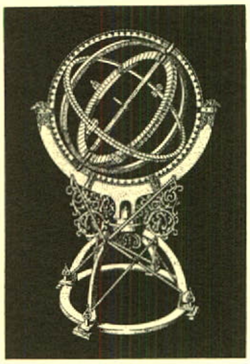
SPAR AEROSPACE PRODUCTS LTD.

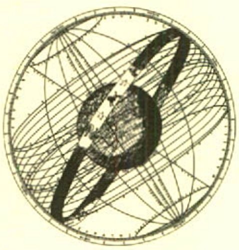
Annual Report 1971

Spar Annual Report Covers



1969

16th century astronomer Tycho Brahe used this armillary to determine the equatorial co-ordinates of stars.



1970

For over 1,500 years man thought of the earth as the centre of our system, with the sun circling it along a spiral path.

1971

Another "space map" from the same 17th century atlas shows the sun modestly to the side among the orbits of the six planets then known.

SPAR AEROSPACE PRODUCTS LTD.

Directors

L. D. Clarke*

C. H. Barrett

D. S. Beatty

R. B. Dodwell*

W. H. Jackson*

Dr. P. A. Lapp

R. A. Perigoe

D. A. B. Steel*

J. P. Wright

*members of the Executive Committee

Officers

R. B. Dodwell
Chairman of the Board

L. D. Clarke
President and Chief Executive Officer

G. J. Aubrey
Vice-President, Finance

J. E. Lockyer
Vice-President, Engineering

J. D. MacNaughton
Vice-President, Planning and Marketing

G. R. Rutledge
Vice-President, Manufacturing

S. A. McKittrick
Treasurer

D. A. B. Steel
Secretary

Transfer Agents and Registrars

Montreal Trust Company,
Toronto

Auditors

Clarkson, Gordon & Co.

