The Farmer's Flower Garden and What To Plant In Fall

By H. H. Schutz, Assistant Professor of Agronomy, N. Mex. A. & M. College

AT THIS time of the year most of the farmer's work is done. Fighting the weeds to keep them in subjection is about over and most of the crops are harvested. He can take life a little easier and while planning the work for next year he can plow and level a few rods of land in front of the house and fit them for a few flowers. It is surprising what a difference a small garden makes in the appearance of the house. On the county road below El Paso one can see small, modest, two room adobe houses that look inviting and comfortable merely on account of the few flowers growing out in front of them.

Not Like Other Sections.

In a country like this, where the farming population is almost continually changing, it cannot be expected that the farmhouse shall look like the more permanent homes one sees in the northern part of the country. There a person is struck by the size and completeness of the homes on small 10 or 20 acre farms; but in the west one may visit a ranch of 100,000 acres and find only a temporary shelter without trees or pretence of garden.

Successful Farmers' Home.

A transitory population does not build with a view to permanency. The older settlers in the Rio Grande valley smile knowingly when newcomers, perhaps from the older parts of the union, move in and begin laying out their new farms along lines they were used to at home. They set out shade trees and improve the grounds as much as a busy day will allow; they spend money on this, then that, and in one or two years their funds are all gone and they are ready to sell and move to the city or back home. Why is it that most of our successful farmers have bare, unimproved homes? The question is difficult to answer, but the fact remains that they have remained here 10, 20 and 30 years and have prospered. They have seen hundreds of men move in, farm a year or two, then leave. With prospects for a steady supply of water in the near future, will come a more permanent rural population, and gradually improved farm homes.

What to Plant.

Before attempting to start a garden here, one must know what to plant and when. The conditions due to climate and altitude are peculiar to this section and greatly different from those in most sections of the country. Our summers are hot and dry, and the plants that grow well in northern regions during this period may be utter failures here. Likewise, our winters are not to be compared with the severe winters farther north. We can grow plants during the winter months that are only seen under glass elsewhere. Sweet peas may be planted from now until early in the spring. The following are also fall planted: Sweet alyssum, antirhinnum or snapdragon, aster, centaurea or cornflower or bachelor's button, eschscholtzia or California poppy, larkspur, poppy, zinnit, dianthus, carnation, verbena.

In bulletin 40 of the New Mexico station, F. E. Lester described the making of a "Southern New Mexico Flower Garden." He advises the extension of the practice of sowing seeds in the fall and, where possible, native grown seed.

Sweet Peas Adapted.

The sweet pea is described as particularly well adapted to our climate. It should have a rich, medium soil, well manured and spaded. The seed is sown in rows, four inches deep and two to three inches between seeds. In about two weeks after irrigating the seed will be well started. During the winter the plants will make but little growth and should be protected by a mulch of manure, brush or dead leaves. New growth begins early in the spring and when a foot or more high sticks should be set in the ground between the plants. They will begin by April 1, especially if given a southern exposure, but this may cause them to suffer from summer heat. If the flowers are picked regularly and not allowed to go to seed, sweet peas may be picked throughout the summer. The Cupid or dwarf sweet peas grow well here, but are not well suited for cut blooms. The older varieties do very well here.

Varieties for Amateurs.

The following varieties do well with ordinary care and are recommended to amateurs:

White—Blanch Burpee, Sadie Burpee (black seeded), Emily Henderson (early), Mrs. Sankey, the Bride.

White and pink—Burpee's Earliest of All, Blanche Terry.

Pink and rose—Royal Rose, Pink Friar, Prince of Wales.

Red—Salopian (the best scarlet), Prince Edward of York, Firefly.

Marroon—Shamda, Othello.

Cream—Queen Victoria, Stella Morse.

Lavender—Lady Nina Balfour, Lady Grisel Hamilton, New Countess.

Blue—Countess of Cadogan, Navy Blue.

Other colors—Fashion (a rich reddish lavender), Lovely (a delicate shade of shell pink), Maid of Honor (white, edged with violet), Gray Friar (purple stripes on cream ground).

What to Plant Now.

The following list gives brief directions for growing a few plants that do well in this region, and which may be planted now:

Annuals.

Alyssum (sweet alyssum)—A constant bloomer until after frost. Sow in early spring or fall. Easy of culture.

How to Plant Flowers.

