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Bibliography of Seismology

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5440. ANNOTATED BIBLIOGRAPHY OF ECONOMIC GEOLOGY, "Annotated Bibliography of Economic Geology for 1941", Vol. 14, No. 2, 169-183, 1004 items, Economic Geology Publishing Co., Urbana, Nov., 1942.

The above bibliography appears twice yearly and is priced at five dollars a year. It is prepared under the auspices of the Society of Economic Geologists. In the above issue, items 934-1004 list references to articles on geophysical prospecting, items 985-996 referring directly to seismic methods.

5441. ATWILL, C. P., "Progress of Stratigraphic Studies in California", *American Association of Petroleum Geologists*, Bulletin No. 26, 153-161, New York, Feb., 1942.

5442. AYVAZOGLU, W.,

(1) "Geophysical Abstracts 107, October-December 1941", *Geological Survey Bulletins*, No. 932-D, Items 6249-6376, 123-183, Washington, 1942.

(2) "Geophysical Abstracts 108, January-March, 1942", *Ibid.*, Items 6377-6499, 1-38, Washington, 1942.

(3) "Geophysical Abstracts 109, April-June, 1942", *Ibid.*, Items 6500-6586, 39-66, Washington, 1942.

5443. BAKER, W. L., "Modern Prospecting", *Oil Weekly*, Vol. 103, No. 9, 97-98, 100-102, Houston, Nov. 3, 1941.

5444. BANCROFT, Dennison, "An Electronic Interval Timer for Laboratory Seismometry", *Transactions, American Geophysical Union, 1940*, Part 2, 695-696, 1 fig., bib., Washington, July, 1940.

— BANCROFT, Dennison, and BIRCH, Francis, "New Measurements on the Rigidity of Rocks at High Pressure". See No. 5450 of this list.

5445. BARATTA, Mario, "Une application pratique des études sismiques. Projet d'assurance contre les dommages causés par les tremblements de terre", *Revue pour l'Étude des Calamités*, Tome 5, Nos. 16-17, 37-47, Geneva, Jan.-June, 1942.

— BARKER, Charles H., and ROBERT, Kearny Q., "Carrying Device for Geophysical Instruments" (Patent), U.S. No. 2,277,505, issued March 24, 1942. Listed as No. 6581, p. 61, *Geophysical Abstracts 109*. See No. 5530 of this list.

5446. BAUER, Christian, "Beitrag zu den Untersuchungen über Erdbebenfrequenz und Polhöhen-schwankungen" (abstract), *Gerlands Beiträge zur Geophysik*, Vol. 57, No. 1, 38-64, Leipzig, 1941.

See abstract No. 6511, p. 42, *Geophysical Abstracts 109*, reported as No. 5442 of this list.

— BELLAMY, Ethel F., and HUGHES, J. S., "International Seismological Summary". See No. 5529 of this list.

5447. BENFIELD, A. E., "Thermal Measurements and Their Bearing on Crustal Problems", *Transactions, American Geophysical Union, 1940, Part 2, 155-159, 2 fig., 1 tab., bib.*, Washington, July, 1940.

Discussion of this paper is given on pp. 168-170 by A. C. Lane, T. S. Lovering, L. H. Adams, F. Birch, A. E. Benfield, and H. Arctowski.

5448. BIRCH, Francis, "Handbook of Physical Constants", *Geological Society of America Publication, 325 pp. Price \$1.40. Geological Society of America, 419 West 117 St., New York City.*

The above handbook is edited by Dr. Birch. It contains 21 sections prepared by 19 specialists co-operating through the Divisions of Chemistry, Physics, and Geology of the National Research Council, U.S.A.

5449. BIRCH, Francis, "Elasticity of Igneous Rocks at High Temperatures and Pressures", *Bulletin, Geological Society of America, Vol. 54, No. 2, 263-286, 4 fig., 6 tab., bib.*, New York, Feb. 1, 1943.

5450. BIRCH, Francis, and BANCROFT, Dennison, "New Measurements on the Rigidity of Rocks at High Pressure" (abstract), *Transactions, American Geophysical Union, 1940, Part 2, p. 695, Washington, July, 1940.*

5451. BIRKENHAUER, H. F., "The Illinois Earthquake of November 23, 1939" (abstract), *Proceedings, Missouri Academy of Sciences, Vol. 6, No. 4, p. 91, Columbia, 1940.*

See Abstract No. 6275, p. 131, *Geophysical Abstracts 107*, reported as No. 5442 of this list.

5452. BIRKENHAUER, H. F., "A New Method for Determining the Epicenter of a Near Earthquake" (abstract), *Transactions, American Geophysical Union, 1940, Part 2, 240-241, Washington, July, 1940.*

5453. BIRKENHAUER, H. F., "The Structure of the Earth's Crust East and North of Saint Louis" (abstract), *Proceedings, Missouri Academy of Sciences, Vol. 7, No. 4, p. 112, Columbia, 1942.*

See Abstract No. 6512, p. 42, *Geophysical Abstracts 109*, reported as No. 5442 of this list.

5454. BLAKE, Archie, "Mathematical Problems in Seismology", *Transactions, American Geophysical Union, 1940, Part 4, 1094-1112, 2 fig., bib., Washington, Sept., 1940.*

5455. BLAU, Ludwig W., "Geophysics", *Mining and Metallurgy, No. 410, Vol. 22, 78-81, New York, Feb., 1941.*

- BLAU, Ludwig W., "Seismic-electric Prospecting" (Patent), U.S. No. 2,269,890, issued Jan. 13, 1942. Listed as No. 6561, p. 56, *Geophysical Abstracts 109*. See No. 5530 of this list.

5456. BODLE, Ralph R., "Some Points of Geophysical Interest Revealed in the Mass Analysis of Teleseismic Records", *Transactions, American Geophysical Union, 1940, Part 2, 232-234, 1 fig., 1 tab., Washington, July, 1940.*

