CBS PROGRAM IS MOST ELABORATE UNDERTAKEN BY RADIO NETWORK

10-22-38

Entire Area Around Dam and Powerhouses Described for Nation

3 ANNOUNCERS WORK

Hum of Machinery, Roar of the Outlet Works Are Carried Into Homes

Boulder dam, man's greatest engineering achievement, was almost visually described to an audience of more than a million persons all over the United States this afternoon, when Columbia Broadcasting system staged the greatest radio broadcast that ever has been presented to the networks from this area.

With three announcers wandering all over Boulder dam, and taking in all the wonders that lie within and around the giant concrete slab in the Colorado river, the listeners were given a full description of the dam, the lake, the powerhouses and the machinery, and heard, probably for the first time, the hum of the generators, the roar of the outlet works and the clicking of the switches as the powerhouse activity was carried into the front rooms of millions of homes throughout the United States.

The broadcast was presented on the second anniversary of delivery of power to Los Angeles, and was the most elaborate setup ever attempted by any radio concern in recent years.

Following is the entire script of the program, just as it was given at the dam this afternoon:

ANNOUNCER: ((COLUMBIA SQUARE)—Calling Boulder dam! . . . . America calling Boulder dam!

SOUND: CARRIER SYSTEM DIAL TONE AND RINGBACK.

ANNOUNCER: Calling Boulder dam! Two years old this month! Congratulations!

SOUND: CARRIER SYSTEM. . . . . DIAL TONE AND RINGBACK (SWITCH TO BOULDER DAM. . . . PICKUP AT TOP OF ELEVATOR SHAFT)

FIRST ANNOUNCER: Hello, this is Boulder dam. . . . As simply as we would talk over a telephone we answer America's call from the world's greatest man made project. The call which you have just heard came from Columbia Square in Hollywood, and that peculiar tone was the dial sound and the ringback signal of the private communication system of the Los Angeles bureau of power and light. That signal was transmitted to us here in Nevada at Boulder dam over the same wires which are at this very moment carrying their load of three hundred and twenty thousand horsepower at two hundred and seventy-five thousand volts from the powerhouse here to the city of Los Angeles. Across those two hundred and sixty-six miles of the world's longest and highest voltage power line comes our answer **and** the very power which is sending this program out to

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CBS Program Is

all the stations of the Columbia broadcasting system.

Just two years ago this very day, the switch was thrown to send the first great flood of power coursing through those huge cables across the desert to the metropolis of the southwest. That first day, about five hundred kilowatts were drawn through the line (enough to light one giant arc-light for the formal celebration in Los Angeles). Since then, the mighty generators in the powerhouse below us have supplied more than two billion kilowatt hours for the needs of a million and a half people—their homes, their business, their lights, heating, toasters, washers, clocks, electric razors and radio receivers.

The sun shines down directly into Black canyon, where the Colorado has slashed a path thru the mountains of the great American desert. From the top of this great dam on which we stand, we can look off upstream to where the great bulk of Fortification Mountain juts out into Lake Mead, named for Dr. Elwood Mead, director of the United States bureau of reclamation, who died during the building of his dapartment's greatest project. It stretches back a hundred miles upstream. . . . up into the colored walls of the Grand canyon itself. . . . . enough water to cover the state of New York to the depth of a foot. . . . the greatest artificial lake in the world. . . . . the greatest weight ever piled up on the face of the earth by the hand of man—but Lake Mead is much more than just water.

Stored here is the water that for centuries has rushed down through the fertile Imperial valley of California in destructive floods . . . . . that water has been tamed . . . . . here, too, is the water to supply the domestic and agricultural needs of the southwest, that water has been thriftily stored for drinking and irrigation in the future. . . . . here is a body of water larger than Lake Tahoe, warm enough for swimming, hundreds of feet deep for boating, rivalling the fjords of Norway for scenic beauty. . . . . a recreational paradise to be developed by the national park service of the United States government. . . . but here, above all, is power—liquid power piled up behind Boulder dam, twenty-three million acre feet. . . . . creating a total pressure of three million tons against the face of the dam, or a maximum of forty thousand pounds per square foot over an area of approximately five hundred thousand square feet. Ten million kilowatt hours. . . . **enough power to supply all the electrical needs of Deleware, Maryland, the District of Columbia, Virginia, West Virginia, North and South Carolina, Georgia and Florida for one year!**

Yes. . . . out there sparkling in the sunshine is Lake Mead. . . . the greatest project ever completed by man to assure this generation and those to come. . . . . flood control, drinking water, irrigation, a new recreational area . . . . . and especially the power to turn the wheels of industry—light the homes and cook the meals, and heat the self same water that turns the wheels that supply the power. Here is the power that runs and regulates electric clocks, washes clothes and sweeps floors. . . . . here is the power to give to millions new wealth, new leisure and a new and greater standard of American living.

