LONDON - The world's oil and natural gas reserves will run out in a generation or so, but there is enough coal to last for centuries. Thus Britain is currently promoting research programs designed to transform coal into gas and liquid fuels as well as into chemicals, to be used either for energy or as the basis for plastics, fertilizer and other products now manufactured from petro-

The fundamental breakthroughs in the field took place long ago. German aircraft, for example, flew on fuel converted from coal as far back as World War II. But the need in the near future will be for large-scale techniques that are efficient without being costly, and that is what preoccupies British experts at the moment.

Six principal projects aimed at perfecting coal technology are being planned or beginning to function here at present, and they are expected to require a total expenditure of some \$250 million. They are a long way from industrial application, but their main purpose now is to prove the feasibility of methods that have succeeded in the lab-

Some of these projects have been shaped jointly by British and American scientists, and it would have been logical to leave their development to the United States, which has immense resources for energy re-

TOP SECRET

Letters to the Editor

Band from 1945 to 1949, I naturally feel it

is the greatest musical organization in exis-

I have seen quite a number of half-time performances by the band since 1949, but

the show put on last Saturday during the

TCU game surpassed anything I have ever witnessed before. The complexity of the

drill and the precision with which it was

carried out was beautiful to watch and the

standing ovation and cheering from the

stands at the conclusion of this perform-

ance makes me think I'm not alone in my

do justice to the Aggie Band this Friday in Austin. In my humble opinion, the Band is

the best public relations medium our

school has, and it needs all the support and

exposure to the people of this state and nation as is possible.

I'm mighty proud to say I was a member of the Texas A&M band, and extend con-

gratulations again on a sterling perform-

Vested interest

ance last Saturday.

I only hope the television cameras will

BONFIRE - NEW CONFIGURATION

"TLL ADMIT IT'S A HARD CONCEPT TO ACCEPT RIGHT OFF,

BUT IT WILL PUT AN END TO BONFIRES THAT TOPPLE!

Band drill top show

Slouch

search. But Britain has decided to push fluidized-bed combustion is that it can be ahead, despite a heavy investment, for a

For one thing, the British are eager to be out front in this domain rather than give an edge to the United States. And secondly, considering the troubles faced by the Carter administration in passing its energy legislation, there are doubts here about America's ability to move rapidly into coal

Involved in the British projects are the government, the coal industry and mine workers, and their objective now is to build pilot plants in which to perform practical

experiments in the conversion process.

The largest and perhaps most promising of these plants, due to start operating at a coal mine in northern England next spring, will test a process known as fluidized-bed combustion. The plant is being sponsored by the International Energy Agency, with costs shared by Britain, West Germany and the United States. the United States.

The way this process works, coal is fed into a bed of burning coal and ash that is suspended, as it were, on a blast of air from below so that it behaves almost like a liquid. By adding limestone to the bed, sulphur can be trapped, whereby removing the main pollutant produced by burning

The overwhelming advantage of

by Jim Earle

carried out in an installation significantly smaller than a big modern power plant that consumes coal dust in huge tubular structures. This reduction in size means a reduc-

Great reductions in size and consequently cost can be achieved if the process operates under pressure, and the study of this operation is one of the pur-poses of the forthcoming experiment. The installation is modest, with an output of 18 megawatts, but plans are already being drawn up for an 80-megawatt demonstra-

Three of the other projects are focusing on the liquification of coal to produce Syn-crude, which resembles crude oil. An object of these experiments is to improve the ratio of hydrogen to carbon in the liquified result. Because it is relatively poor in hy-drogen, coal yields less heat than oil when

One plant being built will concentrate on a process called liquid solvent extraction. This consists of treating coal with a hot solvent that produces a thick tarry solution, which can then be "hydrogenated" to make oil-like "coal liquids," among them a form

of low-octane gasoline.

Another plant will do a similar job by applying a gas rather than liquid solvent at pressures and temperatures high enough to

"open up" the coal and extract its more valuable constituents.

