Storrie Lake State Park is located 5 mi north of Las Vegas, San Miguel County, by way of NM-3. The park comprises 84 acres on the south side of the lake. Open all year, facilities include camp and picnic sites, shelters, ramp and center for boating, and playground. Sailing, motorboating, waterskiing, swimming, fishing, and hiking are enjoyed by visitors.

The lake, impounded by a 1,400-ft-long earth dam, is part of an irrigation system that diverts water from the Gallinas River. The lake is named for Robert C. Storrie, the first contractor, who began the work in 1916.

The lake area is near a boundary that separates two great geographic provinces of the United States. Approximately 1 mi west are the foothills of the Sangre de Cristo (Blood of Christ) Mountains, the southernmost range of the Rocky Mountains province. From the Sangre de Cristo foothills to the northeast, east, and southeast stretches the Great Plains province, which includes tens of thousands of square miles of the west-central United States.

The orientation diagram gives directions and relative distances to local geological and historical landmarks. From this point, the lake is on the north side and a water fountain is on the south.

**Geology**

Although the earth is about 5 b.y. (billion years) old, the rocks contain a clear record of only the past 600 m.y. (million years). During much of that time, this part of New Mexico was repeatedly inundated by seas that deposited thick layers of sediments which are now sedimentary rocks. About 70 m.y. ago during the Tertiary Period, the entire region was lifted above sea level, and the Rocky Mountains began to form. The flat-lying rock strata underlying the Great Plains were bent upward, broken, and folded along the mountain front. This period of mountain building was accompanied by severe erosion that sculptured the mountains, exposed the more than 600-m.y.-old basement rocks, and removed several thousand feet of sedimentary rocks from the park area. As erosion continued, sand and gravel were carried from the mountains by ancient streams and deposited on the eroded surface. Remnants of this debris are still present in gravel terraces and old stream beds that cap Highland Mesa, Los Vigiles Butte, and several other mesas. These isolated remnants and the present-day topography are the result of more recent erosion that stripped away much of the Tertiary deposits as well as younger and older rocks.

Most of the bedrock in the lake area is the dark-gray Carlile Shale (Cretaceous) and limestone that locally contains abundant marine fossils such as coiled ammonoids, brachiopods, and shark teeth. Shark Tooth Mesa was named for the fossils found there. Near the northeast end of the lake, the Carlile contains some medium-to-large (up to 3-ft diameter) limestone septarian concretions that weather out of the weaker shale and lie on the surface, resembling discarded oxcart wheels.

During the Cenozoic Era, which includes the present time, most of New Mexico was an area of widespread volcanic activity. At Storrie Lake, however, there is only slight evidence of this volcanism. On the northeast side of the lake (east of the area of concretion occurrence) are two dikes formed in vertical fractures that have been filled with molten rock material, probably during Quaternary time. These dikes are composed of a dark rock called lamprophyre, and their joints give the appearance of rock-built walls. The dikes crop out in the roadside ditch along NM-3 near the southeast edge of the lake and probably extend below the lake.

Underlying the rocks at Storrie Lake are older sedimentary rocks, several thousand feet thick, that overlie the Precambrian basement. These rocks can be seen in the mountainous areas to the west. The Dakota Sandstone is several hundred feet below the lake. Because the rocks have been folded into a sag, or syncline, the Dakota is bent upward to the west and forms the top of The Creston (the low-lying ridge approximately 2 mi west of the lake that can be recognized by its barren crest) at an elevation several hundred feet above the lake (see cross section).

**History**

Here at the western edge of the Great Plains, where early migrants and traders caught their first glimpse of the imposing Rocky Mountains, the cultures of Mexico and (continued on p. 29)
MINING REGISTRATIONS (continued)

