

MINING AND TOURISM IN CALIFORNIA

Ivor J. Brown

Abstract: The wide variety of mining museums and related tourist attractions in California is discussed and described in a gazetteer.

INTRODUCTION

This article is a collection of notes on a selection of tourist mines and working mines with tourist interest, mining in museums, mine railways and mining "ghost" towns. The notes give some idea of the wealth of opportunity available in transforming an old, in some cases obsolete, industry into a modern one, that of leisure. The writer has been fortunate in being able to have visited most of the sites in the course of two study tours to consider various aspects of the modern relationship between mining and tourism and the opportunities available for improving the economics of declining mining areas.

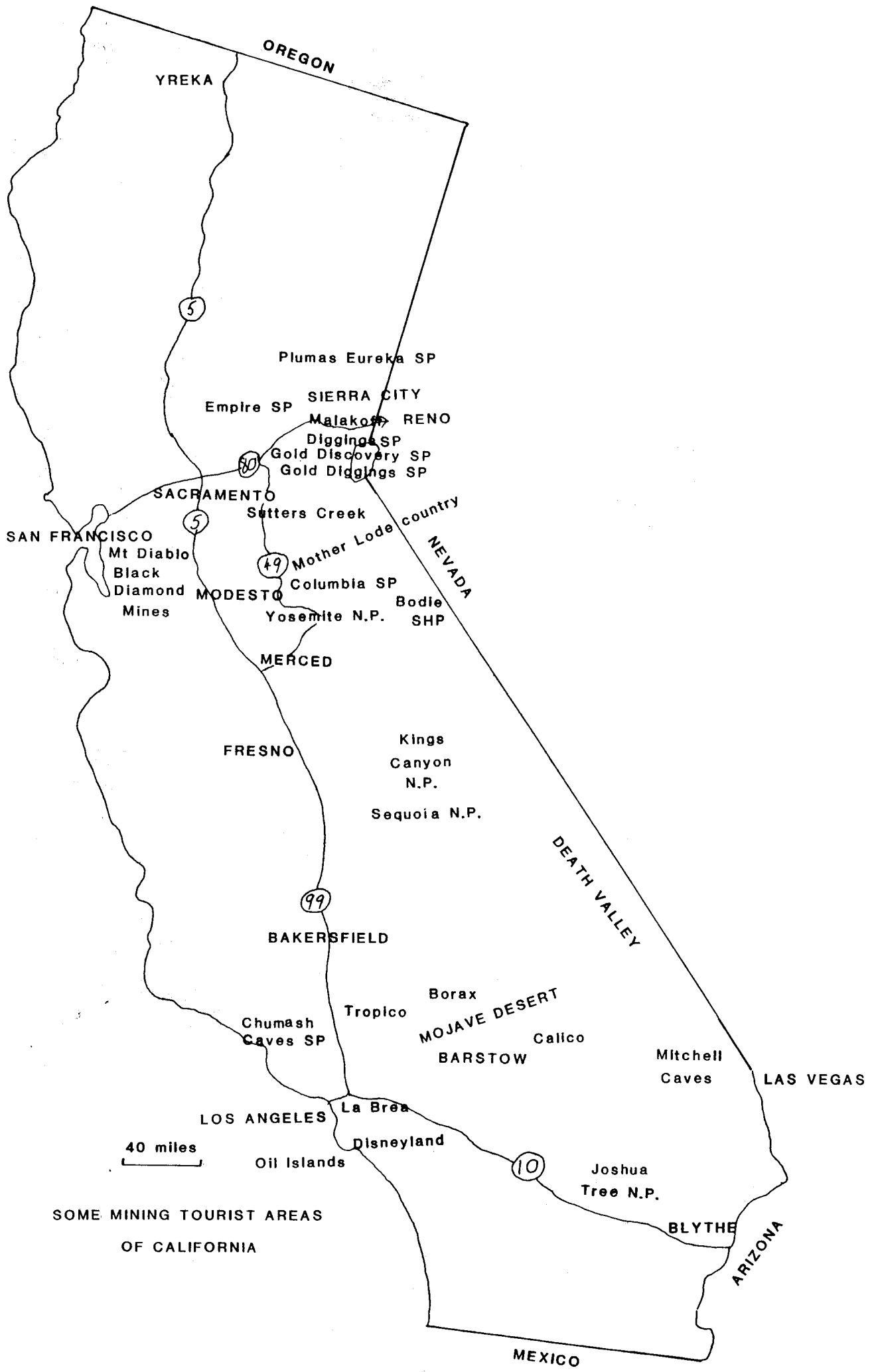
For the purpose of this article the following types of tourist provision have been considered:

- (a) Viewpoints, sometimes with interpretative panels but often unmanned. Publicity brochures and trail leaflets for self-guided tours may also be available.
- (b) Information Points, usually manned and often containing a display of photos, tools and artefacts. Postcards and booklets are usually on sale.
- (c) Guided tours at well publicised times from specific locations. Literature and "samples" may also be available from the guide. These tours may be by foot, by car, by train or other vehicle.
- (d) Craft Centres usually include a display of products manufactured for sale and a demonstration by skilled persons of the techniques used.
- (e) Interpretation Centre/Mining Museum usually includes most of the above but displays in addition a wide range of raw materials, illustrations, dioramas, historical exhibits and products. Audio-visual displays are often included together with opportunities for visitors to "do" things themselves e.g. gold panning, slate-splitting and "fossicking" (= hunting for specimens).
- (f) Theme Parks/Open Air Museums - an extension into all activities related to the operations, the production of the finished product through its many processes. These may include also various types of trails, "ghost" or reconstructed towns and a wide range of facilities for public entertainments e.g. cafes, souvenir shops etc.
- (g) Thematic leisure centres/Ecomuseums: an extremely wide interpretation is used; leisure centres can be based on, for example, water sports on flooded open workings or railway centres around the old rail depot. Ecomuseums can include whole towns and several separate but inter-related sites having a common interest.

In passing, the interpretation media and techniques used and the degree of public participation permitted at show-caves, "parks" and "monuments" of mining and geological significance were also considered. Notes on these have also been included in this article and the whole should provide a useful gazetteer to any mining or geological enthusiast visiting the area.

California has long realised the value of its minerals industry, and, in fact, it was mining which boosted the growth of the State. The California Mining Association is now doing much to publicise both the industry it represents and its value to the community. It publishes a range of leaflets of which the most important is one entitled "There's mining in California". This gives a list of 30 mineral-groups at present being mined, describes their uses and shows on a plan the locality in which they are worked. The leaflet also attempts to answer questions like "What do minerals mean to me?" and "How long will our minerals last?" Apparently every American needs "40,000 pounds of new minerals each year" to survive and California produces representative quantities of 30 of the 91 different minerals required.

The California Chamber of Commerce supplies at cost price copies of a publication entitled "U.S.A. Plant Visits" published by the U.S. Government Printing Office which lists many mine sites open to public inspection. A smaller publication "Industrial Tours available in California" is published by the American Automobile Association. This includes some minerals-orientated undertakings but no specific mines.



SOME MINING TOURIST AREAS
OF CALIFORNIA

A 24-page booklet on "California Ghost Towns" is also available free from the Automobile Club of Southern California. This describes in some detail under the headings 'now' and 'then' over 50 ghost towns which may be visited in the State together with details of their locations and modern facilities.

The California State Park System also produces useful literature. The System contains about 270 units and employs 2,000 people. Among the sites of mining interest within the System are the following;

- Bodie State Historical Park (ghost town)
- Chumash Painted Cave State Historical Park
- Columbia State Historical Park (ghost town)
- Empire Mine State Historical Park
- Malakoff Diggins State Historical Park
- Marshall Gold Discovery State Historical Park
- Plumas Eureka State Park (mining displays)
- Providence Mountain and Mitchell Cavern State Recreation Area

Southern California

The greatest single attraction in Southern California is, without doubt, Disneyland in Los Angeles. Over 12.7 million people pay to visit the feature each year - this compares with about 3 millions who visit some of the famous London buildings during the same period. As a crowd puller there are few places like this and yet it appears to cope without straining the resources of the area. The site is based on seven theme parks and the one appropriate to this study is 'Frontierland'. This includes a narrow-gauge railway and a runaway mine train, an exhilarating ride in a very authentic setting, surrounded by real steam engines, timber buildings and processing plant transferred here from more distant sites.

Also in the Los Angeles area there are several other features of interest and two of these are associated with the production of oil. The Rancho La Brea Tar Pits is one of two impressive museum complexes in the Hancock Park. The Tar Pits are the result of an occurrence of a seepage of bitumen or 'tar' as it is known locally. The seepage was first noted in 1769 and from this date became a feature for travellers to visit mainly because the liquid-looking mass attracted creatures which, once in contact, remained until they died. During the late 19th century the site owners, the Hancocks, dug a pit to collect the tar and sold it for use in paving streets, caulking ships and patching roofs. Early this century it was realised that the bones preserved by the tar were not only recent in origin but also of extinct animals thousands of years old. The site now abounds with full size skeletons, models and pictures of sabre-toothed tigers, wolves, ground sloths, mammoths and mastodons.