5457. BRAVINDER, Kenneth M., "Los Angeles Basin Earthquake of October 21, 1941, and Its Effect on Certain Producing Wells in Domingues Field, Los Angeles County, California", *Bulletin, American Association of Petroleum Geologists*, Vol. 26, No. 3, 388-399, 6 fig., Tulsa, March, 1942. J.H.H.
5458. BRYAN, W. H., "Seismology in Queensland", *Australian Journal of Science*, Vol. 4, No. 5, 144-146, April, 1942.
5459. BUCHER, Walter H., "The Mountain-building Cycle", *Transactions, American Geophysical Union, 1940*, Part 2, 163-166, 2 fig., Washington, July, 1940.
Discussion of the paper is given on pp. 173-176 by W. T. Thom, Jr., H. H. Hess, and John L. Rich. See also p. 176 for comments by B. Gutenberg.
5460. BULLEN, K. E., "The Ellipticities of Surfaces of Equal Density in the Earth's Interior", *Transactions, Royal Society of New Zealand*, Vol. 72, Part 2, 141-147, Wellington, Sept. 1942. K.E.B.
- BULLEN, K. E., and JEFFREYS, Harold, "Seismological Tables". See No. 5503 of this list.
5461. BUWALDA, John P., "Gouge is not Positive Fault Evidence" (abstract), *Bulletin, Geological Society of America*, Vol. 53, No. 12, Part 2, p. 1816, New York, Dec. 1, 1942.
5462. BYERLY, Perry, "University of California Seismographic Station for the Year Ending April 30, 1940", *Transactions, American Geophysical Union, 1940*, Part 2, 243-244, Washington, July, 1940.
5463. BYERLY, Perry, "The Seismic Determination of Deep Seated Crustal Structure in California", *Transactions, American Geophysical Union, 1940*, Part 3, 815-822, 7 fig., bib., Washington, Sept., 1940.
5464. BYERLY, Perry, "A Seismologist's Difficulties with Some Mathematical Theory or the Lack of It". *Transactions, American Geophysical Union, 1940*, Part 4, 1113-1118, 4 fig., bib., Washington, Sept., 1940.
5465. BYERLY, Perry, "Seismology", Prentice-Hall, Inc., 256 pp., 57 fig. Price \$4.65, New York, 1942.
A brief review, by Bernarr Bates, appears on p. 642 of *Economic Geology*, Vol. 37, No. 7, Lancaster, Nov., 1942.
A review, by Frank Neumann, appears on pp. 331-332 of *Bulletin, Seismological Society of America*, Vol. 32, No. 4, Berkeley, Oct., 1942.
5466. BYERLY, Perry, "Microseisms at Berkeley and Surf on Near-by Coasts", *Bulletin, Seismological Society of America*, Vol. 32, No. 4, 277-282, 2 fig., bib., Berkeley, Oct., 1942.
5467. CAIRNS, W. D., "Applications of Mathematics to the Earth Sciences" (Preface to Symposium), *Transactions, American Geophysical Union, 1940*, Part 4, 1067-1068, Washington, Sept., 1940.
5468. CAMPBELL, J. W., "Motion *re* Moving Axes", *Transactions, Royal Society of Canada, Section III*, Ser. 3, Vol. 36, 1-6, 2 fig., Ottawa, 1942.

5469. CARNEGIE INSTITUTE OF TECHNOLOGY, "Cooperative Researches at the Seismological Laboratory", *Carnegie Institution of Washington Year Book*, No. 41, 1941-42, 102-106, Washington, 1942.
- CHRISTIE, N. J., HOOVER, Herbert, and MORGAN, C. G., "Geophysical Exploration System" (Patent), U.S. No. 2,305,383, issued Dec. 15, 1942. See No. 5532 of this list.
- CLOUD, Raymond T.,
- (1) "Method and Apparatus for Determining Distances of Elastic Discontinuities" (Patent), U.S. No. 2,275,735, issued March 10, 1942. Listed as No. 6574, p. 59, *Geophysical Abstracts*, 109. See No. 5530 of this list.
 - (2) "Seismic-wave-velocity Well Logging" (Patent), U.S. No. 2,275,736, issued March 10, 1942. Listed as No. 6575, p. 59, *Geophysical Abstracts* 109. See No. 5530 of this list.
5470. COAST AND GEODETIC SURVEY, "Annual Report of the U.S. Coast and Geodetic Survey", Thirtieth Annual Report, 1942, U.S. Department of Commerce, 65-81, Washington, 1943.
- COWLES, L. G., and WOLF, A., "Astatic Electromagnetic Vibration Detector" (Patent). See No. 5531 of this list.
5471. DALY, R. A., "The Floor of the Ocean", University of North Carolina Press, 177 pp., 82 fig. Price \$2.50. Chapel Hill, 1942.
- A review by R. F. Flint appears on page 162 of *Economic Geology*, Vol. 38, No. 2, Lancaster, March-April, 1943.
5472. DALY, Reginald A., "Meteorites and an Earth-Model", *Bulletin, Geological Society of America*, Vol. 54, No. 3, 401-456, 17 tab., bib., New York, March 1, 1943.
5473. DEACON, L. E., "An Analysis of Abnormal Reflexions", *Geophysics*, Vol. 8, No. 1, 3-13, 5 fig., Menasha, Jan., 1943.
- Pages 9-13 of this article are taken up by discussions of the main paper by Hewitt Dix and by Curtis H. Johnson, the latter discussion being illustrated by one figure.
5474. De GOLYER, E., "New Skill Will Determine", *Oil Weekly*, Vol. 101, No. 4, 22-24, Houston, March, 1941.
- A brief review, signed D.W., appears as No. 904, p. 122 of the *Annotated Bibliography of Economic Geology*, Vol. 14, No. 1, April, 1942.
5475. DELANEY, John P., "Variations of Elastic Constants with Moisture in Soapstone", *Transactions, American Geophysical Union*, 1940, Part 2, 696-698, 2 fig., 1 tab., bib., Washington, July, 1940.
- DICKERSON, Lin W., and HONNELL, Pierre M., "Seismic-wave Detector" (Patent). See No. 5530 of this list.
- DIX, C. Hewitt. Discussion of paper by L. E. Deacon on "An Analysis of Abnormal Reflexions", See No. 5473 of this list.

