTAL	$ 35,724.	$ 40,984.	$ 213,607.	$ 233,082.	$ 205,230.	$ 234,760.	$ 1,211,016.	$ 3.44
PARTS AND SUPPLIES	$ 14,580.	$ 16,713.	$ 87,165.	$ 95,144.	$ 83,699.	$ 95,869.	$ 494,117.	$ 1.40
FUEL AND LUBE	6,446.	7,344.	38,489.	42,118.	36,801.	42,569.	218,010.	.62
ELECTRIC POWER	2,269.	2,647.	13,612.	14,751.	13,233.	14,728.	77,347.	.22
TOTAL	$ 59,019.	$ 67,688.	$ 352,874.	$ 385,095.	$ 338,963.	$ 387,928.	$ 2,000,490.	$ 5.68
COST PER TON	$ 4.92	$ 5.64	$ 5.88	$ 6.42	$ 5.65	$ 6.47		

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
OVERBURDEN STRIPPING								
DRAGLINE								
DRAGLINE OVERBURDEN YARDS	15,650	22,300	25,375	31,500	31,500	31,500	31,500	31,500
DRAGLINE SHIFTS	813	1,249	1,500	2,000	2,000	2,000	2,000	2,000
DOZER SHIFTS	813	1,249	1,500	2,000	2,000	2,000	2,000	2,000
LABOR PRODUCTION	$ 633.	$ 972.	$ 1,168.	$ 1,557.	$ 1,557.	$ 1,557.	$ 1,557.	$ 1,557.
MAINTENANCE	1,328.	1,920.	2,208.	2,781.	2,781.	2,781.	2,781.	2,781.
PAYROLL OVERHEAD	784.	1,157.	1,350.	1,735.	1,735.	1,735.	1,735.	1,735.
SUBTOTAL	$ 2,746.	$ 4,049.	$ 4,725.	$ 6,074.	$ 6,074.	$ 6,074.	$ 6,074.	$ 6,074.
PARTS AND SUPPLIES	$ 1,105.	$ 1,625.	$ 1,893.	$ 2,427.	$ 2,427.	$ 2,427.	$ 2,427.	$ 2,427.
FUEL AND LUBE	217.	313.	359.	451.	451.	451.	451.	451.
ELECTRIC POWER	2,397.	3,485.	3,825.	4,702.	4,702.	4,702.	4,702.	4,702.
TOTAL	$ 6,465.	$ 9,371.	$ 10,803.	$ 13,654.	$ 13,654.	$ 13,654.	$ 13,654.	$ 13,654.
COST PER TON	$ .99	$ .94	$ .90	$ 1.14	$ 1.14	$ 1.14	$ 1.14	$ 1.14
MINING AND HAULING COAL								
AND PARTING REMOVAL								
PRODUCTION,TONS	6,500	10,000	12,000	12,000	12,000	12,000	12,000	12,000
PARTING,CUBIC YARDS	407	737	619	736	907	617	388	212
DRILL SHIFTS	316	487	584	583	583	584	582	583
SHOVEL SHIFTS	1,023	1,574	1,889	1,889	1,889	1,889	1,888	1,888
COAL TRUCK SHIFTS	5,085	8,300	11,405	11,695	10,920	11,210	11,915	11,815
PARTING TRUCK SHIFTS	0	0	0	0	0	0	0	0
DOZER SHIFTS	1,112	1,710	2,003	2,023	2,071	2,010	1,960	1,935
SCRAPER SHIFTS	265	405	340	400	545	360	215	140
LABOR PRODUCTION	$ 1,504.	$ 2,405.	$ 3,122.	$ 3,193.	$ 3,083.	$ 3,090.	$ 3,186.	$ 3,147.
MAINTENANCE	1,554.	2,492.	3,255.	3,335.	3,213.	3,219.	3,325.	3,281.
PAYROLL OVERHEAD	1,223.	1,959.	2,551.	2,611.	2,519.	2,524.	2,604.	2,571.
SUBTOTAL	$ 4,282.	$ 6,855.	$ 8,928.	$ 9,139.	$ 8,815.	$ 8,833.	$ 9,115.	$ 9,000.
PARTS AND SUPPLIES	$ 1,621.	$ 2,609.	$ 3,449.	$ 3,532.	$ 3,375.	$ 3,406.	$ 3,545.	$ 3,505.
FUEL AND LUBE	1,070.	1,714.	2,240.	2,291.	2,204.	2,215.	2,292.	2,266.
EXPLOSIVES	193.	604.	710.	716.	726.	710.	697.	687.
TOTAL	$ 7,365.	$ 11,781.	$ 15,326.	$ 15,678.	$ 15,120.	$ 15,164.	$ 15,650.	$ 15,457.
COST PER TON	$ 1.13	$ 1.18	$ 1.28	$ 1.31	$ 1.26	$ 1.26	$ 1.30	$ 1.29

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
OVERBURDEN STRIPPING								
DRAGLINE								
DRAGLINE OVERBURDEN YARDS	31,500	31,500	157,500	157,500	157,500	151,520	907,845	
DRAGLINE SHIFTS	2,000	2,000	10,000	10,000	10,000	9,512	57,074	
DOZER SHIFTS	2,000	2,000	10,000	10,000	10,000	9,512	57,074	
LABOR PRODUCTION	$ 1,557.	$ 1,557.	$ 7,785.	$ 7,785.	$ 7,785.	$ 7,405.	$ 44,432.	$ .13
MAINTENANCE	2,781.	2,781.	13,907.	13,907.	13,907.	13,347.	79,992.	.23
PAYROLL OVERHEAD	1,735.	1,735.	8,677.	8,677.	8,677.	8,301.	49,769.	.14
SUBTOTAL	$ 6,074.	$ 6,074.	$ 30,368.	$ 30,368.	$ 30,368.	$ 29,052.	$ 174,193.	$ .49
PARTS AND SUPPLIES	$ 2,427.	$ 2,427.	$ 12,136.	$ 12,136.	$ 12,136.	$ 11,614.	$ 69,635.	$ .20
FUEL AND LUBE	451.	451.	2,257.	2,257.	2,257.	2,167.	12,987.	.04
ELECTRIC POWER	4,702.	4,702.	23,509.	23,509.	23,509.	22,653.	135,697.	.38
TOTAL	$ 13,654.	$ 13,654.	$ 68,270.	$ 68,270.	$ 68,270.	$ 65,486.	$ 392,511.	$ 1.11
COST PER TON	$ 1.14	$ 1.14	$ 1.14	$ 1.14	$ 1.14	$ 1.09		
MINING AND HAULING COAL and PARTING REMOVAL								
PRODUCTION,TONS	12,000	12,000	60,000	60,000	60,003	60,000	352,503	
PARTING,CUBIC YARDS	340	388	272	0	0	0	5,703	
DRILL SHIFTS	582	586	2,925	2,930	2,925	2,935	17,185	
SHOVEL SHIFTS	1,888	1,890	9,450	9,450	9,450	9,460	55,517	
COAL TRUCK SHIFTS	11,520	11,105	60,500	56,300	55,825	67,700	345,295	
PARTING TRUCK SHIFTS	0	0	0	0	0	0	0	
DOZER SHIFTS	1,950	1,975	9,520	9,450	9,450	9,460	56,629	
SCRAPER SHIFTS	185	255	200	0	0	0	3,310	
LABOR PRODUCTION	$ 3,103.	$ 3,044.	$ 15,884.	$ 15,034.	$ 14,943.	$ 17,205.	$ 91,943.	$ .26
MAINTENANCE	3,232.	3,165.	16,563.	15,604.	15,502.	18,047.	95,787.	.27
PAYROLL OVERHEAD	2,534.	2,484.	12,979.	12,255.	12,178.	14,101.	75,092.	.21
SUBTOTAL	$ 8,868.	$ 8,693.	$ 45,426.	$ 42,893.	$ 42,622.	$ 49,353.	$ 262,822.	$ .75
PARTS AND SUPPLIES	$ 3,443	$ 3,358.	$ 17,765.	$ 16,706.	$ 16,591.	$ 19,468.	$ 102,372.	$ .29
FUEL AND LUBE	2,231	2,183	11,455.	10,819.	10,751.	12,459.	66,189.	.19
EXPLOSIVES	694.	697.	3,390.	3,375.	3,375.	3,375.	20,149.	.06
TOTAL	$ 15,236.	$ 14,931.	$ 78,036.	$ 73,793.	$ 73,339.	$ 84,655.	$ 451,533.	$ 1.28
COST PER TON	$ 1.27	$ 1.24	$ 1.30	$ 1.23	$ 1.22	$ 1.41		

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
COAL LOADOUT								
PRODUCTION, TONS	6,500	10,000	12,000	12,000	12,000	12,000	12,000	12,000
LABOR PRODUCTION	$ 560.	$ 560.	$ 560.	$ 560.	$ 560.	$ 560.	$ 560.	$ 560.
MAINTENANCE	389.	389.	389.	389.	389.	389.	389.	389.
PAYROLL OVERHEAD	380.	380.	380.	380.	380.	380.	380.	380.
SUBTOTAL	$ 1,329.	$ 1,329.	$ 1,329.	$ 1,329.	$ 1,329.	$ 1,329.	$ 1,329.	$ 1,329.
PARTS AND SUPPLIES	$ 387.	$ 595.	$ 714.	$ 714.	$ 714.	$ 714.	$ 714.	$ 714.
FUEL AND LUBE	68.	105.	126.	126.	126.	126.	126.	126.
ELECTRIC POWER	195.	300.	360.	360.	360.	360.	360.	360.
TOTAL	$ 1,979.	$ 2,329.	$ 2,529.	$ 2,529.	$ 2,529.	$ 2,529.	$ 2,529.	$ 2,529.
COST PER TON	$ .30	$ .23	$ .21	$ .21	$ .21	$ .21	$ .21	$ .21
HAUL ROAD CONSTRUCTION AND MAINTENANCE								
LENGTH OF ROAD CONSTRUCTED	27,560	20,400	14,600	32,300	25,280	42,600	24,000	20,500
DOZER SHIFTS	624	460	324	642	521	828	438	433
SCRAPER SHIFTS	760	514	323	583	479	716	266	396
GRADER SHIFTS	483	802	889	973	1,112	1,094	1,244	1,209
WATER TRUCK SHIFTS	598	1,021	1,140	1,239	1,423	1,392	1,603	1,552
WHEEL DOZER SHIFTS	1,000	1,000	1,018	1,080	1,263	1,206	1,453	1,391
GRAVEL PLANT SHIFTS	371	289	216	448	361	589	349	301
GRAVEL TRUCK SHIFTS	550	428	320	665	534	873	518	446
LABOR PRODUCTION	$ 1,021.	$ 1,000.	$ 908.	$ 1,267.	$ 1,245.	$ 1,526.	$ 1,258.	$ 1,228.
MAINTENANCE	665.	602.	515.	769.	725.	938.	695.	692.
PAYROLL OVERHEAD	675.	641.	569.	815.	788.	986.	781.	768.
SUBTOTAL	$ 2,362.	$ 2,243.	$ 1,991.	$ 2,851.	$ 2,758.	$ 3,449.	$ 2,734.	$ 2,687.
PARTS AND SUPPLIES	$ 604.	$ 547.	$ 475.	$ 700.	$ 666.	$ 854.	$ 658.	$ 641.
FUEL AND LUBE	340.	320.	282.	396.	387.	475.	377.	379.
TOTAL	$ 3,305.	$ 3,109.	$ 2,748.	$ 3,947.	$ 3,811.	$ 4,778.	$ 3,769.	$ 3,708.
COST PER TON	$ .51	$ .31	$ .23	$ .33	$ .32	$ .40	$ .31	$ .31

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
COAL LOADOUT								
PRODUCTION, TONS	12,000	12,000	60,000	60,000	60,000	60,000	352,500	
LABOR PRODUCTION	$ 560.	$ 560.	$ 2,800.	$ 2,800.	$ 2,800.	$ 2,800.	$ 16,800.	$ .05
MAINTENANCE	389.	389.	1,945.	1,945.	1,945.	1,945.	11,670.	.03
PAYROLL OVERHEAD	380.	380.	1,898.	1,898.	1,898.	1,898.	11,388.	.03
SUBTOTAL	$ 1,329.	$ 1,329.	$ 6,643.	$ 6,643.	$ 6,643.	$ 6,643.	$ 39,858.	$ .11
PARTS AND SUPPLIES	$ 714.	$ 714.	$ 3,570.	$ 3,570.	$ 3,570.	$ 3,570.	$ 20,974.	$ .06
FUEL AND LUBE	126.	126.	630.	630.	630.	630.	3,701.	.01
ELECTRIC POWER	360.	360.	1,800.	1,800.	1,800.	1,800.	10,575.	.03
TOTAL	$ 2,529.	$ 2,529.	$ 12,643.	$ 12,643.	$ 12,643.	$ 12,643.	$ 75,108.	$ .21
COST PER TON	$ .21	$ .21	$ .21	$ .21	$ .21	$ .21		
HAUL ROAD CONSTRUCTION AND MAINTENANCE								
LENGTH OF ROAD CONSTRUCTED	29,000	40,500	160,650	196,320	131,200	144,080	908,990	
DOZER SHIFTS	609	821	3,495	4,095	2,832	3,168	19,291	
SCRAPER SHIFTS	574	725	3,271	3,300	2,497	2,950	17,355	
GRADER SHIFTS	1,343	1,570	9,682	12,829	9,159	9,566	51,955	
WATER TRUCK SHIFTS	1,720	2,008	12,426	16,504	11,778	12,288	66,691	
WHEEL DOZER SHIFTS	1,526	1,775	11,127	14,900	10,616	11,036	60,391	
GRAVEL PLANT SHIFTS	418	579	2,405	2,995	2,000	2,185	13,506	
GRAVEL TRUCK SHIFTS	620	858	3,570	4,445	2,965	3,235	20,027	
LABOR PRODUCTION	$ 1,486.	$ 1,840.	$ 9,858.	$ 12,559.	$ 8,876.	$ 9,468.	$ 53,540.	$ .15
MAINTENANCE	863.	1,083.	5,566.	6,942.	4,908.	5,290.	30,253.	.09
PAYROLL OVERHEAD	940.	1,169.	6,170.	7,800.	5,514.	5,903.	33,517.	.10
SUBTOTAL	$ 3,288.	$ 4,092.	$ 21,594.	$ 27,301.	$ 19,299.	$ 20,661.	$ 117,310.	$ .33
PARTS AND SUPPLIES	$ 793.	$ 995.	$ 5,154.	$ 6,504.	$ 4,581.	$ 4,912.	$ 28,083.	$ .08
FUEL AND LUBE	462.	570.	3,049.	3,831.	2,725.	2,922.	16,515.	.05
TOTAL	$ 4,543.	$ 5,657.	$ 29,798.	$ 37,636.	$ 26,604.	$ 28,495.	$ 161,909.	$ .46
COST PER TON	$ .38	$ .47	$ .50	$ .63	$ .44	$ .47		

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
GENERAL MINE SERVICES								
LABOR PRODUCTION	$ 644.	$ 895.	$ 1,271.	$ 1,503.	$ 1,508.	$ 1,535.	$ 1,416.	$ 1,528.
MAINTENANCE	951.	1,188.	1,676.	1,819.	1,753.	1,740.	1,580.	1,790.
PAYROLL OVERHEAD	639.	833.	1,179.	1,329.	1,305.	1,310.	1,198.	1,327.
SUBTOTAL	$ 2,236.	$ 2,917.	$ 4,127.	$ 4,651.	$ 4,566.	$ 4,586.	$ 4,195.	$ 4,644.
PARTS AND SUPPLIES	$ 731.	$ 787.	$ 925.	$ 899.	$ 814.	$ 835.	$ 786.	$ 881.
FUEL AND LUBE	53.	57.	68.	66.	59.	61.	57.	64.
ELECTRIC POWER	40.	40.	40.	40.	40.	40.	40.	40.
TOTAL	$ 3,060.	$ 3,801.	$ 5,159.	$ 5,655.	$ 5,479.	$ 5,521.	$ 5,078.	$ 5,629.
COST PER TON	$ .47	$ .38	$ .43	$ .47	$ .46	$ .46	$ .42	$ .47
SUPERVISION AND ADMINISTRATION								
LABOR SALARIED EXEMPT	$ 1,313.	$ 1,382.	$ 1,382.	$ 1,520.	$ 1,520.	$ 1,520.	$ 1,520.	$ 1,520.
SALARIED NON-EXEMPT	2,405.	3,950.	3,950.	5,439.	5,439.	5,439.	5,439.	5,439.
PAYROLL OVERHEAD	1,487.	2,133.	2,133.	2,784.	2,784.	2,784.	2,784.	2,784.
SUBTOTAL	$ 5,204.	$ 7,465.	$ 7,465.	$ 9,743.	$ 9,743.	$ 9,743.	$ 9,743.	$ 9,743.
PARTS AND SUPPLIES	$ 446.	$ 637.	$ 637.	$ 825.	$ 825.	$ 825.	$ 825.	$ 825.
FUEL AND LUBE	22.	27.	27.	31.	31.	31.	31.	31.
GEN. & ADMIN. ALLOCATION	3,965.	6,100.	7,320.	7,320.	7,320.	7,320.	7,320.	7,320.
TOTAL	$ 9,637.	$ 14,229.	$ 15,449.	$ 17,918.	$ 17,918.	$ 17,918.	$ 17,918.	$ 17,918.
COST PER TON	$ 1.48	$ 1.42	$ 1.29	$ 1.49	$ 1.49	$ 1.49	$ 1.49	$ 1.49
PRODUCTION TAXES AND FEES								
BLACK LUNG TAX	$ 3,250.	$ 5,000.	$ 6,000.	$ 6,000.	$ 6,000.	$ 6,000.	$ 6,000.	$ 6,000.
RECLAMATION TAX	2,275.	3,500.	4,200.	4,200.	4,200.	4,200.	4,200.	4,200.
TOTAL	$ 5,525.	$ 8,500.	$ 10,200.	$ 10,200.	$ 10,200.	$ 10,200.	$ 10,200.	$ 10,200.
COST PER TON	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
GENERAL MINE SERVICES								
LABOR PRODUCTION	$ 1,446.	$ 1,556.	$ 7,653.	$ 8,300.	$ 7,541.	$ 8,308.	$ 45,106.	$ .13
MAINTENANCE	1,608.	1,744.	8,952.	9,303.	8,678.	9,199.	51,983.	.15
PAYROLL OVERHEAD	1,221.	1,320.	6,642.	7,041.	6,488.	7,003.	38,836.	.11
SUBTOTAL	$ 4,275.	$ 4,619.	$ 23,247.	$ 24,644.	$ 22,708.	$ 24,511.	$ 135,925.	$ .39
PARTS AND SUPPLIES	$ 805.	$ 833.	$ 3,995.	$ 4,106.	$ 4,027.	$ 4,049.	$ 24,473.	$ .07
FUEL AND LUBE	59.	61.	292.	300.	294.	296.	1,788.	.01
ELECTRIC POWER	40.	40.	198.	198.	198.	198.	1,189.	.00
TOTAL	$ 5,178.	$ 5,553.	$ 27,731.	$ 29,249.	$ 27,227.	$ 29,054.	$ 163,374.	$ .46
COST PER TON	$ .43	$ .46	$ .46	$ .49	$ .45	$ .48		
SUPERVISION AND ADMINISTRATION								
LABOR SALARIED EXEMPT	$ 1,520.	$ 1,520.	$ 7,601.	$ 7,601.	$ 7,601.	$ 7,601.	$ 45,122.	$ .13
SALARIED NON-EXEMPT	5,439.	5,439.	27,194.	27,194.	27,194.	27,194.	157,151.	.45
PAYROLL OVERHEAD	2,784.	2,784.	13,918.	13,918.	13,918.	13,918.	80,909.	.23
SUBTOTAL	$ 9,743.	$ 9,743.	$ 48,713.	$ 48,713.	$ 48,713.	$ 48,713.	$ 283,183.	$ .80
PARTS AND SUPPLIES	$ 825.	$ 825.	$ 4,124.	$ 4,124.	$ 4,124.	$ 4,124.	$ 23,988.	$ .07
FUEL AND LUBE	31.	31.	156.	156.	156.	156.	917.	.00
GEN. & ADMIN. ALLOCATION	7,320.	7,320.	36,600.	36,600.	36,600.	36,600.	215,025.	.61
TOTAL	$ 17,918.	$ 17,918.	$ 89,592.	$ 89,592.	$ 89,592.	$ 89,592.	$ 523,113.	$ 1.48
COST PER TON	$ 1.49	$ 1.49	$ 1.49	$ 1.49	$ 1.49	$ 1.49		
PRODUCTION TAXES AND FEES								
BLACK LUNG TAX	$ 6,000.	$ 6,000.	$ 30,000.	$ 30,000.	$ 30,000.	$ 30,000.	$ 176,250.	$ .50
RECLAMATION TAX	4,200	4,200.	21,000.	21,000.	21,000.	21,000.	123,375.	.35
TOTAL	$ 10,200.	$ 10,200.	$ 51,000.	$ 51,000.	$ 51,000.	$ 51,000.	$ 299,625.	$ .85
COST PER TON	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85		

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

ANNUAL OPERATING COSTS	8	9	10	11	12	13	14	15
PRODUCTION, TONS	6,500	10,000	12,000	12,000	12,000	12,000	12,000	12,000
OVERBURDEN, CUBIC YARDS	24,650	40,300	62,875	84,000	84,000	84,001	76,500	84,001
PARTING, CUBIC YARDS	487	737	619	736	907	617	388	212
LABOR PRODUCTION	$ 6,764.	$ 10,975.	$ 17,980.	$ 22,237.	$ 22,855.	$ 22,761.	$ 20,492.	$ 22,565.
MAINTENANCE	7,554.	12,277.	20,000.	24,406.	24,994.	24,741.	22,340.	24,581.
SALARIED EXEMPT	1,313.	1,382.	1,382.	1,520.	1,520.	1,520.	1,520.	1,520.
SALARIED NON-EXEMPT	2,405.	3,950.	3,950.	5,439.	5,439.	5,439.	5,439.	5,439.
PAYROLL OVERHEAD	7,214.	11,434.	17,326.	21,442.	21,925.	21,786.	19,916.	21,642.
SUBTOTAL	$ 25,250.	$ 40,018.	$ 60,638.	$ 75,044.	$ 76,733.	$ 76,247.	$ 69,707.	$ 75,747.
PARTS AND SUPPLIES	$ 7,728.	$ 12,896.	$ 21,144.	$ 25,901.	$ 26,536.	$ 26,336.	$ 23,924.	$ 26,269.
FUEL AND LUBE	3,021.	5,282.	8,996.	10,709.	11,106.	10,906.	9,870.	10,849.
ELECTRIC POWER	3,085.	4,632.	6,115.	7,748.	7,748.	7,748.	7,370.	7,748.
EXPLOSIVES	393.	604.	710.	716.	726.	710.	697.	687.
PRODUCTION TAXES	5,525.	8,500.	10,200.	10,200.	10,200.	10,200.	10,200.	10,200.
GEN. & ADMIN. ALLOCATION	3,965.	6,100.	7,320.	7,320.	7,320.	7,320.	7,320.	7,320.
TOTAL	$ 48,967.	$ 78,032.	$ 115,123.	$ 137,639.	$ 140,369.	$ 139,466.	$ 129,087.	$ 138,820.
COST PER TON	$ 7.53	$ 7.80	$ 9.59	$ 11.47	$ 11.70	$ 11.62	$ 10.76	$ 11.57

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18- 22	23- 27	28- 32	33- 37	TOTAL	COST PER TON
ANNUAL OPERATING COSTS								
PRODUCTION, TONS	12,000	12,000	12,000	12,000	12,000	12,000	352,500	
OVERBURDEN, CUBIC YARDS	76,500	84,000	85,499	90,000	84,000	88,723	2,441,937	
PARTING, CUBIC YARDS	340	388	54	0	0	0	5,703	
LABOR PRODUCTION	$ 20,828.	$ 23,143.	$ 23,720.	$ 25,742.	$ 22,903.	$ 25,542.	$ 680,135.	$ 1.93
MAINTENANCE	22,607.	24,862.	25,626.	27,295.	24,610.	27,255.	732,292.	2.08
SALARIED EXEMPT	1,520.	1,520.	1,520.	1,520.	1,520.	1,520.	45,122.	.13
SALARIED NON-EXEMPT	5,439.	5,439.	5,439.	5,439.	5,439.	5,439.	157,153.	.45
PAYROLL OVERHEAD	20,158.	21,986.	22,522.	23,998.	21,790.	23,903.	645,894.	1.83
SUBTOTAL	$ 70,552.	$ 76,950.	$ 78,827.	$ 83,994.	$ 76,262.	$ 83,659.	$ 2,260,596.	$ 6.41
PARTS AND SUPPLIES	$ 24,167.	$ 26,485.	$ 27,254.	$ 29,033.	$ 26,256.	$ 29,106.	$ 779,631.	$ 2.21
FUEL AND LUBE	10,046.	11,025.	11,463.	12,262.	10,934.	12,399.	327,099.	.93
ELECTRIC POWER	7,370.	7,749.	7,824.	8,051.	7,748.	7,876.	224,807.	.64
EXPLOSIVES	694.	697.	678.	675.	675.	675.	20,149.	.06
PRODUCTION TAXES	10,200.	10,200.	10,200.	10,200.	10,200.	10,200.	299,625.	.85
GEN. & ADMIN. ALLOCATION	7,320.	7,320.	7,320.	7,320.	7,320.	7,320.	215,025.	.61
TOTAL	$ 130,349.	$ 140,425.	$ 143,566.	$ 151,535.	$ 139,395.	$ 151,235.	$ 4,126,933.	$ 11.71
COST PER TON	$ 10.86	$ 11.70	$ 11.96	$ 12.63	$ 11.62	$ 12.60		

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

	8	9	10	11	12	13	14	15
ANNUAL PERSONNEL REQUIREMENTS								
PRODUCTION -GRADE 5	14	25	41	54	54	54	49	54
-GRADE 4	42	63	92	120	123	124	107	119
-GRADE 3	68	123	223	267	276	272	247	272
-GRADE 1	18	18	20	22	24	25	24	25
SUBTOTAL	142	229	376	463	477	475	427	470
MAINTENANCE-GRADE 5	7	11	19	23	23	23	21	23
-GRADE 4	46	73	119	145	147	146	132	145
-GRADE 3	59	100	166	206	212	210	188	208
-GRADE 2	26	40	63	76	77	76	69	76
-GRADE 1	14	23	38	46	47	47	42	47
SUBTOTAL	152	247	405	496	506	502	452	499
WAGE SUBTOTAL	294	476	781	959	983	977	879	969
SALARIED EXEMPT	19	20	20	22	22	22	22	22
SALARIED NON-EXEMPT	42	69	69	95	95	95	95	95
SALARIED SUBTOTAL	61	89	89	117	117	117	117	117
TOTAL	355	565	870	1,076	1,100	1,094	996	1,086
ANNUAL EQUIPMENT SHIFTS								
WALKING DRAGLINE	0	249	500	1,000	1,000	1,000	1,000	1,000
WALKING DRAGLINE	813	1,000	1,000	1,000	1,000	1,000	1,000	1,000
OVERBURDEN SHOVEL	1,626	3,253	6,775	9,487	9,486	9,485	8,131	9,487
HYDRAULIC EXCAVATOR	1,023	1,574	1,889	1,889	1,889	1,889	1,888	1,888
CRAWLER DOZER	1,184	1,538	1,716	2,448	2,361	2,589	2,349	2,301
CRAWLER DOZER	3,246	5,604	9,341	12,044	12,227	12,079	10,485	11,909
SCRAPER	1,785	2,329	2,024	1,993	2,544	2,101	1,392	1,591
OVERBURDEN HAULER	6,505	14,875	34,285	42,920	45,555	43,890	37,825	43,805
COAL HAULER	5,085	8,300	11,405	11,695	10,920	11,210	11,915	11,815
MOTOR GRADER	483	802	889	973	1,112	1,094	1,244	1,209
WHEEL DOZER	1,000	1,000	1,018	1,080	1,263	1,206	1,453	1,391
WATER TRUCK	598	1,021	1,140	1,239	1,423	1,392	1,603	1,552
COAL DRILL	316	487	584	583	583	584	582	583
PUMPS AND PIPING	3,241	5,993	8,429	9,505	12,755	14,377	15,004	13,605
RECLAMATION FARM EQUIPMENT	0	26	65	134	288	340	352	419
COMPACTOR	95	64	110	113	85	100	43	60
GRAVEL SCREEN PLANT	371	289	216	448	361	589	349	301
GRAVEL TRUCKS	550	428	320	665	534	873	518	446
FRONT END LOADER	371	289	216	448	361	589	349	301

TABLE 3 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

	16	17	18- 22	23- 27	28- 32	33- 37
ANNUAL PERSONNEL REQUIREMENTS						
PRODUCTION -GRADE 5	49	54	55	58	54	58
-GRADE 4	109	126	125	141	122	132
-GRADE 3	254	278	293	314	279	319
-GRADE 1	23	25	22	24	23	23
SUBTOTAL	435	483	495	537	478	532
MAINTENANCE-GRADE 5	21	23	24	26	23	26
-GRADE 4	134	147	152	162	146	162
-GRADE 3	192	212	219	232	210	233
-GRADE 2	70	77	79	84	76	84
-GRADE 1	43	47	49	52	47	52
SUBTOTAL	460	506	523	556	502	557
WAGE SUBTOTAL	895	989	1,018	1,093	980	1,089
SALARIED EXEMPT	22	22	22	22	22	22
SALARIED NON EXEMPT	95	95	95	95	95	95
SALARIED SUBTOTAL	117	117	117	117	117	117
TOTAL	1,012	1,106	1,135	1,210	1,097	1,206
ANNUAL EQUIPMENT SHIFTS						
WALKING DRAGLINE	1,000	1,000	1,000	1,000	1,000	902
WALKING DRAGLINE	1,000	1,000	1,000	1,000	1,000	1,000
OVERBURDEN SHOVEL	8,132	9,488	9,758	10,574	9,486	10,558
HYDRAULIC EXCAVATOR	1,888	1,890	1,890	1,890	1,890	1,892
CRAWLER DOZER	2,418	2,579	2,481	2,599	2,400	2,339
CRAWLER DOZER	10,488	11,975	12,005	12,914	11,752	12,832
SCRAPER	1,399	1,785	1,069	1,340	1,119	1,145
OVERBURDEN HAULER	39,475	44,825	47,110	51,620	44,940	52,260
COAL HAULER	11,520	11,105	12,100	11,260	11,165	13,540
MOTOR GRADER	1,343	1,570	1,936	2,566	1,832	1,913
WHEEL DOZER	1,526	1,775	2,226	2,980	2,123	2,207
WATER TRUCK	1,720	2,008	2,485	3,301	2,356	2,458
COAL DRILL	502	586	585	586	585	587
PUMPS AND PIPING	11,509	10,699	11,870	10,991	9,269	5,769
RECLAMATION FARM EQUIPMENT	241	502	108	245	243	217
COMPACTOR	82	101	92	87	67	79
GRAVEL SCREEN PLANT	418	579	481	599	400	437
GRAVEL TRUCKS	620	858	714	889	593	647
FRONT END LOADER	418	579	481	599	400	437

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	6	7	8	9	10	11	12	13
DRAINAGE CONTROL AND RECLAMATION								
AREA DISTURBED	84	32	47	27	12	25	13	35
AREA RECLAIMED	0	0	0	69	25	17	20	18
SCRAPER SHIFTS	240	100	150	195	75	80	65	100
DOZER SHIFTS	80	35	50	65	25	30	25	35
PUMPING SHIFTS	1,160	1,524	2,055	1,575	1,989	1,732	1,535	1,557
LABOR PRODUCTION	$ 63.	$ 27.	$ 40.	$ 104.	$ 39.	$ 35.	$ 34.	$ 41.
MAINTENANCE	107.	75.	106.	109.	82.	76.	66.	77.
PAYROLL OVERHEAD	68.	41.	58.	85.	49.	45.	40.	47.
SUBTOTAL	$ 239.	$ 144.	$ 204.	$ 299.	$ 170.	$ 156.	$ 140.	$ 165.
PARTS AND SUPPLIES	$ 85.	$ 66.	$ 91.	$ 119.	$ 85.	$ 75.	$ 68.	$ 75.
FUEL AND LUBE	57.	37.	52.	55.	38.	36.	31.	37.
TOTAL	$ 381.	$ 246.	$ 348.	$ 473.	$ 293.	$ 268.	$ 239.	$ 277.
COST PER TON	$ .22	$ .12	$ .17	$ .24	$ .15	$ .13	$ .12	$ .14
OVERBURDEN STRIPPING AND HAULING-LOADER/TRUCK								
OVERBURDEN YARDS	0	0	2,105	2,895	3,800	4,105	5,280	5,500
LOADER SHIFTS	0	0	790	1,088	1,427	1,541	1,981	2,065
TRUCK SHIFTS	0	0	1,805	2,895	4,165	4,685	6,025	6,270
DOZER SHIFTS	0	0	1,580	2,176	2,854	3,082	3,962	4,130
DRILL SHIFTS	0	0	240	330	430	465	595	620
LABOR PRODUCTION	$ 0.	$ 0.	$ 1,146.	$ 1,655.	$ 2,239.	$ 2,454.	$ 3,153.	$ 3,285.
MAINTENANCE	0.	0.	855.	1,257.	1,720.	1,894.	2,434.	2,535.
PAYROLL OVERHEAD	0.	0.	800.	1,165.	1,584.	1,739.	2,235.	2,328.
SUBTOTAL	$ 0.	$ 0.	$ 2,802.	$ 4,078.	$ 5,542.	$ 6,087.	$ 7,822.	$ 8,147.
PARTS AND SUPPLIES	$ 0.	$ 0.	$ 750.	$ 1,107.	$ 1,518.	$ 1,673.	$ 2,151.	$ 2,240.
FUEL AND LUBE	0.	0.	510.	751.	1,029.	1,134.	1,458.	1,519.
ELECTRIC POWER	0.	0.	25.	35.	45.	49.	63.	65.
EXPLOSIVES	0.	0.	197.	271.	356.	385.	495.	516.
TOTAL	$ 0	$ 0	$ 4,284.	$ 6,242.	$ 8,491.	$ 9,327.	$ 11,988.	$ 12,487.
COST PER TON	$ 0.00	$ 0.00	$ 2.14	$ 3.12	$ 4.25	$ 4.66	$ 5.99	$ 6.24

