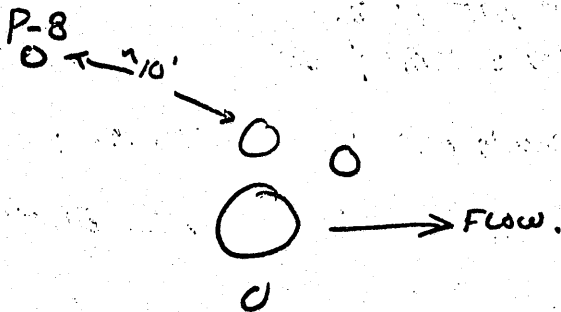


THE TOP WILL BE BUILT ON THE WOOD
ON TOP OF THE EXISTING ~~WALLED~~ CHANNELS.

TUESDAY, MAY 11, 1971

CLOUDY, COOL.

CALL FINISHED PRESSURE TESTING @ 9:00 & W/
DENHR HELPING. GROUTED THE HOLE SHUT
I TALKED TO ALMIES RE: LOCATION OF THE
OFFSET. HE WANTS IT NEAR E4, SAY 10',
TO BE SURE OF HITTING THE DRIFT. WE
LOCATED THE OFFSET ~ 10' FROM E4 TOWARD
THE HILLSIDE. IT WILL CAUSE THE LEAST
OBSTRUCTION THERE WHEN TED STARTS UNLOADING
THE E4 BORE HOLES.



CALL SET UP & STARTED DRILLING THE OFFSET
WITH A ROTARY BIT.

TOM JULIAN PRESSURE TESTED P-10 THE
BOTTOM HELD SMALL PRESSURE & TOOK MUCH
WATER, SO WE ARE IN A CAVE APPARENTLY.
NO COAL WAS FOUND IN CORING. ONLY THE
RUBBLE WHERE WE EXPECTED COAL.

TED'S STILL WORKING ON E1 BRIDGE.

CALL FROM GEO. MANDEL REQUESTING

QUANTITIES FOR E2A & B. GAVE THEM TO
TED TO CALL BACK.

Dale L. Rowles

WEDNESDAY, MAY 12, 1971 CLOUDY, COOL.

CALLED RE: PLANE RENTAL FOR FRIDAY
FOR AERIAL PHOTO. RATE'S 23⁰⁰ / hr

CARL GOT THE OFFSET DRILLED DOWN TO THE
DRIFT. TOP OF DRIFT AT 96' (96'). SWL.
2.3' BELOW CASING TOP. ∴ HEAD ON E4 ~
1', LESS THAN EXPECTED.

TOM GOT THE PIEZ. SET AT P10 & MOVED TO
P-11, GOT SET UP & STARTED SOIL SAMPLING.

TED'S CREW'S WORKING ON BRIDLE.

~ 9⁰⁰ TO GO AT CUMMINGS TILL EL 1066.

Dale L. Rowles

THURSDAY, MAY 13, 1971 CLOUDY, STEADY
RAIN.

W/ SMITH, HELPER, BEAIR, THE BASKETON P-8 (E4)
WAS SET. WE WANTED TO GET THE BOTTOM 10'
OR SO OF THE HOLE GROUTED, SO THAT FLOW FROM
THE HOLE COULD BE CONTROLLED. AS IT TURNED
OUT, NO WATER CAME OUT, SO WE COULD HAVE
WAITED.

THE RAIN HAS MADE THE E4 AREA ALL BUT IMPASSABLE
4 WHEEL DRIVE BARREN MAKES IT IN.

FRIDAY, MAY 14, 1971

CLEAR, WARM
WINDY, 70°

TOM JULIAN CONTINUES DRILLING AT P-10. HIT THE
DRIFT OFF OF EULTON A @ 72' LATE IN THE DAY, SO
WE'LL PRESSURE TEST MONDAY.

CARL SMITH FINISHED ERDING @ E4 (P-8) AND MOVED
TO P-7, THE CROOKED CREEK BOREHOLE, GOT SET UP &
STARTED SOIL SAMPLING.

AT E1 WATER STARTED FLOWING OUT THE OPENING
(EL 1066). THE WATER LEVEL AT CUMMINGS WAS ~1066[±]
INDICATING THAT THERE IS NO MINE BARRIER BETWEEN
CUMMINGS AND E1. THE VALVE AT CUMMINGS WAS
OPENED TO LOWER THE WATER LEVEL & PERMIT
WORKING AT THE E1 OPENING.

ALMES VISITED THE SITE & LOOKED AT THE PROGRESS AT
ALL CONSTRUCTION AREAS.

Dale L. Lawson

SATURDAY, MAY 15, 1971

SMITH WAS AT P-7 CORING - NO SITE VISIT BY ME.

Dale L. Rowison

MONDAY MAY 17, 1971

CLEAR, WARM
75°

TOM JULIAN IS AT P 11 & WE PRESSURE TESTED THE HOLE & SET THE PIEZOMETER. HE LOADED FOR THE MOVE TO A-1 TO PULL CASING & GROUT THE HOLE.

