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The Economic Development of Moab, Utah

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THE ECONOMIC DEVELOPMENT OF MOAB, UTAH

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF ILLUSTRATIONS

CHAPTER I

INTRODUCTION

"The agricultural village was the basis of the economy of early Utah."[1] The viability of these villages lessened with increasing agricultural technology and economic centralization. Most of these communities either reached a growth climax and then declined, or grew with the addition of other economic functions. However, some villages were limited as to resources and extent of developable land. Such marginal sites, worsened by relative isolation, complicated the search for economic functions. Many of the communities of southeastern Utah found themselves in this position of limited agricultural resources and isolated location. The purpose of this study is to trace the economic development of one of these communities--Moab, Utah.

Statement of Problem and Justification

Moab is not representative of the original agricultural villages of southeastern Utah. Marginal to the Domain

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[1]Richard H. Jackson, "Meadow, Millard County, Utah: The Geography of a Small Mormon Agricultural Community" (unpublished Master's thesis, Brigham Young University, 1966), p. 1.

of the Mormon Culture Region,[1] its settlement and development differed from the rest of Utah. Moab's development has involved a varying mixture of Mormon and non-Mormon influences from its initial settlement down through its present economic development. Also, Moab has been more fortunate in its broadening of economic function than have its neighboring communities. This study will search into the underlying factors which affected the development of this atypical example of the isolated communities of southeastern Utah.

Many communities of the American West have faced the problem of finding new sources of economic revenue to prevent population decline in a world of increasing technology and specialized activities. Moab has grown due to the addition of economic functions, but it is unclear whether it can maintain its stability in the future. This study will attempt to analyze those factors which might help other small towns with similar economic problems in their future planning.

The study of the economic development of Moab is related to geographical research. Basic to a geographic viewpoint is man's use of the land and its resources. In studying the economic development of Moab, the physical resource base has presented possible economic uses. Much of the economic development of Moab is an expression of the possibilities of the physical environment.

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[1]Donald W. Meinig, "The Mormon Culture Region: Strategies and Patterns in the Geography of the American West, 1847-1964", Annals, Association of American Geographers, LV (1965), 191-220.

The aims of this study are similar to those found in other past geographic research. The study of economic functions of cities have been most notably researched by Harris[1] and Nelson.[2] Their studies attempt to derive the chief economic function of major American cities, just as this study of Moab attempts to do this in a time sequence. More local settlement studies have been done in Utah. One of the earliest by a geographer was by Spencer on agricultural villages in southeastern Utah.[3] More recently, an in-depth case study of one of these settlements was done by Jackson.[4] Another settlement study which is external to the Mormon Culture Region, yet locally important to Moab, is a study by Barber on the nodality of Grand Junction.[5] Many of the topics covered in these different investigations will be explored in this study of Moab. These topics are common to much other geographic research.

Location and Extent of Area

Moab is located on the Colorado River in south-

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[1]Chauncy D. Harris, "A Functional Classification of Cities in the United States", Geographical Review, XXXIII (1943), 86-99.

[2]Howard J. Nelson, "A Service Classification of American Cities", Economic Geography, XXXI (1955), 189-210.

[3]J. E. Spencer, "The Development of Agricultural Villages in Southern Utah", Agricultural History, XIV (1940),

[4]Jackson, "Meadow, Utah".

[5]William M. Barber, "An Analysis of the Role of Grand Junction, Colorado as a Regional Capital" (unpublished Master's thesis, University of Utah, 1970).

eastern Utah. It is situated about 200 air miles southeast of Salt Lake City. The nearest nodal centers are Price, Utah (100 air miles), and Grand Junction, Colorado (70 air miles). Moab is relatively isolated from these other areas with few people between. (Fig. 1).

Moab is in the southern portion of Grand County, and is its county seat. The town lies in the middle of Moab Valley, about two miles from the passing Colorado River. Moab Valley runs in a northwest-southeastly direction with its southeastern extension known as Spanish Valley. Moab is situated near several important physical features: Arches National Park to the north, Canyonlands National Park to the west and the La Sal Mountains to the east. These areas and nearby communities will be studied only as to their significance to Moab's economy and regional relations. The focus of study will be on the community of Moab, and its immediate hinterland of Moab Valley.

Overview of Study and Methods

Several aspects of more detailed geographic study will be explored. Background will be given on the physical site of the larger Colorado Plateau, and Moab-Spanish Valley within. The economic development of Moab and its immediate hinterland of Spanish Valley will be studied as to its initial settlement, historical development of economic functions, and its present economic base. Related to its economic development, study will also be made of the land use of

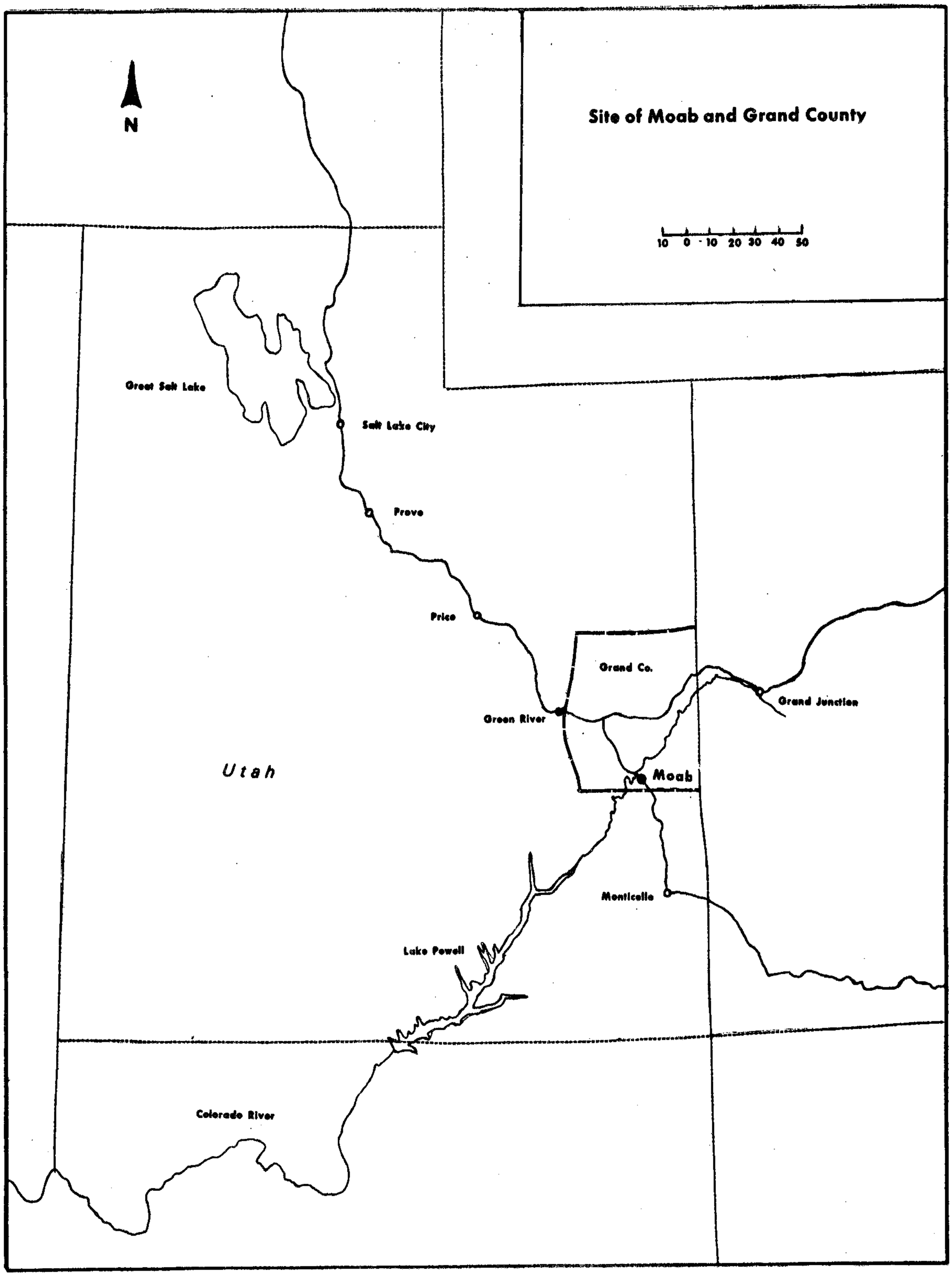

Fig. 1.--Site of Moab and Grand County

Moab Valley, and the regional relations of the town with surrounding communities (i.e., nodality, hinterland, and flows). This study will conclude with an integrative discussion leading towards the future viability and growth prospects of the community of Moab. These conclusions are not meant to be representative of Utah communities, but rather as an atypical case study of an isolated town on a limited resource site.

Much of the material for this study was accumulated from written materials. Consulted sources included histories, newspapers, government documents, county records, periodicals, economic profiles, and planning surveys. These sources proved invaluable especially for historical information on economic development.

Field work was employed to analyze the current situation of the area. Several visits were made for reconnaissance of the general area, and also for more intensive analysis of the current local land use. A sample survey was also taken of residents as to shopping preferences in nearby communities. The archival and field information was combined to form the basis of this study of the economic development of Moab.

CHAPTER II

PHYSICAL SITE

The eastern half of Utah is on the Colorado Plateau. This sparsely populated region is limited to a few, widely dispersed settlements, of which Moab is one. In discussing the physical site, the characteristics of both the general region, and the more immediate Moab-Spanish Valley will be presented.

Colorado Plateau

The Colorado Plateau province occupies about 150,000 square miles of the Four Corners region (in Utah, Arizona, New Mexico, and Colorado). It is a hydrological unit as it forms a tributary basin for the Colorado River. However, the rationale for the physiographic region is not only based on drainage. The area forms a broad plateau which rises above the Basin and Range Province to the west. This great crustal block forms a slight depression similar to a dish. It slopes upward again to the east and north to the higher Rocky Mountain physiographic province. The elevation ranges from 5,000 feet o n much of the center of the province to over 13,000 feet on the mountainous rims.

The province is characterized by extensive areas of nearly horizontal sedimentary strata. Sections of this

strata have been gently warped by broad uplifts with alternating basins or abrupt folds or monoclinal bends. Also common to the region are fringing areas of extrusive igneous formations such as found in the High Plateaus, San Francisco Mountain, and Mount Taylor areas. However, one of the most distinctive features of the Colorado Plateau is its extremely dissected landscape of canyons and escarpments.

Erosion by fluctuating, swift streams on the plateau is probably unmatched anywhere in the United States. Sporadic rainfall results in much runoff and accompanying sheetwash erosion. In contrast to bordering provinces, the great relief is more the result of incised deep canyons below the broad plateau, rather than uplifted mountain ranges. The differing strength of rock layers has meant differential erosion, with resulting escarpments and angular topography. Most of these structures are of recent origin, with formation being during Tertiary and Quaternary times.

The Colorado Plateau physiographic province has been subdivided into regions within, according to more specialized characteristics. Fenneman has suggested six subregions: Grand Canyon, High Plateaus, Uinta Basin, Canyonlands, Navajo, and Datil sections.[1] Each of these subregions could be studied in detail but that which concerns us most is the canyonlands subprovince, in which Moab is located. (Fig. 2).

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[1]William D. Thornbury, Regional Geomorphology of the United States (New York: Wiley and Sons, 1965), pp. 416-417.

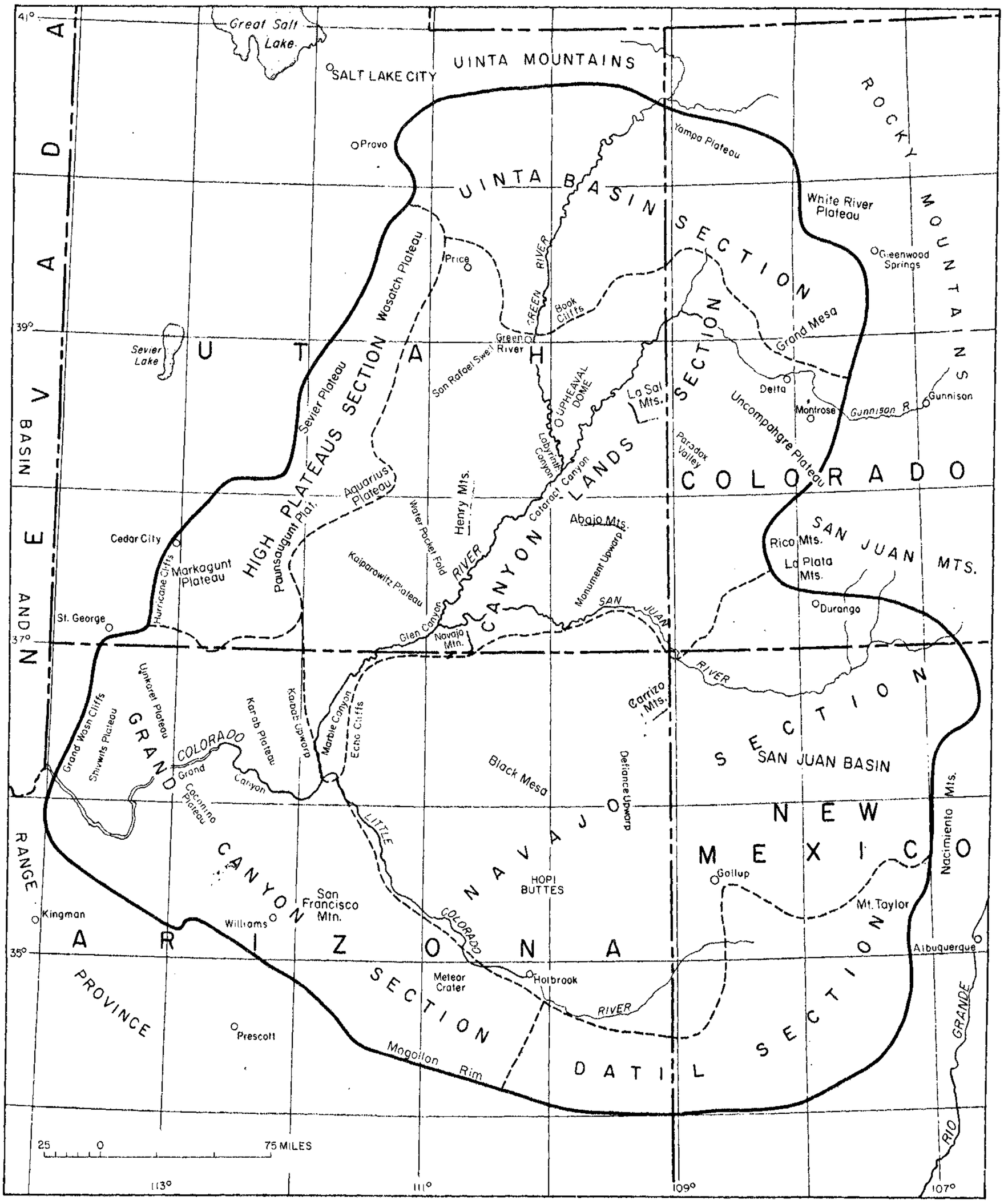

Fig. 2.--Colorado Plateau and its subsections (from Thornbury, Regional Geomorphology, p. 416.)

Canyonlands

The Canyonlands section covers most of southeastern Utah. It is bordered on the west by the High Plateaus, with the Book Cliffs to the north, the San Juan Mountains to the east, and the San Juan River to the south. The distinguishing feature of the province is its numerous, incised canyons, cut in rocks of pre-Tertiary age. The little dissected Sage Plain of southeastern Utah is a notable exception. Canyonlands National Park to the west of Moab is but one of many such areas in the Canyonlands region.

The region has been epeirogenically uplifted with superimposed local upwarps, salt structures (from salt intrusions), and domal uplifts (from igneous intrusions). The La Sal Mountains to the east of Moab are a laccolithic structure, formed by igneous intrusions. Other nearby surface features include San Rafael Swell, Comb Ridge, Henry Mountains, and Paradox Salt Basin. Moab Valley is part of the Paradox Salt Basin which is a series of parallel, discontinuous valleys which trend in a northwest-southeasterly direction. The Salt Valley anticline has created some interesting features in the form of Arches National Park, to the north of Moab. All of these structures within the Canyonlands area make it an area of varied terrain and scenic wonder.

Climate and Water

The location of the Colorado Plateau deep in the interior West is largely responsible for its arid climate.

Though much of the plateau is relatively high, it lies in the rain shadow of higher mountain ridges to the west. The Sierra Nevadas first deplete much of the eastward moving precipitation, with the High Plateaus taking most of the rest. As a result, the Colorado Plateau receives scant rainfall and has an arid to semiarid climate except in the high elevations. Much of the interior receives less than ten inches of precipitation per year, while a maximum of twenty inches is received along the southwestern Mogollon Rim. (Fig. 3).

The aridity of the region is intensified by the high evaporation rate. This is due to the needed rainfall of July and August occurring when the evapotranspiration rate is highest. "Probably 95 per cent of the precipitation is lost by evaporation, transpiration, and seepage into the ground."[1] This phenomena occurring during the limited growing season does not enhance the water resources for agricultural possibilities.

The temperature variations within the area contribute to the harsh environmental setting. "The dry atmosphere contributes to great radiational exchanges between earth and sky, and great temperature fluctuations result."[2] Put simply, the summers are hot and the winters are cold. The cold winters are due to loss of energy from short days,

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[1]Charles B. Hunt, Physiography of the United States (San Francisco: Freeman, 1967), pp. 289-290.

[2]Robert Durrenberger, "The Colorado Plateau", Annals, Association of American Geographers, LXII (July, 1972), 214.

