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# AUSTRALIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

## NEWSLETTER

PREVIEW # 13:

JANUARY - FEBRUARY 1988

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P.O. BOX 44, EASTWOOD, S.A. 5063

**COMING EVENTS****ADELAIDE '88**

See you in Adelaide from February 14-22 for the ASEG/SEG ADELAIDE'88 Conference and Exhibition.

**FOURTH ANNUAL GULF COAST EXPLORATION AND DEVELOPMENT MEETING AND EXPOSITION.**

The Fourth Annual Gulf Coast Exploration and Development Meeting and Exposition of the Society of Exploration Geophysicists will be held in New Orleans, March 13-15, 1988.

The central theme of the technical sessions will be "Cost Effective Exploration and Development through the Application of Technology and the Integration of Disciplines."

Listed below are the topics for the individual sessions:

- Recent Advances in Geophysics and a Look at the Future.
- Best Papers from Associated Societies (AAPG, GCAGS, etc.).
- P.C. Applications.
- Seismic Interpretation: Case Histories.
- Migration: Dip Movement, Prestack Migration, and Inversion.
- SPE/SEG Joint Session: Reservoir and Engineering Geophysics.

Abstracts Of 300 words or less, with no illustrations or mathematical equations, are requested for publication in the meeting program. In addition, an expanded abstract with illustrations would help the technical program committee in the review process. Talks should be limited to 20 minutes in length.

Abstracts must be received by February 18, 1988. Send original and two copies to:

Karl Kaufmann  
Gulf Coast Meeting, Technical Program Chairman  
Society of Exploration Geophysicists  
P.O. Box 702740  
Tulsa, OK 74170-2740 (74137).

**THE TENTH GEOPHYSICAL CONVENTION OF TURKEY.**

The Tenth Geophysical Convention will be held between April 4-8, 1988, in Ankara.

For further information contact:

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YURUTME KURULU

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CHINA COUNCIL FOR THE PROMOTION OF INTERNATIONAL TRADE

The China Council for the Promotion of International Trade is organising an International Exhibition on Geological Prospecting, Surveying, Seismology and Meteorology on October 11-17, 1988.

This Exhibition will be held in Beijing, China, and has been called GEOLOGY'88.

The objective of this International Exhibition is to create an opportunity for those in the industry to exchange information and ideas about prospecting, mining and exploration and knowledge in the physical environment.

SHK International Services LTD., and CIEC Exhibition Company (H.K.) LTD., in Hong Kong have been appointed as the overseas organisers of GEOLOGY'88.

The contact addresses are:

CIEC Exhibition Company (H.K.) LTD.  
21/F, China Resources Bldg.,  
26 Harbour Road, Wanchai

Tel: 5-8335078 Tlx: 81529 CIFC HX  
Fax: 5-8931214

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CALL FOR PAPERS - 1988 SEG/MIDWEST MEETING.

The 1988 Midwest Meeting of the Society of Exploration Geophysicists will be held in Oklahoma City, Oklahoma, April 10-12, 1988.

The meeting is designed to meet the technical needs of the Midwest explorationist by providing technical sessions which relate to aspects of exploration and development Geophysics.

Sessions to be offered will include the topics of:

- Case Histories of Integrated Geophysical Interpretations.
- Processing Technology.
- Acquisition Techniques.

Abstracts of 300 words or less with no illustrations or mathematical equations are requested for publication in the meeting program. In addition, an expanded abstract with illustrations would help the technical committee in the review process. Talks should be limited to 20 minutes in length.

Abstracts must be received by February 18, 1988. Send original and two copies to:

Thomas A. Schultz  
Midwest Meeting, Technical Program Chairman  
Society of Exploration Geophysicists  
P.O. Box 702740  
Tulsa, OK 74170-2740.

### ASEG RESEARCH FOUNDATION

For some time now, the Federal Executive of ASEG has been discussing the possible formation of an ASEG Research Foundation to formalise our support for research in exploration geophysics. No decisions have been made and this position paper is intended to solicit the opinions of the membership, at large, on this issue.

There are some administrative and taxation advantages in the formation of such a body but it would involve some modification (additions to) the articles of association of ASEG. Our aim would be to have the ASEG Research Foundation accepted as an approved research institute for the purposes of section 73A of the Income Tax Assessment Act. This would ensure that donations to the Foundation would be, at least 100% tax deductible. If donations are directed towards a specific project they could also qualify for 150% tax deduction, regardless of the amount and regardless of the status of the donor. We feel that this mechanism would facilitate support for research in exploration geophysics by both companies and individuals.

In order to establish the ASEG Research Foundation, as an approved research institute, we would need approval by CSIRO. The ASEG Memorandum and Articles of Association would require amendment to reflect the following:

- (1) The establishment of a separate research fund to be used exclusively for scientific research purposes, as defined by sub section 73A(6) of the Act, into which all donations for which income tax deductions are sought must be paid;
- (2) The administration of this fund to be carried out by a research committee of not less than five members, four of whom shall be suitably qualified for assessing the research being undertaken, and all of whom are approved by CSIRO;
- (3) Any changes in the membership of the research committee to be approved by CSIRO;
- (4) All decisions regarding areas of research and the application of moneys thereto are to be made only by the research committee;
- (5) The publication of the results of the research, financed by moneys for which deductions are allowable under sub-paragraph 78(1)(a)(x) of the Act, in the scientific and technical press;
- (6) Any Australian patents issued in the course of such research, financed by moneys for which deductions are allowable under sub-paragraph 78(1)(a)(x) of the Act, are to be made available for general use on the same terms to all interested parties; and

(7) In the event of the organisation being wound up, or research activities being ceased, any surplus funds in the account must be transferred to another research fund or organisation accepted as an approved research institute.

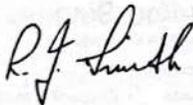
The addition of these statements to the existing Memorandum and Articles of Association of ASEG would be sufficient to initiate the ASEG Research Foundation. Following the appointment of a suitable committee to administer the Foundation, application and presumably acceptance by CSIRO as an approved research institute, we could then solicit funds from both companies and individuals (and, of course, from ASEG).

The advantage of the existence of such a body is that even small donations of a few dollars could be fully tax deductible and there is no commitment to make similar donations over a period of several years. In this way we would hope to avoid conflict with bodies like AMIRA who generally require more substantial sponsorship and a 2-3 year commitment.

We feel that funds could best be directed to Honours degree students or even M.Sc. students as these short term projects generally cannot be funded by AMIRA. The resulting research and the graduates should then make a worthwhile contribution to exploration geophysics in Australia.

We believe that such a research fund, properly administered, could further the long term aims of ASEG by supporting exploration geophysics research. This support could be in the form of scholarships, commissioned research, grants to individuals or companies etc. - the decisions would rest with the committee which should include representation from academia, industry, CSIRO and AMIRA.

The Federal Executive would like to hear from the membership at large if you have any opinions on this important issue. The Memorandum and Articles of Association of ASEG have served us well and we do not lightly undertake to change them. At present however, we see no negative aspects to this proposal but a positive way to further the aims of our society in supporting exploration geophysics.