- DIX, C. Hewitt, "Method of Seismic Surveying" (Patent), U.S. No. 2,267,858, issued Dec. 30, 1941. Listed as No. 6492, p. 33, *Geophysical Abstracts 108*. See No. 5530 of this list.
5476. DIX, C. Hewitt, and LAWLOR, Reed C., "Computation of Seismic Dips below an Unconformity", *Geophysics*, Vol. 8, No. 2, 105-118, 4 fig., 1 tab., Tulsa, April, 1943.
5477. EBY, J. Brian, and HARKINS, T. I., "The Geophysical History of Darrow Dome, Ascension Parish, Louisiana", *American Institute of Mining and Metallurgical Engineers, Technical Publications*, No. 1495, 1-8, 5 fig., New York, 1943.
5478. EWING, Maurice, "Present Position of the Former Topographic Surface of Appalachia (from Seismic Evidence)", *Transactions, American Geophysical Union, 1940*, Part 3, 796-801, 2 fig., bib., Washington, Sept., 1940.
5479. ECKHARDT, E. A., "Geophysical Prospecting Follows Varied Pattern", *Oil Weekly*, Vol. 101, No. 4, 45-48, Houston, March 31, 1941.
A brief review, signed D.W., appears as No. 905, p. 122, of the *Annotated Bibliography of Economic Geology*, Vol. 14, No. 1, April, 1942.
5480. ENGINEERING NEWS-RECORD, "Instruments for Measuring Vibrations in Grand Coulee Dam", *Engineering News-Record*, Vol. 129, No. 27, p. 64, 1 fig., New York, Dec. 31, 1942.
5481. EXPLOSIVES ENGINEER, "Case History of a Seismic Shot", *Explosives Engineer*, Vol. 20, No. 4, p. 1113, Wilmington, April, 1942.
- FAILING, Tweed E., "Apparatus for Seismic Surveying" (Patent), U.S. No. 2,272,741, issued Feb. 10, 1942. Listed as No. 6567, p. 57, *Geophysical Abstracts 109*. See No. 5530 of this list.
5482. FINCH, R. H., "Eruptions of Mauna Loa, April 26 to May 10, 1942", *Bulletin, Seismological Society of America*, Vol. 33, No. 1, 65-67, 1 tab., Berkeley, Jan., 1943.
5483. GABRIEL, V. G., "The Geophysicist and the Geologist", *International Oil*, Vol. 2, No. 4, 56-57, Houston, Oct., 1941.
- GADD, C. W., "Vibration Indicator" (Patent). See No. 5531 of this list.
5484. GALANOPULOS, A., "Gleichzeitige Erdbebenstätigkeit im Ionischen und Ägäischen Gebiet", *Gerlands Beiträge zur Geophysik*, Vol. 57, No. 2, 117-131, Leipzig, 1941.
See Abstract No. 6278 p. 131, *Geophysical Abstracts 107*, reported as No. 5442 of this list.
5485. GARDNER, Derry H., "Scientific Exploration for Oil", *Electronics*, Vol. 16, No. 3, 136-137, 226-232, 3 fig., bib., New York, March, 1943.
5486. GEISER, K. R., and HANCOCK, J. E., "The Latest in Magnetic Oscillographs", *General Electric Review*, Vol. 46, No. 5, 289-294, 10 fig., bib., New York, May, 1943.
5487. GORANSON, Roy W., "Fracture and Flow in Stressed Solids", *Transactions, American Geophysical Union, 1940*, Part 2, 698-700, 1 fig., bib., Washington, July, 1940.

5488. GRIGGS, David, "Deformation of Rocks in the Laboratory", *Transactions, American Geophysical Union, 1940*, Part 2, 159-162, 1 fig., Washington, July, 1940.

Discussion of this paper is given on pp. 170-172 by R. W. Goranson and M. King Hubbert.

See also pp. 176-177 for discussion by B. Gutenberg.

- GROENENDYKE, G. M., "Automatic Volume Control" (Patent), U.S. No. 2,306,991, issued Dec. 29, 1942. See No. 5532 of this list.

5489. GUTENBERG, Beno, "Propagation of Sound Waves in the Atmosphere", *Journal, Acoustical Society of America*, Vol. 14, No. 2, 151-155, 5 fig., bib., New York, Oct., 1942

B.G.

5490. GUTENBERG, Beno, "Earthquakes and Structures in Southern California" (abstract), *Bulletin, Geological Society of America*, Vol. 53, No. 12, Part 2, p. 1818, New York, Dec. 1, 1942.

5491. GUTENBERG, Beno,

(1) "Seismological Evidence for Roots of Mountains", *Bulletin, Geological Society of America*, Vol. 54, No. 4, 473-498, 3 fig., 3 pl., bib., New York, April 1, 1943.

(2) "Earthquakes and Structure in Southern California", *Ibid.*, 499-526, 4 fig., 1 pl., 12 tab. B.G.

- HANCOCK, J. E., and GEISER, K. R., "The Latest in Magnetic Oscillographs". See No. 5486 of this list.

- HARKINS, T. I., and EBY, J. Brian, "The Geophysical History of Darrow Dome, Ascension Parish, Louisiana". See No. 5477 of this list.

5492. HAYES, R. C., "Report of the Dominion Observatory (N.Z.) for the Year Ended 31st December, 1941", *Annual Report of the Department of Scientific and Industrial Research, 1941-42*, 2 pp., in reprint, Wellington, 1942. R.C.H.

5493. HECK, N. H., "Some Seismic Contributions to Knowledge of the Earth's Crust", *Transactions, American Geophysical Union, 1940*, Part 2, 237-240, 1 fig., 1 tab., Washington, July, 1940.

5494. HECK, N. H., "The Role of the Western Hemisphere in Seismology under Present-day Conditions", *Proceedings, Eighth American Scientific Congress, Physical and Chemical Sciences, 57-62*, 1 tab., Washington, 1942. N.H.H.

5495. HECK, N. H., HUBBERT, M. King, HESS, Victor F., HODGSON, Ernest A., LYNCH, William A., MACELWANE, James B., S.J., and LYNCH, Joseph, S.J., "The Interior of the Earth Viewed in Relation to Earthquake Causes: A Symposium", *Journal of Applied Physics*, Vol. 14, No. 3, New York, March, 1943.

The above symposium was conducted as part of the centenary celebration at Fordham University, New York City, in September, 1941. The individual papers are as follows:

(1) "What Geodesy Can Tell Us about Immediate and Ultimate Causes of Earthquakes", Nicholas H. Heck, 104-114, 10 fig., bib.

(2) Discussion of above paper, by M. King Hubbert, p. 115.