The 'great tar lake', the original quarry, is on display and there are observation platforms allowing visitors to inspect the various tar pits. One pit is in original state and methane gas periodically bubbles through; another is in the process of being archeologically dug. The adjacent museum has reconstructions, film shows, tape slide presentations, exhibition areas and a special 'asphalt is sticky' feature invites visitors to experience personally the "death trap of the ages". Scientists can be seen working on bones behind large windows.

The oil drilling islands located off Long Beach are also a major attraction. The oil rigs are encased by walls designed to resemble high-rise apartments and are surrounded by waterfalls and palms. The islands are named after men in the astronaut programme who were killed; Grissom, White, Freeman and Chaffee. Boat trips are arranged around the islands, and, at night, they are dramatically floodlit.

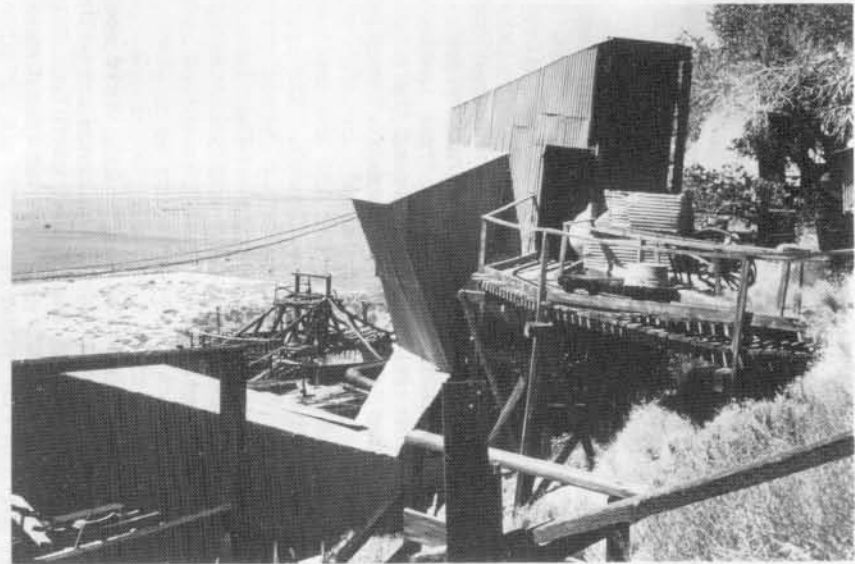
East of Los Angeles lies the extensive Mojave Desert which contains several features of interest including the Joshua Tree National Monument, Mitchell Caves, Calico Ghost Town, Burtons Tropic Mine and the Boron Open Pit.

The Joshua Tree National Monument includes parts of two deserts, two distinct eco-systems primarily determined by elevation. Below 910 metres, the Colorado Desert occupies the eastern half of the Monument. The higher slightly cooler and wetter Mojave Desert is the special habitat of the undisciplined Joshua Tree, extensive stands of which occur throughout the western half of the Monument. The Monument also encompasses some of the most interesting geologic displays found in California's deserts. Rugged mountains of twisted rock and exposed granite monoliths, "Arroyos, playas, alluvial fans, bajadas, pediments, desert varnish, granites, aplite and gneiss interact to form a giant desert mosaic."

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1. Kentucky Mine, 1982; part of Sierra County Historical Park.



2. Burton's Tropic Gold Mine, 1982; trestle bridge to mill; now part of a theme park.



3. Borax Mine, Boron, 1982; The tunnel entrances are relics of levels in the earlier underground mine.



4. Eureka Coal slope at Greathouse Sand Mine, 1982; formerly a coal and sand producer, a lady guide here prepares visitors for an underground trip. Part of Black Diamond Mines Regional Preserve.

The area was first explored by white men in the 1850's and settlement by gold miners began in the 1870's. This had limited success and reached its peak in the first decade of the present century. Mining activity gradually decreased through the years up to 1940 although in the 1950's extensive uranium prospecting was carried out. The two principal mines were the Lost Horse Mine and the Desert Queen.

There are two major visitor centres, at Cottonwood in the South and Oasis in the North. Each contains a small interpretative section and a bookshop selling local publications, trail literature and maps. Roads in the area are few and the trails are intended for walking only. A full ranger service is provided (for safety reasons; the dangers listed include flash flooding, loose rocks, wild animals and abandoned mineshafts) but the area remains rugged with no conveniences. All food and water has to be carried, a feature which adds to the area's interest and makes it a mecca for 'backwoods' types.

