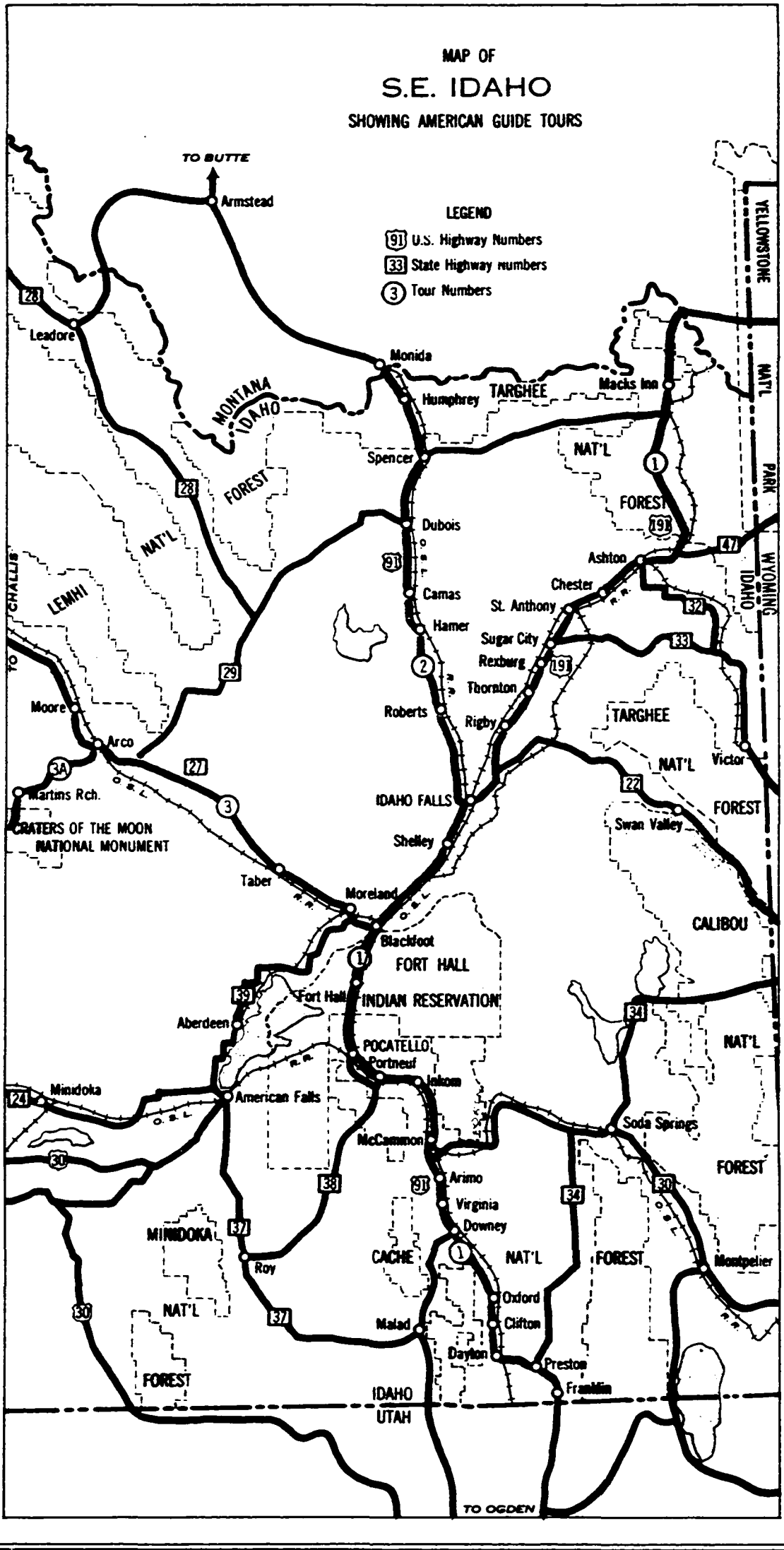
TOURS
IN
EASTERN IDAHO

Published by
THE AMERICAN GUIDE PROJECT
WORKS PROGRESS ADMINISTRATION

Picture on Cover

Big Falls, Snake River, Targhee National Forest, Idaho

Photo by U. S. Forest Service



J.B. Schwedel, Map Editor
B.F. Cooke, Draftsman

American Guide Series

TOURS
IN
EASTERN IDAHO

Published by
THE AMERICAN GUIDE PROJECT
A FEDERAL WRITERS PROJECT
WORKS PROGRESS ADMINISTRATION

Federal Writers Projects

HENRY G. ALSBERG

Director

VARDIS FISHER

Idaho State Director

INDEX TO TOURS

(Place-names given in parentheses are inserted to enable travelers to recognize the interstate importance of the routes.)

INTRODUCTION

The material in this pamphlet, which describes several tours in Eastern Idaho, will be included in the Idaho State Guide, one of the forty-eight State guides being prepared by the Federal Writers' Projects of the Works Progress Administration. It is given approximately in the form in which it will appear in the State Guide, where it will be united with other highway and trail descriptions to give complete coverage of the State. The route descriptions have been divided into sections, which travelers can unite according to their wishes and needs, no matter what transcontinental route they take in entering the State. Eventually, all of these transcontinental routes, from east to west and from north to south, will be described in like detail and united in regional guides to the United States.

These descriptions have been selected for publication to emphasize to Americans the existence of little-known areas in their own country that are rich in scenic, historical, scientific and recreational interest. The highways can be followed with comfort by those who do not care for strenuous exertion, but from the highways there is easy access to little-explored regions full of interest and adventure for the hardiest explorers.

Mr. Vardis Fisher, State Director of the Federal Writers' Projects in Idaho, and his staff have been assisted in assembling the material by the U. S. Forest Service, the National Park Service, and many other State and Federal agencies, as well as by private citizens.

HOW TO USE THE TOUR DESCRIPTIONS

The map facing the Index to Tours shows the Federal and State highways, their numbers, and the numbers of the descriptions covering the routes.

It will be seen that US 91 and US 191 (Tours No. 1 and No. 2) run from the Montana border to Idaho Falls, where they unite and continue south into Utah. From US 91 at Blackfoot, State 27 (Tour No. 3) branches northwest to meet US 93. At Arco on State 27 is a junction with State 22 (Side Tour No. 3A) which passes the entrance to the Craters of the Moon National Monument, not far from Arco.

The entire area is easily accessible by main highways from Glacier National Park in Montana, from Yellowstone and Grand Teton National Parks in Wyoming, from Salt Lake City, and from points in the States of Washington and Oregon. All or part of the routes can be covered as part of a tour of the National Parks.

Following a national plan, all routes are described from north to south and from east to west, but they can be read quite as easily in the reverse directions. Cumulative mileage following a town or point of interest on main routes is for the north to south and east to west directions.

Side routes, branching from the main routes, are described in indented paragraphs, with cumulative mileage counted from the junction points with the main highways.

TOUR No. 1

(West Yellowstone, Montana)—St. Anthony—Idaho Falls—Pocatello—Preston—(Ogden, Utah). US 191 and US 91. Yellowstone Route.

Montana Line to Utah Line 243.9 m.

The Oregon Short Line of the Union Pacific System and the air route of the National Park Airways roughly parallel US 191 and US 91.
Union Pacific Stages follow US 191 and US 91 to Salt Lake City, Utah.

All types of accommodations along the highway, also improved camp-sites; usual price range.

Section a. Montana Line to Idaho Falls, 107 m.

US 191 crosses a small corner of Montana and enters Idaho over the TARGHEE PASS (7,078 alt.), 10 miles west of the western entrance to Yellowstone National Park and proceeds for almost fifty miles through the heart of the TARGHEE NATIONAL FOREST. This beautiful area of rivers and heavy timber is one of the principal tourist regions of the state and the scenery is particularly fine. The dense growth on both sides of the highway is chiefly lodge-pole pine, though other trees of importance are Alpine and Douglas fir and Engelmann spruce; in late spring and throughout the summer there is a continuous bloom of wild flowers along the road. Inasmuch as the lower elevations are more than six thousand feet above sea level, the summers are cool and the winters so snowy that unobstructed skiing is often possible over buildings. Fishing in the region is exceptionally good; the streams are annually stocked not only by the State but also by several sportsmen's associations, some of which have clubs here. Big game, such as bear and elk, abound; ducks and geese are plentiful in the fall.

