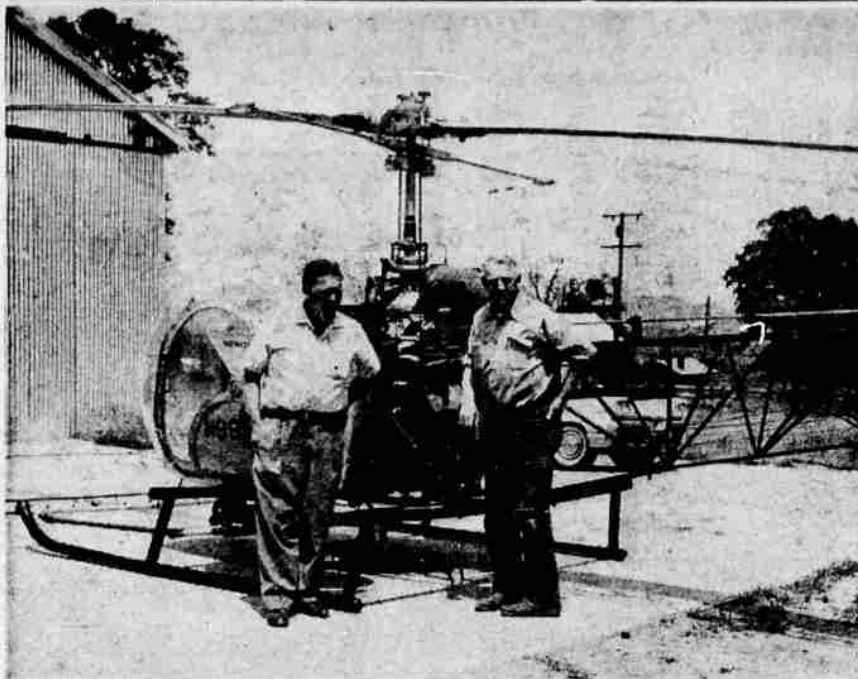




AETNA HELICOPTER "BOSSES" are shown here with one of the firm's whirlybirds at the base near Etna in the Scott Valley, Siskiyou County. Left is Ed Mathews, president of Aetna Helicopter Service, and, right, is Erling Hjertager, vice president.

— Photo by Walsh



IT TAKES A LOT OF SPRAY to cover 820 acres, as this pile of empty drums at a temporary base camp indicates. Bases were set up near available water supplies and the helicopters were landed on platforms for refueling and loading with the spray mixture.

— Photo by Walsh



CHARLES TRICKEY, fire control assistant working out of the Mt. Hebron headquarters of the Klamath National Forest, shows the result of aerial spraying on the dense brush of the old Bogus burn. The spraying was done by helicopter this spring.—Photo by Walsh

Helicopters Used In New Brush Disposal On Bogus Burn; Results Held Good

By PEGGY WALSH

MOUNT HEBRON—In the fight to preserve and re-establish the nation's forests, the national forest service has found a new ally—the helicopter.

On what is known as the Bogus Burn in the Goosenest District of the Klamath National Forest, an 820-acre helicopter spray operation was completed recently which will destroy the ground cover of brush and permit reforestation. If man or lightning does not burn it and established moisture and growth cycles continue, a productive area can now be created from a total waste land.

Forest fire devastated the Bogus Mountain area, on the ridge west of Mount Hebron, in 1926 and various types of brush took over. The brush grew to 20 feet heights creating a thicket that neither cattle nor deer could penetrate. It established a fire hazard that furrowed the brows of forest service men.

An experimental brush burning project in September, 1957, got away from the forest service. Despite fire lines around the 500-acre test site, erratic and unpredictable winds spread the fire and 11,000 acres of northern Siskiyou County were burned. Here was an ideal site for forest development . . . if the regrowth of the brush could be controlled.

Perennial grass was sown as the initial step in December, 1957, to control erosion and to provide permanent cattle forage at the lower elevations. The grass seed was broadcast by airplane and growth was highly successful. But Les Clark, district ranger at Mount Hebron, and his staff watched buckbrush, wild cherry, willow and other growth begin to take over the mountain sides.