Calico Ghost Town has been 'restored' mainly through the efforts of Walter Knott of the Knottsberry Farm entertainment and theme park. It was originally a silver-mining camp founded in the 1880's. By 1890 over 3,000 miners were at work in the area and the town contained all the usual facilities, with a dancing school, literary society and a newspaper. By 1900 the town had begun to die. Borax mining commenced in 1888 but this too had become uneconomic by 1907 and the town was abandoned except for a handful of people. In 1953 Walter Knott opened the town as a tourist attraction and in 1966 handed it over to San Bernadino County. As well as the restored buildings (many now used as handicraft shops) there is a schoolhouse, a mining museum, including underground tours of the Maggie Mine, an operating narrow gauge railroad and a tramway (inclined) from the car park to the site. Other features of contemporary interest include a shooting gallery and a 'rock shop' in the old assay office. The full-time maintenance staff numbers 14 persons while a further 150 are employed in the 22 concessions (these include the mine, train, shops etc. which are all on lease). The site manager stated that despite good visitor numbers and privatisation the whole operation cannot cover costs and is subsidised by the County. Fourteen people now live permanently on site. The feature is extensively publicised and it is difficult to understand why it cannot be made profitable except that the area does have a relatively short tourist season (or rather two seasons - spring and autumn).

Burtons Tropico Gold Mine is in many ways similar to Calico although its population, workforce, restoration and visitor levels never reached the same heights. There is now a range of town buildings on site together with more extensive remains of the mine than are present at Calico. In fact, the complete gold dressing plant is present (although in 'mothballs') and some assay and trial work is still carried out on a contract basis. The family who ran the operation first as a mine, then as a show-place, have recently retired and the operation is under new management. It is on a smaller scale, the contents of the museum having been sold, and is only open about 4 days/week. Both mill and underground mine tours (walking) are available. Much capital and publicity would be necessary in order for the operation to return to even being a modest one.

The present Borax Open Pit Mine lies close to the route taken by the 20-mule team wagons when carrying borax from Death Valley to Mojave. Beginning in 1883 and for the next five years "huge 7,800 pound wagons each containing 10 tons of borax, and borne on wheels 7 ft high formed a train 100 ft long with 20 mules fore and the water aft, on a 21 day journey." The train is now the trade mark of the company and an example of such a train minus mules forms the basis of the interpretation centre.

The centre itself consists of an inspection point overlooking the great pit 5,600 ft long, 3,800 ft wide and 550 ft deep and a building containing diagrams and display cases. There is also a push-button operated commentary on the site history and the use of the mineral. The site is unmanned but literature is available from an office at the main gate. Mine tours are not organised, partly due to the danger from old underground workings which are now being opened out, the mines having operated underground from 1927 to 1957. At this time the overburden was removed and the mine converted to an openpit.

The facilities are not actively publicised but visitors are welcomed which the company admits aids public relations for an operation employing over 800 and with a payroll of over 9 million dollars annually. Samples of 'Borax' and 'Borateem' powders are given free to enquirers at nearby Information Centres.

The Kern County Pioneer Museum at Bakersfield is an Open Air Museum with streets of reconstructed buildings. Museum construction commenced in 1950 and it is now claimed to be the West's "largest open-air Museum." It contains many mineral-orientated features, mining and agriculture forming the mainstay of the area. Besides all the usual craftsmens' shops and a complete railway set-up with engine and wagons, there are exhibits representing the borax industry, a mining assay office, a survey office and an excellent 'oil Museum'. This includes a main building containing artefacts, the oldest known operative-cable drilling rig of 1910; a massive timber construction 70ft high, and an oilfield jack plant (a pump used 1915-1965). Blacksmith's shops and timber yards add to the realism of the site. The Museum has about 3,000 visitors per month, each paying one dollar admission. There is a staff of "about 10" so that the museum must be heavily subsidised and supported by local authorities, industry and commerce.

The Highway Rest Areas are a feature of this area. They are provided mainly for safety reasons and

offer toilets, a cool oasis, plentiful shade and picnic tables. In these wide open areas they are also a place to position monuments, memorials and interpretation facilities. Panorama boards point out major features in the scenery and tablets give the geology, natural history and ecology of the area. So many birds now frequent the rest areas that several have been declared bird sanctuaries. Rest areas visited include those at Indio (Route 10), at Boron (Route 58) and on the Mojave Desert at Cady Mountains (Route 400). The latter is on a large basalt lava flow which covers 35 sq. miles; a volcanic cone can be seen 9 miles away.

