Signing the new supplemental agreement between the Government of the Republic of Lebanon and Tapline is His Excellency Rashid Karame, Prime Minister and Minister of Finance. Others, from left, are oil expert Paul J. Klat, Tapline legal adviser Henry Cattan and president John Noble. (Photo by Nasr).

Tapline, Lebanon Sign Accord

Negotiations between Tapline and the Government of the Republic of Lebanon concerning the increase in transit fees have been successfully completed. On August 7, an agreement was signed in Beirut on behalf of the Lebanese Government by His Excellency Rashid Karame, Prime Minister and Minister of Finance, and on behalf of Tapline, by President John Noble.

The new agreement is supplemental to the Convention made August 10, 1946, between the Government and the Company. In addition to a substantial increase in annual fees, Lebanon receives a lump sum payment of $10,000,000 in full and final settlement of all differences, disputes and claims prior to November 1, 1961.

The agreement was unanimously approved by the Finance Committee of the Parliament on August 16 and ratified by the Chamber of Deputies on August 27.

Tapline signed similar supplemental accords with the Governments of Syria and Jordan on February 25 and March 13, respectively.

Olson's Career Enters New Phase

A distinguished twenty-year petroleum career that stretches from San Francisco to the Middle East recently entered a new phase. Upon his departure from the field August 21, Chief Engineer Arthur E. Olson left Tapline to continue his advanced studies in engineering and mathematics at Oregon State University and to open up a consulting engineering practice in Corvallis, Oregon. Mr. Olson will continue to be associated with Tapline from time to time on a consulting basis.

Considered one of the outstanding engineers in the pipeline industry, forty-six year old Olson was graduated with honors as a civil engineer from Oregon State University in 1942. He had the highest academic average ever achieved at the school.

On June 10 that same year, he joined Standard Oil Company of California in San Francisco as Junior Engineer. He has been interested in Tapline affairs since 1946.

In the planning of Tapline, Mr. Olson has made many major contributions, not the least of which was in the technical development and the adoption of construction methods of the above-ground restrained line.

Arriving in the Zone of Operations on December 11, 1947, Mr. Olson officially transferred to Tapline in February, 1948, as Senior Engineer. With Tapline, Mr. Olson has served as Superintendent-Engineering and Inspection Services, Eastern Division, Chief Field Engineer-Manager of Construction, as well as Chief Engineer. In February, 1958, he was appointed Chairman of the Technical Committee for Long Range Planning and was in full and responsible charge of the

(Continued on page 8)

Arthur E. Olson receives his twenty-year service pin from Vice President of Operations Walter E. Locher at the Central Facilities Supervisors' Meeting held August 2-3 at Sidon Terminal's Auditorium. From right are President John Noble, Mr. Locher, Mr. Olson and Executive Vice President William R. Chandler. (Photo by el-Soussi).
Tagline water wells in Saudi Arabia are always associated with the name of Richard Ragsdale, whose career with Tagline started on May 16, 1953, when he joined the company at Queen Dow as a mechanic. At that time, he had already completed two contracts with Bechtel at Ras el-Mishagh, from June 1947 to January 1951, as general foreman in charge of the installation and maintenance of water wells along the Tagline system. Mr. Ragsdale was transferred to Rafha in 1954, where he has worked, Mr. Ragsdale calls Long Beach, California, as point of origin. He is married and is the proud father of one child, Gordon, who was born on August 31. Mrs. Ragsdale has taught for many years at the Kemper Military School, Kemper, Missouri. He spent the last academic year with the Marine Corps in San Diego, California.

The first three columns in the designated area contain a visit to Tagline installations at Tawil and Sidon that was organized by the Public Relations Department for high school students from Lebanon who were given their awards August 7 by Tagline President John Noble. Shown above, from left, are second prize winner Khalil el-Naqib, of the National Evangelical Institute in Sidon, who received a gold-coated set of Sheaffer’s; Public Relations Manager Sallie St. Arnaud, first prize winner; Royal S. Duwaik, third prize winner; and a portable stereoscope; President Noble, third prize winner Michel Abul—Noor, of the College du Sacre—Coeur, who received a set of binoculars; and Muhammad K. Saab, Community Affairs Representative. (Photo by Near).
PRECIOUS WATER:

Maintaining 41 Wells, a Real Challenge to Tapline Crews

Everyone who has ever spent any time in Saudi Arabia is sharply conscious that water has been one of the great problems since the dawn of recorded history. Few commodities are more precious and scarce. Wise use of it, with constant attention to conservation, is indispensable to the present and future well-being of the Desert Kingdom.

Basic to the problem is the sparsity of rainfall in most of the peninsula, and the fact that there are no large rivers or lakes. Basic too is the absence or insufficiency in many parts of the country of shallow underground formations of the type necessary for accumulation of rainwater in the ground.

As the geologists explain, there are two kinds of ground water: "free" and "confined." Free ground water occurs when rain seeps down a relatively short depth into the earth, and then is stopped by a stratum of impermeable rock. If the rock stratum is concave, it is fortunate for the seekers of water, because a sort of basin is thus provided to keep it in place. Unfortunately, basin or no basin, this type of accumulation is generally only a temporary source; being shallow, it may evaporate, and being small, it can be quickly pumped dry.

Confined ground water offers a more enduring source of supply. This is the kind which collects in porous subterranean strata, such as sand or limestone, and is confined between two strata of impermeable rock, one above and one below.

Wells which penetrate the covering rock strata of confined ground water traps and release a flow of water are known as artesian wells.