<table>
<thead>
<tr>
<th>Date and operation</th>
<th>Operators and owners</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-6-80 lead, zinc, copper, gold, silver, tungsten</td>
<td>Operator—Cobalt Nuclear Corporation, 313 Washington SE, Albuquerque, NM 87108; Supri: Willie Chavez, Box 623, Magdalena, NM 87825, phone: 854-2761</td>
<td>Socorro Co.; secs. 6, 7, 12, T. 3 S., Rgs. 3, 4 W.</td>
</tr>
<tr>
<td>6-9-80 copper</td>
<td>Property owner—Triple S Development Corp.</td>
<td>Grant Co.; sec. 4, T. 17 S., R. 12 W.</td>
</tr>
<tr>
<td>6-20-80 uranium</td>
<td>Operator—J. D. Dutton, Inc., P.O. Box 829, Olympia, WA 98507; Gen. Mgr.: Dave Gayman, 421 E. Main (P.O. Box 2899), Farmington, NM 87401, phone: 322-9500</td>
<td>Property owner—Sharon Steel Corp., Mining Division, 19th Floor University Club Bldg.; 136 E. South Temple, Salt Lake City, UT 84111</td>
</tr>
<tr>
<td>6-24-80 potash</td>
<td>Operator—Paslay Construction, Industrial Park, P.O. Box 1137, Carlsbad, NM 88220, phone: 885-3157; Gen. Mgr.: John Paslay</td>
<td>Eddy Co.; sec. 9, T. 19 S., R. 30 E.</td>
</tr>
<tr>
<td>7-9-80 copper, molybdenum</td>
<td>Operator—Quintana Minerals Corporation, P.O. Drawer 472, Truth or Consequences, NM 87910, phone: 895-5317; Person in charge: Milton W. Hood</td>
<td>Property owner—The Copper Flat Partnership, P.O. Drawer 472, Truth or Consequences, NM 87910</td>
</tr>
<tr>
<td>7-9-80 uranium</td>
<td>Operator—Teton Exploration Drilling Co., P.O. Drawer A-1, Casper, WY, phone: 307-265-4102; Person in charge: Charles Ernst, 1510 Berryhill, Milan, NM, phone: 287-4221</td>
<td>Property owner—United Nuclear Homestake Partner, P.O. Box 98, Grants, NM 87200</td>
</tr>
<tr>
<td>8-7-80</td>
<td>Operator—Kerr-McGee Nuclear Corp., New Mines Div., Ambrosia Lake, Grants, NM; Gen. Mgr.: Morris Worley, Kerr-McGee Center, Oklahoma City, OK, phone: 405-270-2638; Person in charge: Frank E. Peters (same address and phone as above); Others: John H. Swales, Suprt., Ambrosia Lake, Grants, NM, phone: 287-8322; Scott L. Hanson, Safety Dir.; 1131 Mt. Taylor, #141, Grants, NM, phone: 287-8312</td>
<td>Property owner—United Nuclear Homestake Partner, P.O. Box 98, Grants, NM 87200</td>
</tr>
<tr>
<td>7-8-80</td>
<td>Operator—Billside claims, Farris mines, Box 687, Grants, NM 87020; Person in charge: Jesse (Jack) Cox, same address</td>
<td>Owners—Jerry F. Farris, Merle D. Burns, same address</td>
</tr>
<tr>
<td>8-11-80 lead, zinc</td>
<td>Operator—Silver Bar Mining Co., Inc., Box 97, Winston, NM; Gen. Mgr.: Ira M. Young (same address as above), phone: 336-4534, 894-2422</td>
<td>Sorcoro Co.; sec. 22, T. 3 S., R. 3 W.; Silver Mountain mining district; turn left at Water Canyon road, approximately 3 mi, turn right on access road; Minerals: lead and zinc; federal land</td>
</tr>
<tr>
<td>8-11-80 mill</td>
<td>Operator—Silver Bar Mining Co., Inc., Box 97, Winston, NM; Gen. Mgr.: Ira M. Young (same address as above), phone: 336-4534, 894-2422</td>
<td>Sierra Co.; sec. 19, T. 11 S., R. 9 W.; from town of Chloride due west approximately 12 mi up Chloride Creek</td>
</tr>
<tr>
<td>8-19-80 mill</td>
<td>Operator—Chem Tech Inc., P.O. Box 86, Winnemucca, NV 89443; Gen. Mgr.: Harold V. Killgore (same address), phone 894-3155; Others: Paul A. Killgore, David N. Killgore (same address)</td>
<td>Owner—Mrs. Floyd Lee, Grants, NM</td>
</tr>
<tr>
<td>8-25-80 gold</td>
<td>Operator—Sierra Blanca Milling, Box 838, Carrizozo, NM; Billy D. Thomas, 400 Hull Rd., Ruidoso, NM, phone: 257-5022; Person in charge: Michael Henson, 11th &amp; &quot;C&quot; Ave., Carrizozo, NM, phone: 648-2114</td>
<td>Lincoln Co.; north from Carrizozo on NM-54, 24 mi, Ancho turnoff, turn right, proceed 11 mi to cattleguard, turn right, go 1/2 mi to large trailer</td>
</tr>
<tr>
<td>8-25-80 mill</td>
<td>Operator—Sierra Blanca Milling and Processing, P.O. Box 2943, Ruidoso, NM, phone: 257-9062; Gen. Mgr.: Billy D. Thomas, same address, phone: 257-5022; Others: Michael Henson, Box 838, Carrizozo, NM, phone: 648-2114</td>
<td>Lincoln Co.; sec. 22, T. 5 S., R. 12 E.; Jicarilla mining district; Custom milling: no; Ores milled: placer gravels</td>
</tr>
<tr>
<td>8-28-80</td>
<td>Operator—Teton Exploration Drilling, P.O. Drawer A-1, Casper, WY; Gen. Mgr.: Victor Magnus (same address as above); Person in charge: Charles Ernst, 1510 Berryhill, Milan, NM, phone: 287-4221; Others: Duane Roe, P.O. Drawer A-1, Casper, WY, phone: 207-265-4102</td>
<td>Property owner—Sierra Blanca Milling and Processing, P.O. Box 2943, Ruidoso, NM, phone: 257-9062; Gen. Mgr.: Billy D. Thomas, same address, phone: 257-5022; Others: Michael Henson, Box 838, Carrizozo, NM, phone: 648-2114</td>
</tr>
<tr>
<td>9-8-80</td>
<td>Operator—Thomas Const. Mines, 116 Victoria St., Silver City, NM; Gen. Mgr.: David Watson, 617 Peyton Blvd, Spokane WA; phone: 504-747-0780; Person in charge: Angel Castillo, 115 Victoria St., Silver City, NM 88061</td>
<td>Grant Co.; sec. 29-30, T. 10 S., R. 19 W.; Cooney mining district; federal land</td>
</tr>
</tbody>
</table>