The Mojave Desert contains many other features which are being used as tourist attractions; a 2,000 ft long tunnel at the Randsburg Museum, tungsten, gold and silver mines, the Garlock Geological Fault - an earth fracture 1/2 mile wide and 1.5 miles long, the Pinnacles - 100 to 140 ft high tufa formations, hot springs and a tungsten mining ghost town dating from the inter-war period.

Immediately to the east of Bakersfield is the southern tip of the Sierra Nevada Mountain Range which then extends northwards for over 400 miles. Along its length there are many fine National Parks including Sequoia, Kings Canyon and Yosemite.

The southernmost park, the Sequoia N.P. lies about 60 miles northwest of Bakersfield. It contains 32 groves of giant sequoia trees, the largest and oldest living things in the U.S.A., beautiful limestone caves and Mount Whitney, at over 14,000 ft California's highest mountain.

The largest tree, the General Sherman, is at about 7,000 ft elevation. It is 2,500 - 3,000 years old, weighs 1,385 tons, height 275 ft and at base is 102.6 ft. circumference (36.5 ft diameter).

There is a fully equipped Visitor Centre with all facilities at the entrance of the Park and a Village within it, the latter containing motel rooms, rustic cabins, dining room, lounge, gift shop and a trail camp for hikers and horse trekkers. Trails of various hardship up to 6 miles long have been laid out and comprehensive literature is available. The Crystal Caves are only open during the Summer. The mountain scenery, towering granite walls, great canyons and water-falls are probably at their most spectacular in winter.

Northern California

Probably the most important features in Northern California relevant to this article are the showcaves, the Mother Lode Country, and the area around San Francisco. California has over 500 natural limestone caverns of which seven are now open to the public. These are about evenly located throughout the State, four are in the north and three in the south. In the south are Boyden and Crystal Caverns, both in the Sequoia National Forest, and Mitchell's Cavern in the Mojave Desert area. Two of these caves have been previously mentioned; they are not unique although Mitchell is the only Californian cave that does not have active wet formations. Lake Shasta Cavern is a very ornate cave in the extreme north of the state and is reached by boat across the lake. The other three lie fairly close together in the Mother Lode country, east of San Francisco.

Quill Lake Cavern at Cave City is California's most ambitious show cave. It has been open to the public since 1850 and is the State's most extensive system. Currently wild-cavern trips are offered which involve rafting across 200 ft deep lakes, climbing ladders and crawling through small passages. The operators provide "helmets, ropes, ladders, rafts, coveralls and two speleo-guides" per party of 10 persons. Each tour takes six hours. The Moaning Cave is famous for its massive chamber, 100 ft steel spiral staircase giving access, and 14 ft stalactites. Excavations in the cave have revealed some of America's oldest human remains, dating back to 11,000 years BC. Mercer Cavern is a smaller but beautiful cave which has been open to the public since 1887. None of the above caverns are great money earners but all are of some significance in attracting tourists to their very isolated areas.

Mitchell's Cave is now a State Park and part of a formalised recreation area offering hiking, high-desert nature study, geology study, picnicking and camping.

The Mother Lode Country seems to exploit mining history in every conceivable way and at every opportunity. The country forms a narrow belt extending over 260 miles along the western slopes of the Sierra Nevada, ranging in elevation from about 700 to over 2,500 feet and even higher in the extreme north. The Automobile Club of California produces an excellent 72 page guide to the Mother Lode Country describing most of the features in the area, consequently only the outstanding aspects will be given.

Nearly all the small towns along Highway 49 have a mining museum and preserved mining remains; they all have their origins in the same mid 19th century period and all exploit to the full every conceivable aspect of mining.

In the southernmost area around Bear Valley and Merced Creek there are a number of small active mines and in the valley bottom remains of gold dredges. These do not appear to have been exploited. Coulterville is perhaps typical of the communities: it once had 5,000 inhabitants (1,500 Chinese), 10 hotels and 25 'saloons'. It now has a population of 115, a motel, petrol station, grocery stores, several restaurants and antique shops. Amongst these are many ruins and a few mining

remains (the restored Wells Fargo building and a narrow gauge steam loco at present form the beginnings of a museum). Chinese Camp, 20 miles north, is in an even more decayed state with recently abandoned timber town houses with trees growing through the rotten boards of the wooden sidewalks or pavements.