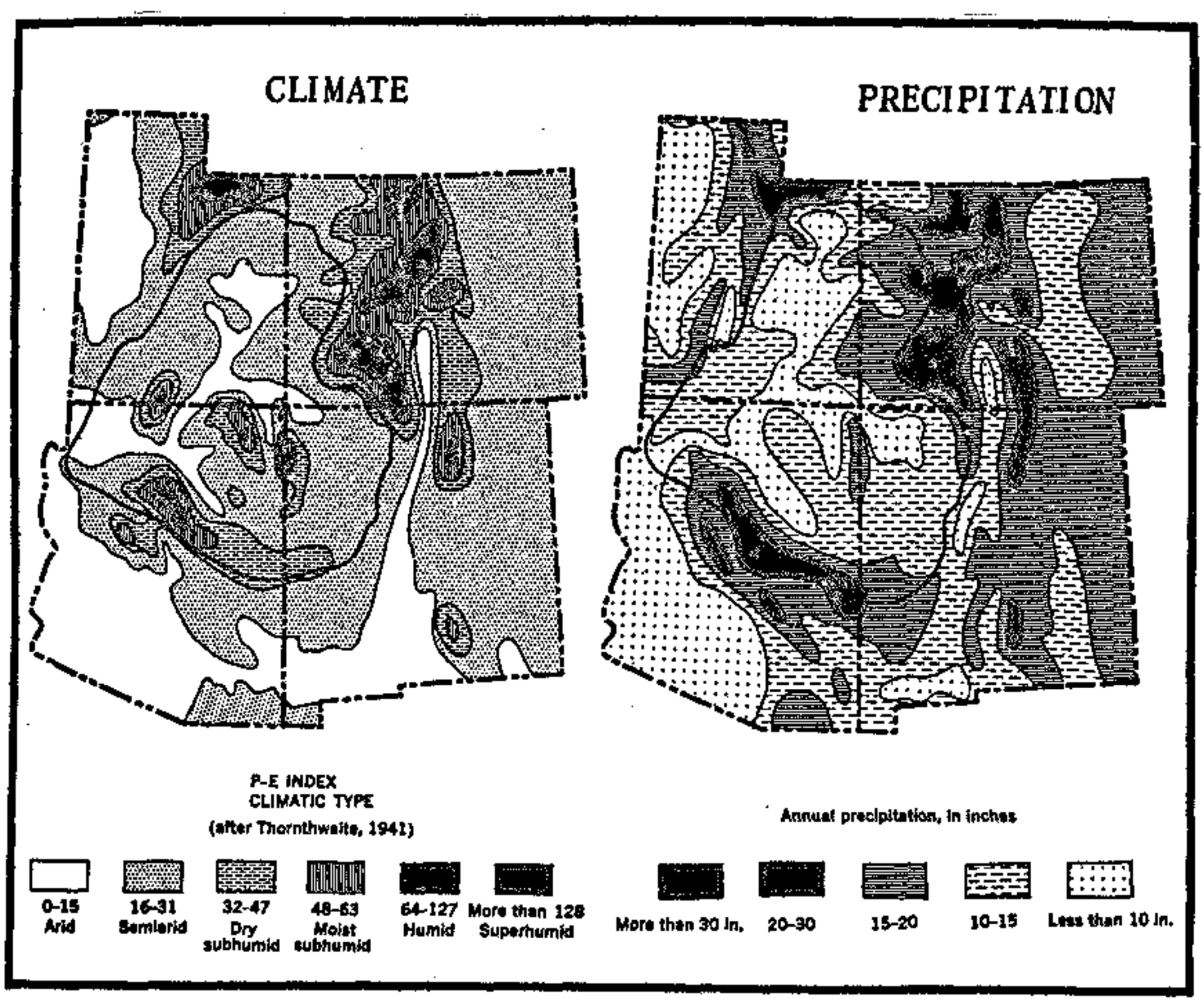

Fig. 3.--Climate and precipitation of the Colorado Plateau (from Durrenberger, "The Colorado Plateau", Annals, p. 215.)

clear dry air, and high elevations. The intense solar radiation of the summer has basis in similar factors (long days, nearly vertical noontime solar rays, clear dry air, and high elevations).[1] As a result, both diurnal and seasonal temperature fluctuations are considerable for the Colorado Plateau.

The aridity and rapid runoff on the plateau make reservoir storage of the winter melt essential. The major perennial rivers are the Colorado, Green and San Juan Rivers (Table 1). The rest are intermittent and flow mostly during

TABLE 1

ANNUAL DISCHARGE OF MAJOR RIVERS[a]

River	Acre-feet
Colorado (above Dolores River)	6,000,000
Dolores	870,000
Green	5,100,000
San Juan	2,100,000
Colorado	14,400,000

[a]Hunt, Physiography, p. 303. Measurement taken at mouth of river except where otherwise noted.

the peak runoff season. Drought and flood vary according to season. The deeply entrenched canyons of the river also make the waters less usable for irrigation of croplands. Only in certain localities are the waters available to irrigate adjacent farmlands. Moab Valley, which intersects the

[1]Ibid.

Colorado in a lowland, is one of these choice areas.

Vegetation and Soils

The harsh climate is expressed in the vegetation and soils. Many of the plants are xerophytic because of the arid climate. The vegetation of much of the interior of the plateau consists of desert shrub (northern deseret), while the isolated mountains and rims of the plateau are forested with spruce, pine and fir. Between these two extremes, the mesas are wooded, with pinyon and juniper on the lower slopes of the mountains. However, the vegetation cover is not continuous. "Despite the vegetation maps, . . . probably a quarter of the Canyonlands section is bare rock."[1] Such meager natural vegetation is indicative of the limited resource base for agriculture.

The soils of the Colorado Plateau are immature and not well developed. The nature of the local soils is often dependent on the underlying material. Such partially weathered soils are known as lithosols. The soils for the entire region may be generalized:

> Recent gray or brown desert soils prevail over much of the Plateau, with small areas of recent alluvial soils along the valleys, and rather extensive lithosols in areas of rapid erosion. In general, the soils below 7,000 to 8,000 feet in the wooded or non-forested zones have a basic reaction; those at higher elevations, acid.[2]

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[1]Hunt, Physiography, p. 291.

[2]Durrenberger, "Colarado Plateau", p. 216.

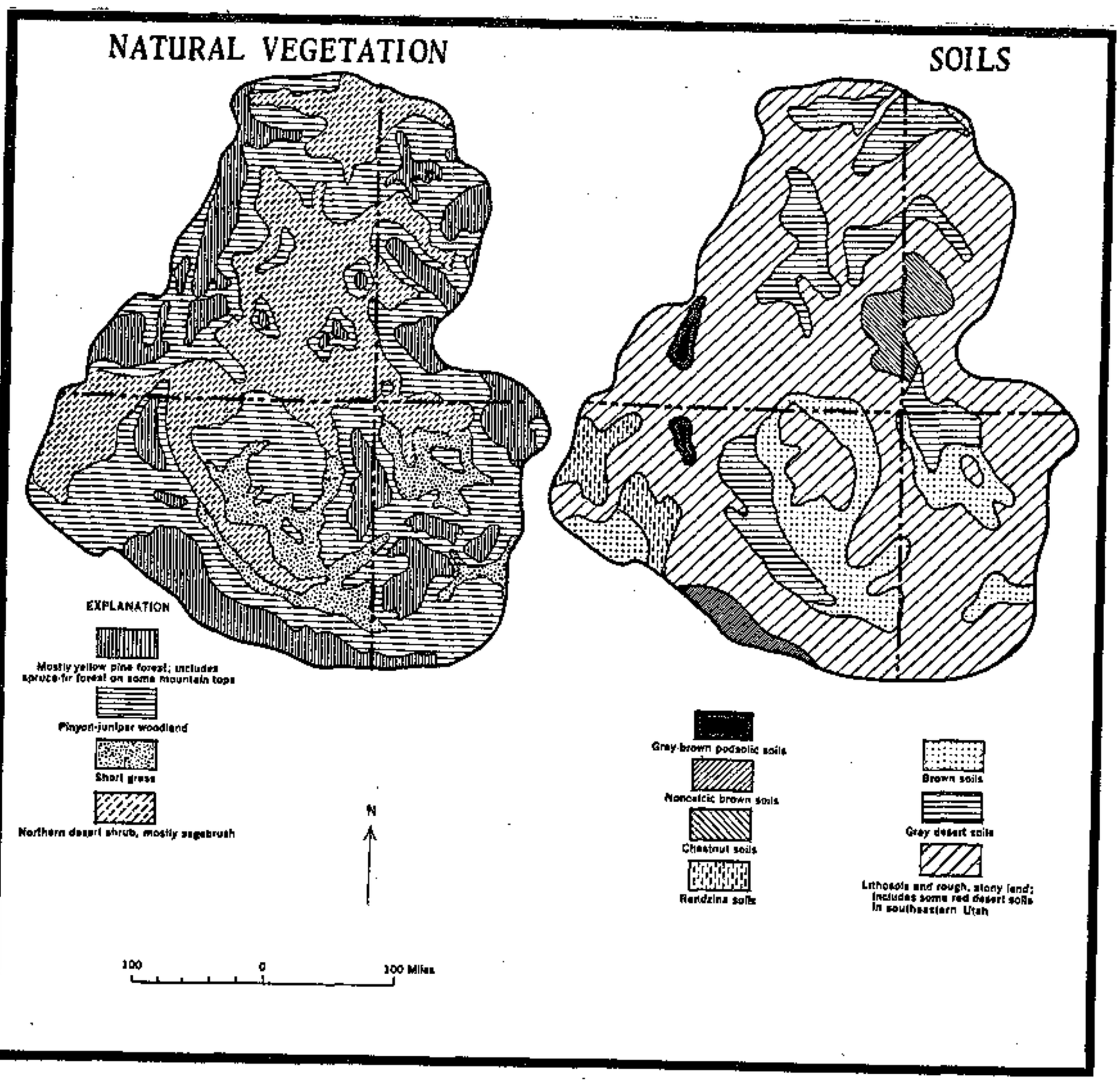

Fig. 4.--Natural vegetation and soils of the Colorado Plateau (from Durrenberger, "The Colorado Plateau", Annals, p. 216.

The alkalinity of lower elevation soils limits the amount of arable lands available for farming. Also, the sparse vegetation and persistent drought make rapid erosion of existing soils a problem. (Fig. 4).

Resources and Land Use

The resource base of the Colorado Plateau has limited its usage. Farming is limited to the better watered alluvial surfaces:

> The two principal farming areas are the floodplain formed by the Colorado and Gunnison rivers in the Grand Junction area (peaches, melons, apples, and vegetables) and the loessial belt in southwest Colorado and southeastern Utah (pinto beans). Other valley areas are farmed, notably in the vicinity of Farmington, New Mexico, and Moab, Green River, and Price, Utah.[1]

The chief limiting factor is water. There is more potential farming land than there is water to irrigate it.

Mineral resources on the Colorado Plateau are usually found in the sedimentary formations. Highest production comes from mineral fuels and uranium. Uranium is a particularly important resource in the Moab area.

The Colorado Plateau was one of the last areas to be developed in the United States, and much of it is still in the public domain. Indian lands account for roughly one-third of the total land area. Much of the rest of the area is used for grazing or as national forest land. Many areas are severely overgrazed as the sparse vegetation cannot support large numbers of livestock. The mountains are used for

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[1]Hunt, Physiography, p. 306.

winter grazing. A more recent usage of the land has been for recreation and tourism. The deeply eroded canyonland landscape, colorful rock structure, and unique landforms such as arches, are significant to the aesthetic appeal of the site. Geological scenery and Colorado River recreation attract numerous people yearly.

All of these aspects reveal what a unique area the Colorado Plateau is. With an arid climate, sparse vegetation and deep canyons, the area has only a sparse population which is relatively isolated from other settlements. However, the colorful deep canyons and landforms are an aesthetic resource for the region. These physical characteristics basically apply to most settlements on the plateau, including Moab.

Moab-Spanish Valley

The town of Moab lies at 4,042 feet elevation in Moab Valley, which extends to the southeast as Spanish Valley. The combined valleys extend from the Colorado River fourteen miles to the southeast. The valley averages about two miles wide. It has a broad floor, with a steep southwestern wall which rises abruptly 1,500 feet above the valley floor. The northeastern side rises more gradually 2,000 feet to Wilson Mesa. Higher mesa lands surround the valley.

Geology

Structurally, Moab Valley is a part of the Paradox Basin region. Moab Valley is in the north central part of this larger region which trends in a northwest-southeasterly

direction along the Utah-Colorado border. The Paradox Basin is about 200 miles long and 115 miles wide. It is composed of a series of discontinuous, parallel valleys (eight major units), one of which is Moab-Spanish Valley. The formational process is similar for most of these structures:

> All of these features are anticlinal structures believed to be due to regional folding, salt intrusion, or a combination of the two. The general form of the anticlines are closely compressed folds, elongated in a northwesterly direction. These structures range from 10 to more than 30 miles in length. Along the anticlinal crests and trending parallel to the axis of folding are narrow fault trenches and grabens. In general, these features are thought to have been formed by collapse of the underlying salt.[1]

Moab Valley was formed by a similar process. It is situated in the down faulted crest of Moab Anticline which trends fifty-three degrees northwest:

> The major anticlinal structure at Moab is primarily the result of regional folding and salt intrusion. The collapse of the anticline at the end of the Cretaceous, of in the Tertiary, was due to solution and displacement of the underlying evaporites and the secondary folds and faults on the limbs of the anticline are the result of differential movement within the downthrown crest of the structure. This differential movement was caused by intrusion and solution of the salt.[2]

The structure of Moab Valley is relatively complex. There are faults on both sides of the valley with the Moab Fault dominating on the southwest side with its resulting steep cliff face. The area has been uplifted and eroded three times, with the process of the third erosion still in

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[1]William Donald Miller,"The General Geology of the Moab Valley, Moab, Utah" (unpublished Master's thesis, Texas Technological College, 1959), pp. 8-10.

[2]Ibid., p. 91.

progress.

The Moab-Spanish Valley may be geologically subdivided further. Nearest the Colorado River is the Moab anticline which is collapsed. This gradates in the Spanish Valley syncline, and finally into the Pack Creek Synclinal graben. The transition between regions is moderated by an extensive covering of alluvium and valley fill. The alluvium was imported by the two parallel streams of the valley, Pack Creek and Mill Creek. These streams are exotic and flow from their headwaters in the snow-ladened La Sal Mountains. The combination of deep alluvial soils and fairly dependable water supply has provided the basis for agriculture in the valley, especially in the lower portions. This is because only Pack Creek flows in upper Spanish Valley. (Fig. 5).

Climate

As on most of the Colorado Plateau, the climate consists of cold winters, and hot summers. With a low elevation, and an interior location, the summer heat and aridity are intensified. The temperatures seasonally fluctuate from a January average low of 29.4°F to a July average high of 78.2°F (see Table 2). The diurnal range of temperature varies from 24.3°F in December to 36.9°F in June. The arid location also accounts for the rapid loss of heat at night. The average daytime temperature is 97.0°F during July, with an average of 61.6°F at night. The January average minimum and maximum temperatures are 41.7°F and 17.3°F respectively.

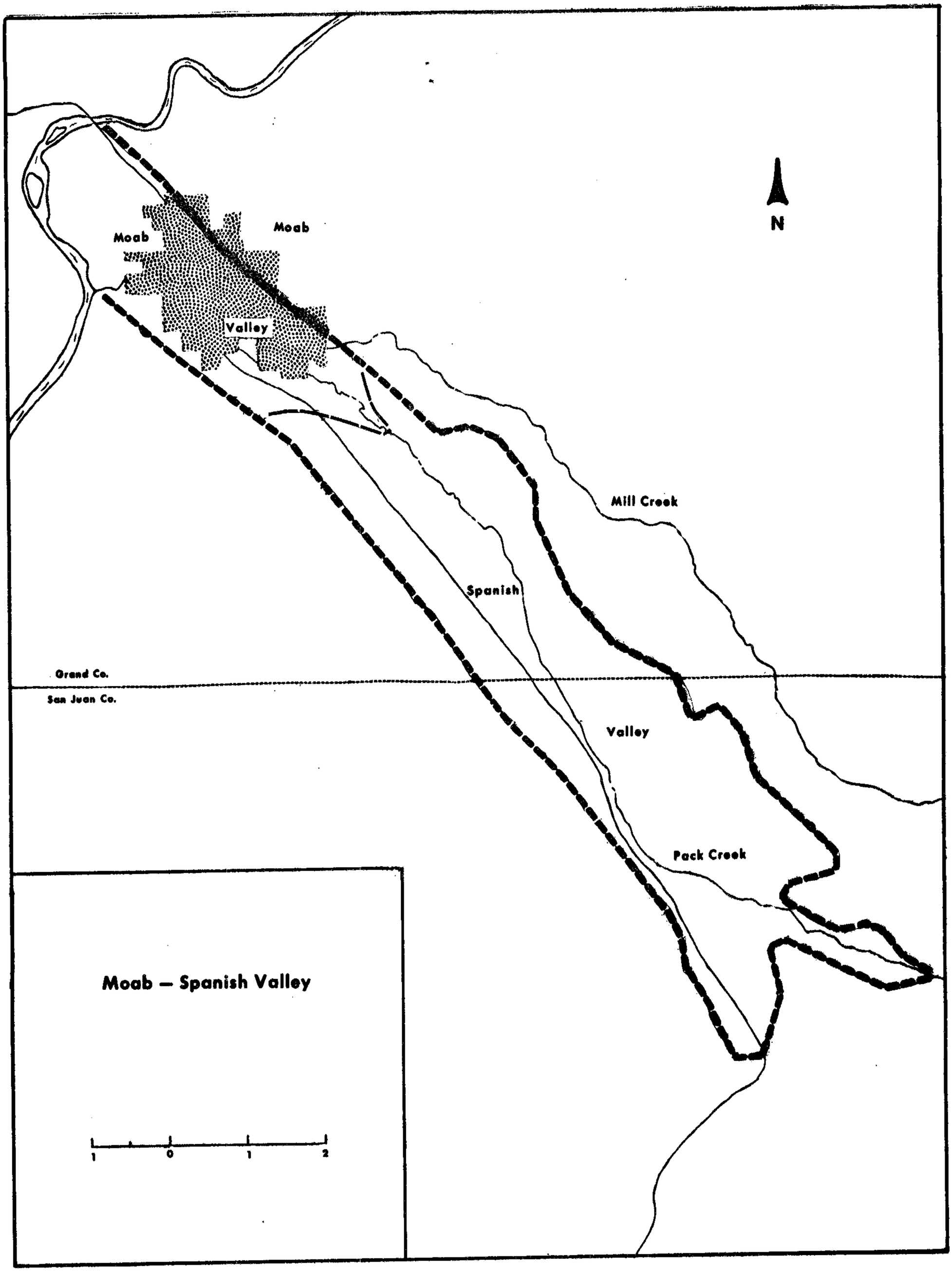

Fig. 5.--Moab-Spanish Valley

The dryness of the winters helps to make the temperature more comfortable. The same is also true for the summer temperature although the heat is still rather excessive.

TABLE 2

TEMPERATURE AVERAGES FOR MOAB, UTAH[a]

Month	Mean	Maximum	Minimum	Range
January	29.4	41.7	17.3	24.4
February	36.9	49.8	23.8	26.0
March	46.5	61.4	31.5	29.9
April	55.7	72.0	39.7	32.3
May	64.5	81.6	47.4	34.2
June	73.0	91.7	54.8	36.9
July	79.2	97.0	61.6	35.4
August	76.6	93.9	59.5	34.4
September	67.9	83.5	50.4	33.1
October	55.3	72.3	38.7	34.6
November	41.5	56.4	27.0	29.4
December	31.6	43.8	19.5	24.3

[a]U.S. Department of Agriculture, Weather Bureau, Climatic Summary of the United States, Utah (1961), pp. 40, 49. Figures are in degrees Fahrenheit based on a 72 year average.

This arid climate has highly variable and low precipitation. The peak recorded years were 1918 ans 1927 when a total precipitation of 15.96 inches was recorded (see Table 3). The lowest year on record was in 1898 when 4.32 inches was received. As Table 3 suggests, there has been little in the pattern of variation of precipitation. It fluctuates freely according to the freak occurrence of storms. The current average for all years is listed as 8.98 inches precipitation (see Table 4). The lowest monthly average is June with .39

inches, while October averages highest with .98 inches. However, this can easily be reversed during any given year because of the irregularity of storms. This aspect of the climate makes agriculture solely dependent on the irrigation waters derived from the snow melt on the La Sal Mountains.

