

Use of the area for nonconsumptive activities, such as backpacking and hiking, increased after Wilderness designation in 1984. Hunting continues to be the primary recreation use. Consequently, most use has not been trail-oriented with the exception of the Little Malheur River zone. Two trails, comprising 10 miles, are presently maintained in the Wilderness. Old jeep trails used mostly by hunters are visible and also provide foot access for much of the Wilderness

Trailhead facilities are nonexistent for this Wilderness. There is a need to develop trailheads at each end of the Little Malheur River.

Table III-20 summarizes 1985 recreation use for the Monument Rock Wilderness

TABLE III-20: Monument Rock Wilderness Recreation Use (1985 data)

Activity	Malheur National Forest (RVDs)	Wallowa-Whitman National Forest (RVDs)	Percent of Total
Camping	271	0	12
Swimming	2	0	0
Sightseeing	4	0	0
Fishing	50	0	2
Hiking	434	50	22
Hunting	768	415	52
Horseback Riding	186	20	9
Cross-country Sking	39	15	3
Other	6	0	0
TOTAL	1,760	500	100

Most recreation use is well-distributed in Monument Rock Wilderness, with road access to Table Rock being a major entry point. Recreation use patterns and amounts may change as this new Wilderness is discovered by recreation users.

Demand for Wilderness recreation has not approached the limits of acceptable change and additional capacity exists. Demand is expected to increase by 80 percent between now and the year 2030. Capacity of the Monument Rock Wilderness has been estimated at 9,591 RVDs. Existing Wilderness recreation use averages 1,800 RVDs (19 percent of capacity).

11 Minerals

Minerals, and gold in particular, have had an important influence in growth and development of the area influenced by the Forest (see Table III-21). Important gold- and silver-producing districts for the area were Susanville, Quartzburg, Middle Fork, Greenhorn, and Idol City (see Figure III-16 and Table III-22)

Locatable mineral deposits on public domain lands may be prospected for, and extracted, under the 1872 mining law, as amended and supplemented. Administration of general mining laws is a responsibility of the Bureau of Land Management (BLM). Joint administration of the mining laws on National Forest System lands is provided by a 1957 Memorandum of Understanding between the BLM and the Forest Service. Regulations covering surface use of National Forests under the mining laws were developed in 1974 to provide for orderly development of locatable mineral resources and for subsequent reclamation of the land

All lands on the National Forest are open to mining except areas specifically withdrawn from mineral entry, or areas on which rights to locatable minerals are reserved to a private party. The Wilderness Act of 1964 allowed prospecting for locatable minerals and location of mining claims until December 31, 1983. The passage of that date has withdrawn the Strawberry Mountain Wilderness Area from mineral entry. The Oregon Wilderness Act of 1984 withdrew additional acreage as additions to the Strawberry Mountain Wilderness, and for the new Monument Rock Wilderness. Mining claims which predated these withdrawals and which contain valid discovery of a valuable mineral, may continue to be worked under the mining laws subject to constraints of the surface management of wilderness. Table III-23 shows the acres withdrawn from principal mineralized areas on the Forest.

A potential for locatable minerals exists almost anywhere on the Forest. But some areas have more likelihood of mineral occurrence than others. Areas on the Forest have been classified according to their mineral potential, with classes ranging from I-High to V-Low or unknown (see Appendix F for a description of evaluation criteria for the various categories).

Western portions of the Forest are within the Columbia Basin of Oregon and Washington. It has been recognized for many years that the Basin has potential for oil and gas within or beneath the layers of lava known as Columbia River basalt. Exploration has been limited and sporadic due to hard drilling in, and difficulty of exploring beneath, the basalt. Carbonaceous sediments provide a potential source of oil and gas, and porous volcanics provide suitable reservoirs. Recently, numerous interests, including major oil companies, have obtained leases in the vicinity. During the 1985 fiscal year, 219,828 acres were under oil and gas leases, producing \$196,950 of revenue, half of which was returned to the State of Oregon.

Figure III-17 shows areas considered prospectively valuable for oil and gas by the U.S. Geological Survey. Leases and lease applications have been received for lands outside, as well as within, the prospectively valuable areas. Many applications were later withdrawn and several leases have now terminated. To date, no drilling has occurred.