Many of the businesses in Jamestown, entered past the wooden headframe of the disused Harvard Mine, play heavily on a gold-mining theme; 'Machinery sales' (hardware store) "we buy and sell gold" (mineral shop), 'Miners' lunches' - specialities 'Cornish Pasties from 3.20 dollars'. To entertain visitors there are regular barbecues, performances by the Gold Rush Chorus, Mother Lode Roundups and Shootouts.

Several businesses offered 'Daily Gold Panning Tours' and 'Gold Mining Classes' (teaching gold panning, using a sluice box, sniping, pocket hunting and post-hole sampling), 'Mining Supplies' offered a full range of mining books, mining equipment, locators, pans and boxes, assaying services, the official U.S. Dept. of the Interior leaflet on 'Gold' and copies of the magazine "Gold Prospectors Association of America News". A special 'Gold Map' points out the numerous sites of mining history throughout the Gold Country.

Other companies offered 'Prospecting tours every two hours' (equipment supplied - fee charged), Gold Mining adventure aboard 'Old Yeller' dredge - "we make no promises but some fellows have taken over 15 ozs". "No gold - no pay". "All you find you keep." The guide book claims that Jamestown is a "growing town which has preserved the past"; tourism and recreation are listed as the principal industries.

At Columbia State Historical Park a complete 'ghost town' has been restored. About 15 of the buildings are now used as shops offering traditional wares or services; Blacksmith's & Carpenter's Shops, Candy, Grocery and Dry Goods Stores and several Saloons. All are operated on a 'concession' basis although several of the operators spoken to said that the commission on sales payable, at up to 10% depending on type of service was too high and that "this was their last season". The operator of the 'gold panning area' and the underground tour of the Matelot Mine said business was not good and that insurance premiums were "crippling" him. The mine, reached after several miles of motoring and consisting of a 750 ft. subterranean walk did not seem to have much to commend it.

Nearby, the Marble Quarry Resort offered campsites, barbecue and picnic areas, swimming, dining, and for "camera Buffs" a "50 ft marble face and many exciting limestone formations sculpted during the Tertiary period and hydraulic mining times."

At Jackson the surface equipment of the Kennedy and Argonaut Mine has been kept in-situ but it is not formally preserved. These were large mines which closed in 1942. On special days trips lasting two hours are conducted around the surface of the mines and a country park has been formed around the two surviving (originally four) 58 ft diameter wheels formerly used in the movement of tailings. There are several panorama boards at viewpoints overlooking the mines and a small interpretation feature in the park. A history of the mines is given on the back of the menu-card of the nearby Wheel Inn.

Sutter's Creek, although heavily commercialised, still looks like the real Gold Rush town with its main street lined with old buildings having overhanging balconies and timber sidewalks.

The city of Placerville takes its name from the placer-deposit workings of the gold rush period. It is a busy trade, lumber and agricultural centre which does not seem to need tourists. However in recent years a gold mine feature has been created in the town's park. The city now claims to have the only municipally owned gold mine, which at present consists of two mine adits open to the public and a gold dressing mill under reconstruction. The workings were in use from the 1880s as the Hattie Mine and Priests Mine but from 1930 became the Gold Bug Mine, a name that is retained. Both tunnels are freely accessible to the public, the lower is 362 ft long, the upper 147 ft long with some fenced off old workings. Both are electrically lit throughout. There are ambitions to develop the complete site as a mining attraction, appeal-brochures have been distributed and a promise to make the stamp-mill operational has been given by the Westinghouse Electric Corporation, who took over, about 1940, the company that originally built the mill. An information centre, museum of artefacts, picnic areas, fishing pool, hiking and nature trails and an amphitheatre are also planned.

Coloma, population now 250, once had over 10,000 inhabitants. It was the birthplace and early focal point of the gold rush. This followed the discovery of gold in January 1848, in the tail race of John Sutter's mill by James Marshall. The great gold rush then began. The surviving residents are now dependant on tourism based on this association and up to 500,000 tourists visit the site each year. The Gold Discovery Museum is both a museum and interpretation centre devoted to this history of gold. Sutter's Mill is an exact replica of the earlier timber mill, the construction of which led to the discovery of gold here, although it is not on the precise spot. The statue of James W. Marshall in a park on a hill nearby points to the spot where gold was found.

From this park there are many trails, well defined and with marker posts, indicating the history of the ruined buildings en-route. Mining artefacts are to be found in every odd corner within the village most of which now forms the Marshall Gold Discovery State Historic Park. Brochures are available for the Park and the Trails which obviously form a mecca for every Californian interested

in his past.