Because of the mountainous terrain, high elevation, dangerous wind currents and projecting timber snags, airplanes could not be used safely or effectively in chemical spraying of the brush to destroy it.

The helicopter which can dodge snags, hover, back up and generally defy the principles of flight, yet cover more ground than Paul Bunyan, himself, has proved an ideal gadget for this forest problem, Clark said.

Although helicopters are still a national rarity outside the armed forces, Siskiyou County happens to have four of them available at the Aetna Helicopter Service, near Etna. Ed "Pinky" Mathews, Erling Hjertager and Bob Trimble established the helicopter service about four years ago after Mathews fell over a cliff in the Marble Mountain area and was rescued by Trimble and his helicopter. Their association has given Mathews, a rancher, a sense of security in this remote country and Trimble, a base of operations. Hjertager, a public minded citizen and lumberman, became interested as a partner also envisioning many local uses for the helicopter.

Mathews, Trimble and Hjertager and their employes fashioned a spray, tank and pump to do the job required by the forest service, figured their costs and risks and bid on the job.

"It has to be done fast," Mathews explained. "Because a helicopter is expensive to operate whether it is getting a job done or not." Aetna Helicopter set up an operation whereby they could land the helicopter on a portable platform, load 40 gallons of brush control solution in 20 seconds, take off and spray two and a half acres in five to seven minutes.

Charles Trickey, fire control as-

sistant, and others of the Goosenest staff, staked out the area to be sprayed and provided flagmen to guide the helicopter's path. A 50-foot swath of spray was deposited at low level on the brush in each pass of the 'copter with the helicopter blades literally whipping the solution into the thick undesirable ground cover.

The emulsion of chemicals, diesel oil and water is absorbed through the brush leaves and completely kills the plant down to the tiniest rootlet. The spray affects only broad leaved plants, thus desirable grasses remain unaffected.

"If we had to clear the brush by hand, it would have grown faster than we could destroy it," Trickey commented.

Sounds simple?

Mathews was able to list a few complications. A helicopter consumes 14 gallons of gasoline and 1 quart of oil per hour. The brush killing chemicals and clinging diesel oil do not stay in solution but must be mixed and agitated within minutes of use. A helicopter pilot can only fly when ground observation is possible and can put in only about five hours of precision flying before fatigue becomes a danger factor.

Weather in the Siskiyou Mountains is not always cooperative. On June 9, the day the spray job was to be completed, freak snow flurries and low clouds sent the 'copters hurrying back to Yreka.

Aetna Helicopter solved its water supply problem by mounting a tank on one of Hjertager's logging trucks. Determining the closest available water supply made the difference between profitable and unprofitable days, Mathews said. The area had to be scouted well ahead of the spray job to determine servicing bases close to the sites of operation and access by truck. One man was assigned to nothing but checking the helicopter for safety factors.

But because this method means no regeneration from the roots and no seed to spread, the brush will not return within several years, Ranger Clark observed with satisfaction. "This period will allow the two year old pine seedlings planted by hand to get sufficient sunshine and plant food to begin a new forest."

With luck, there can be some thinning operations on the Bogus area in 25 to 30 years," Clark said, "but a completely restored forest will take 100 to 125 years . . . and even then Mother Nature will make a lot of the final decisions."

Tree planting by helicopter may be an operation of the future, Clark said, but thus far hand planting of tree seedlings in these rugged areas has been more successful than broadcasting seed. Pine seeds and pine sprouts are subject to rodent and deer consumption.

In respect to the deer, Clark explained that using the 'copter with its controlled spraying enables the forest service to preserve certain stands of brush for deer forage. The multiple aims of forestry include watershed and wildlife protection, timber, recreation and grazing, according to Clark, and no projection is undertaken without these multiple objectives in mind.

He said the forest service has learned over the past few years that natural regeneration does not take place in burned over or cut over forests. Controlled harvesting, replanting and a constant search for improved methods provide the only real future for our forests.

Charles Trickey, fire control as- (Additional story on Page Three)