VALLEY VIEW RANCH, 4 m. (L), is a group of cabins on a mountainside overlooking HENRY'S LAKE (R). Meals and cabins are available at nominal rates.

Henry's Lake lies in the center of three mountain passes—the Red Rock, the Reynolds, and the Targhee. The lake is chiefly interesting for its background of folklore. Only five miles in length, it is fed by innumerable streams from the mountains flanking it. It probably dates from the Pliocene Age when all of these valleys were filled with water. Its mysterious floating and disappearing islands, now largely restored to a somewhat mythical past, were composed of spongy substance covered with grass; they are said to have attracted the fancy of Chief Joseph of the Nez Perces who saw the working of a supernatural agency in their changing forms. According to legend, the Indians for many years refused to explore them, though after a while they resolved, with ingenious courage, to use the islands as burial grounds inasmuch as they vanished "six sleeps in each moon" and ought, on that account, to put any ghost irrevocably beyond the reach of care. So they decided, the tale continues, that by the time the erected scaffolds had sunk into the bogs, the soul would be safely within happy eternity. Thus the islands became one of the strangest burial grounds in the world, alternately vanishing and reappearing with their cargoes of dead. Perhaps of more importance today to those unaffected by legends is the fact that fishing in the lake and nearby streams is unusually good and that ducks abound in the marshes. A State hatchery is at the northern end.

South of Valley View Ranch US 191 passes through a narrow valley and enters an area of resorts.

At 5 m. is the junction with a trail.

Right, on trail to SAWTELLE PEAK, 8 m. (10,123 alt.), from which can be seen most of the Targhee National Forest and a portion of southwestern Montana.

At 12 m. on US 191 is a graded road.

Left on the graded road is BIG SPRINGS INN, 5 m. (6,450 alt.). The Big Springs Inn—most of the resorts here are called inns—comprises a central lodge, with rustic dining room, flanked by a number of cabins. The Targhee National Forest has several public camp grounds within its boundaries and one of the best is here. No other camp in the area stands upon so beautiful a site.

Big Springs, a few yards from the Inn, are exceedingly interesting. Gushing from the base of a mountain, they are the source of the North Fork of Snake River and pour out in such volume that a full-sized river is under way within a hundred feet of the springs. The average flow of 185 feet to the second never varies in temperature from 52 degrees F. Below and visible from the bridge is interesting flora, and on the mountains roundabout are lodge-pole pine, Douglas fir, and Engelmann spruce. A favorite pastime of visitors is to stand on the bridge and feed bread to the schools of rainbow trout. During the summer an average of twenty loaves a day are bought at the Inn for this purpose.

Sacks Cabin (admission free), across the springs from the Inn, is a very attractive and unusual lodge-pole cabin. Built over a period of years with painstaking care by a German carpenter creatively endowed, it has attracted the interest of thousands of persons and filled them with wonder at what skill can do with logs and slabs and a few simple tools. All the interior woodwork and furniture is handmade and of most unusual craftsmanship.

From the Inn a side road climbs to BIG SPRINGS LOOKOUT, 2 m., where a tower affords an excellent view of the surrounding country.

MACK'S INN, 13 m. on US 191, best known resort in the region, is popular with visitors from many parts of the world and particularly with celebrities from Hollywood. It has a central unit of buildings comprising cafe, stores, and a hotel flanked by rows of cabins. Some of the cabins are noteworthy for their workmanship and an interesting feature of the place is the interior of the cafe. To the right is a public camp ground and down the river below it are summer homes. Across the river, both east and west, are private clubs. The North Fork of the Snake River is the northern boundary of the grounds; and from the bridge, as at Big Springs, visitors delight in scattering bread to the fish. Big Springs (see above) can also be approached from Mack's Inn.

TRUDE, 16 m. (6,327 alt.), another resort with a wealthy clientele, is on Elk Creek in the Bitterroot range. Set back from the highway (L) are the main lodge and the cabins, overlooking a lake, in which are unusually large eastern brook trout. Swimming and boating may be enjoyed here, as well as fishing. Trude's outfits for horseback and pack trips into adjacent areas, including Sawtelle Peak and Yellowstone National Park.

POND'S LODGE, 20.4 m., is on the Buffalo River and has a central inn and a number of cabins. The former lodge, which burned to the ground in 1935, was notable for its interior rustic woodwork. Just north of the lodge (L) is the Buffalo public camp-ground.

Left from Pond's Lodge a graded road leads to ISLAND PARK, 4 m. (6,290 alt.), and to natural camp sites in a wilderness of evergreens.

South of Pond's Lodge on US 191 the Teton Peaks are visible (L). Here the highway runs through another forested area and the gorge of the North Fork comes into view (R), with a road that leads down into the gorge at 39 m.

Right, is an unimproved road to UPPER MESA FALLS, .75 m., where unimproved camp grounds are available. This waterfall, sometimes called the Big Falls, is 300 ft. wide and has a drop of 114

