APPENDIX D

DAILY CONSTRUCTION DIARY

TUES DEC 29, 1970 J. POELLOT

WORK BEGAN AT THE FULTON RUN SHAFT A AND THE E4 BOREHOLES. ONLY A MINOR AMOUNT OF EXCAVATION HAD BEEN DONE AT THE FULTON A SHAFT.

A NEW ROAD WAS OPENED FROM BASH ROAD TO THE E4 BOREHOLES. THE CONTRACTOR COULD NOT GAIN ACCESS TO THE E4 BOREHOLES NOR THE CROOKED CREEK BOREHOLE DUE TO HIGH WATER IN CROOKED CREEK.

THE ONLY WORK DONE AT E4 WAS TRENCHING FROM THE CREEK TO THE BOREHOLES TO DRAIN THE SURROUNDING POND. A HIGH RATE OF FLOW IS OCCURRING FROM ALL THREE BOREHOLES.

THE APPARANT LOCATION OF THE CROOKED CREEK BOREHOLE WAS FOUND. A MORE THOROUGH INVESTIGATION WILL BE MADE AT A LATER DATE.

TUES JAN 5, 1971 COLD, CLEAR
25°-30°

R. ALMES (EDCE)
GEORGE MANBEL (DEPT OF MINES)
BARRETT WATSON (DEPT OF MINES)

WORK IS CONTINUING AT THE FULTON SHAFTS, EH BOREHOLES, CROOKED CREEK BOREHOLE AND CUMMINGS SHAFT. THIS IS THE FIRST SITE VISIT SINCE DEC 29, 1970.

PROGRESS OF CONSTRUCTION:

FULTON A - CONTRACTOR EXCAVATED AROUND CONCRETE SHAFT WALLS TO A DEPTH OF APPROXIMATELY 5 FEET. AWAITING BACKHOE TO COMPLETE EXCAVATION TO ROCK.

FULTON B - LOCATED SHAFT FROM INFORMATION PROVIDED BY LOCAL RESIDENTS. NO ONE KNOWS OF A THIRD SHAFT. SOME EXPLORATION WAS DONE OUTSIDE THE EASEMENT AREA. PROPERTY OWNER REQUESTED THE CONTRACTOR TO RESTORE THE AREA AS IT HAD EXISTED PRIOR TO EXCAVATING. THIS WAS AGREED TO BY THE CONTRACTOR. SHAFT WAS CONSTRUCTED OF TIMBERS WITH CONCRETE WALLS AT THE TOP, APPROXIMATELY 2 TO 3 FEET IN LENGTH. A TEST PIT WAS EXCAVATED AT THE INTERFACE OF THE IN SITU SOIL AND ROCK AND THE SHAFT WALLS. TOTAL DEPTH APPROXIMATELY 20 FEET. ROCK IS A VERY SOFT CLAYSTONE OR CLAY SHALE

SHAFT AREA APPEARS TO HAVE BEEN BACKFILLED WITH "RED-DOG". CONTRACTOR WILL EXCAVATE ENTIRE AREA TOMORROW IN PREPARATION FOR CONSTRUCTING CONCRETE SEAL.

E-Y BOREHOLES - CONTRACTOR HAS COMPLETED A DITCH FROM THE BOREHOLES TO CROOKED CREEK. TREES AND VEGETATION HAVE BEEN CLEARED IN PORTIONS OF THE BOREHOLE AREAS. CONTRACTOR PURCHASED AN EASEMENT TO THE E-Y BOREHOLES WITH HIS OWN FUNDS TO SIMPLIFY ACCESS TO THE SITE

CROOKED CREEK BOREHOLE - APPROXIMATE LOCATION IS KNOWN.. MOST OF THE AREA IS UNDER WATER.

CUMMINGS SHAFT - TREES AND VEGETATION IS BEING CLEARED AROUND THE SHAFT. CONTRACTOR WILL ATTEMPT TO DIVERT WATER IN SHAFT WITHOUT PUMPING (~~WATER~~ PUMPING COULD BE IMPRACTICAL.)

A MEETING WAS HELD BETWEEN THE FOLLOWING:

R. ALMES EDCF
T. BEAHR FETTERHOLF
G. MANDEL DEPT OF MINES
B. WATSON DEPT OF MINES

SOME ISSUES CONCERNING THE WORK WERE DISCUSSED.

1) THE CONTRACTOR MUST CROSS-SECTION ALL EXCAVATIONS TO DETERMINE QUANTITIES FOR PAYMENT.