R.J. SMITH  
President

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14a



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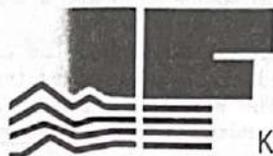
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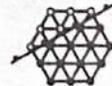
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**MEET THE CHALLENGE**  
*leave nothing unattempted in '88*

**ASEG/SEG  
INTERNATIONAL GEOPHYSICAL  
CONFERENCE & EXHIBITION**

**Feb. 14-21, 1988  
Adelaide, Australia**



**IN**  
1788 - 1988  
Australia Bicentenary  
Voyage of Discovery

ASEG '88  
P.O. Box 753  
Norwood,  
S.A. 5067  
Ph:(08)332 4068

**REMINDER**

January 1988

A few vacancies still exist for the following Workshops, Short Courses and Engineering Seminar which are being held either side of the joint ASEG/SEG Adelaide '88 Conference. Refer to the Registration Brochure for details or phone or write to Muriel Ellis of Ellisservice Convention Management, P.O. Box 753, Norwood, South Australia 5067. Telephone (08) 332-4068.

W.1 EM WORKSHOP...FEBRUARY 13-14, 1988 \$280 all-inclusive  
Limited to 35 participants

Venue: Raywood Conference Centre, Bridgewater ('live in').  
 Chairman: Michael Asten of B.H.P. Minerals.

W.2 DOWNHOLE GEOPHYSICS, FEBRUARY 20-21, 1988 \$280 all-inclusive  
Limited to 35 participants

Venue: Raywood Conference Centre, Bridgewater (live-in).  
 Chairmen: Tom Edie of Aberfoyle Resources and Ted Tyne of the Geological Survey of N.S.W.

W.3 AIRBORNE GEOPHYSICS SHORT COURSE \$250  
FEBRUARY 20-21, 1988

Venue: University of Adelaide, Mawson Laboratory Building.  
 Chairman: Graham Butt, Geoterrex Ltd, NSW

W.4 ENGINEERING GEOPHYSICS SEMINAR \$175 (incl. Lunch)  
FEBRUARY, 13-14, 1988

Venue: University of Adelaide, Mawson Laboratory Building.  
 Chairman: Kim Frankcombe

SEG CONTINUING EDUCATION COURSES

A few places still remain in the following Courses which normally cost at least \$US385 for SEG Members in the U.S.A. Don't miss this unrepeatable chance to participate at a registration price pitched to merely cover the expense of bringing these eminent experts to Adelaide. Venue: University of Adelaide, Mawson Laboratory Building. (Approach from Victoria Drive). 9.00am to 5.00pm each day - plan to arrive not later than 8.45am on Day One.

SEG.1 VERTICAL SEISMIC PROFILING \$250  
FEBRUARY 13 & 14, 1988

Course Instructor: Robert R. Stewart, Senior Research Geophysicist with Veritas Software Ltd and a lecturer with the Continuing Education Program of the SEG.

SEG.2 MULTI-COMPONENT SEISMIC EXPLORATION \$250  
FEBRUARY 20 & 21, 1988

Course Instructors:  
 Michael D. McCormack, Director of the Seismic Interpretation Techniques Group in the Geophysical Research Dept of ARCO Resources Technology Company, U.S.A., and --  
 Robert H. Tatham, a research consultant with Texaco U.S.A.'s Houston Research Center.

SEG.3 SEISMIC DATA ACQUISITION \$250  
FEBRUARY 19 & 20, 1988\*

Please note change of date from 20-21/2/88 as published in Registration Booklet.  
 Course Instructor: Marvin Hewitt, who retired in July 1986 after 36 years with AMOCO.

BAD.1 ADVANCED GEOLOGICAL TECHNIQUES IN \$250  
SEISMIC INTERPRETATION FEBRUARY 13 & 14, 1988

Venue: University of Adelaide, Mawson Laboratory Building. 9.00am-5.00pm each day.  
 Plan to arrive not later than 8.45am on Day One.

Course Instructor: Dr Mike Badley, consultant with Badley, Ashton & Associates Ltd, U.K.

PROGRAM

[ACC] -- THE ADELAIDE CONVENTION CENTRE, North Terrace (west of The Adelaide Casino and Railway Station) is the main venue for the Conference and Trade Exhibition. The Conference Registration Desk is at all times located in the Main Foyer of The Convention Centre.

All lunches will be served at the Centre in or adjacent to the Trade Exhibition Area. The Welcome Reception at the Convention Centre also incorporates the Official Opening of the Trade Exhibition. All parallel sessions will be conducted in The Adelaide Convention Centre.

[AFT] - THE ADELAIDE FESTIVAL THEATRE, King William Road (a 5 minutes' walk from The Adelaide Convention Centre, behind the Adelaide Casino) is the venue for the Opening and Closing Plenary Sessions. The Closing Cocktail Party will be held in the Adelaide Festival Centre's Banqueting Room.

-----  
MAIN CONFERENCE PERIODSUNDAY FEBRUARY 14

1200-2030	REGISTRATION DESK OPEN (Main Foyer)	[ACC]
1630	SPEAKERS' & CHAIRMEN'S BRIEFING (Hall C)	[ACC]
1700-2030	TRADE EXHIBITION OPEN (Halls A, B, E & Meeting Rooms 1 & 2)	[ACC]
1800	OFFICIAL OPENING OF TRADE EXHIBITION	[ACC]
1800-2000	WELCOME RECEPTION in TRADE EXHIBITION AREA. (sponsored by SHELL AUSTRALIA) [Guest tickets \$18 each]	[ACC]
<u>FREE EVENING</u>	Group bookings for theatre/restaurants arranged on request.	

MAIN CONFERENCE PERIOD (Continued)MONDAY FEBRUARY 15

0800-1800	REGISTRATION DESK OPEN	[ACC]
0830-0845	STROLL DOWN TO ADELAIDE FESTIVAL THEATRE	
0845	TAKE SEATS IN MAIN THEATRE	[AFT]
	OPENING PLENARY SESSION	[AFT]
0900	Conference Chairman's Address (Reg Nelson)	
0915	Official Opening of the Conference (Jim Kirk, Chairman Australian Bicentennial Authority) Welcome Addresses:	
0930	. Bob Smith, President ASEG	
0945	. Lee Lawyer, President SEG	
1030	Morning Tea Keynote Addresses:	
1100	. Norman R. Paterson, Paterson, Grant & Watson Ltd, Canada	
1145	. Ian Story, Meares & Philips Ltd, NSW	
1215	MAKE WAY BACK TO ADELAIDE CONVENTION CENTRE View Trade Exhibition.	[ACC]
	Lunch served in Exhibition Area.	[ACC]
1330-1430	PARALLEL SESSIONS	[ACC]
1430-1500	Afternoon Tea in Trade Exhibition Area	[ACC]
1500-1700	PARALLEL SESSIONS	[ACC]
<u>FREE EVENING</u>	Optional Twilight Cruise aboard M.V. "Captain Matthew Flinders" Showboat, with Dinner (\$45 per person)	