TABLE III-21: Total Production of Minerals from Northeastern Oregon and Malheur National Forest Vicinity

Northeastern Oregon*	Malheur National Forest Vicinity*
3,526,300 ounces gold	102,900 ounces gold
5,111,900 ounces silver	766,700 ounces silver
18,940,000 pounds copper	272,000 pounds copper
312,000 pounds lead	15,112 long tons chrome ore
41,000 pounds zinc	8 flasks mercury
20,000 long tons chrome	
390,000 short tons lime	
122 flasks mercury	
1983 Metal Prices	
Gold (Au)	\$399 72/oz
Silver (Ag)	11 45/oz
Copper (Cu)	0 793/lb
Chrome ore (Cr)	50.00/long ton
Mercury (Hg)	322 44/flask

*Value at 1983 prices \$1,484.2 million for northeastern Oregon; \$51 million for Malheur N.F. vicinity

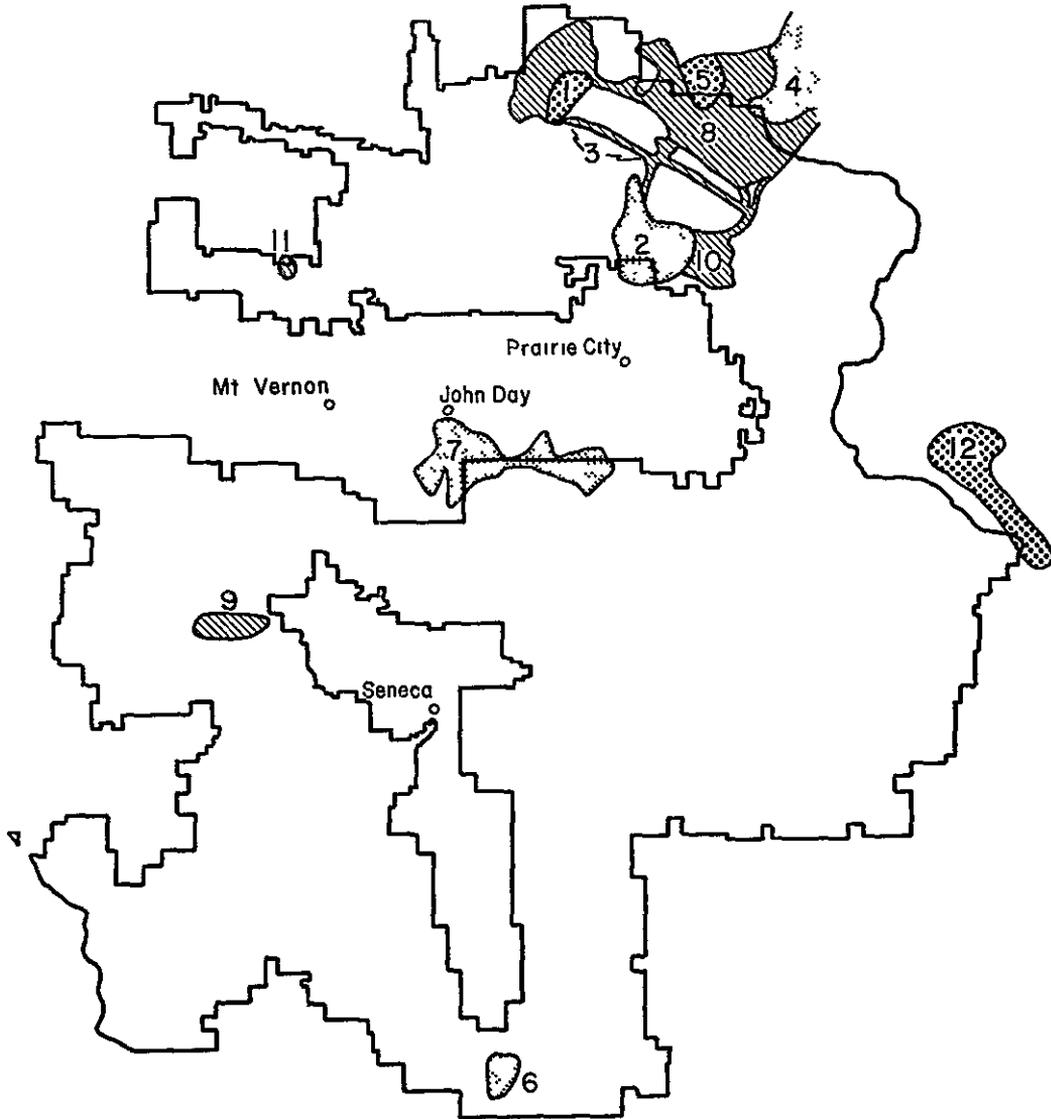
TABLE III-22: Key to Mineralized Areas on the Malheur National Forest
(Production figures are for areas within and immediately adjacent to the Forest)