Antirhinnum (snapdragon)—Blooms profusely in spring and early summer and may be carried through the winter out of doors. Sow in the fall or early spring, but preferably in the cold frame in late fall ready for transplanting the following spring, or procure plants in the spring.

Aster—Sow the seed of the native varieties in the spring or preferably fall.

Centaurea (Cornflower, Bachelor's Button)—A hardy and easily grown flower, standing our winters well and producing an abundance of bloom in the spring and early summer. Sow the seed in the fall or in the early spring. These will bloom and the self sown seed from the blooms will start quantities of young plants the following fall.

Eschscholtzi (California poppy)—Sow in an open place in the fall or spring, taking precautions against baking of the soil, as the seed is small. Cannot be transplanted.

Gaillardia—The Gaillardia Aristata does well, blooming freely and continuously until after frost and standing the heat and drouth fairly well. Procure plants and set out in the spring in an open location. May be raised from seed in cold frames during the fall and winter.

Larkspur Planting.

Larkspur—Sow the seed in the fall or spring or procure plants and set out in the spring, after which self-sown seed will germinate each fall. An easy flower to grow and an abundant bloomer during the summer.

Petunia—Sow the seed in cold frames through the winter for the following spring, or, better, procure plants and set out in spring after frosts are over. Blooms through the summer and especially during the fall until after early frosts. Should have water regularly during hot weather.

The Poppy.

Poppy—Sow the seed in the fall, mulching with manure or light chaff. Will not transplant. Blooms profusely during the early summer—May to July—and covers up readily from self-sown seed.

Sweet Pea—Described above.

Zinnia—Sow the seed in the fall or spring. Flowers well and continuously through the summer until after frost.

Hardy Plants and Perennials.

Aquilegia (Columbine)—Set out the plants, which may be procured from most of our mountains or purchased from florists (preferably the former, since they are already acclimated) in the spring or fall. An open and sunny, as well as a more shady location will suit the Columbine well. Blooms during early summer. The wild yellow varieties do best, although the scarlet and other sorts may be grown with care.

Dianthus (pink)—The hardy pinks are excellent flowers for the garden. Procure and set out in the early spring or fall, or sow seed in the fall. Bloom profusely during the summer. The Sweet William, which has been much improved in recent years, is a Dianthus, and grows and blooms well.

The Hollyhock.

Sow the seed in the fall or procure plants and set out in the spring. They will bloom abundantly the first summer and the self-sown seed will start many young plants the same fall, which should be transplanted the following spring. The hollyhock is one of the best showy plants to adorn the garden, and blooms continually until after frost.

Iris—Both the common and the German and Japan Iris do well and flower profusely. Plant the roots in the fall or spring. Well suited for border planting or edging beds or walks. Every other fall the plants should be raised and the roots divided and replanted.

Pyrethrum—Sow the seed in the fall. The older plants may be divided. Blooms continuously during the summer, standing drouth well and requiring little care.

Verbena—This popular and sun-loving plant is at home under southern New Mexico conditions. The plants may be grown from fall or spring grown seed, or from seed sown in the cold frame, but surer results will be obtained from plants bought and set out in the spring, April or May. With ordinary care, the Verbena will bloom all through the season until well after the autumn frosts, and if given a little protection and a southern exposure will occasionally delight the amateur with winter blooms. Plant in a sunny and open place.

Violets Are Hardy.

The violet may be successfully grown in cold frames during the winter and spring. For this purpose, as well as for ordinary open culture, the California and Princess of Wales varieties succeed as well as any. Set out the plant in the early fall or late summer, giving preferably a partially shaded location if in the open, when the plants should be afforded some protection from the frost by means of brush, etc. There are possibilities in the direction of growing violets on a commercial scale worthy of investigation, succeeding as they do with proper care, and being a ready selling flower. New plants should be started from the runners of the old vines, setting out in the spring after blooming. The violet loves a rich soil, containng as much leaf mould as can be procured.

Wallflower—Start from fall sown seed, or from seed sown in cold frames, transplanting in the spring. Will bloom the first season and thereafter each year in the early summer.

Winter Blooming Bulbs.