The lower end of that mighty lake laps against the dam on which I stand, against the Nevada shore on my left as I look upstream, and against the Arizona shore on my right. In another year, the water level will probably be almost to the rim of the giant spillways. . . . . spillways which, in the level intake chamber at their upper end, could float the largest battleship ever built. Lake Mead is nearly full to the brim. Behind me, downstream, the lower face of the dam rises from the river to almost exactly the height of the

Woolworth building, and over here—rising from the surface of the lake—the four graceful intake towers drink in the water that turns the wheels of Boulder dam. . . . . Down it goes. . . . . over five hundred feet. . . . . gathering speed! . . . **pressure!. . . . AND POWER!**

(SWITCH TO CUBICLE)

SOUND: HUM OF GENERATORS. . . . FROM UP ON TOP . . . . . NOT LIKE BIG SOUND LATER. . . . SIGNIFYING POWER. . . . FADE IN SLOWLY AND BUILD UP **BIG. . . . FADE**

SECOND ANNOUNCER: (CUBICLE) Power. . . . a third of a million horsepower roars in the background as I speak to you from the generator room of the Boulder dam powerhouse on the Nevada side. Four generators—the largest ever built—are turning out their thousands of kilowatts of electricity directly in front of me. . . . and right behind me is a neat sign reading, "Please turn off all lights not actually in use." (PAUSE) . . . . That paradox is not the work of a humorist. . . . . it is an understandable symbol of the engineering genius which has gone into the planning and building of Boulder dam. . . . which has produced a plant so huge as to stagger the imagination and yet so efficient that one man, with the tip of his fingers can control every function of this powerhouse and the great transmission lines that carry the current across the desert. Here in this huge room, as long as two city blocks and as high as a five story building, is the physical machinery of power. . . . . but power must be controlled, and in a large—almost cathedral-like room, three stories above us, with wide windows looking downstream across the tail-race, is the brain of this whole vast system of power production and distribution.

(SWITCH TO CONTROL ROOM)

THIRD ANNOUNCER: (LOW VOICE. . . . IMPRESSED. . . . BUILD GRADUALLY) Those of us who have grown up with this business called radio are used to impressive displays of meters, and dials, and complicated electrical controls . . . . and yet, never have I seen a set of controls that gives me the impression that this does. I'm standing in the middle of a hollow square, formed by three huge switchboards, and a bank of recording instruments. In the center of the square, two men sit at twin panels in constant communication with every phase of this great electrical network. These men also operate the various panels around the edge of the square. This room is built lengthwise across the river, and, starting on the upstream side, let's have a look around, just to give you—through these layman's eyes—an impression of what we find.

Over here are the powerhouse controls which are centralized so that one man may start and synchronize all those mighty generators that we saw down below. Just reading the names on the various dials we see megawatts, kilovolts and kilovars, battery ground volts, synchroscope, gate position, gate limit and so on. Here on this dial is an interesting figure measuring the voltage at this hour. It's just after one forty-five in the afternoon, here in the west. In a few hours lights will be turned on and electric ranges will be cooking dinner. Right now, radios in this area are using some of this current to listen to this program.

This meter shows that **two hundred and eighty-seven thousand** volts are forcing power into the line at this moment to meet this need. Here's another dial labeled Time Error Indicator, and right now it shows no error. In fact it very seldom does, for correct time is one of the most important things around here. Over beside the wall is the grand-daddy of all the electric clocks in the southwest. Set three times a day by signals from Arlington observatory, it provides a direct time check on the generators.