- (3) "What Radioactivity Tells Us about the Interior of the Earth", Victor F. Hess, 116-120, 3 tab., bib.
 - (4) "What Seismology Can Tell Us about the Structure of the Earth's Interior", Ernest A. Hodgson, 121-126, bib.
 - (5) "Measurements of Terrestrial Magnetism Tell Us Little about Earthquakes but May Tell Us Much about the Interior of the Earth", William A. Lynch, 127-130, bib.
 - (6) "Tectonophysics of the Physics of Earth Deformation", James B. Macelwane, S.J., 131-133, bib.
 - (7) "What We Learn from Thermodynamics: Summary", Joseph Lynch, S.J., 134-136.
5496. HEILAND, C. A., "Mining Geophysics", *Engineering and Mining Journal*, Vol. 142, No. 8, p. 103, New York, Aug., 1941.
5497. HEILAND, C. A.,
- (1) "Geophysics in War", *American Journal of Physics*, Vol. 10, No. 3, 127-134, June, 1942. The same subject, treated in more detail and bearing the same title, appears in *Colorado School of Mines Quarterly*, Vol. 37, No. 1, Golden, Jan., 1942. See also *Mines Magazine*, Vol. 32, No. 2, 65-69, 86, Golden, Feb., 1942.
 - (2) "Geophysics", *Mining and Metallurgy*, 4 pp. in reprint, New York, Feb., 1943.
C.A.H.
5498. HERCULES POWDER COMPANY, "Seismograph Dynamite", a brief manufacturer's note in *Mines Magazine*, Vol. 32, No. 11, p. 607, Golden, Nov., 1942.
- HESS, Victor F., HODGSON, Ernest A., LYNCH, William A., MACELWANE, James B., S.J., LYNCH, Joseph, S.J., HECK, N. H., and HUBBERT, M. King, "The Interior of the Earth Viewed in Relation to Earthquake Causes: A Symposium". See No. 5495 of this list.
5499. HODGSON, Ernest A., "Velocity of Elastic Waves and Structure of the Crust in the Vicinity of Ottawa, Canada", *Bulletin, Seismological Society of America*, Vol. 32, No. 4, 249-255, 2 fig., 3 tab., Berkeley, Oct., 1942.
5500. HODGSON, Ernest A., "Rockburst Research at Lake Shore Mines", *Miner and Mine*, Vol. 1, No. 1, 4-5, 3 fig., Kirkland Lake, March, 1943.
- HODGSON, Ernest A., LYNCH, William A., MACELWANE, James B., S.J., LYNCH, Joseph, S.J., HECK, N. H., HUBBERT, M. King, and HESS, Victor F., "The Interior of the Earth Viewed in Relation to Earthquake Causes: A Symposium". See No. 5495 of this list.
- HONNELL, Pierre M., and DICKERSON, Lin W., "Seismic-wave Detector" (Patent), U.S. No. 2,271,864, issued Feb. 3, 1942. Listed as No. 6563, p. 56, *Geophysical Abstracts 109*. See No. 5530 of this list.
- HOOVER, Herbert, "Method and Apparatus for Signaling" (Patent), U.S. No. 2,272,201, issued Feb. 10, 1942. Listed as No. 6565, p. 57, *Geophysical Abstracts 109*. See No. 5530 of this list.

- HOOVER, Herbert,
 (1) "Seismic Wave Amplifier" (Patent), U.S. No. 2,303,357, issued Dec. 1, 1942.
 (2) "Stable Seismic Wave Amplifier with Automatic Volume Control" (Patent), U.S. No. 2,303,358, issued Dec. 1, 1942.
 See No. 5532 of this list.
- HOOVER, Herbert, MORGAN, C. G., and CHRISTIE, N. J., "Geophysical Exploration System" (Patent), U.S. No. 2,305,383, issued Dec. 15, 1942. See No. 5532 of this list.
- HOSTETLER, G. W., "Infinite Period Seismometer" (Patent), U.S. No. 2,302,219, issued Nov. 17, 1942. See No. 5532 of this list.
- HOWARD, Gerald M., "Method of and Means for Determining the Velocity of Propagation of Waves through Subsurface Formations" (Patent), U.S. No. 2,276,974, issued March 17, 1942. Listed as No. 6580, p. 61, *Geophysical Abstracts 109*. See No. 5530 of this list.
5501. HOWARD, H. V., "Exploration Methods Combine Old and New Practices", *Oil and Gas Journal*, Vol. 39, No. 47, 40-41, Tulsa, April 3, 1941.
- HUBBERT, M. King, HESS, Victor F., HODGSON, Ernest A., LYNCH, William A., MAC-ELWANE, James B., S.J., LYNCH, Joseph, S.J., and HECK, N. H., "The Interior of the Earth Viewed in Relation to Earthquake Causes: A Symposium". See No. 5495 of this list.
- HUGHES, J. S., and BELLAMY, Ethel F., "International Seismological Summary". See No. 5529 of this list.
- IRELAND, A. T., "Design and Calibration of Air Blast Meters". See No. 5547 of this list.
5502. ISHKOV, P. K., "On the Propagation of Elastic Waves within a Stratum Overlying a Hard Foundation" (in Russian), *Bulletin, Academy of Sciences, U.R.S.S.*, No. 2, 169-176, Moscow, 1941.
 See abstract No. 6399, p. 8, *Geophysical Abstracts 108*, reported as No. 5442 of this list.
5503. JEFFREYS, Harold, and BULLEN, K. E., "Seismological Tables", 48 pp., 5 fig., bib., published by the British Association for the Advancement of Science, Gray-Milne Trust, London, 1940.
- JOHNSON, Curtis H. Discussion of paper by L. E. DEACON on "An Analysis of Abnormal Reflexions". See No. 5473 of this list.
5504. KLOTZ, R. L., Jr., "Seismic Shooting near Power Lines", *Explosives Engineer*, Vol. 20, No. 4, 68-112, Wilmington, April, 1942.
5505. LAMBERT, Walter D., "The Beginnings of Mathematical Geophysics in Great Britain", *Transactions, American Geophysical Union, 1940*, Part 4, 1068-1072, Washington, Sept., 1940.
5506. LAMBERT, Walter D., "The Distance between Two Widely Separated Points on the Surface of the Earth", *Journal, Washington Academy of Sciences*, Vol. 32, No. 5, 125-130, bib., Washington, May 15, 1942. W.D.L.

5507. LAMBERT, Walter D., "Notes on Earth Tides", *Geophysics*, Vol. 8, No. 1, 51-56, bib., Menasha, Jan., 1943.
5508. LANDSBERG, H., "Seasonal Pressure Changes and Earthquake Occurrence", *Transactions, American Geophysical Union, 1940*, Part 2, 227-228, 3 fig., bib, Washington, July, 1940.
5509. LANGGUTH, L. C., "Progress Report: Northeastern Seismological Association for 1939", *Transactions, American Geophysical Union, 1940*, Part 2, 244-245, Washington, July, 1940.
- LAWLOR, Reed C., and DIX, C. Hewitt, "Computation of Seismic Dips below an Unconformity". See No. 5476 of this list.
5510. LEYPOLDT, Harry, and MCHENRY, J. R., "Block Pattern of Crustal Movements in Long Beach", *Bulletin, Seismological Society of America*, Vol. 32, No. 4, 269-276, 5 fig., bib., Berkeley, Oct., 1942.
5511. LINEHAN, Daniel, "Earthquakes in the West Indian Region," *Transactions, American Geophysical Union, 1940*, Part 2, 229-232, 4 fig., Washington, July, 1940.
5512. LONGWELL, Chester R., "Relative Roles of Geology and Geophysics in Determination of Crustal Structure", *Transactions, American Geophysical Union, 1940*, Part 3, 783-786, bib., Washington, Sept., 1940.
5513. LOUDERBACK, George D., "Faults and Earthquakes", *Bulletin, Seismological Society of America*, Vol. 32, No. 4, 305-330, bib., Berkeley, Oct., 1942.
5514. LUDY, Albert K., "*Earthquake Notes*", Vol. 14, Nos. 1-2, 1-10, Washington, Sept., 1942.