2) ADD AND DEDUCT UNIT PRICES WERE NOT INCLUDED IN THE BID AND SINCE THE ESTIMATED QUANTITY COULD VARY, AN AGREEMENT BETWEEN THE STATE AND THE CONTRACTOR SHOULD BE MADE AS SOON AS POSSIBLE

3) A CHANGE ORDER OR A LETTER AUTHORIZING THE CONTRACTOR TO ADD STAINLESS STEEL PIPE AND VALVES AT THE E-# BOREHOLES AS SHOWN IN THE REVISED DWGS SHOULD BE ISSUED BY THE DEPT OF MINES.

THESE ITEMS WERE TO BE DISCUSSED WITH MR. ALEX MOLINSKI, DEPT OF MINES.

THURS JAN 7, 1971 CLEAR, VERY COLD 10°-15°

R. AUNES (NO SITE VISIT ON JAN 6, 1971)

MOST OF THE EXCAVATION WAS COMPLETED AT FULTON SHAFT B. THE SHAFT DIMENSIONS WERE MEASURED AS FOLLOWS:

12'6" x 24' (INSIDE DIMENSIONS) WHICH IS APPROXIMATELY THE SAME SIZE AS FULTON A. THEREFORE, THE CONTRACTOR WAS INSTRUCTED TO USE THE SAME CONCRETE SLAB SPECIFICATIONS INDICATED FOR FULTON B SHAFT.

THE CONTRACTOR WAS TOLD TO CONTRACT WITH A TESTING FIRM TO OBTAIN CONCRETE TEST CYLINDERS AND CONDUCT STRENGTH TESTS IN ACCORDANCE WITH THE SPECIFICATIONS. ALSO, WE WANTED TO REVIEW THE CONCRETE MIX DESIGN SUBMITTED BY THE CONCRETE SUPPLIER PRIOR TO PLACING ANY CONCRETE.

THE EXCAVATION FOR THE FULTON B SHAFT SHOULD BE COMPLETED BY TUES OF NEXT WEEK (JAN 12). FINAL GRADING AND TAMPING WILL NOT BE DONE UNTIL THE RE-STEEL AND CONCRETE IS READY FOR PLACEMENT SINCE PROTECTION AGAINST FREEZING OF THE SUBGRADE IS NECESSARY...

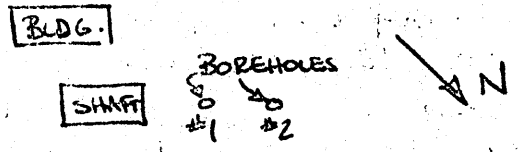
THE CROOKED CREEK BOREHOLE HAS BEEN LOCATED. A PORTION OF THE PIPE IS HORIZONTAL BUT CONNECTS TO THE 8" ϕ VERTICAL PIPE ~~SHAFT~~ BE

A 90° Elbow embedded in concrete. The pipe is cracked and water is present in the vertical pipe to a depth of about 2.5 feet from the surface (approx water EL at 1017). The contractor is arranging to have the borehole calipered to determine method of plugging...

FRIDAY, JAN 8, 1971. Overcast, cold 15-20°

J.H. POELLOT

Additional excavation at the Fulton B shaft uncovered 2 boreholes, approximately 8 inches in diameter, located as shown on the sketch:



The water level in #2 was measured to be about 36 feet below ground surface — approximate water surface elevation = 1015. This is essentially the same as elevation of boreholes at E4. Borehole #1 had a wooden plug in it so water level was not measured.

No further excavation at Fulton B is planned, except clean-up in the immediate shaft area prior to concrete placement.

Excavation at Fulton shaft A was begun. The backhoe was moved in midafternoon.

Calipering of borehole on Crooked Creek and holes at Fulton B is planned for Monday morning Jan. 11.

(PHOTOGRAPHS OF FULTON B EXCAVATION)

MONDAY, JAN. 11, 1971 CLEARING, WARMER 35°-40°

J.H. POELLOT

CROOKED CREEK BOREHOLE WAS CALIPERED, DEPTH 99 FEET; DIAMETER 8 INCHES (MINIMUM 7 INCHES). BOTTOM 40-50 FEET FAIRLY UNIFORM IN DIAMETER.

ONLY ONE BOREHOLE AT FULTON B COULD BE CALIPERED. HOLE NEAREST SHAFT HAS WOODEN PLUG IN IT — AN ATTEMPT TO REMOVE THE PLUG WILL BE MADE LATER. THE OTHER HOLE WAS 6½ INCHES IN DIAMETER AND 80 FEET DEEP (SHOULD CHECK MINE MAPS TO SEE IF THIS IS APPROX. MINE LEVEL.

EXCAVATION AT FULTON A IS IN PROGRESS. APPROXIMATELY 10 FEET BELOW G.S. THIS DATE.