The generators in turn, are run at exactly the right speed so that the current generated by them

will run your electric clocks and keep them correct. (Remind me to set my watch before I get out of here.) Over here at the Nevada end of the room, is a panel filled with automatic recording devices which are printing figures and drawing charts on long strips of paper. These strips can be read later and will explain just what has been happening thruout the plant during the day. Let's look at the names again. . . . field temperature, bearing temperature, system frequency, transformer temperature, time deviation, stator temperature. . . . . those are nice things to know, ladies and gentlemen, if you are running a powerhouse. Suppose a friend of yours called up and said, "How's your stator temperature" . . . . . what could you tell him if you didn't have a meter like this? But seriously, here is centralization of control to the nth degree. Going on around the square to the downstream side we come to the switchboard which controls all the auxiliary equipment in the plant. A feature of both this and the main control board is the annunciator system, whereby a small square of glass lights up as an alarm whenever there is an abnormal operating condition in the system, anywhere.

Now, over here at the Arizona side (maybe I should draw a map for you). . . . anyhow, over here we have another long switchboard, this one covered with red and green and white lights and small switches. Painted on the board are red lines which are really a streamlined map of the world's longest and highest voltage power line. . . . the one from here to Los Angeles. Each light and each switch is placed at a point on this map which corresponds to one of the huge, electrically operated switches located along the line. A man standing here can open or close any switch along the two hundred and sixty-six miles of the line as easily as you turn on the light in your kitchen. However, just so you won't get the idea that these switches are the kind installed by your neighborhood electrician, let's go up on the roof of the powerhouse, on the Nevada side, and see what they're like.

FIRST ANNOUNCER: We're speaking to you from the roof of the powerhouse at Boulder dam. Our microphone is situated on the Nevada wing of the great U shaped structure that houses all the generating equipment here at the dam. Below us are six floors of modern equipment extending down right to the bottom of the river. Above us the dam face itself rises for more than five hundred feet in a graceful curve, and on both sides the red rocks of Black canyon climb upward in rough, vertical walls. Up here on the roof are the switches through which this tremendous electrical current passes to start its long journey to southern California. Looking straight up the wall of rock it seems as though a ten ton steel transmission tower is about to come tumbling down on top of me. Last year, nearly three hundred thousand visitors came to Boulder dam, according to the figures of the government reclamation department—most of these visitors were tremendously impressed by these four towers—two on each side—which hang out over the canyon wall at an angle of forty-five degrees. I can assure you that from down here in the canyon floor they look much more impressive. . . . but to me they smybolize the takeoff point for millions of kilowatt hours of electricity. . . . here is an aerial stairway for electrical energy and power leading right up the canyon wall to the switching station at the top, and then off across the wastelands of Nevada and California to the fertile valleys and the great cities along the coast.

This is the time to tell you just a bit about this great power line which presented such problems in its construction, and which, today, by its very size, attracts electrical engineers from all over the world. From the switching station at the top of this cliff, twin

lines lead westward to Silver Lake station, situated near Baker, California, Victorville station, at the town for which it is named, and on into Los Angeles.

These intermediate stations facilitate the transmission of power by isolating different sections of the line. Here, the load may be switched from one line to the other to permit repairs or maintenance work. Here, too, we find the great lightning rods towering above the transmission line and the switches protecting them from the violent desert electrical storms. Throughout the entire system, this tremendously high voltage is handled by huge automatic switches, just like the one that we're going to operate for you in just a moment. In addition, the line is protected by automatic circuit breakers which work with incredible speed. If an interruption were to occur along the line, automatic relays would disconnect the line by means of these circuit breakers long before the transmission cable, throbbing to the pressure of two hundred and seventy-five thousand volts, could be damaged or could cause damage. In fact, the line would be dead within six cycles or less than one tenth of a second. . . . . Well, let's get back to the roof of the powerhouse here at Boulder dam. I'm standing beside one of the disconnect switches—three long arms, over twenty feet long —which drops down into a U shaped socket to complete the circuit. The switch is closed now and current is passing through. We're going to show you how it sounds when we open that switch and close it again. . . . but first. . . listen to this sound.

SOUND: CLICK OF ORDINARY TUMBLE SWITCH.

ANNOUNCER: Hear it?. . . . . That's the click of an ordinary light switch such as you hear every time you walk into a dark room and switch on the light. But, behind that tiny sound is this! Listen for the sound of two hundred and seventy-five thousand volts snapping across a big arc as the points of this switch come apart!

SOUND: OPEN SWITCH. . . . SLOWLY

ANNOUNCER: Now listen as this switch is closed again, with the current arcing across as the switch points get close together!