TABLE 3

ANNUAL PRECIPITATION AT MOAB, 1890-1972[a]

Year	Inches	Year	Inches	Year	Inches	Year	Inches
1890	5.58	1911	11.10	1932	8.09	1953	8.40
1891	7.15	1912	10.87	1933	8.02	1954	--
1892	6.61	1913	9.05	1934	7.78	1955	--
1893	8.34	1914	10.90	1935	8.31	1956	3.02
1894	6.56	1915	15.49	1936	7.56	1957	14.58
1895	7.40	1916	13.23	1937	9.29	1958	5.08
1896	9.53	1917	8.29	1938	8.18	1959	6.62
1897	14.69	1918	15.96	1939	10.23	1960	5.68
1898	4.32	1919	6.13	1940	13.53	1961	11.04
1899	7.64	1920	8.35	1941	15.42	1962	8.74
1900	4.47	1921	10.68	1942	6.75	1963	6.01
1901	7.64	1922	6.38	1943	8.55	1964	4.71
1902	7.90	1923	7.86	1944	6.86	1965	12.15
1903	6.63	1924	10.96	1945	9.49	1966	6.03
1904	5.72	1925	10.60	1946	6.64	1967	8.28
1905	12.11	1926	10.72	1947	10.71	1968	7.27
1906	13.15	1927	15.96	1948	7.92	1969	10.21
1907	9.27	1928	10.81	1949	9.78	1970	5.66
1908	12.37	1929	10.30	1950	5.80	1971	7.29
1909	9.72	1930	11.17	1951	8.55	1972	9.02
1910	9.06	1931	5.87	1952	7.67		

[a]Information taken from Climatic Summary of the United States, and Climatological Data: Utah (annual summaries 1960-1972).

The snowfall for Moab itself is very low with an annual average of 12.4 inches. The dry climate is reflected in the low snowfall. The average date for the first freeze

is October 18, with the last freeze around April 18. This leaves a balance of 183 days for a growing season. This is not a long period, but much better than found on the higher elevations of Utah. Thus, some crops can be grown in Moab that cannot be grown in some other parts of Utah.

TABLE 4

PRECIPITATION AVERAGES AT MOAB, UTAH[a]

Month	Inches	Month	Inches	Month	Inches	Month	Inches
Jan.	.71	Apr.	.74	July	.73	Oct.	.98
Feb.	.68	May	.69	Aug.	.81	Nov.	.66
Mar.	.83	June	.39	Sept.	.92	Dec.	.84

[a]Climatic Summary, p. 14. Based on 72 year average.

Conclusion

A combination of physical factors created a site suitable for the initial agricultural base of Moab Valley. The flat, alluvial-floored valley with fairly regular streams provided an area of fertile land with a suitable water supply in this arid region. Its lower elevation provided an adequate growing season. An easy traverse of the Colorado River is provided by the valley which crosses the river at a right angle. This meant an early advantage as a transport route. Geological stratigraphy provided mineral resources. Unique landforms added scenic appeal for later development as accessibility increased.. All of these factors helped in giving Moab a raison d'etre in this area of otherwise marginal usage.

CHAPTER III

EARLY SETTLEMENT

The permanent settlement of the Colorado Plateau came relatively late, with much of it not coming until the 1880s. Moab was no exception. However, there was activity in the area prior to permanent white settlement. The following is the order of visitation or occupance: (1) Indians, (2) Spanish explorers and traders, (3) trappers and mountain men, (4) geographic and geologic expeditions, (5) cattlemen, and (6) farmers. Missing from the normal pattern of sequent occupance was the phase of mining, which came later. Each of these phases will be surveyed, with the exception of the original Indians. The Elk Mountain Mission will be included because of its local significance. Then characteristics on the economy and community layout will highlight study of the initial permanent settlement.

Exploration and Trade

The earliest known explorer of the region was Father Escalante in 1776. His route, however, did not go through Moab, but further to the east and north. Though definite records of the earliest travelers are scanty, it is known that Spanish Valley (which got its name from Spanish trade through the area) was on the route of the Old Spanish Trail.

The Old Spanish Trail was a trade route between Santa Fe and Los Angeles. Enroute the trail went through Spanish Valley and by present-day Moab. It became a prosperous route:

> The 1830s and 1840s saw traders and raiders (both white and redskin) drive thousands of horses and mules eastward over the Spanish Trail in exchange for Mexican woolen goods moving west. Slave traffic also became a major activity on the trail as the annual caravans crept across the Basin. Hundreds of native children and squaws from the weaker tribes were purchased or kidnapped along the route to be fattened and sold in the markets of Los Angeles and Santa Fe.[1]

Oftentimes the goods and slaves were exchanged for mules and horses. The route was first discovered to be in existence by Workman and Spencer in 1809. Change in demand for some of these items meant a later decline in trade along the route, so that by the late 1840s only a few men traversed the region. During all this there was no permanent settlement attempted in this vast area.

Related to the trade in the region there were a number of mountain men who visited and trapped in the general area. Among these were Kit Carson, Jedediah Smith, and William Wolfskill. Details of these visits are sketchy at best. As animal numbers declined and styles changed, the fur trade was less profitable. This meant that this activity of the fur trade came to an end.

Few ventured in this area until government surveys covered portions of the American West . This was because of

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[1]Gustave O. Larson, Outline History of Utah and the Mormons (Salt Lake City: Deseret Book Co., 1965), p. 13.

the isolation and apparent hostility of the environment. The perception of the area was not enhanced by the statements of those who visited the area. The following report by Lt. J. C. Ives in 1857-1858, illustrates the poor conceptualization of the Colorado River area:

> Ours has been the first, and will probably be the last party of whites to visit this profitless locality. It seems intended by nature that the Colorado River, along the greatest portion of its lonely and majestic way, shall be forever unvisited and undisturbed.[1]

Though the area is still considered not the most desirable place, this statement would now be found extreme in view of later settlement.

The major government expedition that specifically traversed the area of southeastern Utah was the Macomb expedition of 1859. This party surveyed a route from Santa Fe to the junction of the grand and Green Rivers. In the vicinity of upper Spanish Valley Macomb reported, "I cannot conceive of a more worthless and impracticable region than the one we found ourselves in."[2] Though these statements were basicallytrue for much of the region, isolated oases did exist in the area, such as found in Moab Valley.

Elk Mountain Mission

The question of Indian troubles in southern Utah was

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[1]John A. Frost, "Canyons, Mystery and Solitude", Guide to the Geology of the Paradox Basin (Salt Lake City: 1958), pp. 19-25.

[2]J. N. Macomb, Report of the Exploring Expedition from Santa Fe, New Mexico, to the Junction of the Grand and Green Rivers of the Great Colorado of the West, in 1859 (Washington: Government Printing Office, 1876), p. 6.

brought up during the general conference of the Mormon Church in April, 1855. The resulting decision was to establish a settlement at Elk Mountain, which was the area now known as Moab. The assignment of the missionaries was to set up a fort and also to preach the Mormon religion to the Indians (Ute tribe). Forty-one men, under the leadership of Alfred N. Billings, were called and set apart on May 7, 1855.[1] The first group left for the starting point at Manti.

The group arrived at Moab early in June. They thought the land good for farming due to the abundant sagewood. The best meadow land was found to be an area of about two miles square near the Colorado River. The Indians occupied the center of the valley with ten acres in corn, melons, squashes and pumpkins. The seeds were planted in separate holes, and ridges and dams were formed for irrigation. The impressions of the area varied, with the majority viewing it as good.

A site was chosen and ". . . all hands were busily engaged in grubbing brush, plowing land, building a dam and performing other camp duties."[2] The first dam failed and a new one built further up, requiring a three mile irrigation ditch. Once these essentials were accomplished a fort was built. After establishing themselves, the Indians feared

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[1]Faun McConkie Tanner, A History of Moab, Utah (Moab, Utah: 1937), p. 15.

[2]Ibid., p. 21.

permanent intrusion due to the permanent appearance of the farms and fort. As a result, ill feelings ensued and the men of the Elk Mountain Mission were finally forced to abandon the site in 1856. Though the permanent impact of this first settlement attempt was little, one landmark remained. The irrigation ditch from Mill Creek widened over the years until it became the arroyo which runs through the town of today.

Initial Permanent Settlement

After the Elk Mountain Mission attempt, the area lay undisturbed for the next twenty years. The Indian presence still created an obstacle to white settlement and development. The U. S. Army concluded a treaty with the Indians in 1872, which prepared the way for prospectors in the area.[1]

Cattlemen

The word of usable lands was passed on to the cattlemen. The first rumored cattlemen came in 1874-1875 with about 400 head of cattle.[2] In 1877, another treaty opened the western slope of Colorado for settlement. Simultaneously, more cattlemen gradually began to infiltrate the area, in search of new grazing lands. In 1877, Nigger Bill and Frenchie (trappers) moved in and raised vegetables. Three other families with cattle passed enroute to La Sal in 1877.

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[1]Daughters of Utah Pioneers, Grand Memories (Salt Lake City: 1972), p. 8.

[2]Tanner, Moab, p. 27.

In 1878 several cattlemen came and stayed, on Poverty Flat, eight miles above present-day Moab. Some more came from San Juan County in 1879. Another sign of settlement were two irrigation ditches which were dug in 1879. Most of the earlier settlement, however, was in the upper portions of the valley.

The area received official recognition as a petition was sent and granted for a post office in 1879. It was located in the upper valley and designated Plainsfield. It moved in 1880 to the lower valley where most people were now residing, and changed in name to Moab. There are two theories concerning the origin of the name for Moab. Little accepted is the corruption of the term "Moapa" (meaning mosquito), which was long used by the Indians for the general area.[1] Most accepted is that a committee decided on a Biblical name--Moab.[2] The rationale was that Moab was analogous to the Biblical Moab in being "the far country", and a land of flat-topped mountains. The comparison is understandable in view of the towns environmental setting.

Mormon Church

The majority of the early settlers in Moab were Mormons. However, the settlement did not involve the colonizing mission call that was typical for towns of an earlier period. Many came in independently in search of new grazing and

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[1] Tanner, Moab, p. 32.

[2] Ibid., pp. 32-33.

farming lands. However, the church headquarters didn't ignore the development of the area. The late 1870s was a period of an increasingly antagonistic federal government. Rival factions were seeking control of sparsely settled southeastern Utah. A large number of miners had invaded southwestern Colorado, and cattlemen were ranging on the plateaus of the San Juan country. The Indian presence also created a desire for a buffer zone adjacent non-Mormon influences. Bluff was to be the major outpost, but there was also concern over Moab.

In view of these concerns, the leaders of the Mormon Church looked over desirable areas for irrigation and settlement. Spanish Valley was found to be suitable and A. G. Wilson, a former member of the Mormon Battalion and pioneer of several towns, was selected to begin a new settlement there.[1] As the first Presiding Elder of Moab branch, Wilson, and a few families left for Moab, arriving in March, 1879:

> The Wilsons soon moved about a mile south of the fort. They took up a farm centrally located so there would be land to divide into lots for the settlers that came later. This was the policy set up by the Mormon Church and followed by all pioneers the church sent out to settle in a new territory.[2]

In the succeeding years, many other families followed this group to Moab. Several families took up residence in 1880, with a visit from Erastus Snow of the Church leadership from Salt Lake City.

A regular ward was created in 1881 with Randolph

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[1] DUP, Grand Memories, p. 14.

[2] Ibid.

Stewart called to relocate to Moab as its first Bishop. The establishment of an LDS ward created an organizing influence for the settlement. This was in contrast to the wilder "frontier" settlements to the east of Moab. However, this ordering influence began the "Mormon-Gentile" conflict that was to continue during the towns history. The influx of Mormons continued as fourteen wagons and a herd of cattle came in the fall of 1881 from Little Salt Creek, Juab County. Many of these early settlers encouraged others to relocate as they wrote to relatives of the good farm and ranch lands. Thus most of the early settlers of Moab were Mormons.

Community Layout

The land needed to be prepared and a town laid out as groups began settling in the area. Farmlands were plowed and irrigation ditches dug. The materials for early housing consisted of adobe bricks, stone, and logs. Early settlers reported to the Deseret News in April, 1881 that there were sixteen families in Moab, and that the valley would sustain one hundred families when all the available land was in cultivation.[1] The contingent from Juab County almost doubled the population by the end of the year. After the community became fully established, the population projected by the earliest settlers became a reality. The first recorded census for the area gave Moab a population of 333, and Grand County a total of 541 people.

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[1] Tanner, Moab, p. 36.

The townsite was laid off in the early 1880s, and had characteristics of the Mormon farm village. The Mormon farm village was the spatial expression of the communal culture of the Mormons. Houses, located in town, were separated from the farming fields. The gathering of homes into the town provided security on the frontier, cooperative works, equitable land distribution, and social intercourse based on common ideals.[1]

The streets and home lots were surveyed in a grid pattern to the cardinal points of the compass. The streets were often wide. Individual towns varied one from another as to details, but the general layout was often similar in pattern and purpose.

The town of Moab was first officially surveyed in 1884 (Fig. 6). It is not definitely known when the townsite was laid off, but that it was sometime during 1881-1884. The town was five blocks square. Each block was 462 feet wide. This meant 4.9 acres per block, and about 1.2 acres for each of four lots on the block. The streets were fairly wide at ninety-nine feet, and were oriented toward the cardinal points of the compass.

Each of these aspects of the community layout were in accordance with the general pattern of the Mormon farm village. However, the naming of streets was not typical of the normal Mormon village. The east-west streets were given

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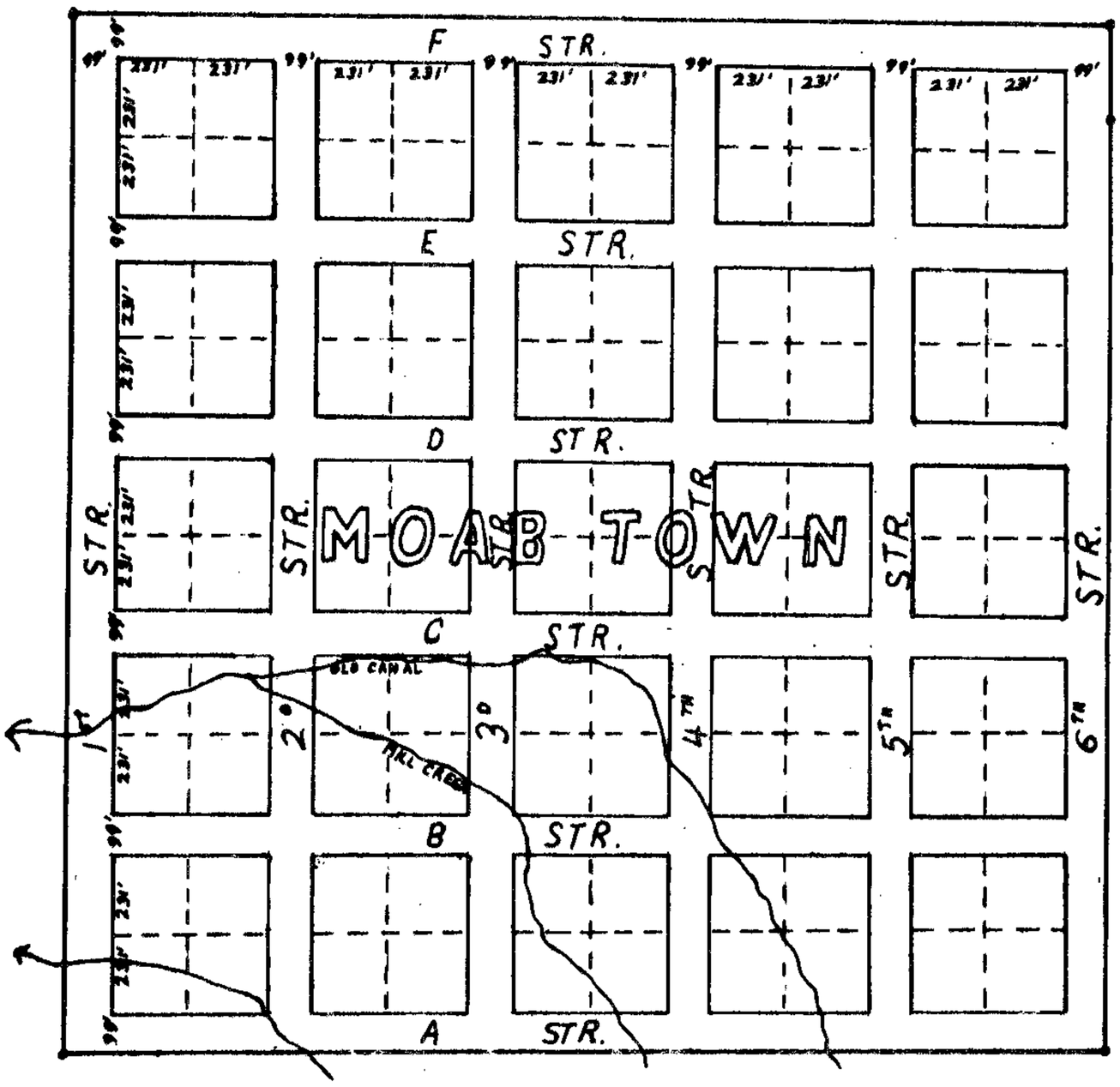
[1]Lowry Nelson, The Mormon Village; a Pattern and Technique of Land Settlement (Salt Lake City: University of Utah Press, 1952), pp. 52-53.

Original Town Plat of Moab



Surveyed September 29, 1884

Fig. 6.--Original town plat of Moab

numeral names (first through sixth). This was not changed until the 1940s when the standard Utahn pattern of 100N, 100S, etc. was superimposed.

The standard grid pattern was corrupted by the drainage pattern. Mill Creek and irrigation ditches cut across the grid and disrupted normal passage of the streets. Other than these minor deviations, the town of Moab basicly followed the general pattern of the Mormon farm village. This village pattern was the basis of the initial spatial layout of Moab.

Economy

The early economy of Moab was a simple agrarian economy, common to much of Utah at this time. Ranching and farming formed the economic basis for Moab during this early period, and continued in dominance until the middle of the twentieth century. However, some other economic aspects had impact on the early settlement. Mining had a temporary boom in the later 1890s, and transportation was a continuing concern to this isolated community. Each of these topics will be covered for the period up to 1900, following a survey of early perception of the area.

Significant to the promotion of the area was the establishment of the Grand Valley Times in 1896. This newspaper perceived southeastern Utah as being rich in resources. It continually pleaded for the state to develop the area through such things as an irrigation canal for farming, regulation of the Colorado River for navigational use, and

development of transportation for the mining areas and their riches. The open land resource was also cited as being desired by the tired, eastern city-dweller. Advertisements to this effect were continuous in the early issues. The following statement is typical of the paper: "The advantages of this part of the state for settlers and for fruit raising and for mining should be set forth to the people."[1]

The newspaper, in 1897, also recorded the conception of the town by a visitor:

> . . . what they need is first a water works system that can be easily and cheaply constructed and that will furnish pure water and an effective fire service. Second, they need a good road up the river to Little Castle; third a canning factory. They need more clay, less sand, more potatoes, fewer peaches, more cider and less pure grape juice; more cows and fewer horses; more workers and fewer box whittlers; more literary entertainments and fewer dances.[2]

This early account indicated that many items were lacking, such as a culinary water system. Many of these secondary items did not come until later.

Livestock Ranching

As indicated earlier, ranching was the initial attraction of Moab. Almost all of the early settlers brought some cattle with them, although the numbers were limited for most. Grazing was mostly on the La Sal Mountains during the summer, and on the lower deserts and river bottoms during the winter. Thus, ranching activity was more removed from

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[1] Grand Valley Times (Moab, Utah: June 26, 1896), p. 1.

[2] Ibid.

Moab Valley.

During the 1880s, two large cattle companies dominated the ranching economy. At its peak, about a thousand to fifteen hundred cattle a year went through Spanish Valley to the railhead at Thompson.[1] From there they were shipped to Salt Lake City. This indicates that during the earliest period there was a dominance of cattle, with sheep playing an insignificant role.

A nuisance to the cattle industry of the 1880s was the rustling of local outlaws. Outlaws gathered in the Blue Mountains near Monticello, at what became Robber's Roost, and raided cattle holdings throughout the region. The menace disbanded in the later 1890s as the source of cattle supply dwindled. Many cattlemen had changed from cattle to sheep in 1895-1896.