The above publication is the official organ of the Eastern Section of the Seismological Society of America. Items to be reported in *Earthquake Notes* should be forwarded to the editor, A. K. Ludy, at the U.S. Coast and Geodetic Survey, Washington, D.C.

The present issue deals with: Announcement by the retiring Chairman, Ralph R. Bodle; Announcement by the Chairman, Elwyn L. Perry; Obituary, Dr. E. Rothé; Obituary, Rev. Navarro Neumann, S.J.; Do deep-focus earthquakes have after-shocks? (by Ross R. Heinrich); Dams built on faults; Golden Gate Bridge; Luminous phenomenon accompanying the Cyprus earthquake of January 20, 1941; South American earthquakes; Earthquakes registered in Switzerland; New Zealand earthquakes reported in Nature; Vibrations in structures; Notes of interest; Epicentres.

5515. LURCY, Carroll, "The Construction and Operation of the Wood-Anderson Seismograph" (abstract), *Proceedings, Missouri Academy of Sciences*, Vol. 6, No. 4, p. 90, Columbia, 1940.

See abstract No. 6288, p. 135, *Geophysical Abstracts 107*, reported as No. 5442 of this list.

— LUNDBERG, Hans, Ltd.,

- (1) "Geophysical-exploration Apparatus" (Patent), Canadian No. 402,212, issued Jan. 13, 1942. Listed as No. 6584, p. 62, *Geophysical Abstracts 109*. See No. 5530 of this list.
- (2) "Geophysical-exploration Method" (Patent), Canadian No. 402,526, issued Jan. 27, 1942. Listed as No. 6585, p. 62, *Geophysical Abstracts 109*. See No. 5530 of this list.

- LYNCH, Joseph, S.J., HECK, N. H., HUBBERT, M. King, HESS, Victor F., HODGSON, Ernest A., LYNCH, William A., and MACELWANE, James B., S.J., "The Interior of the Earth Viewed in Relation to Earthquake Causes: A Symposium". See No. 5495 of this list.
- LYNCH, William A., MACELWANE, James B., S.J., LYNCH, Joseph, S.J., HECK, N. H., HUBBERT, M. King, HESS, Victor F., and HODGSON, Ernest A., "The Interior of the Earth Viewed in Relation to Earthquake Causes: A Symposium". See No. 5495 of this list.
5516. MACELWANE, James B., S.J., "Seismology and the First Hundred Kilometers of the Earth", *Transactions, American Geophysical Union, 1940, Part 2*, 153-155, Washington, July, 1940.
- Discussion of this paper is given on pp. 167-168 by John N. Adkins, J. T. Wilson, N. H. Heck, F. Birch, A. C. Lane, and R. M. Field. See also p. 176 for discussion by B. Gutenberg.
5517. MACELWANE, James B., S.J., "Progress Report: Jesuit Seismological Stations for 1939", *Transactions, American Geophysical Union, 1940, Part 2*, p. 243, Washington, July, 1940.
- MACELWANE, James B., S.J., LYNCH, Joseph, S.J., HECK, N. H., HUBBERT, M. King, HESS, Victor F., HODGSON, Ernest A., and LYNCH, William A., "The Interior of the Earth Viewed in Relation to Earthquake Causes: A Symposium". See No. 5495 of this list.
5518. MADDOCK, A. J., "Some Useful Circuits Employing Thyratrons and Ignitrons", *Journal of Scientific Instruments*, Vol. 20, No. 3, 37-46, 24 diag., bib., London, March, 1943.
- MALMQUIST, Johan David, "Ground-wave Velocity-determining Method" (Patent), Canadian No. 400,592, issued Nov. 11, 1941. Listed as No. 6498, p. 35, *Geophysical Abstracts 108*. See No. 5530 of this list.
5519. MARSCH, B., "Electrical Measurements in Physical Soil Research" (in German), *Elektrizität i. Bergbau*, Vol. 15, 17-21, March, 1940.
- See abstract No. 6401, p. 9, *Geophysical Abstracts 108*, reported as No. 5442 of this list.
- MAYNE, W. H.,
- (1) "Measuring and Recording Apparatus" (Patent), U.S. No. 2,306,456, issued Dec. 29, 1942.
 - (2) "Measuring and Recording Apparatus" (Patent), U.S. No. 2,306,457, issued Dec. 29, 1942.
 - (3) "Measuring and Recording Apparatus" (Patent), U.S. No. 2,306,458, issued Dec. 29, 1942.
- See No. 5532 of this list.
5520. McAFEE, J. C., "Spirallock—A New Shell for Seismic Shooting", *Explosives Engineer*, Vol. 20, No. 4, 105-107, Wilmington, April, 1942.

— McCARTY, M. D.,

(1) "Seismograph" (Patent), U.S. No. 2,304,738, issued Dec. 8, 1942.

(2) "Expander for Electrical Seismographs" (Patent), U.S. No. 2,305,543, issued Dec. 15, 1942.

See No. 5532 of this list.

5521. McCOMB, H. E., and NELSON, J. H., "A Dynamic Tester for Galvanometric Seismographs", *Transactions, American Geophysical Union, 1940*, Part 2, 236-237, 1 fig, Washington, July, 1940.

— McCOMB, H. E., NEUMANN, Frank, and RUGE, A. C., "The Determination of True Ground Motion by Integration of Strong-Motion Records: A Symposium". See No. 5536 of this list.

— McHENRY, J. R., and LEYPOLDT, Harry, "Block Pattern of Crustal Movement in Long Beach". See No. 5510 of this list.

— MINTON, J. P., "Method for Recording Seismic Waves" (Patent), U.S. No. 2,304,740, issued Dec. 8, 1942. See No. 5532 of this list.

— MINTON, J. P., and SHOOK, E. M., "Gain Control for Seismograph Amplifiers" (Patent), U.S. No. 2,301,739, issued Nov. 10, 1942. See No. 5532 of this list.

— MORGAN, C. G., CHRISTIE, N. J., and HOOVER, Herbert, "Geophysical Exploration System" (Patent), U.S. No. 2,305,383, issued Dec. 15, 1942. See No. 5532 of this list.