Hyacinth—These popular bulbs do well in the open garden. Plant in October, the tops of the bulbs four inches below the surface and keep the soil moist. Prepare the soil by manuring and spading well. The white, red and pink and blue varieties do best, single and double. For house culture plant in tins (which are preferable to ordinary flower pots, retaining moisture better) in fairly rich soil, in October. Water well and put away in a cellar, or, if such is not available, bury in the ground from six inches to a foot below the surface. When the bulbs have appeared above the surface of the soil in the tins, which will be from one to two months after planting, bring into the house. Many varieties show a tendency to bloom down in the bottom of the plant, without making sufficient leaf growth. This can be largely remedied by placing over the plant, as soon as this tendency appears, a cone of paper with the small end cut off, which will draw the plant up towards the light. A strong root growth is necessary for the best results with all winter flowering bulbs, and this can only be secured by planting the bulbs early enough to be put away and make such root growth before bringing out into the light. The old bulbs should be set out in the open after having done flowering, where they will come up and bloom the following and succeeding years.

Narcissus.—The directions given for hyacinths apply to the narcissus. Almost all varieties do well in the open, better than in pots or tins in the house.

Tulips.—Most varieties succeed in the open garden, especially the parrot feather varieties. They should be treated the same as the hyacinth. Have not given satisfactory results as a house bulb.

J. T. SNELUS TELLS VALENTINE PEOPLE HOW TO FOLLOW DRY FARMING

Shows Them What Has Been Accomplished Elsewhere and How They Can Do the Same Thing.

J. T. Snelus, of Valentine, Texas, roadmaster for the G. H., and dry farmer—a member of the executive committee of the Texas Dry Farming congress, is doing a great deal to encourage his people in farming operations.

A large number of the citizens of Valentine and the surrounding country recently assembled at the auditorium to hear him lecture on the possibilities of dry or scientific farming in that region. Mr. Snelus declared that conditions in his section were better than 20 years ago. This was caused, he said, by too many people being afraid to help build up the country. He said more people should say "come ahead" instead of "go ahead." "We can't expect the outsider to help us and let us sit idly by; people must not be afraid to spend some money," he declared. He compared life to the game of baseball, saying, "take the player who only thinks of himself and his standing, who after he makes a hit will die on a base waiting for some one to bring him in. He is being crowded out by the player who does not play for his own record but will sacrifice his interests to held the game. We must all be like the hustling player and make the move that will bring the most good."

Aid to Stockmen.

He spoke on the conditions of the stockmen and advised them to try scientific farming on part of their range. He don't think it good polity for all to attempt to plow up the whole country at once, but said they should use brains with their labor. "Feed your cattle here at home and put them on the market," he said, "by growing your own crops." He said stockmen raised steers two years and sold them for four cents a pound to stock buyers from Kansas and Colorado, who fed them for three months and sold them flor 12 to 15 cents a pound. He advised them to plant milo as the best crop and asked them to try a few acres.

He said, with the increased cost of living and the increased cost of lease taxes, the stock men were not getting near fair wages for the money invested and advised them to fatten their cattle three months more at home and then have the profit that the men in Kansas and Colorado are now getting.

"They will tell you that it can't be done," he said, "but I have here a sample of milo maize raised by George Karakey, near Wendell. You all know that there was no irrigation there. You all know what amount of rains he had. Mr. Karakey told me he only had three light rains, so I say to you, if Karakey can raise such a crop, you can if you try."

Corn Near Valentine.

The speaker told of the corn crop of Mr. Willkin and called on Mr. Louthian and asked him if it was not so that Willkin had a good crop. Mr. Louthian corroborated this and said if it had not been for the rain that day Mr. Willkin would have been in town with some corn to show.

Mr. Willkin tried for three years in a small way to raise crops by the method he used in Illinois, but that did not work, so he studied the soil and conditions at Valentine and planted to catch the rain, with the result that he had a good crop.

He said more could do the same if they would try. He advised the stockmen to get good bred hogs and raise corn for them. He showed them that they could raise hogs on the land and fatten them on the corn which he said they could raise and then sell them at six months old for at least 10 cents per pound.

The speaker reminded his hearers that some months ago when the government had the experts finding what would stop the black leg they decided that vaccination would do it; the result was the stockmen got the stuff needed for black leg with the result that black leg is not now seen among the cattle, "and I have your own words that they at one time died in great numbers," he said. He then asked his hearers to give the same amount of credit to the men who the government now has trying to make scientific farming pay in this region andtake their experience in dry farming to improve present conditions. He referred them to the experts of the state who would give them all the information in their power.