Several factors were responsible for the changeover from cattle to sheep. Among these were extended drought, low market price for cattle, and rustling losses. During 1895-1896, many cattlemen moved their flocks to Montana, and brought in sheep. Within a few years, sheep vastly outnumbered cattle. In 1896, over 150,000 pounds of wool were shipped out of Thompson. Several sheep-shearing places were established during this period. By 1900, sheep numbers dominated the ranching scene (see Table 5). By 1900, the number of cattle had returned to its 1890 level, and sheep had become dominant.

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[1]DUP, Grand Memories, p. 79.

Farming

Farming became dominant in the immediate Moab Valley with the arrival of the Mormons. The earliest farming was general subsistence farming, such as wheat and other staples. However, some unusual crops were experimented with, such as sugar cane and cotton. The Grand Valley Times reported in 1897 that the area was suitable for mulberry trees and silk culture.[1] However, no actual production was recorded.

By 1900 some trends in crop specialization were forming. Critical to the development of farming was having a dependable and adequate water supply. Pack and Mill Creeks were tapped with irrigation canals in their lower portions at an early date. The development of upper Spanish Valley was limited as only Pack Creek flowed through it. Mill Creek flowed parallel to the valley, but separated from it by a high, narrow divide. The irregularity of flow was accentuated by an extreme flood of the Colorado River in 1884 that inundated the lower valley. Other years (such as during the 1890s) the area might be stricken with drought. The seasonal variation was also great. To help alleviate changes in immediate water supply, an irrigation company was formed in 1892.

By 1890, there were 56 farms with 6,055 acres.[2] Of

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[1] Times (June 18, 1897), p. 1.

[2] U.S. Department of Commerce, Bureau of the Census, Census of Agriculture, 1890, p. 231.

this, 1970 acres were considered improved, of which 1,139 acres were irrigated. The irrigated acreage was mostly in Moab Valley, the focus of our concern. The irrigated acreage was subdivided into 411 acres for cereals and 381 acres for alfalfa.[1] Corn became the dominant crop at an early date as 363 acres were devoted to corn (see Table 9).

Fruit orchards had already appeared on the landscape. Peach trees were most numerous at first (see Table 10). With roughly 1,000 irrigated acres, Moab Valley was already beginning to specialize in alfalfa, corn and peaches. However, the value of return for livestock far overshadowed the return for crops ($96,870 to $17,870).[2] In 1890, livestock dominated the cash economy.

During the next decade, several aspects of the farming economy grew, while other aspects remained stable. In 1900, there were 121 farms with a total of 15,686 acres. Of these, 2,817 acres were irrigated.[3] The sector in alfalfa had mushroomed to 4,098 acres. The grains were still dominated by corn, although corn acreage had declined slightly and stabilized. Fruit orchards were growing rapidly in acreage. All types of fruit trees had grown tremondously in numbers, with a resulting increased diversity. Apples and plums were now almost rivalling peaches for number of

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[1] Ibid.

[2] Ibid.

[3] Ibid.

trees (see Table 9). By 1900, fruits and alfalfa were assuming a greater role in the farming economy.

Mining

During this early period, mining was not important to the permanent economic base, but created an emotional climate for temporary economic boom. From its inception, the Grand Valley Times promoted the myth of the mining potential of precious metals. During the period 1896-1900, "Mining News" was a regular front-page feature. The early editions had enthusiastic reports on gold mining possibilities in the La Sal Mountains. In 1896, the editor wrote:

> The recent finds of exceedingly rich float on the La Sal Mountains is beginning to attract attention from practical miners. They have been quietly coming in until at this time there are at least one hundred prospectors at work in the mountains. Every practical miner that has ever passed over the mountains has been convinced that as rich lodes as were ever discovered lay hidden in them. Some samples of quartz were recently shown in this office holding gold nuggets as large as grains of wheat. These certainly come from mineral bearing veins.[1]

As such reports increased in intensity, miners were attracted with their capital, and substantial settlements resulted to the east of Moab, at Miner's Basin to the east of Moab, and Gold Basin in the La Sal Mountains.

Advertising began in 1897, about the La Sal mining district and its gold, copper, silver, uranium and vanadium. This promotional scheme by the Denver and Rio Grande railroad lasted until 1900. Coninuing its promotionalism, the

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[1] Times (September 13, 1897), p. 1.

newspaper editor wrote in 1899:

> Not only are the mountain peaks showing up their minerals before the miners picks, but the canyons that run through the mesas to the east are showing up rich veins carrying copper, gold and silver.[1]

As the newspaper continued its obvious bias towards the min-

interest, farmers began to complain about being slighted.

In reply the editor wrote:

> . . . the agricultural interests are limited, and can only thrive when it can come in direct contact with other lines of industry. Modern rapid transportation to carry the products of the fertile valleys to other industrial centers cannot be expected because of that product alone, there must be something to add to it. The mineral resources are great; they only need men and capital to develop them. . . . The building up of the mining industry is the building up of every other industry; the establishment of every line of business.[2]

There is some basis in this statement as needed capital for

regional development would have to come externally and for

something more valuable than farming crops. However, the resource of precious metals was not adequate to match with the excessive promotion of it.

As a last ditch promotional plea, the Times came out on August 3, 1900 with headlines that read: "Wanted--1000 Prospectors in the La Sal Mountains". The accompanying article stated: "No section of the west have ever presented a better field for the prospector than the La Sal mining district today."[3] But it was too late--the mining boom had already climaxed, and was almost over. The short and tem-

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[1] Times (April 28, 1899), p. 1.

[2] Times (June 23, 1899), p. 1.

[3] Times (August 3, 1900), p. 1.

porary mining boom helped to bring in some desperately needed capital from trade with miners, but did little to add to the permanent economic base for the continued growth of Moab.

Transportation

Moab's isolation from other populated areas meant an economic brake on its development. Until transportation networks could be developed, this situation was made even worse. Fortunately, the Denver and Rio Grande railroad traversed the northern portion of Grand County not long after Moab was initially settled. The railroad was built in this area from 1881 to 1883, partly by men from Moab. This put Moab only 35 miles from its railhead at Thompson. This considerable lessened the freighting distance to market for agricultural products, and import of manufactured goods. The railroad also brought new business to the town as many could migrate to the area easier. Some of those on the construction crew of the railroad stayed to set up residence in Moab. Warm climate and expansive free public lands were considered a drawing factor, though they were limited by insufficient water.

Another feature considered for transportation was the Colorado River. Primarily it was considered a barrier, needing to be crossed. The first ferry began service in 1885, and continued until a bridge was built in 1911. However, the enterprising editor of the Grand Valley Times later began to promote it as a natural highway for water transportation.

Citing the cheap cost of water transportation, the potential usage of the river was promoted: "There is from 250 to 300 miles of navigable river for steamboats as ply on the upper Ohio and Missouri rivers."[1] Stating that southeastern Utah had great riches that needed cheap transport, the editor implored for the state to develop the water route, and hence the region. He claimed that little work was necessary, but not like on the eastern rivers, to make it navigable the full length of the Utah segment. This was repeatedly stated in earnest during the 1896-1900 period. Today this seems hard to believe in view of the physical barriers within the Colorado River route.

Conclusion

The economy of early Moab was primarily based on agriculture (ranching and farming), with an emphasis on ranching. A subsistence economy was the general pattern, However, as 1900 approached, some specialization was beginning to be evident. Fruit production was increasing tremendously due to the warmer climate found in this part of the state. Alfalfa production and ranching continued as important aspects of the economy, although sheep became dominant over cattle by 1900. The isolation of the area was alleviated by construction of the railroad through northern Grand County in 1883, thus allowing export of agricultural products and importation of manufactured goods.

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[1] Times, (November 20, 1896), p. a.

The mining boom of the late 1890s helped to bring in needed capital and trade, but did little for the permanent economic base of Moab. Thus Moab's economy was based on subsistence agriculture though some specialization was beginning to emerge.

CHAPTER IV

ECONOMIC DEVELOPMENT

The agrarian economy of Moab continued into the twentieth century. It wasn't until much later that mining and service industries contributed greatly to the economic base of Moab. Temporary additions periodically emerged in the economy, but agricultural endeavor was to remain the focus of the economy until the 1950s when mining, and then tourism took over.

The earlier perception of the area was pastoral in nature, indicating the agrarian economy of the area. One description of the area in the 1930s was made by Al M. Rogers:

> Vast areas of luxuriant grasses carpet the hillsides and mesas; great herds of fat, sleek, contented cattle and sheep graze upon those almost limitless natural pastures and bask in the cool, umbrageous shade of pine and aspen groves, where the air is filled with melody of feathered songsters and redolent with the odor of myriads of wild flowers and the balsamic breath of the forests which gladden the heart and lull the spirit like the perfumes of incense from mystic oriental alters, and bring health and happiness to all who breathe it.[1]

However, some realized the limitations of agriculture and looked towards the future with a view of industrial potential:

> Grand County has never been a thickly settled county. However, it will be extremely interesting to see what

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[1] Tanner, Moab, pp. 6-7.

> might develop in the next generation after Utah has become largely industrialized. Grand County has a number of possibilities that might well make her one of the industrial centers of the state.[1]

Cited as favorable resources for industrial development were the Colorado and Green rivers for hydroelectric power, and the coal of the Book Cliffs. However, the area was too isolated and sparsely settled for these resources to be economically preferred in industrial location.

During Moab's economic history, several booms have added at least temporarily to the economy. Six booms have been cited as having significant importance:

> The first boom came in the 1890s with reports of gold in the La Sal Mountains. . . . The second was in 1910. Moab was growing the biggest and best fruit in the West. . . . The third boom came in the 1920s when oil created astir. . . . In the 1950s was the big boom--uranium.[2]

The fifth boom of the 1960s came with oil-gas exploration and discovery of the world's largest potash deposit. The last and current boom relies on tourism to surrounding recreational and scenic areas. Most of these booms added to the economy of Moab, thus broadening the functional base of the town, and increasing its raison d'etre in an isolated location. Thus the stability and growth of Moab was made possible by the adding of economic functions to the initial agricultural economy.

The growth of the economy has been reflected by the

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[1]Cynthia Taylor, "History of Grand County" (unpublished term paper, Brigham Young University Library, 1938), p. 8.

[2]DUP, Grand Memories, p. 70.

growth of population (see Table 5). The La Sal mining boom of the late 1890s doubled the population of Grand County between 1890 and 1900. The orchard boom continued but moderated the increase to 1910. Oil exploration of the 1920s had

TABLE 5

POPULATION OF GRAND CO. AND MOAB, 1890-1970[a]

Year	Grand Co.	Moab
1890	541	333
1900	1,149	---
1910	1,595	615
1920	1,808	856
1930	1,813	853
1940	2,070	1,084
1950	1,903	1,274
1960	6,345	4,682
1970	6,688	4,793

[a]information taken from Census of Population, 1890-1970.

had little lasting effect on population growth, as the population remained stable. The total population even declined between 1940 and 1950 in the county, but not in Moab. However, the big uranium boom of the 1950s tripled the population. The population has since stabilized as potash mining and tourism prevented a mass exodus following the decline of the uranium boom.

Moab has followed the same pattern of population change, as most of the county's inhabitants reside within the city. Moab was incorporated as a town in 1902, and as a third class city in 1925. The earliest period again had a

doubling of the population (1890-1910) and had continued steady growth until the uranium boom of the 1950s almost quadrupled the population of the town. The population has stabilized since the decline of the uranium boom. Both the initial and additive economic functions indicate impact on the growth of Moab.

Livestock Ranching

Ranching has continued as a basic function throughout most of Moab's economic history. Sheep and cattle have been the dominant animals, although they varied in relative importance to each other through time. In the early part of the twentieth century, cattle numbers reached their peak (see Table 6). Though there were only half as many cattle as sheep, cattle were worth twice as much as sheep in value (see Table 7). By 1920, both groups had declined in animal numbers.

During the 1920s the trend was towards more sheep and less cattle, but cattle were still twice as valuable. After peaking again in the 1930s, sheep were more than reduced by half in 1940. However, the value for sheep was still considerably higher than for cattle. In succeeding years, cattle numbers stabilized, while sheep numbers continued to plummet. Today, sheep ranching is neglible.

Several factors help explain the decline in sheep production. One reason cited was not the traditional cattle-sheep feud, but lack of sheepherders.[1] The major reason,

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[1]DUP, Grand Memories, p. 81.

TABLE 6

LIVESTOCK NUMBERS, GRAND CO., 1890-1970[a]

Year	Cattle	Sheep	Chickens
1890	6,345	23	1,119
1900	6,613	63,942	2,748
1910	21,549	47,668	3,973
1920	14,150	19,514	4,403
1925	14,503	117,956	4,016
1930	6,959	106,476	3,701
1935	9,480	113,859	2,999
1940	4,959	50,081	3,569
1945	5,060	30,865	3,512
1950	5,022	10,892	2,820
1955	3,657	7,503	2,203
1960	4,903	3,850	1,297
1965	6,246	--	3,661
1970	6,456	115	2,801

[a]information taken from Census of Agriculture, 1890-1970.

TABLE 7

VALUE OF LIVESTOCK, GRAND CO., 1890-1970[a]

Year	Cattle	Sheep	Chickens	Total
1890	--	--	--	$96,870
1900	--	--	--	$371,459
1910	$480,085	$251,950	$2,129	$864,538
1920	$586,921	$243,818	$4,218	$1,034,493
1930	$352,855	$858,338	--	$1,255,462
1940	$199,640	$347,400	--	--
1950	$657,014	$263,893	$4,312	$950,240
1960	--	--	--	$234,108
1970	$459,213	--	--	$480,989

[a]information taken from Census of Agriculture, 1890-1970.

however, would be the poor economic situation of the period. As demand for wool dropped during the depression of the 1930s, sheep wool became a surplus item. With wool in oversupply, prices dropped, and sheepherding became uneconomical. Though sheep ranching has little importance today, at its peak, over one million pounds of wool a year was produced from over 100,000 sheep. Such production proved an important sector of the economy.

One other livestock concern that has been present is the poultry industry. Grand County has consistently had several thousand poultry throughout its history, with production mostly for eggs. The poultry industry, however, is a low value item. Production for meat reached a high point in the 1920s as the industry specialized in turkeys for holiday season.

The livestock industry formed an important part of the early economy. It continued to expand during the early twentieth century, most notably in sheep. However, as economic depression hit the nation, wool prices dropped and the sheep industry nosedived. The reduction in sheep has been accompanied by growth in other economic sectors, until today livestock ranching forms a small part of the economy. However, cattle still have value in the current economy and dominate agricultural value.

Farming

During the earliest period, farming was the most important sector of the local economy of Moab Valley.

Ranching was more common in the more southern Spanish Valley and outlying mesa lands. The crops produced in the area had some specialization although crop specialization changed through time.

The acreage in farms remained low, though greatly fluctuating, until 1960 (see Table 8).. Total farmland

TABLE 8

NUMBER OF FARMS, TOTAL ACRES, AND IRRIGATED LAND, GRAND COUNTY, 1890-1970[a]

Year	Farms	Acres	Irrigated
1890	56	6,055	1,139
1900	121	15,686	2,817
1910	172	62,089	6,470
1920	114	42,656	5,865
1925	129	30,560	--
1930	157	33,128	2,747
1935	176	47,038	2,443
1940	155	139,265	3,774
1945	91	152,788	--
1950	85	54,415	4,057
1955	59	56,493	3,045
1960	77	278,425	2,390
1965	74	157,485	--
1970	39	164,339	2,277

[a]information taken from Census of Agriculture, 1890-1970.

decreased to a low of 30,560 acres in 1925, rose to 152,788 acres in 1945, and then sank to 54,415 acres in 1950. The agricultural depression of the 1920s was responsible for the low acreages of the 1920s, while World War II increased demand for crops in the 1940s. In recent years, farmlands have risen considerably to about 300,000 acres. The current

trend has been to larger, less intensive units.

Of the total farmland, most of it is used as grazing lands. Irrigated fields form a small part of farmlands. Irrigated acreage has fluctuated also. By 1930, irrigated lands had shrunk to half of the 1910 figure. However, it was reported that there was still more land classified as "irrigated" in 1930 than could be supplied with water.[1] After rising in the 1940s, it has currently sunk to all time lows. Urbanization from rising population of Moab was the chief factor for the sudden drop of irrigated land in the 1950s. Prime irrigated lands in Moab Valley were engulfed by the sudden spread of the community.

The number of farms has also fluctuated. The number fell considerably by the 1920s, rose in the 1930s and has since steadily declined. The general trend for farming enterprise has been towards fewer, larger units which depend considerably on large, open range lands for grazing. The early emphasis on irrigated crops within Moab Valley has been largely encroached upon by the expanding community of the 1950s. The limited acreage in the valley has meant a decline in irrigated crops.

Several crop types have been of relative importance in the farming economy. Cereal, pasture and vegetable crops have played a role in the traditional agricultural economy, as well as the more specialized fruit tree crops. Though

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[1]Utah State Planning Board, Grand County; Basic Data of Economic Activities and Resources, pp. 3-4.

several varieties have proved lucrative, the changeover of crops has been high. A comparison of crops through time reveals the shifting emphasis of money-making crops (see Table 9). However, the value of the crops is not directly proportional to the number of acres for the crop.

Cereal crops have had a continuing role in the farming economy of Moab. However, the principal crop has been corn. This is in contrast to the other parts of Utah where barley and wheat have predominance. Much of the corn is used for cattle feed. Grand County traditionally has led the state in corn production. The warm summer climate encouraged the introduction of the crop in Moab's early days. Other early important cereal crops were oats (1910), and wheat (1920). Corn reached high points in 1930 and 1940. However, with wartime demands for wheat and other harder cereals, corn was replaced by wheat, barley and oats in the 1940s. Wheat was the principle crop of this period, rising from virtual non-existence a few years previous. Since this period, all cereal crops have been on the decline. With the postward demand lowered, and production technologically increased in better producing areas, cereal production has become uneconomical.

Hay has had importance as to land use. From a high of 4,000 acres in 1900, and then 3,000 acres in 1925, acreage was cut in the next period. This was probably again due to nationwide agricultural depression. The crop briefly recovered somewhat, but has been on the decline in recent years.

TABLE 9

ACRES IN SELECTED CROPS, GRAND CO., 1890-1970[a]

Crop	1890	1900	1910	1920	1925
Wheat	17	38	311	7	--
Barley	22	73	16	19	2
Oats	9	21	365	128	56
Hay	453	2,453	2,034	3,023	2,859
Corn	363	314	676	841	782
Sugar Beets	--	--	--	--	101
Potatoes	13	48	53	41	27
Vegetables	--	--	--	233	--
Fruit Trees	--	--	--	--	--

Crop	1930	1935	1940	1945	1950
Wheat	--	--	--	801	651
Barley	20	10	--	157	79
Oats	55	10	--	265	315
Hay	2,849	1,640	2,299	1,498	1,490
Corn	1,036	771	1,164	778	651
Sugar Beets	--	--	57	35	28
Potatoes	23	9	9	21	--
Vegetables	13	124	192	145	39
Fruit Trees	242	166	97	164	294

Crop	1955	1960	1965	1970
Wheat	331	146	40	112
Barley	20	70	--	--
Oats	49	74	6	14
Hay	1,250	1,011	1,451	1,425
Corn	236	240	342	85
Sugar Beets	--	--	--	--
Potatoes	5	--	--	9
Vegetables	17	--	39	40
Fruit Trees	173	192	129	63

[a]information taken from Census of Agriculture, 1890-1970.