5522. NATURE. Brief items of interest to seismologists have appeared in recent issues of Vol. 150 of the above periodical (London, 1942) as follows:

(1) "Earthquakes Registered in Switzerland", No. 3810, p. 545, Nov. 7.

(2) "Earthquakes in New Zealand", *Ibid.*, p. 554.

(3) "Recent Earthquakes", No. 3812, p. 602, Nov. 21.

(4) "Recent Earthquakes", No. 3813, p. 632, Nov. 28.

(5) "New Zealand Earthquakes", No. 3814, p. 659, Dec. 5.

(6) "Recent Earthquakes", No. 3815, p. 687, Dec. 12.

5523. NATURE. Brief items of interest to seismologists have appeared in recent issues of Vol. 151 of the above periodical (London, 1943) as follows:

(1) "The Turkish Earthquakes", No. 3818, 19-20, Jan. 2.

(2) "Earthquakes Registered in Spain", No. 3819, p. 51, Jan. 9.

(3) "Recent Earthquakes", No. 3821, p. 106, Jan. 23.

(4) "Earthquakes Registered in India during 1940", No. 3822, p. 136, Jan. 30.

(5) "Earthquakes Registered in Spain", No. 3824, p. 194, Feb. 13.

(6) "The Wairarapa (New Zealand) Earthquake of June 24, 1942", No. 3825, 229-230, Feb. 20.

(7) "Earthquakes Registered in New Zealand", No. 3829, p. 331, March 20.

(8) "Earthquakes in Mid-Atlantic", No. 3830, p. 362, March 27.

(9) "Recent Earthquakes", No. 3836, p. 530, May 8.

(10) "New Seismograph in Mexico", *Ibid.*

- NELSON, J. H., and McCOMB, H. E., "A Dynamic Tester for Galvanometric Seismographs". See No. 5521 of this list.
5524. NELSON, Wilbur A., "Topography of the Former Continent of Appalachia (from Geologic Evidence)", *Transactions, American Geophysical Union, 1940, Part 3, 786-796, 3 fig., bib., Washington, Sept., 1940.*
5525. NEUMANN, Frank, "The Vieques, Puerto Rico, Seismographic Record of the Destructive Earthquake of 1918 as a Clue to Local Crustal Structure" (abstract), *Transactions, American Geophysical Union, 1940, Part 2, p. 232, Washington, July, 1940.*
5526. NEUMANN, Frank, "Progress Report: United States Coast and Geodetic Survey, January 1, 1939, to March 31, 1940", *Transactions, American Geophysical Union, 1940, Part 2, 245-247, Washington, July, 1940.*
- NEUMANN, Frank. Review of "Seismology", a book by Perry Byerly reported as No. 5465 of this list. See pp. 331-332, *Bulletin, Seismological Society of America, Vol. 32, No. 4, Berkeley, Oct., 1942.*
- NEUMANN, Frank, RUGE, A. C., and McCOMB, H. E., "The Determination of True Ground Motion by Integration of Strong-Motion Records: A Symposium". See No. 5536 of this list.
5527. NORTHERN MINER, "Bursts at Lake Shore: Recent Major Adjustments May Settle Conditions for Time", *Northern Miner, Vol. 29, No. 6, p. 2, Toronto, April 29, 1943.*
G.H.A.C.
- OLSON, R. W., and SHOOK, E. M., "Electric Seismograph" (Patent). See No. 5531 of this list.
- OLSON, R. W., and SHOOK, E. M., "Geophysical Instrument" (Patent). See No. 5530 of this list.
5528. OLSON, W. S., "Seismic-velocity Variations in San Joaquin Valley, California" (abstract), *Bulletin, American Association of Petroleum Geologists, Vol. 25, No. 7, 1343-1362, Tulsa, 1941.*
See abstract No. 6290, p. 135, *Geophysical Abstracts 107*, reported as No. 5442 of this list.
5529. OXFORD, UNIVERSITY OBSERVATORY, "The International Seismological Summary, 1934: July, August, September, 327-514, Sept., 1941; October, November, December, 515-656, July, 1942.
The above Summary is prepared and edited by J. S. Hughes and Ethel F. Bellamy. They have also prepared an "Index to the International Seismological Summary for 1934". This is a pamphlet of 19 pages.
- PARR, J. O., "Seismic Surveying", "Seismic Circuits", and "Seismic Surveying" (Patents). See No. 5531 of this list.
5530. PATENTS. A list of recent patents of interest to geophysicists appears in each issue of *Geophysical Abstracts* reported as No. 5442 of this list. Those of particular interest to seismologists are entered in this list under the names of the inventors as follows: Ritzmann, Shook, Olson, Wiley, Dix, Slotnick, Malmquist, Blau, Honnell, Dickerson, Hoover, Failing, Cloud, Wyckoff, Howard, Barker, Robert, Lundberg.

5531. PATENTS. The following patents of interest to seismologists are reported in *Geophysics*, Vol. 8, No. 1, 64-65, Menasha, Jan., 1943.

- (1) SHOOK, E. M., and OLSON, R. W., "Electric Seismograph", U.S. No. 2,290,773, July 21, 1942.
- (2) WELTY, W. R., "Geophysical Apparatus and Method", U.S. No. 2,291,779, Aug. 4, 1942.
- (3) GADD, C. W., "Vibration Indicator", U.S. No. 2,293,288, Aug. 18, 1942.
- (4) PARR, J. O., "Seismic Surveying", U.S. No. 2,294,627, Sept. 1, 1942.
- (5) WOLF, A., and COWLES, L. G., "Astatic Electromagnetic Vibration Detector", U.S. No. 2,296,754, Sept. 22, 1942.
- (6) PARR, J. O., "Seismic Circuits", U.S. No. 2,297,319, Sept. 29, 1942.
- (7) PARR, J. O., "Seismic Surveying", U.S. No. 2,298,020, Oct. 6, 1942.

5532. PATENTS. A list of patents in the field of geophysical prospecting is given in *Geophysics*, Vol. 8, No. 2, 178-184, Menasha, April, 1943. Those dealing with seismic work are listed in this issue of the *Bibliography* under the names of the inventors as follows: Minton, Shook, Hostetler, Washburn, Hoover, McCarty, Morgan, Christie, Mayne, Groenendyke.

5533. PLASKETT, H. H., *et al.*, "Seismological Investigations", Forty-sixth report of the Committee on Seismological Investigations, British Association, 1941, 3 pp., in reprint, London, 1943.

The report deals with the following: Gray-Milne Fund; Instruments; Deep earthquake of 1934 June 29 (by Dr. Harold Jeffreys); Integration of seismograms (by Dr. R. Stoneley); Reappointment of committee.

