

JOURNAL
OF THE
CANADIAN SOCIETY
OF
EXPLORATION
GEOPHYSICISTS

TABLE OF CONTENTS

Velocity Density Variations Around Keg Biver Reefs, Alberta	. T	homas	L. Davis	1
The Fourier Spectrum of Gravity Anomalies Due to	**	ii		.
Two-Dimensional Prisms		T. W.	F. Eby	14
Manager Angle Manager Angle		*	1	
Viewfield - A Producing Fossil Crafet?	. · •	I. B. S	sawatzky	22
		4 %	*/ / d	# · · · · · · · · · · · · · · · · · · ·
Signature Deconvolution For Marine Seismic Reflection Survey	76	. F	. Carrol	41
AND IN COMMENT OF THE PROPERTY		4,		
Heview of Gravity and Magnetic Data Processing Systems	• ; •	Li	R. Crain	54
A CONTRACTOR OF THE CONTRACTOR	,			× 2
AND THE REPORT OF THE PARTY OF		* 1		B
The state of the s	,		of the state	n (* \$
Section of the control of the contro		Sec. 3	gar Daniel PO Prima	* *
· · · · · · · · · · · · · · · · · · ·		a far var		K 2 A 4 B
Front Advertisements . 1-xvi President's Page		·	i dia ini	XX
	* · · ·	in the second	A REAL TON THE	garan, ar∵ aart uu aan s
CSEC Executive page	4 4 c	** • 3 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \		XXIII
The same of the contract of th	inos ar	a	a rd V	
Lague Lommittee page XVIII Announcements				XXV
A Trade Carried And Carried Control of the Control of the Carried Co			A A A A	# v # 2.25
1977 Corporate Members of the xix Canadian University		Bome :		*
Canadian Unive	TSIMES	r 8.		xxvi
Advertures index	ectory	î,		ecixo
The state of the s	u ,	* * * *		4
CSEC Formal Contributions	en ts	*a .		XXXI
* 職 · 選 · And ·	· '^			No.
	d by .	5 2 60		F

CANADIAN SOCIETY

OF

EXPLORATION GEOPHYSICISTS P.O. Box 117, CALGARY, ALBERTA, CANADA

EXECUTIVE COMMITTEE FOR YEAR ENDING FEBRUARY 1973

President: J. K. Morrison

Vice-President: E. F. Mahaffy

Secretary: J. L. Hudson

Treasurer: J. J. Guthrie

Business Manager: J. F. Trotter

Past President: R. O. Lindseth

Prior-Past President: L. R. Baxendale

Editor: K. A. Titchkosky

CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

1972 COMMITTEES

Canadian Geoscience Council	R. O. Lindseth		
CSEG Convention — Chairman — Assistant Chairman	A. E. Pallister H. M. Young		
Education	K. R. Moyse		
National Research Council	J. Hodgkinson		
Petroleum Industry Committee	J. J. Guthrie		
Canadian Petroleum Association	J. F. Trotter		
Scholarship	E. E. Rutledge		
Gravity	T. A. Pezarro		
Bar-B-Q and Family Picnic	L. Jaques		
Best Paper	E. A. Horne		
Bonspiel	J. B. Prendergast		
Doodlebug Golf	J. R. Pullen		
Editor Newsletter	J. Kempers		
Honours and Awards	R. O. Lindseth		
Ladies Auxiliary	Mrs. Joan Gelineau		
Membership	W. R. Angus		
Publicity	J. E. Blott		
CSEG Journal — Editor	K. A. Titchkosky		
Assistant Editor	R. B. Cruz		
Review Editor, Research	R. Crain		
- Review Editor, Computers	G. Hadford		
— Review Editor, Geophysics	G. Hobson		
Review Editor, Processing	H. Hofer		
— Review Editor, Magnetics			
— Review Editor, Economics	L. Margherita M. Stevenson		
- Review Editor, Interpretation			
— Review Editor, Marine	E. Wren		
— Advertising Chairman	N. Pullin		

1972 CORPORATE MEMBERS OF THE C.S.E.G.

The following individuals and companies have contributed funds to the CSEG in the amount of \$50.00 or more and have received corporate memberships for 1972. These contributions are used to provide scholarships for students studying in Geophysics or related fields.

AGIP CANADA LTD.

ANSCHUTZ (CANADA) EXPLORATION LTD.

BOW VALLEY INDUSTRIES LTD.

BPOG OPERATIONS LTD.

CANADA-CITIES SERVICE LTD.

CANADIAN INDUSTRIAL OIL & GAS LTD.

CANADIAN OCCIDENTAL PETROLEUM LTD.

CANADIAN SUPERIOR OIL LTD.

ELF OIL EXPLORATION AND PRODUCTION CANADA LTD.

FRANCANA OIL & GAS LTD.

GEODIGIT

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA LTD.

HUDSON'S BAY OIL & GAS CO. LTD.

HUSKY OIL OPERATIONS LTD.

MESA PETROLEUM CO.

PAN CANADIAN PETROLEUMS LIMITED

PEMBINA PIPE LINE LTD.

SCURRY-RAINBOW OIL LIMITED

SHELL CANADA LIMITED

TENNECO OIL & MINERALS, LTD.

TEXACO EXPLORATION CANADA LTD.