Hay has chiefly been used for feed demands of livestock.

Other crops of varying significance have been garden vegetables, sugar beets, and potatoes. Potatoes had some significance during the early period, but have been on the decline ever since a high in 1910. Sugar beets have been erratic in importance. A high of 101 acres was reported in 1925, although the number of acres was insignificant for many years both previous and subsequent. However, during the 1940s the crop again appeared in moderate acreages. Garden vegetables suddenly emerged as a significant, high value crop during World War II, with 145 acres in 1945. However, this crop has also been on the decline since this period. Specialization of vegetable crops has changed through time. some years strawberries were emphasized, while other years saw melons, tomatoes or other varieties grown. All of these crops have had temporary significance as the agricultural panacea of its day.

A specialized, high value crop was found in fruit trees. A relatively good frost-free period, warm summers, and good soil created an environment which grew large, quality fruit. Fruit crops were the dominating export cash crop for the earliest days of Moab. Acreages reflect the dominance of orchards. From an early peak in the 1910s, orchards declined to ninety-seven acres in 1939, but rose again to almost 300 acres in 1949. The depression accounts for the drop in the 1930s, and World War II demands account for the rise in the 1940s. The current trend for orchard

acreages has again been for decline. As with other farming lands, orchards have been engulfed by the urban spread of Moab.

The types of fruits raised have varied in emphasis (see Table 10). First came peaches, then apples were first in number of trees during the early period. However, from

TABLE 10

NUMBER OF FRUIT TREES, GRAND CO., 1890-1960[a]

Year	Apple	Cherry	Peach	Pear	Plum	Apricot
1890	151	334	2,960	10	30	73
1900	7,629	576	8,966	2,174	6,813	419
1910	7,809	245	2,080	2,737	2,097	328
1920	5,962	--	1,083	4,427	300	--
1925	8,278	50	1,579	--	--	9
1930	2,878	140	235	97	38	--
1935	457	140	668	1,154	139	--
1940	1,503	178	1,047	396	274	441
1945	1,689	313	6,320	814	395	720
1950	3,714	213	13,977	2,872	229	394
1955	2,703	40	8,334	1,078	40	--
1960	2,600	61	6,982	1,566	30	7

[a]Information taken from Census of Agriculture, 1890-1960.

their peak in 1925, apple trees almost disappeared from the landscape by 1935. They later recovered somewhat, to a fairly stable few thousand trees. Peaches surpassed all other fruits to a peak of almost 14,000 trees in 1950. Pears have been another important fruit, especially in the earlier period. Grapes also have been grown in abundance, with a peak of 80,000 acres in 1930. It is interesting to

note that the diversified balance between fruits in 1910 gave way to specialization in first apples (1925), then grapes (1930), and finally peaches (1950). Three general periods in fruit production can be recognized: (1) diversified boom in the early period, (2) severe reduction during the depression of the 1930s, and (3) rise again with the demands of World War II.

One reason cited for the decline of the 1930s concerned the matter of distance to markets:

> This industry on a commercial scale has waned due to the fact that the distance from the railroad makes competition difficult and the valley is too small to raise sufficient quantities to offset the disadvantages of distance to a shipping point. As a result the orchards have been allowed to die and the production is purely on a local basis.[1]

Improved truck transportation and demands of the war reversed this trend temporarily. The current trend has been for steady decline of fruit trees as land is sold for urban land uses of Moab.

Crop values indicate the real relative importance of the sectors to the whole of the farming economy (see Table 11). Hay has consistently led in value, often accounting for half or more of total production value. Hay accounted for two-thirds of total production at its peak in 1920. All crops increased greatly from 1910 to 1920, but plummeted following World War I, especially as agricultural depression hit the nation. Cereals only moderately declined. The decline continued to 1939, except in vegetables. At the

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[1]Tanner, Moab, p. 46.

end of World War II, in 1945, values were high, especially in vegetables and cereals. As postwar demands lowered, crop values lowered. Today crops form a small portion of the economic income. Only hay and cereals are considered economically viable for the county, although some fruit production still remains in Moab Valley.

TABLE 11

CROP VALUES, GRAND CO., 1910-1970[a]

Year	Cereal	Hay	Vegetable	Fruit	Total
1910	32,966	62,108	11,189	16,542	126,042
1920	64,212	241,215	21,215	23,623	351,194
1930	50,462	60,428	3,610	7,750	125,240
1940	25,357	44,079	18,167	5,456	98,336
1950	16,291	65,682	6,005	25,851	183,456
1960	--	21,805	315	38,352	62,047
1970	8,510	11,368	--	--	34,259

[a]information taken from Census of Agriculture, 1910-1970. Figures are in dollars.

When comparing livestock and crop values for any given period, crops have always been vastly overshadowed by livestock. Though farming has had significance in the more local economy, livestock have always had more significance as to value in the regional economy. Livestock ranching is more extensive than farming, and is conducted on the nearby mesa lands.

Taking all agricultural activities together, some general trends may be observed. Agriculture rose considerably up to 1920, and even continued beyond for some items.

But as the demand from World War I lowered, overexpanded production was hit by low prices, with a resulting cutback first in value, then in production. As depression hit all sectors of the economy in the 1930s, other items, such as wool were hard hit, with eventual cutback in production. World War II raised demand for such things as hard grains and vegetables. As postwar demand lowered so did all agricultural pursuits. Today agriculture forms only a small portion of the local economy.

Mining

Though mining has had recurrent activity in Grand County, it has not been of importance until only recently. Interest in mining first arrived with the speculative boom of the late 1890s in the La Sal Mountains. Some gold, silver, lead and copper was actually found and mined for periods following this boom, though only in small amounts. These minerals never had a widespread effect on the economy. Oil, gas and coal were sought and produced, but were not significant to Moab's economy. The big mining boom was not to come to Moab until uranium became supreme in the 1950s. As this boom wore off, potash became significant. Many minerals have existed as resources, though they were not mined. Besides those already mentioned, other minerals present include manganese, bentonite, cobalt, nickel, gypsum, bidsonite, and potassium (see Table 12 for locations).

As previously mentioned, gold and silver were the first to be considered. The speculative boom of the late

1890s brought much needed capital with the miners who came to the La Sal Mountains. The boom was soon realized as being more speculative than real as to resources, and most miners left. However, in the immediate period following, gold was

TABLE 12

LOCATION OF MINERALS, GRAND CO., 1938[a]

Location	Minerals
La Sal	Copper
Miners Basin	Gold, Silver, Copper
Little Grand	Manganese
Richardson	Uranium, Vanadium
Wilson Mesa	Gold
Sego	Coal

[a]Utah State Planning Board, Grand County; Basic Data of Economic Activities and Resources, (1938), p. 21.

still produced commercially, though only moderately. The period from 1903 to 1938 produced 74,330 worth of minerals (see Table 13). Of this, $57,304 was in gold, with much less in silver and copper. The peak year was 1903 when almost $24,000 worth of minerals were produced, most of which was in gold. Throughout the period, Gold led in value, with silver or copper next in importance.

Copper and silver hit a peak in 1917. Copper was mined forty miles southeast of Moab, at Big Indian copper mine, but not significantly as it was a low grade ore and difficult to extract. It was further made uneconomical by poor milling and distance from the railroad.

TABLE 13

VALUE OF MINERAL PRODUCTION
GRAND COUNTY, 1903-1935, (SELECTED YEARS)[a]

Year	Gold	Silver	Copper	Total
1903	20,672	3,204	--	23,876
1904	4,920	--	--	4,954
1907	6,585	--	--	7,105
1917	--	3,866	3,942	7,866
1935	5,096	751	--	5,904
Total	57,304	10,800	5,871	74,330

[a]Utah State Planning Board, Grand County, pp. 21-22.

Another mineral worthy of mention is vanadium. Vanadium was mined forty-five miles southeast of Moab at Dry Valley. The mining district crosses the Utah-Colorado boundary. The distance factor made production marginal. Also, a rich discovery in 1921 in South America lowered the price, However, the use of vanadium for making steel, raised during World War II. Few minerals were produced commercially during this early period.

Organic Minerals

Though it did not have permanent importance, oil and gas induced the second mineral boom, during the 1920s. Oil-gas exploration began in 1900 and became intensified by the 1920s. Most of this activity was in northern Grand County, and so had little direct effect on the economy of Moab. Oil drilling had the most impact on northern communities such as

Thompson and Cisco. Most of these wells, however, proved dry. Those with oil were small as ". . . there are no known anticlines or domes in which large quantities of oil or gas might be expected to collect.[1] However, a well on Big Six Dome, twelve miles south of Moab came as a gusher.[2] It spewed 1,000 barrels a day, but was found to be difficult to control and pump as the casing was too weak. All of these explorations, though proving unsuccessful, did add temporarily to the economy due to the employment of drilling crews.

Another organic mineral of temporary significance was coal. This industry centered in the Book Cliffs of northern Grand County. Sego was a coal camp, north of Thompson. Volume was apparently enough to warrant a railway spur to be built from Thompson of Sego. The railroad was especially interested in the product to use in their steam engines. However, the boom was short-lived as trains switched from coal to diesal and production increased elsewhere:

> In May, 1928, Sego was the busiest coal camp in Utah. Due to the high grade of the product and the great demand for it, a 150-man crew was working the mine at capacity, producing 1500 tons of coal each day. . . . Nineteen years later, in 1947, the Sego Coal Mine closed.[3]

Though this product also had little direct impact on Moab, it did provide coal for local consumption, a labor outlet,

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[1]Taylor, Grand County, p. 8.

[2]DUP, Grand Memories, p. 86.

[3]Ibid., p. 154.

and a source of revenue.[1]

Uranium

The all time mining boom for Moab came with rich discoveries of uranium in the 1950s. Overnight the economy shifted from an agricultural emphasis to a mining emphasis. This panacea provided a sudden growth period for Moab, and subsequent decline if the boom could not be sustained.

Uranium had been known to be present from earliest settlement. However, its usage was limited until recently, and hence economically unjustifiable:

> During the early 1900s the only use for uranium was for its radium content. . . . When a rich strike of pitcheblende ore was discovered in the Belgian Congo, the miners in this area went out of business.[2]

Early production had been from the Blue Goose Mine, at the head of Spanish Valley and foot of Brumley Hill. This started in 1910 or 1900. However, the market for uranium dropped with World War I. Discoveries elsewhere put it out of business entirely, except for the vanadium content of the ore. Uranium activity remained dormant until World War II.

The development of atomic energy during World War II sparked renewed interest in the mineral. The atomic Energy Commission started extensive exploration in the late 1940s and announced a guaranteed price in 1950. As the area was known to contain some uranium deposits, further

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[1]Tanner, Moab, p. 48.

[2]DUP, Grand Memories, pp. 88-89.

prospecting was sparked by the guaranteed price. In 1953, Charles Steen, a Texas geologist, struck it big with a claim estimated at $150 million. Other claims within a ten-mile radius totaled another $150 million. Most of these claims were about 20 miles southeast of Moab at the head of Spanish Valley and within San Juan County. Charles Steen's Mi-Vida uranium mine was the focus of mining activity. Steen's uranium reduction company built a ten million dollar mill four miles northwest of Moab, in 1955-1956. This plant was later sold in 1962 to Atlas Minerals Corporation. Several other, large claims were viable in production, but the lesser finds proved uncompetitive for development.

The sudden surge of wealth was more than evident as national magazines publicized the wealth of these new mining owners. Twenty millionaires were established almost overnight. This meant an average of one millionaire per 250 people, in contrast to the nationwide average of one to every 12,000 population. Hence the nickname, "The Richest Town in the U.S.A."[1] However, some of this wealth was based on the value of the claim rather than what was actually being produced. As the "Uranium Capital of the World", ninety-five per cent of the nation's uranium was mined in the Moab area. However, one complication for taxing purposes for building up Moab, was that the mining areas lay across the San Juan County border, and hence not part of

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[1]Elizabeth Pope, "The Richest Town in the U.S.A.", McCall's Magazine, December, 1956, p. 39.

the assessed valuation of Moab. Still, such a rich concentration accounted for the sudden establishment of wealth.

Though a few really struck it rich, Moab did not have the overall appearance of a wealthy community. The growth of the community was too sudden for the public and commercial improvements which accompany community development:

> . . . a very wide and new looking main street with a smattering of two-story buildings, and many gas stations, motels and trailer camps. . . . And you see dust, blowing in red waves off the unpaved side streets. . . . one out of every three families lives in a trailer. Another twenty per cent live in miserable tar paper and scrap-lumber shacks. At last count some 300 families were doing without running water or sewage facilities.[1]

The sudden quadrupling of population in three years from 1,200 in 1953 to about 4,600 in 1956 meant a sudden overburdening of public facilities. Suddenly plans were laid for a new hospital, new schools, improved airport, public park and pool, wider highway, and expanded sewer and water system. In the meantime, most people existed on inadequate facilities.

The uranium boom could not be perpetuated at length. "The uranium boom lost its momentum after five years. Economic chaos was anticipated by many Moab residents."[2] However, just as decline threatened the town's growth and stability, other mining activities stepped in to fill the gap. First came serious oil-gas explorations. ". . . at one time thirteen seismograph crews, each employed thirty

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[1] Ibid., p. 99.

[2] DUP, Grand Memories, p. 70.

to forty men, using Moab as headquarters."[1] This provided a temporary filling-in of the slackening of the uranium boom. However, the crews again found little in actual oil resources. The big industry to emerge was in potash.

Potash

"As early as 1926,. tests by the United States government indicated that Grand County would be important in the search for potash."[2] It was not until post-uranium times that the nation's largest potash deposit was found along the Colorado River, just southwest of Moab. It covers an area twenty by four miles. Texas Gulf Sulphur began construction of a forty-five million dollar mining and milling plant in 1961.. This provided employment for those in Moab, and brought in an even larger working force. To haul away the large shipments of potash, the Denver and Rio Grande railroad built a spur from Crescent Junction to the mine in 1962. Full production soon followed.

The output of the mine lowered as mining problems arose:

> For several years after its completion, the plan and its employees prospered. Then in November, 1969 Texas Gulf Sulphur reported that their net income for the first nine months of 1969 was $46,702,435 compared with $53,835,262 for the nine months of 1968--down considerably. The decision was made to convert from conventional to solution mining. A large number of employees were laid off or transferred.[3]

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[1] Ibid.

[2] Ibid., p. 92

[3] Ibid.

The newer solution process was predicted as more economical for efficient production. Production is expected to continue with a moderate work force for some time. Some mines have been found elsewhere, but this huge deposit should remain competitive. Current uses of potash are in soaps, glass-ware, pharmaceuticals, clothing materials, and fertilizer. The largest usage is for fertilizer.

Mining though found in all periods of Moab's history, had little lasting impact on the economy until the 1950s. Before this, temporary, speculative booms created momentary rises, in the economy, but nothing of real value was found. First came gold, silver, and copper from the La Sal Mountains in the 1890s. Then came oil and gas explorations in the 1920s. But the real boom came in the 1950s with the mad rush for uranium. Overnight the town quadrupled, much to the dismay of public officials who had to cope with the increasing demands on overloaded public facilities. As uranium began to slacken, decline threatened the town, but potash was found in abundance, and thus a new source of employment and income. As the town stabilized, it was ready for the last added function of recreation-tourism services.

Service Industries

The service and business provisions of the early town were meager due to the low population base and lack of luxury income. Services and goods were limited to local needs. The largest demand for services came in the post-

uranium period as recreation-tourism grew from popular visitations to the area. Before covering this last boom, preparatory material will be presented on the employment patterns of Moab in the twentieth century.

Employment Patterns

The pattern of employment reflects the economic booms of the period. The total number of employees numbered in the 600s until the 1950s when it suddenly rose to over two thousand (see Table 14). Agriculture remained dominant until the

TABLE 14

EMPLOYMENT BY INDUSTRY, GRAND CO., 1930-1970[a]

Industry	1930	1940	1950	1960	1970
Agriculture	264	141	154	87	68
Mining	101	74	80	977	657
Construction	16	60	52	83	158
Manufacturing	--	--	6	65	74
Trans.-Comm.-Util.	41	118	29	227	161
Finance-Business	--	--	23	105	88
Personal Service	27	20	33	80	186
Wholesale Trade	--	--	6	32	39
Retail Trade	--	25	46	391	503
Professional Serv.	41	44	54	135	254
Public Admin.	14	41	46	54	87
Total	667	619	642	2,309	2,321

[a]information taken from Census of Population, 1930-1970.

1950s when previously second-place mining took over. Throughout the period, agriculture declined in manpower due to increasing mechanization. Mining has also declined since its high in the 1950s during the uranium boom. Its

earlier activity emphasized coal. Manufacturing, except for handicrafts, has been non-existent until only recently, and is still only minimal. Transportation was first served by a railroad employment emphasis in the 1930s, but now trucks serve as the chief transport employer. Retail trade and personal services have been the current trend for Moab's growth. This is due to the current rise in recreation-tourism for the area.

Recreation-Tourism

The creation of Canyonlands National Park in 1964, and an increase in visits to Arches National Monument created a demand for services by the passing tourist. As affluence and leisure time of the American populace increased, previously untouched areas were invaded in the form of the tourist:

> Moab is one of the recognized playgrounds of America. The surrounding area offers rock hunting, hiking, mountain climbing, exploring, fishing, hunting, photography, many man-made sports facilities, jeeping, water, skiing, boating, and sightseeing.[1]

Visitation to these isolated areas was enhanced by improvements in accessibility.

An example of increasing visitation if Arches National Monument. This geological wonder increased from 59,000 visits in 1959 to 143,900 visits in 1965. This increase has continued even more. Such popularity was an

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[1]DUP, Grand Memories, p. 173.

[2]Planning and Research Associates, Master Plan of Grand County, Utah, including Moab and Spanish Valley (1968), p. 13.

inducement to elevate the monument to national park status in 1971. (Fig. 6).

Tourism's potential was recognized as early as the 1930s, but lay dormant until accessibility and facilities were improved. The future economy of Moab was linked early to the natural scenery:

> To get a panoramic picture of the city of Moab, tucked away in the shadow of towering cliffs surrounded on all sides by tortuous sheer walled canyons leading to the deeply entrenched meanderings of the Colorado River requires even the pessimistic to predict that the future of Moab and southeastern Utah will be inseparably linked with the beauty of this exquisite desert garden of wonders.[1]

The areas most affected were in retailing and service industries. The development of these activities will be traced to show their part in the economy.

Retail trade had modest beginnings. The first store was opened in 1882, and by the 1930s, only several general merchandising and grocery stores existed. As a number of stores were added by the 1930s, sales volume decreased, thus discouraging further expansion. The depression took its toll in this sector also. Hardest hit were general stores and filling stations. Following World War II, however, the economy improved. With the uranium boom of the 1950s, retail trade increased spectacularly. The greatest growth in the number of establishments came in the period 1954-1958 (see Table 15). It took awhile for the retail industry to catch up with the growth of the uranium boom.

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[1]Tanner, Moab, p. 67.