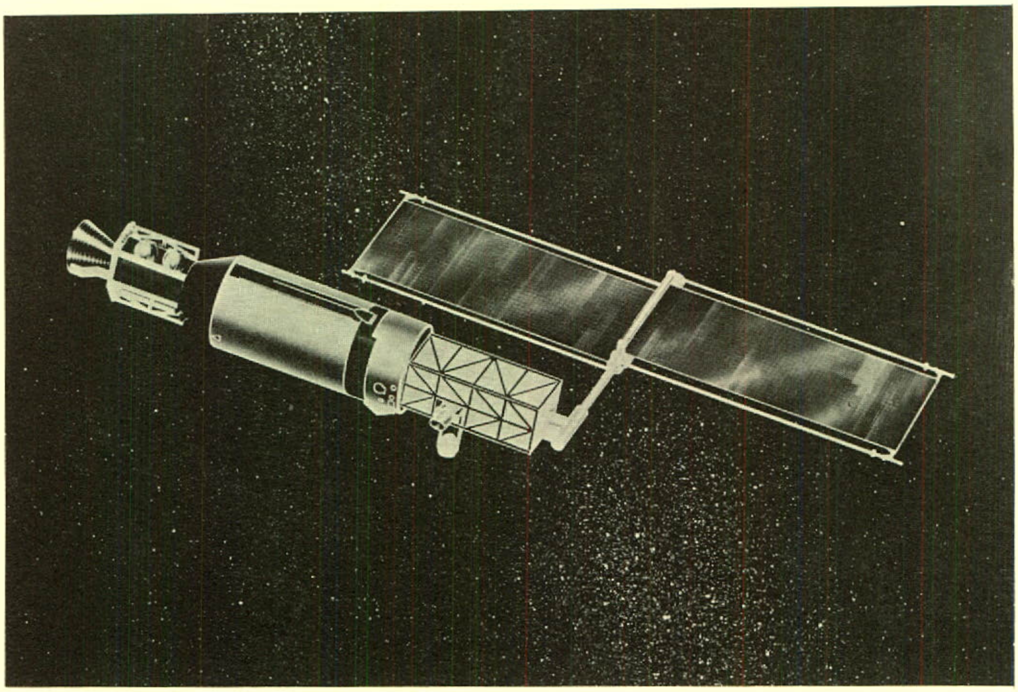
Head Office

825 Caledonia Road,
Toronto 395, Canada

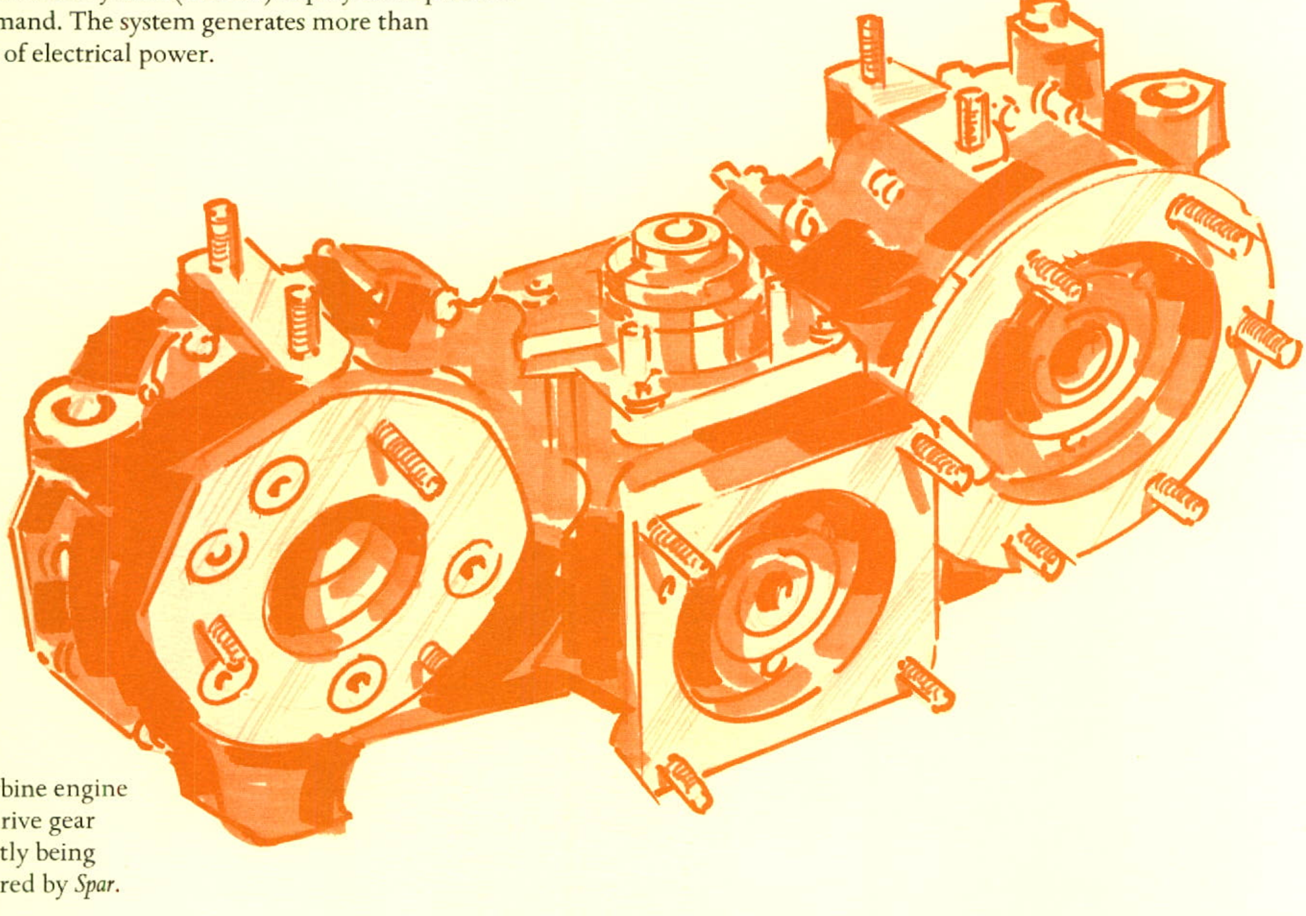
Highlights

	1971	1970
	(000's)	(000's)
Revenues	$12,205	$9,124
Earnings (loss) for the year		
—Before extraordinary item (income tax recovery)	334	(371)
—Net income (loss) for the year	671	(371)
Working Capital	728	314
Long Term Debt	610	848

	1971	1970
Earnings (loss) per average common share outstanding		
—Before extraordinary item (income tax recovery)	$ .27	$ (.30)
—Income (loss) for the year	.54	(.30)
Book value per share	2.17	1.63



On October 17, 1971, *Spar* STEM boom actuators successfully extended from an Agena spacecraft the first flexible roll-up solar array system to be flown in space. The artist's concept shows the system (FRUSA) deployed in space on radio command. The system generates more than 1,500 watts of electrical power.



Typical turbine engine accessory drive gear box currently being manufactured by *Spar*.

President's Report

1971

Throughout 1971 your company continued on the recovery pattern commenced in 1970. This resulted not only in the elimination of losses but in significant profits together with a substantial increase in working capital. These improvements were achieved despite the many problems which continued to affect the North American aerospace industry during 1971. We are therefore looking forward with confidence to the future as the overall industry position improves.