CARL SMITH IS DRILLING AT P 1, CROOKED CREEK,

TED'S HELPING WITH PIEZ INSTALLATION & WORKING AT THE BRIDGE. HE IS SETTING THE PIEZ HOUSINGS ALSO.

TUESDAY, MAY 18, 1971

CLEAR, WARM
85°

TOM JULIAN & TED'S CREW GROUTED P-1 IN THE MORNING. LEFT JOB SITE @ NOON

CARL SMITH WAS DRILLING AT P1 AND WAS DOWN 130' I TOLD HIM TO GO TO 150 OR THE COAL AND STOP. HE HIT COAL AT 135'. WILL PRESSURE TEST TOMMORROW.

Dale L. Rowison

P.S. BOSACK CALLED RE FLYING COLOR IR PHOTOGRAPHY OF THE SITE. HE IS TIED UP & CANT COME OUT,

SO HE'LL SEND THE CAMERA & FILM OUT. I'D
ARRANGED FOR THE PLANE @ 2:00 PM. I TOOK A
PRACTICE RUN W/ TED TO GET HIS IDEAS ON IT & CAME
BACK (1 1/2 hr FLYING TIME). THE CAMERA & FILM
ARRIVED AT 4:00 PM & WE FLEW THE AREA 4:00 till
5:30 PM & 100K & ROLLS OF FILM. SOME WAS IMPROPERLY
EXPOSED DUE TO BUMPING THE SETTINGS. WILL HAVE TO
WAIT TO SEE WHAT DEVELOPS.

Dale L. Paulson

19 MAY 1971, WEDNESDAY

CLEAR, COOL 50-60°

PRESSURE TESTED P-7 TILL 3:00 WHEN ^{WATER} METER BROKE DOWN.
CARL HAD TO GO IN TO GET ANOTHER, AND WILL FINISH PRESSURE
TESTING IN THE MORNING.

TED IS WORKING AT THE BRIDGE ALIGNING & SETTING
THE PIPE SUPPORT ON GRADE. GREN IS OUT TO
STAKE THE OFFSET LINE & LOCATE PIPE SUPPORT.

Dale L. Paulson

THURSDAY 20 MAY, 1971

CLEAR, WARM

70°

FINISHED PRESSURE TESTING P-7 & SET PIEZ IN THE
CONC. THE PRESSURE TEST ABOVE THE COAL SHOWED
A HIGH PERMEABILITY & THE COAL IS FRACTURED
BADLY. FROM THIS IT WAS CONCLUDED THAT A
DIRECT WATER CONNECTION EXISTS BETWEEN THE DRIFT
& THE BEDROCK & A PIEZOMETER WILL FUNCTION
PROPERLY.

THE PAD @ E1 WAS PLACED TODAY. 2 1/2 YDS OF CONCRETE.

Dale L. Paulson

FRIDAY 21 MAY 1971

CLEAR, WARM
70°

CARL SMITH FINISHED GROUTING P-7 & PULLED THE CASING. HE WAS LOADED & MOVED OUT BY 4:00 PM.

TED HELPED W/ PIEZ GROUTING & MOVING THE DRILL RIG OUT.

Dale L. Rowleson

MONDAY, MAY 24, 1971

CLOUDY, WARM
LIGHT RAIN.

I FINISHED LOGGING CORE ON P-7 & TOOK PHOTOS OF ALL CORE BOXES. TED'S CREW IS AT THE CROOKED CREEK BOREHOLE AREA CLEANING UP & GRADING THE WORK AREA.

GREEN IS UP & HAS RUN LEVELS TO ALL PIEZOMETERS AND HAS ELEVATIONS @ TOP OF THE HOUSING & DPOF PIPE.

Dale L. Rowleson

TUESDAY, MAY 25, 1971

PTLY CLDY WARM.

NO SITE VISIT. THE CONTRACTOR IS WORKING ON P-7 & THE E4 AREA.

Dale L. Rowleson

WEDNESDAY, MAY 26, 1971

NO SITE VISIT. THE CONTRACTOR HAS BILL WOODS, THE DRILLER UP WORKING ON PLUGGING E4. THE SPIRAL WELDED PIPE SHOULD BE READY IN CHICAGO TODAY.

Dale L. Rowleson

THURSDAY MAY 27, 1971

NO SITE VISIT. PLUGGING OF E4 CONTINUES.

Dale L. Rowleson

FRIDAY, MAY 28, 1971

NO SITE VISIT. THE BOREHOLE AT E4 IS PLUGGED, AND WOODS IS MOVING OVER THE 16" HOLE TO REAM $\frac{1}{2}$ CLEAN IT. A BIT WILL HAVE TO BE FABRICATED TO CLEAN THE BOREHOLE.

THE CONTRACTOR BEGINS CLEARING & EXCAVATING AT E2. THE PIPE FOR THE TRANSFER IS ON THE SITE. ALSO THE PIPE FOR E4 & THE VALVES IS HERE.

Dale L. Rowleson

TUESDAY, JUNE 1, 1971

CLEAR, WARM
70°

THE CONTRACTOR IS REAMING THE 16" HOLE @ E4 WITH THE BIT FABRICATED FRIDAY. PARTS OF THE HOLE ARE 14", ACCORDING TO THE CALIPERING RECORDS, BUT THE BIT CAN BE TRIMMED TO FIT.