AFTER CALIPERING AT CROOKED CREEK BOREHOLE WAS COMPLETED, FETTEROLF WAS PREPARING TO DIG DRAINAGE DITCH TO THE CREEK. A MR. PATTERSON CAME DOWN AND FORCED THEM TO LEAVE SAYING THEY WERE ON HIS PROPERTY. THIS IS NOT IN AGREEMENT WITH PROPERTY INFORMATION USED FOR OBTAINING EASEMENTS.

WITNESSING CALIPERING:

TED BEAHR
DON FETTEROLF } FETTEROLF COAL
GEORGE MANDEL - DEPT. OF MINES
J.H. POELLOT — EDCE

(PHOTOGRAPH OF CALIPERING)

Tuesday Jan. 12, 1971 Overcast with light winds
22° - 30°

Checked boreholes (2) located North of Fulton Air Shaft "B" for methane gas, with combustible gas indicator. Found no trace and good contractor OK to cut off casing.

Ask contractor to use base line cross-section method for determining volume of excavation for Fulton "B" shaft concrete cap, helping in cross section were:

Fetterolf Coal Engineer
Ted Beahr of Fetterolf Coal
George Mendel of Pa. Dept. of Mines
Lynn Crayne of D'Appolonia Engs.

Contractor continuing to excavate Fulton Shaft "A", water beginning to seep in from insitu shales in South-Eastern portion of excavation. Contractor pumping water out with accents pump.

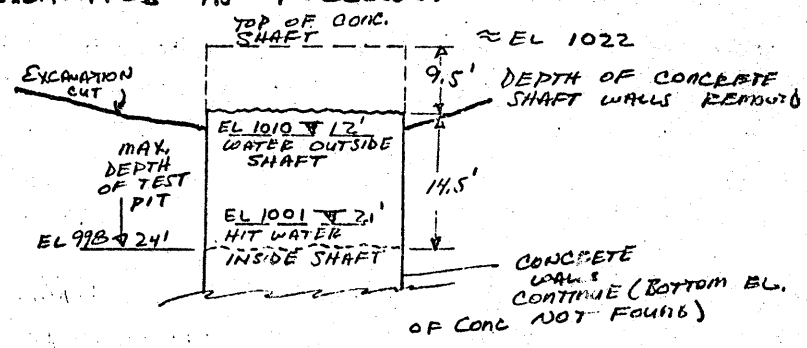
Equipment on site consists of one old International series 25 dozer and a Link-Belt backhoe

Lynn Crayne
1-12-71

WEDNESDAY JAN 13, 1971 — OVERCAST, FREEZING RAIN 20°-30°

R. Ames 8:30 am - 2:00 pm

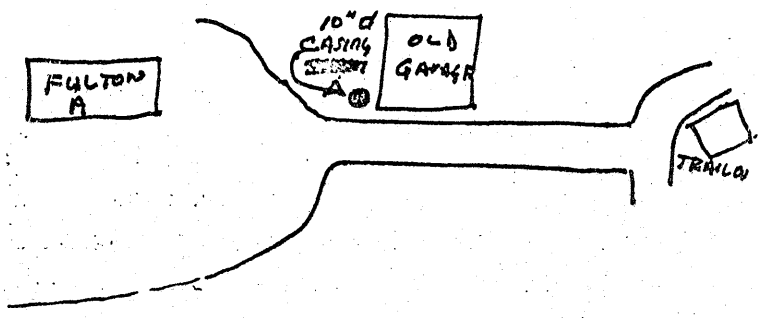
A TEST PIT INSIDE FULTON A WAS EXCAVATED AS FOLLOWS:



TIMBER TIES BOTH INSIDE AND OUTSIDE THE SHAFT WERE ENCOUNTERED. THE CONCRETE WALLS REMAIN AT 2 FEET IN THICKNESS AND ARE UNREINFORCED. WATER SAMPLES WERE OBTAINED FROM WITHIN THE SHAFT AND OUTSIDE THE SHAFT TO COMPARE QUALITY. A PH METER WILL BE TAKEN TO THE SITE TOMORROW. WILL ALSO SAMPLE FULTON RUN CREEK

SHAFT WALLS APPEAR TO SLOPE INTO THE SHAFT, I.E., A DECREASE IN SHAFT AREA WITH DEPTH IS OCCURRING..

A 10" ϕ CASING, FILLED WITH DEBRIS, WAS NOTED NEAR FULTON A SHAFT.



Contractor was instructed to excavate with small backhoe adjacent to casing to determine if further investigation is required...