TUESDAY FEBRUARY 16

0800-1800	REGISTRATION DESK open	[ACC]
0800-1800	TRADE EXHIBITION open	
0900-1030	PARALLEL SESSIONS	[ACC]
1030-1100	Morning Tea in Trade Exhibition Area	[ACC]
1100-1230	PARALLEL SESSIONS	[ACC]
1230-1400	VISIT TRADE EXHIBITION	[ACC]
	Lunch in Trade Exhibition Area	[ACC]
1400-1530	PARALLEL SESSIONS	[ACC]
1530-1600	Afternoon Tea in Trade Exhibition Area	[ACC]
1600-1700	PARALLEL SESSIONS	[ACC]
<u>FREE EVENING</u>	Optional Social Programme, including return transport:	
a.	Ayers House Tour, Harp & Flute Musicale/Soiree & Supper	(\$20)
b.	The Buffalo Sailing Ship Museum & Seafood Restaurant	(\$40)
c.	The Tunnels, Old Lion Hotel, Restaurant & Disco	(\$40)

WEDNESDAY FEBRUARY 17

0800-1800	REGISTRATION DESK open	[ACC]
0800-1800	TRADE EXHIBITION open	[ACC]
1000-1800	TRADE EXHIBITION - OPEN TO THE PUBLIC	[ACC]
0900-1030	PARALLEL SESSIONS	[ACC]
1030-1100	Morning Tea in Trade Exhibition Area	[ACC]
1100-1230	PARALLEL SESSIONS	[ACC]
1230-1400	VISIT TRADE EXHIBITION	[ACC]
	Lunch in Trade Exhibition Area	[ACC]
1400-1530	PARALLEL SESSIONS	[ACC]
1530-1600	Afternoon Tea in Trade Exhibition Area	[ACC]
1600-1700	PARALLEL SESSIONS	[ACC]
1900	MAKE OWN WAY TO RUNDLE MALL, CENTRAL ADELAIDE SHOPPING DISTRICT.	
1915-2000	PRE-DINNER DRINKS, RENAISSANCE CENTRE ARCADE, RUNDLE MALL.	
2000-2400	CONFERENCE DINNER with ENTERTAINMENT & DANCING, RENAISSANCE CENTRE.	
	[Guest tickets \$48 each]	

THURSDAY FEBRUARY 18

0800-1800	REGISTRATION DESK open	[ACC]
0900-1030	PARALLEL SESSIONS	[ACC]
1030-1100	Morning Tea in Trade Exhibition Area	[ACC]
1100-1230	PARALLEL SESSIONS	[ACC]
1230-1400	LAST CHANCE TO VISIT TRADE EXHIBITION	[ACC]
	Lunch served in Trade Exhibition Area	
1330-1345	MAKE OWN WAY TO ADELAIDE FESTIVAL THEATRE	
1345	TAKE SEATS IN MAIN THEATRE	[AFT]
	<u>CLOSING PLENARY SESSION</u>	[AFT]
	Keynote Addresses:	
1400	. Katharine West	
1430	. Marvin Hewitt	
1500	. David Tucker	
1530	Afternoon Tea (Main Theatre Foyers)	
1600	AWARD PRESENTATIONS	
	INVITATION TO 1989 ASEG CONFERENCE, MELBOURNE	
1645	CLOSING CEREMONY	
1700	CLOSE	
1730-1930	CLOSING COCKTAIL PARTY, Adelaide Festival Centre Banqueting Room	
	[Guest tickets \$18 each]	

# TECHNICAL PROGRAM

## TECHNICAL PROGRAM OUTLINE

### Monday 15 February, 1988

- 0900 - 1030 OFFICIAL OPENING in Festival Centre - Chairman R. Nelson  
 PLENARY SESSION - Distinguished Guests  
 1030 - 1100 MORNING TEA in Festival Centre  
 1100 - 1215 PLENARY SESSION - Keynote Address in Festival Theatre - N. Patterson, I. Story - Chairman R. Nelson  
 1215 - 1330 LUNCH - Convention Centre

	HALL D	ROOM 5	HALL C	ROOM 4
1330 - 1500	<b>Session 1A</b> Seismic 35 Processing I 159 98	<b>Session 1B</b> Basin 147 Studies I 58 22	<b>Session 1C</b> Magnetics I 89 4 6	<b>Session 1D</b> Coal 47 96 87
1500 - 1530	AFTERNOON TEA in Trade Exhibition Area			
1530 - 1700	<b>Session 2A</b> Seismic 85 Processing 44 II 109	<b>Session 2B</b> Basin 106- Studies II 8 105	<b>Session 2C</b> Magnetics II 156 76 53	<b>Session 2D</b> Management 14- 74- 103-

### Tuesday 16 February, 1988

	HALL D	ROOM 5	HALL C	ROOM 4
0900 - 1030	<b>Session 3A</b> Crustal 37 Studies I 81 91	<b>Session 3B</b> Seismic 99 Acquisition 88 I (Marine) 115	<b>Session 3C</b> E.M. I 127 104- 43	<b>Session 3D</b> Crosshole 124- tomography 143 57
1030 - 1100	MORNING TEA in Trade Exhibition Area			
1100 - 1230	<b>Session 4A</b> Crustal 112 Studies II 13 166-	<b>Session 4B</b> Seismic 24- Acquisition 39- II (Statics) 126-	<b>Session 4C</b> E.M. II 62 77 69	<b>Session 4D</b> Waste 80 Management 134 75
1230 - 1400	LUNCH			
1400 - 1530	<b>Session 5A</b> Seismic 25 Processing III 18 (C/Histories) 84-	<b>Session 5B</b> Seismic 144 Acquisition 67 III (Land) 5	<b>Session 5C</b> Geotechnical 82 34	<b>Session 5D</b> Electrical 93 148 49-
1530 - 1600	AFTERNOON TEA in Trade Exhibition Area			
1600 - 1700	<b>Session 6A</b> Seismic 21 Processing IV 83	<b>Session 6B</b> Seismic 33 Acquisition 167 IV (Instruments)	<b>Session 6C</b> Minerals 142- (Instrument- 160 ation)	<b>Session 6D</b> Closed

TECHNICAL PROGRAM

Wednesday 17 February, 1988

	HALL D	ROOM 5	HALL C	ROOM 4
0900 - 1030	<b>Session 7A</b> Seismic 152- Processing 63 V 61 (C/Histories)	<b>Session 7B</b> Closed	<b>Session 7C</b> Downhole (Mineral) 32 70 128	<b>Session 7D</b> Geophysics 29 (Special 46 Papers) 164-
1030 - 1100	MORNING TEA in Trade Exhibition Area			
1100 - 1230	<b>Session 8A</b> Seismic 52 (General) 130 15	<b>Session 8B</b> Databases 70 154 66	<b>Session 8C</b> Minerals 79 (C/Histories 27 & New Devel 40 opments)	<b>Session 8D</b> VSP's 150 161- 16
1230 - 1400	LUNCH			
1400 - 1530	<b>Session 9A</b> Seismic 100 C/Histories 71- 118	<b>Session 9B</b> Three 138- Component 65 Seismic 7	<b>Session 9C</b> Geotechnical 55 (C/Histories) 10 165	<b>Session 9D</b> Workstations 38- 45 111
1530 - 1600	AFTERNOON TEA in Trade Exhibition Area			
1600 - 1700	<b>Session 10A</b> Seismic 86 C/Histories 163 11	<b>Session 10B</b> Closed	<b>Session 10C</b> Groundwater 72 (C/Histories) 95	<b>Session 10D</b> Closed
1900	CONFERENCE DINNER			