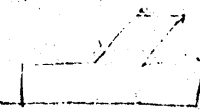
AT E2 THE CAVED AREA HAS BEEN EXCAVATED AND THE DRIFT CLEANED OF DEBRIS.

THE WYES RECEIVED WITH THE PIPE (FOR THE CLEAN-OUT) ARE NOT STRAIGHT THROUGH, AS REQUIRED

Rec'd



Required.



SO NEW WYES WILL BE NEEDED, OR THESE MODIFIED.

Dale L. Rowleson

Wednesday, June 2, 1971

clear, warm

The contractor installed the 18" spiral welded pipe in the E2 opening (2 lengths, 50' from opening), and constructed the temporary dike to dewater the opening. The water was pumped from the opening and the debris & mud removed to provide a firm, dry area for the seal. The 10" fitting was installed at the opening on grade and pipe installation will continue from E2 to E1.

In the afternoon I met with George Mandel, Lon Peterdorf & Ted Beahr to prepare the May payment estimate.

Dale Beahm

Thursday, June 3, 1971

No site visit - the contractor is working placing the earth seal at E2

Friday, June 4, 1971

No site visit. The contractor finished the earth seal at E2 and started excavating for the pipe. He found an old 8" water pipe about 15' from the grade bottom across E2. The top of the 8" pipe is 5" above the invert grade of the 18" pipe to be installed. Ted Beahr called R&P Coal Co. and sent out a man to look at it. He thought the pipe was abandoned, but would check it. He also indicated from an AS Bull that a "rock" line was 105' from the opening. A test hole by the backhoe at this location did not uncover the pipe. Ted Beahr is to meet the R&P man Monday to locate more lines if there are more, and to give info about the pipe that was found.

Dale Beahm

MONDAY, JUNE 7, 1971

CLOUDY, WARM, HUMID

Mr. Alex Molenski was at the site to look at the problem of the 8" pipe that was found. The RFP man had not arrived, and Ted Bear called. Mr. Molenski talked to ^{RFP} him and found that RFP could not lend further assistance in locating or fixing existing pipes. The existing pipes would have to be left in place and undisturbed and our pipes would go around them.

Beate, Molenski & I discussed methods of circumventing the 8" pipe and determined it could be done and not hinder the flow from E-2. The deflection caused by the 8" pipe can be taken out in the joints of the 18" pipe, or the joints could be made with concrete if alignment wasn't practical, or a shallow drop manhole could be installed to take up the elevation difference.

We also decided to open the trench the entire distance E-1 to E-2 to find any more pipes that are not known.

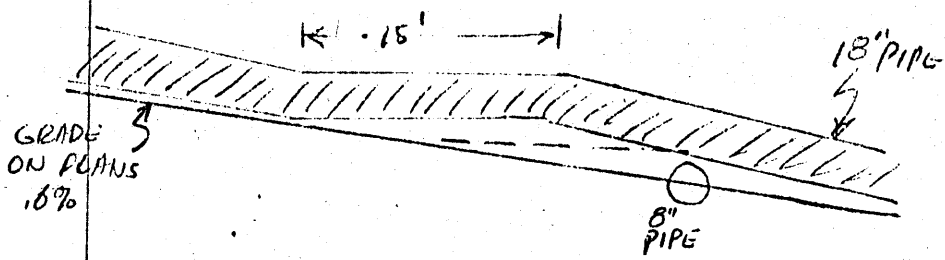
About 100' from E-2 a 12" pipe was found about 3' below grade, so should present no problem. The pipe is quite old & corroded. About 250' were uncovered and only the one pipe was found.

Deke & Paulson

TUESDAY, JUNE 8, 1971

CLOUDY WARM

NO SITE VISIT: THE CONTRACTOR FINISHED EXCAVATING THE PIPE TRENCH AND FOUND NO MORE PIPES CROSSING THE TRENCH. HE IS STARTING TO PLACE PIPE. DUE TO THE 8" PIPE NEAR E-2, ABOUT 15' WILL BE NEARLY LEVEL TO GET BACK ON GRADE.



NO LOW AREAS WILL BE INSTALLED, SO NO WATER
CAN COLLECT, SHOULD THE FLOW STOP.

Dale L. Rowleson

WEDNESDAY, JUNE 9, 1911

NO SITE VISIT THE CONTRACTOR IS INSTALLING
PIPE & INSULATION BETWEEN E1 & E2

Dale L. Rowleson

THURSDAY, JUNE 10, 1911

NO SITE VISIT. THE CONTRACTOR IS INSTALLING
PIPE BETWEEN E1 & E2. WHERE THE DEPTH
OF COVER IS 3' OVER THE PIPE, NO INSULATION
IS INSTALLED

Dale L. Rowleson

FRIDAY, JUNE 11, 1911

NO SITE VISIT. PIPE INSTALLATION BETWEEN E1 & E2 CONTINUES

Dale L. Rowleson

MONDAY, JUNE 14, 1911

CLOUDY, WARM
70°

THE CONTRACTOR HAD REACHED THE LAST 75' BEFORE THE BRIDGE & COVER IS SHALLOW SO THE INSULATION IS BEING PLACED AGAIN. PLACING THE PIPE ON LINE & GRADE IS EASY, BUT PLACING THE INSULATION IS SLOW & TIME CONSUMING. 3 LENGTHS WERE INSULATED TODAY, AND THE PIPE JUST REACHED THE BRIDGE. THE BRIDGE PORTION WILL BE INSULATED WITH THE BOX & INSULATION AROUND IT.