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	14	15	16- 20	21- 25	TOTAL	COST PER TON
DRAINAGE CONTROL AND RECLAMATION						
AREA DISTURBED	22	98	229	85	707	
AREA RECLAIMED	14	23	198	169	553	
SCRAPER SHIFTS	65	275	625	475	2,445	
DOZER SHIFTS	25	95	225	175	865	
PUMPING SHIFTS	1,616	2,222	10,600	9,965	37,530	
LABOR PRODUCTION	$ 30.	$ 91.	$ 321.	$ 259.	$ 1,084.	$ .03
MAINTENANCE	68.	151.	513.	447.	1,880.	.05
PAYROLL OVERHEAD	39.	97.	333.	283.	1,186.	.03
SUBTOTAL	$ 137.	$ 339.	$ 1,167.	$ 989.	$ 4,150.	$ .10
PARTS AND SUPPLIES	$ 68.	$ 134.	$ 533.	$ 470.	$ 1,869.	$ .05
FUEL AND LUBE	33.	77.	246.	211.	910.	.02
TOTAL	$ 237.	$ 550.	$ 1,947.	$ 1,670.	$ 6,928.	$ .17
COST PER TON	$ .12	$ .28	$ .19	$ .17		
OVERBURDEN STRIPPING AND HAULING-LOADER/TRUCK						
OVERBURDEN YARDS	5,685	5,775	16,100	23,230	74,475	
LOADER SHIFTS	2,134	2,168	6,055	8,730	27,979	
TRUCK SHIFTS	6,485	6,435	21,725	28,550	89,040	
DOZER SHIFTS	4,268	4,336	12,110	17,460	55,958	
DRILL SHIFTS	640	650	1,825	2,625	8,420	
LABOR PRODUCTION	$ 3,395.	$ 3,420.	$ 10,271.	$ 14,277.	$ 45,294.	$ 1.14
MAINTENANCE	2,621.	2,632.	8,085.	11,116.	35,150.	.89
PAYROLL OVERHEAD	2,406.	2,421.	7,342.	10,157.	32,177.	.81
SUBTOTAL	$ 8,422.	$ 8,473.	$ 25,699.	$ 35,550.	$ 112,621.	$ 2.84
PARTS AND SUPPLIES	$ 2,316.	$ 2,325.	$ 7,170.	$ 9,838.	$ 31,087.	$ .78
FUEL AND LUBE	1,570.	1,577.	4,854.	6,665.	21,066.	.53
ELECTRIC POWER	67.	68.	192.	276.	885.	.02
EXPLOSIVES	341.	341.	1,509.	2,178.	6,982.	.18
TOTAL	$ 12,907.	$ 12,984.	$ 39,423.	$ 54,506.	$ 172,640.	$ 4.35
COST PER TON	$ 6.45	$ 6.49	$ 3.94	$ 5.45		

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	6	7	8	9	10	11	12	13
OVERBURDEN STRIPPING								
DRAGLINE								
DRAGLINE OVERBURDEN YARDS	5,355	3,855	3,485	3,485	3,485	4,070	4,070	4,180
DRAGLINE SHIFTS	700	750	749	749	749	875	875	875
DOZER SHIFTS	700	750	749	749	749	875	875	875
DRILL SHIFTS	605	435	395	395	395	460	460	475
LABOR PRODUCTION	$ 996.	$ 908.	$ 878.	$ 878.	$ 878.	$ 1,024.	$ 1,024.	$ 1,035.
MAINTENANCE	567.	535.	521.	521.	521.	608.	608.	613.
PAYROLL OVERHEAD	625.	577.	559.	559.	559.	653.	653.	659.
SUBTOTAL	$ 2,187.	$ 2,020.	$ 1,958.	$ 1,958.	$ 1,958.	$ 2,285.	$ 2,285.	$ 2,307.
PARTS AND SUPPLIES	$ 562.	$ 577.	$ 571.	$ 571.	$ 571.	$ 667.	$ 667.	$ 669.
FUEL AND LUBE	107.	112.	112.	112.	112.	130.	130.	131.
ELECTRIC POWER	1,275.	1,344.	1,339.	1,339.	1,339.	1,563.	1,563.	1,564.
EXPLOSIVES	502.	361.	327.	327.	327.	382.	382.	392.
TOTAL	$ 4,634.	$ 4,415.	$ 4,306.	$ 4,306.	$ 4,306.	$ 5,027.	$ 5,027.	$ 5,062.
COST PER TON	$ 2.73	$ 2.21	$ 2.15	$ 2.15	$ 2.15	$ 2.51	$ 2.51	$ 2.53
MINING AND HAULING COAL								
PRODUCTION,TONS	1,700	2,000	2,000	2,000	2,000	2,000	2,000	2,000
DRILL SHIFTS	70	82	81	82	83	83	82	81
LOADER SHIFTS	573	674	674	675	674	674	675	674
COAL TRUCK SHIFTS	2,335	2,730	2,815	2,805	2,990	3,015	3,025	2,985
DOZER SHIFTS	573	674	674	675	674	674	675	674
LABOR PRODUCTION	$ 686.	$ 803.	$ 819.	$ 818.	$ 853.	$ 858.	$ 860.	$ 852.
MAINTENANCE	657.	770.	786.	785.	821.	826.	828.	819.
PAYROLL OVERHEAD	537.	629.	642.	641.	669.	673.	675.	668.
SUBTOTAL	$ 1,880.	$ 2,203.	$ 2,248.	$ 2,244.	$ 2,343.	$ 2,356.	$ 2,362.	$ 2,339.
PARTS AND SUPPLIES	$ 619.	$ 725.	$ 741.	$ 739.	$ 772.	$ 777.	$ 779.	$ 771.
FUEL AND LUBE	442.	518.	528.	527.	549.	552.	553.	548.
EXPLOSIVES	80	94	94.	94.	94.	94.	94.	94.
TOTAL	$ 3,021	$ 3,539.	$ 3,610.	$ 3,604.	$ 3,758.	$ 3,779.	$ 3,788.	$ 3,753.
COST PER TON	$ 1.78	$ 1.77	$ 1.81	$ 1.80	$ 1.88	$ 1.89	$ 1.89	$ 1.88

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	14	15	16- 20	21- 25	TOTAL	COST PER TON
OVERBURDEN STRIPPING						
DRAGLINE						
DRAGLINE OVERBURDEN YARDS	5,250	5,130	18,145	13,070	73,580	
DRAGLINE SHIFTS	1,000	874	3,213	2,431	13,843	
DOZER SHIFTS	1,000	874	3,213	2,431	13,843	
DRILL SHIFTS	595	580	2,050	1,475	8,320	
LABOR PRODUCTION	$ 1,222.	$ 1,113.	$ 4,029.	$ 2,992.	$ 16,975.	$ .43
MAINTENANCE	718.	648.	2,354.	1,755.	9,967.	.25
PAYROLL OVERHEAD	776.	704.	2,553.	1,899.	10,777.	.27
SUBTOTAL	$ 2,716.	$ 2,465.	$ 8,935.	$ 6,645.	$ 37,718.	$ .95
PARTS AND SUPPLIES	$ 771.	$ 681.	$ 2,493.	$ 1,877.	$ 10,678.	$ .27
FUEL AND LUBE	150.	132.	484.	365.	2,077.	.05
ELECTRIC POWER	1,793.	1,574.	5,777.	4,363.	24,834.	.63
EXPLOSIVES	492.	481.	1,701.	1,225.	6,898.	.17
TOTAL	$ 5,922.	$ 5,334.	$ 19,390.	$ 14,476.	$ 82,206.	$ 2.07
COST PER TON	$ 2.96	$ 2.67	$ 1.94	$ 1.45		
MINING AND HAULING COAL						
PRODUCTION,TONS	2,000	2,000	10,000	10,000	39,700	
DRILL SHIFTS	83	83	410	415	1,635	
LOADER SHIFTS	674	676	3,370	3,370	13,383	
COAL TRUCK SHIFTS	2,955	2,810	13,975	14,350	56,790	
DOZER SHIFTS	674	676	3,370	3,370	13,383	
LABOR PRODUCTION	$ 846.	$ 819.	$ 4,078.	$ 4,150.	$ 16,442.	$ .41
MAINTENANCE	814.	786.	3,913.	3,987.	15,792.	.40
PAYROLL OVERHEAD	664.	642.	3,196.	3,255.	12,893.	.32
SUBTOTAL	$ 2,324.	$ 2,248.	$ 11,188.	$ 11,392.	$ 45,127.	$ 1.14
PARTS AND SUPPLIES	$ 766.	$ 741.	$ 3,686.	$ 3,753.	$ 14,869.	$ .37
FUEL AND LUBE	545.	528.	2,627.	2,672.	10,589.	.27
EXPLOSIVES	94.	94.	469.	469.	1,861.	.05
TOTAL	$ 3,728.	$ 3,610.	$ 17,969.	$ 18,286.	$ 72,446.	$ 1.82
COST PER TON	$ 1.86	$ 1.81	$ 1.80	$ 1.83		

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	6	7	8	9	10	11	12	13
COAL LOADOUT								
PRODUCTION,TONS	1,700	2,000	2,000	2,000	2,000	2,000	2,000	2,000
LABOR PRODUCTION	$ 234.	$ 234.	$ 234.	$ 234.	$ 234.	$ 234.	$ 234.	$ 234.
MAINTENANCE	146.	146.	146.	146.	146.	146.	146.	146.
PAYROLL OVERHEAD	152.	152.	152.	152.	152.	152.	152.	152.
SUBTOTAL	$ 531.	$ 531.	$ 531.	$ 531.	$ 531.	$ 531.	$ 531.	$ 531.
PARTS AND SUPPLIES	$ 116.	$ 136.	$ 136.	$ 136.	$ 136.	$ 136.	$ 136.	$ 136.
FUEL AND LUBE	20.	24.	24.	24.	24.	24.	24.	24.
ELECTRIC POWER	119.	140.	140.	140.	140.	140.	140.	140.
TOTAL	$ 786.	$ 831.	$ 831.	$ 831.	$ 831.	$ 831.	$ 831.	$ 831.
COST PER TON	$ .46	$ .42	$ .42	$ .42	$ .42	$ .42	$ .42	$ .42
HAUL ROAD CONSTRUCTION AND MAINTENANCE								
LENGTH OF ROAD CONSTRUCTED	6,750	11,250	21,850	18,250	18,200	19,800	19,500	16,250
DOZER SHIFTS	54	83	151	131	130	141	140	121
SCRAPER SHIFTS	43	43	73	73	73	73	73	73
GRADER SHIFTS	281	334	431	452	456	482	494	501
WATER TRUCK SHIFTS	253	301	389	408	411	435	446	452
WHEEL DOZER SHIFTS	250	250	750	750	750	750	750	750
GRAVEL PLANT SHIFTS	40	69	127	107	106	117	116	97
GRAVEL TRUCK SHIFTS	59	102	189	158	158	173	171	143
LABOR PRODUCTION	$ 205.	$ 252.	$ 452.	$ 440.	$ 440.	$ 460.	$ 464.	$ 448.
MAINTENANCE	111.	139.	248.	238.	238.	250.	251.	240.
PAYROLL OVERHEAD	126.	156.	280.	271.	271.	284.	286.	275.
SUBTOTAL	$ 442.	$ 547.	$ 979.	$ 949.	$ 950.	$ 995.	$ 1,001.	$ 964.
PARTS AND SUPPLIES	$ 103.	$ 128.	$ 249.	$ 238.	$ 239.	$ 249.	$ 249.	$ 238.
FUEL AND LUBE	66.	79.	144.	141.	141.	147.	148.	144.
TOTAL	$ 610.	$ 754.	$ 1,372.	$ 1,329.	$ 1,330.	$ 1,390.	$ 1,399.	$ 1,346.
COST PER TON	$ .36	$ .38	$ .69	$ .66	$ .67	$ .70	$ .70	$ .67

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	14	15	16- 20	21- 25	TOTAL	COST PER TON
COAL LOADOUT						
PRODUCTION, TONS	2,000	2,000	10,000	10,000	39,700	
LABOR PRODUCTION	$ 234.	$ 234.	$ 1,169.	$ 1,169.	$ 4,675.	$ .12
MAINTENANCE	146.	146.	729.	729.	2,918.	.07
PAYROLL OVERHEAD	152.	152.	759.	759.	3,037.	.08
SUBTOTAL	$ 531.	$ 531.	$ 2,657.	$ 2,657.	$ 10,630.	$ .27
PARTS AND SUPPLIES	$ 136.	$ 136.	$ 680.	$ 680.	$ 2,700.	$ .07
FUEL AND LUBE	24.	24.	120.	120.	476.	.01
ELECTRIC POWER	140.	140.	700.	700.	2,779.	.07
TOTAL	$ 831.	$ 831.	$ 4,157.	$ 4,157.	$ 16,585.	$ .42
COST PER TON	$ .42	$ .42	$ .42	$ .42		
HAUL ROAD CONSTRUCTION AND MAINTENANCE						
LENGTH OF ROAD CONSTRUCTED	15,200	22,000	70,800	63,900	303,750	
DOZER SHIFTS	110	157	542	507	2,271	
SCRAPER SHIFTS	73	86	367	367	1,418	
GRADER SHIFTS	399	521	2,446	2,632	9,429	
WATER TRUCK SHIFTS	360	470	2,206	2,374	8,504	
WHEEL DOZER SHIFTS	750	750	3,750	3,750	14,000	
GRAVEL PLANT SHIFTS	86	128	420	385	1,798	
GRAVEL TRUCK SHIFTS	128	190	620	565	2,656	
LABOR PRODUCTION	$ 400.	$ 490.	$ 2,157.	$ 2,191.	$ 8,398.	$ .21
MAINTENANCE	215.	268.	1,149.	1,159.	4,507.	.11
PAYROLL OVERHEAD	246.	303.	1,322.	1,340.	5,162.	.13
SUBTOTAL	$ 862.	$ 1,061.	$ 4,628.	$ 4,689.	$ 18,067.	$ .46
PARTS AND SUPPLIES	$ 219.	$ 263.	$ 1,141.	$ 1,142.	$ 4,457.	$ .11
FUEL AND LUBE	130.	156.	696.	708.	2,701.	.07
TOTAL	$ 1,211.	$ 1,480.	$ 6,466.	$ 6,538.	$ 25,225.	$ .64
COST PER TON	$ .61	$ .74	$ .65	$ .65		

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	6	7	8	9	10	11	12	13
GENERAL MINE SERVICES								
LABOR PRODUCTION	$ 255.	$ 212.	$ 242.	$ 313.	$ 297.	$ 310.	$ 310.	$ 304.
MAINTENANCE	235.	292.	234.	202.	181.	212.	234.	243.
PAYROLL OVERHEAD	196.	201.	191.	206.	191.	209.	218.	219.
SUBTOTAL	$ 685.	$ 705.	$ 667.	$ 721.	$ 670.	$ 731.	$ 762.	$ 765.
PARTS AND SUPPLIES	$ 289.	$ 296.	$ 228.	$ 235.	$ 187.	$ 205.	$ 196.	$ 195.
FUEL AND LUBE	25.	25.	19.	20.	16.	17.	17.	17.
ELECTRIC POWER	79.	79.	79.	79.	79.	79.	79.	79.
TOTAL	$ 1,078.	$ 1,106.	$ 993.	$ 1,055.	$ 952.	$ 1,033.	$ 1,054.	$ 1,056.
COST PER TON	$ .63	$ .55	$ .50	$ .53	$ .48	$ .52	$ .53	$ .53
SUPERVISION AND ADMINISTRATION								
LABOR SALARIED EXEMPT	$ 518.	$ 518.	$ 518.	$ 518.	$ 518.	$ 518.	$ 518.	$ 518.
SALARIED NON-EXEMPT	1,489.	1,489.	1,489.	1,489.	1,489.	1,489.	1,489.	1,489.
PAYROLL OVERHEAD	803.	803.	803.	803.	803.	803.	803.	803.
SUBTOTAL	$ 2,809.	$ 2,809.	$ 2,809.	$ 2,809.	$ 2,809.	$ 2,809.	$ 2,809.	$ 2,809.
PARTS AND SUPPLIES	$ 246.	$ 246.	$ 246.	$ 246.	$ 246.	$ 246.	$ 246.	$ 246.
FUEL AND LUBE	12.	12.	12.	12.	12.	12.	12.	12.
GEN. & ADMIN. ALLOCATION	1,219.	1,434.	1,434.	1,434.	1,434.	1,434.	1,434.	1,434.
TOTAL	$ 4,287.	$ 4,502.	$ 4,502.	$ 4,502.	$ 4,502.	$ 4,502.	$ 4,502.	$ 4,502.
COST PER TON	$ 2.52	$ 2.25	$ 2.25	$ 2.25	$ 2.25	$ 2.25	$ 2.25	$ 2.25
PRODUCTION TAXES AND FEES								
BLACK LUNG TAX	$ 850.	$ 1,000.	$ 1,000.	$ 1,000.	$ 1,000.	$ 1,000.	$ 1,000.	$ 1,000.
RECLAMATION TAX	595.	700.	700.	700.	700.	700.	700.	700.
TOTAL	$ 1,445.	$ 1,700.	$ 1,700.	$ 1,700.	$ 1,700.	$ 1,700.	$ 1,700.	$ 1,700.
COST PER TON	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	14	15	16- 20	21- 25	TOTAL	COST PER TON
GENERAL MINE SERVICES						
LABOR PRODUCTION	$ 342.	$ 299.	$ 1,749.	$ 1,538.	$ 6,173.	$ .16
MAINTENANCE	288.	279.	1,063.	905.	4,367.	.11
PAYROLL OVERHEAD	252.	231.	1,125.	977.	4,216.	.11
SUBTOTAL	$ 882.	$ 809.	$ 3,937.	$ 3,421.	$ 14,756.	$ .37
PARTS AND SUPPLIES	$ 250.	$ 211.	$ 1,293.	$ 900.	$ 4,486.	$ .11
FUEL AND LUBE	21.	18.	110.	77.	382.	.01
ELECTRIC POWER	79.	79.	396.	396.	1,586.	.04
TOTAL	$ 1,233.	$ 1,118.	$ 5,736.	$ 4,795.	$ 21,208.	$ .53
COST PER TON	$ .62	$ .56	$ .57	$ .48		
SUPERVISION AND ADMINISTRATION						
LABOR SALARIED EXEMPT	$ 518.	$ 518.	$ 2,591.	$ 2,591.	$ 10,365.	$ .26
SALARIED NON-EXEMPT	1,489.	1,489.	7,443.	7,443.	29,770.	.75
PAYROLL OVERHEAD	803.	803.	4,014.	4,014.	16,054.	.40
SUBTOTAL	$ 2,809.	$ 2,809.	$ 14,047.	$ 14,047.	$ 56,189.	$ 1.42
PARTS AND SUPPLIES	$ 246.	$ 246.	$ 1,232.	$ 1,232.	$ 4,929.	$ .12
FUEL AND LUBE	12.	12.	62.	62.	247.	.01
GEN. & ADMIN. ALLOCATION	1,434.	1,434.	7,170.	7,170.	28,465.	.72
TOTAL	$ 4,502.	$ 4,502.	$ 22,511.	$ 22,511.	$ 89,830.	$ 2.26
COST PER TON	$ 2.25	$ 2.25	$ 2.25	$ 2.25		
PRODUCTION TAXES AND FEES						
BLACK LUNG TAX	$ 1,000.	$ 1,000.	$ 5,000.	$ 5,000.	$ 19,850.	$ .50
RECLAMATION TAX	700.	700.	3,500.	3,500.	13,895.	.35
TOTAL	$ 1,700.	$ 1,700.	$ 8,500.	$ 8,500.	$ 33,745.	$ .85
COST PER TON	$ .85	$ .85	$ .85	$ .85		

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

ANNUAL OPERATING COSTS	6	7	8	9	10	11	12	13
PRODUCTION, TONS	1,700	2,000	2,000	2,000	2,000	2,000	2,000	2,000
OVERBURDEN, CUBIC YARDS	5,355	3,855	5,590	6,380	7,285	8,175	9,350	9,680
PARTING, CUBIC YARDS	0	0	0	0	0	0	0	0
LABOR PRODUCTION	$ 2,438.	$ 2,437.	$ 3,810.	$ 4,442.	$ 4,981.	$ 5,376.	$ 6,078.	$ 6,197.
MAINTENANCE	1,823.	1,957.	2,896.	3,258.	3,709.	4,011.	4,567.	4,673.
SALARIED EXEMPT	518.	518.	518.	518.	518.	518.	518.	518.
SALARIED NON-EXEMPT	1,489.	1,489.	1,489.	1,489.	1,489.	1,489.	1,489.	1,489.
PAYROLL OVERHEAD	2,507.	2,560.	3,485.	3,883.	4,279.	4,557.	5,061.	5,151.
SUBTOTAL	$ 8,775.	$ 8,960.	$ 12,199.	$ 13,589.	$ 14,975.	$ 15,951.	$ 17,712.	$ 18,028.
PARTS AND SUPPLIES	$ 2,020.	$ 2,174.	$ 3,013.	$ 3,392.	$ 3,754.	$ 4,029.	$ 4,493.	$ 4,571.
FUEL AND LUBE	729.	807.	1,401.	1,643.	1,922.	2,053.	2,374.	2,431.
ELECTRIC POWER	1,474.	1,564.	1,583.	1,593.	1,603.	1,832.	1,845.	1,849.
EXPLOSIVES	582.	455.	618.	692.	777.	860.	970.	1,001.
PRODUCTION TAXES	1,445.	1,700.	1,700.	1,700.	1,700.	1,700.	1,700.	1,700.
GEN. & ADMIN. ALLOCATION	1,219.	1,434.	1,434.	1,434.	1,434.	1,434.	1,434.	1,434.
TOTAL	$ 16,243.	$ 17,094.	$ 21,948.	$ 24,043.	$ 26,165.	$ 27,858.	$ 30,529.	$ 31,014.
COST PER TON	$ 9.55	$ 8.55	$ 10.97	$ 12.02	$ 13.08	$ 13.93	$ 15.26	$ 15.51

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	14	15	16- 20	21- 25	TOTAL	COST PER TON
ANNUAL OPERATING COSTS						
PRODUCTION, TONS	2,000	2,000	2,000	2,000	39,700	
OVERBURDEN, CUBIC YARDS	10,935	10,905	6,849	7,260	148,055	
PARTING, CUBIC YARDS	0	0	0	0	0	
LABOR PRODUCTION	$ 6,469.	$ 6,466.	$ 4,755.	$ 5,315.	$ 99,042.	$ 2.49
MAINTENANCE	4,870.	4,911.	3,561.	4,020.	74,579.	1.88
SALARIED EXEMPT	518.	518.	518.	518.	10,365.	.26
SALARIED NON-EXEMPT	1,489.	1,489.	1,489.	1,489.	29,770.	.75
PAYROLL OVERHEAD	5,338.	5,353.	4,129.	4,537.	85,503.	2.15
SUBTOTAL	$ 18,684.	$ 18,736.	$ 14,452.	$ 15,878.	$ 299,258.	$ 7.54
PARTS AND SUPPLIES	$ 4,771.	$ 4,738.	$ 3,646.	$ 3,978.	$ 75,075.	$ 1.89
FUEL AND LUBE	2,484.	2,524.	1,840.	2,176.	38,447.	.97
ELECTRIC POWER	2,080.	1,862.	1,413.	1,147.	30,084.	.76
EXPLOSIVES	1,119.	1,116.	736.	774.	15,741.	.40
PRODUCTION TAXES	1,700.	1,700.	1,700.	1,700.	33,745.	.85
GEN. & ADMIN. ALLOCATION	1,434.	1,434.	1,434.	1,434.	28,465.	.72
TOTAL	$ 32,272.	$ 32,110.	$ 25,220.	$ 27,088.	$ 520,816.	$ 13.12
COST PER TON	$ 16.14	$ 16.05	$ 12.61	$ 13.54		

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

	6	7	8	9	10	11	12	13
ANNUAL PERSONNEL REQUIREMENTS								
PRODUCTION -GRADE 5	6	6	9	11	12	13	15	15
-GRADE 4	10	10	24	29	32	35	40	41
-GRADE 3	22	24	33	37	43	46	53	54
-GRADE 1	6	6	6	7	6	6	6	6
SUBTOTAL	44	46	72	84	93	100	114	116
MAINTENANCE-GRADE 5	2	2	3	3	4	4	4	5
-GRADE 4	11	12	17	19	22	24	27	28
-GRADE 3	13	15	23	26	31	34	38	38
-GRADE 2	6	7	9	10	11	12	14	14
-GRADE 1	4	4	6	7	8	8	9	10
SUBTOTAL	36	40	58	65	75	82	93	95
WAGE SUBTOTAL	79	85	130	149	169	182	207	211
SALARIED EXEMPT	8	8	8	8	8	8	8	8
SALARIED NON-EXEMPT	26	26	26	26	26	26	26	26
SALARIED SUBTOTAL	34	34	34	34	34	34	34	34
TOTAL	113	119	164	182	202	215	240	244
ANNUAL EQUIPMENT SHIFTS								
WALKING DRAGLINE	700	750	749	749	749	875	875	875
OVERBURDEN DRILL	605	435	635	725	825	925	1,055	1,095
FRONT END LOADER	573	674	1,464	1,763	2,101	2,215	2,656	2,739
CRAWLER DOZER	740	819	876	856	855	992	991	972
CRAWLER DOZER	667	723	2,329	2,941	3,578	3,811	4,687	4,864
SCRAPER	283	143	223	268	148	153	138	173
OVERBURDEN HAULER	0	0	1,805	2,895	4,165	4,685	6,025	6,270
COAL HAULER	2,335	2,730	2,815	2,805	2,990	3,015	3,025	2,985
MOTOR GRADER	281	334	431	452	456	482	494	501
WHEEL DOZER	250	250	750	750	750	750	750	750
WATER TRUCK	253	301	389	408	411	435	446	452
COAL DRILL	70	82	81	82	83	83	82	81
PUMPS AND PIPING	1,160	1,524	2,055	1,575	1,989	1,732	1,535	1,557
RECLAMATION FARM EQUIPMENT	0	0	0	70	25	17	20	19
COMPACTOR	10	10	14	14	14	14	14	9
GRAVEL SCREEN PLANT	40	69	127	107	106	117	116	97
GRAVEL TRUCKS	59	102	189	158	158	173	171	143
FRONT END LOADER	40	69	127	107	106	117	116	97

TABLE 3 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

	14	15	16- 20	21- 25
ANNUAL PERSONNEL REQUIREMENTS				
PRODUCTION -GRADE 5	16	15	11	12
-GRADE 4	42	44	29	36
-GRADE 3	56	55	43	46
-GRADE 1	6	6	7	6
SUBTOTAL	120	120	90	100
MAINTENANCE-GRADE 5	5	5	3	4
-GRADE 4	29	29	21	24
-GRADE 3	40	40	30	34
-GRADE 2	15	15	11	12
-GRADE 1	10	10	7	8
SUBTOTAL	99	99	72	82
WAGE SUBTOTAL	219	218	162	182
SALARIED EXEMPT	8	8	8	8
SALARIED NON-EXEMPT	26	26	26	26
SALARIED SUBTOTAL	34	34	34	34
TOTAL	252	252	195	215
ANNUAL EQUIPMENT SHIFTS				
WALKING DRAGLINE	1,000	874	643	486
OVERBURDEN DRILL	1,235	1,230	775	820
FRONT END LOADER	2,808	2,844	1,885	2,420
CRAWLER DOZER	1,086	1,002	727	563
CRAWLER DOZER	4,992	5,136	3,166	4,226
SCRAPER	138	361	198	168
OVERBURDEN HAULER	6,485	6,435	4,345	5,710
COAL HAULER	2,955	2,810	2,795	2,870
MOTOR GRADER	399	521	489	526
WHEEL DOZER	750	750	750	750
WATER TRUCK	360	470	441	475
COAL DRILL	83	83	82	83
PUMPS AND PIPING	1,616	2,222	2,120	1,993
RECLAMATION FARM EQUIPMENT	15	23	40	34
COMPACTOR	14	21	14	14
GRAVEL SCREEN PLANT	86	128	84	77
GRAVEL TRUCKS	128	190	124	113
FRONT END LOADER	86	128	84	77

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
DRAINAGE CONTROL AND RECLAMATION								
AREA DISTURBED	42	63	34	24	22	9	57	115
AREA RECLAIMED	0	33	37	30	13	19	37	29
SCRAPER SHIFTS	135	185	130	100	80	70	175	320
DOZER SHIFTS	45	65	45	35	30	25	60	110
PUMPING SHIFTS	660	1,005	968	899	832	686	855	2,085
LABOR PRODUCTION	$ 36.	$ 74.	$ 64.	$ 50.	$ 33.	$ 34.	$ 75.	$ 107.
MAINTENANCE	61.	88.	70.	59.	50.	43.	81.	160.
PAYROLL OVERHEAD	39.	65.	54.	43.	33.	31.	62.	107.
SUBTOTAL	$ 136.	$ 227.	$ 187.	$ 152.	$ 116.	$ 107.	$ 218.	$ 374.
PARTS AND SUPPLIES	$ 48.	$ 84.	$ 73.	$ 61.	$ 48.	$ 44.	$ 80.	$ 143.
FUEL AND LUBE	32.	46.	36.	30.	25.	22.	43.	83.
TOTAL	$ 216.	$ 358.	$ 297.	$ 243.	$ 189.	$ 172.	$ 340.	$ 599.
COST PER TON	$ .22	$ .36	$ .15	$ .12	$ .09	$ .09	$ .17	$ .30
OVERBURDEN STRIPPING AND HAULING-LOADER/TRUCK								
OVERBURDEN YARDS	0	679	1,889	3,166	3,200	3,442	1,715	1,479
LOADER SHIFTS	0	255	710	1,189	1,201	1,291	644	556
TRUCK SHIFTS	0	585	1,795	3,150	2,740	3,925	1,775	1,660
DOZER SHIFTS	0	510	1,420	2,378	2,402	2,582	1,288	1,112
DRILL SHIFTS	0	80	215	360	360	390	195	170
LABOR PRODUCTION	$ 0.	$ 372.	$ 1,062.	$ 1,806.	$ 1,738.	$ 2,056.	$ 991.	$ 881.
MAINTENANCE	0.	277.	802.	1,371.	1,298.	1,587.	756.	678.
PAYROLL OVERHEAD	0.	260.	746.	1,271.	1,214.	1,457.	699.	624.
SUBTOTAL	$ 0.	$ 909.	$ 2,610.	$ 4,448.	$ 4,250.	$ 5,100.	$ 2,446.	$ 2,183.
PARTS AND SUPPLIES	$ 0.	$ 243.	$ 705.	$ 1,207.	$ 1,139.	$ 1,402.	$ 666.	$ 598.
FUEL AND LUBE	0.	165.	479.	819.	774.	950.	452.	406.
ELECTRIC POWER	0.	8.	23.	38.	38.	41.	20.	18.
EXPLOSIVES	0.	64.	177.	297.	300.	323.	161.	139.
TOTAL	$ 0.	$ 1,389.	$ 3,994.	$ 6,809.	$ 6,501.	$ 7,815.	$ 3,746.	$ 3,344.
COST PER TON	$ 0.00	$ 1.39	$ 2.00	$ 3.40	$ 3.25	$ 3.91	$ 1.87	$ 1.67

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18	19	20	21	22	23- 27
DRAINAGE CONTROL AND RECLAMATION								
AREA DISTURBED	102	73	80	86	117	102	160	288
AREA RECLAIMED	122	29	25	36	0	0	75	705
SCRAPER SHIFTS	330	215	220	235	340	285	435	2,050
DOZER SHIFTS	110	75	75	80	115	95	145	700
PUMPING SHIFTS	1,864	1,455	1,208	1,089	1,709	1,874	3,774	9,195
LABOR PRODUCTION	$ 178.	$ 80.	$ 77.	$ 90.	$ 91.	$ 75.	$ 170.	$ 1,070.
MAINTENANCE	161.	110.	104.	106.	154.	142.	247.	931.
PAYROLL OVERHEAD	136.	76.	73.	78.	98.	87.	167.	800.
SUBTOTAL	$ 475.	$ 267.	$ 254.	$ 274.	$ 343.	$ 304.	$ 584.	$ 2,801.
PARTS AND SUPPLIES	$ 180.	$ 102.	$ 94.	$ 99.	$ 123.	$ 115.	$ 236.	$ 1,030.
FUEL AND LUBE	84.	57.	55.	56.	82.	73.	125.	492.
TOTAL	$ 740.	$ 426.	$ 402.	$ 429.	$ 547.	$ 492.	$ 945.	$ 4,323.
COST PER TON	$ .25	$ .14	$ .13	$ .14	$ .18	$ .16	$ .31	$ .29
OVERBURDEN STRIPPING AND HAULING-LOADER/TRUCK								
OVERBURDEN YARDS	5,142	6,072	6,721	7,195	6,885	6,605	5,865	28,685
LOADER SHIFTS	1,929	2,279	2,523	2,700	2,583	2,478	2,200	10,770
TRUCK SHIFTS	4,400	6,395	7,290	8,215	7,850	7,875	5,020	32,325
DOZER SHIFTS	3,858	4,558	5,046	5,400	5,166	4,956	4,400	21,540
DRILL SHIFTS	580	685	760	810	775	745	660	3,250
LABOR PRODUCTION	$ 2,792.	$ 3,526.	$ 3,944.	$ 4,297.	$ 4,109.	$ 4,009.	$ 3,184.	$ 17,071.
MAINTENANCE	2,085.	2,696.	3,026.	3,318.	3,172.	3,111.	2,378.	13,154.
PAYROLL OVERHEAD	1,951.	2,489.	2,788.	3,046.	2,913.	2,848.	2,225.	12,090.
SUBTOTAL	$ 6,828.	$ 8,710.	$ 9,759.	$ 10,661.	$ 10,194.	$ 9,967.	$ 7,786.	$ 42,316.
PARTS AND SUPPLIES	$ 1,830.	$ 2,378.	$ 2,670.	$ 2,932.	$ 2,803.	$ 2,751.	$ 2,087.	$ 11,616.
FUEL AND LUBE	1,244.	1,613.	1,811.	1,988.	1,900.	1,864.	1,419.	7,875.
ELECTRIC POWER	61.	72.	80.	85.	81.	78.	69.	342.
EXPLOSIVES	482	569.	630.	675.	645.	619.	550.	2,689.
TOTAL	$ 10,445.	$ 13,342.	$ 14,950.	$ 16,340.	$ 15,625.	$ 15,281.	$ 11,911.	$ 64,838.
COST PER TON	$ 3.48	$ 4.45	$ 4.98	$ 5.45	$ 5.21	$ 5.09	$ 3.97	$ 4.32