Contractor will backfill Fulton A shaft and pour concrete seal on top of concrete shaft. Water elevation was rising with the shaft and backfill was placed immediately to restrict further flow. Apparently, the water in the shaft is either mine water from mine or trapped seepage from above which accumulated over several years.. There is no reason to believe that mine water is seeping from the shaft into the surrounding soils or vice versa.. Also, it could not be positively determined whether the concrete liner extends completely to the mine or stops at an elevation below 998 (Approximately 24 ft below ground surface)

Two boreholes at Fulton B are two pipes in one; 6"ø inside 8"ø.. Thus, entire length is probably cased. Borehole nearest shaft was cut off (casing that is!) but is still plugged with debris. Contractor will probably have to ream the hole before calipering will be possible.

Steel decking will not be required for either Fulton A or Fulton B shafts. Backfill in shafts is compacted sufficiently to resist weight of concrete seal.

Concrete Mix design was submitted by the supplier A.F. Moreau of Sons Inc. Indiana, Penna. Concrete cylinders and testing will be done by Moreau... Mix design is being reviewed by E.D.C.E. for approval.

Reinforcing steel mat is being fabricated by the contractor for Fulton B... Depending on weather, concrete placement may be done on Thurs or Fri Jan 17th.

Fulton A will be cross-sectioned Thurs or Fri..

Copies of latest revised drawings were given to Fettwolf with a set for Don Fettwolf.....

THURSDAY JAN 14, 1971

NO SITE VISIT TODAY...
CONTRACTOR INFORMED PGH OFFICE
THAT NO WORK WOULD BE DONE
DUE TO RAIN AND WET CONDITIONS

R. Acmer

FRIDAY JAN. 15, 1971

NO WORK DONE DUE TO WET CONDITIONS. CONTRACTOR WILL PREPARE FULTON B ON MONDAY FOR CONCRETE PLACEMENT ON TUESDAY. FULTON A WILL BE PREPARED WEDNESDAY FOR CONCRETING ON THURSDAY.

CONTRACTOR WILL CROSS-SECTION FULTON A EXCAVATION ON MONDAY.

J H Poellot

MONDAY JAN. 18, 1971 OVERCAST, VERY COLD
LIGHT SNOW, 5°-10°

Fulton A shaft excavation was cross-sectioned by Contractors survey party. Due to water in bottom of excavation, volume below waterline was approximated. Excavation inside shaft has already been backfilled, so volume equal to area of shaft times depth of 12 feet must be added to measured volume.

Fulton B shaft excavation was prepared for concrete. Two-foot wide strip outside shaft was tamped with Wacker. Soft spots were filled with clay and tamped. Hay was placed over the prepared surface to prevent freezing of the subbase. Hay placed Friday had prevented freezing over weekend.

Reinforcing steel mat was to be delivered to site in afternoon. Final placement of steel and placing of concrete will be done Tuesday, Jan 19.

Contractor informed that PVC pipe cannot be used in place of stainless steel at Cummings shaft. Contractor is to obtain technical data on the spiral riveted pipe he wants to use between E1 and E2 in place of the spiral welded.

J.H. Bellot

TUESDAY JAN. 19, 1971

INCREASING CLOUDS
VERY COLD, -5° to +5°

Reinforcing steel placed. Subgrade not frozen. Covered by hay and plastic overnight. Salamander heaters in hole melted snow on subgrade. Based on observation of subgrade, approval was given to place concrete.

Twenty yards (20 cu.yd.) of concrete was placed according to delivery tickets. Surface was rough finished with rake. Immediately upon completion of placing, concrete was covered with plastic and hay.

Four cylinders were taken by Moreau and stored on the slab for curing under identical conditions. These will be tested at seven and twenty eight days.

Concrete supplied by A.F. Moreau and Sons. Concrete placed by A.J. Spory, General Contractor, Boswell, Pa., assisted by Fetterolf.

JH Poelnot

WEDNESDAY, JAN. 20, 1971 SNOW FLURRIES 20°

No site visit. Phone call from Contractor indicated Fulton A shaft was being readied for concrete placement on Friday, if the weather warms up as forecast.

Inspection by Contractor this morning showed condensed moisture on underside of plastic cover over Fulton B concrete not frozen. Concrete should be OK.

Contractor is meeting with Pennsylvania Drilling on Saturday to discuss alternate borehole packers.

JHBenot

Phone call to Molinski in Ebensburg — They will prepare change order as soon as revised drawings received.

JHP

Thursday Ted Bahr related that Chief Engineer from R&P Coal had visited site and was upset that construction was underway. Told Ted that Dept. of Mines had no easement for construction. He telephoned A.E. Molinski about it, but Ted didn't know what was said. Molinski told Ted to call him if any problems with R&P developed.