Map No.	District/Category	Past Production Estimates	Value @ 1983 Prices	Current Activity and Estimated Potential
1	Susanville II	40,000 oz. Au 646,000 oz. Ag	\$23,386,000	Numerous lodes; a few placerclaims Large exploration program by major company. Good potential for vein-type silver and gold production.
2	Quartzburg III	31,800 oz. Au 16,700 oz. Ag 272,000 lb Cu	\$13,118,000	Many claims on Forest and adjacent BLM land Most activity around Dixie Meadows Mine. Potential for gold, silver, copper, and cobalt
3	Middle Fork IV	23,000 oz. Au 3,900 oz. Ag	\$ 9,238,000	Past placer production; most land in private ownership Unmined sections have potential for placer gold production.
4	Greenhorn III	4,400 oz. Au 800 oz. Ag	\$ 1,768,000	Many claims; Most of the area is off the Forest. Generally small targets in Forest area, no interest by large companies
5	Ben Harrison Peak III	500 oz. Au 96,000 oz. Ag	\$ 1,299,000	Many claims; substantial exploration activity. Good potential for silver and gold production.
6	Idol City III	2,400 oz. Au 600 oz. Ag	\$ 966,000	Entire area claimed by one company exploring for epithermalgold deposits. Future activity may depend largely on results of current exploration program

TABLE III-22: (continued)
 (Production figures are for areas within and immediately adjacent to the Forest)

Map No.	District/Category	Past Production Estimates	Value @ 1983 Prices	Current Activity and Estimated Potential
7	Strawberry III	15,000 lt Cr ore	\$750,000	Substantial gold production off-Forest in past. Potential for chrome on-Forest limited by small deposit size and erratic occurrence.
8	South Slope IV	800 oz Au 2,700 oz Ag	\$351,000	Numerous lode and placer claims currently being prospected, but no large projects. Some potential for gold, silver, and possibly copper and molybdenum.
9	Flagtail Mountain IV	8 fl Hg	\$2,600	Some gold prospects associated with mercury, indicating some potential for epithermal gold deposits.
10	Dixie IV	Unknown	Unknown	There is evidence of past placer production and lode prospecting. Hydrothermal alteration extends from the adjacent Quartzburg area onto this area. Exploration for lode deposits, and some placer gold production, is expected to continue.
11	Black Butte IV	Unknown	Unknown	A few lode and placer claims are currently held in the area, and a small seasonal production comes from the placers.
12	Unity II	None	None	This area is primarily under claim to one large company interested in gold and copper-molybdenum mineralization. The Malheur Forest portion of the area is away from any historic mining activity, and it is unlikely that any substantial mining activity will occur on the Forest in the near future.

FIGURE III-16: Mineralized Areas



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MALHEUR NATIONAL FOREST MINERALIZED AREAS

Numbers from Production Table

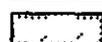
-  Category II
-  Category III
-  Category IV



TABLE III-23: Acres Withdrawn from Mineralized Areas

Locatable Mineral Category	Map No.	Area Name	Gross Acres	Private Ownership	Net National Forest	Acres Withdrawn	Localized Minerals Reserved
II	1	Susanville	4,400	1,000	3,400	20	0
	5	Ben Harrison Peak	1,108	8	1,100	0	0
	12	Unity	200	0	200	0	0
III	2	Quartzburg	11,250	250	11,000	0	0
	4	Greenhorn	310	10	300	0	0
	6	Idol City	3,620	320	3,300	0	0
	7	Strawberry	8,100	100	8,000	5,510	0
IV	3	Middle Fork	5,300	2,400	2,900	280	54
	8	South Slope	40,948	648	40,300	60	4,677
	9	Flagtail Mountain	4,500	0	4,500	0	0
	10	Dixie	5,620	220	5,400	0	345
TOTALS			85,356	4,956	80,400	5,870	5,076