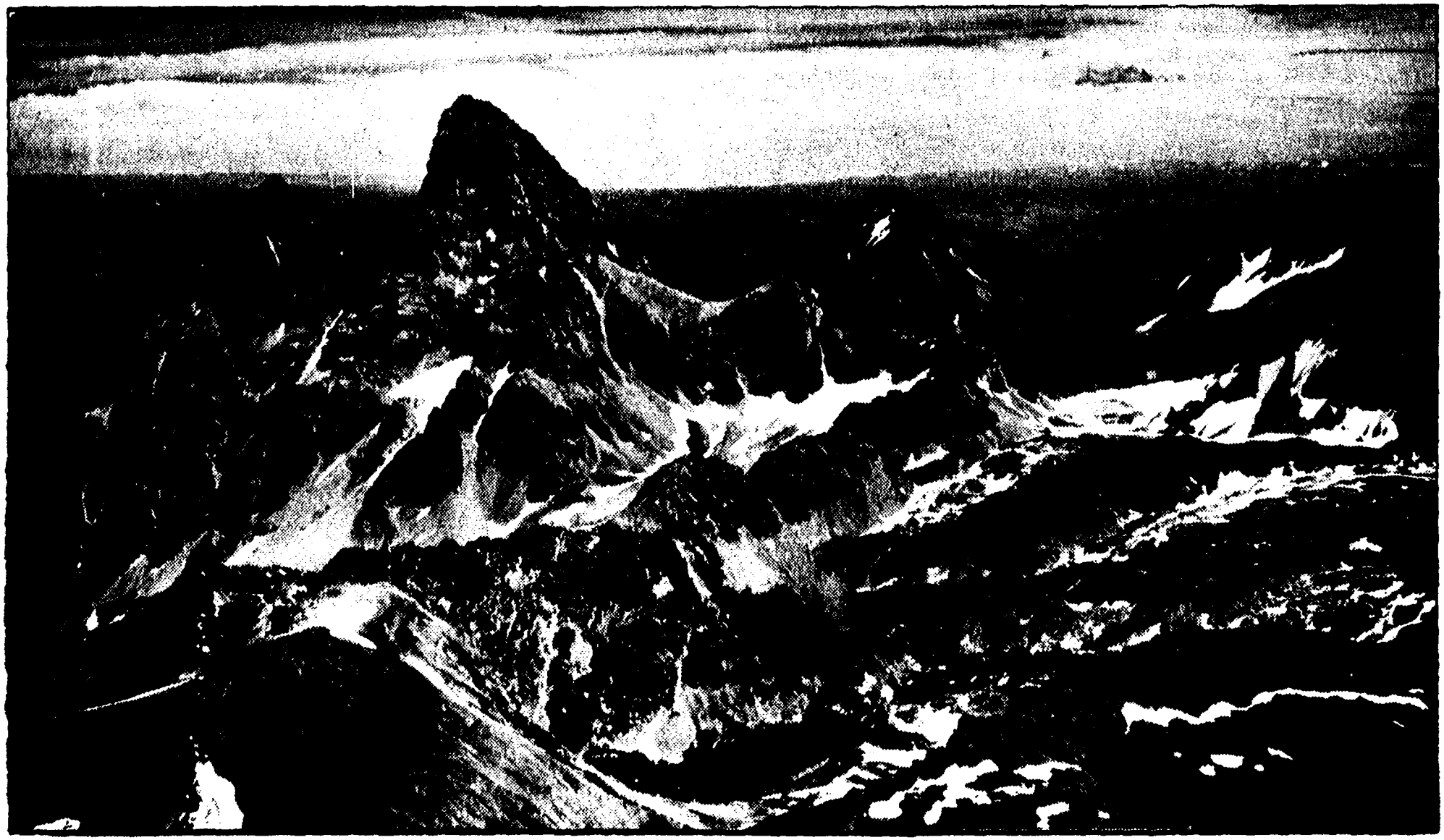


Photo by U. S. Army Air Corps

ALONG THE IDAHO-WYOMING BORDER, SOUTH OF YELLOWSTONE NATIONAL PARK, IS THE TETON MOUNTAIN RANGE, WHICH CAN BE SEEN FROM TOUR No. 1.

ft. Unlike many of the falls in Idaho it has not been vitiated by reservoirs and consequently the full flow of the North Fork is delivered over the wide escarpment. The plunge of water against a high mountainous backdrop is well worth seeing and in picturesqueness the camp sites are rarely excelled. The lovely symmetrical trees across the river are Engelmann spruce. Below the falls at a point where the river plunges again is a curious formation of stone that resembles a group of heathen idols. The cascading rapids downstream are especially impressive when the river is at its flood in late spring.

At 39 m. on US 191 is a sign marked GRAND VIEW POINT.

Right, at Grand View Point on an improved road is LOWER MESA FALLS (200 yds.). An eminence here affords a fine view of this second drop of 65 ft. with the mist of the upper falls apparent in the distance. Though only a little more than half the height of the other waterfall, the Lower Mesa excels it in a greater concentration of water and a more furious downpour. In this distance of a mile and a half the North Fork of Snake River drops almost 200 ft.

South of Grand View Point is an unusually inviting but unimproved camping ground.

South of Lower Mesa Falls US 191 descends by winding grade to the lower border of Targhee National Forest.

WARM RIVER, 48 m. (5,284 alt.), is another tourist resort. Like the others, it has a central lodge with outlying cabins. It is located at a point where the Warm, the Robinson, and the Snake rivers meet. Nearby a large hall offers dancing on Saturday evenings.

In this vicinity Owen Wister's "Virginian" caught and hanged the horse thieves, Steve and Ed.

South of Warm River, the highway climbs out of Warm River Valley and at 49 m. (R) is the REIMAN RANCH whose lodge-pole buildings prove what an enterprising

farmer can do toward beautifying his homeplace. Remarkably ingenious is Reiman's own hydro-electric plant on the river below.

At 50 m. on US 191 is the junction with State 47. Left on State 47, a graveled road connects US 191 with the southwest corner of Yellowstone National Park. Along this road are many good camp sites and unusually fine fishing. The best streams are Bechler and Fall rivers, Boundary, Porcupine, Rock and Ash creeks, all accessible from the highway.

At 9 m. on State 47 is the YOUNG RANCH, which outfits pack trips into the surrounding mountains.

BECHLER RIVER STATION of Yellowstone National Park, at 19 m., is in the center of a good hiking area of Yellowstone Park and has excellent camp grounds. Right from Bechler River Station is a trail to CAVE FALLS, 4 m., a lovely waterfall on the Bechler River, which gets its name from a large cave on the river bank from which the most striking view of the falls may be had. An improved camp has been provided at Cave Falls.

ASHTON, 54 m. (5,256 alt., 1,022 pop.), is the home of the dog derby, held annually on February 22, attracting drivers from Canada and many of the northern States. Inaugurated in 1917, and since then copied in many parts of the country, the course was at first from West Yellowstone to Ashton, a distance of 64 miles. In that race a blizzard almost buried the drivers and their teams and they did not reach Ashton until the following day. Windriver Smith had a bulldog in the lead; the second man drove out a bunch of mongrels gathered from the farmyards of the neighbors; but the winner had an assortment of lusty young hounds that had been used on mail teams out of Ashton. The record for the present three-lap course of 8 1/3 miles is 1 hour 51 minutes 41 seconds. The favorite dogs now are red Irish setters.

South of the Targhee Forest and Warm River, US 191 runs for nearly a hundred miles through the center of the valley of the North Fork of Snake River, one of the richest agricultural areas in the state. The chief crops are potatoes, sugar beets, peas, and hay. South of Ashton are visible (L) on a clear day the magnificent Teton Peaks of Wyoming, penetrating the sky like great towers of stone and glass furrowed with snow. The highest of these peaks, GRAND TETON in the Grand Teton National Park, is 13,747 ft. high.

ST. ANTHONY, 68 m. (4,969 alt., 2,778 pop.), was named for St. Anthony Falls in Minnesota. This town is the seat of Fremont County and the headquarters for the Targhee National Forest. (Forest maps are available here.) It is the center of the seed-pea industry of eastern Idaho. There is nothing of unusual interest in the town itself but west of it are two of the most remarkable natural phenomena in the state.

1. Right, from St. Anthony an unnumbered and unimproved road crosses Henry's Fork of the Snake River and turns (R) to the SAND DUNES, 6 m., Idaho's miniature Sahara Desert which lies in a belt more than a mile wide and thirty miles long. It is quite beyond the power of words to describe the flawless beauty of these rolling wind-drifted golden banks that vary in height from ten to a hundred feet. They appear to flow over the landscape like a great arrested tide, most of them unbelievably perfect in symmetry and contour. They are a beautiful picture at any time of the day and even under a cloudy sky; but their soft and shimmering loveliness seems most impressive under a gorgeous sunset when the flame color of the sky falls on the burning gold of the sand dunes and the whole earth here seems to roll away in soft fiery mists. Under the first light of morning they unfold from a landscape of shadow and gloom to faintly luminous witchery and then steadily form into dazzling piles of light and dark. And from year to year and mile to mile they

shift uncertainly under the sculpturing winds and are never twice the same.

Beyond the Sand Dunes a poor and unimproved road winds over lava fields to CRYSTAL FALLS CAVE, 28 m. It is impossible to give specific directions for reaching it; strangers to the area should not go to these caves without a local guide. They should carry with them warm clothing and gas lanterns or powerful flashlights and about 50 feet of rope; and it is best to have a party of several because for the careless or the unwary this is a comparatively dangerous journey.

The entrance to Crystal Falls Cave is by way of a ragged gulch bedded with piles of stone but the opening itself is large and vaulted and leads easily to the first chamber. This room is huge and rough with torn ceilings and walls, and has countless tons of rock heaped upon its floor. At its farther end is a rugged passageway that leads down, but not steeply, to the enormous first corridor of the cave. The ceiling here at the beginning is perhaps 100 feet in height and descends in sweeping curves to the walls; but gradually it comes down to 30 or 40 feet and the corridor runs for a quarter of a mile in an almost perfectly vaulted archway of remarkable formation. After penetrating for 100 yards the explorer will come to a frozen river that lies upon half the length of the main chamber. This river of ice, of unknown depth, is 8 or 10 feet wide and reaches down the center of the cave with great sloping stone shelves running parallel on either side. The explorer can move carefully along the glazed surface of either ledge or he can descend with the aid of a rope to the river and walk on the ice.