Financial

Total revenues increased by 33.8% from $9.1 million in 1970 to $12.2 million in 1971 of which engineering programs were the largest contributor to the increase. A breakdown by major business categories is included in Note 10 to the financial statements.

Income before taxes was $671,495 or 54¢ per average share outstanding compared to a loss of $370,674 (30¢ per share) in 1970. Income taxes of $337,000 applicable in 1971 were offset by an extraordinary credit of $337,000 due to the carry-forward of losses from prior years.

Perhaps of greatest significance is the improvement in working capital to $727,771 from $314,144 at December 31, 1970 and $161,707 at June 30, 1971. This increase, which resulted from profits gained in the second half of the year, brought about a dramatic reduction in your company's bank indebtedness and financing costs by year-end.

In accordance with prior years' practice, management wrote off as a charge against 1971 earnings, research and development expenses of $273,679. Total expenditures for the year in this regard amounted to approximately $455,000 as compared to $380,000 in 1970, before grants and assistance aggregating $182,000 (1970 – $193,000) under various Canadian Government assistance programs.

With the completion of the development work, the deferral of gear development costs related to the introduction of new gears for two key customers ceased by the end of the first six months. In 1971 in accordance with established policy your company amortized gear development costs of $99,884 compared to $29,960 in 1970 and in addition wrote off the unamortized balance of costs incurred on two programs amounting to $65,830.

At year-end that part of accounts receivable which is the subject of the company's lawsuit against Levy Industries Ltd. had been further reduced through payments received from customers. Your directors remain confident that the balance still outstanding will be recovered directly out of the lawsuit which should go to trial during the current year.

A significant decrease in inventory to $1.4 million in 1971 from $2.2 million in 1970 reflects a low level of work-in-progress at year-end in respect of gear manufacturing and proprietary products.

With the welcome addition of operating profits, shareholders' equity now stands at $2,706,616 as compared to $2,035,121 at 1970 year-end. In addition, it should be noted that with the results achieved in 1971, the first deferred shares outstanding are now eligible for conversion which, if effected, will increase outstanding common shares by 150,000 and shareholders' equity by $75,000.

Repair and Overhaul

The improved operating efficiencies which were forecast in your company's 1970 report were realized in 1971 and contributed substantially to Spar's overall turnaround. We expect 1972 volume and profits in this area to approximate those of 1971. For the longer term we are continuing to look for opportunities of growth in the commercial and foreign military repair and overhaul markets. This activity is receiving management's particular attention because of the fundamental importance to the company of the stability of employment, cash flow and earnings that are realized from this segment of our business.

Engineering

The most dramatic increase in our operations during 1971 took place in the engineering department arising out of our work on three key sub-systems for the new Canadian Communications Technology Satellite (CTS) and two sounder antennas for the North American Apollo 17 program. A more modest rate of increase is expected during 1972 with the continuation of the CTS program and the possible addition during the second half of the year of development work on our infra-red surveillance systems. Profit margins in this area, as forecast in the 1970 report, showed a modest improvement in 1971 which should be maintained in 1972.

Manufacturing

As planned, gear manufacturing throughput in 1971 was at a low level. This notwithstanding, management was able to reduce losses in this area to one half of those experienced in 1970. As 1971 drew to a close, your company secured new gear orders for delivery in 1972 and 1973 on substantially better terms than it had been able to obtain during the extremely depressed state of the industry over the previous 30 months. With these orders in hand, we are optimistic that results from the gear manufacturing operations will show a continuing improvement during 1972.

The emerging market for high precision aerospace gears related to new helicopter and jet engine programs, which was predicted in our 1970 report, has now reached a point where your company is actively bidding on a number of such programs. With the strengthening of the market for aerospace gears and Spar's demonstrated improvements in operating efficiencies, your directors are confident as to the long term potential in this key area of the company's activities.

In addition to gear work, this department has been assuming an increasing responsibility with regard to the manufacture of spacecraft and spacecraft components. In furtherance of this capability and in addition to our continuing arrangements as to the manufacture of Telesat structures, Spar has entered into other teaming agreements which, your directors hope, will lead to participation in the manufacture of major structural elements in support of a number of other international space programs.

Products

As mentioned in our 1970 report, the market for Spar's aerospace products has been adversely affected by the general slowdown in the industry and particularly by reductions in new orders for de Havilland Buffalo aircraft. With the expected improvement in the aerospace economy, your management remains optimistic that modest orders for Spar products will continue over the next several years.