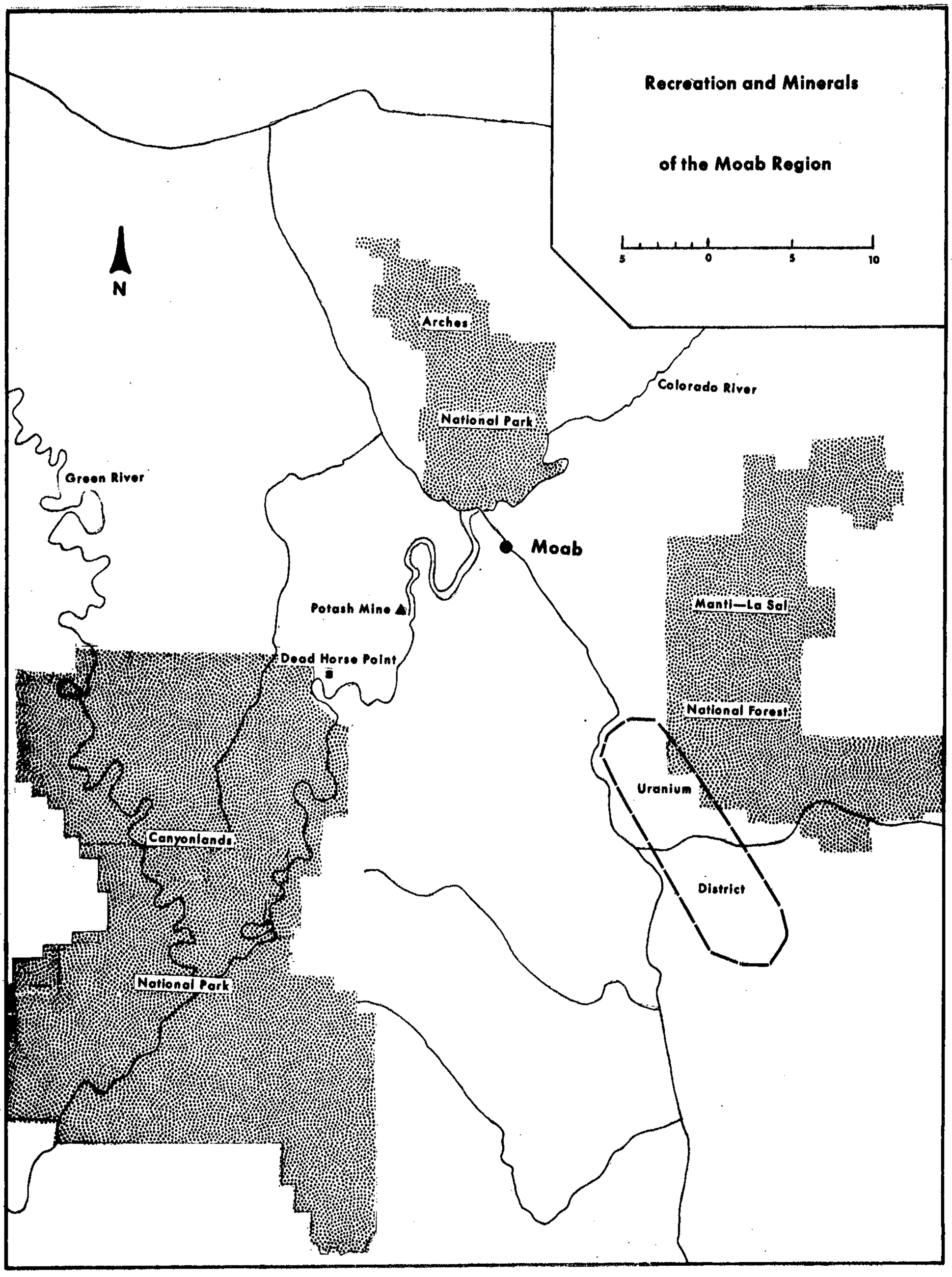

Fig. 7.--Recreation and minerals of the Moab region

Wholesale trade also increased during this period.

Service industries increased fantastically from virtually nothing in 1948. Service industries continued to swell until they equalled retail establishments in 1963. Service activities were a natural outlet for unemployed residents following the decline of the uranium exploration. The only drawback was that personal income was to decrease. Lately consolidation of business establishments has occurred due to previous overexpansion in certain sectors.

TABLE 15

BUSINESS ESTABLISHMENTS, GRAND CO., 1948-1967[a]

Business	1948	1954	1958	1963	1967
Retail	28	38	70	85	85
Wholesale	3	9	11	18	6
Service	2	30	57	85	62

[a]information from Census of Business, 1948-1967

Construction peaked during two periods, corresponding with mining booms: 1954-1956 (uranium), and 1961-1963 (potash). This activity was the source of manpower in the switch to service activities. But, the shift in employment was from high wage construction construction to low wage services. However, the growth in services is balancing its share of the economy due to the current growth in this activity.

As headquarters for such areas as Arches National Park, Canyonlands National Park, Dead Horse State Park,

Wilson Mesa Rim, Castle Valley, and La Sal Mountains, Moab didn't realize its service function until the 1960s. As part of the "Canyonlands, U.S.A.", the Grand-San Juan county area is currently being promoted by tourist bureaus:

> Enjoy the cleaner air, the modern accomodations, the brighter days, and the improved or wilderness camping areas. . . . The contrast between desert floor, sheer rock canyons, and lofty-snowcapped peaks is remarkable. It's as if nature compressed into this one corner of Utah all she had to offer.[1]

At both state and local levels, tourism has been promoted as a policy. This policy has capitalized on the aesthetic potential of local physical phenomena by advertising their scenic grandeur. The development of scenic potential has had a great impact on the economy of Moab.

The Utah Department of Development Services has surveyed the amount of tourism in the area.[2] In 1971-1972, $2.9 million was spent in Grand County by the out-of-state traveller (2.2 per cent of the state total), while the in-state tourist spent $2.4 million (3.5 per cent). The in-state tourist also had a higher proportion of the state total as to number of overnight visits to Moab, though actual numbers showed the reverse. The in-state tourist numbered about 165,500, to represent 3.4 per cent of the total, while the out-of-state traveller numbered about 224,300 to represent 2.7 per cent of the state total. The out-of-state traveller

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[1]"Canyonlands, U.S.A.", tourist bureau pamphlet.

[2]Utah State Department of Development Services, "Utah Motor Vehicle Travel, 1971-1972."

is not only more numerous but spends more money per capita in passing through.

In relation to other settlements in Utah, Moab ranks well as to its percentage of the state total of overnight stays. With about three per cent of all overnight stays in Utah, Moab is only exceeded by Salt Lake City, Provo and Saint George. This is most notably so for the in-state tourist. For the out-of-state traveller, some additional settlements lead in the number of overnight stays. More than half of the overnight visitors to Moab stayed in motels. However, a sizeable proportion of out-of-state travellers stayed with friends and relatives (24 per cent), with a comparable amount of camping by in-state tourists (28 per cent). Overall, Moab is more preferred by the in-state tourist than by the out-of-state traveller. As a result, Moab is a leader in overnight stays by the in-state tourist in relation to other settlements in Utah.

The peak season for tourism is during the summer, as for all of Utah. However, Moab had a higher proportion of the state total during the springtime. The fall season was next in importance, with the wintertime last in visitation and money spent. The milder climate during the spring and fall make this an attractive time of the year to visit the area in relative comfort. The drawing power of Arches National Park was indicated by about 351,600 visits by in-state tourists during the period to represent 7.2 per cent of the state total. Over half of these were during the

summer, although a higher proportion of the state total was had during the fall. Though the summer has the most tourism, in relation to the rest of the state, Moab is more favorable during the off-season.

The continuing increase in tourist numbers has resulted in an increase in the demand for services by the passing and lodging traveller-tourist. As a result, services are increasing as the current growth sector of Moab's economy, and is expected to continue for some time.

Conclusion

The early part of the twentieth century continued the dominance of agricultural pursuits, in the economy. Temporary speculative rises came with the periodic mining booms of the 1890s in precious metals in the La Sal Mountains, and of the 1920s in organic fuels in northern Grand County. However, these explorations and actual production efforts added little to the lasting economic growth of the town. The resources available proved less than the speculative optimism of the booms had supposed. Concurrantly agriculture had a boom in orchard fruits in the 1910s. The fruit was high quality and high value. However, distance from market made the crop less profitable than was at first hoped for. As this activity declined, the depression of the 1930s hit all sectors of the economy, with a resulting economic downturn.

World War II brought added hopes as the general economy brightened. Farm crops were again in demand. But

the brightest item was in the announced need for uranium. During the early 1950s the town mushroomed from the surge of exploration for uranium. The prospecting turned up profitable as claims proved valuable. Construction and consumer services accompanied the sudden growth. As the uranium boom settled down, oil-gas exploration and later potash took over. Shortly following, tourist-recreational service needs created a new important portion of Moab's economic functions. The current trend has revealed how the addition of functions has staved off mass emigration from the town, but it is still unclear whether the present economic base can be sustained.

CHAPTER V

PRESENT ECONOMY OF MOAB

The town of Moab has had the fortune to add economic functions for growth and stabilization. In contrast to most Mormon agricultural villages of Utah, Moab has not declined in the last twenty years, but rather has had phenomenal growth. This growth has been due to the circumstance of finding rich mineral bodies, most notably uranium and potash. Uranium first attracted the growth and then potash sustained it. Again in contrast to most mining boom towns, Moab prevented decline by the development of service industries related to recreation and tourism.

The determination of the key to Moab's future stabilization, growth or decline, can be helped found by analyzing the current economy. The present balance between the sectors of the economy can be studied by the various functions of Moab's economic base. Related to the economic base is the application of the economy to the land. A concluding discussion on the spatial relations of the community with other towns (nodality, hinterland, and flows) is another indicator of future trends of the town.

Economic Base

The occupational pattern of the town has become more

evenly distributed and stabilized in recent years. However, compared to most other towns, the economic base is more dependent on fluctuating mining and service industries, than on the more stable manufacturing and agricultural-related industries. The current economic base can be determined from the standpoint of employees and value added, to reveal these present patterns.

The last twenty years has been a period of tremendous growth for Moab:

> Since 1952, Moab, which is the county seat, has changed greatly in population and activity because of the following developments:
> 1. The discovery of a quarter-billion dollar value uranium deposit.
> 2. The discovery of $150 million value potash deposits.
> 3. The production of on-location, outdoor filming of motion pictures.
> 4. An increase in tourism to the Canyonlands.
> 5. The working of coal and oil fields.[1]

This growth is preparatory to an understanding of the current situation.

The employment pattern for 1970 and previous years differs from cities of comparable size in Utah (see Table 16). Moab was below average in agriculture, and especially in manufacturing, while above average in transportation-communication-utilities, and especially mining. Personal services were also notably low compared to the norm. The change between 1960 and 1970 was toward averages, with above

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[1]Bureau of Economic and Business Research, Grand County--An Economic Profile (College of Business, University of Utah, 1966), p. 3.

areas losing, and below average areas gaining. However, this moderation between categories was sometimes only slight. Mining employment remained disproportionately large. Personal services fell considerably in employment. Though the categories strove towards balance, mining still dominated the economy.

TABLE 16

MOAB VS. UTAH CITIES OF 2,500-10,000 POPULATION, EMPLOYMENT, 1960-1070[a]

	Moab, 1960		Moab, 1970		Utah Cities, 1970	
Industry	#	%	#	%	#	%
Agriculture	24	1.4	--	--	1,273	5.1
Mining	796	43.9	--	--	1,608	6.4
Construction	56	3.2	106	6.0	1,856	7.4
Manufacturing	53	3.0	55	3.2	3,484	13.8
Trans-Com-Util	164	9.4	144	8.2	1,035	4.1
Whole-Retail	250	14.2	392	22.2	5,547	21.1
Personal Serv	175	10.0	63	3.7	1,807	7.2
Public Admin	42	2.4	51	2.8	2,216	8.8
Prof Services	161	9.2	198	11.2	4,723	18.8
Total	1,756	--	1,766	--	25,127	--

[a]information taken from Census of Population, 1960-1970.

The regular census doesn't reveal the wide fluctuation of some of the industries over the years. Statistics for Grand County reveal some interesting variations from year to year (see Table 17). There is also some disparity from the decennial figures. There was an emphasis in

TABLE 17

EMPLOYMENT, GRAND COUNTY, 1948-1971[a]

Industry	1948	1951	1953	1956	1959
Mining	42	32	52	266	415
Construction	--	8	12	194	12
Manufacturing	--	--	--	18	--
Trans-Comm-Util	78	113	127	135	127
Wholesale Trade	--	--	--	45	--
Retail Trade	16	30	57	278	57
Finance	--	--	--	23	--
Services	11	11	47	116	47
Total	162	205	315	1,096	1,024

Industry	1962	1964	1965	1966	1967
Mining	345	476	462	610	573
Construction	537	81	41	43	38
Manufacturing	--	13	13	27	--
Trans-Com-Util	151	176	169	139	160
Wholesale Trade	32	54	43	35	24
Retail Trade	368	293	227	288	252
Finance	35	37	31	34	40
Services	169	151	192	169	223
Total	1,689	1,305	1,185	1,351	1,346

Industry	1968	1969	1970	1971
Mining	807	862	657	511
Construction	176	65	135	64
Manufacturing	--	--	77	24
Trans-Com-Util	170	161	160	151
Wholesale Trade	--	20	--	27
Retail Trade	300	367	348	370
Finance	35	33	35	34
Services	266	344	312	368
Total	1,899	1,940	1,749	1,558

[a]information taken from County Business Patterns, 1948-1971 (selected years).

transportation-communication-utilities until the mid-1950s. Mining, construction, retail trade, and services suddenly achieved more importance during the height of the uranium boom. Most fluctuating was construction as it declined, rose with the potash boom, and been erratic ever since. Most dominant is mining as it grew to sizeable numbers in the late 1960s, cut which has again declined in recent years. However, it still remains the number one employer in Grand County. Retailing and services have generally mirrored the pattern in mining and construction with highs in 1962. However, these areas have currently been increasing independent of the other functions. The current tourist boom has been the cause of this trend in retailing and services. Apparently, the 1970 figures were a temporary low, as recorded in the decennial Census of Population.

The value of the sectors of the economy reveal another view of the economic base of Moab. The last comprehensive tally of personal income was compiled in 1962. This was during the potash boom and so is distorted as to construction activity. However, it does reveal some other patterns (see Table 18). Disregarding the temporary boom in construction, mining has an unusually high amount of income. Contrary to the early economy of Moab, and many other rural communities in Utah, farming forms a neglible portion of the economy. Manufacturing also has little value in this area. Retailing and transportation brings in considerable income, but service income is relatively low for this period.

TABLE 18

PERSONAL INCOME BY INDUSTRY, GRAND CO., 1962[a]

Industry	$	%
Agriculture	34,960	0.2
Mining	4,322,445	23.6
Construction	6,228,052	34.0
Manufacturing	60,420	0.3
Wholesale-Retail Trade	1,579,257	8.6
Finance, Insurance, etc.	205,916	1.1
Transport-Commun-Utilities	1,247,820	6.8
Services	470,643	2.6
Government	1,140,259	6.2

[a]Bureau of Economic and Business Research, Grand County--An Economic Profile (College of Business, University of Utah, 1966), pp. 34-35.

Agriculture, the early raison d'etre for Moab, is no longer important to Moab's economy. Urbanization has largely eliminated the more high value crops of Moab Valley. Some isolated remnants of agriculture still remain in the valley, but only on a small-scale. Livestock ranching still has some significance on outlying mesa lands, and is presently overwhelmingly dominant in the county's agricultural sector (see Table 19). Acreages and numbers of farms has continued to decrease in recent years. However, as the number of farmers in the business has declined, values have increased, with a soaring of value per farm. This growth is due to increases in livestock value, as crop values have declined. Today, crop agriculture is mostly in alfalfa and grains used for livestock purposes. The trend is towards

fewer, more productive livestock ranching units.

TABLE 19

MARKET VALUE OF AGRICULTURE, GRAND CO., 1964-1969[a]

	1964	1969
Total Value	$534,556	$378,195
Average per Farm	$13,706	$5,111
Total Crop Value	$39,650	$69,226
Total Livestock Value	$494,406	$308,964

[a]Census of Agriculture, 1970, I, pt. 46, 81.

Mining, though clearly dominating the economy, has been declining in employment in recent years. "Uranium production has in the recent past been severely curtailed by federal 'stretch-out' programs."[1] Atlas Mineral Corporation which once hired 225 employees, only had 100 employees by 1968. Much of the physical plant is now dated as to efficiency. However, a high level of production is expected as uranium needs increase. The potash that is mined is of high grade and in a huge deposit. However, as production increased elsewhere, the price lowered to only one-half of that received when production began. Oil and gas explorations brought little in actual production as the 16,000 foot depth was not currently economical, and this activity has been on the decline since 1959.

Despite the decrease in mining employment, however,

[1]Planning Research Associates, Master Plan, p. 6.

its value has been great. Besides an almost five million dollar payroll for 1967, mining industries together added a value of $21.6 million to the economy, for that year. While mining values increased, the number of units engaged in the activity decreased (see Table 20). The smaller, uneconomical units had dropped out of business. In mining, the trend was also towards fewer, large, more efficient operations.

TABLE 20

NUMBER OF ESTABLISHMENTS AND VALUE BY INDUSTRY, GRAND COUNTY, 1963-1969[a]

Industry	Establishments	Employees	Value
Agriculture	39	68	$534,556
Mining	36	700	$21,600,000
Manufacturing	4	--	$100,000
Wholesale Trade	6	29	$2,278,000
Retail Trade	80	280	$9,598,000
Services	62	119	$1,573,000

[a]information taken from Census of Agriculture (1970), Census of Business (1967), Census of Manufactures (1967), and Census of Mineral Industries (1963).

Activities with little value include manufacturing and wholesaling. In 1967, manufacturing had a value added of only $100,000 while wholesaling had receipts of $2.3 million. Both of these activities had declined during the previous five years.

Retail trade has continued to play an important role in the post-uranium economy. In 1967, Moab had 71 establishments with 267 employees, and $9 million in receipts.

Though the number of employees in this category has fluctuated, the value has generally increased. By kinds of business, there was a concentration of gas stations and eating places in 1967, indicating the importance of the passing tourist trade. However, these establishments, as in almost all other categories were fewer in 1967 than in 1963. Retail trade is also stabilizing to fewer, more prosperous establishments.

Most of the current boom in the service industries is not evident in the dated 1967 statistics. In that year, Moab had 54 establishments in services, with 199 employees and $1.4 million in receipts.[1] Motels represented a major portion of this activity. Again, over previous years, there were fewer establishments but more income.

The trend for all business enterprises in Moab and Grand County is towards fewer, more profitable establishments. During the uranium and potash booms, many sectors were overbuilt and overspeculated. In the post-boom period. The smaller, more marginal concerns realized their uneconomic abilities, and soon found themselves out of business. However, total profits did not decline, and the more efficient establishments which remained absorbed the surplus gain. After the business consolidated to form a more stabilized economy, a better foundation was prepared for the current boom in the tourist-related service industries. Grand County

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[1]U.S. Department of Commerce, Bureau of the Census, Census of Business, 1967, V.

has a more stabilized economy than during the booms of the 1950s and early 1960s. However, it still is not as balanced as most other communities. There is still heavy dependence on the mining industries.

The still relatively unbalanced economy is reflected in the most current employment pattern for 1971 (see Table 21) Out of 1,538 employees, mining had almost one-third of

TABLE 21

EMPLOYMENT BY INDUSTRY, GRAND CO., 1971[a]

Industry	Employees	%
Mining	511	32.8
Oil-Gas	117	--
Construction	64	4.1
Manufacturing	24	1.5
Transport-Commun-Utilities	151	9.7
Wholesale Trade	27	1.7
Retail Trade	370	23.7
Automotive	85	--
Eating	114	--
Gasoline	49	--
Finance, Insurance, etc.	34	2.2
Services	368	23.6
Hotels	112	--
Total	1,558	--

[a] County Business Patterns, Utah, 1971, p. 26.

the employees. This is considerably above the fifteen per cent given by Harris as the criterion of a functional mining town in the United States.[1] Manufacturing was low, while transportation-communication-public utilities were high.