How to Treat the Soil.

He demonstrated the use of packing the soil to hold moisture and used two No. 1 Rochester lamp chimneys. He filled two with the same amount of sand and near the top of one he put some packed soil taken from under an old house or board, then some more sand on top of this. The other one just had sand. He showed that the one that was treated in a scientific manner had used less than one-fourth of the water that the other one had taken up, still the soil was just as wet. He advised deep plowing in the fall, then harrowing often, especially after any rain. This keeps the moisture in the ground. He advised planting seed before the rain and said that where the ground was dry, the seed would not rot but would be ready for the rain when it came. He cautioned against waiting until it rained, but said have the crop in before the rain.

He advised his hearers to harrow diagonally across the field and gave his reason. He said: "In corn you will notice that if you cultivate along and across the row there is a space of about six inches near the stalk of corn that is dry and hard; this is just what you want to stop; you must keep the land loose and fine close to the corn and the best way to do this is to harrow across the field."

Mr. Snelus said that he was no farmer and when he went to Eagle Pass to the Texas Dry Farming congress he wondered what he was going to hear. Right there he found that "the world do move," he said, as to farming, and he came back home to advise his people to try what he heard others had made a success of. He explained Senor Dominguez's system of raising and testing seeds and said that a farmer should take the time for such tests. This testing method was recently recounted in The Herald's farm pages.

Raising Chickens.

The speaker said that when he came to Valentine a man had said that it was the finest country in the world for men and dogs, but women and chickens couldn't live there. He said that women could not only live there, but could show the men how to live and then he showed that Mrs. Ed Stegall had made a success with fine chickens. She raises the finest breed of White Rocks and can sell chickens two months old for 50 cents; she also gets 50 cents a dozen for all the eggs she wishes to sell. "This goes to show what can be done where people will use their heads and mix good judgment with work," he declared.

Regarding trees for this region he recommended the apricot or Jap plum. He said the apricot was a good drouth resisting tree. He advised care in their planting and cultivation.

Closing his talk, Mr. Snelus read a letter from the El Paso Fair association and urged everyone who could to have a showing there. He especially urged the stockmen to show any fine cattle and horses they had.

Mr. Snelus has always taken a very entine.

Mr. Snelus is working to get exhibits for the El Paso fair. He especial active part in the development of Valley wishes to get the Sub-Irrigation company to put in a small plant. He is meeting with success in getting other various exhibits promised.

Best Food For Raising Chickens For the Market

By H. H. Schutz, Assistant Professor of Agronomy, N. Mex. A. & M. College.

THE objection to feeding mash to fowls in the evening is that even with the crop full it will not last until morning. It is better to feed grain at night, for it is more slowly digested.

A mash recommended to farmers is composed of 200 pounds bran, 100 pounds shorts, 100 pounds ground corn, 100 pounds ground oats, 100 pounds beer scraps and 10 pounds of charcoal.

Types of Incubators.

There are two types of incubators, the hot air and the hot water. The hot air type is the most satisfactory for small machines and will last indefinitely; the hot water machine is apt to leak and cause trouble. Before deciding upon any particular brand of incubator, it is well to see to it that the thermostat is of solid metal and not of the small disk regulator kind.

Eggs for hatching should not be kept in a temperature above 70 or below 40 degrees; consequently, in the winter time, eggs should be gathered often during the day so that they will not become chilled. They should not be over 10 days old, and some recommend turning every day or twice daily until ready for incubation.

Good Market Chickens.

A good market chicken should be able to make good quality flesh at a small cost; should have a strong constitution, which is indicated by a short, stout, well-curved beak, a bright, clear eye, rather short, broad head, moderately short neck, broad back, and well rounded, full breast with legs of medium length and well set apart.

Fattening Feed.

The Minnesota station gives the following rations for fattening chickens:

1. Equal parts by weight of finely ground corn, oats and shorts, mixed with sour skim milk.
2. Equal parts by weight of finely ground barley, oats and shorts, mixed with sour milk.
3. Finely ground oats mixed with sour skim milk.
4. Equal parts of finely ground oats, corn and low grade flour. Where one is using beef scraps, 15 percent is the best porportion to use.

Immense Consumption.