SOUND: CLOSE SWITCH. . . . SLOWLY

ANNOUNCER: WOW. . . . and listeners from coast to coast have heard power going out of Boulder dam, power that a few seconds ago was water, stored in that tremendous reservoir above us. What has happened between? Let's go down to the turbine gallery and find out.

(SWITCH TO TURBINE GALLERY. . . . SOUND OF TURBINE SHAFT)

SECOND ANNOUNCER: The water from Lake Mead is drawn in through the intake towers, each one of them as large as a thirty-nine story building, but with only the top few floors showing above water. The drop from the surface of the lake provides a head of five hundred feet, or in other words the pressure created by the water falling that distance. Far below the surface, at the bottom of each intake tower is a thirty foot penstock pipe—thirty

feet in diameter! . . . . nearly half again as big as the average large living room. Branching off from each of these main penstocks, one to each turbine, are the thirteen foot penstocks which come down at a steep angle, giving a last final push to the fast moving water before it starts to turn the wheels. One of these penstocks is directly beneath my feet as I stand in the turbine gallery on top of one of the largest turbines ever built.

You've heard all of us say, many times today, that this or that is the largest ever built. Remember that we're trying to describe the greatest project ever set on the face of the earth by the hand of man. . . . The water beneath me roars into a spiral shell, for all the world like the shell of some monstrous snail. . . . a shell that swings it around until it directs it against the blades of this turbine. That water, falling down from the surface of the lake and passing through this machine, develops enough speed and pressure to produce one hundred and fifteen thousand horsepower, and remember that this turbine is just one of fifteen identical machines which are to be installed here eventually, as well as several smaller generators.

So much for what's going on below me. . . . in the basement I might say. . . . . Here on the first floor, about a foot in front of my nose, is a great steel collar that connects the drive shaft to the turbine, and that shaft, about three feet in diameter, rises vertically to the bottom of the generator, two floors above me. It's a sort of a sandwich with the turbine below, the shaft and your announcer in the middle and the generator up above. Right here the shaft and those big collars that hold the sections together are spinning smoothly, a hundred and eighty times a minute. . . . tons and tons and tons of metal running much more smoothly than grandmas's sewing machine . . . . . carrying the power of that water upward again to convert it into electrical power.

Now . . . . up another floor. . . . generators, rotors, stators and electrical power! Right up there, over my head, is the six hundred ton rotor spinning one hundred and eighty times a minute. . . . . generating kilowatt hours by the force of five million pounds at the outer edge of the water wheel, and yet, so perfectly balanced is it that it runs like a watch. . . . pushing out power from the generators.

That is the power that goes out to the transformers, outside this powerhouse, where it is stepped up from sixteen thousand, five hundred volts at the generator to two hundred eighty-seven thousand volts and sent up over the roof to the switches which you have just heard, and then climbs the canyon wall to start its long journey at the rate of one hundred fifty thousand miles per second to provide light, heat and power for labor saving devices in the homes and factories of the southwest.

(SWITCH TO CONTROL ROOM)

SOUND: OPEN STONY GATE MIKE AND KEEP LOW IN BACKGROUND

THIRD ANNOUNCER: Yes, but what happens to that water that a few minutes ago was sitting pretty in Lake Mead, providing a playground for tourists, and which has just produced those thousands of volts of power that is on the wires to Los Angeles? That water has gone out into the tail race which we can see here below the dam and it still has a great future in front of it. It's a part of the water which is passed through and around the dam to flow on down the Colorado river providing water for navigation, water to irrigate the great fertile stretches of the Imperial Valley, and in the very near future, water for drinking and domestic use for the cities on the coast. Already, before it has passed through the powerhouse it has been tamed, so that never again can it go rushing through the southern valleys in great, destructive, floods . . . already it has dropped the tremendous load of silt which has always made the Colorado, in the words of a humorist, "Too thick to drink and too thin to plow."

The present need for irrigation water is greater than can be supplied by the water used for power, at this time, the excess being discharged by these giant valves, still retaining much of its power. Millions of gallons of it are rushing out through stony gate at the lower end of the tunnel on the Nevada side. You can hear its roar behind my voice as I speak to you. A few minutes ago we flipped an ordinary light switch to that you could compare it with one of the big switches here. This time we're going to ask you to think how the stream of water sounds when you turn on a faucet in your home . . . Now . . . listen to the voice of the Colorado river, booming out through stony gate and rolling on its way to more useful work.