THURSDAY, JAN. 21, 1971 Cloudy, cold 20°-25°

The hay and plastic cover was removed from the slab at Fulton B. Both the concrete and water standing on the concrete were warm to the touch. Backfilling over the slab was begun, with Dave Troxell supervising.

Fulton A shaft was formed, steel delivered, and preparations made for concrete placement on Friday. Weather is to be warmer, so freezing will be less of a problem.

From Troxell field notes:

Backhoe cleaned faces of northwest half of excavation. Clay was excavated from pit east of shaft and placed over northwest half of slab. Lifts were approximately 8" thick and compacted with Wacker. Special attention was given to edges of excavation. About 3' of clay was thus placed. Fill was placed in 1' to 1½' lifts above the clay and compacted with hoe bucket. Fill was raised to level permitting backhoe to move out on it and operate (counterweight clearance of excavation wall was governing). Remainder of excavation walls cleaned and filling over second half of slab began. Water seeping from southeast wall of excavation was problem and sump pump was used. Fill was placed as to cause water to flow toward northeast

corner of excavation.

Water in the excavation was a problem and the first lift was very wet. This should not be serious in terms of the effectiveness of the seal, however, since strength is not a concern.

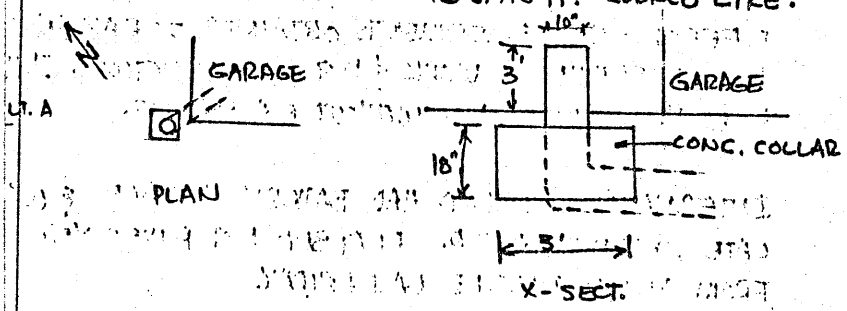
J.A. Pochlot

FRIDAY, JAN. 22, 1971 SUNNY, 30°-35°

FULTON B - CLAY BACKFILLING CONTINUED & FINISHED BY 2:00 p. CHECKED EDGES & LOOKED OK. STARTED RANDOM BACKFILL

FULTON A. - CLEANED SNOW & DIRT OFF TOP OF SHAFT W/ COMPRESSED AIR. PLACED REINFORCING MAT (WELDED, NOT TIED - TOOK PIC) & CALLED FOR 23 YARDS CONC. POURED FROM NOON TILL TWO pm. CARE TAKEN TO VIBRATE CONCRETE UNDER REINFORCING ESP AT EDGES TO BOND TO SHAFT. 4 CYLINDERS TAKEN FROM TRUCK #1 (3 LAYERS, 21 STROKES EA.) SLAB COVERED W/ PLASTIC, STRAW, PLASTIC FOR CORING)

USED SMALL BACK HOE TO INVESTIGATE 10" ϕ CASING LOCATED BY ALMES 13 JAN 71. LOOKED LIKE:



DROVE TO CUMMINS SHAFT & LOOKED AT WORK TO BE DONE THERE - LOOKED AT E3 & E3. TED BEAHR ASKED IF CONCRETE BLOCK HEAD WALL AT E3 WOULD BE ACCEPTABLE. WILL CHECK W/ DICK ALMES.

DUG TRENCH NEAR FULTON A TO FIND CLAY BACKFILL & FOUND A SEAM OF IT NEAR THE SHAFT, ON EAST SIDE.

Dale L. Rowlison

MONDAY JAN 25, 1970 CLOUDY, COOL 35-40°

FULTON B - CONTINUED RANDOM BACKFILL W/TD25 & LINKBELT - NEARLY FINISHED THERE EX FOR GRADING. LEFT THE TWO SHAFTS EXPOSED.

FULTON A - CONTRACTOR UNCOVERED 1/2 OF SLAB & STARTED TO BACKFILL W/CLAY USING SMALL BACKHOE & WHACKER. COVERED TO 2 1/2 FT. CLAY IS WET & QUITE PLASTIC WHEN TAMPED W/ WACKER. (BEHAVES LIKE JELLO.) COMPACTED BY RUNNING TRACTOR OVER & WACKING.

FRED BEAHR MENTIONED THAT HE GOT A COPY OF A LETTER TO THE BUREAU OF MINES TO THE EFFECT THAT EASEMENTS OBTAINED SO FAR WERE FOR PRELIMINARY WORK & NOT CONSTRUCTION. THEREFOR HE IS WORKING WITHOUT EASEMENT.