THE TRENCH FOR THE BULK OF THE PIPE CROSSING WAS INTO SAND, WHICH WAS USED AS THE BEDDING MATERIAL. CLEAN FILL FROM AROUND E2 WAS ADDED ALSO TO BRING THE BACKFILL ABOVE THE PIPE. WHEN THE PIPE WAS PROPERLY BEDDED & HANDLED WITH THE WAGON, THE EXCAVATED MATERIAL WAS PLACED & MOUNDING OVER THE TRENCH.

IN THE LAST 75' THE TRENCH WAS IN A SILTY CLAY, AND THE CONTRACTOR PURCHASED CLEAN SAND FOR THE TRENCH FROM MOREAU. 10 TONS WAS USED TODAY.

Dale & Rowles

This record is continued in Volume 2

Dale & Rowles
15 June 1911

VOLUME 2

THIS RECORD IS CONTINUED FROM VOLUME 1

Dale & Rowson
15 JUNE 1971

TUESDAY, JUNE 15, 1971

NO SITE VISIT. WORK AT E1 ONLY
Dale & Rowson

WEDNESDAY, JUNE 16, 1971

NO SITE VISIT. WORK ON PIPE @ E1.
Dale & Rowson

THURSDAY, JUNE 17, 1971

NO SITE VISIT. PIPE IS PLACED TO E1.
Dale Rowson

FRIDAY JUNE 18, 1971

NO SITE VISIT. INSULATION INSTALLED TO
WITHIN 10' OF E1 & BACK FILL AROUND PIPE COMPLETE.
Dale & Rowson

Monday, June 21, 1971

NO SITE VISIT. THE CONTRACTOR STARTED BUILDING
THE BOX AROUND THE PIPE AT THE BRIDGE.
Dale & Rowson

TUESDAY, JUNE 22, 1971

NO SITE VISIT. WORK ON BRIDGE BOX.
Dale Rowleson

Wednesday, June 23, 1971

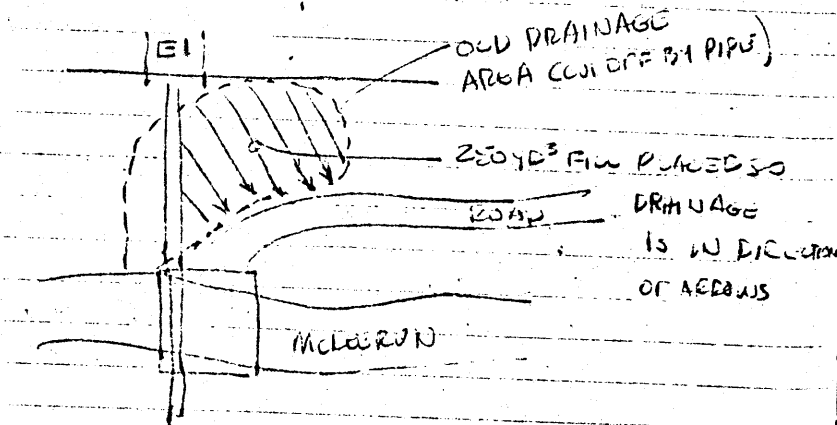
NO SITE VISIT. THE BOX OVER THE BRIDGE IS
COMPLETE. SPORY WILL BE UP TO FINISH THE
WALL AT E1 TOMORROW.

Dale Rowleson

THURSDAY, JUNE 24, 1971

CLEAR, WARM
15°

MET DON FEITEROLF, GEORGE MANDEL, & TED
BEAHR AT THE SITE TO PREPARE THE PAY ESTIMATE
FOR JUNE. THE TRANSFER PIPE FROM E1 TO E2,
AND THE SEALING OF E2, L2A, & E2B WERE THE
MAIN ITEMS BILLED. ONE ITEM ON THE
TRANSFER PIPE WAS INCREASED SUBSTANTIALLY: THE
BACKFILL FOR THE PIPE. THIS IS FOR 250 YARDS
OF FILL PLACED TO FILL A POND CREATED BY THE
PIPE BETWEEN E1 & THE BRIDGE.



THE POSSIBILITY OF A CULVERT WAS DISCUSSED BY TED BEHR, GEORGE MANDEL, & MYSELF, BUT THE FILL WAS DETERMINED TO BE THE SIMPLEST SOLUTION, AND MORE PERMANENT.

GEORGE MANDEL & I DISCUSSED THE MONTHLY PIEZOMETER READINGS TO BE MADE. I SAID EDGE COULD GET OUT TO DO IT, BUT COULD USE HELP ON OCCASSION. GEORGE SAID THE STATE COULD AID AT TIMES, SO FOR THE INITIAL READINGS IN JULY, GEORGE, ANOTHER STATE MAN, & I WILL GO TO THE LOCATIONS & READ THE PIEZOMETERS. THEN 3 PEOPLE WILL BE TRAINED & CAN DO THE READINGS.