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	28 - 32	TOTAL	COST PER TON
DRAINAGE CONTROL AND RECLAMATION			
AREA DISTURBED	159	1,534	
AREA RECLAIMED	342	1,531	
SCRAPER SHIFTS	1,225	6,530	
DOZER SHIFTS	425	2,235	
PUMPING SHIFTS	5,820	35,978	
LABOR PRODUCTION	$ 585.	$ 2,890.	$ .04
MAINTENANCE	563.	3,130.	.05
PAYROLL OVERHEAD	460.	2,408.	.04
SUBTOTAL	$ 1,608.	$ 8,428.	$ .13
PARTS AND SUPPLIES	$ 590.	$ 3,150.	$ .05
FUEL AND LUBE	297.	1,636.	.03
TOTAL	$ 2,496.	$ 13,215.	$ .20
COST PER TON	$ .17		
OVERBURDEN STRIPPING AND HAULING-LOADER/TRUCK			
OVERBURDEN YARDS	28,290	117,030	
LOADER SHIFTS	10,625	43,933	
TRUCK SHIFTS	35,975	130,975	
DOZER SHIFTS	21,250	87,866	
DRILL SHIFTS	3,200	13,235	
LABOR PRODUCTION	$ 17,613.	$ 69,453.	$ 1.07
MAINTENANCE	13,769.	53,478.	.82
PAYROLL OVERHEAD	12,553.	49,172.	.76
SUBTOTAL	$ 43,935.	$ 172,103.	$ 2.65
PARTS AND SUPPLIES	$ 12,195.	$ 47,224.	$ .73
FUEL AND LUBE	8,259.	32,017.	.49
ELECTRIC POWER	336.	1,391.	.02
EXPLOSIVES	2,633.	10,972.	.17
TOTAL	$ 67,378.	$ 263,707	$ 4.06
COST PER TON	$ 4.49		

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
OVERBURDEN STRIPPING DRAGLINE								
DRAGLINE OVERBURDEN YARDS	2,886	3,245	5,194	5,040	5,040	5,122	5,774	6,387
DRAGLINE SHIFTS	273	500	1,000	1,000	1,000	1,000	1,000	1,000
DOZER SHIFTS	273	500	1,000	1,000	1,000	1,000	1,000	1,000
DRILL SHIFTS	235	370	585	570	570	580	650	720
LABOR PRODUCTION	$ 387.	$ 665.	$ 1,214.	$ 1,203.	$ 1,203.	$ 1,211.	$ 1,263.	$ 1,315.
MAINTENANCE	221.	384.	715.	709.	709.	713.	737.	760.
PAYROLL OVERHEAD	243.	419.	772.	765.	765.	769.	800.	830.
SUBTOTAL	$ 851.	$ 1,468.	$ 2,700.	$ 2,678.	$ 2,678.	$ 2,693.	$ 2,799.	$ 2,905.
PARTS AND SUPPLIES	$ 219.	$ 394.	$ 769.	$ 768.	$ 768.	$ 769.	$ 777.	$ 786.
FUEL AND LUBE	42.	76.	150.	150.	150.	150.	151.	152.
ELECTRIC POWER	497.	904.	1,792.	1,791.	1,791.	1,792.	1,799.	1,806.
EXPLOSIVES	196.	304.	487.	473.	473.	480.	541.	599.
TOTAL	$ 1,804.	$ 3,146.	$ 5,899.	$ 5,858.	$ 5,858.	$ 5,884.	$ 6,067.	$ 6,248.
COST PER TON	$ 1.80	$ 3.15	$ 2.95	$ 2.93	$ 2.93	$ 2.94	$ 3.03	$ 3.12
MINING AND HAULING COAL								
PRODUCTION, TONS	1,000	1,000	2,000	2,000	2,000	2,000	2,000	2,000
DRILL SHIFTS	41	41	82	82	81	82	82	82
LOADER SHIFTS	338	337	674	675	673	674	675	674
COAL TRUCK SHIFTS	2,025	2,020	4,090	4,150	4,125	4,190	3,940	4,010
DOZER SHIFTS	338	337	674	675	673	674	675	674
LABOR PRODUCTION	$ 527.	$ 526.	$ 1,062.	$ 1,073.	$ 1,068.	$ 1,081.	$ 1,034.	$ 1,046.
MAINTENANCE	514.	512.	1,034.	1,046.	1,041.	1,054.	1,006.	1,019.
PAYROLL OVERHEAD	416.	415.	838.	848.	843.	854.	816.	826.
SUBTOTAL	$ 1,458.	$ 1,454.	$ 2,935.	$ 2,968.	$ 2,952.	$ 2,988.	$ 2,855.	$ 2,892.
PARTS AND SUPPLIES	$ 482.	$ 481.	$ 970.	$ 981.	$ 976.	$ 988.	$ 944.	$ 956.
FUEL AND LUBE	338.	337.	681.	688.	685.	693.	663.	671.
EXPLOSIVES	47.	47.	94.	94.	94.	94.	94.	94.
TOTAL	$ 2,325.	$ 2,319.	$ 4,679.	$ 4,731.	$ 4,707.	$ 4,763.	$ 4,555.	$ 4,612.
COST PER TON	$ 2.32	$ 2.32	$ 2.34	$ 2.37	$ 2.35	$ 2.38	$ 2.28	$ 2.31

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18	19	20	21	22	23- 27
OVERBURDEN STRIPPING								
DRAGLINE								
DRAGLINE OVERBURDEN YARDS	5,455	5,040	5,040	5,040	5,040	5,241	6,772	23,902
DRAGLINE SHIFTS	1,000	1,000	1,000	1,000	1,000	1,000	1,000	5,000
DOZER SHIFTS	1,000	1,000	1,000	1,000	1,000	1,000	1,000	5,000
DRILL SHIFTS	615	570	570	570	570	590	765	2,700
LABOR PRODUCTION	$ 1,237.	$ 1,203.	$ 1,203.	$ 1,203.	$ 1,203.	$ 1,218.	$ 1,348.	$ 5,904.
MAINTENANCE	725.	709.	709.	709.	709.	716.	776.	3,496.
PAYROLL OVERHEAD	785.	765.	765.	765.	765.	774.	850.	3,760.
SUBTOTAL	$ 2,746.	$ 2,678.	$ 2,678.	$ 2,678.	$ 2,678.	$ 2,708.	$ 2,974.	$ 13,160.
PARTS AND SUPPLIES	$ 773.	$ 768.	$ 768.	$ 768.	$ 768.	$ 770.	$ 791.	$ 3,820.
FUEL AND LUBE	150.	150.	150.	150.	150.	150.	152.	746.
ELECTRIC POWER	1,796.	1,791.	1,791.	1,791.	1,791.	1,793.	1,811.	8,938.
EXPLOSIVES	511.	473.	473.	473.	473.	491.	635.	2,241.
TOTAL	$ 5,976.	$ 5,858.	$ 5,858.	$ 5,858.	$ 5,858.	$ 5,912.	$ 6,363.	$ 28,906.
COST PER TON	$ 1.99	$ 1.95	$ 1.95	$ 1.95	$ 1.95	$ 1.97	$ 2.12	$ 1.93
MINING AND HAULING COAL								
PRODUCTION, TONS	3,000	3,000	3,000	3,000	3,000	3,000	3,000	15,000
DRILL SHIFTS	121	122	121	123	123	123	122	610
LOADER SHIFTS	1,010	1,012	1,011	1,011	1,012	1,011	1,012	5,060
COAL TRUCK SHIFTS	6,060	5,855	5,205	5,365	5,325	5,355	4,730	22,025
DOZER SHIFTS	1,010	1,012	1,011	1,011	1,012	1,011	1,012	5,060
LABOR PRODUCTION	$ 1,577.	$ 1,540.	$ 1,415.	$ 1,446.	$ 1,439.	$ 1,444.	$ 1,326.	$ 6,320.
MAINTENANCE	1,537.	1,497.	1,371.	1,402.	1,395.	1,400.	1,279.	6,077.
PAYROLL OVERHEAD	1,246.	1,215.	1,114.	1,139.	1,133.	1,138.	1,042.	4,959.
SUBTOTAL	$ 4,360.	$ 4,252.	$ 3,900.	$ 3,987.	$ 3,967.	$ 3,982.	$ 3,646.	$ 17,356.
PARTS AND SUPPLIES	$ 1,441.	$ 1,405.	$ 1,288.	$ 1,317.	$ 1,310.	$ 1,315.	$ 1,203.	$ 5,721.
FUEL AND LUBE	1,012.	988.	910.	929.	924.	928.	853.	4,070.
EXPLOSIVES	141.	141.	141.	141.	141.	141.	141.	703.
TOTAL	$ 6,954.	$ 6,786.	$ 6,239.	$ 6,374.	$ 6,342.	$ 6,365.	$ 5,842.	$ 27,850.
COST PER TON	$ 2.32	$ 2.26	$ 2.08	$ 2.12	$ 2.11	$ 2.12	$ 1.95	$ 1.86

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	28- 32	TOTAL	COST PER TON
OVERBURDEN STRIPPING			
DRAGLINE			
DRAGLINE OVERBURDEN YARDS	30,440	129,858	
DRAGLINE SHIFTS	5,000	23,773	
DOZER SHIFTS	5,000	23,773	
DRILL SHIFTS	3,425	14,655	
LABOR PRODUCTION	$ 6,444.	$ 29,425.	$ .45
MAINTENANCE	3,743.	17,241.	.27
PAYROLL OVERHEAD	4,075.	18,667.	.29
SUBTOTAL	$ 14,263.	$ 65,333.	$ 1.01
PARTS AND SUPPLIES	$ 3,908.	$ 18,382.	$ .28
FUEL AND LUBE	756.	3,572.	.05
ELECTRIC POWER	9,015.	42,689.	.66
EXPLOSIVES	2,854.	12,174.	.19
TOTAL	$ 30,795.	$ 142,150.	$ 2.19
COST PER TON	$ 2.05		
MINING AND HAULING COAL			
PRODUCTION,TONS	15,000	65,000	
DRILL SHIFTS	615	2,653	
LOADER SHIFTS	5,060	21,919	
COAL TRUCK SHIFTS	19,250	107,720	
DOZER SHIFTS	5,060	21,919	
LABOR PRODUCTION	$ 5,794.	$ 29,719.	$ .46
MAINTENANCE	5,538.	28,722.	.44
PAYROLL OVERHEAD	4,533.	23,376.	.36
SUBTOTAL	$ 15,865.	$ 81,817.	$ 1.26
PARTS AND SUPPLIES	$ 5,222.	$ 26,999.	$ .42
FUEL AND LUBE	3,737.	19,106.	.29
EXPLOSIVES	701.	3,047	.05
TOTAL	$ 25,526.	$ 130,969.	$ 2.01
COST PER TON	$ 1.70		

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
COAL LOADOUT								
PRODUCTION, TONS	1,000	1,000	2,000	2,000	2,000	2,000	2,000	2,000
LABOR PRODUCTION	$ 422.	$ 422.	$ 422.	$ 422.	$ 422.	$ 422.	$ 422.	$ 422.
MAINTENANCE	219.	219.	219.	219.	219.	219.	219.	219.
PAYROLL OVERHEAD	256.	256.	256.	256.	256.	256.	256.	256.
SUBTOTAL	$ 897.	$ 897.	$ 897.	$ 897.	$ 897.	$ 897.	$ 897.	$ 897.
PARTS AND SUPPLIES	$ 68.	$ 68.	$ 136.	$ 136.	$ 136.	$ 136.	$ 136.	$ 136.
FUEL AND LUBE	12.	12.	24.	24.	24.	24.	24.	24.
ELECTRIC POWER	70.	70.	140.	140.	140.	140.	140.	140.
TOTAL	$ 1,047.	$ 1,047.	$ 1,197.	$ 1,197.	$ 1,197.	$ 1,197.	$ 1,197.	$ 1,197.
COST PER TON	$ 1.05	$ 1.05	$ .60	$ .60	$ .60	$ .60	$ .60	$ .60
HAUL ROAD CONSTRUCTION AND MAINTENANCE								
LENGTH OF ROAD CONSTRUCTED	2,700	7,000	15,900	12,000	8,750	9,000	17,800	14,350
DOZER SHIFTS	34	62	148	99	78	80	135	114
SCRAPER SHIFTS	33	39	147	83	86	88	89	101
GRADER SHIFTS	409	452	562	570	538	567	582	579
WATER TRUCK SHIFTS	369	407	507	514	485	511	524	523
WHEEL DOZER SHIFTS	250	250	500	750	750	750	500	500
GRAVEL PLANT SHIFTS	23	49	99	71	49	51	105	80
GRAVEL TRUCK SHIFTS	34	72	147	105	73	76	155	119
LABOR PRODUCTION	$ 232.	$ 275.	$ 449.	$ 452.	$ 420.	$ 433.	$ 442.	$ 422.
MAINTENANCE	120.	146.	254.	239.	220.	227.	243.	230.
PAYROLL OVERHEAD	141.	168.	281.	276.	256.	264.	274.	261.
SUBTOTAL	$ 492.	$ 589.	$ 984.	$ 967.	$ 895.	$ 924.	$ 958.	$ 913.
PARTS AND SUPPLIES	$ 106.	$ 129.	$ 231.	$ 232.	$ 215.	$ 220.	$ 224.	$ 211.
FUEL AND LUBE	74.	86.	148.	147.	138.	142.	141.	136.
TOTAL	$ 672.	$ 804.	$ 1,363.	$ 1,345.	$ 1,248.	$ 1,287.	$ 1,323.	$ 1,260.
COST PER TON	$ .67	$ .80	$ .68	$ .67	$ .62	$ .64	$ .66	$ .63

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18	19	20	21	22	23- 27
COAL LOADOUT								
PRODUCTION, TONS	3,000	3,000	3,000	3,000	3,000	3,000	3,000	15,000
LABOR PRODUCTION	$ 422.	$ 422.	$ 422.	$ 422.	$ 422.	$ 422.	$ 422.	$ 2,109.
MAINTENANCE	219.	219.	219.	219.	219.	219.	219.	1,094.
PAYROLL OVERHEAD	256.	256.	256.	256.	256.	256.	256.	1,281.
SUBTOTAL	$ 897.	$ 897.	$ 897.	$ 897.	$ 897.	$ 897.	$ 897.	$ 4,485.
PARTS AND SUPPLIES	$ 204.	$ 204.	$ 204.	$ 204.	$ 204.	$ 204.	$ 204.	$ 1,020.
FUEL AND LUBE	36.	36.	36.	36.	36.	36.	36.	180.
ELECTRIC POWER	210.	210.	210.	210.	210.	210.	210.	1,050.
TOTAL	$ 1,347.	$ 1,347.	$ 1,347.	$ 1,347.	$ 1,347.	$ 1,347.	$ 1,347.	$ 6,735.
COST PER TON	$ .45	$ .45	$ .45	$ .45	$ .45	$ .45	$ .45	$ .45
HAUL ROAD CONSTRUCTION AND MAINTENANCE								
LENGTH OF ROAD CONSTRUCTED	16,775	22,100	9,750	13,900	17,050	7,800	13,950	55,750
DOZER SHIFTS	127	165	85	113	133	75	112	468
SCRAPER SHIFTS	111	142	86	101	138	77	118	413
GRADER SHIFTS	527	657	560	625	607	605	570	2,874
WATER TRUCK SHIFTS	476	593	505	564	548	545	515	2,592
WHEEL DOZER SHIFTS	1,000	1,065	1,000	1,020	1,000	1,000	1,000	5,000
GRAVEL PLANT SHIFTS	90	118	56	79	87	49	73	330
GRAVEL TRUCK SHIFTS	133	175	83	118	129	72	108	490
LABOR PRODUCTION	$ 513.	$ 611.	$ 484.	$ 539.	$ 548.	$ 490.	$ 515.	$ 2,487.
MAINTENANCE	274.	331.	250.	283.	295.	251.	273.	1,291.
PAYROLL OVERHEAD	315.	377.	293.	329.	337.	296.	315.	1,511.
SUBTOTAL	$ 1,102.	$ 1,318.	$ 1,027.	$ 1,151.	$ 1,180.	$ 1,037.	$ 1,103.	$ 5,290.
PARTS AND SUPPLIES	$ 278.	$ 327.	$ 254.	$ 283.	$ 291.	$ 253.	$ 274.	$ 1,310.
FUEL AND LUBE	169.	208.	159.	176.	182.	161.	170.	813.
TOTAL	$ 1,549.	$ 1,845.	$ 1,440.	$ 1,610.	$ 1,654.	$ 1,451.	$ 1,547.	$ 7,413.
COST PER TON	$ .52	$ .62	$ .48	$ .54	$ .55	$ .48	$ .52	$ .49

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	20- 32	TOTAL	COST PER TON
COAL LOADOUT			
PRODUCTION, TONS	15,000	65,000	
LABOR PRODUCTION	$ 2,109.	$ 10,547.	$ .16
MAINTENANCE	1,094.	5,470.	.08
PAYROLL OVERHEAD	1,281.	6,407.	.10
SUBTOTAL	$ 4,485.	$ 22,424.	$ .34
PARTS AND SUPPLIES	$ 1,020.	$ 4,420.	$ .07
FUEL AND LUBE	180.	780.	.01
ELECTRIC POWER	1,050.	4,550.	.07
TOTAL	$ 6,735.	$ 32,174.	$ .49
COST PER TON	$ .45		
HAUL ROAD CONSTRUCTION AND MAINTENANCE			
LENGTH OF ROAD CONSTRUCTED	85,700	330,275	
DOZER SHIFTS	654	2,680	
SCRAPER SHIFTS	807	2,657	
GRADER SHIFTS	2,546	13,829	
WATER TRUCK SHIFTS	2,302	12,480	
WHEEL DOZER SHIFTS	5,000	21,335	
GRAVEL PLANT SHIFTS	385	1,794	
GRAVEL TRUCK SHIFTS	570	2,659	
LABOR PRODUCTION	$ 2,557.	$ 11,868.	$ .18
MAINTENANCE	1,393.	6,317.	.10
PAYROLL OVERHEAD	1,580.	7,274.	.11
SUBTOTAL	$ 5,530.	$ 25,460.	$ .39
PARTS AND SUPPLIES	$ 1,390.	$ 6,229.	$ .10
FUEL AND LUBE	864.	3,906.	.06
TOTAL	$ 7,784.	$ 35,595.	$ .55
COST PER TON	$ .52		

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	8	9	10	11	12	13	14	15
GENERAL MINE SERVICES								
LABOR PRODUCTION	$ 238.	$ 257.	$ 341.	$ 408.	$ 387.	$ 342.	$ 364.	$ 324.
MAINTENANCE	207.	238.	387.	395.	395.	347.	394.	406.
PAYROLL OVERHEAD	178.	198.	291.	321.	313.	276.	303.	292.
SUBTOTAL	$ 624.	$ 694.	$ 1,020.	$ 1,125.	$ 1,096.	$ 965.	$ 1,060.	$ 1,021.
PARTS AND SUPPLIES	$ 275.	$ 288.	$ 391.	$ 420.	$ 410.	$ 328.	$ 415.	$ 397.
FUEL AND LUBE	23.	25.	33.	36.	35.	28.	35.	34.
ELECTRIC POWER	79.	79.	79.	79.	79.	79.	79.	79.
TOTAL	$ 1,001.	$ 1,086.	$ 1,524.	$ 1,659.	$ 1,620.	$ 1,400.	$ 1,590.	$ 1,532.
COST PER TON	$ 1.00	$ 1.09	$ .76	$ .83	$ .81	$ .70	$ .79	$ .77
SUPERVISION AND ADMINISTRATION								
LABOR SALARIED EXEMPT	$ 829.	$ 829.	$ 898.	$ 898.	$ 898.	$ 898.	$ 898.	$ 898.
SALARIED NON-EXEMPT	1,603.	1,603.	2,233.	2,233.	2,233.	2,233.	2,233.	2,233.
PAYROLL OVERHEAD	973.	973.	1,252.	1,252.	1,252.	1,252.	1,252.	1,252.
SUBTOTAL	$ 3,405.	$ 3,405.	$ 4,383.	$ 4,383.	$ 4,383.	$ 4,383.	$ 4,383.	$ 4,383.
PARTS AND SUPPLIES	$ 305.	$ 305.	$ 386.	$ 386.	$ 386.	$ 386.	$ 386.	$ 386.
FUEL AND LUBE	18.	18.	20.	20.	20.	20.	20.	20.
GEN. & ADMIN. ALLOCATION	750.	750.	1,500.	1,500.	1,500.	1,500.	1,500.	1,500.
TOTAL	$ 4,478.	$ 4,478.	$ 6,290.	$ 6,290.	$ 6,290.	$ 6,290.	$ 6,290.	$ 6,290.
COST PER TON	$ 4.48	$ 4.48	$ 3.15	$ 3.15	$ 3.15	$ 3.15	$ 3.15	$ 3.15
PRODUCTION TAXES AND FEES								
BLACK LUNG TAX	$ 500.	$ 500.	$ 1,000.	$ 1,000.	$ 1,000.	$ 1,000.	$ 1,000.	$ 1,000.
RECLAMATION TAX	350	350	700.	700.	700.	700.	700.	700.
TOTAL	$ 850	$ 850	$ 1,700.	$ 1,700.	$ 1,700.	$ 1,700.	$ 1,700.	$ 1,700.
COST PER TON	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	16	17	18	19	20	21	22	23- 27
GENERAL MINE SERVICES								
LABOR PRODUCTION	$ 524.	$ 575.	$ 552.	$ 511.	$ 533.	$ 533.	$ 510.	$ 2,465.
MAINTENANCE	463.	489.	426.	427.	488.	439.	440.	2,126.
PAYROLL OVERHEAD	395.	426.	391.	375.	408.	389.	380.	1,836.
SUBTOTAL	$ 1,382.	$ 1,490.	$ 1,369.	$ 1,313.	$ 1,429.	$ 1,361.	$ 1,329.	$ 6,427.
PARTS AND SUPPLIES	$ 496.	$ 525.	$ 457.	$ 412.	$ 478.	$ 448.	$ 463.	$ 2,170.
FUEL AND LUBE	42.	45.	39.	35.	41.	38.	39.	185.
ELECTRIC POWER	79.	79.	79.	79.	79.	79.	79.	396.
TOTAL	$ 2,000.	$ 2,139.	$ 1,944.	$ 1,840.	$ 2,027.	$ 1,926.	$ 1,911.	$ 9,178.
COST PER TON	$ .67	$ .71	$ .65	$ .61	$ .68	$ .64	$ .64	$ .61
SUPERVISION AND ADMINISTRATION								
LABOR SALARIED EXEMPT	$ 1,106.	$ 1,106.	$ 1,106.	$ 1,106.	$ 1,106.	$ 1,106.	$ 1,106.	$ 5,528.
SALARIED NON-EXEMPT	2,462.	2,462.	2,462.	2,462.	2,462.	2,462.	2,462.	12,309.
PAYROLL OVERHEAD	1,427.	1,427.	1,427.	1,427.	1,427.	1,427.	1,427.	7,135.
SUBTOTAL	$ 4,994.	$ 4,994.	$ 4,994.	$ 4,994.	$ 4,994.	$ 4,994.	$ 4,994.	$ 24,971.
PARTS AND SUPPLIES	$ 436.	$ 436.	$ 436.	$ 436.	$ 436.	$ 436.	$ 436.	$ 2,182.
FUEL AND LUBE	23.	23.	23.	23.	23.	23.	23.	113.
GEN. & ADMIN. ALLOCATION	2,250.	2,250.	2,250.	2,250.	2,250.	2,250.	2,250.	11,250.
TOTAL	$ 7,703.	$ 7,703.	$ 7,703.	$ 7,703.	$ 7,703.	$ 7,703.	$ 7,703.	$ 38,517.
COST PER TON	$ 2.57	$ 2.57	$ 2.57	$ 2.57	$ 2.57	$ 2.57	$ 2.57	$ 2.57
PRODUCTION TAXES AND FEES								
BLACK LUNG TAX	$ 1,500.	$ 1,500.	$ 1,500.	$ 1,500.	$ 1,500.	$ 1,500.	$ 1,500.	$ 7,500.
RECLAMATION TAX	1,050.	1,050.	1,050.	1,050.	1,050.	1,050.	1,050.	5,250.
TOTAL	$ 2,550	$ 2,550.	$ 2,550	$ 2,550.	$ 2,550.	$ 2,550.	$ 2,550.	$ 12,750.
COST PER TON	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	28- 32	TOTAL	COST PER TON
GENERAL MINE SERVICES			
LABOR PRODUCTION	$ 2,691.	$ 11,554.	$ .18
MAINTENANCE	1,907.	9,976.	.15
PAYROLL OVERHEAD	1,839.	8,612.	.13
SUBTOTAL	$ 6,437.	$ 30,143.	$ .46
PARTS AND SUPPLIES	$ 2,175.	$ 10,548.	$ .16
FUEL AND LUBE	185.	898.	.01
ELECTRIC POWER	396.	1,982.	.03
TOTAL	$ 9,194.	$ 43,571.	$ .67
COST PER TON	$ .61		
SUPERVISION AND ADMINISTRATION			
LABOR SALARIED EXEMPT	$ 5,528.	$ 25,843.	$ .40
SALARIED NON-EXEMPT	12,309.	58,452.	.90
PAYROLL OVERHEAD	7,135.	33,718.	.52
SUBTOTAL	$ 24,971.	$ 118,014.	$ 1.82
PARTS AND SUPPLIES	$ 2,182.	$ 10,347.	$ .16
FUEL AND LUBE	113.	543.	.01
GEN. & ADMIN. ALLOCATION	11,250.	48,750.	.75
TOTAL	$ 38,517.	$ 177,654.	$ 2.73
COST PER TON	$ 2.57		
PRODUCTION TAXES AND FEES			
BLACK LUNG TAX	$ 7,500.	$ 32,500.	$ .50
RECLAMATION TAX	5,250.	22,750.	.35
TOTAL	$ 12,750	$ 55,250	$ .85
COST PER TON	$ .85		

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

ANNUAL OPERATING COSTS	8	9	10	11	12	13	14	15
PRODUCTION, TONS	1,000	1,000	2,000	2,000	2,000	2,000	2,000	2,000
OVERBURDEN, CUBIC YARDS	2,086	3,924	7,083	8,206	8,240	8,564	7,489	7,866
PARTING, CUBIC YARDS	8	0	0	0	0	0	0	0
LABOR PRODUCTION	$ 1,843.	$ 2,592.	$ 4,614.	$ 5,414.	$ 5,271.	$ 5,579.	$ 4,590.	$ 4,517.
MAINTENANCE	1,341.	1,864.	3,481.	4,039.	3,932.	4,189.	3,434.	3,473.
SALARIED EXEMPT	829.	829.	898.	898.	898.	898.	898.	898.
SALARIED NON-EXEMPT	1,603.	1,603.	2,233.	2,233.	2,233.	2,233.	2,233.	2,233.
PAYROLL OVERHEAD	2,246.	2,755.	4,490.	5,034.	4,933.	5,160.	4,462.	4,448.
SUBTOTAL	$ 7,862.	$ 9,643.	$ 15,716.	$ 17,617.	$ 17,267.	$ 18,059.	$ 15,618.	$ 15,569.
PARTS AND SUPPLIES	$ 1,502.	$ 1,992.	$ 3,663.	$ 4,192.	$ 4,078.	$ 4,273.	$ 3,628.	$ 3,613.
FUEL AND LUBE	548.	765.	1,571.	1,913.	1,851.	2,029.	1,529.	1,526.
ELECTRIC POWER	646.	1,062.	2,034.	2,048.	2,048.	2,052.	2,039.	2,044.
EXPLOSIVES	242.	415.	758.	863.	866.	897.	796.	831.
PRODUCTION TAXES	850.	850.	1,700.	1,700.	1,700.	1,700.	1,700.	1,700.
GEN. & ADMIN. ALLOCATION	750.	750.	1,500.	1,500.	1,500.	1,500.	1,500.	1,500.
TOTAL	$ 12,392.	$ 15,477.	$ 26,942.	$ 29,834.	$ 29,310.	$ 30,509.	$ 26,809.	$ 26,783.
COST PER TON	$ 12.39	$ 15.48	$ 13.47	$ 14.92	$ 14.66	$ 15.25	$ 13.40	$ 13.39

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

ANNUAL OPERATING COSTS	16	17	18	19	20	21	22	23- 27
PRODUCTION, TONS	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
OVERBURDEN, CUBIC YARDS	10,597	11,112	11,761	12,235	11,925	11,846	12,637	10,517
PARTING, CUBIC YARDS	0	0	0	0	0	0	0	0
LABOR PRODUCTION	$ 7,244.	$ 7,956.	$ 8,098.	$ 8,509.	$ 8,346.	$ 8,192.	$ 7,474.	$ 7,485.
MAINTENANCE	5,464.	6,052.	6,105.	6,464.	6,432.	6,277.	5,611.	5,634.
SALARIED EXEMPT	1,106.	1,106.	1,106.	1,106.	1,106.	1,106.	1,106.	1,106.
SALARIED NON-EXEMPT	2,462.	2,462.	2,462.	2,462.	2,462.	2,462.	2,462.	2,462.
PAYROLL OVERHEAD	6,510.	7,030.	7,108.	7,416.	7,338.	7,214.	6,661.	6,675.
SUBTOTAL	$ 22,785.	$ 24,606.	$ 24,878.	$ 25,956.	$ 25,683.	$ 25,251.	$ 23,313.	$ 23,362.
PARTS AND SUPPLIES	$ 5,639.	$ 6,145.	$ 6,171.	$ 6,451.	$ 6,413.	$ 6,293.	$ 5,695.	$ 5,774.
FUEL AND LUBE	2,759.	3,111.	3,181.	3,392.	3,337.	3,273.	2,817.	2,895.
ELECTRIC POWER	2,146.	2,152.	2,160.	2,165.	2,162.	2,161.	2,170.	2,145.
EXPLOSIVES	1,134.	1,182.	1,243.	1,288.	1,259.	1,251.	1,325.	1,127.
PRODUCTION TAXES	2,550.	2,550.	2,550.	2,550.	2,550.	2,550.	2,550.	2,550.
GEN. & ADMIN. ALLOCATION	2,250.	2,250.	2,250.	2,250.	2,250.	2,250.	2,250.	2,250.
TOTAL	$ 39,263.	$ 41,996.	$ 42,433.	$ 44,051.	$ 43,653.	$ 43,028.	$ 40,120.	$ 40,102.
COST PER TON	$ 13.09	$ 14.00	$ 14.14	$ 14.68	$ 14.55	$ 14.34	$ 13.37	$ 13.37

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
ESTIMATED OPERATING COSTS
(COSTS IN THOUSAND DOLLARS)

	28- 32	TOTAL	COST PER TON
ANNUAL OPERATING COSTS			
PRODUCTION, TONS	3,000	65,000	
OVERBURDEN, CUBIC YARDS	11,746	246,886	
PARTING, CUBIC YARDS	0	0	
LABOR PRODUCTION	$ 7,559.	$ 165,458.	$ 2.55
MAINTENANCE	5,602.	124,336.	1.91
SALARIED EXEMPT	1,106.	25,843.	.40
SALARIED NON-EXEMPT	2,462.	58,453.	.90
PAYROLL OVERHEAD	6,691.	149,635.	2.30
SUBTOTAL	$ 23,419.	$ 523,725.	$ 8.06
PARTS AND SUPPLIES	$ 5,737.	$ 127,300.	$ 1.96
FUEL AND LUBE	2,878.	62,458.	.96
ELECTRIC POWER	2,160.	50,612.	.78
EXPLOSIVES	1,242.	26,192.	.40
PRODUCTION TAXES	2,550.	55,250.	.85
GEN. & ADMIN. ALLOCATION	2,250.	48,750.	.75
TOTAL	$ 40,235.	$ 894,287.	$ 13.76
COST PER TON	$ 13.41		

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

	8	9	10	11	12	13	14	15
ANNUAL PERSONNEL REQUIREMENTS								
PRODUCTION -GRADE 5	3	5	10	12	12	12	10	9
-GRADE 4	7	12	24	31	30	31	23	23
-GRADE 3	18	24	44	49	47	52	44	43
-GRADE 1	7	8	9	9	9	9	9	9
SUBTOTAL	35	49	87	101	98	104	86	84
MAINTENANCE-GRADE 5	1	2	3	4	4	4	3	3
-GRADE 4	8	11	21	25	24	26	21	21
-GRADE 3	9	14	27	32	32	34	26	26
-GRADE 2	5	6	12	14	13	14	12	12
-GRADE 1	3	4	7	8	8	8	7	7
SUBTOTAL	26	37	70	82	80	86	69	69
WAGE SUBTOTAL	62	85	157	184	179	190	155	153
SALARIED EXEMPT	12	12	13	13	13	13	13	13
SALARIED NON-EXEMPT	28	28	39	39	39	39	39	39
SALARIED SUBTOTAL	40	40	52	52	52	52	52	52
TOTAL	102	125	209	236	231	242	207	205
ANNUAL EQUIPMENT SHIFTS								
WALKING DRAGLINE	273	500	1,000	1,000	1,000	1,000	1,000	1,000
OVERBURDEN DRILL	235	450	800	930	930	970	845	890
FRONT END LOADER	338	592	1,384	1,864	1,874	1,965	1,319	1,230
CRAWLER DOZER	296	549	1,099	1,071	1,049	1,051	1,105	1,080
CRAWLER DOZER	394	925	2,188	3,116	3,134	3,310	2,053	1,930
SCRAPER	168	224	277	183	166	158	264	421
OVERBURDEN HAULER	0	585	1,795	3,150	2,740	3,925	1,775	1,660
COAL HAULER	2,025	2,020	4,090	4,150	4,125	4,190	3,940	4,010
MOTOR GRADER	407	452	562	570	538	567	582	579
WHEEL DOZER	250	250	500	750	750	750	500	500
WATER TRUCK	369	407	507	514	485	511	524	523
COAL DRILL	41	41	82	82	81	82	82	82
PUMPS AND PIPING	660	1,005	968	894	832	686	855	2,085
RECLAMATION FARM EQUIPMENT	0	33	58	30	14	19	38	29
COMPACTION	9	10	25	15	16	16	16	18
GRAVEL SCREEN PLANT	23	49	99	71	49	51	105	80
GRAVEL TRUCKS	34	72	147	105	73	76	155	119
FRONT END LOADER	23	49	99	71	49	51	105	80