The Forest Service has no statutory responsibility to issue leases or permits on lands reserved from the public domain. The Mineral Leasing Act of 1920 reserves this authority for the Secretary of the Interior. The "Federal Onshore Oil and Gas Leasing Reform Act of 1987" provides the Secretary of Agriculture with consent authority for issuance of oil and gas leases on National Forest System Lands. This Act also provides that no drilling permit for an oil or gas lease may be granted without the analysis and approval of the responsible Forest Service official. On acquired National Forest System lands, the "Mineral Leasing Act for Acquired Lands" of 1947 requires consent by the Secretary of Agriculture prior to leasing of the mineral estate.

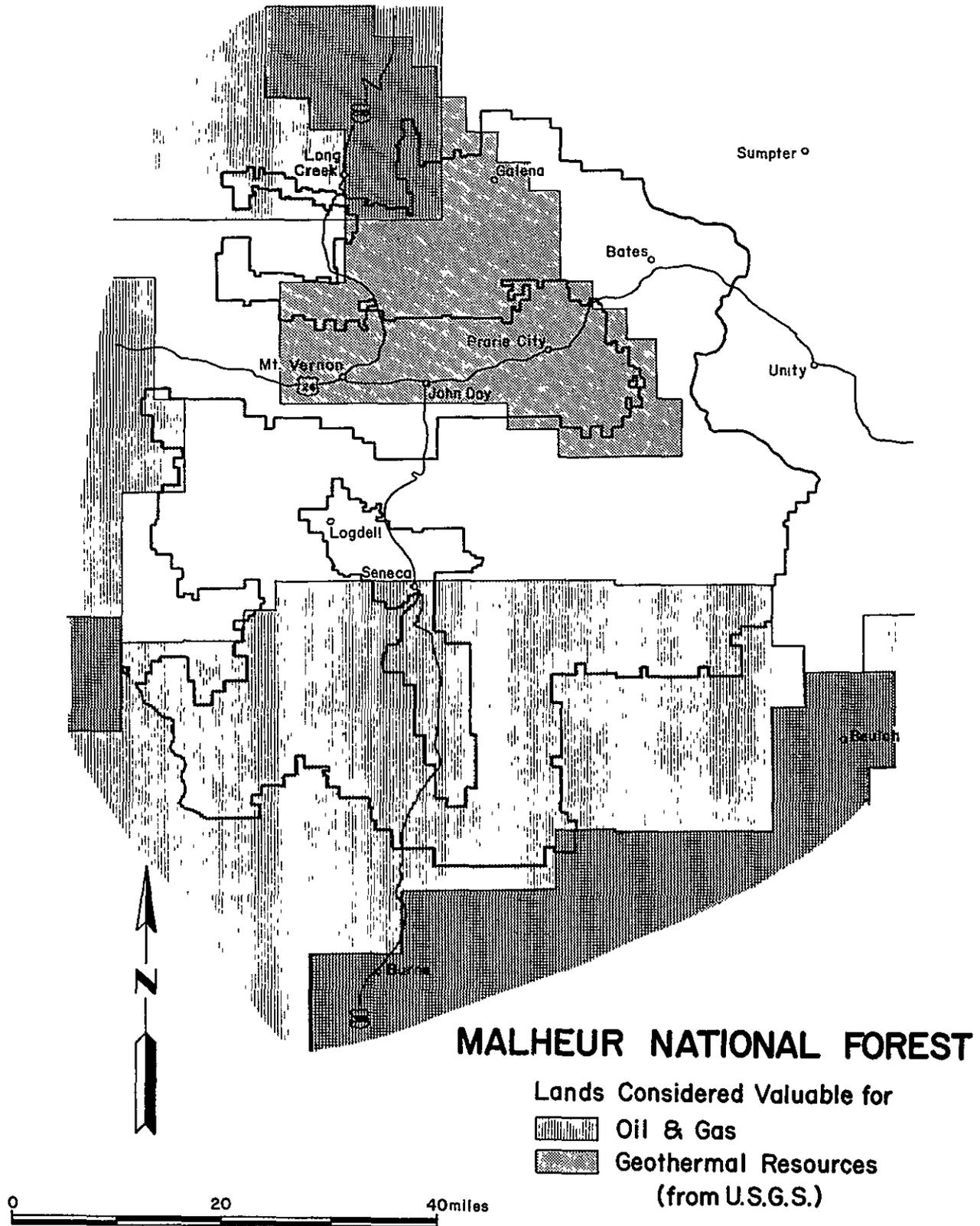
Although a few hot springs are known to occur in and near the Forest, there does not seem to be a high potential for geothermal resource development. There currently are no geothermal leases or lease applications within Forest boundaries. The U.S. Geological Survey considers some lands prospectively valuable for geothermal resources in the vicinity, some of which partially overlap the Forest boundaries (Figure III-16). Should interest in geothermal exploration develop, the Geothermal Steam Act of 1970 requires that geothermal leasing on National Forest System lands be subject to the consent of, and conditions prescribed by, the Secretary of Agriculture.