Yet another process known as pyrolysis, which has been tried in the laboratory, consists of heating coal rapidly in hydrogen at high pressure. The result is a mixture of tars, oils and gas, the blend of which can be controlled depending on the reactor condi-

In addition to these experiments in liquification, a plant located in Scotland has already had considerable success in producing synthetic natural gas from coal. The gasifier involved in the process has attracted interest in the United States and

may be incorporated into a demonstration installation to be constructed there with Department of Energy funds.

Plans are also being made for a small plant in which coal would be turned into the could drive a truth in directly out. gas that could drive a turbine directly, cut-

ting out the steam stage entirely. With North Sea oil and gas flowing, these projects and plans are not urgent, and British scientists are working on schedules that reach into the 1980s. They feel, therefore, that they have a headstart against the day when oil and gas supplies will begin to dwindle - and they hope to be ready when

(Silcock writes on science and technology for the London Sunday Times, the British weekly newspaper.)

# Republicans jockey for congressional slots

By CHERYL ARVIDSON

WASHINGTON — Conservative Republicans are riding high these days after scoring some major wins in Senate races made doubly sweet by a list of losers that includes some of the chamber's most un-swerving liberals.

It's no surprise, then, that conservatives are jockeying for places on the Senate GOP leadership team that will be elected when the 96th Congress convenes in

Senate Republican Leader Howard Baker has enough commitments from incoming and current senators to assure

# **Politics**

himself of re-election to the top leadership job. But from there on down, the GOP is bracing for spirited races that will prove whether more moderate Republicans will continue their dominance of chamber strategy positions or be forced to yield to

Conservative Sen. Jesse Helms, R-N.C., was rumored to be considering a challenge of Baker but he has apparently backed off, and his supporters are focusing instead on the lesser leadership spots.

Conservative Sen. Harrison Schmitt. R-N.M., has announced plans to challenge the more moderate Sen. Ted Stevens of Alaska for the second highest job, assistant Republican leader. Stevens was first elected to this slot two years ago when the

#### Writing the editor

The Battalion welcomes letters to the editor on any subject. However, to be acceptable for publication these letters must meet certain criteria. They should:

✓ Not exceed 300 words or 1800 characters in length.

✓ Be neatly typed whenever possible. Hand-written letters are

✓ Include the author's name, address and telephone number for verification.

Letters to the editor are printed as a service to our readers. Publication of a letter is never guaranteed. The editorial staff reserves the right to edit letters to remove grammatical errors and to avoid litigation. Address letters to the editor to:

Letters to the Editor The Battalion Room 216
Reed McDonald Building College Station, Texas 77843 entire Senate leadership on both sides of

the aisle changed hands. Sen. James McClure, R-Idaho, another staunch conservative, is running for chairman of the Republican Conference, composed of all GOP senators. He is being challenged by moderate Sen. Bob Packwood of Oregon.

Freshman Sen. John Danforth of Missouri has also indicated he will challenge the more conservative Sen. John Tower of Texas for chairmanship of the Senate GOP Policy Committee. But moderate Republicans are reportedly pressuring Danforth to leave Tower alone since there is no objection to his performance in the policy committee job and it is unlikely Tower could be unseated.

Instead, the moderates hope to convince Danforth to step into another racechairman of the Senate Republican Campaign Committee — and free them from a serious dilemma. The campaign commit-tee post is an important job since it in-volves raising the funds and doling out the dollars to incumbent GOP senators and GOP challengers around the country.

The two announced candidates for the committee chairmanship — Sens. Orrin Hatch of Utah and John Heinz of Pennsylvania — offer moderates what could be considered a "best of the worst" choice

Hatch is an ultra-conservative, heavily involved in right wing causes and closely associated with Richard Viguerie whose high-powered mail fund raising efforts were vital in many of the conservative victories this fall.

