Helium-generating potential of a material is a measure of its alpha emission activity. One gram of uranium may generate 1.16×10^{-7} ml of helium in 1 year.

Nearly all igneous rocks contain trace amounts of the uranium series. The acidic types are usually significantly more radioactive than those of the basic types. The helium-generating potential of sedimentary and metamorphic rocks appears to be dependent upon the rock type and its history rather than on the age or location of the sample. Comparative Specific Radiation Activity (SRA) values for the three classes of rocks are presented, with the calculated percentages of uranium in each sample.

The helium-generating potential of sedimentary rocks is a particular study: as a uranium-bearing granite is emplaced, cooled, uplifted, and eroded, for example, alpha particles are emitted at a constant rate. During transportation of the sands, silts, and shales, and deposition as sediments, these clastic grains continue to give off alpha particles which become helium atoms that are trapped in the rocks.

Helium cannot be trapped permanently in a geologic trap. Rather, the helium will diffuse out, or migrate out, over a period of geologic time. Helium must either be generated or migrate into a trap, be detained by the geometry of the rock and then either move out by migration or by diffusion. The helium that is produced is "in transit" through the rocks in the trap. A given trap has the ability to hold no more than 2% helium depending on the geometry of the rock, the pressures, and the helium holders associated with the trap.

ROGERS, FERRILL H., Attorney and Counselor at Law, Oklahoma City, Okla.

HOW SPACING CAN KEEP THE GEOLOGIST WORKING AND WHY

(No abstract submitted)

WOODS, DALTON J., Geologist and Petroleum Engineer, Shreveport, La.

SMACKOVER'S SIGNIFICANT WALKER CREEK (ARKANSAS)

Thirty years ago, the oil industry knew all there was to know about the Smackover in southern Arkansas. All production from that formation came from large anticlines that were found by seismograph—then came Walker Creek!

Now, stratigraphic traps at 11,000 ft, oolite bars trending across low relief structural noses, and porosity pinchouts bring a new frontier for the wildcatter. Leave your old ideas and your old tools behind if you join this search. Gravity and shooting are not much help. The "in" combination is an imaginative subsurface geologist working with an operator who is interested in trend plays.

When you are tracing the pattern of offshore bars along an ancestral Gulf of Mexico shoreline, it is a big country. Wherever oolites are formed, beach or bar deposits can be present, and these are the ingredients for lucrative but elusive oil fields.

How many "Walker Creeks" will be found from Mexico to Florida? That is an interesting challenge facing the industry today.

21ST ANNUAL MEETING

GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES (GULF COAST SECTION OF AAPG)

and

SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS (GULF COAST SECTION)

"WHERE THE ACTION IS"

NEW ORLEANS, LOUISIANA—OCTOBER 13–15, 1971

TECHNICAL PROGRAM SUMMARIES

THURSDAY MORNING, OCTOBER 14

GCAGS-GCS-SEPM Joint Session
Jung Hotel, New Orleans
Opening Ceremonies
- ROBERT G. WILLIAMSON: Opening remarks
- HONORABLE MOON LANDRIEU: Mayor, City of New Orleans, Welcome address
- LEE H. MELTZER: GCAGS report of president
- Introduction of AAPG officers
- Presentation of awards
- WILSON M. LAIRD: American Petroleum Institute, Keynote address

GCAGS TECHNICAL SESSIONS

1. H. YARBOROUGH: Sedimentary environments and occurrence of major hydrocarbon accumulations
2. R. W. BOEBEL: Quantifying multiple working geologic hypotheses—geology and competitive offshore lease bidding

THURSDAY AFTERNOON, OCTOBER 14

3. P. L. KEYES: Geology of Jurassic, Flomaton-Jay area, Alabama and Florida
4. R. L. LAYDEN: Story of Big Wells
5. G. O. WINSTON: Regional structure, stratigraphy, and oil possibilities of South Florida basin
6. M. OXLEY, D. E. HERLIHY: Geology and geophysics of East Nancy field, Clarke County, Mississippi
7. P. H. BENSON: Geology of Oligocene Hackberry trend, Gillis English Bayou-Manchester area, Calcasieu Parish, Louisiana
8. J. A. GILREATH, R. W. STEPHENS: Distributary-front deposits interpreted from dipmeter patterns
9. W. E. CONATSER, C. C. ALMY: Grand Isle barrier island, Louisiana—human activity in natural dynamic system

FRIDAY MORNING, OCTOBER 15

10. L. F. BOLAND, E. D. MINIHAN, W. A. THOMAS: Black Warrior basin
11. J. A. HARTMAN: "G_2" channel sandstone, Main Pass Block 35 field
12. W. F. BISHOP: Stratigraphic control of production from Jurassic calcarenites, Red Rock field, Webster Parish, Louisiana
13. B. J. SLOANE: Recent developments in Miocene *Planulina* gas trend of South Louisiana
14. D. A. REEL, G. M. GRIFFIN: Potentially petroliferous trends in Florida as defined by geothermal gradients