Recent Developments

In February of this year, Spar agreed to acquire the Astro Research Corporation of Santa Barbara, California. The acquisition will provide your company with a continuing source of new technology in the area of lightweight, extendible space structures which is vital to Spar's continued growth within the space industry. Astro will continue to specialize in the research and development area with Spar providing the manufacturing and engineering capability for market exploitation. Astro's sales for 1972 are estimated at approximately $¼ million.

Outlook

Your directors anticipate that sales in 1972 will exceed $14 million as compared to $12.2 million in 1971. With the improvements realized in the manufacturing operations a modest increase is expected in the ratio of profits to sales over that experienced in 1971.

Now that the York plant acquisition has been digested, the aerospace market is on the upswing and new three-year labour contracts with our office and plant unions have been concluded, your company is looking with confidence to the longer term future. While relatively heavy expenditures in design and development will be required during the next few years before full benefits can be realized, your management's strategy will be to devote its activities increasingly to projects with substantial engineering responsibility. Over the longer term this approach will ensure greater business stability through product control, and with it, opportunities for improvement in profits.

On behalf of the directors, I wish to welcome to the Spar family all employees of Astro Research in Santa Barbara, California, and would like to thank our own company staff at every level of responsibility for their continued loyalty and devotion.

On behalf of the Board,

L. D. Clarke

L. D. CLARKE
President

April 14, 1972.

Statement of Consolidated Earnings and Deficit

For the year ended December 31, 1971
(with 1970 figures for comparison)

	1971	1970
Revenues	$12,204,634	$ 9,124,315
Cost of sales including all expenses except items shown below	9,574,278	7,800,475
Administrative and selling expenses	1,278,690	1,126,272
Deferred development amortization (including amounts written off of $65,830; 1970—nil) (note 4)	165,714	29,960
Depreciation and amortization (note 5)	272,474	227,338
Bank and other interest charges (note 8)	155,619	192,406
Management fees (note 13)	75,000	71,478
Loss on sales of machinery and equipment	11,364	47,060
	11,533,139	9,494,989
Income (loss) before income taxes and extraordinary item	671,495	(370,674)
Income taxes (note 7)	337,000	—
Income (loss) for the year before extraordinary item	334,495	(370,674)
Extraordinary item:		
Income tax reduction realized on carry-forward of a loss (note 7)	337,000	—
Net income (loss) for the year	671,495	(370,674)
Deficit, beginning of year	1,095,175	724,501
Deficit, end of year	$ 423,680	$ 1,095,175

Earnings per share:

		1971	1970
Basic	—Before extraordinary item	$ .27	$(.30)
	—Income (loss) for the year	$ .54	$(.30)
Fully diluted	—Before extraordinary item	$ .20	
	—Income (loss) for the year	$ .41	

Basic earnings per share based on 1,248,554 shares being the weighted average number of common shares outstanding during the year (1970—1,247,390).

Fully diluted earnings per share based on 1,760,054 shares assuming conversion of all of the deferred shares and exercise of all options outstanding, after recognition of imputed earnings at the rate of 8.0% ($22,000 before extraordinary item and $45,000 after extraordinary item) on cash payments that would be received on the issue of common shares.

(See accompanying notes to the financial statements)

SPAR AEROSPACE PRODUCTS LTD.

(Incorporated under the laws of Canada)

Consolidated Balance S

(with 1970 fig

ASSETS

	1971	1970
Current:		
Cash	$ 8,551	$ 8,437
Accounts receivable	2,188,042	1,973,838
Amounts receivable under Government Industrial Assistance Programs (note 2)	47,609	430,903
Inventories, less progress payments (note 3)	1,408,682	2,162,765
Prepaid expenses (note 5)	19,998	56,872
Total current assets	3,672,882	4,632,815
Deferred development costs less accumulated amortization (note 4)	303,746	119,826
Non-current deferred interest charges on leased equipment (note 5)	1,880	10,060
Machinery, tooling and equipment—at cost (note 5)	2,628,658	2,373,932
Less accumulated depreciation and amortization	634,837	361,211
Net machinery, tooling and equipment	1,993,821	2,012,721
	$ 5,972,329	$ 6,775,422

On behalf of the Board:

Director

Director

(See accompanying notes to the financial statements)

eet, December 31, 1971
for comparison)