INTERNATIONAL PICKUP HAD BATERY TROUBLE & WAS LATE GETTING STARTED. FLATBED NOT FIXED YET FROM BLOWN ENGINE LAST FRIDAY.

Dale L Rowlison

TUESDAY JAN 26, 1970 CLOUDY, COOL 25°
SNOW FLURRIES

FULTON B - FINISHED BACKFILL & GRADING OVER SHAFT - LEFT THE TWO CASINGS EXPOSED. THEY WILL TRY TO PULL THEM THIS AFTERNOON.

FULTON A - FINISHED CLAY BACKFILL OVER SLAB TO 3' DEPTH. CLAY STILL VERY WET & DIFFICULT TO COMPACT IN PLACE. APPEARS IMPEMEABLE HOWEVER.

WENT TO MOREAU FOR CONCRETE CYLINDER TESTS

#1 FAILED AT 123,000# 4350psi
#2 " " 126,500# 4474psi

THIS IS SEVEN DAY TEST ON FULTON B SLAB.

I ASKED ~~FRED~~ TED BEAHR TO MEASURE TIES TO THE SLAB CENTER FROM TWO LARGE TREES ADJACENT TO FULTON A. HE WILL BLAZE THE TREES & MARK THEM, SO A PERMANENT TIE CAN BE MADE LATER

Dale L. Rowlison

WEDNESDAY JAN 27, 1971
to
FRIDAY JAN 29, 1971

NO VISIT TO SITE. WEATHER COLD, SNOW, WIND
CONTRACTOR CONTINUED BACKFILLING AT FULTON
A & COMPLETED IT.

AN ATTEMPT WAS MADE TO PULL THE CASINGS
NEAR FULTON B, BUT HAD NO SUCCESS.

THE EQUIPMENT IS BEING MOVED TO
CUMMINS SHAFT NEXT.

Dale Rowlison

MONDAY FEB 1, 1971 CLEAR, CALM, COLD ~5°

SITE VISIT W/ DICK ALMES - INSPECTED FULTON A & B AREAS - BACKFILL COMPLETE BUT ROUGH.

MET WITH TED BEAHR - RECIEVED FROM HIM PAY ESTIMATE Nº 2 (WORKING COPIES) TO EXAMINE & CHECK QUANTITIES. TO EXPEDITE THE CHECKING WE ASKED FOR THE LAST ESTIMATE AND THE COMPUTATION SHEETS FOR EXCAVATION QUANTITIES. TED DIDN'T HAVE THEM, BUT WILL PICK THEM UP TONIGHT FOR US TO HAVE IN THE MORNING

TUESDAY FEB 2, 1971 CLEAR, COLD, CALM
~5°

DROVE TO SITE TO PICK UP PAY EST #1 &
QUANTITY CALC. FOR EXCAVATION

CONTRACTOR FINISHING EQUIPMENT MOVING TO
CUMMING.

HE HAD RECIEVED THE PIPE TO BE USED
FOR A STAND PIPE AT E4 AND WAS GOING
TO TRY TO INSTALL IT IN THE AFTERNOON.

Dale Rowlison

WEDNESDAY, FEB 3, [illegible]

NO SITE VISIT – WORK IS STILL ON MOVING TO COMMINGS SHAFT & STARTING EXCAVATION

DICK ALMES, LOU MELLINGER & I MET WITH TED BEAHR, DON FETTEROLF, MYRON FETTEROLF & DANNY MILLER (PENNA DRILLING) & DISCUSSED METHODS OF GROUTING BOREHOLES & SETTING PACKERS. MR. MILLER CAN FABRICATE A PACKER FOR ABOUT 1/3 THE COST OF COMMERCIAL PACKERS. ALSO DISCUSSED WAS THE USE OF A WOODEN PLUG FOR A PACKER, IF THE MINE FLOW WAS SHUT OFF. ALL OF THESE IDEAS WILL BE CONSIDERED FOR USE, PARTICULARLY AT E-4.

DRAFT OF PROGRESS REPT #1 DRAFTED.

Dale L Rawlison

THURSDAY FEB 4, 1971 CLOUDY, COLD, RAIN

~25°

CONTRACTOR IS WORKING AT CUMMINGS SHAFT AREA. USING THE LINK BELT BACKHOE, THE DITCH FROM THE SHAFT TO THE CREEK WAS WIDENED AND DEEPENED TO DEWATER THE SHAFT. THE WATER LEVEL WAS DOWN ABOUT 24" IN THE SHAFT. FURTHER REDUCTION IN THE WATER LEVEL WILL BE DONE BY THE SAME METHOD UNTIL THE LEVEL IS BELOW THE WORKING LEVEL OF THE BOTTOM OF THE WALL ADDITION. THE CONTRACTOR ESTIMATES THIS SHOULD BE DONE BY NEXT MONDAY.