During the last three months over 3,800,000 cases of eggs were shipped to the six principal markets of the country, namely: Boston, Chicago, Cincinnati, Milwaukee, New York and St. Louis. In the same period, New York received over 90,000 coops of live poultry and 172,000 packages of dressed poultry.

Storing Sweet Potatoes Most Important Matter

By H. H. Schutz, Assistant Professor of Agronomy, N. Mex. A. & M. College.

MOST of the sweet potatoe crop in the United States is raised in the Carolinas, Georgia, Texas, Alabama, Mississippi, Virginia and New Jersey, and amounts annually to over 50,000,000 bushels. Other states that produce sweet potatoes are Pennsylvania, Maryland, West Virginia, Florida, Ohio, Indiana, Illinois, Missouri, Nebraska, Kansas, Kentucky, Tennessee, Louisiana, Oklahoma, Arkansas, New Mexico and California. In Texas and New Mexico, this year's crop is considerably below the average, but in the other states it is normal, or nearly so.

The Sweet Potato Tribe.

The sweet potato is of the morningglory and moonflower tribe and is one of the oldest crops cultivated by the native Americans. It is thought to be native to tropical America, and is not known very well in central Europe. It is one of the first plants to feel the effect of frosts in the fall.

The yield of sweet potatoes in this region varies with the nature of the soil and its fertility, with the date of planting and the attention to cultivation and irrigation. It ranges from a few thousand pounds per acre to as much as 25,000 pounds in fertilized soils. The price may be three-fourths of a cent a pound or it may be seven for early ones. The price of stored potatoes may be double the average price paid during the growing season.

The common method of gathering the sweet potatoes is to clear away the vines and plow them out. They are then placed into cone-shaped piles, covered with hay, straw, cornstalks or sand and left for use later on. It is customary to leave them in the field until after the frost has killed the vines, which need not be removed if time is allowed for them to dry. The vines may be cut off with a hoe or pulled off by plowing down the rows.

Plowing is Laborious.

Plowing the potatoes out is frequently a most laborious task, especially if the ground is hard and dry. At the New Mexico station, potato diggers and listers have been tried, but none have given the results produced by the ordinary turning plow. A large plow with two or three horses attached is the best. Two or more furrows are necessary to turn out all the potatoes in a ridge, and one should have help enough following the plow to remove them out of the way of the team.

Five or six hours in the sun after digging the potatoes is sufficient, but they should be covered at night. If they are handled roughly and bruised, their keeping qualities are seriously impaired. If hauled from the field in the wagon bed or boxes or basket, they are apt to be less injured than when first put into sacks.

Needs for Preserving.

Prof. Garcia has pointed out that to keep sweet potatoes one should have first, a suitable storage building; second, use great care in preventing bruising; third, in curing them before they are put away.

The best temperature for storage of sweet potatoes is between 50 and 65 degrees F. In the Mesilla valley, storing the potatoes in alternate layers of dry sand in an adobe room has given the best results. Another method is to gather the potatoes in piles containing a thousand pounds or more, cover with straw or cornstalks and sand. Then in about five days they are uncovered to allow the moisture to escape and again covered to remain until early spring.

A WONDERFUL DAM IN ANIMAS VALLEY

Wall Is 30 Miles Long and Must Have Taken Ages to Build of Dirt.

"At the head of the Animas valley, in the extreme south end of Grant county, N. M., over 30 miles south of the station of Animas, on the E. P. & S. W. railroad, is one of the most stupendous works of man on the American continent," said J. A. Friedenblum, owner of the White Rose zinc mine in the Animas mountains.

Large Wall of Earth.

This consists of a wall of earth in the form of a half circle which begins at the western base of the Animas mountain, at the north end of a basin, and runs out in a circle into the valley and around to the south end of the basin, to the mountain, forming a reservoir. This earthen wall is 15 miles long, the diameter between its ends being 10 miles long. The base is 150 feet wide, its height is 40 feet, and its level top is 40 feet wide.

This circular dam and the enclosed basin in the mountain constitute a reservoir 10 miles in diameter, the bottom of which is perfectly level. It probably impounded a body of water 30 feet deep. The south side of the reservoir is just over the international line in Mexico, where a huge break, over 100 feet wide, caused apparently by an earthquake, discharged the waters of the reservoir down the plains of Mexico.

While the floor of this great reservoir is dry at present, yet water is found everywhere in it at a depth of from four to six feet. In it are numerous holes, apparently vents of old springs or geysers, probably destroyed or dried up by the great seismic or cataclysmal force that destroyed or drove out that ancient civilization.