Thursday 18 February, 1988

	HALL D	ROOM 5	HALL C	ROOM 4
0900 - 1030	<b>Session 11A</b> Seismic 137- Processing 48 VI (Ampli- 153 tude vs Offset)	<b>Session 11B</b> Surface 113 Seismic 92 Tomography 151	<b>Session 11C</b> Non Seismic 157 Petroleum 2 Exploration 125	<b>Session 11D</b> Magnetic 110 Rock Proper- 115 ties 140
1030 - 1100	MORNING TEA in Trade Exhibition Area			
1100 - 1230	<b>Session 12A</b> Seismic 145 C/Histories 11 111 108	<b>Session 12B</b> Shear Waves 155 1 56	<b>Session 12C</b> Magneto 51 tellurics 122 117-	<b>Session 12D</b> Closed
1230 - 1400	LUNCH - Convention Centre			
1400 - 1530	PLENARY SESSION in Festival Theatre - Keynote Addresses - K. West, H. Hewitt, D. Tucker Chairman C. Branch			
1530 - 1600	AFTERNOON TEA in Festival Centre			
1600 - 1700	AWARD PRESENTATIONS AND CLOSING PLENARY SESSION in Festival Theatre. Chairman R. Nelson			

EXCURSIONS

COURSES &amp; WORKSHOPS

OPTIONAL PRE- or POST-CONFERENCE EXCURSIONS

All tours start from Hilton International Hotel, 233 Victoria Square at the stated commencement time. Coaches proceed to Gateway Hotel, 150 North Terrace and pick up passengers from there 15 minutes later.

FRIDAY FEBRUARY 12 (0730) - SUNDAY FEBRUARY 14 (1730)

- A. Natural History Voyage on the sailing ship "FALIE", \$395  
3 days, 2 nights - with sumptuous meals. (Limited to 18 passengers)

SATURDAY FEBRUARY 13

- A. Southern Vales Wineries Tour & Dinner at Hardy's Cellars, Reynella \$40  
(1430-2300)  
B. Dinner at Hardy's Cellars, Reynella (join up with group A 6.45pm) \$35  
(1800-2300)

SUNDAY FEBRUARY 14 (0900-1630)

- A. Barossa Valley Wineries Tour & Lunch at Yalumba Winery, Angaston \$40  
B. Adelaide Hills, Gumeracha Toy Factory, Birdwood Mill Motor Museum,  
Hahndorf & Lunch at Birdwood \$40

TUESDAY FEBRUARY 16 (0700-1730)

- C(a) Spencer Gulf Voyage on the sailing ship "FALIE" \$75  
Includes sumptuous lunch. (Limited to 50 passengers)

WEDNESDAY FEBRUARY 17 (0700-1630)

- C(b) Spencer Gulf Voyage on the sailing ship "FALIE" \$75  
Includes sumptuous lunch. (Limited to 50 passengers)

FRIDAY FEBRUARY 19 (0730) - SUNDAY FEBRUARY 21 (1730)

- B. Natural History Voyage on the sailing ship "FALIE", \$395  
3 days, 2 nights - with sumptuous meals. (Limited to 18 passengers)

ACCOMPANYING PERSONS' OPTIONAL PROGRAMMEMONDAY FEBRUARY 15

- A. 1000-1600 Carrick Hill/Mt Lofty House (includes lunch) \$40  
B. 1300-1600 Hahndorf/Crafts (includes afternoon tea) \$25

TUESDAY FEBRUARY 16

- A. 0930-1630 Shopping/Sightseeing Tour (includes lunch) \$40  
B. 1400-1700 Mt Lofty & Cleland Wildlife Park (includes afternoon tea) \$20

WEDNESDAY FEBRUARY 17 - 1000-1200 - Guided Walking Tours, incl. morning tea \$10

- A. North Terrace B. King William Road C. Courts

REFER TO REGISTRATION BROCHURE FOR MORE DETAILS OF OPTIONAL SOCIAL PROGRAMME.

# COURSES & WORKSHOPS

1988 JOINT ASEG/SEG INTERNATIONAL CONFERENCE/EXHIBITION - ADELAIDE, AUSTRALIA  
FEBRUARY 14-21, 1988

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TIMETABLE

PRE-/POST-CONFERENCE COURSES & WORKSHOPS - (0900-1700 each day)

SATURDAY FEBRUARY 13 to SUNDAY FEBRUARY 14

- |        |   |                                |
|--------|---|--------------------------------|
| BAD.1  | Advanced Geological Techniques in Seismic Interpretation (Badley)<br>University of Adelaide, Mawson Laboratory Building<br>(approach from Victoria Drive) | Regular \$250<br>Student \$200 |
| SEG.1  | - Vertical Seismic Profiling (Stewart)<br>University of Adelaide, Mawson Laboratory Building<br>(approach from Victoria Drive)                            | Regular \$250<br>Student \$150 |
| W.1    | E.M. 'Live-in' Workshop (Asten)<br>Raywood Conference Centre, Bridgewater   | Regular \$280<br>Student \$200 |
| 7.45am | Coach picks up from Adelaide Casino, North Terrace  |                                |
| 8.00am | " " " " Hilton International Hotel, Victoria Sq.  |                                |
| W.4    | Engineering Geophysics Workshop/Seminar (Frankcombe)<br>University of Adelaide, Mawson Laboratory Building<br>(approach from Victoria Drive)              | Regular \$175<br>Student \$100 |

FRIDAY FEBRUARY 19 TO SATURDAY FEBRUARY 20

- |       |   |                                |
|-------|---|--------------------------------|
| SEG.3 | - Seismic Data Acquisition (Hewitt)<br>University of Adelaide, Mawson Laboratory Building<br>(approach from Victoria Drive) | Regular \$250<br>Student \$150 |
|-------|---|--------------------------------|

SATURDAY FEBRUARY 20 TO SUNDAY FEBRUARY 21

- |        |  |                                |
|--------|--|--------------------------------|
| SEG.2  | - Multi-Component Seismic Exploration (McCormack/Tatham)<br>University of Adelaide, Mawson Laboratory Building<br>(approach from Victoria Drive) | Regular \$250<br>Student \$150 |
| W.2    | Down Hole Geophysics 'Live In' Workshop (Eadie/Tyne)<br>Raywood Conference Centre, Bridgewater   | Regular \$280<br>Student \$200 |
| 7.45am | Coach picks up from Adelaide Casino, North Terrace   |                                |
| 8.00am | " " " " Hilton International Hotel, Victoria Sq.   |                                |
| W.3    | Airborne Geophysics Short Course (Butt)<br>University of Adelaide, Mawson Laboratory Building<br>(approach from Victoria Drive)                  | Regular \$250<br>Student \$150 |
-

## WORKSHOPS

W.1 EM WORKSHOP...FEBRUARY 13-14, 1988  
Limited to 35 participants

\$280 all-inclusive

Venue: Raywood Conference Centre, Arbury Park, Bridgewater 5155.  
 Phone: 08.339-1339.