LIABILITIES AND SHAREHOLDERS' EQUITY

	1971	1970
Current:		
Bank indebtedness (note 6)	$ 990,144	$ 2,377,266
Accounts payable and accrued charges	1,489,149	1,372,218
Employee deductions payable	136,297	128,086
Income and other taxes payable (note 7)	39,877	14,759
Current portion of long term debt (note 8)	289,644	426,342
Total current liabilities	2,945,111	4,318,671
Long term debt (note 8)	320,602	421,630
Shareholders' Equity:		
Capital stock (note 9)	3,130,296	3,130,296
Deficit	423,680	1,095,175
Net shareholders' equity	2,706,616	2,035,121
	$ 5,972,329	$ 6,775,422

Auditors' Report

To the Shareholders of
SPAR AEROSPACE PRODUCTS LTD.:

We have examined the consolidated balance sheet of Spar Aerospace Products Ltd. and its subsidiaries as at December 31, 1971 and the consolidated statements of earnings and deficit and source and use of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion these consolidated financial statements present fairly the financial position of the companies as at December 31, 1971 and the results of their operations and the source and use of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Toronto, Canada,
April 13, 1972.

Clarkson, Gordon & Co.

Chartered Accountants

Statement of Consolidated Source and Use of Funds

For the year ended December 31, 1971
(with 1970 figures for comparison)

	1971	1970
Source of Funds:		
Net income (loss) for the year before depreciation and other non cash outlays ...	$ 1,121,231	$ (66,316)
Issue of capital stock	—	13,000
Long term debt assumed under Government Industrial Assistance Program	172,878	157,272
Disposal of machinery and equipment	15,360	97,849
Decrease in non-current deferred interest charges	8,180	20,535
Total source of funds	1,317,649	222,340
Use of Funds:		
Additions to machinery and equipment (net of Government grants of $172,878; 1970—$157,272)	280,482	390,014
Deferred development costs	349,634	149,786
Repayment of long term debt and provision for instalments due currently	273,906	376,204
Total use of funds	904,022	916,004
Increase (Decrease) in working capital	413,627	(693,664)
Working capital, beginning of year	314,144	1,007,808
Working capital, end of year	$ 727,771	$ 314,144

(See accompanying notes to the financial statements)

Notes

1. General

The accompanying consolidated financial statements include the accounts of all subsidiaries (wholly-owned) of the Company.

For comparative purposes, with no effect on net income or loss for the period, revenues and cost of sales for 1970 have each been reduced by $709,279 to conform to the basis adopted in 1971. Concurrently, research and development expenses shown separately in 1970 were grouped under cost of sales.

2. Amounts receivable under Government Industrial Assistance Programs

This includes $38,265 (1970—$357,817) to be paid under a capital assistance program of the Department of Industry, Trade and Commerce (D.I.T.C.) Government of Canada, covering certain machinery and equipment acquired by the Company in 1971.

3. Inventories

Inventories are classified as follows:

	1971	*1970*
Work in process	$ 1,201,083	$ 1,975,666
Less progress payments	122,255	474,608
	$ 1,078,828	$ 1,501,058
Raw materials, parts and supplies	266,279	572,281
Finished goods	63,575	89,426
	$ 1,408,682	$ 2,162,765

Inventories of raw materials and finished goods are valued generally at the lower of cost, applied on a moving average basis, and market value determined on the basis of replacement cost or net realizable value, whichever is lower.

Work in process represents contracts valued at estimated sales value calculated on the percentage of completion basis where the work has advanced sufficiently to warrant such a valuation, and contracts in the initial stages of work which are valued at cost. Under the percentage of completion method, revenue is accrued as the work is performed, and provision is made for total anticipated losses where the estimate of total costs on a contract indicates a loss.

4. Research and development costs

The Company follows the practice of expensing all research and development expenditures as incurred with the exception of (a) costs related to the manufacture of equipment for development purposes which are capitalized and included as machinery, tooling and equipment, and (b) certain development costs related to the initial manufacture of new products which are deferred and amortized over a period of five years commencing in the year in which the expenditure is incurred. However, should the Company at any time determine that no future profitable business will accrue on a program, the costs of that program will be totally written off in that year. Development costs are claimed for income tax purposes as incurred.

5. Machinery, tooling and equipment and accumulated depreciation

Machinery, tooling and equipment at December 31, 1971, includes an amount of $663,597 (1970—$687,290) representing the capitalized costs of lease-option contracts assumed by the Company from York Gears Ltd. These leases cover machinery and equipment used in the manufacturing division and are equivalent to instalment purchase contracts for the assets. Accordingly, the payments required under the contracts have been capitalized, in part, as machinery and equipment costs to be depreciated over the estimated remaining useful lives of the assets, and, in part, as deferred interest charges to be amortized over the terms of the lease-option contracts. Prepaid expenses include $8,179 (1970—$19,847) of such interest charges to be amortized in 1972.