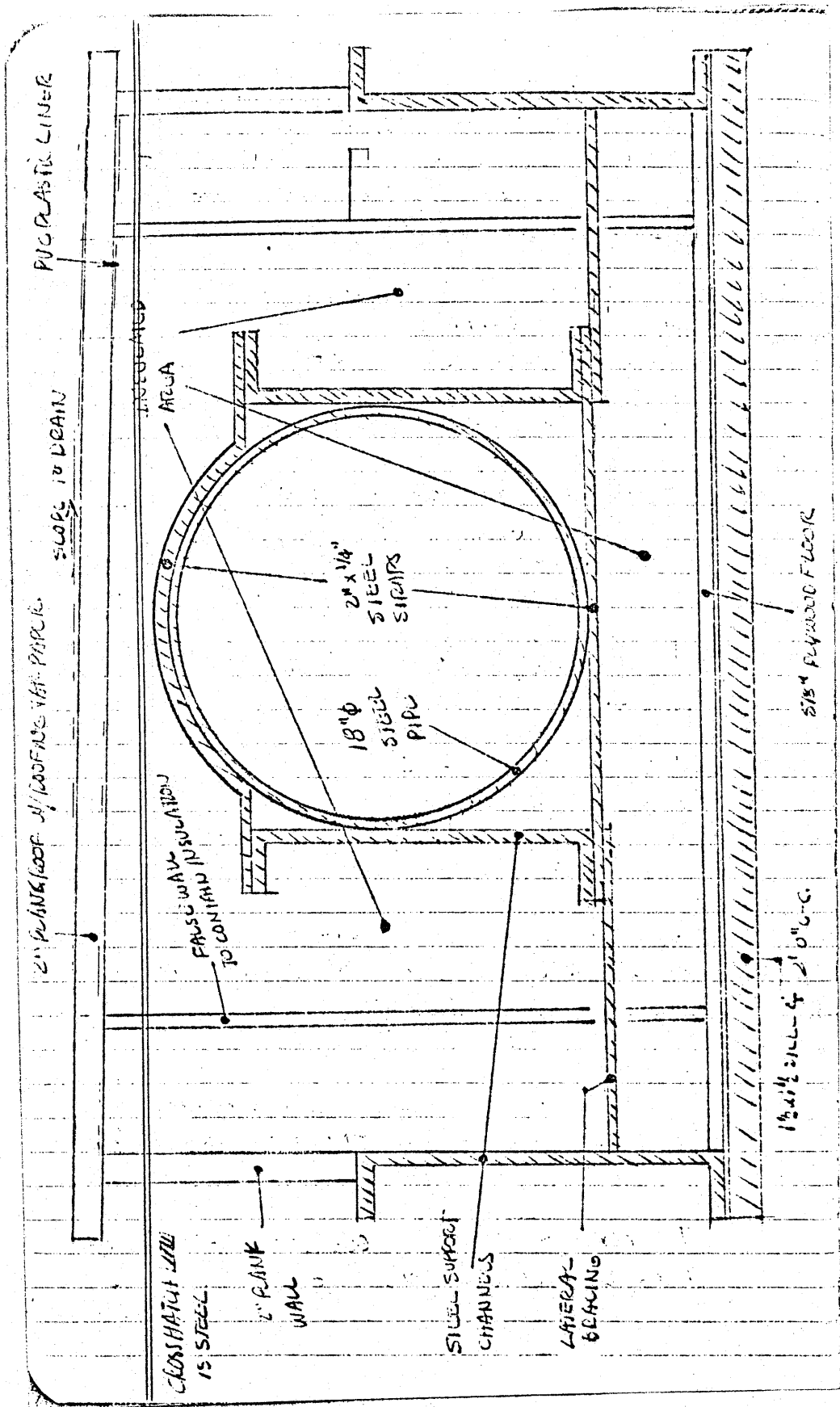
WE LOCATED THE ADDITIONAL BORING TO BE PLACED AT CRLERSIDE, DDH44. THIS WILL BE MADE NEXT WEEK.

THE PACKERS FOR E-4 ARE ORDERED. THE 8" HOLE PACKERS SHOULD BE HERE SOON & THE 16" HOLE PACKER IS ON ORDER BUT WILL TAKE 2 WEEKS. SEALING E4 WILL START AFTER DDH44 HOLE IS DRILLED.

A. J. SPORY WAS AT THE SITE FORMING THE FRONT WALL FOR E1 OPENING. THAT SHOULD BE READY TO POUR TOMORROW.

RAILS WERE PLACED AS GUARD POSIS AROUND THE CLEAN OUTS, AND WHERE THE BOX CROSSES THE BRIDGE. THESE WILL BE CONCRETED IN PLACE.

THE BOX CROSSING THE BRIDGE LOOKS VERY GOOD. A CROSS SECTION LOOKS LIKE 1



THE BOX CONTAINING THE INSULATION WAS LINED WITH SHEETS OF PVC PLASTIC TO KEEP THE INSULATION DRY.