SOUND: **Open mike for rush of water and fade to close.**

FIRST ANNOUNCER: Water . . . and power . . . the two vital necessities in this arid land of southwestern America! This huge lake stands today as the culmination of a dream . . . a dream that we are told has been held for generations. Across the centuries, this country—for several hundreds of miles in every direction—has been a barren desert, broken only by the stream which flowed deep in the bottom of the canyon. Between Black canyon, and the mighty sink of the Grand Canyon a hundred and fifty miles upstream, the river bed spreads out in places, leaving wide valleys . . . valleys that could have been used for great Indian communities, or for the towns of the white men. But the wise men of the Indian tribes knew of the dream. Time and again they warned their people to stay away from the valley of the great river. Even on the highlands along the river banks no village could be built, for sometime, many moons away, the great water was to come and swallow up the land.

This legend has been told among these Indians for countless generations, and never was an Indian village built along the valleys of the Colorado above Black canyon. The story was told again when white men settled in the valley, but these unbelievers built their town . . . a town which today lies nearly five hundred feet below the surface of Lake Mead. Today the Indians

still come to the edge of the valley and remember the legend of their people. The great water has come! The words of the wise men were true. The dream of the Indians, and the dreams of the white man have become a reality.

Boulder dam, as a completed operating project, is now two years old, and already has surpassed the dreams of the men who first conceived this great storehouse of water and power! Those two successful years, with their promise for the future, have amply justified the vision of the men who fought for this project through the long years of political opposition, who refused to be daunted by the amazing size and complexity of the job. Those two years have proved the perfection of the plans made by the world's finest engineers and the

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handiwork of the thousands of men who built Boulder dam and who are still building the many corrollary projects which it serves. In describing this plant it is easy to view it as a finished structure and forget the many unique problems which were solved in its planning and building. The story of Boulder dam from the beginning is one of the most heroic tales in the history of civilization. Evidence of the obstacles overcome are thick around us here. Setting of concrete creates heat. This mass of concrete was so great that it would have taken one hundred and fifty years to cool naturally, before even distribution of stresses in the dam would become normal. Consequently, five hundred and eighty-two miles of one-inch pipe were built into the concrete of the dam and water cooled the the dam by a large refrigerator plant, circulated the brine, thus removing the heat as the dam was being built, producing the desired normal condition upon its completion instead of one hundred and fifty years hence.

THIRD ANNOUNCER: That's right—I understand that enough pipe was used for that purpose alone to build three replicas of the Eiffel Tower in Paris.

FIRST ANNOUNCER: That's a good way to explain it. In fact, figures don't mean a thing in talking about Boulder dam. The numbers are too big. For example, it was completed in five years, but let's see how much work was done in that time. If it were built out of hundred

pound blocks, and one block were laid on every minute of the day and night, the dam would have to have been started by the Pilgrims back in 1620 to have been completed today.

THIRD ANNOUNCER: That's almost as hard to understand as the figures. Look at these lists of materials and supplies used by the contractors.

Eight hundred and forty axes.

One thousand, seven hundred and seventy six cold chisels.

Ninety-six fish poles.

Over a million feet of chalk line.

Seventeen thousand four hundred **carloads** of cement—enough to make a freight train one hundred and sixty miles long!

Nearly twenty-two thousand pairs of rubber boots and so on—

It was hardly an ordinary building job.

FIRST ANNOUNCER: I should say not . . . The cement in this dam alone was equal to that used by the bureau of reclamation in all the dams and structures that it had built during its twenty-nine year history before it started this project. . . When you spend twenty-nine years in doing gigantic construction work, and then start one job equal to all the others put together, you have quite a task on your hands.

THIRD ANNOUNCER: Yes . . it is big . . . It cost one hundred thirty million dollars to build and yet it will pay for itself in fifty years. From the Los Angeles municipal power bureau alone the United States government already has received two million three hundred and three thousand dollars in power payments, an amount that will be increased substantially this year and future years as the southland city uses more and more power from Boulder dam. Those pipes down in the tunnels, the thirty foot penstocks, are made of steel sections so big that no railroad could bring them in here. A steel plant had to be built right on the reservation. Boulder dam is one of those things that you look at for a long time . . . and then say to yourself, "It isn't true!"