At the ends of this river are the most amazing parts of the cave. The end first reached is a

great waterfall of ice that drops 30 feet to a tiny chamber of extraordinary beauty. Close to this chamber, near the entrance, is a jagged basin some 20 feet across and 30 feet in depth into which the explorer can descend without the aid of ropes; a turn to the right leads to a short and narrow passage into a second chamber, a place of unsurpassed beauty. This waterfall of ice looks as if a river had plunged and been suddenly frozen because the contour of the descending flood is perfect, even to the spilled tides frozen at its base. On either side of this plunge of ice is a huge flanking structure that looks like tumbled chandeliers and draperies of glass. The floor of this small chamber is of ice with perfect cones bedded in it, formed by the dripping of water from the ceiling. On either side of the fall is a passage that leads to an inclined floor of ice and to another long and faultless corridor that lies exactly under the one above. This chamber should be entered for a view of the ice fall from the other side, and because it leads, after a drop in its ceiling until the explorer for a few yards has to proceed on hands and knees, to yet another huge chamber beyond which are ice crystals, studded walls and ceiling, breath-taking in their perfection. The descent from the small chamber over the downward floor of ice can easily be made with a rope or, by the adventurous person, without; but a rope will be necessary to make the return to the small chamber.

Leaving the chamber of the waterfall it is advisable to descend to the river of ice and follow it to its far end where it cascades in corrugations as if the ripples of the stream had been suddenly frozen here, too. At this far end is the loveliest corridor of all. It is smaller, although a person may walk without stooping, and it is perfectly vaulted. From its floor up over its arched

ceiling down to its floor again it is a solid mass of ice crystals that grow in great bunches like flowers, each with a thousand glass petals. The perfection of this long narrow corridor, symmetrically arched and vaulted, and of its glittering jeweled length, can hardly be suggested. Those who walk down it are urged to proceed with care, and not to touch the luxuriant brilliance of the walls and ceiling; because this burgeoned fragile loveliness breaks and falls in showers when touched and takes a long time to form again.

Possibly nobody yet knows how many corridors there are in the cave and doubtless nobody has remained long enough to see all of the natural beauty to be found here. Particularly to be noted is the coloring of some of the stone formations which, in places look like inlaid slates or huge rough mosaics in greens and sepia browns. Here and there, too, ice hangs in draperies or like prodigal glass chandeliers. On the curved walls above the river ledges are great curved slabs that look like stucco and are perfect in both pattern and contour. They seem to hang most precariously to the vaulted sides, as if they had been set up on edge and were held in position by no more than a concealed button or hook. In all these corridors, in fact, the visible stonework is remarkable in the recklessness of its sculpturing and the variety of its pattern.

This is Idaho's principal area of caves. Within a radius of ten miles from this one eleven others have been explored wholly or in part and many remain unexplored. Crystal Falls Cave is the most remarkable of those known but some of the others are equally unusual in their own way.

Another nearby, reached only with the aid of an experienced guide, is the CORKSCREW CAVE. This

cave descends like a spiraled stairway to nobody knows quite what depth; and another, unnamed, is a massive interior that runs underground for two miles. An adventurous person who delights in subterranean exploration could spend months here and never penetrate all the recesses to be found. In the whole area there are no poisonous snakes or insects.

2. Right, from St. Anthony, another country road leads to the site of OLD FORT HENRY, 7 m., on Snake River. The broad flat valley was first explored by Andrew Henry of the Missouri Fur Company in 1810. Trappers were the first settlers, and Beaver Dick Leigh and his Indian wife Jenny were the first to build a home in this region. The fort, erected in 1810, was the first on Snake River or any of its tributaries. It consisted of several cabins and a dugout; but after Henry and his companions trapped and traded with the Shoshones for a year they abandoned the fort and it was used by Wilson Price Hunt while his men built cottonwood canoes to venture down La Maudite Riviere Enragee (the accursed mad river, the name given to the Snake River by French voyageurs after they had come to grief upon its falls and cascades). For nearly a century the site of the old fort was unknown, but in 1927 a rock was unearthed which bore the inscription: "Al the cook but nothing to cook." This stone, together with two others inscribed "Gov't. Camp, 1811" and "Fort Henry 1811 by Captain Hunt," are now in Rexburg.

At 75 m. on US 191 is a junction with State 33 (L), which leads through the TETON PASS (alt. 8,429) to Grand Teton National Park and to the southern entrance of Yellowstone National Park.

Fishing along the entire length of State 33 is good, and unimproved camp sites are frequent. At Canyon Creek, 18 m., (R) from State 33 on a graded road, is the PINCOCK HOT SPRINGS, 5 m., which

has private baths and a large indoor pool but no hotel accommodations. Fishing is very good in TETON RIVER, 30 m., which abounds in rainbow trout. At TETON CANYON, 40 m., is the only improved camp ground, 9 m., (L) from State 33. From VANTAGE POINT in this canyon there is a magnificent view of Teton Peaks and the surrounding country.

On State 33 is DRIGGS, 41 m., county seat of Teton County. Here is the largest bed of coal known to exist in the State. Geologists estimate that about 11,000,000 tons lie in beds a few miles west but the fields remain almost wholly unexploited. At 44 m. is TETON BASIN, formerly called Pierre's Hole, a famous rendezvous in early days for trappers and traders who gathered here in a rousing carnival of sharp maneuvering and drunkenness. Probably no spot in the West knew a larger congress of rascals and scoundrels. It was here that 42 adventurers encountered a roving band of 200 men, women, and children of the Gros Ventre tribe, and reinforced by Indian allies, engaged in terrific battle. Arrows and spear points, and, more infrequently, stone axes and tomahawks are still found on the battlefield. A winter carnival of skiing and dog-racing draws a crowd each year.

VICTOR, 49 m., is the nearest railway station of the Oregon Short Line R. R. of the U. P. System to the Jackson Hole Country and the Grand Teton National Park. It is 6 m. from the Wyoming Line.

On US 191, where it crosses the Snake River at the northern edge of Rexburg, there is a monument to Fort Henry. (See above.)

REXBURG, 80 m. (4,866 alt., 3,569 pop.), was named for Thomas Ricks, one of the first settlers—the present name is a corruption. Founded in 1883 under instructions from the Mormon Church, it soon established mills and a school, and five years later Ricks College. Characteristic Mormon resourcefulness and social in-

tegrity have made it the principal town in the upper Snake River Valley. The city is typical of Mormon planning in the breadth of its streets. The railroad station is built of local rhyolite, or pink lava.

Between Rexburg and Rigby may be seen a part of the irrigation canals that make this a prosperous farming region; some were built as early as 1879-84.

RIGBY, 93 m. (4,851 alt., 1,531 pop.), planned and developed chiefly through Mormon initiative and enterprise, is the center of a potato, sugar beet, and seed pea area.

Right from Rigby on State 48, a graveled road, are MENAN BUTTES, 8 m., sometimes called the Big Buttes, at the confluence of the north and south forks of Snake River. Great quantities of sediment carried down from the watersheds to this point are spread out here, because of the stream's decreased velocity, into a broad delta, with the river cutting across it in several channels. Just beyond are the buttes, broad of base with sloping sides and broad tops, rising 600 ft. above the surrounding plains. Each has a well-defined extinct crater in its top, about a mile in diameter and 200 ft. in depth. The beds of ejected materials fall away in all directions at sharp angles, and flatten at the base. Sand and gravel contained in the strata of which the craters are derived indicate that these volcanoes were erupted explosively through an old river or lake deposit. The cones are of the same age and moderately recent. At their base is a black volcanic rock of cemented fragments and explosive dust which is quarried and used locally in buildings. These great bleak sentinels have been little explored, and only rarely do persons descend to their crater beds. Between the two are rocks bearing Indian petroglyphs of men, bison, cranes, rabbits and horses. Because the horse, unknown to Indians long ago, is represented here, no great age is claimed for these writings. South of these buttes are two smaller

ones, covered with juniper, once a favorite camping ground for Indians of the valley.

At 103 m. on US 191 is a junction with State 22.