Valley Once Densely Populated.

It is believed that the Animas valley was once densely inhabited and under a high state of cultivation, evidenced by numerous mounds, ruins and ancient pottery.

The channel of an ancient river is plainly seen running north from the Mexican line through Animas valley toward the Gila valley.

Within the reservoir are the old Fitzpatrick and the Lang ranches.

"This vast circular dam," said Mr. Friedenbloom, "must have been the work of thousands of men for a century."

BOYS IN TEXAS ARE RAISING MUCH CORN

Corn Clubs Organized for the Purpose of Raising Larger Crops.

Temple, Texas, Sept. 24.—"There are 100 boys in Texas who will make 100 bushels of corn to the acre this year," is the statement of J. L. Quicksall of the United States department of agriculture.

"Everywhere the boys corn clubs are meeting with encouragement," continued Mr. Quicksall, "and I am prepared to say the movement to organize the boys of the country has been a signal success. Down in Williamson county this year, one of our boys, 17 years of age, will average 75 acres of land, 65 bushels of corn to the acre, while right across from his land his father, a man of 50, who has farmed all his life, is hoping to pull through with 27 1-2. The farmer's reply in answer to a question as to why his son was more successful than himself was, "O, well' he's learned how to cultivate from them there corn clubs and in my day there warn't none of them."

GOLD STRIKE MADE IN ARIZONA MINES

Former Copper Queen Overseer Makes Strike in Supposed Copper Mine.

A great gold strike is reported in the Superstition mountains of Arizona, in the Carney group, owned by P. G. Carney, for a long time overseer for the Copper Queen. He acquired these claims in the Superstition about three years ago and entered into negotiations for bonding them to the Guggenheims for $200,000. There was a ledge of rich copper running alongside of the mountain and it was that copper that attracted the attention of the Guggenheim agent. But the negotiations were not concluded and Mr. Carney proceeded with development work.

The late strike is not a copper strike, but a great gold discovery. The ledge was found at the foot of the mountain, dipping under it at an angle of 45 degrees towards the copper vein.

The work has been carried down 15 feet and the ledge was two and a half feet wide and getting wider. Assays have been made across it and the ore is found to contain gold of the value of $77.20, copper 2.7 per cent and silver $1. A great deal of free gold is found as depth is attained. Every particle of rock taken from the ledge discloses gold in the pan. This ledge lies parallel with the copper ledge, and no doubt joins in the base of the mountain.

The particular claim on which this discovery was made is called the "Lost Dutchman." It joins the "Big George" mine.

INDE MINE IS SOLD.

The Conallo mines, in the Inde district, of Durango, Mex., have been sold to the Inde Gold Mining and Reduction company for the stated price of 175,000 pesos. This property has been a large producer of rich ore.

SILVER CITY MINES SHOWING ACTIVITY

Chemung Closes Temporarily But Other Properties Are Developing Shafts.

Silver City, N. M., Sept. 24.—Much interest is being manifested here relative to the future of the mining industry, which is the leading one of this section. This interest centers in the temporary closing of the Chemung company's property, numbering between 35 and 40 claims, situate in the Burro mountain mining district, about 14 miles west of this city. The past week marked the suspension of development work by this company. The pumps were pulled and the mines bulkheaded. The employes were discharged and Henry Barber left in charge of the property as care taker.

The Chemung company was organized by the Cole-Ryan interests a little more than four years ago, since which time the group of mines have been developed, patented, and a large tonnage of ore extratced. A conservative estimate of the actual amount of ore on the dumps would not be less than 1,000,000 tons. At the scene of the principal workings of the company, on a portion of the claims lying in the gorge to the west of the main Burro mountain draw, there is an immense dump of ore, sorted and running well in copper.

By reason of the present visit to the camp of A. E. Mills, general superintendent of the Phelps, Dodge & company interests, the impression prevails among well informed mining men that the closing of the Chemung company is due to an understanding with the Phelps Dodge & company, and that the time has not yet arrived for the completion of the railway, projected out of the camp and four miles of the roughest grading of which has been completed, by either the Phelps, Dodge & company people or through their control, and that the Chemung, Burro Mountain, Copper Gulf and other large companies, operating in this district for the past four to six years, will not begin active working of their respective properties until such time as the railway is completed and the copper market becomes settled. That the railway will be completed there seems little doubt; that the Chemung company has valuable property and a large tonnage of ore already on the dumps and blocked out in the mines; development and blocking out of the ore having been steadily done for the past four years, is an assured fact, and there seems no other conclusion to be reached except that the suspension of the Chemung is only temporary and that there is an understanding along the general lines of operation in the camp by the large companies.