OTHER WORK IN THE AREA CONSISTED OF CLEANING UP THE AREA AROUND THE SHAFT IN PREPARATION FOR THE EXCAVATION NEXT WEEK.

Dale L Rue

FRIDAY, FEB 5, 1971 , CLOUDY, COOL
30°

NO SITE VISIT TODAY. THE CONTRACTOR CONTINUED TO DRAW DOWN THE WATER LEVEL IN THE CUMMINS SHAFT AND BEGAN EXCAVATING AROUND THE SHAFT. SNOW FENCE IS BEING PUT UP TO PROTECT THE EXCAVATION FROM UNAUTHORIZED VISITORS.

I RECIEVED A CALL FROM GEO. MANDEL & ALEX MOLINSKI CONCERNING THE ESTIMATE SIGNED WEDNESDAY (CALL REC'D THURS EVE) THE CONCERN WAS FOR LARGE AMOUNT THE CLAIMED YARDAGE WAS OVER THE ESTIMATES FOR BID. I RELAYED THAT THE FIGURES SUBMITTED WERE ESTIMATES, AND WE'D NOT HAD THE OPPORTUNITY TO CHECK FETTEROLFS CALCS. EXACT QUANTITIES WOULD COME WHEN THE CALCS WERE CHECKED & AGREED UPON. BECAUSE THE FULTON SHAFTS WERE COMPLETED ITEMS, THE STATE WANTS THE EXACT QUANTITIES (MR. MOLINSKI'S interpretation).

THE BULK OF TODAY (5TH) WAS SPENT VERIFYING THE EXCAVATION QUANTITIES. WE RECIEVED FETTEROLFS CALC'S AND UPON CHECKING THEM, FOUND THAT THEIR SURVEYOR, "GREM", HAD MEASURED THE WRONG AREA FOR THE CROSS-SECTIONS. OUR REVISED AREAS FOR THE EXCAVATION AT FULTON A & B GAVE THE QUANTITIES:

FULTON A: 1699 yd^3
FULTON B: 2221 yd^3

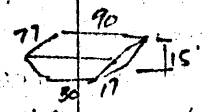
THESE QUANTITIES WERE RELAYED TO THE STATE PEOPLE AND I ARRANGED TO MEET FETTEROLF MONDAY TO FINALIZE THE QUANTITIES.

Dale L. Rowlison

MONDAY, FEB 8, 1971 CLOUDY, COOL, LIGHT SNOW IN AFTERNOON 30°

I MET DON FETTEROLF, TED BEAHR, "GREM", AND GEORGE MANDEL AT THE TRAILER IN THE FULTON SHAFT AREA.

I DISCUSSED BRIEFLY THE MISTAKE "GREM" HAD MADE IN COMPUTING QUANTITIES. IT WAS AGREED THAT HE HAD MEASURED BELOW THE CUT SURFACE AND SHOULD HAVE MEASURED ABOVE. UPON EXAMINATION OF THE CROSS-SECTIONS IT WAS DECIDED, WITH INFORMATION FROM MR BEAHR & MR MANDEL THAT THE ORIGINAL GROUND SURFACES I'D ASSUMED WERE LOW. (EG. MAX CUT AT FULTON A ON THE CROSS SECTIONS WAS 7' WHILE 9.5' WAS TAKEN OF THE SHAFT, THE SHAFT TOP BEING AT ORIGINAL GROUND SURFACE) ACCORDINGLY, MR. MANDEL SUGGESTED WE USE A PRISM WITH A 17'X30' TOP & A CUT OF 15' W/2:1 SIDE SLOPES. HIS FIGURES SHOWED 2100 yd³ AND HE SAID THAT WOULD SATISFY THE STATE. I VERIFIED THE CALCULATION BY AVE END AREA



$$\frac{(90\times77)+(17\times30)}{2}\times\frac{15}{27}=2067\ yd^3$$

THE GROUND SURFACE I'D ASSUMED FOR FULTON B SLOPES THE WRONG WAY (AWAY FROM THE CREEK INSTEAD OF TOWARD.) THEY HADN'T RUN CROSS-SECTIONS ALL THE WAY ACROSS, SO THE PLOTTED CROSS-SECTIONS WERE MIS-LEADING. WE RAISED THE ASSUMED ORIGINAL GROUND SURFACE AND CALCULATE A VOLUME FOR FULTON B OF APPROX. 2600 yd³. SEE CALC SHEET IN BACK.