Left on State 22, a paved road, is RIRIE, 12 m., a fairly recent Idaho town reflecting the vigor of the frontier. To get the atmosphere and rowdy spirit of the old West it is well to attend the Friday night dance in the new Ririe dance hall.

POPLAR, 16 m., on State 22. From Poplar (L) a country lane leads to HEISE HOT SPRINGS, 3 m., just across the south fork of Snake River by ferry. This popular resort offers hotel accommodations and indoor and outdoor pools. East of Poplar, State 22 enters the foothills of the eastern mountain range and crosses the rolling belt of dry-farms to ANTELOPE, 24 m. Along the highway may be seen the South Fork River coming down its gorge on the left. The road descends by easy grade to the river valley and climbs hills again to swing leftward to the river bridge. It then follows the stream to SWAN VALLEY, 42 m., so named because once a haven of swans.

At Swan Valley, State 22 forms a junction with State 31. State 31 leads to Victor. (See above.)

East of Swan Valley, State 22 proceeds up the gorge of the South Fork to ALPINE, 69 m. Here is the Idaho-Wyoming Line and the junction of State 22 with Wyoming 22.

IDAHO FALLS, 108 m. (4,708 alt., 9,429 pop.).

Railroad Station. Oregon Short Line, Shoup and C Sts.

Bus Station. Union Pacific Stages, A St. near Park.

Airport, municipal. Natl. Park Airways, 1.5 m. N.W. from P. O.

Golf course. Highland Park, M and Willow Sts., 18 holes.

Idaho Falls, seat of Bonneville County and third city in size in the State, is the cultural and industrial center of the upper Snake River Valley, and the shipping center of this part of the State. Idaho Falls is one of the chief honey producing centers of the State. The normal acreage of the surrounding seed-pea industry is 50,000, and this is minor in comparison with the land in hay and potatoes and beets. The potato flour mill is one of the few such mills in the world, and uses annually about 10,000,000 pounds of culled potatoes that would otherwise be wasted or used only for hog feed. The source of a large income for the city is the powerful municipally-owned hydro-electric plant on Snake River, near the west end of Broadway (open to visitors). This plant is used to pump water from three deep wells having a combined flow of 13,500,000 gallons every 24 hours, and nets the city an annual profit of more than $100,000 for liquidation of its debts and expansion of its civic programs. Its electric power rate is one of the lowest in the Northwest and its city tax rate is only a little more than a third of the average for Idaho as a whole. This conservative town, surprised by the success of its first venture in municipal ownership, next built a modern hotel, the Bonneville, and has discovered that this is an asset also. Still having unused profits from its power plant, it built a city hall to house its fire and police departments, a radio station, an engineering and drafting department, in addition to the customary offices. This hall was erected at a cost of $200,000.

At the junction of Elm Street and Boulevard is Triangle Park, in which are to be found rare species of shrubs, flowers, and trees.

Facing Snake River and off Broadway (L) is Island Park, which contains a few historic relics, an aquarium, a few wild animals and small rearing ponds for fish.

City Park (admission free) is southward (L), just beyond the city limits. Here is an artificial lake, used as a swimming pool, and a small zoological garden of native wild animals.

Highland Park (admission free) at M and Willow Sts., includes an eighteen hole golf course, one of two such courses in the State. It is irrigated by an underground system, thanks to the municipal power plant, and has an excellent turf. This park is also equipped with kitchens, tennis courts, and a children's swimming pool and playground.

The historic Taylor Toll Bridge, of which only the stone abutments remain, was built across Snake River in 1866-67. The timbers were hauled from Beaver Canyon 80 miles north and the iron was obtained from old freight wagons and a wrecked steamboat on the Missouri River. The stage station and post office here were formerly called Eagle Rock because a great stone out in the river near the site of the former bridge, was for many years the nesting place of an eagle.

1. Left from Idaho Falls is LINCOLN, 3 m., where is located one of the largest sugar factories in the West, with a capacity of 65,000,000 pounds annually.

2. Right from Idaho Falls on a country road is WILLOW CREEK, about 4 m., where are the remnants of the first orchard in this part of Idaho. One huge old pear tree has become a towering patriarch that looks over even the cottonwoods along the creek.

US 91 and US 191 unite at Idaho Falls. (For US 91 to the Montana Line see Tour No. 2.)

Section b. Idaho Falls to Utah Line, 136.9 m.

The Greyhound Lines and Intermountain Trans. Co. buses follow this highway between Butte and Salt Lake City.

South of Idaho Falls on US 91 is SHELLEY, 116 m. (4,624 alt., 1,447 pop.), center of the most prolific potato area in the State. Ten warehouses export annually about 2,000 carloads of Idaho russets, famous for their quality. At the close of the harvest in October a Spud Day is held. Choice potatoes are displayed and

baked potatoes are served to passengers on every train and bus going through the town.

Right from Shelley on a country road is THE LAVAS, 4 m., a weird assortment of small caves and fissures and solidified rock-flows with dwarfed trees hanging precariously on the edges, and lovely ferns thriving incongruously in the deep pits. The remoter depths are said to be the haunts of coyotes, wildcats, and rattlesnakes, and for this reason remain unexplored. Because of the presence of so many arrow heads and other Indian relics in the tables and pockets, it has been surmised that an ancient Indian village was inundated by an eruption. From here the Twin Buttes (see Tour No. 3) are visible on a clear day.

BLACKFOOT, 135 m. (4,504 alt., 3,199 pop.), was named for the Indian Blackfeet tribe. The Indians were called Siksika (meaning "black of feet") because, according to legend, their feet were blackened by constant walking in volcanic ashes or in ashes of prairie fires. Blackfoot has a public library, located under the police department headquarters; the library has a collection that reflects an unusually discriminating public taste.

At Blackfoot is the junction of US 91 with State 27, the most used approach to the Craters of the Moon National Monument. (See Tour No. 3 and Side Tour No. 3A.)

Left from Blackfoot a country road follows the Blackfoot River past magnificent mountains, rivers, lakes and forested areas where there is an abundance of fish and wild game. Near the head of WOLVERINE CREEK, 30 m., are excellent camp sites, an open-air dance pavilion, and a fish hatchery owned by sportsmen of this region. GRAY'S LAKE, 60 m. (L), may be reached over a poor road that at length penetrates virginal forest. It has excellent fishing and good camp sites and lies between the Little Valley Hills and the peaks of the Caribou Range. Gray's Lake is better reached from US 30 N. and State 34.

Between Blackfoot and Pocatello, US 91 cuts across the western end of the Fort Hall Indian Reservation.

FORT HALL, 148 m. (4,445 alt.), is an Indian agency for the Bannock, Shoshone and other tribes. Annual dances of unusual interest are held here-- the Sun Dance about July 24th, followed by the War, Owl, Rabbit and Grass dances, each with its own characteristic songs and drum beats. The Warm Dance, held in late January or early February, is a religous ritual intended to hasten the end of winter. Later there is an Easter Dance accompanied by an egg feast. The Indians on the reservation are excellent artisans, the women engaging in many kinds of intricate bead work upon such articles of clothing as moccasins, vests, etc. These, as well as other handicraft, are for sale in the stores in Fort Hall.