Raywood Conference Centre is situated in historic grounds with formal gardens, surrounded by native vegetation. It is just 25 minutes' drive from Adelaide into the Adelaide Hills (via the South Eastern Freeway.) Accommodation is provided in comfortable single rooms with study facilities and hand basins. Showers and toilet facilities are available on each floor of the dormitory block which is only a short distance from the main conference and dining centre.

This 'live in' workshop is being chaired by Mr Michael Asten of BHP Minerals. It will include such topics as EM image processing techniques, case histories, inversion techniques, instrumentation, EM/IP and instrumental effects, and "hands on" interpretation of various data sets. Workshop leaders will include Australian and overseas experts. For further information call Mr Michael Asten on (03) 813.3666.

### TIMETABLE

<u>Day One</u>	
7.45am	Coach picks up from outside Adelaide Casino, North Tce
8.00am	Coach picks up from outside Hilton International Hotel, 233 Victoria Square, Adelaide.
8.30am	Arrive Raywood
9.00am-1.00pm	<u>Session One</u>
	Depth of effective exploration in EM sounding (Brian Spies, ARCO Oil & Gas, USA)
	Multi-loop modelling software on PC (Jim MacNae, Lamontage Geophysics, Canada)
	Current filament inversion software on PC (Andrew Duncan, Mincor, Vic.)
	Inductive/galvanic responses (Greg Newman, University of Utah, USA)
	Image processing techniques in data (Peter Elliott, Billiton Aust., SA)
	Data plotting conventions -- General discussion
	Demonstration of Zonge processing package on PC (Van Reed, Zonge Engineering & Research Organisation, SA)
1.00pm	Lunch

**WORKSHOP ONE (Saturday February 13 & Sunday February 14, 1988) ...cont'd****Day One (cont'd)**

- 2.00pm-5.30pm      **Session Two**  
**Capabilities of present instrumentation (with examples)**  
:      Sirotem - Roger Henderson, Geo Instruments, NSW  
:      UTEM - Jim MacNae, Lamontage Geophysics, Canada  
:      Zonge GDP16 - Ken Zonge, Zonge Engineering & Research, SA  
:      EM 37 - tba  
:      Crone Digital - tba  
Discussion on future directions  
:      Actual advances in development  
:      Wish list
- 5.30pm              Break/Evening Meal  
7.30pm-late        Demonstrations on PCs and 68020 workstations  
Free-flowing discussion

**Day Two**

- 7.30am              Breakfast  
9.00am-12.30pm    **Session Four**  
Loop effect, polarization smoke-ring  
(Marcus Flis, CRAE, NSW; Michael Asten, BHP Utah Minerals,  
Vic.; Richard Smith, University of Toronto, Canada)  
Loop effect and instrumental effects  
(Brian Spies, ARCO Oil & Gas, USA)  
IP in 3D TEM modelling  
(Greg Newman, University of Utah, USA)  
Detector self-response  
(Dick Irvine, BHP Utah Minerals, Vic.)  
Lunch
- 12.30pm  
1.30pm- 4.00pm    **Session Five**  
Interpretation of selected examples of surface and down  
hole TEM data, working in small groups with PC software  
supplied. Feel free to bring your own data.  
Pack-up, and board coach.  
4.00pm- 4.30pm    Coach departs Raywood for City Hotels. Coach waits for  
4.30pm              those workshop participants who are also registering  
for the ASEG/SEG Adelaide '88 Conference and continues  
on to the Adelaide Convention Centre where they can register.  
6.00pm- 8.00pm    Welcome Reception incorporating official opening of the  
Trade Exhibition being held in conjunction with the Conference.

W.2 DOWNHOLE GEOPHYSICS, FEBRUARY 20-21, 1988  
Limited to 35 participants

\$280 all-inclusive

Venue: Raywood Conference Centre, Arbury Park, Bridgewater 5155.  
 Phone: 08.339-1339.

Raywood Conference Centre is situated in historic grounds with formal gardens, surrounded by native vegetation. It is just 25 minutes' drive from Adelaide into the Adelaide Hills (via the South Eastern Freeway.) Accommodation is provided in comfortable single rooms with study facilities and hand basins. Showers and toilet facilities are available on each floor of the dormitory block which is only a short distance from the main conference and dining centre.

This is a 'live in' workshop which will be co-chaired by Mr Tom Eadie of Aberfoyle Resources and Mr Ted Tyne of the Geological Survey of N.S.W. It will include such topics as IP, EM, Radar, Seismic and Magnetics. Participants are encouraged to bring interesting and/or problem data for discussion. For further information call Mr Tom Eadie on (03) 882.2226.

#### TIMETABLE

<u>Day One</u>	
7.45am	Coach picks up from outside Adelaide Casino, North Tce
8.00am	Coach picks up from outside Hilton International Hotel, 233 Victoria Square, Adelaide.
8.30am	Arrive Raywood
9.00am	Downhole EM - current state of the art and case histories. (led by Tom Eadie)
10.30am	Morning Tea
11.00am	Downhole EM - the future. (led by Dr Mike Asten, BHP Utah Minerals, Vic.)
1.00pm	Lunch
2.00pm	Downhole IP - Instrumentation, applications and pitfalls. (led by Ted Tyne)
3.30pm	Afternoon Tea
4.00pm	Downhole IP - Case histories. (led by Ted Tyne)
5.30pm	Break/Evening Meal
7.30pm-late	Problem solving in separate IP and EM groups Group discussions, over a glass (or two) of wine.
<u>Day Two</u>	
7.30am	Breakfast
9.00am	Downhole magnetics. (led by Terry Hoschke, Geopeko, NSW)
10.30am	Morning Tea
11.00am	High resolution techniques (radar, seismic)
12.30pm	Lunch
1.30pm	Specialist groups for problem solving, discussion, etc.
3.00pm	Afternoon Tea in Session Room
3.15pm- 4.00pm	Wind-up - Discussion
4.00pm- 4.30pm	Pack-up, and board coach.
4.30pm	Coach departs Raywood for City Hotels and Adelaide Airport.

W.3 AIRBORNE GEOPHYSICS SHORT COURSE, FEBRUARY 20-21, 1988 \$250

VENUE: University of Adelaide.  
Mawson Laboratory Building (approach from Victoria Drive)