The Company records depreciation and amortization on a straight line basis at the following rates; 6⅔% for heavy machinery, 10% for other machinery and fixtures, and 33⅓% for tooling and automotive equipment.

6. Bank indebtedness

The bank indebtedness is secured by a general assignment of the accounts receivable and inventories and a demand debenture for the principal amount of $2,500,000 carrying a floating charge on all unencumbered assets of the Company.

The debenture provides inter alia that the holder may exercise its rights thereunder in the event that the Company fails to maintain an excess of current assets over current liabilities of not less than $500,000 and a ratio of current assets to current liabilities of not less than 1.1 to 1.0.

7. Income taxes

As a result of operating losses in prior years the Company has tax losses in the amount of $371,000 (1970—$1,051,000) available for carry forward against future years' income.

However, differences in timing for claiming allowable expenses for tax purposes, principally resulting from the basis of acquisition of the assets from York Gears, results in a tax loss carry forward on filing of $900,000 (1970—$1,700,000).

8. Long term debt

	Total Liability	Portion due in 1972 shown in current liabilities	Balance owing
Non interest bearing loan from the Department of Defence, Government of Canada, assumed from York Gears Ltd., representing the balance of funds received (50% of $1,200,000) for the purchase of machinery and equipment repayable in annual instalments to 1972, at which time the Company acquires full title to the assets	$ 86,270	$ 86,270	—
Amounts payable on various lease-option contracts to the expiry of the leases including option payments substantially repayable by the end of 1973	193,827	128,374	$ 65,453
Non interest bearing loans from D.I.T.C., Government of Canada, for the purchase of machinery and equipment repayable commencing in 1972 in annual instalments to 1976 at which time the Company acquires full title to the assets	330,149	75,000	255,149
	$610,246	$289,644	$320,602

The interest portion of the payments under the lease-option contracts amounted to $20,057 (1970—$40,530) and is included with bank and other interest charges in the statement of earnings.

9. Capital stock

(a) There has been no change in the capitalization of the Company during the year.

(b) The following table details the capitalization of the Company:

		Issued and outstanding December 31, 1971	
	Authorized shares	Number	Amount paid in
Common shares without nominal or par value	2,000,000	1,248,554	$3,125,796
First deferred shares without nominal or par value	200,000	150,000	1,500
Second deferred shares without nominal or par value	200,000	150,000	1,500
Third deferred shares without nominal or par value	200,000	150,000	1,500
	2,600,000	1,698,554	$3,130,296

Deferred Shares

(c) Dividends are not payable on the deferred shares until the year following that in which the consolidated net profit of the Company, after tax, exceeds, in the case of the first deferred—$200,000, second deferred—$300,000 and the third deferred—$400,000. When payable, dividends on the first, second and third classes of deferred shares are also restricted to the dividends declared on the preceding class, and in the case of the first deferred, on the common shares paid in the preceding fiscal year of the Company.

The first and second deferred shares carry one vote and the third deferred carry three votes per share.

The deferred shares are convertible into common shares under specific conditions on the basis of one deferred share plus a cash amount for one common share as follows:

	May be converted in the year following the year in which the consolidated net profit after tax exceeds	or in any event after	Converted on basis of one common share for one deferred share plus cash of
First deferred shares	$200,000	April 30, 1976	$0.50
Second deferred shares	$300,000	April 30, 1976	$1.00
Third deferred shares	$400,000	April 30, 1980	$1.50

The second deferred shares are convertible in a year subsequent to the conversion of the first deferred and the third deferred in a year subsequent to the conversion of the second deferred.

Stock option plan

(d) Under an incentive stock option plan, there are outstanding options to full time officers and other employees to purchase common shares of the Company at prices ranging from $.85 to $2.25 per share. These options may be exercised at various periods through to 1976.

	1971	1970
Balance outstanding, beginning of year	41,500	30,500
Options granted	47,000	11,000
Options forfeited on termination of employment	(27,000)	—
Balance outstanding, end of year	61,500	41,500
Options held by officers of the Company (included in the above figures)	35,000	33,000

Common shares reserved for future issue

(e) 511,500 shares (1970—491,500) are reserved for future issue of which 450,000 (1970—450,000) are reserved for possible conversion of the first, second and third deferred shares into common shares and 61,500 (1970—41,500) for the possible exercise of the outstanding stock options.