Dale L. Rowleson

FRIDAY JUNE 25, 1971

NO SITE VISIT. THE CONTRACTOR IS WORKING AT E1 POURING THE WALL AROUND THE PIPE. & ANCHORING POSTS AT THE BRIDGE & CLEANOUTS.

Dale L. Rowleson

MONDAY JUNE 28, 1971

NO SITE VISIT. THE CONTRACTOR IS BACKFILLING THE LOW AREA AT E1 TO PROVIDE DRAINAGE.

GEORGE MANDEL & I DISCUSSED (BY PHONE) THE EASEMENTS REQUIRED AT THE BORE HOLE IN CREEKSIDE, SINCE THE PREVIOUS ONE HAD EXPIRED. HE SAID THE STATE WOULD OBTAIN THE REQUIRED EASEMENTS FROM THE BOROUGH OF CREEKSIDE & THE LAND OWNER. TED BEAHR WILL WAIT TO DRILL THE HOLE UNTIL EASEMENTS ARE OBTAINED.

Dale L. Rowleson

TUESDAY JUNE 29, 1971

NO SITE VISIT. THE CONTRACTOR IS WORKING AT E1 GRADING & CLEANING UP.

Dale L. Rowleson

WEDNESDAY JUNE 30, 1971

NO SITE VISIT. THE CONTRACTOR IS STILL AT E1.

Dale L. Rowleson

THURSDAY, JULY 1, 1971

NO SITE VISIT. TED BEHR IS MOVING EQUIPMENT TO E-4 TO BEGIN WORK THERE.

Dale L. Rowleson

FRIDAY, JULY 2, 1971

NO SITE VISIT. I CALLED GEORGE MANDER & FOUND OUT THAT THE EASEMENTS WERE NOT OBTAINED. THE MAN FROM THE STATE WENT OUT, AND THE LAND OWNER IS OUT OF TOWN & WILL BE BACK THIS WEEK ON JULY 11, 1971. ALSO THE EASEMENT FROM THE BOROUGH WILL HAVE TO COME BEFORE THE COUNCIL ON JULY 13, 1971. THEREFORE THE BORING IN CREEKSIDE WILL HAVE TO WAIT TILL THEN.

TED HAS THE PACKER FROM LYONS FOR THE 16" HOLE & WILL START ON THAT ONE NEXT WEEK.

Dale L. Rowleson

NO WORK MONDAY, JULY 5, 1971

TUESDAY, JULY 6, 1971

NO SITE VISIT. TED CALLED AND SAID THEY'D BE SETTING THE PACKER IN THE 16" HOLE TOMORROW.

Dale L. Rowleson

Wednesday July 7, 1971

CLEAR, WARM.

I VISITED THE SITE & READ ALL PIEZOMETERS. AT E4, THE LYONS PACKER WAS PLACED, AND THE STEEL PIPE WELDED ON UNTIL THE PACKER WAS AT 85' BELOW THE WATER LEVEL. (APPROX 10' ABOVE MINE ROOF). THE WELDING OF THE JOINTS WAS VERY SLOW, ABOUT 1 HR JOINT, SO TED WAS

CONSIDERING THREADING THE PIPE FOR THE SMALL HOLES, TO SAVE TIME.

TED IS HAVING HALIBURTON COME OUT TO SET THE PACKERS & GROUT THEM. HE FEELS THEY HAVE MORE EXPERIENCE & CAN DO A BETTER JOB. TED'S CREW WILL ASSEMBLE THE PIPE & PLACE IT IN THE HOLE.

THE TREMMIE PIPE WAS PLACED IN THE HOLE, A 2 1/4" GALVANIZED STEEL THREADED PIPE. THE SMALL PACKERS ARE GROUTED THROUGH THE STEM OF THE PACKER, AND GROUT IN THE STEM IS LATER REMOVED BY DRILLING. HALIBURTON & WOODS (TED'S DRILLER) SAY THIS IS COMMON PRACTICE & USUALLY EASY TO DO, SO THEY WILL DO IT THAT WAY.

THE TOP OF THE CASING WILL BE AT PLATFORM LEVEL, ABOUT GROUND SURFACE EL AT THE PIEZ WITH THE FITTINGS & ELBOW. THE VALVE WILL BE ABOUT 2 FT ABOVE THIS, AMPLE ROOM FOR WORKING AROUND THEM.

Dale L. Powlison

Friday July 16 1971

Part cloudy WARM

I visited the site today and observed as they drilled out the packer plug on the 8" hole near the steep side of creek at G-4. Total time to drill out the plug was about an hour. Haliburton has packers that don't need drilling out which we could use next time. Cable tool is best way to drill out plug. On Monday July 19 Haliburton will bring out packer for other 8" hole and Ted will be setting pipe. On Tuesday July 20 they will cement place the packer & cement in the casing. At

present they plan to set the packer
at 80 feet. The 16" hole and 8"
hole near the steep bank are finished

L. J. [Signature]

July 20 Tuesday Partly cloudy warm
Ted called this morning and said they
would not be working today due to the rain
last night & yesterday. He asked about the
easment for the piezometer at creekside. I
called George MANDEL. He thinks they have been
signed and are at the store in Creekside. I
will check on this tomorrow and call him back.