TIMETABLE

<u>Day One</u>	
9.00am	Introductory Remarks - Graham Butt, Geoterrex Pty Ltd, NSW.
9.10am	Navigation & Positioning - Tim Crago, Nortech Surveys (Canada) Inc.
10.10am	Discussion
10.25am	Morning Tea
10.55am	Airborne Gravity - John Brozena, U.S. Naval Research Laboratory, Washington, D.C.
11.55am	Combined Discussion (Gravity and Positioning)
12.15pm	Lunch
1.45pm	Fixed Wing TEM Equipment, Data Acquisition and Data Processing Procedures - Steve Thomson, Geoterrex Ltd, Ottawa, Canada.
2.15pm	Discussion
2.25pm	Fixed Wing TEM Interpretative Data Processing - Martin Schneider, Geoterrex Pty Ltd, Sydney.
2.55pm	Discussion
3.05pm	Afternoon Tea
3.35pm	Helicopter EM Equipment and Data Acquisition Procedures - Doug Fraser, Dighem Ltd, Canada
4.05pm	Discussion
4.15pm	Helicopter EM Data Processing and Interpretation Procedures - Doug Fraser, Dighem Ltd, Canada
4.45pm	Discussion
5.00pm	Close
<u>Day Two</u>	
9.00am	Gamma Spectrometry; Equipment and Data Acquisition Procedures - Graham Jenke, Kevron Geophysics, Perth.
9.40am	Discussion
9.55am	Morning Tea
10.25am	Gamma Spectrometry; Data Processing - Paul Wilkes, Engineering Computer Services, Perth.
11.05am	Discussion
11.20am	Gamma Spectrometry; Data Presentation & Interpretation - BHP, Melbourne (Presenter t.b.a.)
12.00pm	Discussion
12.15pm	Lunch
1.45pm	Moniteq's Fluorescent Line Imager (FLI); Applications - Dr Don Pridmore, Aerodata/World Geoscience Corporation.
2.25pm	Discussion
2.40pm	The Daedalus 1260/1268 Multi-Spectral Scanner - Graeme Lacey, National Safety Council of Australia, Sale, Victoria.
3.20pm	Discussion
3.35pm	Afternoon Tea
4.05pm	Image Processing of Remotely Sensed Data Sets - Steve Webster & Ian Campbell, Austirex International Ltd, Sydney
4.45pm	Discussion
5.00pm	Close

W.4 ENGINEERING GEOPHYSICS SEMINAR,  
FEBRUARY 13-14, 1988

\$175 (incl.Lunch)

VENUE: University of Adelaide  
Mawson Laboratory Building (approach from Victoria Drive)

This Seminar will cover many areas of geotechnical and mining engineering geophysics. It will attempt to highlight the relevance (if any) of geophysics to the engineer or geologist predicting performance figures.

Presentations will be from geophysicists on an application basis and engineers and geologists on a problem basis. Ample time will be allowed for discussion and questions. The seminar is supported by the Geomechanics Society and should be of interest to all engineering geologists, mining engineers, geotechnical engineers and engineering geophysicists. For further details, please contact Kim Frankcombe on (08) 332.5633.

TIMETABLE

Day One

Chaired by Kim Frankcombe:

9.00am- 9.05am	Opening Welcome by K.M. Frankcombe.
9.30am	Engineering Geophysics: a Geophysicist's view - Bob Whitley, University of NSW, NSW.
10.00am	Engineering Geophysics: a Geologist's view - Professor David Stepelton, S.A.I.T., SA.
10.30am	Engineering Geophysics: an Engineer's view - Professor Robin Fell, University of NSW, NSW.
11.00am	Morning Tea "Geophysics Case Histories by Geophysicists on an application basis"
11.30am	Magnetics - John Stanley, University of New England, NSW.
12.00pm	Gravity - Lockey Creswell, Dept of Housing & Construction, VIC.
12.30pm	Electromagnetism - Jock Buselli, C.S.I.R.O., NSW.
1.30pm	Lunch
2.00pm	Downhole sonic & neutron logging - Alan Davies, Utah, QLD.
2.30pm	Downhole logging, Electrical - Ted Tyne, NSW Dept of Min.Res., NSW.
3.00pm	Radar - Tony Siggins, C.S.I.R.O., VIC.
3.30pm	Afternoon Tea
4.00pm	Refraction: Seismic - Dereke Palmer, NSW Dept of Min. Res., NSW.
4.30pm	Reflection: Seismic - Geoff Pettifer, Vic. Geological Survey, VIC.
5.00pm	Shear wave: Seismic - Bob Whitley, University of NSW, NSW.
5.30pm	Cross hole: Seismic - Bob Whitley, University of NSW, NSW.

W.4 ENGINEERING GEOPHYSICS SEMINAR, FEBRUARY 13-14, 1988 (Cont'd)Day Two

9.00am- 9.30am	Port Bonython Jetty - Charles Fitzhardinge, Fitzhardinge & Woodburn, SA.
10.00am	Detection of clay in Riverside Colliery - Wayne Stasinowsky, BHP Engineering, NSW.
10.30am	Overburden characteristics - Andrew Kremore, ETSA, SA.
11.00am	Morning Tea
11.30am	Rippability, subsurface profile - Iain Gibson, Golder & Associates, VIC.
12.00pm	Detection of Cavities - George Rumbens/Jim Williams, Dept of Main Roads, NSW.
12.30pm	Fracture patterns as an aid to blasting - Cameron McKenzie, Julius Kruttschnitt Res. Centre, QLD.
1.30pm	Lunch
2.00pm	Assessment of road materials and sites - Graeme Granger, RCA, VIC.
2.30pm	Cavity detection/Tunnel lining/Fracture detection - Malcolm Bridges, SMEC, NSW.
3.00pm	Integrated site investigation including Tyndal study - Pat McGregor, Coffey, NSW.
3.30pm	Afternoon Tea
4.00pm	Downhole sonic and neutron logging, Part I: Prediction of rock properties. - Peter Hatherly and Greg McNally, A.C.I.R.L., NSW.
4.30pm	Downhole sonic and neutron logging, Part I: Geotechnical applications for surface coal mining. - Alan Davies and D.A. McManus, BHP Utah, QLD.

## COURSES

### SEG CONTINUING EDUCATION COURSE

SEG.1 VERTICAL SEISMIC PROFILING \$250  
FEBRUARY 13 & 14, 1988

- VENUE: University of Adelaide.  
Mawson Laboratory Building (approach from Victoria Drive)
- TIME: 9.00am to 5.00pm each day.  
Please plan to arrive at the University not later than 8.45am.
- PARKING: Closest public car park is in John Martin's Department Store Building, 217 North Terrace, Adelaide.

This two-day course provides participants with a comprehensive review of state-of-the-art developments and provides hands-on experience in the interpretation of VSP data. Workshop sessions combine VSP data, surface seismic data, well logs and synthetic seismograms for a unified subsurface interpretation. Case studies will be emphasised.

Anyone who has ever wanted to measure the behavioural characteristics of a propagatory seismic wavefront deep in a stratigraphic section, understand it, and map it, will want to attend this course!

The Course Instructor is Robert R. Stewart who graduated from the University of Toronto in 1978 with a B.Sc. in physics and mathematics. He received a Ph.D. in geophysics from the Massachusetts Institute of Technology in 1983. Dr Stewart is currently Senior Research Geophysicist with Veritas Software Ltd and is also a lecturer with the Continuing Education Program of the SEG. He is a member of APEGGA, SEG, EAEG, Sigma XI and the CSEG where he is past editor of the Journal.

Enquiries should be directed to:

ASEG/SEG Adelaide '88 Conference, C/- Ellisservice Convention Management,  
P.O. Box 753, Norwood, S.Australia, 5067. Telephone enquiries regarding  
registration can be directed to Muriel Ellis at that address (08) 332.4068.