SECOND ANNOUNCER: It's true all right . . . It has to be true. All through the history of the world, the location of great cities has been dictated by transportation centers . . . harbors, railroad terminals and so on. Other cities have grown up where water was available to sustain life, or where water power could be generated to turn the wheels of industry. Today, and in the centuries to come, centers of population are gradually shifting. Progress has caught up with geography.

Boulder dam, and other great plants like it make it possible for whole areas of the earth's surface to be opened up for settlement and production. Here water and power can be sent out to the entire southwest. There's one victory for the men who dream of making the deserts blossom . . . and others will follow throughout the world.

After seeing the dam and these other projects . . . after getting deeply enough into the story to find its true meaning . . . we can't say enough for the men who have been identified with this tremendous reclamation work since its beginning.

Two men, very closely identified with the project, one here in the **control room** of the power plant with us, the other in Columbia's Studios in Hollywood. May I present, first, Mr. E. F. Scattergood, chief electrical engineer and general manager of the Los Angeles bureau of power and light, (publicly owned by the city of Los Angeles) which is the largest user of Boulder dam power . . . Mr. Scattergood, speaking from Hollywood.

(SWITCH TO KNX).

SCATTERGOOD: Boulder canyon project, embracing the greatest of all existing reservoirs, and increasing by one hundred per cent the total amount of underground and surface storage, gives to the intensive garden farmer of southern California new hope and new security—the certainty of successful crops and freedom from other disastrous effects of subnormal rainfall.

This, in conjunction with the tremendous benefits of cheap power, means enlarged opportunity for investment and for livelihood. Availability of abundant water and low-cost electric power assures expanding southern California enterprise, industrial as well as agricultural. Indeed, it presages the doubling of industrial activities here during the next decade.

Now, back to Boulder dam.

(SWITCH TO BOULDER DAM)

SECOND ANNOUNCER: Thank you, Mr. Scattergood . . . Also here with us is a man who is the director of power in charge of Boulder dam and power plant for the United States bureau of reclamation.

Mr. Irving C. Harris.

HARRIS: In the building of this project, forty-six states received contracts for furnishing materials, giving employment to their citizens during a critical

emergency. On this second anniversary, we rejoice that this structure now stands as a symbol and a realization of a noble purpose to protect the habitation and works of man from the ravages of flood, to make arid land fruitful and relieving drudgery, providing electrical energy for the promotion of the welfare of the people.

SECOND ANNOUNCER: Thank you, Mr. Harris . . . You and Mr. Scattergood have expressed something of the meaning of Boulder dam, and we Columbia commentators have tried to build a word picture of an undertaking far too big to fit into the limits of this broadcast. I think that right here we should try to find words to summarize the whole great achievement here in the middle of the American desert.

THIRD ANNOUNCER: Perhaps so, but I think that better words than ours have been inscribed in bronze and gold on the monuments and plaques at the top of the dam. Against the wall of the canyon, on the Arizona side at the turn in the highway which spans the dam is a bronze plaque which bears two inscriptions. Across the top is this line:

FIRST ANNOUNCER: "They died to make the desert bloom."

THIRD ANNOUNCER: And in the left hand panel:

FIRST ANNOUNCER: "The United States of America will continue to remember that many who toiled here found their final resting place in the building of this dam."

THIRD ANNOUNCER: And on the right hand panel, for the living, are these words:

SECOND ANNOUNCER: "The United States of America will continue to remember the services of all who labored to clothe with substance the plans of those who first visioned the building of this dam."

THIRD ANNOUNCER: Then — across the dam, in the sister state of Nevada is a magnificent new statuary group with two monumental figures, a symbolic inlaid floor and a graceful flagpole rising above the dam. Here is something found all too seldom in this uneasy world, a great work of art commemorating — not the achievements of warriors —but a great triumph of a peace time army, a victory for civilization rather than barbarism. On a marble slab at the base of that flagpole we find these words in gold:

FIRST ANNOUNCER: "It is fitting that the flag of our country should fly here in honor of those men who, inspired by a vision of lonely lands made fruitful, conceived this great work and of those others whose genius and labor made that vision a reality."

(PAUSE)

THIRD ANNOUNCER: Thus— in the words of men upon their monuments—we have our summary. But by far the greatest monument that could ever be erected to these peace time heroes is Boulder dam itself . . . Boulder dam, two years old . . . and from