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

	16	17	18	19	20	21	22	23- 27
ANNUAL PERSONNEL REQUIREMENTS								
PRODUCTION -GRADE 5	16	18	19	19	19	18	17	17
-GRADE 4	45	50	51	54	53	51	49	48
-GRADE 3	63	72	72	76	75	75	60	64
-GRADE 1	12	11	11	11	11	11	12	12
SUBTOTAL	136	151	153	161	158	155	138	141
MAINTENANCE-GRADE 5	5	6	6	6	6	6	5	5
-GRADE 4	33	37	37	39	39	38	34	34
-GRADE 3	44	49	50	52	51	51	45	46
-GRADE 2	18	20	20	21	21	20	18	18
-GRADE 1	11	12	12	13	13	12	11	11
SUBTOTAL	111	123	124	131	130	127	113	114
WAGE SUBTOTAL	247	274	277	292	288	282	251	255
SALARIED EXEMPT	16	16	16	16	16	16	16	16
SALARIED NON-EXEMPT	43	43	43	43	43	43	43	43
SALARIED SUBTOTAL	59	59	59	59	59	59	59	59
TOTAL	306	333	336	351	347	341	310	314
ANNUAL EQUIPMENT SHIFTS								
WALKING DRAGLINE	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
OVERBURDEN DRILL	1,195	1,255	1,330	1,380	1,345	1,335	1,425	1,190
FRONT END LOADER	2,939	3,291	3,534	3,711	3,595	3,489	3,212	3,166
CRAWLER DOZER	1,090	1,118	1,056	1,079	1,087	1,049	1,073	1,066
CRAWLER DOZER	5,015	5,692	6,161	6,525	6,339	6,088	5,596	5,488
SCRAPER	441	357	306	336	478	362	553	493
OVERBURDEN HAULER	4,400	6,395	7,290	8,215	7,850	7,875	5,020	6,465
COAL HAULER	6,060	5,855	5,205	5,365	5,325	5,355	4,730	4,405
MOTOR GRADER	527	657	560	625	607	605	570	575
WHEEL DOZER	1,000	1,065	1,000	1,021	1,000	1,000	1,000	1,000
WATER TRUCK	476	593	505	564	548	545	515	518
COAL DRILL	121	122	121	123	123	123	122	122
PUMPS AND PIPING	1,864	1,455	1,208	1,089	1,709	1,874	3,774	1,839
RECLAMATION FARM EQUIPMENT	122	29	28	37	0	0	75	141
COMPACTOR	19	28	16	18	27	15	20	15
GRAVEL SCREEN PLANT	90	118	56	79	87	49	73	66
GRAVEL TRUCKS	133	175	83	118	129	72	108	98
FRONT END LOADER	90	118	56	79	87	49	73	66

TABLE 3 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
PERSONNEL REQUIREMENTS and
EQUIPMENT OPERATING SHIFTS

ANNUAL
PERSONNEL REQUIREMENTS

PRODUCTION	GRADE 5	1
	GRADE 4	4
	GRADE 3	6
	GRADE 1	2
	SUBTOTAL	141
MAINTENANCE	GRADE 5	5
	GRADE 4	34
	GRADE 3	46
	GRADE 2	18
	GRADE 1	11
	SUBTOTAL	114
	WAGE SUBTOTAL	255
SALARIED	EXEMPT	16
SALARIED	NON EXEMPT	43
	SALARIED SUBTOTAL	59
	TOTAL	314

ANNUAL
EQUIPMENT SHIFTS

WALKING DRAGLINE	1,000
OVERBURDEN DRILL	1,325
FRONT END LOADER	3,137
CRAWLER DOZER	1,072
CRAWLER DOZER	5,401
SCRAPER	406
OVERBURDEN HAULER	7,195
COAL HAULER	3,050
MOTOR GRADER	307
WHEEL DOZER	1,000
WATER TRUCK	4[illegible]
COAL DRILL	1[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
GRAVEL SCREEN PLANT	
GRAVEL TRUCKS	114
FRONT END LOADER	57

Tables No. 4 A to No. 4 D

TABLE 4 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	TYPICAL MODEL OR SIZE	UNIT PRICE		SERVICE LIFE	1	2	3	4	5	6	7
WALKING DRAGLINE	70 CYD	27400.0	K	30 LM	0.	0.	0.	0.	2,740.	13,700.	9,590.
OVERBURDEN SHOVEL	20 CYD	3410.0	K	30 LM	0.	0.	0.	0.	0.	0.	0.
HYDRAULIC EXCAVATOR	18.5 CYD	1550.0	K	30,000 HR	0.	0.	0.	0.	0.	1,550.	0.
CRAWLER DOZER	CAT D8-K	332.0	K	12,500 HR	0.	0.	0.	0.	0.	332.	0.
CRAWLER DOZER	CAT D9-L	469.0	K	12,500 HR	0.	0.	0.	0.	469.	0.	469.
SCRAPER	CAT 637-B	561.0	K	10,000 HR	0.	0.	0.	0.	561.	561.	0.
OVERBURDEN HAULER	120 TON	788.0	K	27,500 HR	0.	0.	0.	0.	0.	1,576.	1,576.
COAL HAULER	120 TON	788.0	K	27,500 HR	0.	0.	0.	0.	0.	0.	0.
MOTOR GRADER	CAT 16 G	303.0	K	12,500 HR	0.	0.	0.	0.	0.	303.	0.
WHEEL DOZER	CAT 824-C	278.0	K	12,000 HR	0.	0.	0.	0.	0.	278.	0.
WATER TRUCK	CAT 631-T	346.0	K	15,000 HR	0.	0.	0.	0.	0.	346.	0.
COAL DRILL	4 In.	240.0	K	12,500 HR	0.	0.	0.	0.	0.	0.	0.
PUMPS AND PIPING	4 Inch H H	32.8	K	40,000 HR	0.	0.	0.	0.	0.	0.	0.
RECLAMATION FARM EQUIPMENT		110.0	K	8,000 HR	0.	0.	0.	0.	0.	0.	0.
COMPACTOR	CAT 816-B	182.0	K	15,000 HR	0.	0.	0.	0.	182.	0.	0.
GRAVEL SCREEN PLANT		94.0	K	24,000 HR	0.	0.	0.	0.	0.	94.	0.
GRAVEL TRUCKS		130.0	K	25,000 HR	0.	0.	0.	0.	0.	130.	0.
FRONT END LOADER	CAT 988-B	388.0	K	12,000 HR	0.	0.	0.	0.	0.	388.	0.
PICKUPS AND SEDANS		16.9	K	3 YR	0.	0.	0.	0.	51.	101.	0.
POWDER TRUCK		95.8	K	10 YR	0.	0.	0.	0.	0.	0.	96.
PORTABLE SUBSTATION	10 MVA	700.0	K	15 YR	0.	0.	0.	0.	0.	700.	0.
HYDRAULIC CRANE	125 TON	235.0	K	15 YR	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	IMT 1836	175.0	K	10 YR	0.	0.	0.	0.	0.	0.	0.
FORKLIFT		70.0	K	10 YR	0.	0.	0.	0.	0.	0.	0.
PORTABLE LIGHT PLANT		20.0	K	10 YR	0.	0.	0.	0.	0.	0.	20.
WELDING TRUCK		46.0	K	5 YR	0.	0.	0.	0.	0.	0.	0.
UTILITY BACKHOE	CAT 225	182.3	K	10 YR	0.	0.	0.	0.	182.	0.	0.
TRUCK w/ LOW-BOY TRAILER		98.1	K	10 YR	0.	0.	0.	0.	0.	0.	0.
SERVICE TRUCK w/ CRANE		80.4	K	10 YR	0.	0.	0.	0.	0.	0.	0.
LUBE TRUCK		57.9	K	10 YR	0.	0.	0.	0.	0.	0.	0.
FUEL TRUCK		76.9	K	10 YR	0.	0.	0.	0.	0.	0.	0.
ELECTRICIANS TRUCK		39.0	K	10 YR	0.	0.	0.	0.	0.	0.	0.
LINE TRUCK		57.9	K	10 YR	0.	0.	0.	0.	0.	0.	0.
SUPPLY TRUCK		33.1	K	5 YR	0.	0.	0.	0.	0.	33.	0.
AMBULANCE		63.9	K	10 YR	0.	0.	0.	0.	0.	64.	0.
PERSONNEL VAN		30.7	K	5 YR	0.	0.	0.	0.	0.	0.	0.
FIRE TRUCK		104.0	K	15 YR	0.	0.	0.	0.	104.	0.	0.
FUEL TRANSPORTER		92.2	K	15 YR	0.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT		1.0	K	5 YR	0.	0.	0.	0.	86.	403.	235.
MINE DEVEL. and INFRASTRUCTURE		1.0	K	30 LM	0.	0.	0.	2,710.	16,759.	29,729.	23,365.
ENGINEERING and ADMIN. EXPENSE		1.0	K	0	2,390.	8,260.	2,900.	1,627.	1,630.	0.	0.
PRE-OPERATIONAL EXPENSES		1.0	K	0	0.	0.	0.	0.	1,034.	5,745.	8,240.
SUBTOTAL CAPITAL COST					2,390.	8,260.	2,900.	4,337.	23,798.	56,033.	43,591.
SERVICE LIFE DEPRECIATION					0.	0.	0.	0.	0.	0.	0.
INVESTMENT TAX CREDIT					0.	0.	0.	271.	2,109.	5,007.	3,524.
ACCELERATED DEPRECIATION					0.	0.	0.	0.	0.	0.	0.

* UNIT PRICES INCLUDE CONTINGENCY ALLOWANCE

TABLE 4 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	8	9	10	11	12	13	14	15	16	17	18
WALKING DRAGLINE	17,810.	6,850.	4,110.	0.	0.	0.	0.	0.	0.	0.	0.
OVERBURDEN SHOVEL	3,410.	3,410.	3,410.	0.	3,410.	3,410.	0.	0.	0.	0.	0.
HYDRAULIC EXCAVATOR	0.	1,550.	1,550.	0.	0.	0.	0.	0.	0.	3,100.	0.
CRAWLER DOZER	332.	332.	664.	332.	332.	332.	332.	664.	332.	332.	0.
CRAWLER DOZER	469.	938.	1,407.	938.	2,345.	469.	1,876.	1,876.	1,407.	1,407.	469.
SCRAPER	561.	0.	2,805.	0.	0.	0.	1,683.	0.	0.	0.	0.
OVERBURDEN HAULER	0.	788.	7,092.	788.	3,940.	6,304.	7,092.	5,516.	4,728.	2,364.	1,576.
COAL HAULER	1,576.	1,576.	2,364.	0.	0.	0.	3,152.	3,152.	0.	0.	788.
MOTOR GRADER	0.	0.	606.	0.	303.	0.	303.	0.	0.	606.	303.
WHEEL DOZER	556.	0.	0.	0.	556.	278.	556.	0.	0.	0.	556.
WATER TRUCK	346.	0.	346.	0.	346.	0.	346.	346.	346.	346.	0.
COAL DRILL	240.	0.	240.	0.	0.	0.	0.	0.	0.	0.	240.
PUMPS AND PIPING	66.	33.	98.	33.	0.	0.	0.	0.	33.	98.	33.
RECLAMATION FARM EQUIPMENT	0.	0.	110.	220.	0.	0.	0.	0.	0.	0.	0.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL SCREEN PLANT	0.	0.	94.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL TRUCKS	0.	0.	260.	0.	0.	0.	0.	0.	0.	0.	0.
FRONT END LOADER	0.	0.	388.	0.	388.	0.	0.	0.	0.	0.	0.
PICKUPS AND SEDANS	254.	101.	85.	270.	101.	85.	270.	101.	85.	270.	101.
POWDER TRUCK	0.	0.	96.	0.	0.	0.	0.	0.	0.	96.	0.
PORTABLE SUBSTATION	700.	0.	1,400.	0.	700.	700.	0.	0.	0.	0.	0.
HYDRAULIC CRANE	235.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	175.	0.	0.	0.	0.	175.	0.	0.	0.	0.	175.
FORKLIFT	70.	0.	0.	0.	0.	0.	70.	0.	0.	0.	70.
PORTABLE LIGHT PLANT	0.	20.	40.	0.	20.	20.	0.	0.	0.	20.	0.
WELDING TRUCK	46.	0.	92.	0.	0.	46.	0.	92.	0.	0.	46.
UTILITY BACKHOE	0.	0.	0.	0.	0.	0.	0.	182.	0.	0.	0.
TRUCK w/ LOW-BOY TRAILER	98.	0.	0.	0.	0.	0.	0.	0.	0.	0.	98.
SERVICE TRUCK w/ CRANE	161.	0.	161.	0.	161.	0.	0.	0.	0.	0.	161.
LUBE TRUCK	58.	0.	58.	0.	0.	0.	0.	0.	0.	0.	58.
FUEL TRUCK	77.	0.	0.	0.	0.	0.	0.	0.	0.	0.	77.
ELECTRICIANS TRUCK	39.	0.	78.	0.	0.	0.	0.	0.	0.	0.	39.
LINE TRUCK	58.	0.	0.	0.	0.	0.	0.	0.	0.	0.	58.
SUPPLY TRUCK	66.	0.	99.	33.	99.	66.	0.	99.	33.	99.	66.
AMBULANCE	0.	0.	0.	0.	0.	0.	0.	0.	64.	0.	0.
PERSONNEL VAN	61.	0.	0.	0.	0.	61.	0.	0.	0.	0.	61.
FIRE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FUEL TRANSPORTER	92.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT	551.	312.	553.	52.	254.	239.	314.	241.	141.	175.	100.
MINE DEVEL. and INFRASTRUCTURE	22,334.	17,460.	23,850.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUBTOTAL CAPITAL COST	50,441.	33,370.	52,056.	2,667.	12,955.	12,185.	15,994.	12,269.	7,168.	8,914.	5,075.
SERVICE LIFE DEPRECIATION	15,881.	9,655.	13,961.	14,487.	15,600.	16,456.	17,543.	17,338.	18,156.	16,134.	15,921.
INVESTMENT TAX CREDIT	5,017.	3,317.	5,121.	249.	1,259.	1,170.	1,507.	1,161.	679.	860.	483.
ACCELERATED DEPRECIATION	34,664.	22,070.	26,367.	26,532.	25,893.	25,931.	26,911.	25,284.	24,692.	23,433.	21,124.

TABLE 4 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	19	20	21	22	23	24	25	26	27	28	29
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
OVERBURDEN SHOVEL	0.	0.	0.	0.	3,410.	0.	0.	0.	0.	10,230.	0.
HYDRAULIC EXCAVATOR	1,550.	1,550.	0.	0.	0.	0.	0.	0.	0.	1,550.	0.
CRAWLER DOZER	0.	332.	996.	332.	332.	0.	332.	664.	332.	332.	0.
CRAWLER DOZER	1,407.	1,876.	0.	1,407.	3,283.	1,407.	1,407.	1,876.	938.	4,690.	469.
SCRAPER	0.	561.	561.	0.	0.	0.	561.	561.	0.	0.	0.
OVERBURDEN HAULER	6,304.	6,304.	788.	0.	9,456.	788.	3,940.	6,304.	6,304.	7,880.	11,032.
COAL HAULER	1,576.	2,364.	2,364.	0.	1,576.	0.	1,576.	2,364.	2,364.	1,576.	788.
MOTOR GRADER	0.	303.	0.	0.	909.	0.	303.	0.	303.	0.	0.
WHEEL DOZER	0.	834.	0.	0.	0.	556.	0.	834.	0.	0.	0.
WATER TRUCK	346.	0.	346.	346.	692.	346.	0.	0.	346.	0.	346.
COAL DRILL	0.	240.	0.	0.	0.	0.	0.	0.	0.	240.	0.
PUMPS AND PIPING	0.	0.	0.	0.	33.	98.	33.	0.	0.	0.	0.
RECLAMATION FARM EQUIPMENT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL SCREEN PLANT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL TRUCKS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FRONT END LOADER	0.	0.	0.	0.	0.	0.	388.	0.	0.	388.	0.
PICKUPS AND SEDANS	85.	270.	101.	85.	270.	101.	85.	270.	101.	85.	270.
POWDER TRUCK	0.	96.	0.	0.	0.	0.	0.	0.	96.	0.	0.
PORTABLE SUBSTATION	0.	0.	700.	0.	700.	0.	1,400.	0.	700.	2,100.	0.
HYDRAULIC CRANE	0.	0.	0.	0.	235.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	0.	0.	0.	0.	175.	0.	0.	0.	0.	175.	0.
FORKLIFT	0.	0.	0.	0.	0.	70.	0.	0.	0.	70.	0.
PORTABLE LIGHT PLANT	20.	40.	0.	20.	20.	0.	0.	0.	20.	40.	20.
WELDING TRUCK	0.	92.	0.	0.	46.	0.	92.	0.	0.	46.	0.
UTILITY BACKHOE	0.	0.	0.	0.	0.	0.	182.	0.	0.	0.	0.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	0.	0.	98.	0.
SERVICE TRUCK w/ CRANE	0.	161.	0.	161.	0.	0.	0.	0.	0.	161.	0.
LUBE TRUCK	0.	58.	0.	0.	0.	0.	0.	0.	0.	58.	0.
FUEL TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	0.	77.	0.
ELECTRICIANS TRUCK	0.	78.	0.	0.	0.	0.	0.	0.	0.	39.	0.
LINE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	0.	58.	0.
SUPPLY TRUCK	0.	99.	33.	99.	66.	0.	99.	33.	99.	66.	0.
AMBULANCE	0.	0.	0.	0.	0.	0.	0.	64.	0.	0.	0.
PERSONNEL VAN	0.	0.	0.	0.	61.	0.	0.	0.	0.	61.	0.
FIRE TRUCK	0.	104.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FUEL TRANSPORTER	0.	0.	0.	0.	92.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT	226.	307.	118.	49.	427.	67.	208.	259.	232.	600.	259.
MINE DEVEL. and INFRASTRUCTURE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUBTOTAL CAPITAL COST	11,514.	15,669.	6,007.	2,499.	21,783.	3,434.	10,605.	13,229.	11,835.	30,620.	13,184.
SERVICE LIFE DEPRECIATION	15,903.	15,916.	15,912.	15,887.	18,069.	18,230.	18,211.	18,239.	18,275.	21,443.	21,927.
INVESTMENT TAX CREDIT	1,091.	1,489.	571.	245.	2,084.	330.	1,015.	1,247.	1,116.	2,991.	1,223.
ACCELERATED DEPRECIATION	18,590.	17,207.	15,631.	13,529.	11,849.	10,812.	8,312.	9,408.	10,993.	11,666.	14,352.

TABLE 4 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	30	31	32	33	34	35	36	37	TOTAL	REMAINING BOOK VALUE
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	54,800.	0.
OVERBURDEN SHOVEL	0.	0.	0.	0.	0.	0.	0.	0.	30,690.	0.
HYDRAULIC EXCAVATOR	0.	1,550.	1,550.	0.	0.	0.	0.	0.	15,500.	3,377.
CRAWLER DOZER	332.	664.	332.	664.	0.	0.	0.	0.	9,960.	0.
CRAWLER DOZER	3,752.	2,345.	2,345.	3,283.	469.	2,814.	0.	0.	48,307.	0.
SCRAPER	0.	1,122.	0.	561.	0.	0.	0.	0.	10,098.	181.
OVERBURDEN HAULER	0.	3,940.	6,304.	19,700.	5,516.	3,940.	0.	0.	141,840.	7,687.
COAL HAULER	0.	1,576.	2,364.	2,364.	788.	788.	0.	0.	37,036.	565.
MOTOR GRADER	606.	303.	0.	909.	0.	0.	0.	0.	6,060.	40.
WHEEL DOZER	556.	0.	834.	556.	0.	0.	0.	0.	6,950.	14.
WATER TRUCK	346.	692.	0.	1,038.	0.	346.	0.	0.	7,958.	566.
COAL DRILL	240.	0.	0.	0.	0.	0.	0.	0.	1,440.	86.
PUMPS AND PIPING	33.	98.	33.	0.	0.	0.	0.	0.	722.	17.
RECLAMATION FARM EQUIPMENT	0.	0.	0.	0.	0.	110.	0.	0.	440.	67.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	0.	182.	52.
GRAVEL SCREEN PLANT	0.	0.	0.	94.	0.	0.	0.	0.	282.	71.
GRAVEL TRUCKS	0.	0.	0.	0.	0.	0.	0.	0.	390.	0.
FRONT END LOADER	0.	0.	0.	0.	0.	0.	0.	0.	1,940.	193.
PICKUPS AND SEDANS	101.	85.	270.	0.	85.	270.	0.	0.	4,411.	0.
POWDER TRUCK	96.	0.	0.	0.	0.	0.	0.	0.	575.	19.
PORTABLE SUBSTATION	0.	0.	0.	0.	0.	0.	0.	0.	9,800.	1,074.
HYDRAULIC CRANE	0.	0.	0.	0.	0.	0.	0.	0.	470.	0.
MOBIL TIRE CHANGER	0.	0.	0.	0.	0.	0.	0.	0.	875.	0.
FORKLIFT	0.	0.	0.	0.	0.	0.	0.	0.	350.	0.
PORTABLE LIGHT PLANT	40.	0.	0.	0.	0.	0.	0.	0.	360.	10.
WELDING TRUCK	92.	0.	0.	0.	0.	0.	0.	0.	690.	0.
UTILITY BACKHOE	0.	0.	0.	0.	0.	0.	0.	0.	547.	0.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	0.	294.	0.
SERVICE TRUCK w/ CRANE	161.	0.	0.	0.	0.	0.	0.	0.	1,286.	32.
LUBE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	290.	0.
FUEL TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	231.	0.
ELECTRICIANS TRUCK	78.	0.	0.	0.	0.	0.	0.	0.	351.	16.
LINE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	174.	0.
SUPPLY TRUCK	99.	33.	66.	0.	0.	0.	0.	0.	1,490.	0.
AMBULANCE	0.	0.	0.	0.	0.	0.	0.	0.	192.	0.
PERSONNEL VAN	0.	0.	0.	0.	0.	0.	0.	0.	307.	0.
FIRE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	208.	0.
FUEL TRANSPORTER	0.	0.	0.	0.	0.	0.	0.	0.	184.	0.
MISC. TOOLS and EQUIPMENT	131.	248.	282.	583.	137.	165.	0.	0.	7,954.	94.
MINE DEVEL. and INFRASTRUCTURE	0.	0.	0.	0.	0.	0.	0.	0.	136,210.	0.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	16,807.	0.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	15,019.	1.
SUBTOTAL CAPITAL COST	6,663.	12,656.	14,380.	29,752.	6,995.	8,434.	0.	0.	573,660.	14,160.
SERVICE LIFE DEPRECIATION	21,905.	21,903.	21,888.	22,600.	22,568.	22,512.	22,393.	20,911.	545,830.	
INVESTMENT TAX CREDIT	656.	1,216.	1,364.	2,809.	652.	797.	0.	0.	52,630.	
ACCELERATED DEPRECIATION	13,646.	12,696.	13,035.	13,866.	13,907.	13,914.	12,317.	9,831.	528,460.	

TABLE 4 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	TYPICAL MODEL OR SIZE	UNIT PRICE		SERVICE LIFE	1	2	3	4	5	6	7
WALKING DRAGLINE	70 CYD	27400.0	K	30 LM	0.	0.	0.	0.	0.	0.	0.
WALKING DRAGLINE	110 CYD	46000.0	K	30 LM	0.	0.	0.	0.	0.	0.	46,000.
OVERBURDEN SHOVEL	20 CYD	3410.0	K	30 LM	0.	0.	0.	0.	0.	0.	0.
HYDRAULIC EXCAVATOR	18.5 CYD	1550.0	K	30,000 HR	0.	0.	0.	0.	0.	1,550.	1,550.
CRAWLER DOZER	CAT D8-K	332.0	K	12,500 HR	0.	0.	0.	0.	0.	332.	0.
CRAWLER DOZER	CAT D7-L	469.0	K	12,500 HR	0.	0.	0.	0.	469.	0.	469.
SCRAPER	CAT 637-B	561.0	K	10,000 HR	0.	0.	0.	0.	1,122.	561.	0.
OVERBURDEN HAULER	120 TON	788.0	K	27,500 HR	0.	0.	0.	0.	0.	1,576.	1,576.
COAL HAULER	120 TON	788.0	K	27,500 HR	0.	0.	0.	0.	0.	0.	0.
MOTOR GRADER	CAT 16 G	303.0	K	12,500 HR	0.	0.	0.	0.	0.	303.	0.
WHEEL DOZER	CAT 824-C	278.0	K	12,000 HR	0.	0.	0.	0.	0.	278.	0.
WATER TRUCK	CAT 631-T	346.0	K	15,000 HR	0.	0.	0.	0.	0.	346.	0.
COAL DRILL	4 In.	240.0	K	12,500 HR	0.	0.	0.	0.	0.	0.	0.
PUMPS AND PIPING	4 Inch H H	32.8	K	40,000 HR	0.	0.	0.	0.	0.	33.	33.
RECLAMATION FARM EQUIPMENT		110.0	K	8,000 HR	0.	0.	0.	0.	0.	0.	0.
COMPACTOR	CAT 816-B	182.0	K	15,000 HR	0.	0.	0.	0.	182.	0.	0.
GRAVEL SCREEN PLANT		94.0	K	24,000 HR	0.	0.	0.	0.	0.	94.	0.
GRAVEL TRUCKS		130.0	K	25,000 HR	0.	0.	0.	0.	0.	130.	0.
FRONT END LOADER	CAT 980-B	388.0	K	12,000 HR	0.	0.	0.	0.	0.	388.	0.
PICKUPS AND SEDANS		16.9	K	3 YR	0.	0.	0.	0.	51.	101.	101.
POWDER TRUCK		95.8	K	10 YR	0.	0.	0.	0.	0.	0.	96.
PORTABLE SUBSTATION	10 MVA	700.0	K	15 YR	0.	0.	0.	0.	0.	700.	1,400.
HYDRAULIC CRANE	125 TON	235.0	K	15 YR	0.	0.	0.	0.	0.	0.	235.
MOBIL TIRE CHANGER	IMT 1836	175.0	K	10 YR	0.	0.	0.	0.	0.	0.	175.
FORKLIFT		70.0	K	10 YR	0.	0.	0.	0.	0.	0.	70.
PORTABLE LIGHT PLANT		20.0	K	10 YR	0.	0.	0.	0.	0.	20.	40.
WELDING TRUCK		46.0	K	5 YR	0.	0.	0.	0.	0.	0.	46.
UTILITY BACKHOE	CAT 225	182.3	K	10 YR	0.	0.	0.	0.	182.	0.	0.
TRUCK w/ LOW-BOY TRAILER		98.1	K	10 YR	0.	0.	0.	0.	0.	98.	0.
SERVICE TRUCK w/ CRANE		80.4	K	10 YR	0.	0.	0.	0.	0.	0.	161.
LUBE TRUCK		57.9	K	10 YR	0.	0.	0.	0.	0.	0.	58.
FUEL TRUCK		76.9	K	10 YR	0.	0.	0.	0.	0.	0.	77.
ELECTRICIANS TRUCK		39.0	K	10 YR	0.	0.	0.	0.	0.	0.	39.
LINE TRUCK		57.9	K	10 YR	0.	0.	0.	0.	0.	0.	58.
SUPPLY TRUCK		33.1	K	5 YR	0.	0.	0.	0.	33.	66.	66.
AMBULANCE		63.9	K	10 YR	0.	0.	0.	0.	0.	64.	0.
PERSONNEL VAN		30.7	K	5 YR	0.	0.	0.	0.	0.	0.	31.
FIRE TRUCK		104.0	K	15 YR	0.	0.	0.	0.	0.	104.	0.
FUEL TRANSPORTER		92.2	K	15 YR	0.	0.	0.	0.	0.	0.	92.
MISC. TOOLS and EQUIPMENT		1.0	K	5 YR	0.	0.	0.	0.	41.	135.	1,048.
MINE DEVEL. and INFRASTRUCTURE		1.0	K	30 LM	0.	0.	0.	1,225.	22,109.	34,314.	37,462.
ENGINEERING and ADMIN. EXPENSE		1.0	K	0	2,390.	13,006.	4,430.	1,627.	1,630.	0.	0.
PRE-OPERATIONAL EXPENSES		1.0	K	0	0.	0.	0.	0.	1,307.	6,196.	11,039.
SUBTOTAL CAPITAL COST					2,390.	13,006.	4,430.	2,852.	27,126.	47,389.	101,920.
SERVICE LIFE DEPRECIATION					0.	0.	0.	0.	0.	0.	0.
INVESTMENT TAX CREDIT					0.	0.	0.	123.	2,412.	4,097.	9,073.
ACCELERATED DEPRECIATION					0.	0.	0.	0.	0.	0.	0.

* UNIT PRICES INCLUDE CONTINGENCY ALLOWANCE

TABLE 4 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	8	9	10	11	12	13	14	15	16	17	18
WALKING DRAGLINE	0.	27,400.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
OVERBURDEN SHOVEL	6,820.	6,820.	10,230.	10,230.	0.	0.	0.	0.	0.	0.	0.
HYDRAULIC EXCAVATOR	1,550.	1,550.	0.	0.	0.	0.	0.	0.	0.	3,100.	1,550.
CRAWLER DOZER	664.	332.	332.	664.	0.	996.	0.	332.	664.	332.	996.
CRAWLER DOZER	1,407.	1,407.	4,221.	2,814.	3,283.	2,345.	938.	4,690.	938.	4,690.	938.
SCRAPER	1,122.	561.	1,683.	0.	1,683.	0.	0.	561.	1,683.	561.	0.
OVERBURDEN HAULER	3,940.	7,880.	18,912.	10,244.	3,940.	2,364.	1,576.	25,216.	3,940.	9,456.	2,364.
COAL HAULER	5,516.	3,152.	3,152.	0.	0.	4,728.	3,940.	3,152.	0.	0.	0.
MOTOR GRADER	303.	0.	303.	0.	0.	303.	606.	0.	303.	0.	606.
WHEEL DOZER	556.	0.	0.	0.	556.	278.	278.	0.	0.	834.	556.
WATER TRUCK	346.	346.	346.	0.	346.	0.	346.	346.	692.	346.	692.
COAL DRILL	480.	0.	240.	0.	0.	0.	0.	0.	0.	0.	480.
PUMPS AND PIPING	66.	66.	98.	33.	98.	98.	98.	33.	33.	0.	131.
RECLAMATION FARM EQUIPMENT	0.	110.	0.	110.	110.	0.	0.	110.	0.	0.	0.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL SCREEN PLANT	94.	0.	0.	0.	0.	94.	0.	0.	0.	0.	0.
GRAVEL TRUCKS	260.	0.	0.	0.	0.	130.	0.	0.	0.	0.	0.
FRONT END LOADER	388.	0.	0.	388.	0.	0.	0.	0.	0.	0.	0.
PICKUPS AND SEDANS	135.	186.	101.	169.	186.	101.	169.	186.	101.	169.	186.
POWDER TRUCK	96.	192.	0.	96.	0.	0.	0.	0.	0.	96.	96.
PORTABLE SUBSTATION	0.	2,100.	2,100.	2,100.	0.	0.	0.	0.	0.	0.	0.
HYDRAULIC CRANE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	0.	0.	175.	0.	0.	0.	0.	0.	0.	175.	0.
FORKLIFT	70.	0.	70.	0.	0.	0.	0.	0.	0.	70.	70.
PORTABLE LIGHT PLANT	0.	60.	60.	60.	0.	0.	0.	0.	20.	40.	0.
WELDING TRUCK	92.	0.	92.	0.	46.	92.	0.	92.	0.	46.	92.
UTILITY BACKHOE	182.	0.	0.	0.	0.	0.	0.	182.	0.	0.	182.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	0.	98.	0.	0.
SERVICE TRUCK w/ CRANE	161.	0.	161.	0.	161.	0.	0.	0.	0.	161.	161.
LUBE TRUCK	0.	0.	58.	58.	0.	0.	0.	0.	0.	58.	0.
FUEL TRUCK	0.	0.	77.	0.	0.	0.	0.	0.	0.	77.	0.
ELECTRICIANS TRUCK	0.	0.	39.	0.	0.	0.	0.	0.	0.	39.	0.
LINE TRUCK	0.	0.	58.	0.	0.	0.	0.	0.	0.	58.	0.
SUPPLY TRUCK	132.	99.	166.	66.	132.	132.	99.	166.	66.	132.	132.
AMBULANCE	0.	0.	64.	0.	0.	0.	0.	0.	64.	0.	0.
PERSONNEL VAN	0.	61.	61.	0.	31.	0.	61.	61.	0.	31.	0.
FIRE TRUCK	0.	0.	104.	0.	0.	0.	0.	0.	0.	0.	0.
FUEL TRANSPORTER	0.	0.	92.	0.	0.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT	488.	1,046.	860.	541.	211.	233.	162.	703.	172.	409.	185.
MINE DEVEL. and INFRASTRUCTURE	34,920.	34,920.	33,325.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PRE OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUBTOTAL CAPITAL COST	59,788.	88,288.	77,180.	27,573.	10,783.	11,894.	8,274.	35,830.	8,775.	20,880.	9,417.
SERVICE LIFE DEPRECIATION	22,073.	17,927.	24,197.	27,956.	28,401.	28,048.	26,345.	27,478.	26,499.	28,021.	28,445.
INVESTMENT TAX CREDIT	5,896.	8,741.	7,552.	2,678.	1,034.	1,133.	777.	3,374.	836.	2,009.	909.
ACCELERATED DEPRECIATION	44,412.	34,320.	42,926.	46,585.	45,773.	42,745.	39,850.	38,161.	37,669.	34,425.	33,858.

TABLE 4 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	19	20	21	22	23	24	25	26	27	28	29
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
OVERBURDEN SHOVEL	0.	0.	0.	0.	3,410.	0.	0.	0.	0.	0.	0.
HYDRAULIC EXCAVATOR	1,550.	0.	0.	0.	0.	0.	0.	0.	1,550.	3,100.	1,550.
CRAWLER DOZER	0.	332.	664.	0.	664.	332.	332.	332.	664.	0.	996.
CRAWLER DOZER	2,814.	3,752.	1,876.	4,690.	1,407.	3,752.	4,690.	1,876.	3,752.	469.	3,752.
SCRAPER	0.	0.	561.	561.	561.	561.	0.	561.	0.	1,122.	561.
OVERBURDEN HAULER	0.	11,820.	14,184.	15,760.	8,668.	0.	11,820.	14,184.	14,184.	3,940.	0.
COAL HAULER	5,516.	3,152.	3,152.	0.	0.	3,940.	3,940.	3,152.	0.	0.	0.
MOTOR GRADER	606.	0.	303.	0.	909.	909.	0.	303.	0.	303.	303.
WHEEL DOZER	278.	0.	0.	834.	556.	834.	0.	0.	834.	0.	834.
WATER TRUCK	346.	0.	0.	346.	1,384.	346.	1,038.	0.	346.	0.	0.
COAL DRILL	0.	240.	0.	0.	0.	0.	0.	0.	0.	480.	0.
PUMPS AND PIPING	66.	66.	33.	0.	33.	66.	164.	33.	66.	66.	0.
RECLAMATION FARM EQUIPMENT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	110.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL SCREEN PLANT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	94.
GRAVEL TRUCKS	0.	0.	0.	0.	0.	0.	0.	0.	130.	0.	0.
FRONT END LOADER	388.	388.	0.	0.	388.	0.	0.	0.	0.	0.	0.
PICKUPS AND SEDANS	101.	169.	186.	101.	169.	186.	101.	169.	186.	101.	169.
POWDER TRUCK	192.	0.	96.	0.	0.	0.	0.	0.	96.	96.	192.
PORTABLE SUBSTATION	0.	0.	700.	1,400.	0.	2,100.	2,100.	2,100.	0.	0.	0.
HYDRAULIC CRANE	0.	0.	0.	235.	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	0.	175.	0.	0.	0.	0.	0.	0.	175.	0.	0.
FORKLIFT	0.	70.	0.	0.	0.	0.	0.	0.	70.	70.	0.
PORTABLE LIGHT PLANT	60.	60.	60.	0.	0.	0.	0.	20.	40.	0.	60.
WELDING TRUCK	0.	92.	0.	46.	92.	0.	92.	0.	46.	92.	0.
UTILITY BACKHOE	0.	0.	0.	0.	0.	0.	182.	0.	0.	182.	0.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	98.	0.	0.	0.
SERVICE TRUCK w/ CRANE	0.	161.	0.	161.	0.	0.	0.	0.	161.	161.	0.
LUBE TRUCK	0.	58.	58.	0.	0.	0.	0.	0.	58.	0.	0.
FUEL TRUCK	0.	77.	0.	0.	0.	0.	0.	0.	77.	0.	0.
ELECTRICIANS TRUCK	0.	39.	0.	0.	0.	0.	0.	0.	39.	0.	0.
LINE TRUCK	0.	58.	0.	0.	0.	0.	0.	0.	58.	0.	0.
SUPPLY TRUCK	99.	166.	66.	132.	132.	99.	166.	66.	132.	132.	99.
AMBULANCE	0.	64.	0.	0.	0.	0.	0.	64.	0.	0.	0.
PERSONNEL VAN	61.	61.	0.	31.	0.	61.	61.	0.	31.	0.	61.
FIRE TRUCK	0.	0.	104.	0.	0.	0.	104.	0.	0.	0.	0.
FUEL TRANSPORTER	0.	0.	0.	92.	0.	0.	92.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT	242.	420.	441.	488.	367.	264.	498.	459.	454.	206.	176.
MINE DEVEL. and INFRASTRUCTURE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUBTOTAL CAPITAL COST	12,319.	21,420.	22,484.	24,877.	18,740.	13,450.	25,380.	23,417.	23,149.	10,520.	8,957.
SERVICE LIFE DEPRECIATION	28,468.	28,411.	28,465.	28,481.	30,027.	30,032.	30,048.	30,052.	30,045.	28,082.	28,064.
INVESTMENT TAX CREDIT	1,184.	2,029.	2,117.	2,367.	1,792.	1,301.	2,419.	2,211.	2,203.	1,015.	883.
ACCELERATED DEPRECIATION	31,143.	25,765.	25,331.	24,467.	22,012.	20,710.	19,021.	19,395.	18,784.	18,117.	16,911.