[1] Chauncy D. Harris, "A Functional Classification of Cities in the United States", Geographical Review XXXII (1942), 88.

Retail trade was a major employed, while service industries had grown to a sizeable portion of the economy. Both automotive-gas station and eating place categories were important to retail trade due to the passing tourist economy. Motels led in the function of the service industries.

The present economy of Moab is dualistic. It revolves around both mining and retail-service activities. The retail-service function employs more than the mining industry, comprising almost half of the total working force. Together, they account for about eighty per cent of all employees. The current economic base consists of a mining and retail-service dominance.

Population Characteristics

Population growth paralleled the growth of the economic base. Population grew tremendously during the uranium period, and has since tapered off in growth and stabilized. The current (1970) population of Moab is officially listed as 4,793, with a growth of 2.4% over the previous decade.[1] This is a relatively low growth rate for the last decade. However, elsewhere, in the Census of Population, figures of over 5,000 were listed for total population. Moab represents seventy-two per cent of Grand County's populace.

The portion of the county residing within the city of Moab was increasing until only recently (see Table 22).

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[1]U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, Vol. I, Characteristics of the Population, pt. 46, Utah.

However, this current trend is confused by the increase of population outside the city limits, but still within the functional community. The Moab census division, which includes this rural-urban fringe, listed 6,272 people for 1970. This represents virtually all of the population of Grand County. The increase for this division was 4.6 per cent over the previous decade. Much of the county's growth came from the northern section, especially around Elgin-Green River, where federal missile operations have been constructed. While this area has increased, Moab has stabilized with a resulting stabilization of its portion of the whole county.

TABLE 22

POPULATION DISTRIBUTION,
MOAB VS. GRAND CO., 1930-1970[a]

Year	Moab	Grand Co.	% of Grand Co.
1930	853	1,813	47.0
1940	1,084	2,070	52.4
1950	1,274	1,903	66.4
1960	4,682	6,345	73.8
1970	4,793	6,688	71.7

[a]information taken from Census of Population, 1930-1970.

The relatively recent growth of Moab and accompanying fluctuations, is mirrored by the migratory nature of the population. Between 1950 and 1960, most of the sudden increase was obviously due to inmigration, rather than

natural increase. The 1960 Census revealed only thirty-eight per cent of Grand County as being born in Utah. Also, another forty-three per cent of the county's residents had not been there prior to 1958. The transient nature of the population continued during the post-uranium boom. These ratios were still rather evident by 1970. Only forty-three per cent were in the state of birth, while thirty-two per cent had located in the county since 1965. These proportions will probably shrink with time.

The origin of these immigrants were mostly from nearby areas. Of those resident in 1960, about twenty per cent were in the same house as in 1955, while a similar amount came from within the county. Of the remainder, some came from within the state, while almost forty per cent came from outside the state (see Table 23). The number that were

TABLE 23

RESIDENCE FIVE YEARS PREVIOUS TO CENSUS,
MOAB, 1960, 1970[a]

Residence	1960	1970
Same House	1,066	2,027
Different House in the U.S.	4,071	3,162
Same County	1,275	1,280
Different County	2,796	1,882
Same State	839	459
Different State	1,957	1,423

[a]information taken from Census of Population, 1960, 1970.

in the same house in 1970 had increased considerably as the area stabilized following the growth periods of uranium and potash. However, the high mobility of the population was still evident. Most of the changes of residence were within the county, while those from outside the county were proportionately more from out of state. These same trends hold true also for the city of Moab.

The highest rate for occupance of 1960 residents occurred in 1959-1960. Another peak period was in 1957. This reflects the lag in permanent construction. Initial residence was often in trailers, until more permanent dwellings could be built. Of the 6,345 living in Grand County in 1960, only 1,000 of these were in the same home as before 1953, when the uranium fever struck. Almost three times this amount had established last residence during the two years of 1959-1960. Sudden housing construction was very dominant during this period when demand suddenly increased due to new residents.

The population profile of the county has also drastically changed during the recent booms. In the 1940s and early 1950s, the population was older in composition, with a low ratio of younger children. By 1960 the profile became more normal as many moved into the area. "... A large proportion of the newcomers during the uranium boom were young families with many young children."[1] The largest

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[1]Planning Research Associates, Master Plan, p. 4.

increase came in the under five group, with significant growth in the 5-14, 25-34, and 35-44 age groups. This supports the contention that most newcomers were young families with young children..

By 1970, the dominance of very young children had disappeared (see Table 24). However, the 5-14 category was now dominant in the population profile. The young adults also thinned out during the decade to give a more even distribution among age groupings. The middle age grouping was now more significant.

TABLE 24

POPULATION PROFILE, MOAB, 1960 & 1970[a]

Age Group	1960	1970
under 5	775	496
5-14	970	1,283
15-24	788	743
25-34	739	634
35-44	595	619
45-54	432	481
55-64	226	341
65-74	103	136
over 75	54	70

[a]information taken from Census of Population, 1960,1970.

All of these aspects of the population character reveal the great changes that came concurrent with the mining booms. An older, small community was transformed overnight into a small city teaming with younger, transient inhabitants.

Land Use

The current use of land in Moab Valley is chiefly urban in character. But of the 1,846 total acres within Moab city, there is more land classed as undeveloped than as developed (see Table 25). However, most of the undeveloped land is considered unsuitable for urbanization. Within the

TABLE 25

LAND USE, MOAB, 1968[a]

Land Use	Acres	% of Total	% of Developed
Manufacturing	6.5	0.4	0.9
Wholesale Trade	7.0	0.4	1.0
Retail Trade	43.1	2.3	6.0
Services	34.4	1.9	4.8
Institutions	13.3	0.7	1.9
Public	60.6	3.3	8.5
Residential	364.6	19.7	51.1
Street	184.1	10.0	25.8
Total Developed	713.6	38.7	--
Farming	291.8	15.8	--
Undeveloped	841.0	45.5	--
Total	1,846.4	--	--

[a]Planning Research Associates, Master Plan, p. 12.

city are still some farming lands. Of the urban land uses, residential and street uses are dominant. Residential land usage represents over half of the developed land, while streets represent another quarter. Developed land comprises thirty-nine per cent of the total, while undeveloped land occupies forty-six per cent of the total.

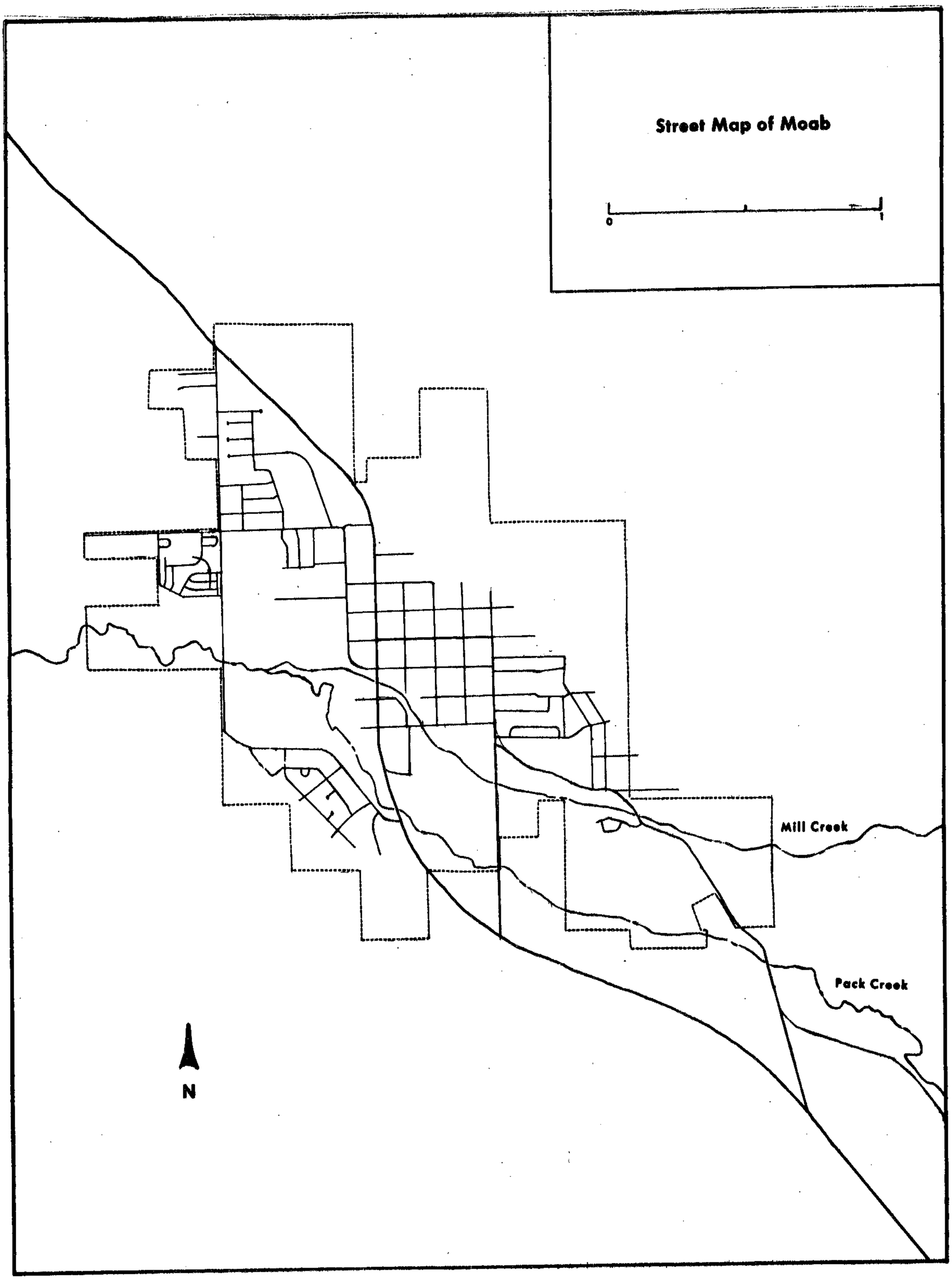

Fig. 8.--Street map of Moab

Much of Spanish Valley is vacant (see Table 26). Of almost 9,000 acres in Moab-Spanish Valley, almost 7,000 acres are classed as vacant (about seventy-seven per cent). The chief land usage is agricultural (about ten per cent). Most of the agricultural lands are in grazing, or alfalfa production. However, within the more immediate Moab Valley, some orchards do still exist.

TABLE 26

LAND USE, MOAB-SPANISH VALLEY, 1968[a]

Land Use	Acres	% of Total
Agricultural	901.0	10.1
Commercial-Retail	15.0	0.2
Commercial-Services	30.9	0.4
Commercial-Wholesale	13.2	0.1
Public	7.0	0.1
Residential-Low	206.2	2.3
Medium	49.4	0.6
Rivers/Streams	365.4	4.1
Mountains	305.0	3.1
Vacant	6,878.4	77.3
Parks	125.9	1.4
Total	8,897.5	--

[a]Planning and Research Associates, Master Plan, p. 13.

Moab Valley itself, has more varied land usage. After the rapid growth of the 1950s, much of the agricultural land was either converted into urban uses or abandoned. The pasture lands on the western side of the city are used for grass crops and pasturage. Some of these areas on the west side of the valley have been abandoned or only moderately maintained as competing urban uses were more profitable. The

most extreme western lands, adjacent to the river are not used as the water table is high with resulting poor drainage. Some other pasture lands and field crops still exist on the southeast end of the valley, especially between Pack and Mill creeks. These lands are better maintained and productive.

Some orchards still occupy the land, although not all appear to be productive. As in the case of all agricultural land, orchards occur in patches to the west and southeast of town. Orchards once were especially common to the west of town, but lately have been especially vulnerable to the bull-zoner of expanding residential tracts. Currently, total agricultural lands occupy about one square mile of the 5.65 square miles in Moab Valley. This represents about eithteen per cent of the total land in Moab Valley (see Table 27).

TABLE 27

LAND USE, MOAB VALLEY, 1973[a]

Land Use	Sq. Miles	% of Total	% of Developed
Residential-Old	.19	3	16
Residential-New	.45	8	38
Residential-Trailer	.15	3	13
Commercial	.20	4	17
Public	.16	3	13
Industrial	.06	1	5
Total Developed	1.20	21	--
Agriculture	1.00	18	--
Undeveloped	3.45	61	--
Total	5.65	--	--

[a]own field survey of current land use.

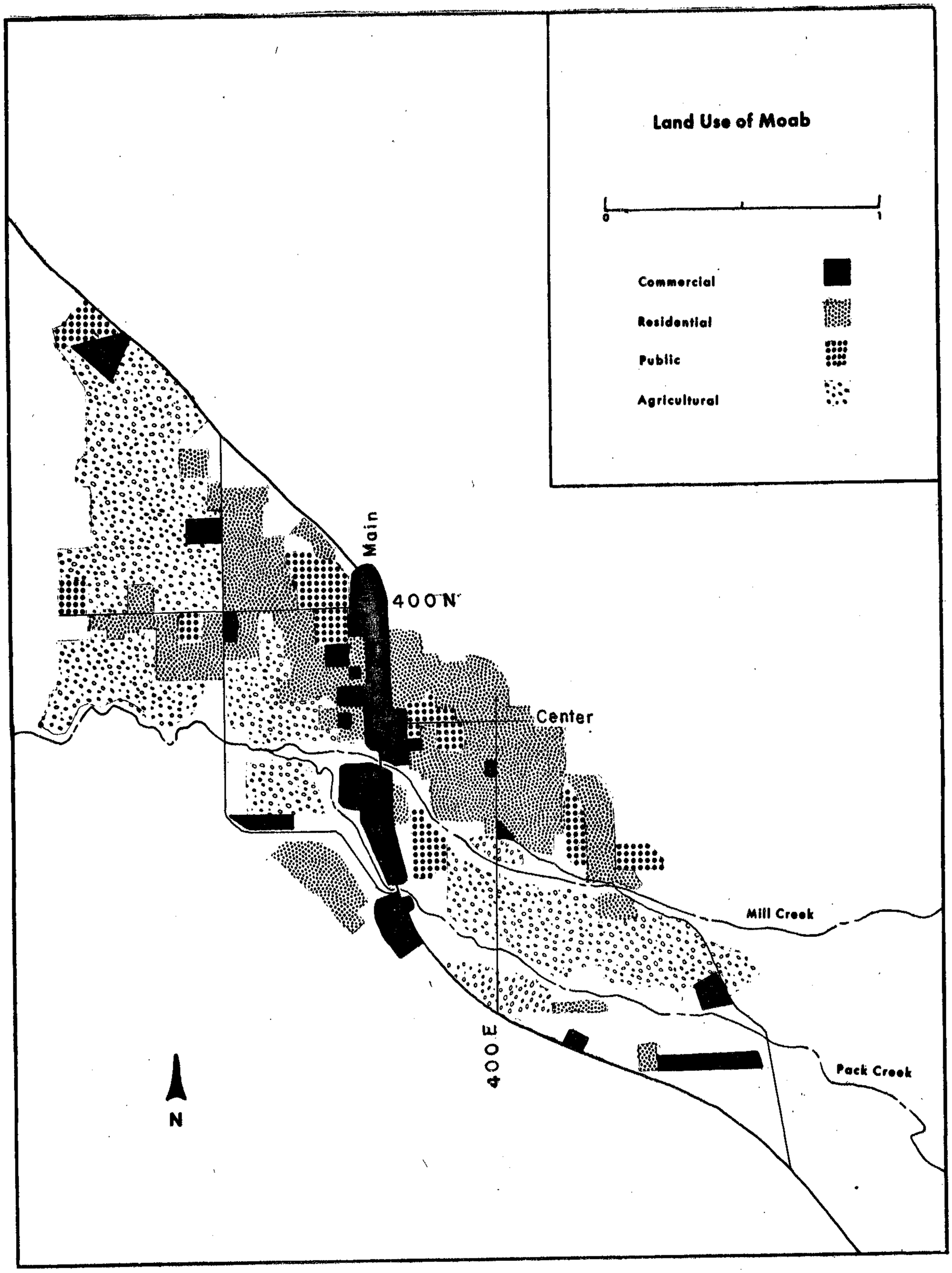

Fig. 9.--Land use of Moab

The urban community of Moab shows some interesting patterns. Total developed urban land occupies about 1.20 square miles, or twenty-one per cent of the valley. The original plat for the Mormon farm village contains most of the older housing of the town (pre-1950). Older residential land use occupies .19 square miles, or about three per cent of the valley.. This central area is composed of older, poorly maintained residences. There is a high mixture of contrasting residence styles and land uses within this area. Amidst the hodge podge are patches of commercial enterprises, trailers and vacant plots, all interspersed through the area. There is little order or uniformity in this central section of the community. Part of the reason for the isolated patches of commercial development is that the main road once went through the eastern portion of the town. As the main road was diverted, these commercial establishments remained.

When the town suddenly grew in population, two phenomena occurred. The immediate, and somewhat temporary action was a tremendous surge in trailer occupance. As a result, the town was interspersed with trailers. Many of these gradually disappeared as more substantial housing was erected. However, some sizeable trailer parks were also created due to this circumstance. The trailer parks still exist, although many of them are now half vacant. Trailer parks occupy .15 square miles, or three per cent of the valley. The poorly maintained trailer sites are in the center of town, while the better trailer sites are on the town's western and

northwestern margins. Large trailers are common in the newer, better parks.

The other, more permanent phenomenon to occur, was the construction of newer, more substantial, middle-class housing in tracts surrounding the older town. Newer residential areas occupy .45 square miles or eight per cent of the valley. Three tracts are most notable. They are to the east, southwest, and northwest sides of the town. Some of the newest housing did not come until the 1960s, following the potash boom. This boom was more stabilizing and permanent in its effect on the residence pattern than was the "uranium fever" of the 1950s. These peripheral tracts consist of modern, well maintained, attractive homes. The appearance of more wealth is concentrated in these housing areas. This gives the town the appearance of a "doughnut-shaped" city, where the central portion is older, poorer, uglier, and decaying, while the surrounding newer "bedroom" tracts have the appearance of having the town's greatest income.

The commercial district is another unique case. The original central business district can be located with a focus on Center Street and Main Street. However, as most of the town's growth came late, during a mobile age, the CBD is extremely small and almost non-existent for the town's size. With sudden expansion of the town in the 1950s, strip commercial development resulted along the major highway.

The newer establishments are most notable on the newer highway which extends south of town. On this southern

extension of the commercial zone are located new, larger motel complexes, and the major grocery markets and clothing store. The location of motels is geared towards the passing tourist trade, while the retail concerns are located where land values are lower and land parcels are bigger for larger outlets. The distance from the original CBD is no problem as the newer, more moneyed consumer is mobile and resides on the community's fringes anyway. This strip commercial development is projected to continue southeastward along the highway. Total commercial land use occupies .20 square miles or four per cent of the valley.

The industrial sector of the economy has little expression on the local land use of Moab Valley. Industry occupies only .06 square miles or one per cent of the valley. there are a few isolated patches along the south side of the town. The only major plant is the Atlas Minerals Corporation which processes uranium ore to the northwest of town, across the Colorado River. Other major units which contribute to the economy are more distant, such as the potash plant west of Moab, on the Colorado.