Sand, gravel, crushed rock, building stone, and some limestone occur within the Forest boundaries. They are all low unit-value materials which must be near transportation routes, and usually the point of consumption, to be used. The Forest Service may dispose of obviously common mineral materials like cinders, building stone used for construction purposes, river rock, and rock or sand to be used for aggregate or road construction.

a Relationship Between Forest Management and Minerals

In order to comply with applicable cultural resource protection laws and regulations, an inventory must be conducted to determine if cultural resources are present on affected sites before the Forest Service approves any mineral-related activity. In addition, if cultural resources are discovered during a mineral activity, the operator must cease operation and notify the Forest Service immediately. For leasable minerals, all costs of protection and mitigation are borne by the operator. If impacts cannot be satisfactorily mitigated, surface occupancy of the site is prohibited.

FIGURE III-17: Areas with Potential for Oil and Gas



For locatable minerals, approval of an operating plan is required before beginning any substantial ground-disturbing activity. The General Mining Laws give the miner the right to mine in an area of a cultural resource site, but the miner must bear all costs of protection and mitigation.

Wildernesses are withdrawn from all forms of appropriation under the mining and mineral leasing laws, subject to any valid existing rights established prior to the date of withdrawal.

12 Air Quality

Throughout time, fire has played a significant role in development of forest environments. To date, smoke has not caused significant problems within or adjacent to the Forest.

Predominantly light southwest winds during the spring, summer, and fall result in relatively clean, clear air. Visibility in the Blue Mountains is considered a prime asset by residents and visitors.

Prescribed burning is the only temporary emission source from the Forest of any significance. Prescribed burning is used for removal of logging residue, site preparation for reforestation, maintenance of range and wildlife habitats, and enhancement of specific fire-dependent plant communities. Most prescribed burning activity takes place in late fall and early winter.

Current policy for management of slash and other activity residues emphasizes utilization of the wood fiber.

Currently, prescribed burning on the Forest is producing approximately 604 tons of total suspended particulates (TSP) annually. This amount of TSP has not had any significant effect on either Wilderness or nonwilderness parts of the Forest. With greater wood utilization and a reduction in fuel treatment, the total amount of TSP is expected to decline in the future.

Commercial chip log sales and firewood sales have contributed to a reduction in slash burning on the Forest. As the supply of dead lodgepole pine is depleted and cogeneration plants are completed, utilization of logging residue should increase.

Cogeneration plants generally burn more efficiently than the old wigwam burners. For that reason, it is expected that cogeneration plants will produce less particulate matter per cubic foot of biomass burned than do wigwam burners. But because of their ability to produce electricity, cogeneration plants may consume more cubic feet of biomass. The overall result may be an increase in particulate matter dispersed into the air.

Local woodstove use has not been shown to have a significant effect on air quality. To date, no restrictions on use have been deemed necessary.

Air quality standards are considered when activities are planned. The Forest complies with all applicable air quality laws and regulations, and coordinates with appropriate agencies and the State of Oregon on smoke management. The main concerns are those areas having Class I visibility standards. On this Forest, only the Strawberry Mountain Wilderness has such standards, although the Monument Rock Wilderness is also being managed to meet it.

The predominantly southwest winds tend to carry any Forest-related smoke away from heavily-populated areas like Boise, Idaho. All air quality effects have generally dissipated by the time they reach other Class I airsheds over the Eagle Cap Wilderness or the Selway-Bitterroot Wilderness in Idaho.