— RITZMANN, Otto F.,

- (1) "Seismograph Prospecting Apparatus" (Patent), U.S. No. 2,263,519, issued Nov. 18, 1941. Listed as No. 6476, p. 29, *Geophysical Abstracts 108*. See No. 5530 of this list.
- (2) "Apparatus for and Method of Seismograph Recording" (Patent), U.S. No. 2,267,356, issued Dec. 23, 1941. Listed as No. 6491, p. 33, *Geophysical Abstracts 108*.
- (3) "Seismograph" (Patent), U.S. No. 2,272,984, issued Feb. 10, 1942. Listed as No. 6568, p. 58, *Geophysical Abstracts 109*.
- (4) "Apparatus for Sending and Recording Time Impulses" (Patent), U.S. No. 2,275,316, issued March 3, 1942. Listed as No. 6572, p. 59, *Geophysical Abstracts 109*.

— ROBERT, Kearny Q., and BARKER, Charles H., "Carrying Device for Geophysical Instruments" (Patent). See No. 5530 of this list.

5534. ROSAIRE, E. E., "A Prospecting Programme for the Dominion", *Canadian Oil and Gas*, Vol. 3, No. 3, 3-11, Toronto, Sept., 1941.

5535. ROSAIRE, E. E.,

- (1) "Prospecting Strategy in Total War Economy", *Oil Weekly*, Vol. 104, No. 12, 14-17, Houston, Feb. 23, 1942.

(2) "Prospecting Tactics and a Total War Economy", *Ibid.*, Vol. 105, No. 1, 13-19, March 9, 1942.

Short abstract by Dart Wantland appears on page 143 of *Mines Magazine*, Vol. 33, No. 3, Golden, March, 1943.

5536. RUGE, A. C., McCOMB, H. E., and NEUMANN, Frank, "The Determination of True Ground Motion by Integration of Strong-Motion Records: A Symposium", *Bulletin, Seismological Society of America*, Vol. 33, No. 1, 1-63, Berkeley, Jan., 1943.

The individual papers are as follows:

(1) "Tests of Earthquake Accelerometers on a Shaking Table", A. C. Ruge, and H. E. McComb, 2-12, 11 fig., 1 tab.

(2) "Discussion of Principal Results from the Engineering Viewpoint", A. C. Ruge, 13-20, 2 fig.

(3) "An Appraisal of Numerical Integration Methods as Applied to Strong-Motion Data", Frank Neumann, 21-60, 16 fig., 1 tab., bib.

(4) "Analysis of Accelerograms by Means of the Massachusetts Institute of Technology Differential Analyzer", A. C. Ruge, 61-63, 1 tab.

5537. SCIENCE. Brief items of interest to seismologists have appeared in recent issues of Vol. 97 of the above periodical (New York, 1943) as follows:

(1) "A New Seismograph in Mexico", No. 2518, p. 303, April 2.

(2) "New Seismograph for the National Astrophysical Observatory of Mexico", *Ibid.*, p. 10 Suppl.

(3) "A Theory of Gravitation", No. 2523, p. 10 Suppl., May 7. (Attempts to explain why shear waves do not traverse the core.)

5538. SCIENCE NEWS-LETTER, "Earthquake Makes Repeat Visit to Coast of Ecuador", *Science News-Letter*, Vol. 42, No. 23, p. 361, Washington, Dec. 5, 1942.

5539. SCIENCE NEWS-LETTER. Brief items of interest to seismologists have appeared in recent issues of Vol. 43 of the above publication (Washington, 1943) as follows:

(1) "Mexican Seismograph", No. 14, p. 212, April 3.

(2) "Earthquake Waves Clocked", No. 18, p. 286, May 1.

— SHOOK, E. M., and OLSON, R. W., "Electric Seismograph" (Patent). See No. 5531 of this list.

— SHOOK, E. M., and MINTON, J. P., "Gain Control for Seismograph Amplifiers" (Patent), U.S. No. 2,301,739, issued Nov. 10, 1942. See No. 5532 of this list.

— SHOOK, E. M., and OLSON, R. W., "Geophysical Instrument" (Patent), U.S. No. 2,264,596, issued Dec. 2, 1941. Listed as No. 6481, p. 30, *Geophysical Abstracts 108*. See No. 5530 of this list.

5540. SLOTNICK, M. M., "Gravimetric and Seismic Methods in Petroleum Exploratory Geophysics", *Transactions, American Geophysical Union, 1940*, Part 4, 1081-1093, 21 fig., Washington, Sept., 1940.

— SLOTNICK, M. M., "Method of Geophysical Investigation" (Patent), U.S. No. 2,268,130, issued Dec. 30, 1941. Listed as No. 6494, p. 33, *Geophysical Abstracts 108*. See No. 5530 of this list.

- SMITH, Paul A., and VEATCH, A. C., "Mapping of the Submarine Valleys of the Atlantic". See No. 5554 of this list.
5541. SOMMERS, G. B., "Doodlebugging in Europe", *Explosives Engineer*, Vol. 19, No. 6, 177-180, Wilmington, June, 1941.
5542. SOSKE, Joshua L., "Computing Seismic Reflection Data by Simple Consistent Method", *Mines Magazine*, Vol. 32, No. 10, 489-495, 564, 8 fig., Golden, Oct., 1942.
5543. SOUTH AFRICAN MINING AND ENGINEERING JOURNAL, "Geophysical Prospecting, Fifty Years Progress Reviewed", *South African Mining and Engineering Journal*, Vol. 52, No. 2, 323-329, Johannesburg, Nov. 22, 1941.
5544. STETSON, Harlan True, "The Time Problem in Connection with the Geophysical Study of Crustal Structure", *Transactions, American Geophysical Union*, 1940, Part 3, 822-824, bib., Washington, Sept., 1940.
5545. SWARTZ, C. A., "Seismograph Evidence on the Depth of the Salt in Southern Mississippi" *Geophysics*, Vol. 8, No. 1, 1-2, 1 fig., Menasha, Jan., 1943.
5546. TAYLOR, F., "Detailed Exploration Finds New Fields in Oklahoma," *Oil Weekly*, Vol. 101, No. 2, 26-29, Houston, 1941.
See abstract No. 6297, p. 137, *Geophysical Abstracts 107*, reported as No. 5442 of this list.
5547. THOENEN, J. R., and WINDES, S. L., "Seismic Effects of Quarry Blasting", *U.S. Department of the Interior Bulletins*, No. 442, 83 pp., 45 fig., 14 tab., bib., Washington, 1942.
May be obtained from the Supt. of Documents, Washington, D.C., at a price of 15 cents.
This paper and two others (S. L. Windes, *Bureau of Mines Report of Investigations* No. 3622, entitled "Damage from Air Blast", and A. T. Ireland, *Bureau of Mines Technical Papers*, No. 635, entitled "Design and Calibration of Air Blast Meters") are reviewed by M. B. Widess on pp. 61-62 of *Geophysics*, Vol. 8, No. 1, Menasha, Jan., 1943.
A brief review of the paper by Thoenen and Windes appears in *Physics Abstracts*, Sec. A, No. 2741, p. 272, London, Oct., 1942.
5548. THOM, W. T., Jr., "Opportunities for Collaborative Research in Further Study of Continental Borders", *Transactions, American Geophysical Union*, 1940, Part 3, 825-826, Washington, Sept., 1940.
5549. TILLEY, C. E., "Obituary of Prof. F. D. Adams, F.R.S.", *Nature*, No. 3821, Vol. 151, 102-103, London, Jan. 23, 1943.
5550. TORREY, P. D., "Determining Fluid Levels (by means of echo meter)", *International Oil*, Vol. 2, No. 4, 16-19, Houston, Oct., 1941.
A brief review, signed D.W., appears on p. 545 of *Mines Magazine* for Oct., 1942.
5551. TORY, H. M., "Frank Dawson Adams" (Obituary), *Science*, No. 2515, Vol. 97, 235-236, New York, March 12, 1943.