L. J. [Signature]

WEDNESDAY July 21 1971

WAS AT SITE TODAY & HALLIBURTON CEMENTED
the remaining 8" Bore Hole. The CEMENT WATER
mix was 1 sack cement to 5 quarts of water
35 SACKS of cement were used.

Ted had some questions on building the
enclosure around the bore holes. He had
questions pertaining to insulation and windows to
supply light AND general configuration of the
building.

L. J. [Signature]

July 22 thru July 27.

No site visit these days. The contractor
was placing sly base and placing concrete
for slab at E4. in preparation for the
enclosure.

L. J. [Signature]

Wednesday July 28 1971

Spring & Warm

The drillers arrived at the site today at about noon. They got set up and drilled about 75'. Hit water at 62' but on following day water was @ 55'. The drillers told Ted about an abandoned water well they drilled. It is about 1/2 mile up the valley from the creek to Piezometer. They reportedly entered the mine 90 feet. I will have to locate this on the plan.

Thursday July 29 1971

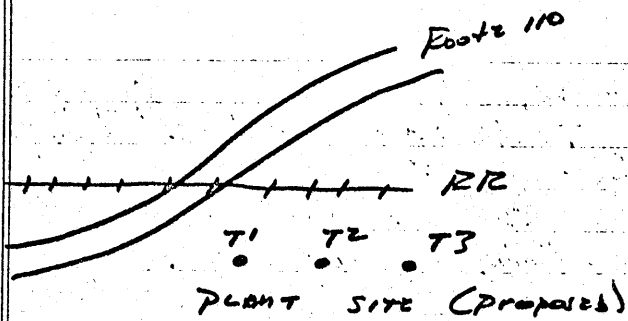
Warm with Rain.

The drillers did not work today due to rain. George Mandel came down with cost estimates and we signed them. George got water samples from E-4 & from Cummings. The water raised about two inches over night at E-4. All of the piezometers were read today.

Friday July 30, 1971

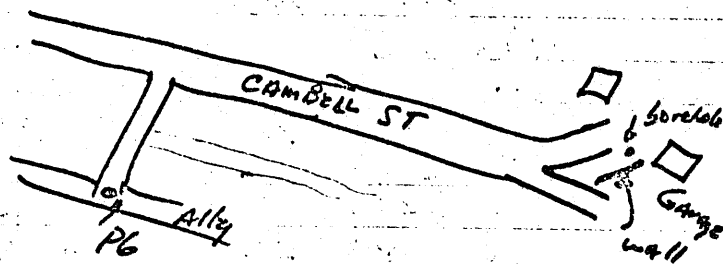
Lou Mellinger visited the site today. Piezometer P-6 was installed in the coal void encountered at about 145' from ground surface (E-5U 107B). The water elevation was at about E1 1023 which correlates with the E-N piezometer.

The piezometers (or wellpoints) installed at the Treatment Plant Site were located. See sketch below.



Ted Beahr will obtain elevation of the standpipes. These piezometer will be included in the monitoring program.

Lou A. also looked at a recently drilled water well borehole located near P-6. The driller who installed P-6 indicated that the abandoned water well borehole was drilled into the mine but was not grouted. They did not backfill the hole entirely but only pulled in the last cuttings. The elevation of this hole will be obtained to monitor along with P-6.



A Full set of Piezometer readings were taken. The water at E-4 has reached the mount of its highest elbow (10" of value @ EL 1022.77).

R. Almy

FRIDAY, AUGUST 6, 1971

CLEAR, WARM.

I VISITED THE SITE & READ PIEZOMETERS. THE CONTRACTOR IS WORKING AT E-4, BUILDING THE PROTECTIVE HOUSING. THE HOUSING IS LOCATED ON THE SLAB SURROUNDING THE 3 VALVES AND IS OF 2" MATERIAL. THE ELBOWS ON THE VALVES HAVE DRAIN COCKS INSTALLED AT THE BASE TO REMOVE WATER FROM THE ELBOW WHEN THE VALVES ARE CLOSED. THERE IS SOME QUESTION ABOUT PROPERLY INSULATING THE ENCLOSURE TO PROTECT FROM FREEZING. ALSO THE PRESSURE PIEZOMETERS. LOU M. SUGGESTED PLACING FUEL OIL IN FIRST 6-10' OF PIPE.

TED ASKED IF A FINAL INSPECTION COULD BE HELD NEXT WEEK. I'LL TRY TO ARRANGE IT.

Dale Rowson

MONDAY, AUGUST 9, 1971

NO SITE VISIT. I CALLED MOLENSKI, MANDEL, FEITEROLF & SET UP A FINAL INSPECTION FOR FRIDAY, AUGUST 13, 1971 AT 10:00AM AT THE FULTON TRAILER.

TUESDAY, August 10, 1971 to THURSDAY, August 12, 1971

NO SITE VISIT. THE CONTRACTOR IS CLEANING UP & MOVING EQUIPMENT OUT.