UNION OIL COMPANY OF CANADA LIMITED

ADVERTISERS' INDEX

	Page	Page
Airborne Geophysical Surveys,	**	Sedco Drilling iv
Ltd. Alpine Helicopters Ltd	ii vi	Sefel, J. and Associates xxxviii
Aqua Terra Consultants Ltd.	xliii	Seisform Drilling Ltd. x Seismic Data Agencies xxxiv
		Seismic Service Supply
Beaver Geophysical Services	xvi ii	(1958) Limited xxxi
Bow Helicopters Ltd.		Seismotech 64 Ltd. iv Sigma Explorations Ltd. xl
Caldraft Ltd.	xxxiv 	Stacs Data Storage Centre xii
Carter Mapping	xl iii	Teledyne Exploration xxxii
Century Geophysical Corp. of	****	Walker-McDonald Bit
Canada	xiii	Distributors, Ltd xlii
Compagnie Generale de Geophysique	xxxix	West Canadian Graphic
Crown Caterers Co. Ltd.	xxxvi	Industries Ltd. xxiv Western Electronic Systems xlii
R. B. Cruz & Associates Ltd.	xi	Western Geophysical Co. of
CSEG National Convention	xlv	Canada Ltd xxxvii
Dalcan Equipment Ltd.	х	
Digital Technology		
(Calgary) Ltd. (Digitech) Dresser Industries, Inc.	xli	C.S.E.G. JOURNAL CONTRIBUTIONS
(Dresser Olympic)	į	The following companies made contribu
Dresser SIE	xliv	The following companies made contributions to C.S.E.G. to support the Journal.
Ed Norton Construction Ltd.	x	de dispersión de de dispersión de dispersión de dispersión de dispersión
Exploration Data Exchange	xlv	AQUITAINE COMPANY
Explosives Limited	xxxv	DOMESTAL DIDES FINITE FOR
Geodigit	xiv	PEMBINA PIPE LINE LTD.
Geophysical Service		CANADIAN EXPORT GAS AND OIL
Incorporated	xlvi	
Geosearch Exploration Ltd. & Geosearch Velocity Surveys		VINCENT S. LOVOI
Ltd	xxxiv	FRIO OIL LTD.
GEO space	vii	THO OLD HID.
Globe Universal Sciences Canada Limited	ix	MESA PETROLEUM
Johnson & Herbert Const. Ltd.	xl	Thinky Off
	A	HUSKY OIL
Kenting Exploration Services Limited	χV	NORCANA EXPLORATION
Mandrel Canada Limited	xii	
Mark Products, Inc.	xxxiii	FOREST OIL CORPORATION
Marsh Head Construction Ltd.	iv	TRANSALTA EXPLORATION
Nickle Map Service Ltd.	xii	ITANSALIA EM LORATION
Norcana Exploration Limited	xii	GENERAL CRUDE OIL COMPANY
Northern Geophysical Ltd.	v	MODIF OIL GANGE:
Northern Auger Drilling Ltd.	viii	MOBIL OIL CANADA
Overland Exploration Services		BOW VALLEY EXPLORATION
(1969) Ltd	viii	, , , , , , , , , , , , , , , , , ,
Photogravity Surveys Ltd,	xxxvi	CHEVRON STANDARD LTD.

PRESIDENT'S PAGE

1972 will be remembered as the year in which the Canadian Society of Exploration Geophysicists ceased to be strictly a technical society.

With the disappearance of the Geophysical Society of Edmonton, the C.S.E.G. has become truly a national society and as such has assumed certain responsibilities. Our primary function is to promote the science of geophysics but in order to protect the livelihood of our members, we have found it necessary to become involved in matters which are political as well as technical.

We have submitted a brief to the Alberta Government protesting the decision to extract an additional 70 million dollars from the oil and gas industry, without at the same time offering geophysical incentives which would stimulate activity. We have also submitted a brief supporting the position of the C.P.A. Geophysical Committee in its comments on the proposed ban on summer foothills work in Alberta.

We have joined in talks with other societies in the Technical Liason Committee of the Association of Professional Engineers, Geologists and Geophysicists of Alberta and were pleased to learn that they too are beginning to take positions on matters of concern to their members and are ready to take joint action when necessary.

Most importantly, we have helped found the Canadian Geoscience Council, a co-operative group composed of seven of Canada's leading national geoscientific societies. The purpose of the Council is to foster close relations between earth science learned societies and professional associations in Canada and to take concerted action for promoting the earth sciences in the best interests of both the members of the constituent organizations and the Canadian nation as a whole. The Council's objectives include providing advice to governments on science policy and providing an informed opinion to the people of Canada on matters of public concern relating to the earth sciences.

All of the foregoing does not mean that we have neglected our technical obligations. We have continued to sponsor monthly technical meetings and biannual continuing education courses and to publish this excellent journal. Next spring we are sponsoring the first "C.S.E.G. National Convention" and have high hopes that this will become an annual event.

When our society was formed in 1949, the name Canadian Society of Exploration Geophysicists was chosen because we were the first Canadian society. Little did the founders realize that years later we would become the only Canadian society and would be called upon to represent all the exploration geophysicists in Canada. In 1972 we began to do that,

J. K. MORRISON