Left from the Fort Hall Agency, on a road built recently by the Indians, is the lava rock monument, .25 m., commemorating the site of old FORT HALL. Built in 1834, the fort was one of the early trading posts of the Rocky Mountain area and an important landmark on the Oregon Trail. It was the chief refuge in a region of sage-brush and Indians, the only inhabited place between Fort Boise, Idaho, and Fort Bridger, Wyoming. Emigrant wagon-trains coming out of the lonely deserts and valleys eastward could see from afar its cool whitewashed walls, its red flag lettered "H. B. C." (Hudson's Bay Company). Old trappers said the letters meant "Here Before Christ." Fort Hall was the rendezvous of Indians, Spaniards, and French Canadians, priests, doctors, and missionaries, besides hordes of nondescript adventurers of all kinds. Some came to rest, some to pray, some to celebrate on liquor distilled from wild honey, some to heal wounds made by Indian arrows, and some to bury their dead. It covered a half-acre of ground and was surrounded by a wall 5 feet high and 19 inches thick. Within the stockade were dwellings, stores and barns, all overshadowed by a two-story block-

house or bastion. Abandoned in 1855, the fort stood as a wayside inn for wagon trains until a flood demolished it in 1863. For a long while thereafter its actual site was unknown. In 1906 Ezra Meeker went over the Oregon Trail with ox team and dogs but was unable to determine the site. Ten years later an old well and the rifle pits were found. Flood and erosion had completely changed the contour of the land upon which it had stood. The old well, once the center of its inclosure, and the triangular rifle pits, now bedded in grass, are all that remain of the fort. Floods have washed away the adobe plaster with which the Hudson's Bay Company covered the cottonwood stockade, and the poles themselves were filched by old-timers to build cabins and bridges and roads. Standing in the center of the battleground of the Bannock, Blackfeet, and Crow Indians, and unprotected on all sides, it was in constant danger of attack, but weathered the years and its enemies, to disappear at last and be forgotten.

POCATELLO, 158 m. (4,458 alt., 16,471 pop.).

Railroad station. Oregon Short Line, end of W. Bonneville St.

Bus station. Union Pacific Stages, Fargo Building, S. Main St.

Airport, municipal (McDougall Field). Nat. Park Airways, 6 m. N. W.

Municipal tourist camp. Tourist Park, N. Fifth Ave.

Golf courses. Ross Park (municipal), south of city, 9 holes. University course, back of Red Hill and near university, 9 holes.

Pocatello is the seat of Bannock County, and second city in size in Idaho. It takes its name from a marauding "Chief" Paughatella of the Shoshone tribe; the name translated means "he who does not follow the beaten path."

Standing at the northern end of Portneuf Canyon and upon a part of the bed of the ancient Lake Bonneville,

of which Great Salt Lake is the survival, the city began as a collection of tents in 1882 when the Union Pacific was completed at this point. It is the principal center of the Oregon Short Line. Arterial highways and railroads go out of it south, west, and north, and it is the hub of airway transportation in those directions.

The city is bisected by the network of railways; the mountains flanking it are denuded and formidable. West of the blackened tangle of rails is most of the business area and west of this against the mountains are many of the lovelier homes and the river. East of the tracks are the chief residential section and the southern branch of the University of Idaho.

There are a considerable number of Basque and Greek families here, as well as a colony of Negroes.

Of points of interest in the city, perhaps the chief is the Oregon Short Line Railway plant, the largest of its kind west of Omaha.

Memorial Building, overlooking Memorial Park and Portneuf River, was erected to Idaho veterans of any and all wars. It has a spacious ballroom and a terrace that opens upon the river.

The southern branch of the University of Idaho is in the eastern part of the city at the base of Red Bluff. It is housed in 7 buildings, scattered over 225 acres of land, and has an enrollment of about 850. Its Historical Museum contains old records and journals, Indian handicraft, and prehistoric fossils that have been gathered in various parts of the State. The largest stadium in Idaho has recently been erected here and there are plans afoot to reconstruct a replica of old Fort Hall on the campus. (See above.)

Ross Park, just south of the city has a 9-hole golf course, a small zoo, and a delightful rock garden. Of greater interest are the lava rocks above the park which carry Indian petroglyphs recording a part of the legends and histories of the Bannock and Shoshone tribes.

West of the city, highly tinted Cambrian quartzite is overlain with rhyolite, a light colored volcanic rock which flowed to the surface before the basalt. Across

the bare plateau of the Snake River country the Twin Buttes (see Tour No. 3) are dimly visible.

Above the city in the west is Kimport Peak, at the summit of which is a roster recording the names of persons who have climbed there for a view of this part of the State. Stretching westward, as far as the eye can see, is Snake River Valley which in times past was deluged with overwhelming outpourings of molten lava that solidified and has remained undisturbed save for erosion.

DOWNEY, 197 m. (4,860 alt., 522 pop.), is at the junction of US 91 and State 36. These highways run approximately parallel into Utah and form a junction at Brigham.

Right from Downey on State 36, a graveled road, is MALAD CITY, 21 m. (4,700 alt., 2,598 pop.), seat of Oneida County, and once the seat of this entire part of the State. Few towns in Idaho have had a more turbulent past. Pictorial history would show a panorama of stage robberies, lynchings and murders. It was over this road that gold was freighted from northern mines to the smelters in Utah and here the coaches of the Overland Stage made a stop. Malad today is known for the crazy irregularity of its streets, many of them laid at random upon old paths and cow trails; and for its many old log cabins, still scattered among its modern homes. The Malad (Fr. sick) River nearby was named by French Canadian trappers, though whether they were made ill by drinking the water of the stream or from gorging on the flesh of beaver is not known. The EAST MALAD MOUNTAIN rises to a height of 9,332 ft. and shelters the town from extremes of weather.

Left from Malad a country road leads to WESTON CANYON, 16 m., where is located the PASS OF THE STANDING ROCK, named by John C. Fremont, who camped here on August 29, 1843, while searching for the Great Salt Lake.

At 34 m. State 36 crosses the Idaho-Utah Line, 66 m. N. of Ogden. South of Downey on US 91 is PRESTON, 233 m. (4,718 alt., 3,235 pop.), seat of Franklin County and the center of an irrigated part of the State.

Left from Preston the Emigration Canyon Road enters the mountains and canyons of the CACHE NATIONAL FOREST. Fishing is good in this area and many beautiful camp sites are available.

At 234 m. on US 91, a monument marks the site of Col. E. P. Connor's attack on the Bannock Indians on January 29, 1863. The battle took place at the mouth of a small stream (later known as Battle Creek) which the Indian chieftains, Bear Hunter and Sagwitch, had chosen for their winter home. The Indians defended themselves behind embankments of woven willows, but in spite of their ingenuity and courage they were so badly defeated that settlers who visited the battleground the next day declared that "you could walk on dead Indians for quite a distance without touching ground." Arrowheads and spear points are still found near the monument.

FRANKLIN, 240.7 m. (4,497 alt., 589 pop.), was the first permanent white settlement in Idaho. It was founded in 1860 by a party of Mormon emigrants who thought they were in Utah but were just across the State line. They were industriously unaware that they were establishing the first school and the first irrigation system in Idaho when they diverted the waters from Maple Creek to this section of Cache Valley. Back east the indefatigable Brigham Young had bought a steam engine and had it shipped up the Missouri River to Fort Benton, and then overland to Franklin by wagon and team. When it is remembered that this engine weighed 10,000 pounds, the long trek, for hundreds of miles by wagon and ox teams over mountains and rivers, was no small feat. The engine was first used in a sawmill in Franklin, then moved to Soda Springs and back again to Franklin; and after a while abandoned and forgotten. For many years it gathered rust by the road-

side until citizens decided it was a relic and placed it in the Franklin Hall, where it may now be seen.

At 243.9 m. US 91 crosses the Idaho-Utah Line, 70 m. N. of Ogden.

TOUR No. 2

(Butte, Montana)—Dubois—Idaho Falls. US 91. Montana Line to Idaho Falls, 83 m.

The Oregon Short Line Railroad of the Union Pacific System parallels the route throughout. The Greyhound Lines and Intermountain Trans. Co. buses use the highway between Butte and Salt Lake City.

Hotels only in cities; elsewhere limited accommodations.

This short section of US 91, part of the main traveled highway between Butte, Montana and Salt Lake City, Utah, lies for the most part over flat, semi-arid and rather desolate country, offering little of beauty or interest.

US 91 crosses the Montana-Idaho Line 132 m. S. of Butte, Montana over the Bitterroot Mountains and the Continental Divide; the pass has an elevation of 6,823 ft. but the gradient is easy and there is little to call attention to the passage between the eastern and the western watershed. For several miles south of the Montana Line the road goes through mountainous country and the western end of the Targhee National Forest.