Burro Mountain Developing.

The Burro Mountain Copper company continues to develop its properties and to keep its big mines unwatered and retimbered. At the present time the company is sinking a good, working shaft to the east of its main workings and concentrator and a short distance from the projected railway. For a reported consideration of $75,000 the company last year purchased the Newsboy and Niagara claims of C. Amory Stevens, the wealthy capitalist of New York City, and its present shaft is being sunk on the Newsboy and has attained a depth of about 500 feet.

These two properties were undoubtedly acquired principally for their valuable location, although at the time very promising prospects, as this gives the Burro Mountain company a clear oulet to the proposed railway, for all its tonnage, both from the mines and concentrator, by its building a short spur to the main railway through the gulch and across the Newsboy and Niagara. This gives an additional evidence that the railway will be completed, although work ceased upon its construction during the past month. This company is working from 60 to 70 men steadily and will continue sinking its working shaft on the Newsboy and developing other properties and keeping its principal workings clear of water and timberings repaired.

Copper Gulf's Force Small.

The Copper Gulf company is employing a small force of men and is engaged in prospecting and sinking on its properties, situate to the southeast of the main workings and concentrator of the Burro Mountain Copper company. Good grade ore is being encountered and work of development will continue steadily, under the general supervision of I. J. Stauber, the company manager.

The Mangas Development company ceased operations some weeks ago, and through J. E. Saint, its vice president, issued a statement that the shut down was only temporary and that whenever the metal market became settled active operations would be resumed.

The National Mining company continues to prosecute development work on its group of claims, under the direction of the company manager, C. P. Laughlin, and this work will continue until the first of the year. It will then be determined by the directors of the company whether development work will continue under the then existing conditions.

Chino Company Most Active.

The Chino Copper company is just now the most active mining concern in this section of the southwest and is conducting its development of the Santa Rita properties and its preparations for the treatment of its large future tonnage of ore upon a larger, more conservative scale than any other company in any of the various nearby mining districts. The work of completing its large reservoir, dimensions of 85 by 200 feet, and at considerable depth, near Apache Tejo, is progressing rapidly. It is also intended to develop the entire water supply of the big Central City draw, a distance of eight or 10 miles, and pump this water into its central station and reservoir at Apache. A large force of workmen is now engaged at the new town of Hurley, constructing a store building of cement, additional residences and cottages for its employes and office men and building the foundation for its large concentrating works, which will have a daily capacity of 2000 tons at the beginning and ultimately a daily capacity of 10,000 tons.

Railway Is Building.

The mile spur of railway is about completed, and seven locomotives for the exclusive use of the company have been purchased. Two of these were received some few weeks ago, three more this week and the remaining two are expected daily. At its mining camp the railway is being extended into the main portion of the camp from its terminal on the west side.

This has necessitated a number of changes in the town of Santa Rita. A number of residences had to be moved, the large building occupied for years as the only saloon in camp has been converted into a railway station, and considerable other changes and grading down hills and dumps for the spur made. A large cement office building is being constructed a short distance from the Santa Rita Store company's building. Other necessary buildings to house the employes, eating houses, etc., are also being erected nearby. One of the old adobe buildings, erected many years ago when the camp was operated by the Spanish, with its three feet walls, Indian lookouts, etc., has been remodeled and is now occupied by Owen Bros. as the camp saloon.

Under the supervision of J. T. Moseley nine large drills are day and night boring deep into the earth. Regular districts have been marked out and holes are drilled at the corner of each 200 feet square of grund. In what is known as district No. 3, all virgin ground, and embracing a number of claims to the east and near the foot of the Kneeling Nun mountains, the work of drill prospecting has been largely completed, and the richest ore of the camp has been found in this section. Many feet of the drilled holes are in native copper. This section of the camp had heretofore been prospected only slightly, a "gopher" hole here and there, and the earlier operators were of the opinion that it was practically a barren piece of ground. The large body of ore, in many instances tested to a depth of 1600 feet, and its wonderful richness, has been the greatest surprise of the camp.