TABLE 4 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	30	31	32	33	34	35	36	37	TOTAL	REMAINING BOOK VALUE
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	27,400.	0.
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	46,000.	0.
OVERBURDEN SHOVEL	0.	0.	0.	0.	0.	0.	0.	0.	37,510.	0.
HYDRAULIC EXCAVATOR	0.	0.	0.	0.	0.	0.	0.	0.	18,600.	359.
CRAWLER DOZER	0.	332.	332.	332.	996.	0.	0.	0.	11,952.	183.
CRAWLER DOZER	3,752.	938.	5,159.	1,876.	1,876.	5,159.	0.	0.	80,199.	0.
SCRAPER	0.	0.	0.	1,122.	0.	0.	0.	0.	15,147.	0.
OVERBURDEN HAULER	5,516.	25,216.	3,940.	14,184.	2,364.	0.	0.	0.	238,750.	0.
COAL HAULER	4,728.	3,152.	3,152.	2,364.	0.	3,940.	0.	0.	63,828.	1,850.
MOTOR GRADER	606.	0.	303.	0.	606.	606.	0.	0.	8,484.	556.
WHEEL DOZER	0.	0.	278.	556.	556.	278.	0.	0.	9,174.	359.
WATER TRUCK	346.	692.	0.	692.	692.	346.	0.	0.	10,726.	1,015.
COAL DRILL	240.	0.	0.	0.	0.	0.	0.	0.	2,160.	102.
PUMPS AND PIPING	0.	98.	0.	98.	33.	0.	0.	0.	1,640.	121.
RECLAMATION FARM EQUIPMENT	0.	110.	110.	0.	0.	0.	0.	0.	770.	226.
COMPACTOR	0.	0.	0.	0.	0.	182.	0.	0.	364.	159.
GRAVEL SCREEN PLANT	0.	0.	0.	0.	0.	94.	0.	0.	470.	133.
GRAVEL TRUCKS	260.	0.	0.	0.	0.	130.	0.	0.	1,040.	356.
FRONT END LOADER	0.	388.	0.	776.	0.	0.	0.	0.	3,492.	696.
PICKUPS AND SEDANS	186.	101.	0.	0.	0.	0.	0.	0.	3,870.	0.
POWDER TRUCK	0.	96.	0.	0.	0.	0.	0.	0.	1,436.	48.
PORTABLE SUBSTATION	0.	700.	0.	0.	0.	0.	0.	0.	17,500.	1,214.
HYDRAULIC CRANE	0.	0.	0.	0.	0.	0.	0.	0.	470.	0.
MOBIL TIRE CHANGER	175.	0.	0.	0.	0.	0.	0.	0.	1,050.	35.
FORKLIFT	70.	0.	0.	0.	0.	0.	0.	0.	630.	14.
PORTABLE LIGHT PLANT	60.	80.	0.	0.	0.	0.	0.	0.	740.	42.
WELDING TRUCK	92.	0.	0.	0.	0.	0.	0.	0.	1,150.	0.
UTILITY BACKHOE	0.	0.	0.	0.	0.	0.	0.	0.	1,094.	0.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	0.	294.	0.
SERVICE TRUCK w/ CRANE	161.	0.	0.	0.	0.	0.	0.	0.	1,769.	32.
LUBE TRUCK	58.	58.	0.	0.	0.	0.	0.	0.	521.	29.
FUEL TRUCK	77.	0.	0.	0.	0.	0.	0.	0.	461.	15.
ELECTRICIANS TRUCK	39.	0.	0.	0.	0.	0.	0.	0.	234.	8.
LINE TRUCK	58.	0.	0.	0.	0.	0.	0.	0.	347.	12.
SUPPLY TRUCK	166.	66.	0.	0.	0.	0.	0.	0.	3,012.	0.
AMBULANCE	64.	0.	0.	0.	0.	0.	0.	0.	383.	13.
PERSONNEL VAN	61.	0.	0.	0.	0.	0.	0.	0.	768.	0.
FIRE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	416.	14.
FUEL TRANSPORTER	0.	0.	0.	0.	0.	0.	0.	0.	369.	12.
MISC. TOOLS and EQUIPMENT	334.	641.	265.	440.	142.	215.	0.	0.	12,285.	114.
MINE DEVEL. and INFRASTRUCTURE	0.	0.	0.	0.	0.	0.	0.	0.	198,280.	22.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	23,083.	0.
PRE OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	18,542.	3.
SUBTOTAL CAPITAL COST	17,049.	32,668.	13,539.	22,440.	7,265.	10,950.	0.	0.	866,420.	7,735.
SERVICE LIFE DEPRECIATION	28,031.	28,116.	27,965.	29,803.	29,730.	29,619.	29,412.	27,514.	835,770.	
INVESTMENT TAX CREDIT	1,620.	3,060.	1,302.	2,118.	703.	1,061.	0.	0.	80,030.	
ACCELERATED DEPRECIATION	14,825.	15,585.	15,237.	16,910.	17,653.	16,386.	10,958.	8,115.	798,090.	

TABLE 4 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	TYPICAL MODEL OR SIZE	UNIT PRICE		SERVICE LIFE	1	2	3	4	5	6	7
WALKING DRAGLINE	30 CYD	15500.0	K	20 LM	0.	1,550.	7,750.	3,875.	2,325.	0.	0.
OVERBURDEN DRILL	10 In.	950.0	K	50,000 HR	0.	0.	0.	0.	950.	0.	0.
FRONT END LOADER	15 CYD	840.0	K	15,000 HR	0.	0.	0.	0.	0.	840.	840.
CRAWLER DOZER	CAT D8-K	332.0	K	12,500 HR	0.	0.	0.	332.	0.	332.	332.
CRAWLER DOZER	CAT D9-L	469.0	K	12,500 HR	0.	0.	0.	469.	0.	0.	0.
SCRAPER	CAT 657 B	561.0	K	10,000 HR	0.	0.	0.	561.	0.	0.	0.
OVERBURDEN HAULER	85 TON	575.0	K	27,500 HR	0.	0.	0.	0.	0.	0.	0.
COAL HAULER	85 TON	575.0	K	27,500 HR	0.	0.	0.	0.	0.	6,900.	1,150.
MOTOR GRADER	CAT 16 G	303.0	K	12,500 HR	0.	0.	0.	303.	0.	0.	0.
WHEEL DOZER	CAT 824-C	278.0	K	12,000 HR	0.	0.	0.	0.	0.	278.	0.
WATER TRUCK	CAT 631-T	346.0	K	15,000 HR	0.	0.	0.	346.	0.	0.	0.
COAL DRILL	4 In.	240.0	K	12,500 HR	0.	0.	0.	0.	0.	240.	0.
PUMPS AND PIPING	4 Inch H H	32.8	K	40,000 HR	0.	0.	0.	0.	33.	33.	0.
RECLAMATION FARM EQUIPMENT		110.0	K	8,000 HR	0.	0.	0.	0.	0.	0.	0.
COMPACTOR	CAT 816-B	182.0	K	15,000 HR	0.	0.	0.	182.	0.	0.	0.
GRAVEL SCREEN PLANT		94.0	K	24,000 HR	0.	0.	0.	94.	0.	0.	0.
GRAVEL TRUCKS		130.0	K	25,000 HR	0.	0.	0.	130.	0.	0.	0.
FRONT END LOADER	CAT 988-B	388.0	K	12,000 HR	0.	0.	0.	388.	0.	0.	0.
PICKUPS AND SEDANS		16.9	K	3 YR	0.	0.	0.	51.	34.	110.	51.
POWDER TRUCK		95.8	K	10 YR	0.	0.	0.	0.	96.	0.	0.
PORTABLE SUBSTATION	10 MVA	700.0	K	15 YR	0.	0.	0.	0.	700.	0.	0.
HYDRAULIC CRANE	125 TON	235.0	K	15 YR	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	IMT 1836	175.0	K	10 YR	0.	0.	0.	0.	175.	0.	0.
FORKLIFT		70.0	K	10 YR	0.	0.	0.	0.	70.	0.	0.
PORTABLE LIGHT PLANT		20.0	K	10 YR	0.	0.	0.	0.	0.	0.	0.
WELDING TRUCK		46.0	K	5 YR	0.	0.	0.	0.	46.	0.	0.
UTILITY BACKHOE	CAT 225	182.3	K	10 YR	0.	0.	0.	182.	0.	0.	0.
TRUCK w/ LOW-BOY TRAILER		98.1	K	10 YR	0.	0.	0.	0.	0.	0.	0.
SERVICE TRUCK w/ CRANE		80.4	K	10 YR	0.	0.	0.	80.	0.	0.	0.
LUBE TRUCK		57.9	K	10 YR	0.	0.	0.	58.	0.	0.	0.
FUEL TRUCK		76.9	K	10 YR	0.	0.	0.	77.	0.	0.	0.
ELECTRICIANS TRUCK		39.0	K	10 YR	0.	0.	0.	0.	39.	0.	0.
LINE TRUCK		57.9	K	10 YR	0.	0.	0.	0.	58.	0.	0.
SUPPLY TRUCK		33.1	K	5 YR	0.	0.	0.	0.	33.	66.	0.
AMBULANCE		63.9	K	10 YR	0.	0.	0.	0.	0.	0.	0.
PERSONNEL VAN		30.7	K	5 YR	0.	0.	0.	0.	31.	0.	0.
FIRE TRUCK		104.0	K	15 YR	0.	0.	0.	0.	0.	0.	0.
FUEL TRANSPORTER		92.2	K	15 YR	0.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT		1.0	K	5 YR	0.	31.	155.	143.	92.	176.	47.
MINE DEVEL. and INFRASTRUCTURE		1.0	K	30 LM	0.	0.	1,374.	8,077.	8,469.	14,150.	3,540.
ENGINEERING and ADMIN. EXPENSE		1.0	K	0	712.	1,196.	303.	0.	0.	0.	0.
PRE OPERATIONAL EXPENSES		1.0	K	0	0.	0.	0.	1,448.	2,957.	0.	0.

* UNIT PRICES INCLUDE CONTINGENCY ALLOWANCE

ADDITIONAL CAPITAL COST	712.	2,777.	9,582.	16,796.	16,107.	23,125.	5,960.
SERVICE LIFE DEPRECIATION	0.	0.	0.	0.	0.	7,847.	4,237.
INVESTMENT TAX CREDIT	0.	158.	928.	1,526.	1,314.	2,265.	587.
ACCELERATED DEPRECIATION	0.	0.	0.	0.	0.	14,579.	8,400.

TABLE 4 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	8	9	10	11	12	13	14	15	16	17	18
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
OVERBURDEN DRILL	0.	0.	950.	0.	0.	0.	0.	0.	0.	0.	0.
FRONT END LOADER	840.	0.	1,680.	840.	1,680.	0.	840.	840.	1,680.	0.	0.
CRAWLER DOZER	0.	0.	0.	332.	332.	332.	0.	0.	0.	0.	332.
CRAWLER DOZER	1,407.	469.	1,407.	938.	938.	1,876.	938.	938.	0.	938.	469.
SCRAPER	0.	561.	0.	0.	0.	0.	0.	0.	0.	561.	0.
OVERBURDEN HAULER	1,725.	1,150.	1,150.	575.	1,150.	575.	0.	1,725.	1,150.	0.	1,150.
COAL HAULER	0.	0.	575.	0.	0.	0.	0.	0.	0.	0.	0.
MOTOR GRADER	303.	0.	0.	0.	0.	303.	0.	0.	303.	0.	0.
WHEEL DOZER	556.	0.	0.	0.	0.	278.	0.	556.	0.	0.	0.
WATER TRUCK	346.	0.	0.	0.	0.	0.	0.	0.	346.	0.	0.
COAL DRILL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PUMPS AND PIPING	33.	0.	0.	0.	0.	0.	0.	0.	66.	0.	33.
RECLAMATION FARM EQUIPMENT	0.	110.	0.	0.	0.	0.	0.	0.	0.	0.	0.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL SCREEN PLANT	0.	0.	0.	0.	0.	0.	0.	0.	94.	0.	0.
GRAVEL TRUCKS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FRONT END LOADER	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PICKUPS AND SEDANS	34.	110.	51.	34.	110.	51.	34.	110.	51.	34.	110.
POWDER TRUCK	0.	0.	0.	0.	0.	0.	0.	96.	0.	0.	0.
PORTABLE SUBSTATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
HYDRAULIC CRANE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	0.	0.	0.	0.	0.	0.	0.	175.	0.	0.	0.
FORKLIFT	0.	0.	0.	0.	0.	0.	0.	70.	0.	0.	0.
PORTABLE LIGHT PLANT	20.	20.	0.	0.	20.	0.	0.	0.	0.	0.	20.
WELDING TRUCK	0.	0.	46.	0.	0.	0.	0.	46.	0.	0.	0.
UTILITY BACKHOE	0.	0.	0.	0.	0.	0.	182.	0.	0.	0.	0.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SERVICE TRUCK w/ CRANE	0.	0.	0.	0.	0.	0.	80.	0.	0.	0.	0.
LUBE TRUCK	0.	0.	0.	0.	0.	0.	58.	0.	0.	0.	0.
FUEL TRUCK	0.	0.	0.	0.	0.	0.	77.	0.	0.	0.	0.
ELECTRICIANS TRUCK	0.	0.	0.	0.	0.	0.	0.	39.	0.	0.	0.
LINE TRUCK	0.	0.	0.	0.	0.	0.	0.	58.	0.	0.	0.
SUPPLY TRUCK	33.	33.	33.	66.	33.	33.	33.	33.	66.	33.	33.
AMBULANCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERSONNEL VAN	31.	0.	31.	0.	0.	31.	0.	31.	0.	0.	31.
FIRE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FUEL TRANSPORTER	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT	107.	49.	118.	56.	85.	70.	45.	94.	75.	31.	44.
MINE DEVEL. and INFRASTRUCTURE	7,080.	3,540.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUBTOTAL CAPITAL COST	12,514.	6,842.	6,041.	3,841.	4,348.	3,548.	2,287.	4,811.	3,831.	1,597.	2,221.
SERVICE LIFE DEPRECIATION	5,008.	6,260.	6,722.	6,904.	7,458.	7,556.	7,626.	7,753.	6,526.	6,515.	6,510.
INVESTMENT TAX CREDIT	1,235.	591	592.	379.	423.	347.	227.	464.	371.	157.	211.
ACCELERATED DEPRECIATION	9,186.	9,343.	9,655.	8,492.	8,304.	7,269.	6,966.	6,375.	6,642.	6,100.	5,621.

TABLE 4 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	19	20	21	22	23	24	25	TOTAL	REMAINING BOOK VALUE
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	15,500.	0.
OVERBURDEN DRILL	0.	0.	0.	950.	0.	0.	0.	2,850.	856.
FRONT END LOADER	840.	840.	1,680.	0.	840.	0.	0.	14,280.	0.
CRAWLER DOZER	332.	0.	0.	0.	0.	0.	0.	2,656.	23.
CRAWLER DOZER	1,407.	938.	938.	938.	469.	0.	0.	15,477.	0.
SCRAPER	0.	0.	0.	0.	0.	0.	0.	1,683.	86.
OVERBURDEN HAULER	575.	0.	1,150.	575.	0.	0.	0.	12,650.	1,174.
COAL HAULER	0.	0.	0.	0.	0.	0.	0.	8,625.	1,131.
MOTOR GRADER	0.	0.	303.	0.	0.	0.	0.	1,515.	74.
WHEEL DOZER	0.	0.	278.	0.	556.	0.	0.	2,502.	458.
WATER TRUCK	346.	0.	0.	0.	0.	0.	0.	1,384.	141.
COAL DRILL	0.	0.	0.	0.	0.	0.	0.	240.	43.
PUMPS AND PIPING	0.	0.	0.	0.	0.	0.	0.	197.	4.
RECLAMATION FARM EQUIPMENT	0.	0.	0.	0.	0.	0.	0.	110.	65.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	182.	146.
GRAVEL SCREEN PLANT	0.	0.	0.	0.	0.	0.	0.	188.	140.
GRAVEL TRUCKS	0.	0.	0.	0.	0.	0.	0.	130.	34.
FRONT END LOADER	0.	0.	0.	0.	0.	0.	0.	388.	0.
PICKUPS AND SEDANS	51.	34.	0.	0.	0.	0.	0.	1,056.	0.
POWDER TRUCK	0.	0.	0.	0.	0.	0.	0.	192.	0.
PORTABLE SUBSTATION	0.	700.	0.	0.	0.	0.	0.	1,400.	420.
HYDRAULIC CRANE	0.	0.	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	0.	0.	0.	0.	0.	0.	0.	350.	0.
FORKLIFT	0.	0.	0.	0.	0.	0.	0.	140.	0.
PORTABLE LIGHT PLANT	20.	0.	0.	0.	0.	0.	0.	100.	10.
WELDING TRUCK	0.	46.	0.	0.	0.	0.	0.	184.	0.
UTILITY BACKHOE	0.	0.	0.	0.	0.	0.	0.	365.	0.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	0.	0.
SERVICE TRUCK w/ CRANE	0.	0.	0.	0.	0.	0.	0.	161.	0.
LUBE TRUCK	0.	0.	0.	0.	0.	0.	0.	116.	0.
FUEL TRUCK	0.	0.	0.	0.	0.	0.	0.	154.	0.
ELECTRICIANS TRUCK	0.	0.	0.	0.	0.	0.	0.	78.	0.
LINE TRUCK	0.	0.	0.	0.	0.	0.	0.	116.	0.
SUPPLY TRUCK	33.	33.	0.	0.	0.	0.	0.	596.	0.
AMBULANCE	0.	0.	0.	0.	0.	0.	0.	0.	0.
PERSONNEL VAN	0.	31.	0.	0.	0.	0.	0.	215.	0.
FIRE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	0.
FUEL TRANSPORTER	0.	0.	0.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT	72.	52.	87.	49.	37.	0.	0.	1,716.	25.
MINE DEVEL. and INFRASTRUCTURE	0.	0.	0.	0.	0.	0.	0.	46,230.	5.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	2,211.	0.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	4,405.	0.
SUBTOTAL CAPITAL COST	3,676.	2,674.	4,436.	2,512.	1,982.	0.	0.	140,350.	4,834.
SERVICE LIFE DEPRECIATION	6,515.	6,507.	7,047.	7,025.	7,000.	6,939.	5,965.	133,920.	
INVESTMENT TAX CREDIT	360.	266.	435.	248.	188.	0.	0.	13,171.	
ACCELERATED DEPRECIATION	5,399.	4,654.	3,431.	3,506.	3,062.	2,260.	1,737.	130,980.	

TABLE 4 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	TYPICAL MODEL OR SIZE	UNIT PRICE		SERVICE LIFE		1	2	3	4	5	6	7
WALKING DRAGLINE	30 CYD	15500.0	K	25	LM	0.	0.	0.	1,550.	7,750.	3,875.	2,325.
OVERBURDEN DRILL	10 In.	950.0	K	50,000	HR	0.	0.	0.	0.	0.	0.	950.
FRONT END LOADER	13 CYD	840.0	K	15,000	HR	0.	0.	0.	0.	0.	0.	0.
CRAWLER DOZER	CAT D8-K	332.0	K	12,500	HR	0.	0.	0.	0.	332.	0.	0.
CRAWLER DOZER	CAT D9-L	469.0	K	12,500	HR	0.	0.	0.	0.	469.	0.	0.
SCRAPER	CAT 637-B	561.0	K	10,000	HR	0.	0.	0.	0.	561.	561.	0.
OVERBURDEN HAULER	85 TON	575.0	K	27,500	HR	0.	0.	0.	0.	0.	0.	0.
COAL HAULER	85 TON	575.0	K	27,500	HR	0.	0.	0.	0.	0.	0.	0.
MOTOR GRADER	CAT 16 G	303.0	K	12,500	HR	0.	0.	0.	0.	303.	0.	0.
WHEEL DOZER	CAT 824-C	278.0	K	12,000	HR	0.	0.	0.	0.	0.	0.	0.
WATER TRUCK	CAT 631-T	346.0	K	15,000	HR	0.	0.	0.	0.	346.	0.	0.
COAL DRILL	4 In.	240.0	K	12,500	HR	0.	0.	0.	0.	0.	0.	0.
PUMPS AND PIPING	4 Inch H H	32.8	K	40,000	HR	0.	0.	0.	0.	0.	0.	33.
RECLAMATION FARM EQUIPMENT		110.0	K	8,000	HR	0.	0.	0.	0.	0.	0.	0.
COMPACTOR	CAT 816-B	182.0	K	15,000	HR	0.	0.	0.	0.	182.	0.	0.
GRAVEL SCREEN PLANT		94.0	K	24,000	HR	0.	0.	0.	0.	94.	0.	0.
GRAVEL TRUCKS		130.0	K	25,000	HR	0.	0.	0.	0.	130.	0.	0.
FRONT END LOADER	CAT 988-B	388.0	K	12,000	HR	0.	0.	0.	0.	388.	0.	0.
PICKUPS AND SEDANS		16.9	K	3	YR	0.	0.	0.	0.	51.	51.	101.
POWDER TRUCK		95.8	K	10	YR	0.	0.	0.	0.	0.	0.	96.
PORTABLE SUBSTATION	10 MVA	700.0	K	15	YR	0.	0.	0.	0.	0.	0.	700.
HYDRAULIC CRANE	125 TON	235.0	K	15	YR	0.	0.	0.	0.	0.	235.	0.
MOBIL TIRE CHANGER	INT 1836	175.0	K	10	YR	0.	0.	0.	0.	0.	175.	0.
FORKLIFT		70.0	K	10	YR	0.	0.	0.	0.	0.	70.	0.
PORTABLE LIGHT PLANT		20.0	K	10	YR	0.	0.	0.	0.	0.	0.	0.
WELDING TRUCK		46.0	K	5	YR	0.	0.	0.	0.	0.	0.	0.
UTILITY BACKHOE	CAT 225	182.3	K	10	YR	0.	0.	0.	0.	182.	0.	0.
TRUCK w/ LOW-BOY TRAILER		98.1	K	10	YR	0.	0.	0.	0.	0.	98.	0.
SERVICE TRUCK w/ CRANE		80.4	K	10	YR	0.	0.	0.	0.	0.	80.	0.
LUBE TRUCK		57.9	K	10	YR	0.	0.	0.	0.	0.	0.	0.
FUEL TRUCK		76.9	K	10	YR	0.	0.	0.	0.	0.	77.	0.
ELECTRICIANS TRUCK		39.0	K	10	YR	0.	0.	0.	0.	0.	39.	0.
LINE TRUCK		57.9	K	10	YR	0.	0.	0.	0.	0.	58.	0.
SUPPLY TRUCK		33.1	K	5	YR	0.	0.	0.	0.	0.	33.	33.
AMBULANCE		63.9	K	10	YR	0.	0.	0.	0.	0.	64.	0.
PERSONNEL VAN		30.7	K	5	YR	0.	0.	0.	0.	0.	31.	0.
FIRE TRUCK		104.0	K	15	YR	0.	0.	0.	0.	0.	104.	0.
FUEL TRANSPORTER		92.2	K	15	YR	0.	0.	0.	0.	0.	92.	0.
MISC. TOOLS and EQUIPMENT		1.0	K	5	YR	0.	0.	0.	0.	31.	216.	113.	85.
MINE DEVEL. and INFRASTRUCTURE		1.0	K	30	LM	0.	0.	0.	1,421.	8,389.	17,935.	16,081.
ENGINEERING and ADMIN. EXPENSE		1.0	K	0		2,390.	1,846.	1,846.	1,635.	580.	0.	0.
PRE-OPERATIONAL EXPENSES		1.0	K	0		0.	0.	0.	0.	1,317.	2,214.	4,384.
SUBTOTAL CAPITAL COST						2,390.	1,846.	1,846.	4,637.	21,290.	25,905.	24,788.
SERVICE LIFE DEPRECIATION						0.	0.	0.	0.	0.	0.	0.
INVESTMENT TAX CREDIT						0.	0.	0.	300.	1,930.	2,365.	2,036.
ACCELERATED DEPRECIATION						0.	0.	0.	0.	0.	0.	0.

* UNIT PRICES INCLUDE CONTINGENCY ALLOWANCE

TABLE 4 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	8	9	10	11	12	13	14	15	16	17	18
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
OVERBURDEN DRILL	0.	0.	0.	950.	0.	0.	0.	0.	0.	0.	0.
FRONT END LOADER	840.	0.	840.	840.	840.	840.	0.	0.	2,520.	840.	840.
CRAWLER DOZER	0.	332.	332.	0.	0.	332.	332.	332.	0.	0.	332.
CRAWLER DOZER	0.	469.	938.	469.	938.	1,407.	0.	469.	1,876.	1,407.	1,407.
SCRAPER	0.	0.	0.	0.	0.	0.	0.	1,122.	0.	0.	0.
OVERBURDEN HAULER	0.	575.	1,150.	575.	0.	575.	0.	0.	1,150.	2,875.	1,150.
COAL HAULER	3,450.	0.	4,025.	0.	0.	0.	0.	0.	2,875.	0.	0.
MOTOR GRADER	303.	0.	0.	0.	0.	0.	0.	606.	0.	0.	0.
WHEEL DOZER	278.	0.	278.	278.	0.	0.	0.	0.	278.	556.	0.
WATER TRUCK	346.	0.	0.	0.	0.	0.	0.	0.	0.	692.	0.
COAL DRILL	240.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PUMPS AND PIPING	0.	0.	0.	0.	0.	0.	0.	98.	0.	0.	0.
RECLAMATION FARM EQUIPMENT	0.	110.	0.	0.	0.	0.	0.	0.	0.	0.	0.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL SCREEN PLANT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL TRUCKS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FRONT END LOADER	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PICKUPS AND SEDANS	135.	51.	135.	135.	51.	135.	135.	51.	169.	135.	51.
POWDER TRUCK	0.	0.	0.	96.	0.	0.	0.	0.	0.	96.	0.
PORTABLE SUBSTATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
HYDRAULIC CRANE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	0.	0.	0.	0.	0.	0.	0.	0.	175.	0.	0.
FORKLIFT	0.	0.	0.	0.	0.	0.	0.	0.	70.	0.	0.
PORTABLE LIGHT PLANT	20.	0.	20.	20.	0.	0.	0.	0.	20.	20.	20.
WELDING TRUCK	0.	0.	0.	0.	0.	46.	0.	0.	46.	0.	46.
UTILITY BACKHOE	0.	0.	0.	0.	0.	0.	0.	182.	0.	0.	0.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	0.	98.	0.	0.
SERVICE TRUCK w/ CRANE	0.	0.	0.	0.	0.	0.	0.	0.	161.	0.	0.
LUBE TRUCK	58.	0.	0.	0.	0.	0.	0.	0.	0.	0.	58.
FUEL TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	77.	0.	0.
ELECTRICIANS TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	39.	0.	0.
LINE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	58.	0.	0.
SUPPLY TRUCK	33.	0.	99.	33.	33.	0.	99.	33.	132.	0.	132.
AMBULANCE	0.	0.	0.	0.	0.	0.	0.	0.	64.	0.	0.
PERSONNEL VAN	31.	0.	0.	31.	0.	31.	0.	0.	61.	0.	31.
FIRE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FUEL TRANSPORTER	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT	115.	31.	156.	69.	37.	67.	11.	58.	197.	132.	81.
MINE DEVEL. and INFRASTRUCTURE	11,635.	5,820.	8,155.	0.	0.	0.	8,148.	8,148.	0.	0.	0.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUBTOTAL CAPITAL COST	17,484.	7,387.	16,129.	3,495.	1,899.	3,433.	8,726.	11,099.	10,067.	6,753.	4,148.
SERVICE LIFE DEPRECIATION	9,948.	4,642.	6,553.	7,121.	6,991.	7,271.	6,916.	7,260.	9,080.	10,192.	10,402.
INVESTMENT TAX CREDIT	1,718.	733.	1,575.	340.	188.	334.	867.	1,103.	974.	647.	406.
ACCELERATED DEPRECIATION	22,014.	10,570.	11,087.	11,556.	11,000.	10,148.	10,010.	9,030.	9,935.	10,737.	10,769.

TABLE 4 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	19	20	21	22	23	24	25	26	27	28	29
WALKING DRAGLINE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
OVERBURDEN DRILL	0.	0.	0.	950.	0.	950.	0.	0.	0.	0.	0.
FRONT END LOADER	2,520.	840.	840.	1,680.	1,680.	0.	1,680.	1,680.	0.	1,680.	1,680.
CRAWLER DOZER	0.	332.	332.	0.	0.	332.	332.	332.	0.	0.	332.
CRAWLER DOZER	1,876.	469.	2,345.	938.	1,407.	1,407.	469.	2,345.	938.	469.	2,345.
SCRAPER	0.	0.	0.	561.	561.	0.	0.	0.	0.	0.	561.
OVERBURDEN HAULER	1,150.	0.	0.	575.	2,300.	1,150.	575.	575.	0.	575.	1,725.
COAL HAULER	0.	0.	2,300.	0.	0.	2,300.	0.	0.	0.	0.	0.
MOTOR GRADER	0.	0.	303.	303.	0.	0.	0.	0.	0.	0.	606.
WHEEL DOZER	0.	0.	0.	556.	0.	278.	0.	0.	278.	278.	0.
WATER TRUCK	0.	0.	0.	0.	0.	0.	0.	692.	0.	0.	0.
COAL DRILL	0.	0.	0.	0.	0.	0.	0.	0.	240.	0.	0.
PUMPS AND PIPING	0.	0.	0.	33.	0.	0.	0.	33.	0.	0.	0.
RECLAMATION FARM EQUIPMENT	0.	0.	0.	0.	110.	0.	0.	0.	0.	0.	0.
COMPACTOR	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL SCREEN PLANT	0.	94.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GRAVEL TRUCKS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FRONT END LOADER	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PICKUPS AND SEDANS	169.	135.	51.	169.	135.	51.	169.	135.	51.	169.	135.
POWDER TRUCK	0.	0.	96.	0.	0.	0.	0.	0.	96.	0.	0.
PORTABLE SUBSTATION	0.	0.	0.	700.	0.	0.	0.	0.	0.	0.	0.
HYDRAULIC CRANE	0.	0.	235.	0.	0.	0.	0.	0.	0.	0.	0.
MOBIL TIRE CHANGER	0.	0.	0.	0.	0.	0.	0.	175.	0.	0.	0.
FORKLIFT	0.	0.	0.	0.	0.	0.	0.	70.	0.	0.	0.
PORTABLE LIGHT PLANT	0.	20.	20.	0.	0.	0.	0.	20.	20.	20.	0.
WELDING TRUCK	0.	0.	46.	0.	46.	0.	0.	46.	0.	46.	0.
UTILITY BACKHOL	0.	0.	0.	0.	0.	0.	182.	0.	0.	0.	0.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	0.	0.	0.	0.	98.	0.	0.	0.
SERVICE TRUCK w/ CRANE	0.	0.	0.	0.	0.	0.	0.	80.	0.	0.	0.
LUBE TRUCK	0.	0.	0.	0.	0.	0.	0.	0.	0.	58.	0.
FUEL TRUCK	0.	0.	0.	0.	0.	0.	0.	77.	0.	0.	0.
ELECTRICIANS TRUCK	0.	0.	0.	0.	0.	0.	0.	39.	0.	0.	0.
LINE TRUCK	0.	0.	0.	0.	0.	0.	0.	58.	0.	0.	0.
SUPPLY TRUCK	33.	132.	0.	132.	33.	132.	0.	132.	33.	132.	0.
AMBULANCE	0.	0.	0.	0.	0.	0.	0.	64.	0.	0.	0.
PERSONNEL VAN	0.	0.	61.	0.	31.	0.	0.	61.	0.	31.	0.
FIRE TRUCK	0.	0.	104.	0.	0.	0.	0.	0.	0.	0.	0.
FUEL TRANSPORTER	0.	0.	92.	0.	0.	0.	0.	0.	0.	0.	0.
MISC. TOOLS and EQUIPMENT	115.	40.	137.	132.	126.	132.	68.	134.	33.	69.	148.
MINE DEVEL. and INFRASTRUCTURE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUBTOTAL CAPITAL COST	5,063.	2,063.	6,962.	6,729.	6,429.	6,732.	3,475.	6,847.	1,689.	3,527.	7,532.
SERVICE LIFE DEPRECIATION	10,737.	10,660.	10,206.	9,955.	9,985.	10,008.	9,987.	10,005.	9,961.	9,930.	9,900.
INVESTMENT TAX CREDIT	573.	201.	679.	658.	621.	649.	337.	672.	165.	341.	734.
ACCELERATED DEPRECIATION	11,278.	10,840.	8,974.	8,147.	6,971.	6,703.	6,681.	6,572.	5,941.	5,204.	4,469.