SEG CONTINUING EDUCATION COURSE

SEG.2 MULTI-COMPONENT SEISMIC EXPLORATION      \$250  
FEBRUARY 20 & 21, 1988

VENUE:            University of Adelaide.  
                   Mawson Laboratory Building (approach from Victoria Drive)

TIME:            9.00am to 5.00pm each day.  
                   Please plan to arrive at the University not later than 8.45am.

PARKING:        Closest public car park is in John Martin's Department Store  
                   Building, 217 North Terrace, Adelaide.

Conventional P-wave seismic wave exploration technology utilises only a small fraction of the available information about sub-surface formations. Shear wave and converted compressional-to-shear wave surface seismic data offers a unique opportunity to estimate basic rock properties of formations when used in conjunction with P-wave data. This two-day course provides an overview of multi-component exploration seismology from the theoretical basics of elastic wave propagation in the real earth through the practical issues of shear wave data collection, processing and analysis.

The course is designed to provide geophysicists and geologists with the fundamental seismic data acquisition, processing and interpretation skills necessary to effectively utilise multicomponent exploration technology. Extensive mathematics are not required.

Attendees will be provided with P-wave and SH-wave data sections shot along common surface profiles for two workshop exercises. The task for small teams of participants will be to correlate common reflection events on the two seismic sections above and below the target horizon and to compute VP/VS ratios by measuring interval transit times. After determining the lateral variations in the VP/VS from the seismic data, the participant will use information provided in the lectures to interpret these horizontal VP/VS changes in terms of variation in lithology, porosity and/or pore fluid type.

Course Instructors:

Michael D. McCormack has worked since 1980 in the Geophysical Research Department of ARCO Resources Technology Company. He is presently Director of the Seismic Interpretation Techniques Group which is responsible for developing interactive computer technology with particular emphasis on the uses of multi-component seismic data for lithology and porosity estimation.

Robert H. Tatham is a research consultant with Texaco U.S.A.'s Houston Research Center. His interests include research and development into techniques of improving processing and interpretation of seismic data, and applying these techniques to determine subsurface geological properties for petroleum exploration and reservoir development.

Enquiries should be directed to:

ASEG/SEG Adelaide '88 Conference, C/- Ellisservice Convention Management,  
 P.O. Box 753, Norwood, S.Australia, 5067. Telephone enquiries regarding  
 registration can be directed to Muriel Ellis at that address (08) 332.4068.

POSTER PAPERS

SEG CONTINUING EDUCATION COURSE

SEG.3 SEISMIC DATA ACQUISITION  
FEBRUARY 20 & 21, 1988

\$250

VENUE: University of Adelaide.  
Mawson Laboratory Building (approach from Victoria Drive)

TIME: 9.00am to 5.00pm each day.  
Please plan to arrive at the University not later than 8.45am.

PARKING: Closest public car park is in John Martin's Department Store  
Building, 217 North Terrace, Adelaide.

The constraints placed on the integrity of seismic reflection data and the distorting and corrupting mechanisms that degrade the fidelity of seismic data during acquisition are presented. This seminar provides information necessary to quantitatively design the source mechanisms, recording geometries, and recording parameters contributing to maintaining the bandwidth of and enhancing the signal-to-noise ratio of the recorded seismic reflection data.

The Course Instructor is Marvin Hewitt who is also presenting a keynote address at the Conference. Marvin has presented papers at numerous technical meetings, both domestic and international; he has published in "Geophysics" and "The Leading Edge". He retired in July 1986 after 36 years with AMOCO.

Enquiries should be directed to:

ASEG/SEG Adelaide '88 Conference, C/- Ellisservice Convention Management,  
P.O. Box 753, Norwood, S.Australia, 5067. Telephone enquiries regarding  
registration can be directed to Muriel Ellis at that address (08) 332.4068.

BAD.1 ADVANCED GEOLOGICAL TECHNIQUES IN SEISMIC INTERPRETATION FEBRUARY 13 & 14, 1988      \$250

- VENUE:            University of Adelaide  
                      Mawson Laboratory Building (approach from Victoria Drive)
- TIME:             9.00am to 5.00pm each day.  
                      Please plan to arrive at the University not later than 8.45am.
- PARKING:         Closest public car park is in John Martin's Department Store Building, 217 North Terrace, Adelaide.

A two-day workshop course on the application of new advanced geological techniques to seismic interpretation. The course, based on a balanced combination of lectures and work sessions, demonstrates the application of advanced geological techniques to real seismic data and interpretation problems, including examples from Australia.

The Course content is:

Unconformity Analysis - Practical application of crustal scale and theoretical dynamic structural models as interpretive tools for the analysis of unconformities.

Fault Analysis - Application of newly developed structural analysis techniques to: section restoration involving extensional faults; quantitative analysis of faults and faults systems using displacement gradient contouring; and advanced contouring and map verification.

The Course Instructor is Dr Mike Badley, a consultant with the U.K. company Badley, Ashton & Associates Ltd. He has been involved in exploration both as a geologist and seismic interpreter in North West European basins for the last 15 years. Since 1983 more than 1,300 geologists and geophysicists have attended his courses "Practical Seismic Interpretation", "Practical Exploration Techniques" and "Advanced Exploration Techniques" held at numerous locations in Europe, North America, S.E. Asia and Australia.

Enquiries should be directed to:

ASEG/SEG Adelaide '88 Conference, C/- Ellisservice Convention Management,  
P.O. Box 753, Norwood, S.Australia, 5067. Telephone enquiries regarding  
registration can be directed to Muriel Ellis at that address (08) 332.4068.

## POSTER PAPERS

The following is a summary of the Poster Papers to be presented at the conference exhibition hall.

1. PEDIN: The Australian Petroleum Exploration Database.  
Bruce Wyatt - Wyatt & Associates.  
John Moss - BMR  
Sandy Radke - BMR
2. Field Examples of The Time Domain IP Curves in French Brittany Massive Sulphide Orebodies (FRANCE).  
M.J.Bernard - Bureau de Recherches Geologiques et Minieres.
3. Aspect of Fault Management in Compresional Tectonics.  
Jorgen Rasmussen -  
Philip E. Neri - Geco Asia Pacific.  
P.Miller -
4. Information and Forecasting Services for Exploration Geophysicists.  
- IPS Radio and Space Services.
5. The Morphology of Geomagnetic Disturbances.
6. Geophysical Survey Index of Victoria.  
J.Ashworth - Department of Industry,  
A.J.Willocks - Technology, and  
G.R.Pettifer - Resources, Victoria.
7. Two Dimensional Surface Impedance Measurements at VLF  
W.X.Wu - School of Science,  
D.V.Thiel - Griffith University.
8. An Updated Look at Cost Effective Ways to Acquire Seismic Data in Remote Areas With Case Histories.  
J.Kruppenbach - Energy Analysts.
9. Cost Effective Marine Static Application.  
J.Kruppenbach - Energy Analysts.
10. The New Stress/Strain Ellipsoid.  
K.S. Kuang - Innovative Technological Geo-exploration.
11. Finite Element Modelling of Crestal Faulting on Anticlinal Traps.  
Jim Leven - BMR,Geology,Geophysics.
12. On-site Interpretation of TEM Data With a Personal Computer.  
Charles H.Stoyer - Interpex LTD.  
Bridget E.Tatlor - Interpex LTD.