The permanency of the Santa Rita camp is positively assured and its exceedingly large and rich bodies of ore, together with its huge tonnage of low grade ore, makes it one of the most interesting in the entire country, and its future production will greatly exceed the most extravagant estimates of the best informed mining men who have heretofore endeavored to calculate its possible production.

Interest Renewed in Pinos Altos.

Interest in the Pinos Altos mining district, since the advent of the Rio Tinto people into the district and the unwatering of the Gillette and Hearst shafts, is being again revived, after some years of idleness in this gold-bearing district.

Price McKinney and Corrigan, of Corrigan, McKinney & company, of Cleveland Ohio, are still in the camp, interested in the progress being made by their superintendent, George A. Easton, in unloading the above shafts of water and waste. These representatives are pleased with the showing thus far made and with the properties of the Western Belle group, upon which they now hold an option to purchase. R. L. Hutchinson and E. L. Robinson, connected with the above company, are also here from Terraas, Mexico, and will remain some days inspecting Pinos Altos properties. There seems little doubt of the sale of these properties and a systematic development of them in search of the sulphide ores known to exist in the district. Mr. Easton has made splendid progress with the preliminary work. The Gillette shaft is already unwatered and its timberings and drifts are found to be in excellent condition. Work is concentrated on the Hearst shaft at this time and the water is practically pumped out, although considerable waste has been encountered and some time yet will be required to clear its large workings of such waste and debris.

The Young property, situate near the famous Deep Down mine, to the east of the town of Pinos Altos, is now being carefully inspected and sampled by mining engineer Peterson of Los Angeles, Cal., who represents an aggregation of capitalists of that city who are interesting themselves in Pinos Altos properties. Recent samples run $22 gold, $4 silver, 7 1-4 percent lead, with about 12 to 15 percent zinc. It seems that the greatest interest in this camp at this time is because of the zinc the ores carry. Instead of the former penalties to be paid for excess zinc, today ores running 7 percent zinc, or better, are desirable. Much of the ore of the camp runs as high as 40 percent zinc. Particularly is this true of the properties on the west side of the idstrict.

George H. Utter has returned from a mining trip to Denver. He is the owner of the celebrated Cleveland group of mines, lying on the west side of the Pinos Altos district, and which has been largely developed in recent years and carries high grade values of gold, silver and zinc.

Golden Giant Leased.

The Golden Giant Mining company has just made a lease of its properties, the principal mines being the Golden Giant and Mammoth, to Oklahoma City capitalists, A. F. Crane, William T. Croslen and Richard H. Towne, and the lessees expect to begin active operation of the properties not later than October 15. These mines are among the noted past producers of the Pinos Altos camp. The 10-stamp mill on the Mammoth will be overhauled and repaired and put into operation, treating custom ores until such time as the Mammoth is cleared and ore is furnished from it for the mill. This property is owned by Oklahoma City people and Alvan N. White of this city and the owners have given the lessees an option to purchase the property within one year from date of lease.

The starting of the Mammoth mill will cause a number of small mine owners of the district to begin extracting ore for the custom work of the mill. This district promises to again become quite active and as it lies only nine miles to the north of this city, its operation means quite a good deal to the local people and business interests.

BIG STRIKE MADE IN BUEN PASTOR

Rich Silver Ore in Deep Shaft Is Shown by Cusihuiriachic Property.

The sensation of the week in mining circles has been the big strike at El Buen Pastor mine, Cusihuiriachic. This property is situated five pertenencias south west of the Promontorio mine. The title to this property was issued by the federal government in favor of Juan Faudoa, of Chihuahua, April 21, 1903. Sr. Faudoa, on September 7, 1909, entered into a contract with Alberto Terrazas, whereby the latter agreed to furnish the necessary money to develop and work the mine.

A shaft was sunk to a depth of 283 feet and then a crosscut south of 136 feet, where the Promontorio vein was found with four feet of 180 ounces of silver ore.

The Promontorio company, owners of the adjoining mine, sank a shaft about 250 feet on their line, which gave the same grade of ore as the recent lucky strike of the Buen Pastor. This being established the Buen Pastor is assured of a block of ore, 35,000 tons which on a very reasonable estimate, will leave a profit of 100 pesos per ton or a total of $3,500,000.