Headquartered at Rafha, Tapline's Water Wells maintenance crew is responsible for the opening, operation and maintenance of 41 such water wells dispersed over a distance of about 1,100 kilometers and spaced at intervals ranging from 70 to 150 kilometers. Twenty-three of these are Tapline wells using Reda submersible pumps and the others are Saudi Arab Government wells, using Peerless and Oil Well equipment. The electric motors used with the submersible pumps in the company wells range from 77 to 100 horsepower. Maintenance on these motors requires flushing, drying and replacement of bushings and bearings.

Tapline's Water Wells Program is a 24 hours a day, 365 days a year job to provide water not only for the needs of the pump stations, but for local and transient populations and their livestock. In fact, 75 percent of the water produced by these wells is used by people living outside the pump stations. The needs of the bedouins rarely tax the capacity of the water systems especially during the long summer months.

All of the 41 water wells along the Tapline system were drilled between 1945 and 1956. The oldest S.A.G. water well was drilled in 1945 at Duwaid while the first Tapline well was drilled in 1949 at Qaisumah. Water production of each of the wells averages 100 gallons per minute. Badnab has a well producing 165 GPM. Well depths range from 800 to 2,400 ft.

Tapline keeps a crew of fourteen men deployed between the pump stations at all times in its unceasing battle for ample water supply. Headquartered at Rafha, where pumps needing repair are taken when removed from wells to be disassembled, cleaned and rebuilt in a 20 x 60 ft. shop, these men are among the most highly trained specialists in the company. Their total years of experience in water well maintenance exceeds a century.

Ten members of the Water Wells crew are mechanics. They are: Ibrahim Sa'ad, Abdulrahman Saleh, Abdulrahman Salem, Sa'id Omar, Muhammad Saleh, Nasir Muhammad, Muhammad Ali, Rahman Rashid, Muhammad Sa'id and Saleh Muhammad. Two are lead mechanics—Mohamed Salem and Saleh Muhammad; and they all work under the capable supervision of Water Wells Foreman Richard Ragdale and his assistant, Jim Deyley.

Making the final adjustment on a re-installed pump are Lead Mechanics Mohammad Salem (left) and Salih Muhammad. (Photo by Nasr).
Qaisumah

Recent weekend guests of Station Superintendent and Mrs. Dudley P. Harbin were ...  

Dr. S. Moussallem joined the Badanah Base Hospital staff in July. From (Continued next page)

Sidon

Miss Jacqueline Faddoul, daughter of Oper- 
ations and Maintenance Foreman Faddoul 
and Mrs. Annibal A. Faddoul, was guest of ho- 

Sa'da is home to a diverse array of

Trafalgar’s personnel interest in Trafalgar operations was strong when the ship arrived here on August 3. The meeting was held to review various aspects of line operations and staff functions, as well as to bring the group up-to-date on matters of general interest.

The two-day Central Facilities Supervisors’ Meeting ended here on August 3. The meeting was held to review various aspects of line operations and staff functions, as well as to bring the group up-to-date on matters of general interest.

The July monthly medal tournament was held here on August 3. The meeting was held to review various aspects of line operations and staff functions, as well as to bring the group up-to-date on matters of general interest.

The Baroudis, who is off to Riyadh and Abha, Juhaymah Dumas and Muhammad Sa’ad, who is off to Riyadh and Abha, Juhaymah Dumas and Muhammad Sa’ad, ...

Rafha

Mr. and Mrs. Everett S. Tracey were the dinner hosts of Jim Druley and his wife, Irene, who has arrived here from the United States. As a high school senior student, Miss Faddoul graduated with honors and is now ready for her first year of university studies in the fall at the Beirut College for Women.

Welcome to Sebou Keb- 
teijan, of Beirut Engineering, who was tem- 
porarily assigned to Sedan Terminal effective August 14. While on his assign- 
ment, Mr. Kebteijan will be in charge of Shops and Area Maintenance.

Afia Institute to conclude his studies in the summer of 2008. As a high school senior student, Miss Faddoul graduated with honors and is now ready for her first year of university studies in the fall at the Beirut College for Women.

Beirut

President John Noble left Beirut August 19 on a business trip to the United States and subsequent short ... Staff and responsibilities of Staff Relations, to Elias Magnusson, chief liaison officer between the Medical Bureau and the Beirut American School. The meeting was held to review various aspects of line operations and staff functions, as well as to bring the group up-to-date on matters of general interest.

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The meeting was held to review various...
Majr'youn, Lebanon, Dr. Moussallem graduated in June from AUB's School of Medicine. He lists dancing, travelling, reading and ping-pong as his favorite pastimes.

Station Superintendent John H. Arnold was in Turaif and Beirut in late July on company business.

Soony Mobil operating division for the United States and Canada.

Moses was a partner in the New York law firm of Boyle, Filler and Stone from 1946 to 1953 before joining Socony Mobil Oil Co. as counsel. He was legislative assistant to the late Senator Robert A. Taft from 1941 to 1942.

Born in New York in 1917, he received an LL.B. degree at Harvard Law School in 1943.

Moses, a Navy lieutenant, served in the European, African and Pacific theaters during World War II.

Moses Named to Aramco Board

Henry C. Moses, executive vice president of Mobil International in charge of the company's Middle East concessionary interests, has been elected a member of Aramco's Board of Directors, and a member of the Executive Committee and the Committee on Agreements and Negotiations with Saudi Arabia. Moses will fill the vacancy created by the resignation of Robert Siegel.

Four years, prior to his appointment to his present position on July 1, Moses was general counsel of Mobil Oil Company, the

Olson's New Career

(Continued from page 2)

Moses also took a leading part in the conception of the unattended, remotely-controlled auxiliary pumping units.

He was married to Eileen Barber on June 16, 1943. The couple have three children: Arthur E. Jr., 18, a mathematician and physics student at Oregon State University, "who will be going to school with his father and who is on the University's Honor Program;" William Rex, 16, and Charlotte Gay, 15, who are in high school in Corvallis too.