ASEG AT SEG - NEW ORLEANS



BOB "PICK A BOX" SMITH SHOWS HIS TALENTS



"NO, I DON'T WANT TO BUY ANY  
DENHAM GENES"

HOW TO RUN AN EXHIBITION



"THIS IS HOW THEY USED TO DO IT ON THE SEIS BOATS ....."



"OH DEAR, I SEEM TO HAVE MY KNOTS IN A BALL"

## ASEG EXHIBITION BOOTH -- ADELAIDE CONFERENCE

The ASEG Exhibition Booth at next month's Adelaide Conference will be featuring a photographic display of "Geophysics in Australia".

Material to be used in the display includes:

1. Historical photographs of early survey work.
2. Recent photographs illustrating the extremes of survey conditions in Australia.
3. Humorous.

Could anyone having photographs fitting these categories please contact Nick Dunstan on (08) 2747617.

### **Advanced Exploration Techniques: A Workshop Course**

by  
Dr. Mike Badley

A five-day workshop course on the practical application of advanced seismic interpretation and geological techniques to exploration and production problems facing geologists and geophysicists working in basins both off- and onshore. The course, based on a balanced combination of lectures and work sessions, demonstrates the application of advanced techniques using seismic sections, well and map data from a wide variety of basin types including examples from Australia.

#### **COURSE CONTENT**

##### **Basin Analysis**

Practical application of crustal scale models as interpretive tools to analyse basin evolution, subsidence, uplift, unconformities, thermal history, etc.

##### **Seismic Interpretation and Structural Analysis**

Seismic interpretation - resolution problems, structural styles, velocity analysis, depth conversion and map migration.  
Sediment decompaction - methods and applications.  
Section balancing - methods.  
Fault analysis - including a new method - fault displacement gradient contouring.  
Salt structure analysis - a new approach.  
Footwall uplift and unconformity analysis.  
Advanced contouring - techniques.

#### **WHO SHOULD ATTEND**

The course is designed for geologists and geophysicists engaged in interpretation and technical management, and other professionals involved in exploration and production. The course is advanced and assumes a working knowledge of basic seismic interpretation techniques.

#### **INSTRUCTOR**

Dr. Mike Badley has been involved in exploration both as a geologist and seismic interpreter in North West European basins for the last 16 years. Since 1983 more than thirteen hundred geologists and geophysicists have attended his courses *Practical Seismic Interpretation* and *Practical Exploration Techniques*, held at numerous locations in Europe, North America, S.E. Asia and Australia.

#### **WHERE, WHEN AND HOW MUCH ?**

The course will be presented in Adelaide during the week 25-29 July 1988. The price of the course is AS1500.  
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# ELECTROMAGNETIC METHODS IN APPLIED GEOPHYSICS

## VOLUME 1, THEORY

Over the last two decades there have been significant advances in electromagnetic (EM) methods of exploration, as evidenced by the extensive research carried out by various companies, universities, and government research organizations; by the large number of papers published on the subject; and by the numerous workshops on various EM topics held in conjunction with SEG's Annual Meetings.

This volume presents the mathematical and physical foundations common to all EM methods. It is devoted to the presentation of the theoretical basis of EM methods, to help facilitate the understanding of the physics involved and to provide a

limited amount of interpretational aids. The chapters on numerical and analog modeling elaborate on ways of enlarging these capabilities. The chapters on electrical properties of rocks and on the resistivity characteristics of geologic targets help envisage the different kinds of ground structures that may be dealt with and the effect of various factors on the observed conductivities of rocks. The basic principles of modern instrument design are incorporated under the heading "Detection of Repetitive Electromagnetic Signals." Finally, Volume 1 concludes with a chapter on the principles of EM inversion, as a first step toward achieving the elusive goal of automatic interpretation of electromagnetic data.

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JOHN HAIGH 1941 - 1988

How should we begin to describe the loss of a valued friend and colleague? What inadequate stringing together of words could properly tell of the vitality and zest for living that John Haigh possessed? A mere recitation of milestones in his professional career will yield an impression of a dedicated professional, but it does not give the grander vision. Nevertheless, the facts must be set down. The journey must be charted.

John graduated from the University of Tasmania in 1962 and joined the Bureau of Mineral Resources in 1963. During his years with the Bureau, he worked in the Metaliferous Section of the Geophysics Branch as a member and eventually party leader of various geophysical field parties. He was Geophysicist-in-charge of the Geophysical Observatory at Mawson, Antarctica from 1965 to 1966. His research from 1966 to 1969 into electronic processing of raw geophysical data and development of computer programs for the interpretation of magnetic data was to stand him in good stead for much innovative work later in his career. In 1969, John joined McPhar Geophysics Pty. Ltd., initially based in Kalgoorlie and then Perth, where he was in charge of contract and consulting activities for the group in Western Australia. He became Chief Geophysicist and Manager W.A. of McPhar in 1974, with responsibility for geophysical operations Australia-wide and in Southeast Asia.

Following the winding-up of McPhar's operations in 1975, he became one of the prime movers in the establishment of Geoex Pty. Ltd., which became a significant Australian-owned and -managed contracting group. John became Chief Geophysicist and provided the main technical leadership for the company. During the period 1978-1983, Geoex flew more than one million line kilometres of aeromagnetic and radiometric survey. Meanwhile, John was heavily involved in the development of digital data acquisition systems, computer interface programs and data processing and interpretation routines. He was Project coordinator for the combined Geoex-AMDEL SIROLOG project. Probably one of Geoex's most significant achievements was to undertake the commercial development and manufacture of the SIROTEM electromagnetic instrumentation, now sold and used worldwide. Falling commodity prices unfortunately undermined Geoex's position just as it was set to capitalise on much of John's innovation, and the company was forced to close in 1983, a short time after John had assumed the position of Managing Director. Shortly afterwards, he joined the Geophysics Branch of the South Australian Department of Mines and Energy as Principal Geophysicist in charge of Regional Geophysics, where his visionary approach to the needs of future exploration set the pace for the development of a comprehensive exploration database based on geographical information management systems. He continued to work on the applied development of SIROTEM, happily immersing

himself in field work as well as processing and interpretation. Much of his vision remains to be fulfilled, so far-reaching was it.

A member of both ASEG and SEG, John was a staunch supporter of professional society activities, serving as ASEG President for the South Australian Branch in 1980 and ASEG Conference Chairman in 1981. His strong support for the ASEG-GDF tape format standard led to his appointment as Chairman of the ASEG Standing Committee for Technical Standards in 1984, a position he held until 1987. At the time of his death, he was Co-Chairman of the ASEG/SEG International Geophysical Conference and Exhibition (Adelaide '88).

The whirl of vitality that he exuded filled his entire life, whether it was in yachting, skiing, orienteering, bushwalking or in devotion to his family. Our deepest sympathy and thoughts are with his wife, Louise and his children, Andrew, Sonja, Jason, Ben and Lisa.

Faced with a certain and oppressive sense of his mortality, he continued to live with a courage and equanimity of mind that even those of who knew his indomitable spirit could only wonder at. If any of us could fulfil the spirit of our conference theme, it was John.

'He left nothing unattempted.'

BOB SMITH  
REG. NELSON