TABLE 4 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
CAPITAL COST
SCHEDULE

ITEM	30	31	32	TOTAL	REMAINING BOOK VALUE
WALKING DRAGLINE	0.	0.	0.	15,500.	1.
OVERBURDEN DRILL	0.	0.	0.	3,800.	484.
FRONT END LOADER	0.	0.	0.	22,680.	159.
CRAWLER DOZER	0.	0.	0.	4,316.	15.
CRAWLER DOZER	469.	0.	0.	25,326.	0.
SCRAPER	561.	0.	0.	4,488.	773.
OVERBURDEN HAULER	1,725.	0.	0.	18,400.	1,278.
COAL HAULER	2,875.	0.	0.	17,825.	3,520.
MOTOR GRADER	0.	0.	0.	2,424.	362.
WHEEL DOZER	278.	0.	0.	3,336.	238.
WATER TRUCK	0.	0.	0.	2,076.	278.
COAL DRILL	0.	0.	0.	480.	163.
PUMPS AND PIPING	0.	0.	0.	197.	21.
RECLAMATION FARM EQUIPMENT	0.	0.	0.	220.	86.
COMPACTOR	0.	0.	0.	182.	129.
GRAVEL SCREEN PLANT	0.	0.	0.	188.	138.
GRAVEL TRUCKS	0.	0.	0.	130.	30.
FRONT END LOADER	0.	0.	0.	388.	0.
PICKUPS AND SEDANS	51.	0.	0.	2,805.	0.
POWDER TRUCK	0.	0.	0.	479.	38.
PORTABLE SUBSTATION	0.	0.	0.	1,400.	187.
HYDRAULIC CRANE	0.	0.	0.	470.	47.
MOBIL TIRE CHANGER	0.	0.	0.	525.	53.
FORKLIFT	0.	0.	0.	210.	21.
PORTABLE LIGHT PLANT	20.	0.	0.	240.	38.
WELDING TRUCK	0.	0.	0.	322.	0.
UTILITY BACKHOE	0.	0.	0.	547.	36.
TRUCK w/ LOW-BOY TRAILER	0.	0.	0.	294.	29.
SERVICE TRUCK w/ CRANE	0.	0.	0.	322.	24.
LUBE TRUCK	0.	0.	0.	174.	29.
FUEL TRUCK	0.	0.	0.	231.	23.
ELECTRICIANS TRUCK	0.	0.	0.	117.	12.
LINE TRUCK	0.	0.	0.	174.	17.
SUPPLY TRUCK	132.	0.	0.	1,556.	53.
AMBULANCE	0.	0.	0.	192.	19.
PERSONNEL VAN	0.	0.	0.	399.	0.
FIRE TRUCK	0.	0.	0.	208.	21.
FUEL TRANSPORTER	0.	0.	0.	184.	18.
MISC. TOOLS and EQUIPMENT	122.	0.	0.	2,656.	78.
MINE DEVEL. and INFRASTRUCTURE	0.	0.	0.	85,732.	8.
ENGINEERING and ADMIN. EXPENSE	0.	0.	0.	8,297.	1.
PRE-OPERATIONAL EXPENSES	0.	0.	0.	7,915.	0.
SUBTOTAL CAPITAL COST	6,233.	0.	0.	237,420.	8,428.
SERVICE LIFE DEPRECIATION	9,944.	9,792.	8,781.	226,300.	
INVESTMENT TAX CREDIT	591.	0.	0.	21,738.	
ACCELERATED DEPRECIATION	4,676.	3,680.	3,261.	220,250.	

Tables No. 5 A to No. 5 D

TABLE 5 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	1	2	3	4	5	6	7	8
PRODUCTION (THOUSAND TONS)	0	0	0	0	0	0	0	2,500
AMOUNTS PER TON								
REALIZATION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 17.495
OPERATING COST	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 9.280
ROYALTY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.187
ALASKA LICENSE TAX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SERVICE LIFE DEPRECIATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.352
TOTAL COST OF PRODUCTION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 17.819
PROFIT BEFORE TAX	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ -.324
TOTAL COST OF PRODUCTION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 17.819
LESS SERVICE LIFE DEPR.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.352
ADD ACCELERATED DEPR.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.866
COST OF PROD. FOR TAXES	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 25.332
INCOME BEFORE TAX DEDUCT.	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ -7.837
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TAXABLE INCOME	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ -7.837
FED. INCOME TAX LIABILITY	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000
INVESTMENT TAX CREDIT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEDERAL INCOME TAX PAID	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000
PROFIT AFTER TAX	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ -.324
SERVICE LIFE DEPRECIATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.352
GROSS CASH FLOW	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 6.028
AMOUNTS IN $000								
GROSS CASH FLOW	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 15,070
CAPITAL EXPENDITURES	2,390	8,260	2,900	4,337	23,798	56,033	43,591	50,441
WORKING CAPITAL	0	0	0	0	0	0	0	7,167
NET CASH FLOW	$ -2,390	$ -8,260	$ -2,900	$ -4,337	$ -23,798	$ -56,033	$ -43,591	$ -42,537

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	9	10	11	12	13	14	15	16
PRODUCTION (THOUSAND TONS)	5,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
AMOUNTS PER TON								
REALIZATION	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495
OPERATING COST	$ 7.160	$ 7.580	$ 8.490	$ 9.300	$ 10.080	$ 10.930	$ 10.630	$ 11.170
ROYALTY	2.187	2.187	2.187	2.187	2.187	2.187	2.187	2.187
ALASKA LICENSE TAX	0.000	0.000	.144	.095	.067	.034	.051	.035
SERVICE LIFE DEPRECIATION	1.931	1.745	1.811	1.950	2.057	2.193	2.167	2.270
TOTAL COST OF PRODUCTION	$ 11.278	$ 11.512	$ 12.631	$ 13.532	$ 14.391	$ 15.344	$ 15.035	$ 15.662
PROFIT BEFORE TAX	$ 6.217	$ 5.983	$ 4.864	$ 3.963	$ 3.104	$ 2.151	$ 2.460	$ 1.833
TOTAL COST OF PRODUCTION	$ 11.278	$ 11.512	$ 12.631	$ 13.532	$ 14.391	$ 15.344	$ 15.035	$ 15.662
LESS SERVICE LIFE DEPR.	1.931	1.745	1.811	1.950	2.057	2.193	2.167	2.270
ADD ACCELERATED DEPR.	4.414	3.296	3.317	3.237	3.241	3.364	3.161	3.087
COST OF PROD. FOR TAXES	$ 13.761	$ 13.063	$ 14.137	$ 14.819	$ 15.575	$ 16.515	$ 16.028	$ 16.479
INCOME BEFORE TAX DEDUCT.	$ 3.734	$ 4.432	$ 3.358	$ 2.676	$ 1.920	$ .980	$ 1.467	$ 1.016
TAX LOSS CARRYFORWARD	-3.919	-.929	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	1.301	1.301	1.301	1.301	.960	.490	.733	.508
TAXABLE INCOME	$ -1.486	$ 2.202	$ 2.057	$ 1.375	$ .960	$ .490	$ .733	$ .508
FED. INCOME TAX LIABILITY	$ 0.000	$ 1.013	$ .946	$ .632	$ .442	$ .225	$ .337	$ .234
INVESTMENT TAX CREDIT	0.000	.862	.805	.538	.376	.192	.287	.199
FEDERAL INCOME TAX PAID	$ 0.000	$ .151	$ .141	$ .094	$ .066	$ .033	$ .050	$ .035
PROFIT AFTER TAX	$ 6.217	$ 5.832	$ 4.722	$ 3.868	$ 3.039	$ 2.118	$ 2.410	$ 1.799
SERVICE LIFE DEPRECIATION	1.931	1.745	1.811	1.950	2.057	2.193	2.167	2.270
GROSS CASH FLOW	$ 8.148	$ 7.577	$ 6.533	$ 5.818	$ 5.096	$ 4.311	$ 4.577	$ 4.068
AMOUNTS IN $000								
GROSS CASH FLOW	$ 40,741	$ 60,613	$ 52,264	$ 46,547	$ 40,765	$ 34,487	$ 36,617	$ 32,547
CAPITAL EXPENDITURES	33,370	52,056	2,667	12,955	12,185	15,994	12,269	7,168
WORKING CAPITAL	4,517	7,850	2,107	1,523	1,503	1,634	-566	1,049
NET CASH FLOW	$ 2,854	$ 707	$ 47,490	$ 32,068	$ 27,077	$ 16,859	$ 24,914	$ 24,331

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	17	18	19	20	21	22	23	24
PRODUCTION (THOUSAND TONS)	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
AMOUNTS PER TON								
REALIZATION	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495
OPERATING COST	$ 9.500	$ 9.470	$ 9.470	$ 9.470	$ 9.470	$ 9.470	$ 11.490	$ 11.490
ROYALTY	2.187	2.187	2.187	2.187	2.187	2.187	2.187	2.187
ALASKA LICENSE TAX	.102	.123	.144	.156	.169	.186	.079	.083
SERVICE LIFE DEPRECIATION	2.017	1.990	1.988	1.990	1.989	1.986	2.259	2.279
TOTAL COST OF PRODUCTION	$ 13.806	$ 13.770	$ 13.789	$ 13.802	$ 13.815	$ 13.829	$ 16.014	$ 16.039
PROFIT BEFORE TAX	$ 3.689	$ 3.725	$ 3.706	$ 3.693	$ 3.680	$ 3.666	$ 1.481	$ 1.456
TOTAL COST OF PRODUCTION	$ 13.806	$ 13.770	$ 13.789	$ 13.802	$ 13.815	$ 13.829	$ 16.014	$ 16.039
LESS SERVICE LIFE DEPR.	2.017	1.990	1.988	1.990	1.989	1.986	2.259	2.279
ADD ACCELERATED DEPR.	2.929	2.641	2.324	2.151	1.954	1.691	1.481	1.352
COST OF PROD. FOR TAXES	$ 14.718	$ 14.420	$ 14.125	$ 13.964	$ 13.779	$ 13.534	$ 15.237	$ 15.111
INCOME BEFORE TAX DEDUCT.	$ 2.777	$ 3.075	$ 3.370	$ 3.531	$ 3.716	$ 3.961	$ 2.258	$ 2.384
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	1.301	1.301	1.301	1.301	1.301	1.301	1.129	1.192
TAXABLE INCOME	$ 1.475	$ 1.773	$ 2.069	$ 2.230	$ 2.414	$ 2.660	$ 1.129	$ 1.192
FED. INCOME TAX LIABILITY	$ .679	$ .816	$ .952	$ 1.026	$ 1.111	$ 1.224	$ .519	$ .548
INVESTMENT TAX CREDIT	.577	.131	.136	.186	.071	.031	.261	.041
FEDERAL INCOME TAX PAID	$ .101	$ .685	$ .815	$ .840	$ 1.039	$ 1.193	$ .259	$ .507
PROFIT AFTER TAX	$ 3.588	$ 3.040	$ 2.891	$ 2.853	$ 2.641	$ 2.473	$ 1.222	$ .949
SERVICE LIFE DEPRECIATION	2.017	1.990	1.988	1.990	1.989	1.986	2.259	2.279
GROSS CASH FLOW	$ 5.604	$ 5.030	$ 4.878	$ 4.843	$ 4.630	$ 4.459	$ 3.481	$ 3.228
AMOUNTS IN $000								
GROSS CASH FLOW	$ 44,835	$ 40,239	$ 39,028	$ 38,741	$ 37,042	$ 35,674	$ 27,845	$ 25,826
CAPITAL EXPENDITURES	8,914	5,075	11,514	15,669	6,007	2,499	21,783	3,434
WORKING CAPITAL	-3,206	0	24	23	26	34	3,825	9
NET CASH FLOW	$ 39,127	$ 35,164	$ 27,489	$ 23,049	$ 31,009	$ 33,141	$ 2,237	$ 22,383

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	25	26	27	28	29	30	31	32
PRODUCTION (THOUSAND TONS)	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
AMOUNTS PER TON								
REALIZATION	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495
OPERATING COST	$ 11.490	$ 11.490	$ 11.490	$ 13.690	$ 13.690	$ 13.690	$ 13.690	$ 13.690
ROYALTY	2.187	2.187	2.187	2.187	2.187	2.187	2.187	2.187
ALASKA LICENSE TAX	.096	.089	.082	.005	0.000	0.000	0.000	0.000
SERVICE LIFE DEPRECIATION	2.276	2.280	2.284	2.680	2.741	2.738	2.738	2.736
TOTAL COST OF PRODUCTION	$ 16.049	$ 16.046	$ 16.043	$ 18.562	$ 18.618	$ 18.615	$ 18.615	$ 18.613
PROFIT BEFORE TAX	$ 1.446	$ 1.449	$ 1.452	$ -1.067	$ -1.123	$ -1.120	$ -1.120	$ -1.118
TOTAL COST OF PRODUCTION	$ 16.049	$ 16.046	$ 16.043	$ 18.562	$ 18.618	$ 18.615	$ 18.615	$ 18.613
LESS SERVICE LIFE DEPR.	2.276	2.280	2.284	2.680	2.741	2.738	2.738	2.736
ADD ACCELERATED DEPR.	1.039	1.176	1.374	1.458	1.794	1.706	1.587	1.629
COST OF PROD. FOR TAXES	$ 14.812	$ 14.942	$ 15.133	$ 17.340	$ 17.671	$ 17.583	$ 17.464	$ 17.506
INCOME BEFORE TAX DEDUCT.	$ 2.683	$ 2.553	$ 2.362	$ .155	$ -.176	$ -.088	$ .031	$ -.011
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	-.176	-.264	-.248
DEPLETION ALLOWANCE	1.301	1.277	1.181	.077	0.000	0.000	.016	0.000
TAXABLE INCOME	$ 1.382	$ 1.277	$ 1.181	$ .077	$ -.176	$ -.264	$ -.248	$ -.259
FED. INCOME TAX LIABILITY	$ .636	$ .587	$ .543	$ .036	$ 0.000	$ 0.000	$ 0.000	$ 0.000
INVESTMENT TAX CREDIT	.127	.156	.140	.031	0.000	0.000	0.000	0.000
FEDERAL INCOME TAX PAID	$ .509	$ .431	$ .404	$ .005	$ 0.000	$ 0.000	$ 0.000	$ 0.000
PROFIT AFTER TAX	$ .937	$ 1.018	$ 1.048	$ -1.072	$ -1.123	$ -1.120	$ -1.120	$ -1.118
SERVICE LIFE DEPRECIATION	2.276	2.280	2.284	2.680	2.741	2.738	2.738	2.736
GROSS CASH FLOW	$ 3.213	$ 3.298	$ 3.332	$ 1.608	$ 1.618	$ 1.618	$ 1.618	$ 1.618
AMOUNTS IN $000								
GROSS CASH FLOW	$ 25,707	$ 26,383	$ 26,658	$ 12,864	$ 12,945	$ 12,945	$ 12,945	$ 12,945
CAPITAL EXPENDITURES	10,605	13,229	11,835	30,620	13,184	6,663	12,656	14,380
WORKING CAPITAL	26	0	0	4,219	0	0	0	0
NET CASH FLOW	$ 15,076	$ 13,154	$ 14,823	$ -21,974	$ -239	$ 6,282	$ 289	$ -1,435

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 A
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 1
8,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)@

	33	34	35	36	37	38	TOTAL
PRODUCTION (THOUSAND TONS)	8,000	8,000	8,000	8,000	8,000	0	231,500
AMOUNTS PER TON							
REALIZATION	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 17.495	$ 0.000	$ 17.495
OPERATING COST	$ 14.220	$ 14.220	$ 14.220	$ 14.220	$ 14.220	$ 0.000	$ 11.383
ROYALTY	2.187	2.187	2.187	2.187	2.187	0.000	2.187
ALASKA LICENSE TAX	0.000	0.000	0.000	0.000	0.000	0.000	.060
SERVICE LIFE DEPRECIATION	2.825	2.821	2.814	2.799	2.614	0.000	2.358
TOTAL COST OF PRODUCTION	$ 19.232	$ 19.228	$ 19.221	$ 19.206	$ 19.021	$ 0.000	$ 15.988
PROFIT BEFORE TAX	$ -1.737	$ -1.733	$ -1.726	$ -1.711	$ -1.526	$ 0.000	$ 1.507
TOTAL COST OF PRODUCTION	$ 19.232	$ 19.228	$ 19.221	$ 19.206	$ 19.021	$ 0.000	$ 15.988
LESS SERVICE LIFE DEPR.	2.825	2.821	2.814	2.799	2.614	0.000	2.358
ADD ACCELERATED DEPR.	1.733	1.738	1.739	1.540	1.229	0.000	2.283
COST OF PROD. FOR TAXES	$ 18.140	$ 18.145	$ 18.146	$ 17.947	$ 17.636	$ 0.000	$ 15.913
INCOME BEFORE TAX DEDUCT.	$ -.645	$ -.650	$ -.651	$ -.452	$ -.141	$ 0.000	$ 1.582
TAX LOSS CARRYFORWARD	-.259	-.904	-1.555	-2.206	-2.657	0.000	N/A
DEPLETION ALLOWANCE	0.000	0.000	0.000	0.000	0.000	0.000	N/A
TAXABLE INCOME	$ -.904	$ -1.555	$ -2.206	$ -2.657	$ -2.798	$ 0.000	N/A
FED. INCOME TAX LIABILITY	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	N/A
INVESTMENT TAX CREDIT	0.000	0.000	0.000	0.000	0.000	0.000	N/A
FEDERAL INCOME TAX PAID	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .254
PROFIT AFTER TAX	$ -1.737	$ -1.733	$ -1.726	$ -1.711	$ -1.526	$ 0.000	$ 1.253
SERVICE LIFE DEPRECIATION	2.825	2.821	2.814	2.799	2.614	0.000	2.358
GROSS CASH FLOW	$ 1.088	$ 1.088	$ 1.088	$ 1.088	$ 1.088	$ 0.000	$ 3.610
AMOUNTS IN $000							
GROSS CASH FLOW	$ 8,705	$ 8,705	$ 8,705	$ 8,705	$ 8,705	$ 0	$ 835,797
CAPITAL EXPENDITURES	29,752	6,995	8,434	0	0	10,000	583,660
WORKING CAPITAL	1,050	0	0	0	0	-32,814	0
NET CASH FLOW	$ -22,097	$ 1,710	$ 271	$ 8,705	$ 8,705	$ 22,814	$ 252,137

NOTE (@) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	1	2	3	4	5	6	7	8
PRODUCTION (THOUSAND TONS)	0	0	0	0	0	0	0	6,500
AMOUNTS PER TON								
REALIZATION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 18.335
OPERATING COST	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 7.530
ROYALTY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.292
ALASKA LICENSE TAX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SERVICE LIFE DEPRECIATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.396
TOTAL COST OF PRODUCTION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 13.218
PROFIT BEFORE TAX	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 5.117
TOTAL COST OF PRODUCTION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 13.218
LESS SERVICE LIFE DEPR.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.396
ADD ACCELERATED DEPR.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.833
COST OF PROD. FOR TAXES	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 16.654
INCOME BEFORE TAX DEDUCT.	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 1.681
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.840
TAXABLE INCOME	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .840
FED. INCOME TAX LIABILITY	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .387
INVESTMENT TAX CREDIT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.329
FEDERAL INCOME TAX PAID	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .057
PROFIT AFTER TAX	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 5.060
SERVICE LIFE DEPRECIATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.396
GROSS CASH FLOW	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 8.456
AMOUNTS IN $000								
GROSS CASH FLOW	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 54,962
CAPITAL EXPENDITURES	2,390	13,006	4,430	2,852	27,126	47,389	101,920	59,788
WORKING CAPITAL	0	0	0	0	0	0	0	15,961
NET CASH FLOW	$ -2,390	$ -13,006	$ -4,430	$ -2,852	$ -27,126	$ -47,389	$ -101,920	$ -20,786

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	9	10	11	12	13	14	15	16
PRODUCTION (THOUSAND TONS)	10,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
AMOUNTS PER TON								
REALIZATION	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335
OPERATING COST	$ 7.800	$ 9.590	$ 11.470	$ 11.700	$ 11.620	$ 10.760	$ 11.570	$ 10.860
ROYALTY	2.292	2.292	2.292	2.292	2.292	2.292	2.292	2.292
ALASKA LICENSE TAX	0.000	0.000	.023	.018	.029	.066	.043	.069
SERVICE LIFE DEPRECIATION	1.793	2.016	2.330	2.367	2.337	2.195	2.290	2.208
TOTAL COST OF PRODUCTION	$ 11.885	$ 13.898	$ 16.115	$ 16.377	$ 16.278	$ 15.313	$ 16.195	$ 15.429
PROFIT BEFORE TAX	$ 6.450	$ 4.437	$ 2.220	$ 1.958	$ 2.057	$ 3.022	$ 2.140	$ 2.906
TOTAL COST OF PRODUCTION	$ 11.885	$ 13.898	$ 16.115	$ 16.377	$ 16.278	$ 15.313	$ 16.195	$ 15.429
LESS SERVICE LIFE DEPR.	1.793	2.016	2.330	2.367	2.337	2.195	2.290	2.208
ADD ACCELERATED DEPR.	3.432	3.577	3.882	3.814	3.562	3.321	3.180	3.139
COST OF PROD. FOR TAXES	$ 13.524	$ 15.459	$ 17.667	$ 17.825	$ 17.503	$ 16.439	$ 17.085	$ 16.360
INCOME BEFORE TAX DEDUCT.	$ 4.811	$ 2.876	$ .668	$ .510	$ .832	$ 1.896	$ 1.250	$ 1.975
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	1.364	1.364	.334	.255	.416	.948	.625	.988
TAXABLE INCOME	$ 3.447	$ 1.512	$ .334	$ .255	$ .416	$ .948	$ .625	$ .988
FED. INCOME TAX LIABILITY	$ 1.586	$ .696	$ .154	$ .117	$ .191	$ .436	$ .287	$ .454
INVESTMENT TAX CREDIT	1.348	.592	.131	.100	.163	.371	.245	.386
FEDERAL INCOME TAX PAID	$ .237	$ .104	$ .023	$ .017	$ .028	$ .065	$ .043	$ .068
PROFIT AFTER TAX	$ 6.213	$ 4.333	$ 2.198	$ 1.941	$ 2.029	$ 2.957	$ 2.097	$ 2.838
SERVICE LIFE DEPRECIATION	1.793	2.016	2.330	2.367	2.337	2.195	2.290	2.208
GROSS CASH FLOW	$ 8.006	$ 6.349	$ 4.527	$ 4.308	$ 4.366	$ 5.152	$ 4.387	$ 5.046
AMOUNTS IN $000								
GROSS CASH FLOW	$ 80,056	$ 76,189	$ 54,328	$ 51,691	$ 52,391	$ 61,824	$ 52,643	$ 60,558
CAPITAL EXPENDITURES	88,288	77,180	27,573	10,783	11,894	8,274	35,830	8,775
WORKING CAPITAL	9,269	10,416	5,709	675	0	-2,677	2,362	-2,054
NET CASH FLOW	$ -17,501	$ -11,407	$ 21,045	$ 40,232	$ 40,497	$ 56,226	$ 14,451	$ 53,837

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	17	18	19	20	21	22	23	24
PRODUCTION (THOUSAND TONS)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
AMOUNTS PER TON								
REALIZATION	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335
OPERATING COST	$ 11.700	$ 11.960	$ 11.960	$ 11.960	$ 11.960	$ 11.960	$ 12.630	$ 12.630
ROYALTY	2.292	2.292	2.292	2.292	2.292	2.292	2.292	2.292
ALASKA LICENSE TAX	.050	.042	.050	.065	.066	.069	.053	.057
SERVICE LIFE DEPRECIATION	2.335	2.370	2.372	2.368	2.372	2.373	2.502	2.503
TOTAL COST OF PRODUCTION	$ 16.377	$ 16.665	$ 16.674	$ 16.685	$ 16.690	$ 16.694	$ 17.477	$ 17.481
PROFIT BEFORE TAX	$ 1.958	$ 1.670	$ 1.661	$ 1.650	$ 1.645	$ 1.641	$ .858	$ .854
TOTAL COST OF PRODUCTION	$ 16.377	$ 16.665	$ 16.674	$ 16.685	$ 16.690	$ 16.694	$ 17.477	$ 17.481
LESS SERVICE LIFE DEPR.	2.335	2.370	2.372	2.368	2.372	2.373	2.502	2.503
ADD ACCELERATED DEPR.	2.869	2.822	2.595	2.147	2.111	2.039	1.834	1.726
COST OF PROD. FOR TAXES	$ 16.910	$ 17.116	$ 16.897	$ 16.464	$ 16.429	$ 16.360	$ 16.809	$ 16.704
INCOME BEFORE TAX DEDUCT.	$ 1.425	$ 1.219	$ 1.438	$ 1.871	$ 1.906	$ 1.975	$ 1.526	$ 1.631
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	.712	.610	.719	.935	.953	.988	.763	.815
TAXABLE INCOME	$ .712	$ .610	$ .719	$ .935	$ .953	$ .988	$ .763	$ .815
FED. INCOME TAX LIABILITY	$ .328	$ .280	$ .331	$ .430	$ .438	$ .454	$ .351	$ .375
INVESTMENT TAX CREDIT	.279	.239	.281	.366	.210	.197	.149	.108
FEDERAL INCOME TAX PAID	$ .049	$ .042	$ .049	$ .064	$ .228	$ .257	$ .202	$ .267
PROFIT AFTER TAX	$ 1.910	$ 1.629	$ 1.611	$ 1.586	$ 1.416	$ 1.384	$ .656	$ .587
SERVICE LIFE DEPRECIATION	2.335	2.370	2.372	2.368	2.372	2.373	2.502	2.503
GROSS CASH FLOW	$ 4.245	$ 3.999	$ 3.984	$ 3.954	$ 3.788	$ 3.757	$ 3.158	$ 3.090
AMOUNTS IN $000								
GROSS CASH FLOW	$ 50,937	$ 47,988	$ 47,806	$ 47,445	$ 45,460	$ 45,087	$ 37,902	$ 37,077
CAPITAL EXPENDITURES	20,880	9,417	12,319	21,420	22,484	24,877	18,740	13,450
WORKING CAPITAL	2,462	758	23	45	4	7	1,963	11
NET CASH FLOW	$ 27,594	$ 37,812	$ 35,464	$ 25,980	$ 22,973	$ 20,203	$ 17,199	$ 23,616

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	25	26	27	28	29	30	31	32
PRODUCTION (THOUSAND TONS)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
AMOUNTS PER TON								
REALIZATION	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335
OPERATING COST	$ 12.630	$ 12.630	$ 12.630	$ 11.620	$ 11.620	$ 11.620	$ 11.620	$ 11.620
ROYALTY	2.292	2.292	2.292	2.292	2.292	2.292	2.292	2.292
ALASKA LICENSE TAX	.062	.060	.062	.101	.107	.119	.114	.116
SERVICE LIFE DEPRECIATION	2.504	2.504	2.504	2.340	2.339	2.336	2.343	2.330
TOTAL COST OF PRODUCTION	$ 17.487	$ 17.487	$ 17.488	$ 16.353	$ 16.358	$ 16.366	$ 16.369	$ 16.359
PROFIT BEFORE TAX	$ .848	$ .848	$ .847	$ 1.982	$ 1.977	$ 1.969	$ 1.966	$ 1.976
TOTAL COST OF PRODUCTION	$ 17.487	$ 17.487	$ 17.488	$ 16.353	$ 16.358	$ 16.366	$ 16.369	$ 16.359
LESS SERVICE LIFE DEPR.	2.504	2.504	2.504	2.340	2.339	2.336	2.343	2.330
ADD ACCELERATED DEPR.	1.585	1.616	1.565	1.510	1.409	1.235	1.299	1.270
COST OF PROD. FOR TAXES	$ 16.568	$ 16.599	$ 16.549	$ 15.522	$ 15.428	$ 15.266	$ 15.325	$ 15.298
INCOME BEFORE TAX DEDUCT.	$ 1.767	$ 1.736	$ 1.786	$ 2.813	$ 2.907	$ 3.069	$ 3.010	$ 3.037
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	.883	.868	.893	1.364	1.364	1.364	1.364	1.364
TAXABLE INCOME	$ .883	$ .868	$ .893	$ 1.449	$ 1.543	$ 1.706	$ 1.646	$ 1.673
FED. INCOME TAX LIABILITY	$ .406	$ .399	$ .411	$ .667	$ .710	$ .785	$ .757	$ .770
INVESTMENT TAX CREDIT	.202	.184	.184	.085	.074	.135	.255	.108
FEDERAL INCOME TAX PAID	$ .205	$ .215	$ .227	$ .582	$ .636	$ .650	$ .502	$ .661
PROFIT AFTER TAX	$ .643	$ .633	$ .620	$ 1.400	$ 1.341	$ 1.319	$ 1.463	$ 1.315
SERVICE LIFE DEPRECIATION	2.504	2.504	2.504	2.340	2.339	2.336	2.343	2.330
GROSS CASH FLOW	$ 3.147	$ 3.138	$ 3.124	$ 3.740	$ 3.680	$ 3.655	$ 3.806	$ 3.646
AMOUNTS IN $000								
GROSS CASH FLOW	$ 37,763	$ 37,651	$ 37,486	$ 44,886	$ 44,156	$ 43,861	$ 45,677	$ 43,747
CAPITAL EXPENDITURES	25,380	23,417	23,149	10,520	8,957	17,049	32,668	13,539
WORKING CAPITAL	14	0	2	-2,915	20	34	0	0
NET CASH FLOW	$ 12,368	$ 14,234	$ 14,335	$ 37,281	$ 35,180	$ 26,778	$ 13,009	$ 30,208

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 B
BELUGA COAL FIELD HYPOTHETICAL MINE
CASE 2
12,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	33	34	35	36	37	38	TOTAL
PRODUCTION (THOUSAND TONS)	12,000	12,000	12,000	12,000	12,000	0	352,500
AMOUNTS PER TON							
REALIZATION	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 18.335	$ 0.000	$ 18.335
OPERATING COST	$ 12.600	$ 12.600	$ 12.600	$ 12.600	$ 12.600	$ 0.000	$ 11.707
ROYALTY	2.292	2.292	2.292	2.292	2.292	0.000	2.292
ALASKA LICENSE TAX	.068	.066	.070	.085	.093	0.000	.062
SERVICE LIFE DEPRECIATION	2.484	2.478	2.468	2.451	2.293	0.000	2.371
TOTAL COST OF PRODUCTION	$ 17.444	$ 17.436	$ 17.430	$ 17.428	$ 17.278	$ 0.000	$ 16.432
PROFIT BEFORE TAX	$ .891	$ .899	$ .905	$ .907	$ 1.057	$ 0.000	$ 1.903
TOTAL COST OF PRODUCTION	$ 17.444	$ 17.436	$ 17.430	$ 17.428	$ 17.278	$ 0.000	$ 16.432
LESS SERVICE LIFE DEPR.	2.484	2.478	2.468	2.451	2.293	0.000	2.371
ADD ACCELERATED DEPR.	1.409	1.471	1.366	.913	.676	0.000	2.264
COST OF PROD. FOR TAXES	$ 16.369	$ 16.429	$ 16.327	$ 15.890	$ 15.661	$ 0.000	$ 16.325
INCOME BEFORE TAX DEDUCT.	$ 1.966	$ 1.906	$ 2.008	$ 2.445	$ 2.674	$ 0.000	$ 2.010
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	N/A
DEPLETION ALLOWANCE	.983	.953	1.004	1.222	1.337	0.000	N/A
TAXABLE INCOME	$ .983	$ .953	$ 1.004	$ 1.222	$ 1.337	$ 0.000	N/A
FED. INCOME TAX LIABILITY	$ .452	$ .438	$ .462	$ .562	$ .615	$ 0.000	N/A
INVESTMENT TAX CREDIT	.177	.059	.088	0.000	0.000	0.000	N/A
FEDERAL INCOME TAX PAID	$ .276	$ .380	$ .373	$ .562	$ .615	$ 0.000	$ .259
PROFIT AFTER TAX	$ .616	$ .520	$ .532	$ .345	$ .442	$ 0.000	$ 1.644
SERVICE LIFE DEPRECIATION	2.484	2.478	2.468	2.451	2.293	0.000	2.371
GROSS CASH FLOW	$ 3.099	$ 2.997	$ 3.000	$ 2.796	$ 2.735	$ 0.000	$ 4.014
AMOUNTS IN $000							
GROSS CASH FLOW	$ 37,189	$ 35,964	$ 35,998	$ 33,547	$ 32,820	$ 0	$1,415,089
CAPITAL EXPENDITURES	22,440	7,265	10,950	0	0	10,000	876,419
WORKING CAPITAL	2,790	0	4	46	24	-44,955	0
NET CASH FLOW	$ 11,960	$ 28,699	$ 25,044	$ 33,502	$ 32,796	$ 34,955	$ 538,670

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	1	2	3	4	5	6	7	8
PRODUCTION (THOUSAND TONS)	0	0	0	0	0	1,700	2,000	2,000
AMOUNTS PER TON								
REALIZATION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 22.075	$ 22.075	$ 22.075
OPERATING COST	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 9.550	$ 8.550	$ 10.980
ROYALTY	0.000	0.000	0.000	0.000	0.000	2.759	2.759	2.759
ALASKA LICENSE TAX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SERVICE LIFE DEPRECIATION	0.000	0.000	0.000	0.000	0.000	4.616	2.118	2.504
TOTAL COST OF PRODUCTION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 16.925	$ 13.428	$ 16.243
PROFIT BEFORE TAX	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 5.150	$ 8.647	$ 5.832
TOTAL COST OF PRODUCTION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 16.925	$ 13.428	$ 16.243
LESS SERVICE LIFE DEPR.	0.000	0.000	0.000	0.000	0.000	4.616	2.118	2.504
ADD ACCELERATED DEPR.	0.000	0.000	0.000	0.000	0.000	8.576	4.200	4.593
COST OF PROD. FOR TAXES	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 20.885	$ 15.510	$ 18.333
INCOME BEFORE TAX DEDUCT.	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 1.190	$ 6.566	$ 3.743
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	0.000	0.000	0.000	0.000	0.000	.595	1.642	1.642
TAXABLE INCOME	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .595	$ 4.924	$ 2.101
FED. INCOME TAX LIABILITY	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .274	$ 2.265	$ .966
INVESTMENT TAX CREDIT	0.000	0.000	0.000	0.000	0.000	.235	1.927	.823
FEDERAL INCOME TAX PAID	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .039	$ .338	$ .143
PROFIT AFTER TAX	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 5.111	$ 8.310	$ 5.689
SERVICE LIFE DEPRECIATION	0.000	0.000	0.000	0.000	0.000	4.616	2.118	2.504
GROSS CASH FLOW	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 9.727	$ 10.428	$ 8.193
AMOUNTS IN $000								
GROSS CASH FLOW	$ 0	$ 0	$ 0	$ 0	$ 0	$ 16,536	$ 20,856	$ 16,385
CAPITAL EXPENDITURES	712	2,777	9,582	16,796	16,107	23,125	5,960	12,514
WORKING CAPITAL	0	0	0	0	0	5,231	423	1,215
NET CASH FLOW	$ -712	$ -2,777	$ -9,582	$ -16,796	$ -16,107	$ -11,821	$ 14,472	$ 2,656