Auburn 'the oldest gold mining town in the West' has cashed in heavily on its mining past. Here commercialisation of mining historical associations has probably reached its peak. Nearly every feature that has been mentioned elsewhere is to be found in Auburn from the multiplicity of gem and antique shops to the dedicated 'Dry Diggin's Discovery' and 'Sourdough Days.' A focal point is the 45-ton statue of a miner, a memorial to Claude Chana who discovered gold here in 1848. As yet there is no 'underground experience' and the general air of authenticity seems to have been lost. North of Auburn the character of the Mother Lode Country changes from rich rolling hills to pine-forested mountain slopes. From an elevation generally less than 2,000 ft to the south the Highway itself reaches a height of 6,700 ft at its highest point at Yuba Pass in the north and even in early May the snow-line is at about 5,000 ft.

The town of Grass Valley was an important mining centre for over 100 years until the last large mine, the Empire Mine, closed in 1956. This mine is now being formed into a State Historic Park. The complex employs 12 full-time (4 maintenance and reconstruction, 2 groundsmen, and 6 on visitor reception.) In addition there are over 100 volunteer assistants. At the time of the visit facilities included tours of the mine owner's house and of mine-surface remains, a small visitor centre and a shop. Some substantial structures remain at the mine but for the present the 'underground experience' is limited to peering through an iron grille down the electrically lit inclined shaft. In 1981 over 11,000 persons visited the mine but it is hoped to increase this to 150,000 persons per year when the underground feature is available. The area around the mine is being sympathetically landscaped, iron ropes on posts made of lengths of rail being used as fences and even the remotely placed modern concrete ore-bins retained as features in the forest landscape.

Nearby is the North Star Mine Power House which was the first complete water-powered compressed air transmission plant of its kind, with power generated by 30 ft diameter Pelton Wheels which are still in place. Around this central feature other mining artefacts have been re-erected making this the finest mining museum in the Lode Country. It contains a bookstall and a well informed guide but as it is run by an Historical Society there are limited hours of opening.

The area north of Grass Valley is lightly populated mountain country, its principal features are its scenery and recreation potential. In an attempt to attract more tourists three major mining features are being developed at Malakoff Diggins State Historic Park, at Plumas Eureka State Historic Park and a new 'County Park' based on the substantial remains of the Kentucky Mine which closed in 1944.

The Kentucky Mine at Sierra City is now being developed as the Sierra County Historical Park. Of all the abandoned mines in the area it was chosen in 1974 because of its historic value, excellent condition and accessibility, even so it was only just below the snow-line in May 1982. The well preserved timber-built mill contains a unique set of eight stamps which are operated on special open days once or twice a year, the power coming from a 5 ft diameter waterwheel. A husband/wife act as curator/wardens and as well as the mining feature run a small gift-shop and museum. Short underground tours are available and a mock-up miner's cabin has been constructed although the modern timber design looks completely out of place. 1,400 persons paid one dollar admission to the site in 1981.

Malakoff Diggins is mainly a scenic trip involving 10 miles of dirt road travel and a hike around the rim to a lookout point. The pit is 7,000 ft long, 3,000 ft wide and 600 ft deep. There is a small mining museum at the visitor centre. Several other similar but smaller hydraulic pits are found in this area.

Plumas-Eureka Park covers 5,000 acres and includes the ghost town of Johnsville. It is the only State Park that "memorializes hard rock mining days". The principal mine had over 65 miles of tunnels but no underground trips are yet available to tourists. The 8-stamp mill is at present being restored and a hard-rock mining museum is being developed. Outdoor recreation will however remain the principal focus of this park since it is affected by deep snow for long periods between October and April each year.

Bodie State Historical Park is now a ghost-town. It is situated east of Yosemite at over 8000 feet, with 20 feet deep snows in winter. Despite this, after a slow start following the discovery of gold there in 1859, its population rose to over 10000 in the 1880s. There were few women except in the town's 65 saloons, and the town was described as "a sea of sin" with (it is claimed) at least one murder a day. By 1890 rapid decline had set in and a fire in the 1930s nearly finished the town off. Since 1962 the town has been maintained in "a state of arrested decay", and a trail covering 64 historic buildings and features has been established. It is California's "most genuine gold mining ghost town".

About 30 miles north east of San Francisco lies the coal mining area known as the Mount Diablo Coalfield. This hilly area south of Antioch and Pittsburg has been designated the Black Diamond Mines Regional Preserve and its coal and sand mining remains are being transformed into a major mining tourist attraction.