There's fear in GOP circles that with Hatch at the helm of the GOP campaign committee, the Viguerie mail drives might slip into institutional Senate GOP fund raising, giving the Viguerie wing a degree of legitimacy that makes the moderate Republicans shudder.

But the moderates have trouble, too, with Heinz, who plowed some \$3 million of his ketchup and pickle fortune into his own Senate race two years ago. Although he is probably more acceptable to moderates than Hatch, Heinz clearly has an image problem.

Moderates could avoid this dilemma entirely if somebody in the middle — specifically Danforth — could be persuaded to make it a three-way battle. The other person who was looked to as a possible compromise, Sen. Pete Domenici of New Mexico, flirted with the idea of running for the campaign committee chairmanship but abandoned it last week.

Over on the House side, the leadership will apparently see only one challenge, but

it too involves a power play from the right wing of the Republican Party.

Rep. Thomas Kindness of Ohio says he will challenge Rep. John Anderson of Il-linois for the chairmanship of the House Republican Conference, the governing body and research organization for all GOP House members.

# Top of the News **CAMPUS**

## Changes in shuttle bus routes

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Ton series

The campus shuttle bus system will reduce operations on Friday due to the holiday. The Intra-Campus will not run and the other, off-campus routes will run from 7:30 a.m. until 5 p.m. The North route will operate the regular number of buses, the East route will have three buses and the South route two bses. The Holleman and Anderson Parkway route will have one bus, and the 2818 circuit will have one bus. A new intra-campus "Blue Route" will begin Monday.

### Aggie Christmas season begins

Texas A&M University President Jarvis E. Miller will kick off the Texas A&M University President Jarvis E. Miller will kick off the Aggie Christmas season in ceremonies here today. The annual event will feature a short concert by the Century Singers. Miller will give a speech on "Christmas in Aggieland and Around the World" and the lights will be turned on the Christmas tree. The ceremonies will be in the Memorial Student Center Lounge at 7:30 p.m. A small reception for the audience will be held after the ceremony in MSC room 201. The presentation is being sponsored by the MSC Christmas Tree Committee.

## Reception for art award winners

A reception honoring award winners in the Juried Student Art Exhibition will be held at 6 p.m. today in the Memorial Student Center Art Gallery. The exhibit, currently on display in the MSC Gallery, will run through Dec.3. Both the reception and exhibit are open to the public free of charge.

# STATE

## Sweeny plant in full operation

Phillips Petroleum Co.'s new ethylene plant near Sweeny, Texas Philips Petroleum Co. s new ethylene plant near Sweeny, Iexas, which will produce 1 billion pounds per year, was completed in the third quarter of 1978 and is in full operation, a Phillips official in Bartlesville, Okla., said Tuesday. The plant at Phillips refining and petrochemical complex nearly doubles the company's yearly ethylene output to 2.2 billion pounds, said L.H. Johnstone, executive vice president for the chemicals group.

### Hughes case motion denied

A Texas federal judge has refused a California request that a case to determine the legal residence of the late billionaire Howard Hughes be moved to Colorado. District Judge Monday said he would hear the case in Austin. Attorneys for the state of California, which also is claiming the western state was Hughes' domicile, had asked Roberts to move the case to the neutral site of Colorado. Texas and California both claim Hughes was a resident and want to collect taxes on the late tycoon's vast estate.

# **NATION**

### Mayor's memorial services continue

A series of memorial services both religious and secular began Monday and were to continue through much of the week for slain San Francisco Mayor George Moscone and Supervisor Harvey Milk. A memorial Mass was held for Moscone at St. Marh's Cathredal Monday. Rosary services were set for Wednesday at 8 p.m. and the funeral was scheduled for Thursday at 10 a.m. Memorial services for Milk began Monday at the Gay Community Center and were followed by a memorial march from the city's Castro district to the steps of City Hall where participants held a silent vigil. Information on burial services for Milk was not immediately available.