10. Business categories

Revenues in each of the Company's major categories of business are as follows:

	1971 (000's)	1970 (000's)
Repair and Overhaul	$ 6,063	$ 5,394
Engineering	4,488	1,995
Manufacturing	1,654	1,735
	$12,205	$ 9,124

11. Lease commitments

The Company leases its Caledonia Road facility under a 20 year lease through 1989 for an annual rental of $318,000.

12. Pension plans

The Company has funded pension plans covering substantially all of its employees. The contributions by employees together with those made by the Company are deposited with trustees according to the terms of the plans. Pensions at retirement are related to remuneration and/or years of service. The amounts charged to income (including amounts paid to government pension plans) were $174,899 (1970—$181,689) which amount includes amortization of prior service costs.

Subsequent to the year end, the Company finalized contract negotiations for all unionized employees covering a three year period through September 30, 1974. Included therein, improvements to the pension benefits resulted in increasing unfunded prior service pension costs to $282,000 (including unfunded vested benefits of $121,000). This liability will be funded on a straight line basis over the next 17 years.

13. Directors' and officers' remuneration

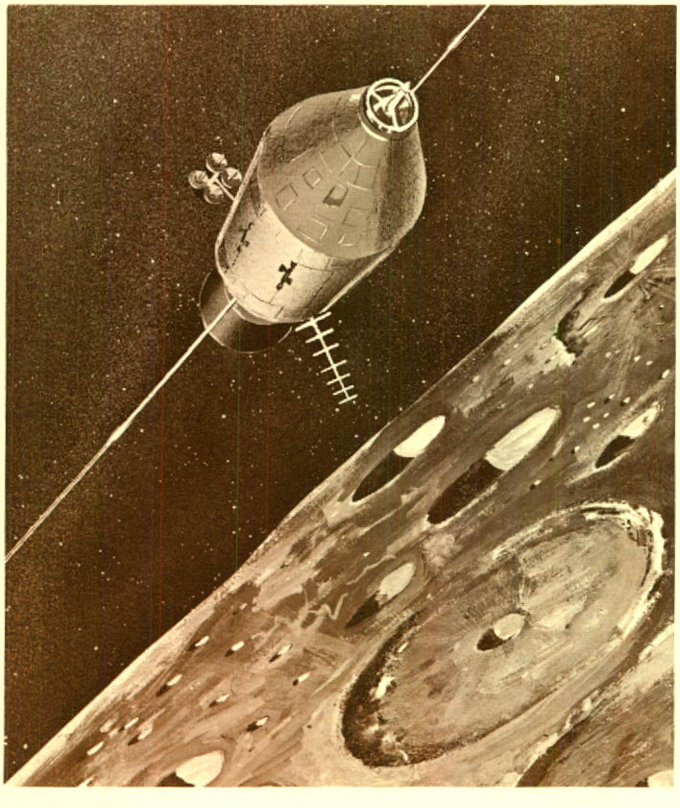
The aggregate remuneration paid by the Company to its nine directors, as directors, amounted to $4,805 (1970—$2,200). The aggregate remuneration paid to its ten officers, as officers, and one past officer amounted to $167,179 (1970—$158,636). Three officers are also directors of the Company.

In addition, a management fee of $75,000 was paid to Gainsborough Management Limited under the terms of a management agreement expiring in 1972 covering the services supplied by two directors, who are also officers of the Company, and one other director.

The management fee payable in each year of the agreement is based on 1% of the prior year's revenues to a maximum of $75,000.