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	9	10	11	12	13	14	15	16
PRODUCTION (THOUSAND TONS)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
AMOUNTS PER TON								
REALIZATION	$ 22.075	$ 22.075	$ 22.075	$ 22.075	$ 22.075	$ 22.075	$ 22.075	$ 22.075
OPERATING COST	$ 12.020	$ 13.090	$ 13.930	$ 15.270	$ 15.510	$ 16.410	$ 16.060	$ 12.610
ROYALTY	2.759	2.759	2.759	2.759	2.759	2.759	2.759	2.759
ALASKA LICENSE TAX	0.000	0.000	.037	0.000	0.000	0.000	0.000	.075
SERVICE LIFE DEPRECIATION	3.130	3.361	3.452	3.729	3.778	3.813	3.876	3.263
TOTAL COST OF PRODUCTION	$ 17.909	$ 19.210	$ 20.178	$ 21.758	$ 22.047	$ 22.982	$ 22.696	$ 18.708
PROFIT BEFORE TAX	$ 4.166	$ 2.865	$ 1.897	$ .317	$ .028	$ -.907	$ -.621	$ 3.368
TOTAL COST OF PRODUCTION	$ 17.909	$ 19.210	$ 20.178	$ 21.758	$ 22.047	$ 22.982	$ 22.696	$ 18.708
LESS SERVICE LIFE DEPR.	3.130	3.361	3.452	3.729	3.778	3.813	3.876	3.263
ADD ACCELERATED DEPR.	4.671	4.828	4.246	4.152	3.635	3.483	3.187	3.321
COST OF PROD. FOR TAXES	$ 19.451	$ 20.677	$ 20.972	$ 22.181	$ 21.904	$ 22.652	$ 22.007	$ 18.766
INCOME BEFORE TAX DEDUCT.	$ 2.624	$ 1.398	$ 1.103	$ -.106	$ .171	$ -.577	$ .068	$ 3.309
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	-.106	-.020	-.598	-.563
DEPLETION ALLOWANCE	1.312	.699	.551	0.000	.086	0.000	.034	1.642
TAXABLE INCOME	$ 1.312	$ .699	$ .551	$ -.106	$ -.020	$ -.598	$ -.563	$ 1.104
FED. INCOME TAX LIABILITY	$ .604	$ .322	$ .254	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .508
INVESTMENT TAX CREDIT	.515	.275	.218	0.000	0.000	0.000	0.000	.434
FEDERAL INCOME TAX PAID	$ .089	$ .046	$ .036	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .074
PROFIT AFTER TAX	$ 4.077	$ 2.818	$ 1.861	$ .317	$ .028	$ -.907	$ -.621	$ 3.293
SERVICE LIFE DEPRECIATION	3.130	3.361	3.452	3.729	3.778	3.813	3.876	3.263
GROSS CASH FLOW	$ 7.207	$ 6.179	$ 5.313	$ 4.046	$ 3.806	$ 2.906	$ 3.256	$ 6.556
AMOUNTS IN $000								
GROSS CASH FLOW	$ 14,414	$ 12,359	$ 10,625	$ 8,092	$ 7,612	$ 5,812	$ 6,512	$ 13,112
CAPITAL EXPENDITURES	6,042	6,041	2,841	4,348	3,548	2,287	4,811	3,831
WORKING CAPITAL	520	535	439	651	120	450	0	-1,862
NET CASH FLOW	$ 7,852	$ 5,783	$ 7,346	$ 3,092	$ 3,943	$ 3,074	$ 1,701	$ 11,144

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	17	18	19	20	21	22	23	24
PRODUCTION (THOUSAND TONS)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
AMOUNTS PER TON								
REALIZATION	$ 22.075	$ 22.075	$ 22.075	$ 22.075	$ 22.075	$ 22.075	$ 22.075	$ 22.075
OPERATING COST	$ 12.610	$ 12.610	$ 12.610	$ 12.610	$ 13.550	$ 13.550	$ 13.550	$ 13.550
ROYALTY	2.759	2.759	2.759	2.759	2.759	2.759	2.759	2.759
ALASKA LICENSE TAX	.130	.146	.153	.178	.156	.154	.168	.195
SERVICE LIFE DEPRECIATION	3.257	3.255	3.257	3.253	3.523	3.513	3.500	3.470
TOTAL COST OF PRODUCTION	$ 18.757	$ 18.770	$ 18.780	$ 18.800	$ 19.989	$ 19.976	$ 19.978	$ 19.973
PROFIT BEFORE TAX	$ 3.319	$ 3.305	$ 3.295	$ 3.275	$ 2.086	$ 2.100	$ 2.098	$ 2.102
TOTAL COST OF PRODUCTION	$ 18.757	$ 18.770	$ 18.780	$ 18.800	$ 19.989	$ 19.976	$ 19.978	$ 19.973
LESS SERVICE LIFE DEPR.	3.257	3.255	3.257	3.253	3.523	3.513	3.500	3.470
ADD ACCELERATED DEPR.	3.050	2.811	2.700	2.327	1.716	1.753	1.531	1.130
COST OF PROD. FOR TAXES	$ 18.549	$ 18.326	$ 18.222	$ 17.874	$ 18.181	$ 18.216	$ 18.009	$ 17.634
INCOME BEFORE TAX DEDUCT.	$ 3.526	$ 3.749	$ 3.853	$ 4.201	$ 3.894	$ 3.859	$ 4.067	$ 4.441
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	1.642	1.642	1.642	1.642	1.642	1.642	1.642	1.642
TAXABLE INCOME	$ 1.884	$ 2.107	$ 2.211	$ 2.559	$ 2.252	$ 2.217	$ 2.425	$ 2.800
FED. INCOME TAX LIABILITY	$ .867	$ .969	$ 1.017	$ 1.177	$ 1.036	$ 1.020	$ 1.115	$ 1.288
INVESTMENT TAX CREDIT	.739	.707	.180	.133	.217	.124	.094	0.000
FEDERAL INCOME TAX PAID	$ .128	$ .262	$ .837	$ 1.044	$ .819	$ .896	$ 1.021	$ 1.288
PROFIT AFTER TAX	$ 3.191	$ 3.043	$ 2.458	$ 2.231	$ 1.267	$ 1.203	$ 1.076	$ .814
SERVICE LIFE DEPRECIATION	3.257	3.255	3.257	3.253	3.523	3.513	3.500	3.470
GROSS CASH FLOW	$ 6.448	$ 6.298	$ 5.716	$ 5.484	$ 4.791	$ 4.716	$ 4.576	$ 4.283
AMOUNTS IN $000								
GROSS CASH FLOW	$ 12,896	$ 12,595	$ 11,431	$ 10,968	$ 9,582	$ 9,432	$ 9,153	$ 8,567
CAPITAL EXPENDITURES	1,597	2,221	3,676	2,674	4,436	2,512	1,902	0
WORKING CAPITAL	27	8	4	12	459	0	6	13
NET CASH FLOW	$ 11,271	$ 10,366	$ 7,752	$ 8,282	$ 4,686	$ 6,919	$ 7,244	$ 8,554

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 C
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 3
INCREMENTAL 2,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	25	26	TOTAL
PRODUCTION (THOUSAND TONS)	2,000	0	39,700
AMOUNTS PER TON			
REALIZATION	$ 22.075	$ 0.000	$ 22.075
OPERATING COST	$ 13.550	$ 0.000	$ 13.135
ROYALTY	2.759	0.000	2.759
ALASKA LICENSE TAX	.212	0.000	.081
SERVICE LIFE DEPRECIATION	2.982	0.000	3.373
TOTAL COST OF PRODUCTION	$ 19.503	$ 0.000	$ 19.349
PROFIT BEFORE TAX	$ 2.572	$ 0.000	$ 2.726
TOTAL COST OF PRODUCTION	$ 19.503	$ 0.000	$ 19.349
LESS SERVICE LIFE DEPR.	2.982	0.000	3.373
ADD ACCELERATED DEPR.	.868	0.000	3.299
COST OF PROD. FOR TAXES	$ 17.389	$ 0.000	$ 19.275
INCOME BEFORE TAX DEDUCT.	$ 4.686	$ 0.000	$ 2.800
TAX LOSS CARRYFORWARD	0.000	0.000	N/A
DEPLETION ALLOWANCE	1.642	0.000	N/A
TAXABLE INCOME	$ 3.044	$ 0.000	N/A
FED. INCOME TAX LIABILITY	$ 1.400	$ 0.000	N/A
INVESTMENT TAX CREDIT	0.000	0.000	N/A
FEDERAL INCOME TAX PAID	$ 1.400	$ 0.000	$ .426
PROFIT AFTER TAX	$ 1.172	$ 0.000	$ 2.300
SERVICE LIFE DEPRECIATION	2.982	0.000	3.373
GROSS CASH FLOW	$ 4.154	$ 0.000	$ 5.674
AMOUNTS IN $000			
GROSS CASH FLOW	$ 8,308	$ 0	$ 225,245
CAPITAL EXPENDITURES	0	10,000	150,341
WORKING CAPITAL	9	-8,261	0
NET CASH FLOW	$ 8,299	$ -1,739	$ 74,904

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	1	2	3	4	5	6	7	8
PRODUCTION (THOUSAND TONS)	0	0	0	0	0	0	0	1,000
AMOUNTS PER TON								
REALIZATION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 25.403
OPERATING COST	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 12.399
ROYALTY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.175
ALASKA LICENSE TAX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SERVICE LIFE DEPRECIATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.940
TOTAL COST OF PRODUCTION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 25.514
PROFIT BEFORE TAX	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ -.111
TOTAL COST OF PRODUCTION	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 25.514
LESS SERVICE LIFE DEPR.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.940
ADD ACCELERATED DEPR.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.014
COST OF PROD. FOR TAXES	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 37.588
INCOME BEFORE TAX DEDUCT.	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ -12.185
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TAXABLE INCOME	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ -12.185
FED. INCOME TAX LIABILITY	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000
INVESTMENT TAX CREDIT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEDERAL INCOME TAX PAID	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000
PROFIT AFTER TAX	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ -.111
SERVICE LIFE DEPRECIATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.940
GROSS CASH FLOW	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 9.829
AMOUNTS IN $000								
GROSS CASH FLOW	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 9,829
CAPITAL EXPENDITURES	2,390	1,846	1,846	4,637	21,290	25,905	24,788	17,484
WORKING CAPITAL	0	0	0	0	0	0	0	3,894
NET CASH FLOW	$ -2,390	$ -1,846	$ -1,846	$ -4,637	$ -21,290	$ -25,905	$ -24,788	$ -11,549

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	9	10	11	12	13	14	15	16
PRODUCTION (THOUSAND TONS)	1,000	2,000	2,000	2,000	2,000	2,000	2,000	3,000
AMOUNTS PER TON								
REALIZATION	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403
OPERATING COST	$ 15.480	$ 13.470	$ 14.920	$ 14.660	$ 15.250	$ 13.400	$ 13.390	$ 13.090
ROYALTY	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175
ALASKA LICENSE TAX	0.000	0.000	0.000	0.000	0.000	0.000	.046	.257
SERVICE LIFE DEPRECIATION	4.642	3.276	3.561	3.495	3.635	3.458	3.630	3.027
TOTAL COST OF PRODUCTION	$ 23.298	$ 19.922	$ 21.656	$ 21.331	$ 22.061	$ 20.033	$ 20.241	$ 19.549
PROFIT BEFORE TAX	$ 2.106	$ 5.482	$ 3.747	$ 4.073	$ 3.343	$ 5.370	$ 5.162	$ 5.854
TOTAL COST OF PRODUCTION	$ 23.298	$ 19.922	$ 21.656	$ 21.331	$ 22.061	$ 20.033	$ 20.241	$ 19.549
LESS SERVICE LIFE DEPR.	4.642	3.276	3.561	3.495	3.635	3.458	3.630	3.027
ADD ACCELERATED DEPR.	10.570	5.544	5.778	5.500	5.074	5.005	4.515	3.312
COST OF PROD. FOR TAXES	$ 29.225	$ 22.189	$ 23.873	$ 23.335	$ 23.499	$ 21.580	$ 21.126	$ 19.834
INCOME BEFORE TAX DEDUCT.	$ -3.822	$ 3.214	$ 1.530	$ 2.068	$ 1.904	$ 3.823	$ 4.277	$ 5.570
TAX LOSS CARRYFORWARD	-12.185	-8.004	-6.396	-5.631	-4.597	-3.646	-1.712	0.000
DEPLETION ALLOWANCE	0.000	1.607	.765	1.034	.952	1.889	1.889	1.889
TAXABLE INCOME	$ -16.007	$ -6.396	$ -5.631	$ -4.597	$ -3.646	$ -1.712	$ .676	$ 3.680
FED. INCOME TAX LIABILITY	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .311	$ 1.693
INVESTMENT TAX CREDIT	0.000	0.000	0.000	0.000	0.000	0.000	.266	1.440
FEDERAL INCOME TAX PAID	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ 0.000	$ .045	$ .253
PROFIT AFTER TAX	$ 2.106	$ 5.482	$ 3.747	$ 4.073	$ 3.343	$ 5.370	$ 5.118	$ 5.602
SERVICE LIFE DEPRECIATION	4.642	3.276	3.561	3.495	3.635	3.458	3.630	3.027
GROSS CASH FLOW	$ 6.748	$ 8.758	$ 7.308	$ 7.568	$ 6.978	$ 8.828	$ 8.748	$ 8.629
AMOUNTS IN $000								
GROSS CASH FLOW	$ 6,748	$ 17,516	$ 14,616	$ 15,136	$ 13,956	$ 17,656	$ 17,495	$ 25,886
CAPITAL EXPENDITURES	7,387	16,129	3,495	1,899	3,433	8,726	11,099	10,067
WORKING CAPITAL	770	3,659	725	0	165	-925	18	4,086
NET CASH FLOW	$ -1,410	$ -2,272	$ 10,396	$ 13,237	$ 10,358	$ 9,855	$ 6,378	$ 11,732

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	17	18	19	20	21	22	23	24
PRODUCTION (THOUSAND TONS)	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
AMOUNTS PER TON								
REALIZATION	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403
OPERATING COST	$ 14.000	$ 14.140	$ 14.680	$ 14.550	$ 14.340	$ 13.370	$ 13.370	$ 13.370
ROYALTY	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175
ALASKA LICENSE TAX	.180	.170	.127	.141	.196	.277	.303	.309
SERVICE LIFE DEPRECIATION	3.397	3.467	3.579	3.553	3.429	3.318	3.328	3.336
TOTAL COST OF PRODUCTION	$ 20.752	$ 20.953	$ 21.561	$ 21.420	$ 21.140	$ 20.141	$ 20.177	$ 20.190
PROFIT BEFORE TAX	$ 4.651	$ 4.451	$ 3.842	$ 3.983	$ 4.263	$ 5.262	$ 5.227	$ 5.213
TOTAL COST OF PRODUCTION	$ 20.752	$ 20.953	$ 21.561	$ 21.420	$ 21.140	$ 20.141	$ 20.177	$ 20.190
LESS SERVICE LIFE DEPR.	3.397	3.467	3.579	3.553	3.429	3.318	3.328	3.336
ADD ACCELERATED DEPR.	3.579	3.590	3.759	3.613	2.991	2.716	2.324	2.234
COST OF PROD. FOR TAXES	$ 20.934	$ 21.075	$ 21.742	$ 21.480	$ 20.702	$ 19.538	$ 19.172	$ 19.089
INCOME BEFORE TAX DEDUCT.	$ 4.469	$ 4.328	$ 3.662	$ 3.923	$ 4.701	$ 5.865	$ 6.231	$ 6.315
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	1.889	1.889	1.831	1.889	1.889	1.889	1.889	1.889
TAXABLE INCOME	$ 2.580	$ 2.439	$ 1.831	$ 2.034	$ 2.811	$ 3.976	$ 4.342	$ 4.425
FED. INCOME TAX LIABILITY	$ 1.187	$ 1.122	$ .842	$ .936	$ 1.293	$ 1.829	$ 1.997	$ 2.036
INVESTMENT TAX CREDIT	1.010	.955	.717	.796	.560	.219	.207	.216
FEDERAL INCOME TAX PAID	$ .177	$ .167	$ .125	$ .139	$ .733	$ 1.609	$ 1.790	$ 1.819
PROFIT AFTER TAX	$ 4.474	$ 4.284	$ 3.717	$ 3.844	$ 3.530	$ 3.653	$ 3.437	$ 3.394
SERVICE LIFE DEPRECIATION	3.397	3.467	3.579	3.553	3.429	3.318	3.328	3.336
GROSS CASH FLOW	$ 7.871	$ 7.751	$ 7.296	$ 7.397	$ 6.959	$ 6.971	$ 6.765	$ 6.730
AMOUNTS IN $000								
GROSS CASH FLOW	$ 23,614	$ 23,253	$ 21,888	$ 22,192	$ 20,877	$ 20,913	$ 20,294	$ 20,189
CAPITAL EXPENDITURES	6,753	4,148	5,863	2,063	6,962	6,729	6,429	6,732
WORKING CAPITAL	625	98	373	0	0	-870	19	4
NET CASH FLOW	$ 16,236	$ 19,008	$ 15,652	$ 20,129	$ 13,915	$ 15,054	$ 13,846	$ 13,453

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

	25	26	27	28	29	30	31	32
PRODUCTION (THOUSAND TONS)	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
AMOUNTS PER TON								
REALIZATION	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403	$ 25.403
OPERATING COST	$ 13.370	$ 13.370	$ 13.370	$ 13.410	$ 13.410	$ 13.410	$ 13.410	$ 13.410
ROYALTY	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175
ALASKA LICENSE TAX	.309	.312	.326	.339	.355	.350	.372	.381
SERVICE LIFE DEPRECIATION	3.329	3.335	3.320	3.310	3.300	3.315	3.264	2.927
TOTAL COST OF PRODUCTION	$ 20.184	$ 20.192	$ 20.191	$ 20.234	$ 20.241	$ 20.251	$ 20.222	$ 19.894
PROFIT BEFORE TAX	$ 5.220	$ 5.211	$ 5.212	$ 5.169	$ 5.163	$ 5.153	$ 5.182	$ 5.510
TOTAL COST OF PRODUCTION	$ 20.184	$ 20.192	$ 20.191	$ 20.234	$ 20.241	$ 20.251	$ 20.222	$ 19.894
LESS SERVICE LIFE DEPR.	3.329	3.335	3.320	3.310	3.300	3.315	3.264	2.927
ADD ACCELERATED DEPR.	2.227	2.191	1.980	1.735	1.490	1.559	1.227	1.087
COST OF PROD. FOR TAXES	$ 19.082	$ 19.048	$ 18.851	$ 18.659	$ 18.430	$ 18.494	$ 18.184	$ 18.054
INCOME BEFORE TAX DEDUCT.	$ 6.322	$ 6.355	$ 6.552	$ 6.744	$ 6.973	$ 6.909	$ 7.219	$ 7.350
TAX LOSS CARRYFORWARD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPLETION ALLOWANCE	1.889	1.889	1.889	1.889	1.889	1.889	1.889	1.889
TAXABLE INCOME	$ 4.432	$ 4.466	$ 4.663	$ 4.855	$ 5.084	$ 5.020	$ 5.330	$ 5.460
FED. INCOME TAX LIABILITY	$ 2.039	$ 2.054	$ 2.145	$ 2.233	$ 2.339	$ 2.309	$ 2.452	$ 2.512
INVESTMENT TAX CREDIT	.112	.224	.055	.114	.245	.197	0.000	0.000
FEDERAL INCOME TAX PAID	$ 1.926	$ 1.830	$ 2.090	$ 2.119	$ 2.094	$ 2.112	$ 2.452	$ 2.512
PROFIT AFTER TAX	$ 3.293	$ 3.381	$ 3.122	$ 3.049	$ 3.069	$ 3.041	$ 2.730	$ 2.998
SERVICE LIFE DEPRECIATION	3.329	3.335	3.320	3.310	3.300	3.315	3.264	2.927
GROSS CASH FLOW	$ 6.622	$ 6.716	$ 6.443	$ 6.359	$ 6.369	$ 6.355	$ 5.994	$ 5.925
AMOUNTS IN $000								
GROSS CASH FLOW	$ 19,867	$ 20,148	$ 19,328	$ 19,078	$ 19,107	$ 19,066	$ 17,982	$ 17,774
CAPITAL EXPENDITURES	3,475	6,847	1,689	3,527	7,532	6,233	0	0
WORKING CAPITAL		2	10	40	12	0	13	7
NET CASH FLOW	$ 16,391	$ 13,299	$ 17,629	$ 15,511	$ 11,563	$ 12,833	$ 17,969	$ 17,768

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

TABLE 5 D
NENANA COAL FIELD HYPOTHETICAL MINE
CASE 4
3,000,000 TONS PER YEAR
LEVELIZED SALES REALIZATION
(AT 8.2% REAL DISCOUNT RATE)a

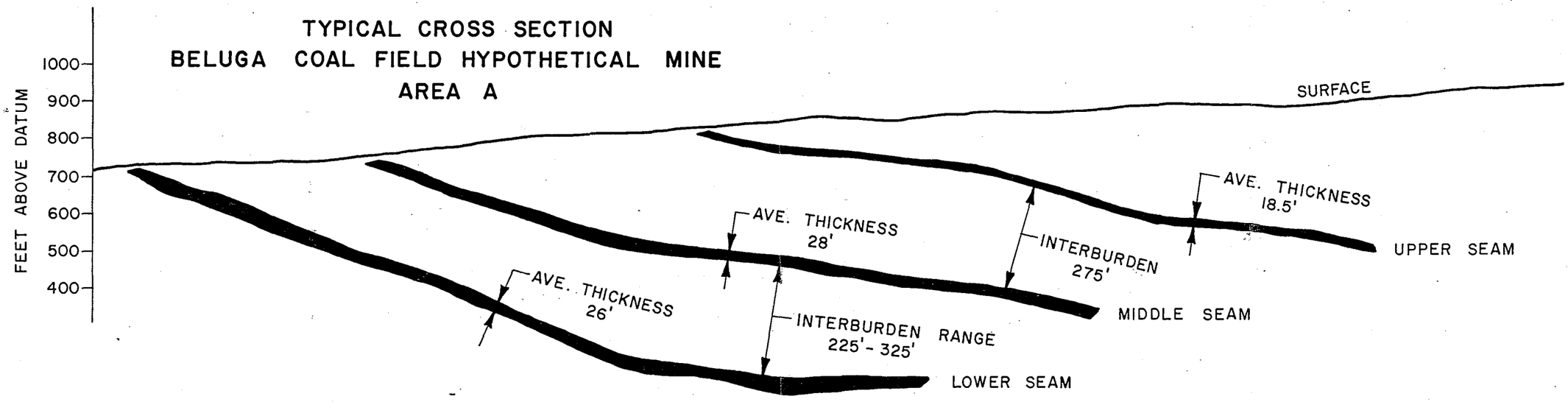
		33		TOTAL
PRODUCTION (THOUSAND TONS)		0		65,000
AMOUNTS PER TON				
REALIZATION	$	0.000	$	25.403
OPERATING COST	$	0.000	$	13.758
ROYALTY		0.000		3.175
ALASKA LICENSE TAX		0.000		.219
SERVICE LIFE DEPRECIATION		0.000		3.482
TOTAL COST OF PRODUCTION	$	0.000	$	20.633
PROFIT BEFORE TAX	$	0.000	$	4.770
TOTAL COST OF PRODUCTION	$	0.000	$	20.633
LESS SERVICE LIFE DEPR.		0.000		3.482
ADD ACCELERATED DEPR.		0.000		3.388
COST OF PROD. FOR TAXES	$	0.000	$	20.540
INCOME BEFORE TAX DEDUCT.	$	0.000	$	4.863
TAX LOSS CARRYFORWARD		0.000		N/A
DEPLETION ALLOWANCE		0.000		N/A
TAXABLE INCOME	$	0.000		N/A
FED. INCOME TAX LIABILITY	$	0.000		N/A
INVESTMENT TAX CREDIT		0.000		N/A
FEDERAL INCOME TAX PAID	$	0.000	$	1.107
PROFIT AFTER TAX	$	0.000	$	3.663
SERVICE LIFE DEPRECIATION		0.000		3.482
GROSS CASH FLOW	$	0.000	$	7.145
AMOUNTS IN $000				
GROSS CASH FLOW	$	0	$	464,408
CAPITAL EXPENDITURES		10,000		247,405
WORKING CAPITAL		-12,725		0
NET CASH FLOW	$	2,725	$	217,003

NOTE (a) REAL DISCOUNT RATE OF 8.2 % REFLECTS UNDERLYING RATE OF INFLATION OF 5.5 % AND NOMINAL RATE OF RETURN OF 14.2 %.

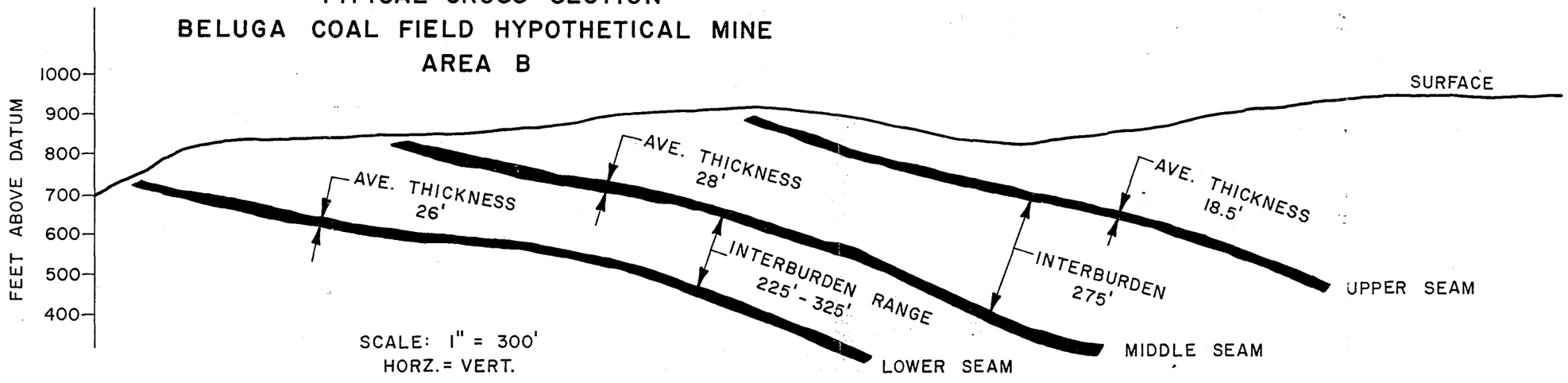
FIGURES

1 to 5

TYPICAL CROSS SECTION
BELUGA COAL FIELD HYPOTHETICAL MINE
AREA A



TYPICAL CROSS SECTION
BELUGA COAL FIELD HYPOTHETICAL MINE
AREA B

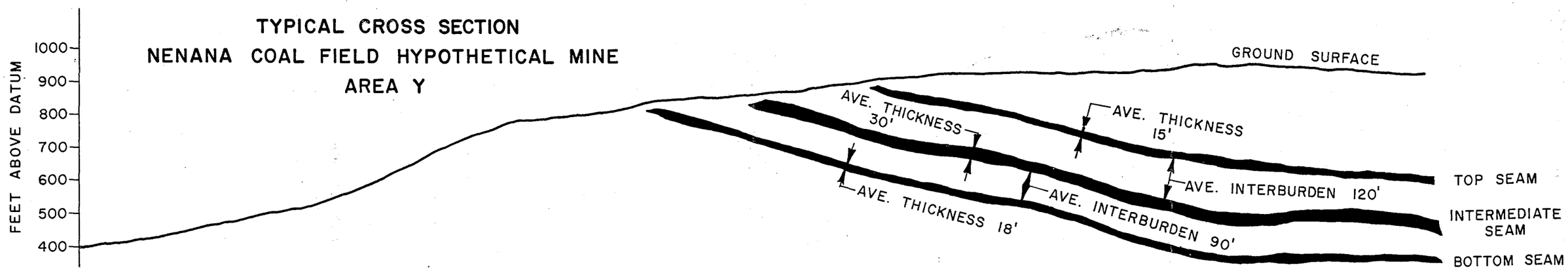


SCALE: 1" = 300'
HORZ. = VERT.

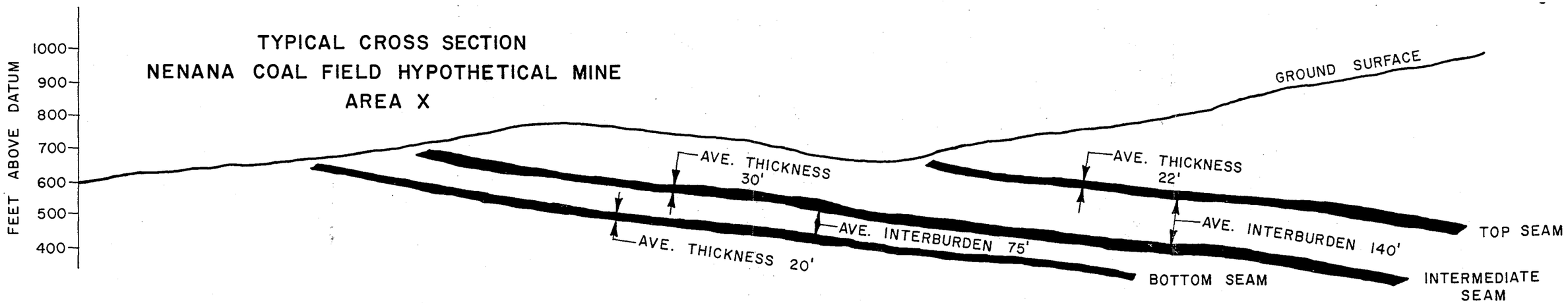
PAUL WEIR COMPANY
INCORPORATED
CHICAGO, ILLINOIS 60606

FIGURE 2

TYPICAL CROSS SECTION
NENANA COAL FIELD HYPOTHETICAL MINE
AREA Y



TYPICAL CROSS SECTION
NENANA COAL FIELD HYPOTHETICAL MINE
AREA X

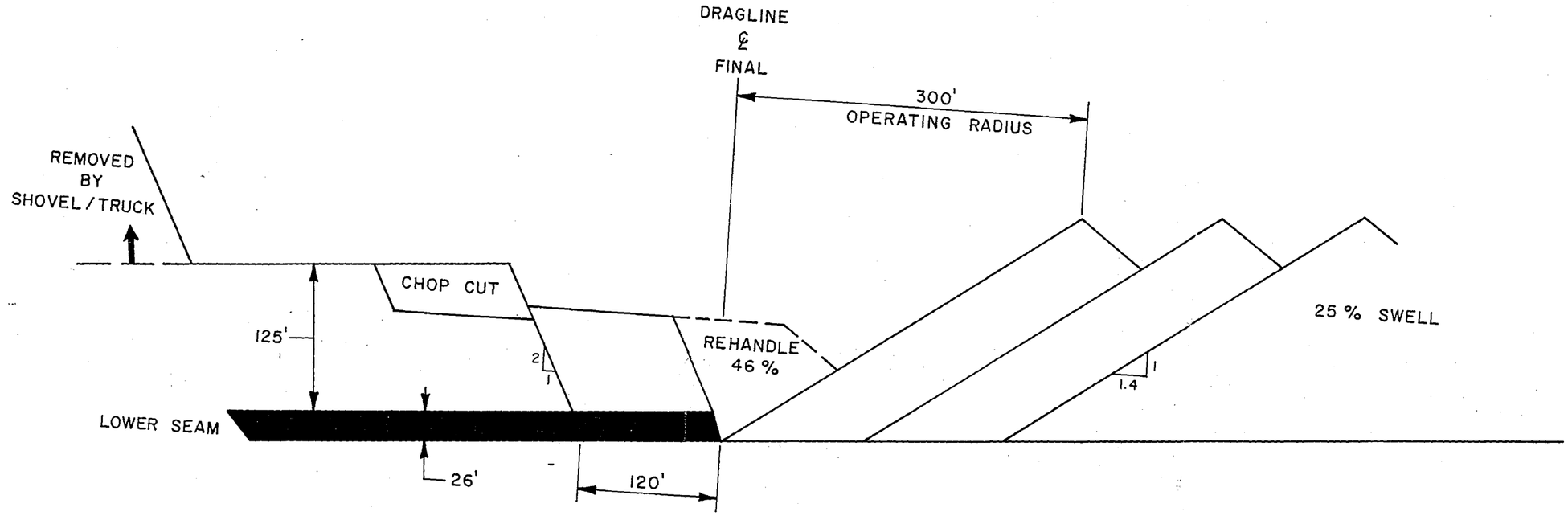


SCALE: 1" = 300'
HORZ. = VERT.

PAUL WEIR COMPANY
INCORPORATED
CHICAGO, ILLINOIS 60606

2988-J

FIGURE 3

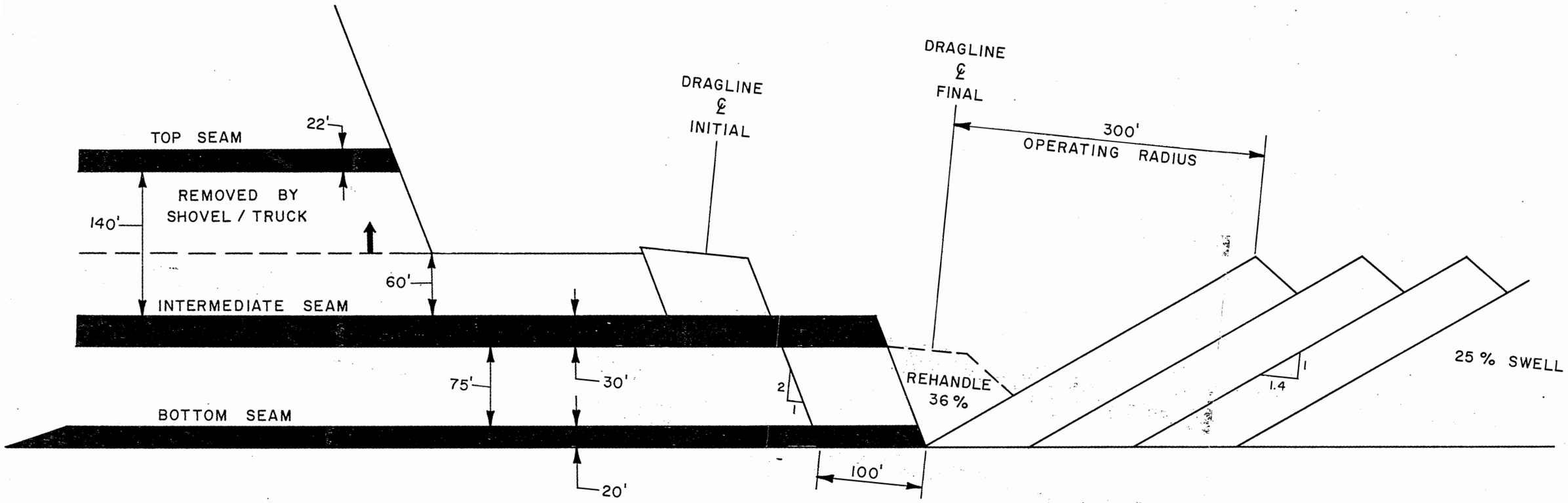


TYPICAL RANGE DIAGRAM
BELUGA DRAGLINE OPERATIONS

SCALE: 1" = 100'
VERT. = HORZ.