Dale & Rowson

FRIDAY, AUGUST 13, 1971

THE FINAL INSPECTION WAS HELD - IN ATTENDANCE WERE:

Alex Molinski - state

GEORGE MANDEL - STATE

DON FETTEROLF - FETTEROLF COAL

TED ISCAHR " "

LARRY ANDERSON - EDCE

LICK ALMES - EDCE

Dale Kowilson - EDCE

FILMS NOTED FOR FURTHER WORK WERE:

PIEZOMETERS - ALL PIEZOMETER INSTALLATIONS REQUIRE MORE INSULATION, AND IT SHOULD BE ONE PIECE TO PERMIT EASY REMOVAL FOR WINTER READINGS. AROUND THOSE PIEZOMETERS THAT WILL HAVE WATER AT OR NEAR GROUND SURFACE, MORE SOIL NEED TO BE PLACED. IT SHOULD BE TO THE TOP OF THE PROTECTIVE CASING AND GENTLY SLOPED AWAY.

FULTON RUN SHAPES WERE ACCEPTABLE

E4 BOREHOLES REQUIRE INSULATION AROUND THE VALVES. FINISHES OF ORBITALS WILL BE PLACED IN A BOX AROUND EACH VALVE.

CROOKED CREEK. THE WORK AT CROOKED CREEK IS ACCEPTABLE. ANOTHER BURCHOLE WAS FOUND AND WILL REQUIRE SEALING.

CREEKSIDE. THE ABANDONED WELL NEAR P. 6 WAS NOTED FOR FURTHER OBSERVATION.

E3 is satisfactory.

E1, E2 and THE TRANSFER PIPE ARE SATISFACTORY.

COMMINGS SHAFT IS SATISFACTORY

IT WAS DECIDED THAT THE MONITORING OF THE PIEZOMETERS SHOULD BE CONDUCTED 3 TIMES WEEKLY FOLLOWING CLOSING OF E4 VALVES. THE COMPLEX AREA SHOULD BE CAREFULLY OBSERVED FOR BREAK OUTS OF MINE DRAINAGE. THE PROGRAM CAN BE ALTERED DEPENDING ON RESULTS OF THE PIEZOMETER READINGS.

Dale L. Rowles

18 AUGUST 1971, WEDNESDAY

NO SITE VISIT. THE CONTRACTOR SCALED THE 2ND BORE HOLE AT CROOKED CREEK.

Dale L. Rowles

20 AUGUST, FRIDAY.

I MET GEORGE MANDEL AND BART WATSON, STATE EMPLOYEE AT THE SITE. WE INSPECTED THE WORK OF THE CONTRACTOR SINCE FINAL INSPECTION. I FOUND IT SATISFACTORY. I INSTRUCTED MR. WATSON IN THE READING OF PIEZOMETERS AND RECORDING RESULTS. THE WATER LEVELS WERE TO 21024, THE SAME AS BEFORE THE BREAK OUT AT CROOKED CREEK. WE DECIDED THAT IF THE WATER LEVEL WAS CONSTANT ON MONDAY, THE E4 VALVES COULD BE CLOSED AND THE WATER IN THE MINE ALLOWED TO RISE.

Dale L. Rowles

MONDAY, AUGUST 23, 1971

GEORGE MANDEL CALLED AND REPORTED THAT THE E4 VALVES WERE CLOSED TODAY. SOME WATER WAS COMING OUT BELOW THE VALVES, BUT THE SOURCE WAS INDETERMINANT. IT WILL BE OBSERVED TO FIND THE SOURCE.

Dale Rowleson

WEDNESDAY, AUGUST 25, 1971

GEORGE MANDEL CALLED. WATER LEVELS ARE RISING NOMINALLY, WITH NO PROBLEMS. I.E. WATER FLOWING FROM BELOW E4 HAS STOPPED, SO IT MUST HAVE BEEN TRAPPED WATER UNDER THE VALVE HOUSE THAT WAS OBSERVED MONDAY.

WORK WILL BE REQUIRED ON THE PIEZOMETERS AT THE TREATMENT PLANT SITE. THEY ARE NOT GROUDED IN PLACE.

Dale L. Rowleson

NO SITE VISIT AUG 26, 1971 TO SEPT 14, 1971

WEDNESDAY, SEPTEMBER ⁵13, 1971, CLEAR WARM

STATE PERSONNEL (BARDEN WATSON & ART KELLEY) HAVE BEEN READING THE PIEZOMETERS AS REQUIRED. I WENT WITH THEM TODAY TO HELP INSPECT THE AREA. NO OUTBREAKS OF WATER WERE DISCOVERED. I WALKED FULION RUN & STATE HELPER WALKED CROOKER CREEK. AT TREATMENT PLANT SITE

THE WATER LEVEL WAS LESS THAN 1' FROM
GROUND SURFACE. NO FLOWING WATER WAS
FOUND NEAR THE PIEZ. - THERE WAS SOME
WATER STANDING NEARBY, BUT THERE HAD BEEN
RAIN THE DAY AND NIGHT BEFORE, AND ITS PROBABLY
PONDED RUNOFF.

Dale L. Rowleson