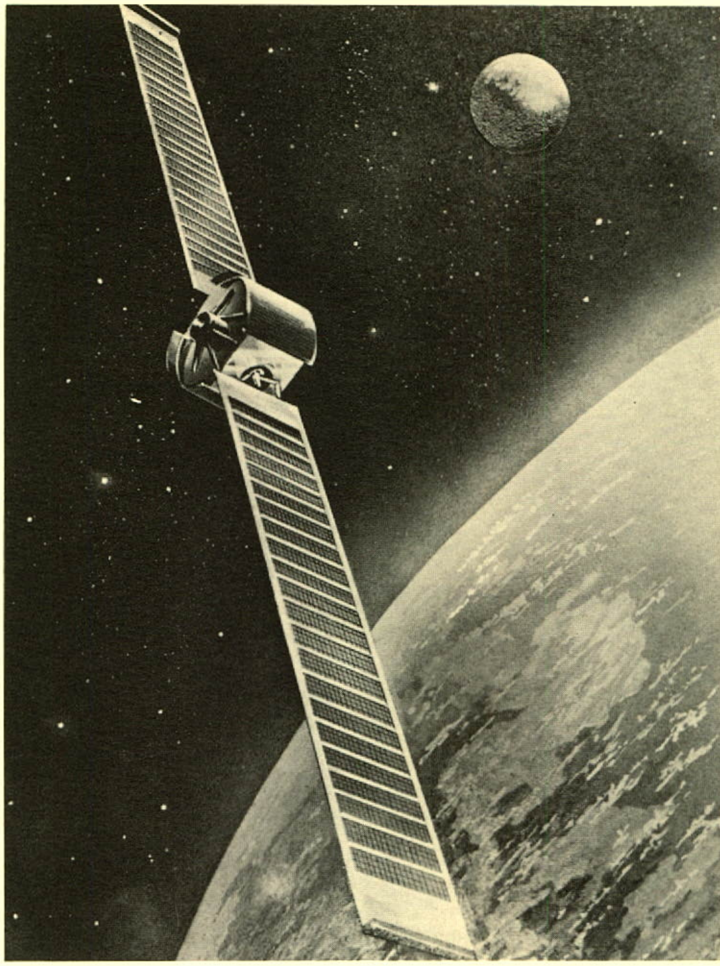
14. Subsequent event

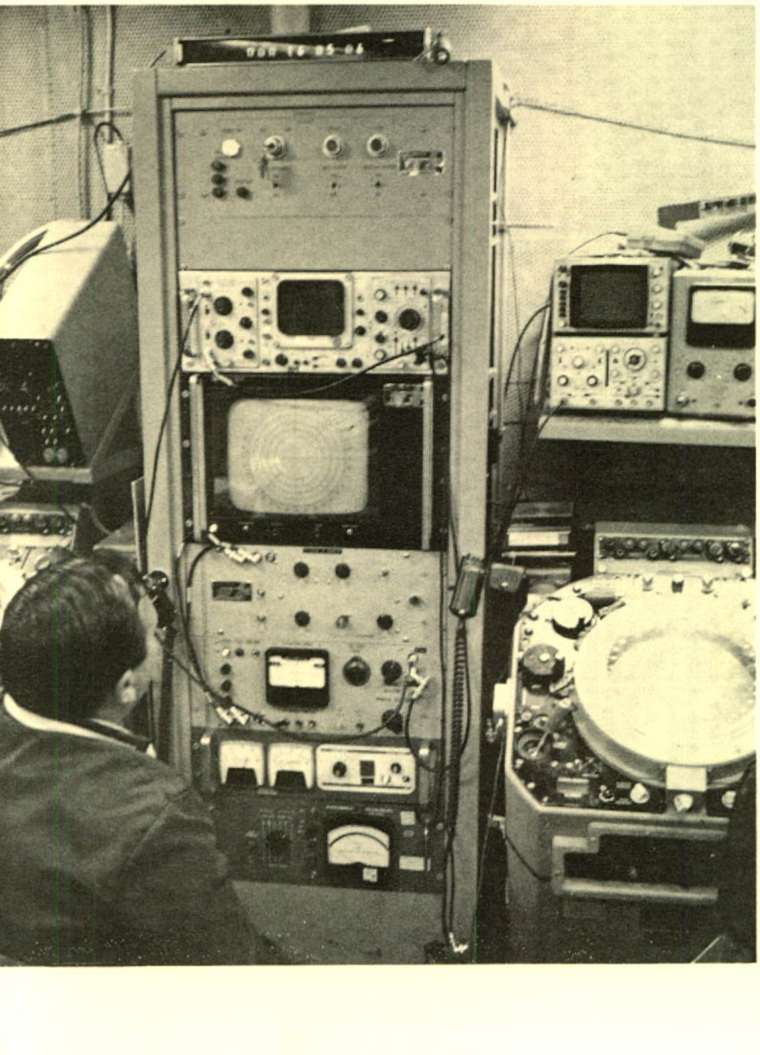
The Company has agreed to acquire all the outstanding shares of Astro Research Corporation, a California (U.S.A.) based research company for cash consideration of $250,000 (U.S.). Astro's net tangible assets are approximately $250,000 plus patents covering products for use in space programs.



The artist's concept shows the Apollo 17 command and service module orbiting the moon. *Spar* designed and manufactured the HF/VHF antenna system for the lunar sounder experiment of the mission. The experiment will gather data from a depth of up to one mile below the moon's surface. Apollo 17 is due for launch in December, 1972.

An artist's concept of Canada's Communications Technology Satellite (CTS) in geostationary orbit with the huge solar arrays fully extended. *Spar* has been awarded an initial contract to build major subsystems for this satellite.





Spar's infra-red acquisition system has been undergoing evaluation trials at sea. Here seen is the control console below decks.

SPAR

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