Field study tours, Desert soil-geomorphology project

Field study tours will be held in October 1981 at the Desert Soil-Geomorphology Project Area in southern New Mexico. This project, informally termed the Desert Project, refers to a study of soil and landscape evolution conducted by the Soil Conservation Service from 1957 to 1972. Research at the Desert Project, which encompasses a 400-sq-mi area astride the Rio Grande valley, was carried out in cooperation with the Agricultural Experiment Station and the Department of Agronomy at New Mexico State University in Las Cruces.

Two 4-day study sessions, for 40 participants each, will be held during the weeks of October 12-16 and 19-23, 1981. Each session will start with registration and orientation lectures from 2-5 p.m. on Monday and will end Friday noon. Field study tours will be held from 8:00 a.m. to 5:00 p.m. Tuesday, Wednesday, Thursday, and from 8:00 a.m. to 12 noon on Friday. The studies will be conducted at 22 Desert Project study sites where detailed soil-geomorphic investigations have been carried out.

Fundamentals in soil classification, soil morphology, soil genesis, and soil-geomorphic relations as they pertain to arid and semiarid regions will be stressed. Soils of a number of great groups in the Entisols, Aridisols, Mollisols, and Vertisols will be studied in the field. They will be illustrated in large trenches and arroyo exposures, some of which extend through several kinds of soils and illustrate soil boundaries. Diagnostic horizons of the new classification system will be emphasized. A new Desert Project Guidebook is being prepared for these and subsequent study tours. The tours will be led by Leland H. Gilie and John W. Hawley.

A list of accommodations and rates will be furnished so that participants can make their own housing arrangements. Estimated fees, including box lunches, drinks, transportation, and the guidebook, will be approximately $50.00 per student and $100.00 per professional; additional copies of the guidebook may be obtained at $25.00 each. Those wishing to register for one of these sessions should contact Dr. John W. Hawley, New Mexico Bureau of Mines and Mineral Resources, Socorro, NM 87801.

**Storrie Lake (continued from p. 25)**

the United States first came into contact. Approximately 65 mi west, Santa Fe was established in 1610 by the Spanish as the capital of the new "Kingdom of New Mexico." The Santa Fe Trail (1821-1879) was the link with the East and its Anglos (English-speaking Americans). One of the main branches of the trail passed through the Storrie Lake area, and to the north and east, ruts of wagon wheels are still seen at many places. The trail passed...
south through the present-day Las Vegas area
and turned west through the southern foot-
hills of the Sangre de Cristo Mountains. The
trail went through two passes in The Creston,
Puerto del Norte and Puerto del Sur (the
North and South Gateways, now traversed by
NM-283 and US-84-US-85, respectively).

Las Vegas (the Meadows), originally Nues-
tria Señora de los Dolores de Las Vegas (Our
Lady of Sorrows of the Meadows), was not
brought in by the trail.

Puerto del Norte and Puerto del Sur (the
North and South Gateways, now traversed by
NM-283 and US-84-US-85, respectively).

The arrival of the Americans stimulated
migration and trade on the Santa Fe Trail and
brought prosperity to the young town. After
the Santa Fe Railway replaced the trail in
1879, commerce increased to such a degree that
Las Vegas became one of the larger cities
in the New Mexico Territory (which included
Arizona at that time).

About 17 mi northeast of Storrie Lake are
the ruins of Fort Union (1850–1880). The only
significant Civil War campaign in New
Mexico was waged by the Confederates, whose
goal was to capture this fort and gain access to
the Colorado gold fields. In 1862 a force of
Texas Volunteers swept up the Rio Grande
valley and captured all settlements as far north
as Santa Fe. The Texans moved east and were
met at Apache Canyon, approximately 17 mi
from Santa Fe, by a combined force of Colo-
rado Volunteers and Army regulars from Fort
Union. The Colorado Volunteers destroyed
the Texas supply train and forced them to
withdraw, thus ending hostilities in the Ter-
ritory for the remainder of the war.

During its rapid growth, Las Vegas became
a typical wild-west town, with hellions like
Billy the Kid, Bat Masterson, and Doc Holli-
day drifting through ahead of the slow ad-
vance of law and order.

More peaceful days followed. The area
was the setting for at least two silent films in
the early 1900’s, one starring Tom Mix, and sev-
eral modern films in the last decade, including
The Evil which starred Richard Crenna and
was set in Montezuma. The Storrie Lake Irri-
gation Project helped produce excellent
vegetable crops that were shipped throughout
the nation between 1922 and 1945. Subse-
quently, lack of adequate water, forced aban-
donment of vegetable farming. The area is
now primarily cattle country and the lake is
used to irrigate grain fields used for duck and
goose feed on the Las Vegas National Wildlife
Refuge.

—Waldemere Bejnar (revised 1980)