PICNIC HOLLOW, 10 m., is the principal camp ground in this section of the forest.

SPENCER, 17 m. (4,883 alt., 75 pop.), is in a formidable area of bleak landscapes extending entirely across Clark County and into the northern part of Jefferson County. This region is the northeastern flank of that vast lava terrain upon central Idaho.

At 30 m. on US 91 is a junction with State 29.

Right, on State 29, is an improved road, that swings into the southwest and joins State 27 near the Craters of the Moon National Monument, 104 m.

A better approach is from Blackfoot, further south. (See Tour No. 3.)

On State 29 is LIDY HOT SPRINGS, 20 m. (sometimes called, and not without reason, the Oasis), where there are indoor and outdoor swimming pools supplied with hot mineralized water, a dance hall, and camping sites.

On US 91 is DUBOIS, 32 m. (5,148 alt., 590 pop.), seat of Clark County and the largest town within a radius of thirty miles. This capital of a wasteland was named for former U. S. Senator Fred Dubois.

Left from Dubois on a country road is a U. S. SHEEP EXPERIMENTAL STATION, 6 m. (Open to the public.)

At 53 m. on US 91 is a junction with State 28.

Right, State 28, a graveled road, leads to MUD LAKE, 10 m., a large body of water that is a favorite with thousands of migratory ducks and geese. This lake has no outlet; and though Camas Creek flows into it and it gathers much rain and snow from its watersheds, it is slowly disappearing. This circumstance is less surprising when it is remembered that this large area, especially the westward parts, is one of vanishing streams. Northward the Beaver and Medicine Lodge creeks lose themselves completely in the lava fields; and westward two rivers disappear. The lava is fissured and contains subterranean channels through which underground streams flow for unknown distances. In type it is basalt and has been poured out at different times from many widely distributed craters. These erratic flows have piled up the basalt to high levels and in consequence has produced large but shallow and undrained depressions into which the streams are discharged. Some of these remain indefinitely as tiny lakes. North of Mud Lake is an extensive lava plain with fantastic buttes; and southwest are the ANTELOPE and CIRCULAR BUTTES, two volcanic cones that stand above

NATURAL BRIDGE ON ROE'S CREEK,
TARGHEE NATIONAL FOREST.
Photo by U. S. Forest Service.

the surrounding country. The flora in the area is chiefly white or sweet sage, rabbit brush, Russian thistle, and chaparral. Around the lake and on the adjacent sloughs is a luxuriant growth of marsh grass, and tule.

ROBERTS, 64 m. (4,775 alt., 350 pop.), was until recently known as Market lake--from the fact that in frontier times there was a lake here upon which ducks and geese were so abundant that early settlers, coming to gather their meat, somewhat facetiously called the place "market lake" and spoke jocularly of going to the market for a supply of food. The name was changed to honor a railroad superintendent.

At 79 m. on US 91 is the entrance to a country road.

Left on the country road is a lava field known as HELL'S HALF ACRE, 14 m., in which until 1928 was a remarkably old juniper (cedar) tree that began its growth in 310 A.D. It was still alive when cut down and an examination of it revealed 1,618

annual rings which, according to botanists, recorded alternate cycles of rainfall and drouth. At IDAHO FALLS, 83 m., US 91 unites with US 191. (See Tour No. 1.)

TOUR No. 3

Blackfoot—Arco—Junction with US 93, 2 m. S. of Challis. 144 m. State 27. Lost River Highway.

The Oregon Short Line Railroad parallels this route between Blackfoot and Mackay. Salmon River Stages use the highway between Blackfoot and Challis.

Accommodations throughout are less than average in hotels and tourist camps, and travelers who plan to spend some time in the region are wise to equip and provision themselves for an outdoor life.

This route is over surfaced road and relatively flat terrain, with no difficult or dangerous grades. State 27 (R) from Blackfoot proceeds into the northwest and soon leaves the fertile Snake River Valley to enter an enormous desolation of volcanic outpourings, of which the Craters of the Moon National Monument is only a very small part. The middle section is in marked contrast to the lower section, where almost half of the Grimm alfalfa seed grown in the United States is produced. State 27 soon leaves behind all the irrigated luxuriance of the valley, and northwest of Arco starts to climb the eastern rim of the great Idaho batholith. This Jurassic uplift underlies a large part of the State and, with its innumerable folds and faults, its gorges and buttes, is the most notable geologic feature of the State.

Especially notable northwest of Arco is the beautiful coloring of the landscape along the highway, with its amazing contrasts. In the central portion the ragged terrifying flank of the volcanic area of which the Craters of the Moon is but a part, runs along (L) like ridges of coal. Beyond are purple mountains. To the right are bare mountains so soft in color and seemingly transparent that in subdued light they look as though they were draped with silk.

At 40 m. are the TWIN BUTTES (L) and the BIG BUTTE (R), which were famous landmarks for emigrants in early days. Two of them, the Big and East Butte, are rhyolitic volcanic cones completely surrounded by Snake River lava and are admirable examples of steptoes (an island formed in a once molten sea of lava.) Middle Butte rises 400 ft. above the base, and East Butte 700 ft.; but Big Butte rises 2,350 ft., as a deeply sculptured mountain, and terminates in 2 ridges about a mile apart, with a deep depression, apparently the remnant of a crater, between them. This mountain can be scaled but it rises with unusual abruptness on all sides. It is composed chiefly of nearly white rhyolitic lava which alternates with light pumice and black obsidian. The basalt spilled at its base and spread in sheets is black. This formidable monument is a favorite haunt of certain wild animals, including bear and deer; and its northern slope is covered with a young and thrifty growth of fir and juniper. From the summit of Big Butte a broad and magnificent vista presents the geologic record of the Snake River plains. Middle and East Buttes also rise abruptly. At the summit of the latter is the remnant of a volcanic crater. In the vicinity of both are many caves and underground passages, most of which have doubtless never been explored; and for any person seeking the unusual or wishing to venture into what has not been seen within the memory of living man, these three desolate sentinels are a ruggedly terrifying playground.

At 54 m. is the junction of State 27 with State 29. The latter proceeds northeast to its junction with US 91 near Dubois. (See Tour No. 2.)

Right on State 29, an improved road, is HOWE, 15 m. At 20 m. (R) are the SINKS, where two rivers disappear. As a matter of fact, not a single tributary reaches Snake River by surface travel from the high and rugged mountains lying west and north of its course between Malad River and Henry's (North) Fork, a distance of 200 miles. In certain instances, as in the case of Big and Little Lost

Rivers, the waters spread out in the marginal portion of the plain during the period of their greatest elongation and form shallow lakes. The chief reason these rivers are lost is that the terrain across which they flow is rough and irregular, and evaporation and percolation in the lakes equal the influx. Big Lost River rises in the Sawtooth Range and flows 90 miles into this desert of stone to form a lake and then vanish; and the Little Lost River emerges from the Pahsimeroi Mountains and flows 80 miles to disappear 10 miles east of the other sink-holes. Both of these rivers were overland tributaries of the Snake before volcanic upheavals buried their channels and shook them out of their courses. Their outlet, as well as the outlet of other streams that vanish in this area, is thought to be chiefly the Thousand Springs which gush from the walls of Snake River Canyon 150 miles to the southwest.

On State 27, northwest of the junction with State 29, is ARCO, 62 m. (5,318 alt., 737 pop.), the seat of Butte County and one of the loveliest of Idaho small towns. From a distance it strongly resembles a village in Switzerland. The present site is its third since 1879, the first of which was called Junction. The United States Post Office Department did not look with favor upon so many Junctions and the name was changed, though whether the present town was named for a visiting Count Arco, for Arco Smith, an early settler, or because it is on a bend in the river, is unknown. The caretaker of the Craters of the Moon National Monument (see Side Tour No. 3A) is stationed here, and guides for trips to the monument may be secured if desired.

Northwest of Arco, State 27 follows for about 50 miles the general course of Big Lost River which runs between sections of the Lemhi National Forest, with the Lost River Mountains (R).