PAUL WEIR COMPANY
INCORPORATED
CHICAGO, ILLINOIS 60606

FIGURE

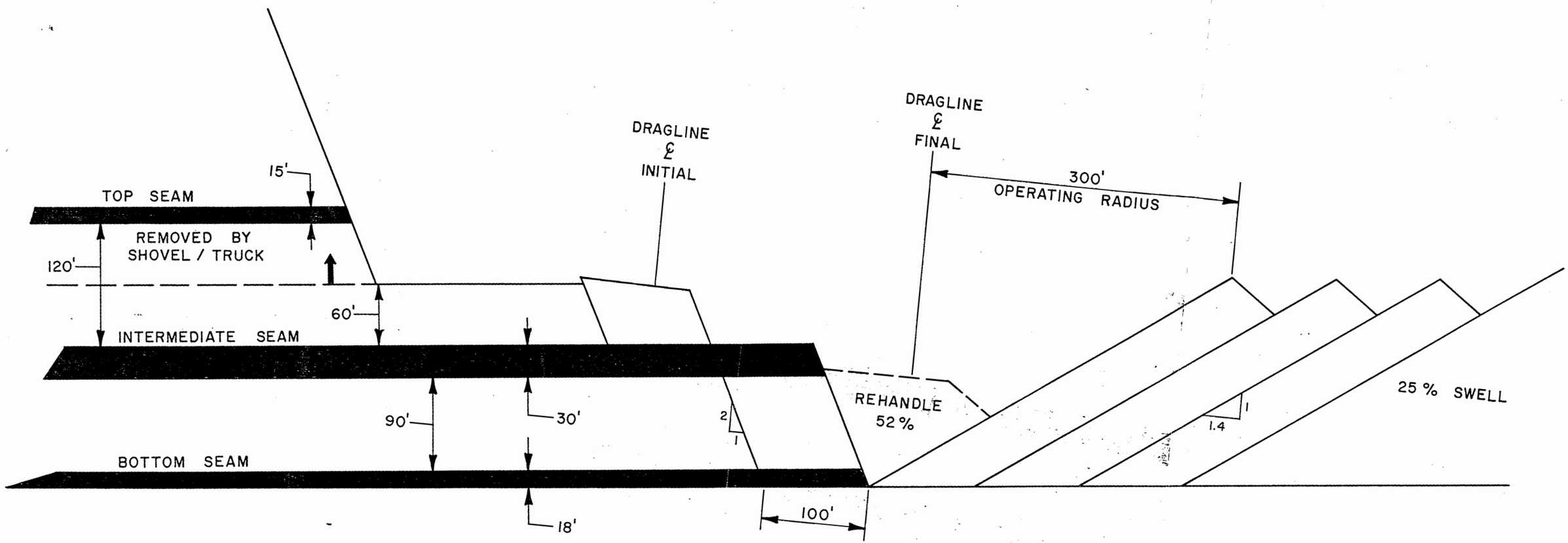


TYPICAL RANGE DIAGRAM
NENANA DRAGLINE OPERATIONS
AREA X

SCALE: 1" = 100'
VERT. = HORZ.

PAUL WEIR COMPANY
INCORPORATED

FIGURE



TYPICAL RANGE DIAGRAM
NENANA DRAGLINE OPERATIONS
AREA Y

SCALE: 1" = 100'
VERT. = HORZ.

PAUL WEIR COMPANY
INCORPORATED

A P P E N D I X

Example Productivity Calculations

EXAMPLE DRAGLINE PRODUCTIVITY CALCULATION

TYPICAL MODEL OF DRAGLINE	BE 1570-W
BOOM LENGTH (FEET)	310.00
BOOM ANGLE (DEGREES)	30.00
MAXIMUM SUSPENDED LOAD (POUNDS)	345000.00
WEIGHT OF MATERIAL IN PLACE (LB PER CYD)	3700.00
SWELL FACTOR DUG FROM BANK	1.25
BUCKET FILL FACTOR	.90
WEIGHT PER BUCKET LOAD (LB PER CYD)	2664.00
WEIGHT OF BUCKET (LB PER CYD)	2250.00
BUCKET SIZE (CUBIC YARDS)	70.00
EQUIVALENT VOLUME (BANK CUBIC YARDS)	50.40
DIGGING CYCLE TIME (SEC)	58.00
LENGTH OF SHIFT (MIN)	480.00
LESS:STARTUP INSPECTIONS	30.00
PRODUCTIVE TIME PER SHIFT (MIN)	450.00
CYCLES PER SHIFT,MAXIMUM	465.00
MAXIMUM PRODUCTIVITY PER SHIFT OPERATED (BCY)	23436.00
MECHANICAL/ELECTRICAL AVAILABILITY (%)	80.00
UTILIZATION (%)	95.00
EFFICIENCY (%)	76.00
AVE PRODUCTIVITY PER SHIFT SCHEDULED (BCY)	17811.36

EXAMPLE SHOVEL PRODUCTIVITY CALCULATION

TYPICAL MODEL OF SHOVEL	BE 290-B
SIZE OF DIPPER, CUBIC YARDS	20.00
WEIGHT OF MATERIAL IN PLACE (LB PER CYD)	3700.00
SWELL FACTOR DUG FROM BANK	1.30
DIPPER FILL FACTOR	.90
WEIGHT PER DIPPER CYCLE (TONS)	25.62
TYPICAL MODEL OF TRUCK	120 TON
BODY SIZE (2:1 HEAPED),(CUBIC YARDS)	86.00
PAYLOAD CAPACITY,(TONS)	120.00
CALCULATED DIPPERLOADS PER TRUCKLOAD	5.00
PAYLOAD (TONS)	128.08
TRUCKLOAD VOLUME (CUBIC YARDS)	90.00
EQUIVALENT VOLUME (BANK CUBIC YARDS)	69.23
LOAD CYCLE TIME (MIN)	
LOADING	2.92
WAIT FOR TRUCK SPOTTING	.83
TOTAL (MIN)	3.75
LENGTH OF SHIFT (MIN)	480.00
LESS:SHUTDOWN FOR LUNCH	30.00
LESS:STARTUP INSPECTIONS	15.00
PRODUCTIVE TIME PER SHIFT (MIN)	435.00
TRUCKLOADS PER SHOVELSHIFT-MAXIMUM	116.00
MAXIMUM PRODUCTIVITY PER SHIFT OPERATED (BCY)	8030.77
MECHANICAL/ELECTRICAL AVAILABILITY (%)	80.00
UTILIZATION (%)	86.17
EFFICIENCY (%)	68.94
AVE PRODUCTIVITY PER SHIFT SCHEDULED (BCY)	5536.09

EXAMPLE SHOVEL PRODUCTIVITY CALCULATION

TYPICAL MODEL OF SHOVEL	HYD SHOVEL
SIZE OF DIPPER, CUBIC YARDS	18.50
WEIGHT OF MATERIAL IN PLACE (LB PER CYD)	2230.00
SWELL FACTOR DUG FROM BANK	1.40
DIPPER FILL FACTOR	.95
WEIGHT PER DIPPER CYCLE (TONS)	14.00
TYPICAL MODEL OF TRUCK	120 TON
BODY SIZE (2:1 HEAPED),(CUBIC YARDS)	125.00
PAYLOAD CAPACITY,(TONS)	120.00
CALCULATED DIPPERLOADS PER TRUCKLOAD	8.00
PAYLOAD (TONS)	111.98
TRUCKLOAD VOLUME (CUBIC YARDS)	140.60
LOAD CYCLE TIME (MIN)	
LOADING	4.67
WAIT FOR TRUCK SPOTTING	.58
TOTAL (MIN)	5.25
LENGTH OF SHIFT (MIN)	480.00
LESS:SHUTDOWN FOR LUNCH	30.00
LESS:STARTUP INSPECTIONS	15.00
PRODUCTIVE TIME PER SHIFT (MIN)	435.00
TRUCKLOADS PER SHOVELSHIFT-MAXIMUM	82.00
MAXIMUM PRODUCTIVITY PER SHIFT OPERATED (TON)	9182.18
MECHANICAL/ELECTRICAL AVAILABILITY (%)	90.00
UTILIZATION (%)	76.98
EFFICIENCY (%)	69.28
AVE PRODUCTIVITY PER SHIFT SCHEDULED (TON)	6361.60

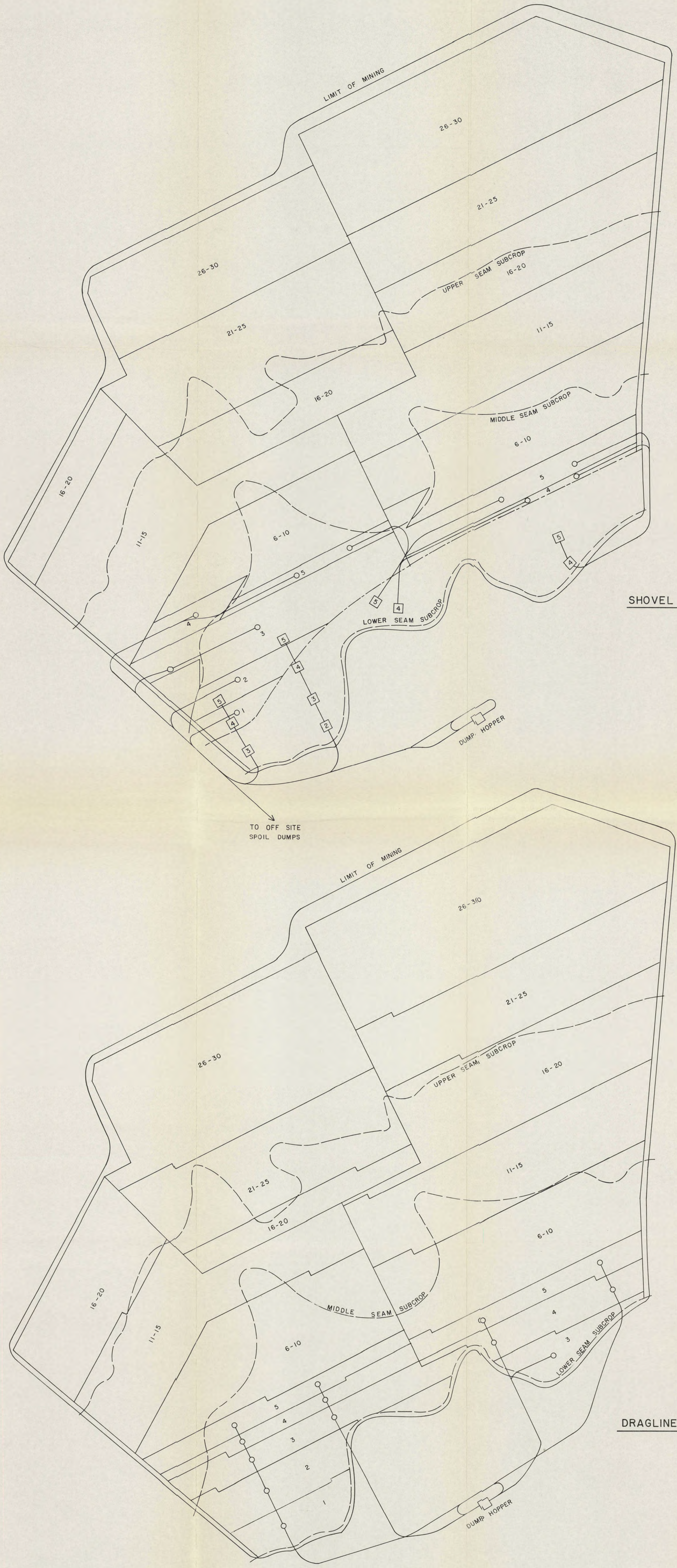
EXAMPLE DRILL PRODUCTIVITY CALCULATION

TYPICAL MODEL OF DRILL	DUAL AUGER
SINGLE PASS DRILLING DEPTH (FEET)	15.00
TYPE OF LOADING UNIT	SHOVEL
HOLE DIAMETER (INCHES)	3.00
DRILL PATTERN (FEET)	12 X 12
AVERAGE BENCH HEIGHT (FEET)	15.00
HOLE DEPTH WITH SUBLEVEL DRILLING (FEET)	15.00
VOLUME PER HOLE (TONS)	80.00
ESTIMATED PENETRATION RATE (FEET PER HOUR)	1500.00
DRILLING TIME (MINUTES PER HOLE)	.60
MOVING AND SETUP TIME (MIN PER HOLE)	.50
TOTAL TIME (MINUTES PER HOLE)	1.10
LENGTH OF SHIFT (MINUTES)	480.00
LESS SHUTDOWN FOR LUNCH	30.00
LESS STARTUP INSPECTIONS	15.00
PRODUCTIVE TIME PER SHIFT	435.00
MAXIMUM PRODUCTIVITY PER SHIFT OPERATED	
HOLES DRILLED	395.00
TONS DRILLED	31600.00
AVAILABILITY (%)	80.00
UTILIZATION (%)	81.69
EFFICIENCY (%)	65.35
AVERAGE PRODUCTIVITY PER SHIFT SCHEDULED	
HOLES DRILLED	258.00
TONS DRILLED	20640.00
BLASTING INFORMATION	
HOLE VOLUME (CFT PER FT OF HOLE DRILLED)	.05
EXPLOSIVES DENSITY (LBS PER CFT)	53.00
POUNDS OF EXPLOSIVE PER FOOT OF HOLE	2.60
POWDER FACTOR (LBS PER BTON)	.30
VOLUME PER FOOT OF HOLE (TON)	80.00
DEPTH OF EXPLOSIVES IN HOLE (FEET)	9.22
% OF HOLE DEPTH	61.50

EXAMPLE SCRAPER PRODUCTIVITY CALCULATION

TYPICAL MODEL OF SCRAPER	CAT 637-D
FLYWHEEL HORSEPOWER	700.00
CAPACITY (2:1 HEAPED),(CUBIC YARDS)	31.00
MATERIAL BEING LOADED	OVERBURDEN
WEIGHT OF MATERIAL IN PLACE (LB PER CYD)	3700.00
SWELL FACTOR DUG FROM BANK	1.26
SCRAPER FILL FACTOR	.90
EQUIVALENT PAYLOAD VOLUME (BANK CUBIC YARDS)	22.14
AVERAGE HAUL DISTANCE,ONE-WAY (FEET)	7000.00
AVERAGE SPEED,LOADED (MPH)	13.40
EMPTY (MPH)	20.00
LOADING TIME (MINUTES)	.90
DUMPING TIME	.70
QUEUING TIME	.75
TOTAL CYCLE TIME (MIN)	12.26
LENGTH OF SHIFT (MINUTES)	480.00
LESS SHUTDOWN FOR LUNCH	30.00
LESS STARTUP INSPECTIONS	15.00
PRODUCTIVE TIME PER SHIFT (MINUTES)	435.00
MECHANICAL AVAILABILITY (%)	90.00
UTILIZATION (%)	95.00
EFFICIENCY (%)	85.50
AVE PRODUCTIVITY PER SHIFT SCHEDULED (BCY)	662.63

EXHIBIT A



SHOVEL STRIPPING SEQUENCE

DRAGLINE STRIPPING SEQUENCE

NOTE:
THE TWO PLAN VIEWS SHOW STRIPPIING ACTIVITIES BY DRAGLINE AND SHOVELS WHICH TAAKE PLACE IN THE SAME AREA BUT AT DIFFERENT ELEVATIONS.

LEGEND

- LIMIT OF MINING ACTIVITIES
- SUBCROP OF SEAMS
- SEQUENCE OF MINING:
  - YEAR 1
  - YEAR 2
  - YEAR 3
  - YEAR 4
  - YEAR 5
  - YEARS 6-10
  - YEARS 11-15
  - YEARS 16-20
  - YEARS 21-25
  - YEARS 26-30
- HAUL ROAD NETWORK SHOWN FOR YEARS 1-5:
  - COAL HAUL FROM DRAGLINE CUTS TO PLANT
  - COAL HAUL FROM SHOVEL PITS TO PLANT
  - OVERBURDEN HAUL FROM SHOVEL PITS TO SPOIL DUMPS
  - LOAD CENTER
  - DUMP CENTER

N

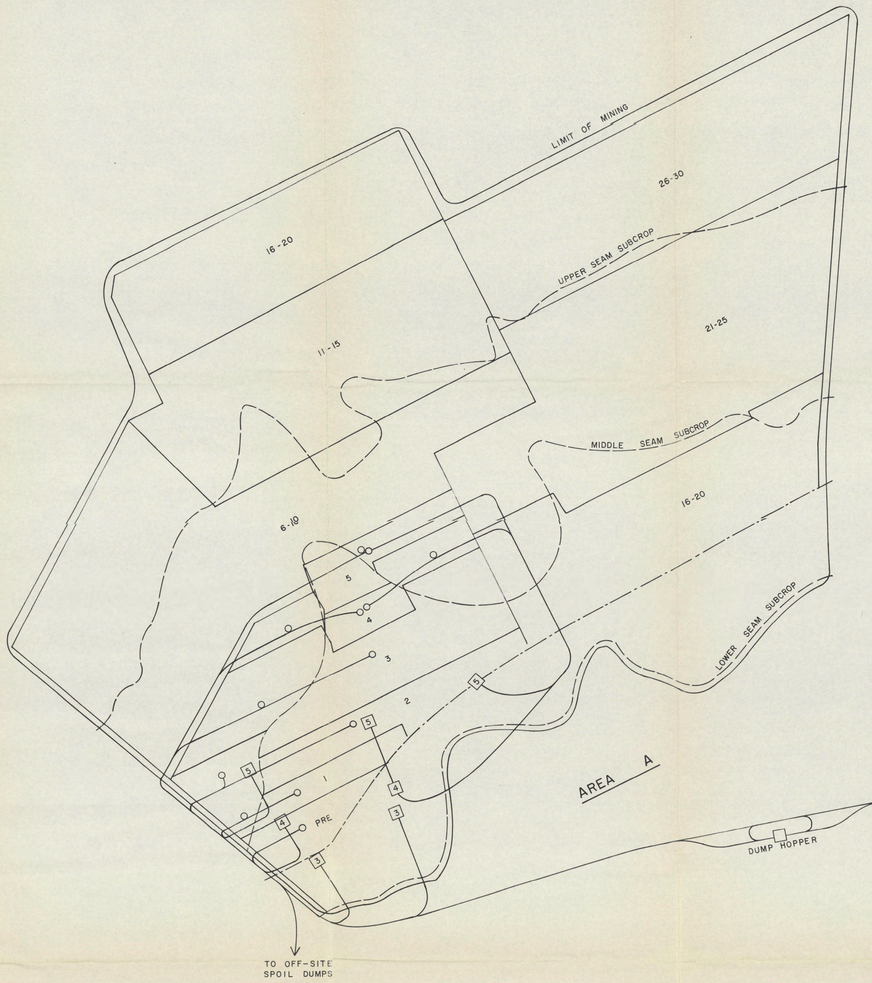
0 1000' 2000'
SCALE

BELUGA AREA HYPOTHETICAL MINE
STRIPPING SEQUENCE
CASE I

PAUL WEIR COMPANY
INCORPORATED
CHICAGO, ILLINOIS 60606

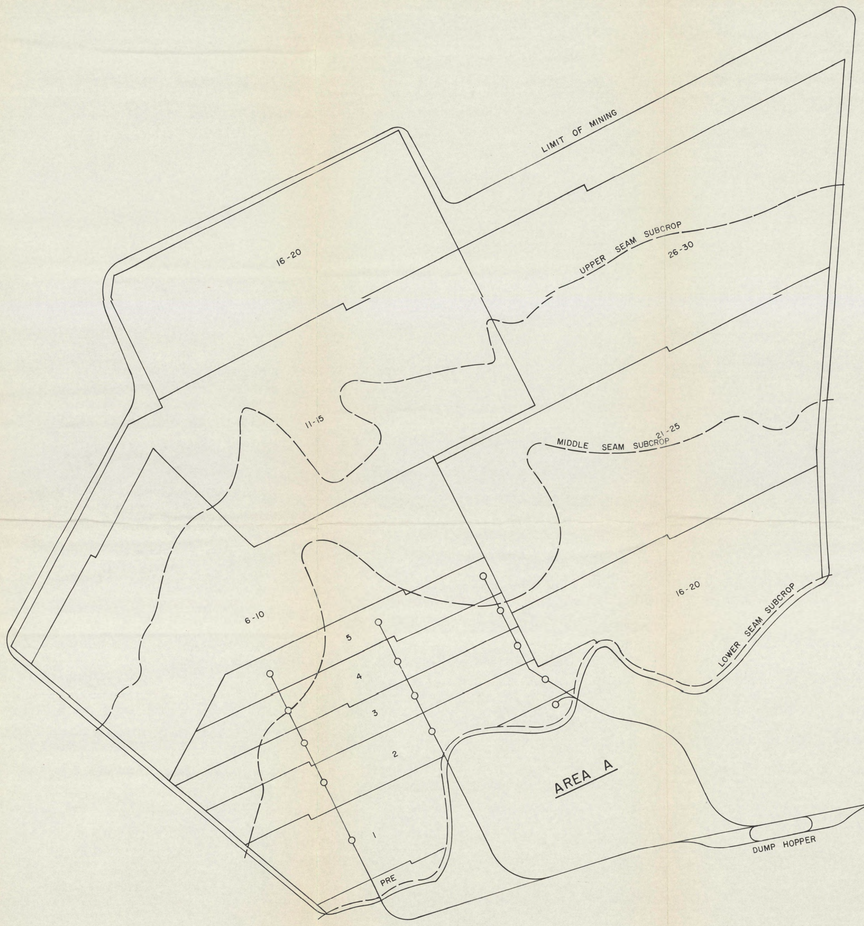
2988-J

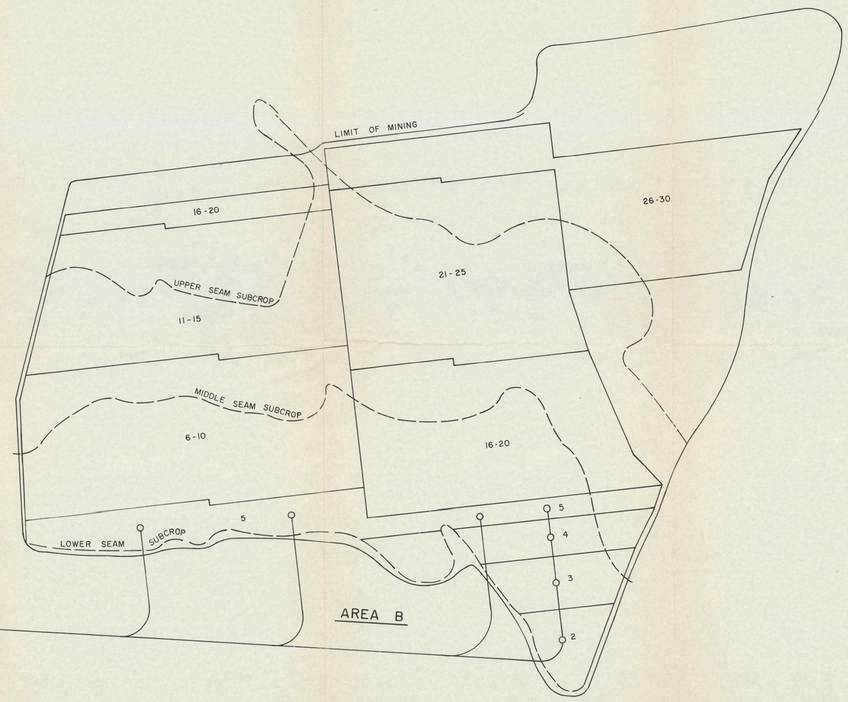
PLAN VIEW OF SHOVEL STRIPPING SEQUENCE



NOTE:
THE TWO PLAN VIEWS SHOW STRIPPING ACTIVITIES BY DRAGLINE AND SHOVELS WHICH TAKE PLACE IN THE SAME AREA BUT AT DIFFERENT ELEVATIONS.

PLAN VIEW OF DRAGLINE STRIPPING SEQUENCE





LEGEND

- LIMIT OF MINING ACTIVITIES
- SUBCROP OF SEAMS
- SEQUENCE OF MINING:
  - PRE PRODUCTION
  - YEAR 1
  - YEAR 2
  - YEAR 3
  - YEAR 4
  - YEAR 5
  - YEARS 6-10
  - YEARS 11-15
  - YEARS 16-20
  - YEARS 21-25
  - YEARS 26-30
- HAUL ROAD NETWORK SHOWN FOR YEARS 1-5:
  - COAL HAUL FROM DRAGLINE CUTS TO PLANT
  - COAL HAUL FROM SHOVEL PITS TO PLANTS
  - OVERBURDEN HAUL FROM SHOVEL PITS TO SPOIL DUMPS
- LOAD CENTER
- DUMP CENTER

N

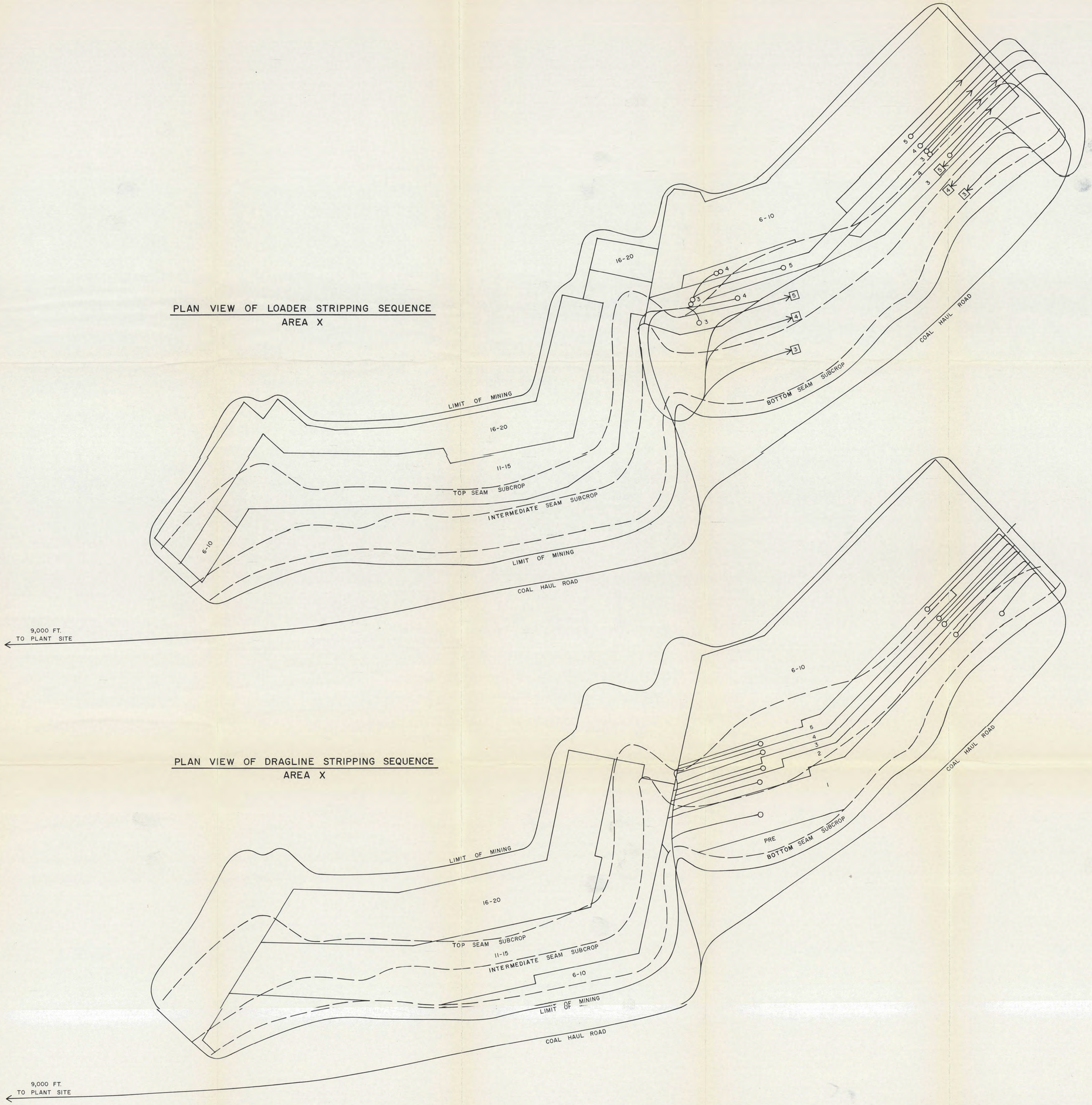
0 1000' 2000'
SCALE

BELUGA AREA HYPOTHETICAL MINE STRIPPING SEQUENCE CASE 2

PAUL WEIR COMPANY
INCORPORATED
CHICAGO, ILLINOIS 60606

EXHIBIT C

PLAN VIEW OF LOADER STRIPPING SEQUENCE
AREA X



NOTE:
THE TWO PLAN VIEWS SHOW STRIPPING ACTIVITIES BY DRAGLINE AND LOADERS WHICH TAKE PLACE IN THE SAME AREA BUT AT DIFFERENT ELEVATIONS.

PLAN VIEW OF DRAGLINE STRIPPING SEQUENCE
AREA X

LEGEND

- LIMIT OF MINING ACTIVITIES
- SUBCROP OF SEAMS
- SEQUENCE OF MINING:
  - PRE PRODUCTION
  - YEAR 1
  - YEAR 2
  - YEAR 3
  - YEAR 4
  - YEAR 5
  - YEARS 6-10
  - YEARS 11-15
  - YEARS 16-20
- HAUL ROAD NETWORK SHOWN FOR YEARS 1-5:
  - COAL HAUL FROM DRAGLINE CUTS TO PLANT
  - COAL HAUL FROM LOADER PITS TO PLANT
  - OVERBURDEN HAUL FROM LOADER PITS TO SPOIL DUMPS
  - LOAD CENTER
  - DUMP CENTER

N

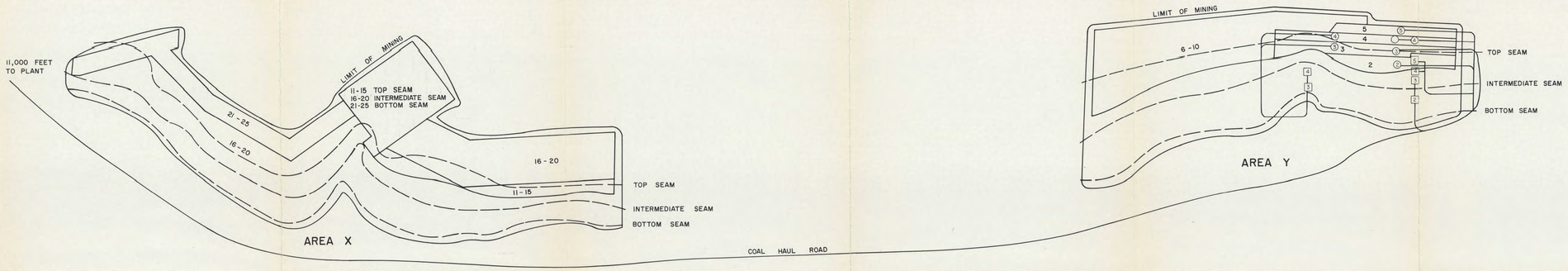
0 500' 1000'
SCALE

NENANA COAL FIELD HYPOTHETICAL MINE
STRIPPING SEQUENCE
CASE 3

PAUL WEIR COMPANY
INCORPORATED
CHICAGO, ILLINOIS 60606

EXHIBIT D

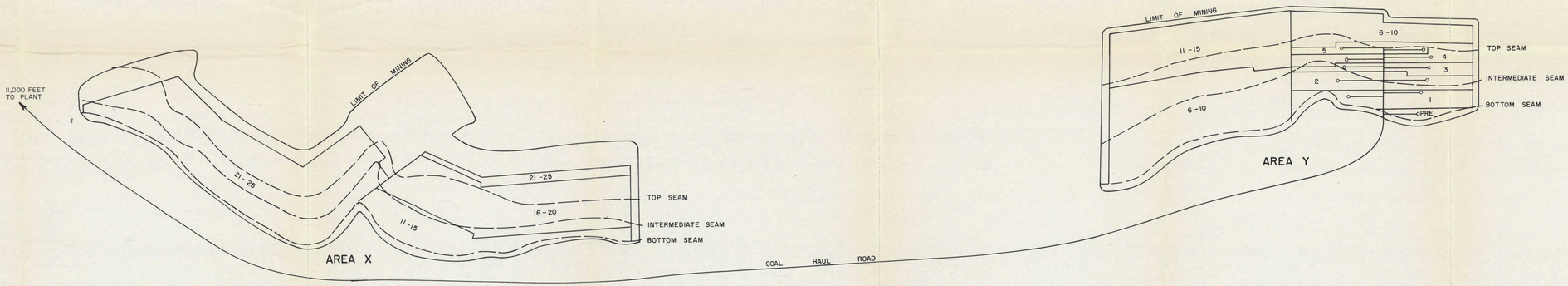
PLAN VIEW OF LOADER STRIPPING SEQUENCE



NOTE :

THE TWO PLAN VIEWS SHOW STRIPPING ACTIVITIES BY DRAGLINE AND LOADERS WHICH TAKE PLACE IN THE SAME AREA BUT AT DIFFERENT ELEVATIONS.

PLAN VIEW OF DRAGLINE STRIPPING SEQUENCE



LEGEND

- LIMIT OF MINING ACTIVITIES
- SUBCROP OF SEAMS
- SEQUENCE OF MINING:
  - PRE PRODUCTION
  - YEAR 1
  - YEAR 2
  - YEAR 3
  - YEAR 4
  - YEAR 5
  - YEARS 6-10
  - YEARS 11-15
  - YEARS 16-20
  - YEARS 21-25
- HAUL ROAD NETWORK SHOWN FOR YEARS 1-5:
  - COAL HAUL FROM DRAGLINE CUTS TO PLANT
  - COAL HAUL FROM LOADER PITS TO PLANT
  - OVERBURDEN HAUL FROM LOADER PITS TO SPOIL DUMPS
  - LOAD CENTER
  - DUMP CENTER

N

0 1000' 2000'
SCALE

NENANA COAL FIELD HYPOTHETICAL MINE
STRIPPING SEQUENCE
CASE 4

PAUL WEIR COMPANY
INCORPORATED
CHICAGO, ILLINOIS 60606

2988-J