Coal mining commenced in 1855 from three thin seams of coal and soon there were six towns, each of about 1,000 persons, many of whom were from Wales. For a while the mine, and towns, flourished, the work was dangerous but the Welsh families tried to emulate the social life they had known in Wales. Choirs, chapels, brass bands, schools and institutes thrived. By 1906 however the last coal mine had closed and the inhabitants of the towns had moved elsewhere many taking their timber houses with them. From 1922 to 1949 the underground mining of sand for use in local foundries brought short-lived prosperity to the area again.

The mine towns have now completely gone, all except for a few raised platforms alongside green pathways and a cemetery perched high on a hill. Under the Preserve Management features are now being developed to attract tourists. The Rose Hill Cemetery has been tidied up and the Welsh epitaphs can again be seen and read. Guides translate into English the epitaphs and sad tales of the past "three Welsh boys, killed in a pit, far from home, 1876", and the many Welsh names, the Jones, Davies, and Watts. Nine of the mine adits have been reopened and guided tours are made of one of them, the Eureka Coal Slope, which was also used as a part of the Greathouse Sand Mine. Visitors are provided with helmets and hand-torches and guides give a full description of the workings. Because of the mine's association with coal seams, methanometers and oxygen deficiency meters are carried and regular tests made. The houses of the old miners are now being re-purchased and transported back to the Park wholesale. A group of four are temporarily positioned near the north gate and it is hoped to reconstruct one of the towns. Mining, nature, geology, archaeology and social history all form the basis of guided walks in the Preserve.

The 3,433 acre Preserve also contains the usual country park features, barbecue areas, amphitheatre and marked trails. About 10 rangers are employed full-time and off-season work included the reopening of other mine entrances such as the Hazel Atlas Portal in which a battery loco is being used to remove debris. The Contra-Costa County Park System, of which this is one unit, employs over 300 persons throughout its 40 units.

There are many other features of interest based on the natural resources of the San Francisco area and their exploitation, the Golden Gate Bridge, the former island prison and the historic hill-climbing tramcars to list but a few. Another feature, the Old Mint, the only substantial survivor of the 1906 earthquake and fire, as well as still being in use for Mint purposes, is open to the public. After a preliminary filmshow, guides tell the history of mining and minting as visitors pass through the various rooms. Part of the building is used as a museum with 'pioneer Gold Coins'; western art display and antiques.

The railway system of California and its history is also an important tourist attraction with often a mining origin or association. There are some very scenic preserved lines, for example, the Californian Western Railroad (The Skunk), Castro Point Railway, Roaring Camp and Big Trees Railroad, Westside and Chery Valley Railroad and the Yosemite Mountain Sugar Pine Railroad. There is a fine Railroad Museum in Sacramento and even the surviving commercial systems are of great interest, the double deck train commuter services in the Bay area being a case in point.

ACKNOWLEDGEMENTS

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SUGGESTED READING

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3. Industrial Tours in California, published annually by ACSC (free to AA members). 2601 South Figueroa Street, Los Angeles, California 90007.
4. California Ghost Towns, published by ACSC, 1982 (free to AA members). 2601 South Figueroa Street, Los Angeles, California 90007.
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7. Disneyland - a pictorial souvenir, published by Walt Disney Productions, 1981, 34pp, \$4.00
8. Rancho La Brea by C. Stock, published by Los Angeles County Museum of Natural History, 1972, 81pp, \$1.50. 900 Exposition Boulevard, Los Angeles, California 90007.
9. The Mount Diablo Coalfield, published in "California Geology" by the California Division of Mines and Geology, March 1980, pp51-60. PO Box 2980, Sacramento, California 95812.
10. Black Diamond Mines by John Waters, in "Underground Space" Volume 2, pp.143-150, 1978. Pergamon Press, Great Britain.
11. Mines of the High Desert by R.D. Miller. La Siesta Press, 1968, 72pp. \$2.50. Glendale, California.
12. Calico Ghost Town - site guide by Knottsberry Farm Publications, 50pp. \$2.00. Calico Ghost Town Regional Park, PO Box 638, Yermo, California 92398.
13. The Story of Borax published by U.S. Borax and Chemical Corporation, 1979, 56pp. (free to callers). 3075 Wilshire Boulevard, Los Angeles, California 90010.
14. Bodie Bonanza by Warren Loose. Exposition Press, 1971, 246pp. \$10. 50 Jericho Turnpike, Jericho, New York 11753.

A range of guides to each of the State Historic Parks is published by the California State Resources Agency, Dept. of Parks and Recreation, P.O.Box 390. Sacramento, 95811.

Tourist leaflets are usually available from local Tourist Information Offices, Chambers of Commerce and Visitor Centers.

NOTE: Costs of admission and publications may have increased from those quoted.