MACKAY, 90 m. (5,897 alt., 777 pop.), is another subalpine town in a lovely setting. It is in a valley that once sheltered several boom towns, of which little

or nothing remains; these towns were harassed by gangs of lusty rascals who had things rather much to their taste before the Vigilantes came. Of minor indignities, the murder of Bill Noyes is still remembered. He was traveling with a friend, whose name is not preserved by legend, and the two engaged in argument over a trivial matter and descended from the wagon to fight. Noyes was the huskier of the two, and after beating his friend in what a historian calls a "most Barbarous Manner," he waxed playful and drove the wagon over the prostrate body. But the now nameless comapnion was tougher than he seemed. He came to his senses presently, shook his fists and made horrible threats, which he later carried out by calling Noyes from his sleep one night and filling him with buckshot. Stories such as this still live in the memory of old-timers here and make a good part of the history of the valley.

Mackay is headquarters for the Lemhi National Forest. (Forest maps available here.)

Left from Mackay is an improved road leading to PASS CREEK GORGE, 9 m., on Pass Creek. This canyon is often called the Royal Gorge of Idaho and perhaps is worthier of the name than any other. More than a mile in length, it is very narrow, and its sheer walls, rising more than 2,000 feet above the floor, leave only a slender line of sky above. Favored as a picnic ground, the bottom of the canyon is forested, and traversed by a cold mountain stream. Fishing in this stream and in others nearby is excellent. Like any other canyon, this one comes most fully to life at sunset when the upper ledges are luminous with glory and shadows are banked depth upon depth in the lower part.

On State 27 is CHILLY, 109 m. At 112 m. can be seen (R) MOUNT BORAH, (alt. 12,655), the highest point in the State. To the left of the highway in the Sawtooth Range stands MOUNT HYNDMAN, (alt. 12,078), which until recently was regarded as Idaho's highest peak.

At 144 m. is a junction of State 27 with US 93, 2

SIDE TOUR No. 3A

Arco--Craters of the Moon National Monument, 23 m. State 22. Partly paved highway and partly graveled.

Any person intending to explore even a small part of the Craters area off the roads should wear very rugged shoes.

State 22 runs southwest from Arco through one of the most impressive areas in Idaho and the most striking of its kind in the United States--perhaps upon the North American continent. It was not explored, save superficially, until recently and the Craters of the Moon section was not set aside as a national monument until 1924.

At 19 m. on State 22 is MARTIN'S RANCH.

At 23 m. is the entrance to the CRATERS OF THE MOON NATIONAL MONUMENT.

A ranger is in charge who will advise tourists; there are public camp grounds, simple cabins, and a general store. There are several miles of graveled road in the monument and a number of well-marked trails.

The Craters of the Moon National Monument was so named because its caves and natural bridges, its cones and terraces and weird piles of volcanic rock resemble the surface of the moon as seen through a telescope. In Blaine and Butte Counties of Central Idaho, the 80 square miles of the monument are but a portion of a vast lava field extending westward to the Columbia plateau.

Few spots on earth--certainly no other readily accessible to unadventurous motorists in the course of an ordinary summer jaunt--have such power to impress the human mind with the aweful inner nature of the rock-planet upon which man lives and is whirled through the universe. Anciently these 80 square miles and many

others around them shuddered and heaved and cracked open, pouring out molten lavas from some internal reservoir and spreading them through the valleys. The last of three known eruptions probably took place 250 to 1,000 years ago.

The molten rock contained dissolved gases which were sometimes liberated with explosive force as the lava reached the surface; more often, however, because of the size of the rifts in the surface, the lavas of the internal cauldron simply boiled over, flooded the valleys and plain, and congealed. It was only when the mass had begun to harden and cover the cracks in the earth's crust that enough gas pressure accumulated in the still seething mass below to throw out the fragments of rock, dust, and masses of lava which formed the weird and fantastic cones that may be seen today along the old fissures.

Today the area looks as if cauldrons of molten rock had been poured from the sky, with the masses often cooling suddenly when the waves were highest. Days can be spent wandering over the area, with each step revealing some new and fantastic form created by the gigantic upheavals.

The part of the lava that welled up and over the area hardened in various forms according to the amount of gas it contained, the temperature at which it reached the outer world (probably around 2,000 degrees F.), and the chemical composition of the liquid rock. One kind of lava became billowy, ropy, and filled with caverns when cool, because the rapidly hardening outer crust wrinkled and heaved above still fiery streams below; some of these streams flowed away completely, leaving behind the empty channels that form the tunnels of the monument. Another type of lava became rough, jagged and spiny.

The cones formed by explosions in the latter stages of the eruptions are the most striking part of the landscape. They are of three varieties. The cinder cones are merely heaps of lava froth or spray that now have black, loose, cindery surfaces; some of the cinder cones

in the northwestern part of the monument were probably molded and elongated by strong southwest winds that were blowing when the fiery froth was thrown up. The spatter cones were formed by clots of lava hurled from the vents; the line of these cones, extending along the automobile road southeast of the Big Craters, is counted one of the finest spatter cone chains in the world. Lava cones, domes with gentle slopes, were formed by the quiet welling up of molten rock from single vents.

Three periods of eruption are recorded in the cones of the monument—the first, in the old cones of the Devil's Orchard and the field of crags south of Big Cinder Cone; the second, in the Sunset, Silent, Big Cinder, and their neighbors on the Great Rift, which were partly buried by later lava flows; the third, by North Crater and Big Craters, which gave vent to several flows of considerable extent and formed the line of spatter cones southeast of Big Craters.

While the area is bleak and desolate in certain lights, it is far from colorless. In bright sunlight some of the formations look like blue glass, some like the half-deflated bodies of monstrous green reptiles, and some like the transfixed waves of the ocean frozen at high tide. There are beautiful symmetrical spheres caught with others and congealed, and curious tree molds created when eruptions buried forest trees of great size.

Below the field are the endless dank caverns, pits that, so far as anyone knows, are bottomless, caves holding water that remains icy cold on the hottest days.

Perhaps the best view of this unutterably desolate region is to be had from Big Cinder Butte, which rises 800 feet above the adjacent plains. Lying eastward from the Butte are broken pavements of black lava that unroll mile upon mile into the gray haze of the desert. Visible from this height is a strange yellow island of knolls, overgrown with grass, which were not covered by lava flows. Southeast runs a series of volcanic vents, reaching out into the black loneliness of lava

for 11 miles, and coming to a climax in Black Top Butte. Southward is an awful acreage of crags and domes; and over in the northwest lie the crater pits along the Great Rift. Some of these cones are brilliant red at noon and purple under twilight, and all of them together, when seen from Big Cinder Butte at dusk, form a weird map of colors shimmering in a pattern of desolate waste. Indians held this spot in dread, and have handed down legends of that terrible time when the hills smoked and shouldered upward in their stupendous wrath, and the whole broad reach of the desert trembled.

The region, curiously enough, has wild animals living within it, as well as a few trees and many wild flowers. There are western junipers and limber pines and quaking aspens; among flowers there are red or yellow eriogonums; blue pentstemons and larkspurs, purple lupines and red Indian paint brushes, pink and white primroses; and, loveliest of all and most incongruous in the black wastes, are the white blossoms of the bitterroot, the yellow blossoms of the sand lily, and the gorgeous white sego lily, Utah's State flower. As if these were not enough, there are also cinquefoil and daisy and phlox, yarrow and aster and prairie pink. A surprising number of animals make their homes here. There are rabbits, gophers, chipmunks, and porcupines, packrats and rockchucks and skunks, and even coyotes and bobcats. In Moss Cave and Sunbear Cave there used to be dens of bears, and several grizzlies were slain in the area some years ago. Skulls show that mountain sheep and antelope and deer used to roam here. But there are no snakes, because the terrain is too rough and jagged for their journeying. Of birds there are woodpeckers and hawks and ravens and crows, larks and bluebirds and shrikes, sage grouse and mourning doves, and both the bald and golden eagle.