5552. TUCKER, W. S., "The Determination of Velocity of Sound by the Employment of Closed Resonators and the Hot-Wire Microphone", *Philosophical Magazine*, No. 231, Vol. 34, 217-235, 4 fig., 7 tab., bib., London, April, 1943.
5553. ULRICH, Franklin P., "Progress Report of Seismological Work by the United States Coast and Geodetic Survey in the Western United States during 1941", *Bulletin, Seismological Society of America*, Vol. 32, No. 4, 283-296, 6 fig., 2 tab., Berkeley, Oct., 1942.
5554. VEATCH, A. C., and SMITH, Paul A., "Mapping of the Submarine Valleys of the Atlantic" (abstract), *Transactions, American Geophysical Union, 1940*, Part 3, p. 786, Washington, Sept., 1940.
5555. WALTER, Edward J., "Longitudinal Wave Velocities in the Mississippi Valley" (abstract), *Transactions, American Geophysical Union, 1940*, Part 2, 241-242, Washington, July, 1940.
5556. WALTER, E. J., "Local Earthquakes and Crustal Layering Immediately South of Saint Louis" (abstract), *Proceedings, Missouri Academy of Sciences*, Vol. 7, No. 4, p. 113. Columbia, 1942.
- See abstract No. 6524, p. 45, *Geophysical Abstracts 109*, reported as No. 5442 of this list.
- WASHBURN, H. W., "Seismometer" (Patent), U.S. No. 2,303,413, issued Dec. 1, 1942. See No. 5532 of this list.
5557. WASHBURNE, Chester W., "Plastodynamics as Indicated by Geologic Structure", *Transactions, American Geophysical Union 1940*, Part 2, 700-719, 7 fig., bib., Washington, July, 1940.
5558. WEISS, Oscar, "The Causes of Rockbursts", *South African Mining and Engineering Journal*, Johannesburg, Oct. 3, 1942.
- A full review of this important paper appears in the Mining Digest section of the *Mining Magazine*, Vol. 67, No. 6, 337-340, London, Dec., 1942.
- WELTY, W. R., "Geophysical Apparatus and Method" (Patent). See No. 5531 of this list.
5559. WIDESS, M. B., "Multiple Branches in Seismic Reflection-Time Surfaces", *Geophysics*, Vol. 8, No. 2, 93-104, 5 fig., bib., Tulsa, April, 1943.
- WILEY, Harold F., "Method and Apparatus for Translating Seismic Waves" (Patent), U.S. No. 2,266,837, issued Dec. 23, 1941. Listed as No. 6490, p. 32, *Geophysical Abstracts 108*. See No. 5530 of this list.
5560. WILSON, James T., "Surface Waves in a Heterogeneous Medium", *Bulletin, Seismological Society of America*, Vol. 32, No. 4, 297-304, 2 fig., 2 tab., Berkeley, Oct., 1942.
5561. WINDES, S. L., "Damage from Air Blast", *U.S. Bureau of Mines, Reports of Investigations*, No. 3622, 18 pp., 17 fig., 6 tab., bib., Washington, Feb., 1942. See No. 5547 of this list.

- WINDS, S. L., and THOENEN, J. R., "Seismic Effects of Quarry Blasting". See No. 5547 of this list.
- WOLF, A., and COWLES, L. G., "Astatic Electromagnetic Vibration Indicator" (Patent). See No. 5531 of this list.
5562. WOOD, Harry O., "Earthquakes and Disturbances to Leveling in the Imperial Valley", *Bulletin, Seismological Society of America*, Vol. 32, No. 4, 257-268, 3 fig., bib., Berkeley, Oct., 1942.
5563. WOOLLARD, George P., "Geophysical Methods of Exploration and Their Application to Geological Problems in New Jersey", *New Jersey Conservation and Development Department, Bulletin No. 54*, 89 pp., maps, 1941.
- WYCKOFF, Ralph D.,
- (1) "Seismograph Amplifier" (Patent), U.S. No. 2,276,708, issued March 17, 1942. Listed as No. 6578, p. 60, *Geophysical Abstracts 109*. See No. 5530 of this list.
 - (2) "Apparatus for and Method of Seismograph Prospecting" (Patent), U.S. No. 2,276,709, issued March 17, 1942. Listed as No. 6579, p. 61, *Geophysical Abstracts 109*. See No. 5530 of this list.

LIST OF COLLABORATORS

The initials appended to various items throughout the *Bibliography* indicate, in each case, the contribution by the respective collaborator.

Bullen, K. E., Department of Mathematics, The University, Melbourne, N. 3, Australia	K.E.B.
Collins, G. H. A., Dominion Observatory, Ottawa, Canada.	G.H.A.C.
Gutenberg, B., Seismological Laboratory, 220 North San Rafael Ave., Pasadena, Cal., U.S.A.	B.G.
Hayes, R. C., Director, Dominion Observatory, Wellington, N.Z.	R.C.H.
Heck, N. H., United States Coast and Geodetic Survey, Washington, D.C., U.S.A.	N.H.H.
Heiland, C. A., Professor of Geophysics, Colorado School of Mines, Golden, Colo., U.S.A.	C.A.H.
Hodgson, J. H., Houma, La., U.S.A.	J.H.H.
Lambert, W. D., United States Coast and Geodetic Survey, Washington, D.C., U.S.A.	W.D.L.