#### Brother of Ray arrested

A brother of James Earl Ray scheduled to testify in Washington this week before a House panel investigating the assassination of the Dr. Martin Luther King Jr. was arrested in St. Louis Monday night. He is suspected of burglary and assault. Police said John Larry Ray, 45, was arrested a short time after a man entered a south side home and scuffled with three men before fleeing. Ray and his brother, Jerry Ray, were among several witnesses called to testify this week before a House committee in Washington looking into the assassination of King, for which James Earl Ray pleaded guilty and is serving a prison

# WORLD

#### Survivors still in Guyana

The State Department said Tuesday it did not expect any survivors of the People's Temple to be flown from Guyana to Charleston Air Force Base Tuesday, where FBI agents are waiting to question them in the murder of U.S. Rep. Leo J. Ryan, D-Calif. Lydon said the Guyanese government has authorized seven persons to leave Guyana and they are expected to fly out commercially. But he gave no indication when the group would fly out or what its U.S. destination would be

# WEATHER

Fair skies with a high in the mid 60's and a low in the lower 40's. Winds are southerly at 5-10 mph.

# THE BATTALION

LETTERS POLICY Editor .

Letters to the editor should not exceed 300 words and are subject to being cut to that length or less if longer. The editorial staff reserves the right to edit such letters and does not guarantee to publish any letter. Each letter must be signed, show the address of the writer and list a telephone number for cerification.

Address correspondence to Letters to the Editor, The Battalion, Room 216, Reed McDonald Building, College. Station, Texas 77843.

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through Thursday.

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Focus section editor ......Gary Welch

Photographers . . . . . . . . . Lynn Blanco

Last year, I worked on Bonfire for myself. This year I'm working on it for my friends in the Corps, my fish sister, my father (class of '53), my old buddies offcampus, and my pride for my dorm. If you've worked on Bonfire before you'll

• Limited to 100 lines

# Where's the 'push'?

Once more the days of "The Push" have

stack. Sophomores and freshmen are

needed to work the pulley crews and hauling crews. If you can't work as much as you

As Aggies we owe it to our fish and

our former students to raise every piece of wood we can onto the stack; those who

have built and will build Bonfire deserve

and must receive any aid we can give.

Bonfire is a spark that's turned to a

flame, even as our school has grown from a

tiny college to a modern university. Fellow non-regs, the Corps can't carry on the

tradition by itself. A strong back is ap-

have your own reasons. Don't quit now, Aggies! The outhouse hasn't burned yet.

preciated no matter whose it is.

want, work as much as you can.

'Uppity' old Ags

This past weekend, my roommate and I

had a opportunity to sit on the 50-yard line in the west side armchair seats. We, of

course, took advantage of the opportunity.

wealthy alumni, we witnessed constant criticism Texas A&M football team's play.

Most of their comments showed, not only

their uppity, upper class attitude toward

These people never seem to be happy.

First, they criticize one coach enough to

make his job unpleasant enough so that he

just what everyone has always wanted, and

. Why don't these rich former students with their superior football intellect go out and buy a professional football team so we

will all have the pleasure of watching this

awesome team play Sunday afternoon in

—Dirk Novosa, '79 Hurlie Collier, '79

resigns. Now we get a "wide-open" coach,

they still complain.

While sitting in the middle of all the

On the weekend of Oct. 28, I visited started and anyone who has the time and A&M for the Rice game. A friend intended to deliver a vest to me for my brother to the strength is need to build the Class of 1982 Bonfire. Juniors and seniors are needed to wire and direct work at the wear in a wedding. The vet, however,

near the Quad. It is part of a blue-grey suit. It was in a small brown paper bag. On the bag was John Stern's address. It is vitally important that I find this vest. If you find it, please return it to Paula Bane, Dorm 1, 845-

never reached me; it was lost somewhere

Thank you.

-Jim Simpson, '49 Hallettsville, Tx.

Readers' Forum Guest viewpoints, in addiare welcome. All pieces submitted to Readers' forum , should be:

-Maureen O'Brien

Typed triple spaceLimited to 60 characters per