In summary, the land use of Moab Valley is varied. Though the physical site constricts the usable portion of the valley, much land has been used indiscriminately. The older center of the town is rundown with much variety of land use and vacant spaces. The fringing newer housing tracts appear to be better maintained and have more uniformity in land use. Another problem is the high proportion of trailer

residence, which in some areas adds to the varied appearance. There is a mixture of agricultural lands with urban uses. Some fields have been abandoned and allowed to revert to unmaintained pastures. A few have become cluttered with junk and abandoned autos. The commercial development is mostly strip development along the major highway. The CBD is very small for the town's size and is poorly defined. In general, the community development has been dispersed and unorganized, which is not unusual for sudden "boom" towns.

Regional Relations

Moab serves as a nodal center for this area due to its isolation from other competing centers of population. However, its hinterland appears severely limited as to sub-ordinate size towns, except for the smallest villages. Another relevant topic to regional relations are the flows between towns. For these purposes, a questionnaire survey was taken to residents of Moab and surrounding communities (see Appendix).

The nodaiity of Moab is self-assured as other towns are distant. Monticello is fifty-four road miles to the south, Green River is fifty-one road miles to the northwest, and Grand Junction is 115 road miles to the northeast. Within these distances lie only small villages of less than one hundred population. Such villages include La Sal to the southeast, Castleton to the east, and Thompson and Cisco to the north.

Though Moab is much larger than such surrounding towns as Green River, and Monticello and Blanding, Moab doesn't have the commercial outlets that other towns have in the general region. Hence the towns of Green River, Monticello and Blanding are included in the hinterlands of such other centers as Price, Cortez, and Grand Junction. This was found as residents were questioned in outlying areas.

The survey was taken to Blanding, Monticello, La Sal, Thompson, and Green River.(see Table 28). Blanding was found

TABLE 28

SURVEY OF SHOPPING IN MOAB, 1973[a]

Town	Total Response	Grocery	Clothing-Furniture	Heavy Equipment
Moab	82	--	48	50
La Sal	6	4	3	3
Thompson	4	2	1	2
Green River	12	0	1	0
Monticello	8	0	0	0
Blanding	11	0	0	0

[a]taken from personal questionnaire survey

to be its own center of providing basic goods and services. Most trips were to Monticello, only twenty-two miles distant. More specialized items were obtained in Salt Lake, with some trading for intermediate goods in Cortez. The same was found for Monticello, with most frequent trips reversing to Blanding. There also appeared to be more trade connections with Salt Lake and Cortez than there was in Blanding.

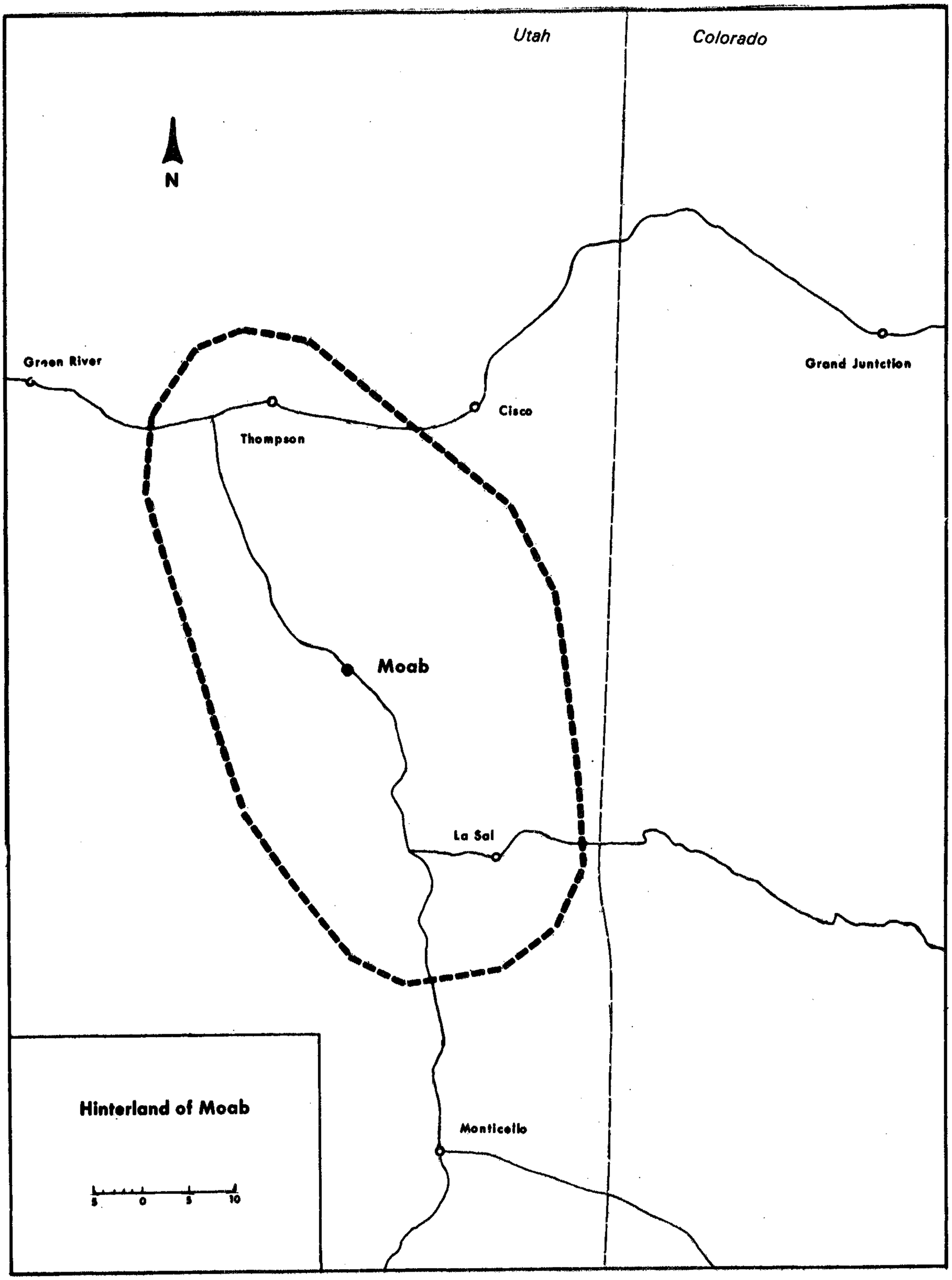

Fig. 10.--Hinterland of Moab

La Sal was found to be more directly tied into Moab's tributary area. Most trips were to Moab, averaging more than once a week, for the most basic items, such as groceries. However, even here, some bought the more specialized items, such as machinery and furniture elsewhere, such as in Grand Junction. Thompson, on the opposite side of Moab, was also found to be more directly tied into Moab's trading area. Trips to Moab average once a week, with most groceries and machinery bought there. However, the preference for clothing and furniture was for either Grand Junction or mail order. Otherwise, Moab seemed the destination of most business dealings.

Green River was found to be more in the hinterland of Price than of Moab, although the visits to Moab were as frequent as to Price. The different reasons for trips explain this paradox. While most groceries are bought locally in Green River, most clothing, furniture and machinery is bought in Price. However, Moab was cited as a center of medical service. This is largely due to the larger, more modern hospital located there. Other reasons for visiting were for church work (Green River is part of the Moab stake of the LDS Church), and entertainment (geared to Moab's tourist trade). So Green River is basicly within the trading hinterland of Price, though it has other connections with Moab.

A survey of these surrounding communities shows that Moab's hinterland may extend some distance, but not far

enough to include other centers of population. Thompson and La Sal were found to be the only villages to be within Moab's hinterland. A survey of Moab's own residents revealed some of the reasons for the lack of trade with Moab.

Many of Moab's residents shop locally in Moab. Grocery shopping is good for its needs with several moderately-sized supermarkets. However, some respondents felt that prices were significantly cheaper in Grand Junction to warrant the distance.

Furniture and clothing are sore spots in Moab's economy. Only half of Moab's residents buy locally for these items. Roughly thirty per cent buy them in Grand Junction while another twenty per cent buy them in Salt Lake City. Common complaints cited were lack of selection and high prices in Moab's retail stores. Many particularly mentioned that when they go to either of the other towns, they buy clothing at J.C. Penney's, which Moab lacks. Some of those classed as shopping locally, did so through mail order, of which Sears and Montgomery Wards have catalog stores in Moab.

Apparently several efforts have been attempted by the town's citizenry to induce more retail clothiers, including Penney's to locate in Moab, but to no avail. As a result, many of those who shop in Moab do so because of convenience, but prefer the selection and prices of goods elsewhere, most notably Grand Junction and Salt Lake City.

Within the town, there was variable response according to income level. The younger, more recent residents of

of the more moneyed newer housing tracts were more willing to travel elsewhere for goods, most notably to Grand Junction. This group is more mobile and desirous of bigger selection of goods. The older, poorer residential areas have a less mobile population and are more satisfied with the local selection. Some of the respondents stated that they realized the difference in price and selection, but that they felt the money whould be spent where it was earned. Local community pride is responsible for such attitudes. But a sizeable number shop out of town for furniture and clothing, with some others who shop locally expressed dissatisfaction with the local prices and selection of goods.

Heavy equipment fares better for the local market. Contrary to the normal heirarchy of more specialized goods being bought further away in larger trade centers, more of Moab's residents bought heavy equipment locally, than for furniture and clothing. Heavy equipment such as cars, machinery and major appliances were bought in Moab by sixty per cent of its residents. Roughly twenty per cent buy them in Salt Lake City, while another ten per cent procure them in Grand Junction. For the heavier items, Salt ake was preferred over Grand Junction, which is more normal in the heirarchy of heavy equipment. Residents of Moab seemed to feel better about availlibility and prices of local cars and machinery. One reason is that the problems of transporting the heavy items over long distance are alleviated by obtain-

ing the items locally.

Generally, Moab serves as a nodal center for its own residents, but to the dissatistaction of many. A fair proportion of its residents do their shopping elsewhere, especially for clothing. Surrounding communities, with the exception of La Sal and Thompson, generally go elsewhere for their business.

The flows between towns reflect both tourist and shopping movements. Past traffic studies include the flows not only of residents, but of all those passing through the area. U.S. Highway 160, which goes through Moab, has considerably traffic even though it is not an interstate route. Traffic has increased most since 1950 (see Table 29). Much of this is due to the increasing tourist trade. However, the 1967 figures were below previous years.

TABLE 29

TRAFFIC VOLUMES, U.S. 160, 1937-1967[a]

Location	1937	1945	1950	1960	1965	1967
Crescent Junc.	97	160	469	1,200	1,245	1,185
Arches Nat. Pk.	95	140	474	1,125	1,750	1,480
South (Moab)	70	134	585	1,600	2,400	1,555
North (Moab)	--	--	1,310	3,700	4,175	3,650

[a]Planning and Research Associates, Master Plan, p. 14.

The flows for residents of Moab are mostly in northerly directions. The most traffic is towards Grand Junction. On the average, residents of Moab make almost seven trips

per year to Grand Junction. Besides shopping, other cited reasons were for medical reasons, such as the orthodontist. The other most travelled route was to Salt Lake City, with an average of four trips per year. Common reasons were for shopping, visiting and other business. The shorter distance to Grand Junction makes it a more frequently travelled route than to more distant Salt Lake City.

Conclusion

The present economy of Moab consists of several functions. The economic base is heavily reliant on mining and retail-service industries. Mining emerged in the 1950s to give the town its sudden growth. Service industries came later and prevented economic decline. However, relative to many other towns of comparable size, Moab is still economically undernourished as to some of the more stable activities.

The sudden growth of the town brought rapid changes in the population characteristics. Suddenly, an established, older resident populace was overwhelmed by a younger, higher income, transient population. The population structure, however, is somewhat returning to normal.

Land use is Moab Valley is very chaotic and unorganized. Blight plagues the inner town with accompanying mixed land uses. Attractive residential areas surround the older core, but are in turn surrounded by another disorganized rural-urban fringe. Commercial development lines the highway, and agricultural lands have been reduced in the valley.

The regional relations indicate that Moab is a local nodal center, but has a small hinterland as to surrounding towns. Even residents of Moab preferred to buy some articles elsewhere. Common destinations for business were Grand Junction, and Salt Lake City.

All of these aspects of the present economy and characteristics of Moab indicate the impact that the mining booms of the last twenty years have had on it. Some sectors of the economy were slow to catch up. The present town is still in the throes of readjustment. Often this readjustment is slow as different sectors attempt to balance out to the norm. However, it is projected that mining and tourist services will continue to play an important role in the local economy of Moab.

CHAPTER VI

FUTURE PROSPECTS FOR MOAB

Moab, in contrast to the typical Mormon agricultural village of Utah, has grown in the last twenty years as to size and economic function. Moab's origin was as an agricultural village in the last part of the nineteenth century. The regional economy was dominated by livestock ranching, but crop farming was the main activity of Moab Valley. The watered alluvial soils and warmer climate of the small physical site encouraged some crops that were able to grow better than in some other parts of Utah. Corn and fruits were among these crops, and provided a stable agricultural economy for the valley. However, distance from markets created a limitation on sizeable cash production. The potential of agricultural growth was blocked while yet in its early days by both small physical site and isolation from markets. Nevertheless, agriculture remained the chief economic function of the valley long into the twentieth century.

Mining was only speculative and temporary in Moab's earlier days, but became the new focus of the economy as uranium brought spectacular growth in the 1950s. Suddenly the town was lifted from its pastoral solitude to a new world of industrious growth. The growth was even too sud-

den for a new community lifestyle to develop. It wasn't until the economy subsided that the transient trailer community began to take on more aspects of a settled, normal community. As the uranium boom subsided, other sectors of the economy had a chance to catch up to more normal proportions. As economic stagnation and decline threatened the community's existence, a new activity was found, in potash. As potash production strengthened the already existing mining economy, the town's stability was maintained, at least temporarily. Mining has continued as the chief economic function since the 1950s.

The future of Moab cannot be definitely ascertained. Aside from mining, the resource base of the region is limited. The area is too arid for large-scale agricultural development. Only mining can exist on the presently known resource base. As a result, Moab's economic base is unbalanced, in favor of mining. Even retail activity for the resident population is inadequate. This is evidenced by the high rate of shopping in external communities. Unless some more economic balance can be achieved, at least in the needs of the resident population, the long-range effective viability of the town is questionable.

The current panacea in the expected, continued growth of Moab, is the tourist trade. The 1970s have witnessed new demands by the passing tourist. Suddenly, newer, higher quality motels, restaurants, and other facilities are being constructed to provide for these needs. It is hoped

by local optimists that this will help balance out the econ-as activities take off in a new service-oriented direction. However, it might not be the expected cure-all as tourist industries can tend to be speculative rather than a stable growth function.

Though tourism will most likely continue to increase it could have serious temporary setbacks. As a luxury sector of the economy, a sudden nationwide or local economic downturn could send it to an equally sudden death. Another drawback to speculative growth in tourism is that it can be overbuilt. This has already been in the economic experience of Moab, in both the 1930s and 1960s as the number of establishments declined due to pevious overexpansion. The same experience could happen again. Tourism may provide temporary growth, but as for long-range, stable growth, it may not be a cure-all for Moab's economy.

The economy of Moab is expected to remain with a dominance in mining. This activity provides the "basic" economic function of the community, while most other employment is "non-basic" to provide for the service, retail and other needs of the resident population. Farming is virtually extinct in the valley. However, there is another smaller core of service industries that form a secondary "basic" tourist trade. The current "basic" economies are expected to continue for at least the immediate future.

Demands for the minerals produced are expected to remain around current levels. Thus the mining sector of the

economy is likely to remain stable. However, it is possible that rich finds elsewhere, or slackening of demand could send Moab's economy spiralling. But the more likely problem to attack Moab's economy is a change of mining technology. As methods of production become more efficient, a reduction of mining employment can be expected. In the event of such a likelihood the effect on Moab's economy and stability will be negative. Unless other functions can increase to fill in the gap, decline will most likely result. The town has already experienced a decline relative to other communities of the region. This is based on an unbalanced sectoral economy, and only minimal growth in the decade between 1960 and 1970.

Unless tourist-related service industries can continue to increase over the long-range, the economy of Moab will most likely remain at little more than the present level, if not less. Thus the town would maintain a status quo-type stability, but have little in the way of vitalizing growth, with a resulting relative decline in comparison to other towns of the west. The current resource base has little more to offer. Either the current rise in tourism must be capitalized on in a sustained manner, or the town will not have a very promising future.

In spite of an uncertain future for Moab, there are several bright spots in its current situation. Though Moab is isolated from larger centers of population, it is situated well relative to some scenic-recreational sites in

southeastern Utah. As the largest community in the area, and being adjacent to such notable features as Arches and Canyonlands National Parks, Moab is a likely center for tourist industries to concentrate. Thus Moab can expect some stability from this sector for at least the immediate future. How long it can be sustained is questionable. The long-range viability of Moab is largely dependent on the variable factor of local tourism.

The economy of Moab has been fortunate in capitalizing on recent resource finds to the resulting growth of its economy. The only problem is finding and sustaining new functions to maintain the town's future stability. Past fortune, however, was good in the growth and many resulting facilities and services that it brought to this isolated outpost in southeastern Utah. The town now has some attractive residential sections, and public facilities that might otherwise have gone elsewhere. The only concern is maintaining an increasing level of these items. Mining will probably assure at least a basis for fairly stable economic activity. Thus, major desertation of the town is unforeseen. The town's continued existence seems assured. The only question is to what level of stability and growth that Moab can maintain. At any rate, Moab is today more viable than as a past agricultural village, and is expected to continue to play an important role in the economy of southeastern Utah.

APPENDIX

QUESTIONNAIRE

The following questionaire was administered orally to a sample of Moab's households, and surrounding communities. Minor variations of this questionaire were devised according to the community.

1. Approximate number of trips per year to:

   Grand Junction _____

   Price _____

   Provo _____

   Salt Lake City _____

2. At which town do you do most of your grocery shopping?

3. At which town do you do buy such purchases as furniture and clothing?

4. At which town do you buy heavy equipment such as cars and machinery and major appliances?

5. What is the major reason for trips to Moab?

RESULTS OF QUESTIONNAIRE FOR MOAB

1. Approximate number of trips per year to:

Grand Junction	6.7
Price	1.4
Provo	1.2
Salt Lake City	4.0

2. At which town do you buy such purchases as furniture and clothing?

Moab	48	(49%)
Grand Junction	27	(28%)
Price	1	
Provo	1	
Salt Lake City	20	(21%)

3. At which town do you buy heavy equipment such as cars and machinery and major appliances?

Moab	50	(60%)
Grand Junction	10	(12%)
Price	4	
Provo	1	
Salt Lake City	18	(22%)

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THE ECONOMIC DEVELOPMENT OF MOAB, UTAH

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ABSTRACT

Moab, located in southeastern Utah, began as an agricultural village, in accordance with the economy of early Utah. However, Moab's growth was limited by a restricted physical site. The purpose of this study is to trace the development of the economic functions of Moab in relation to its resource base. Despite the physical limitations of the area, agriculture remained the chief economic activity up to the mid-twentieth century. Periodic booms in speculative mining were only temporary and not significant to the permant economy of the community.

However, in the 1950s, a spectacular uranium boom brought unprecedented growth to the town. As the uranium boom slackened, economic and population decline threatened the town's new status. Potash production and tourist-service industries emerged to buoy up the sagging economy. Although the economy was aided by the addition of other activities, the sectors of the economy still remained disproportionately unbalanced in comparison to the norm. The future economic stability of the community remains questionable unless balance can be attained.

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