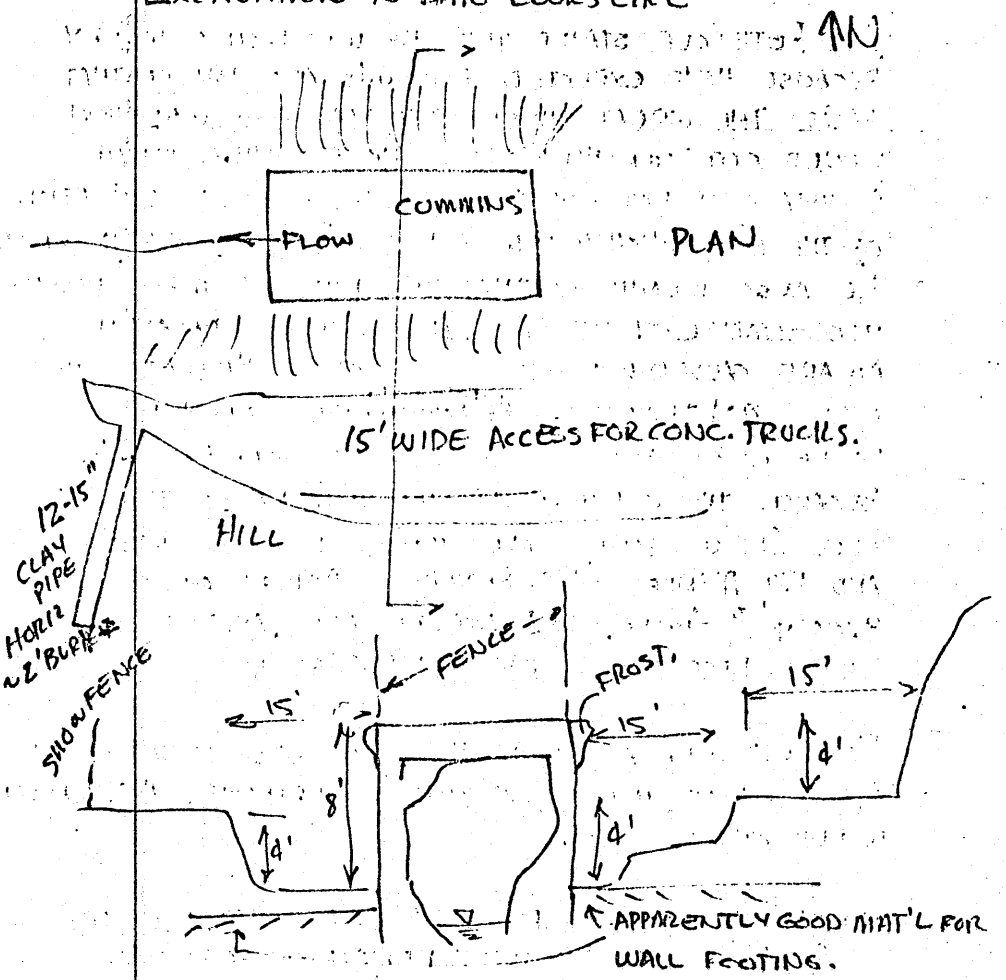
MR FETTEROLF STATED THAT HE WAS LOSING MONEY BECAUSE HE'D EXPECTED 3600 yds AND BID ON THAT BASIS. THE GREAT AMOUNT THE YARDAGE WAS SHORT WOULD CUT DOWN HIS PROFIT. HE ADMITTED MAKING A MISTAKE IN NOT COMPLETING THE ADD/DEDUCT PORTION OF THE BID, WHICH WOULD HAVE COVERED THIS CONTINGENCY. HE ALSO MENTIONED THAT THE BID WAS MADE ASSUMING SUMMER CONSTRUCTION, AN SINCE THE DELAY IN AWARD CAUSED WINTER CONSTRUCTION, HE WAS LOSING MONEY ON THAT TOO. HE FETTEROLF, SUGGESTED SPLITTING THE DIFFERENCE BETWEEN 2600 & 3600 OR 3200 yds. BECAUSE THE ORIGINAL PROFILE ISN'T KNOWN THAT WELL (IE WE DONT REALLY KNOW IF 2600 IS RIGHT) AND MR MANDEL & MR. FETTEROLF AGREED ON THE 3200 yds figure. I AGREED ALSO, AS A COMPROMISE, BUT NOT NECESSARILY AS THE YARDAGE MOVED.

MR FETTEROLF ASKED IF HE COULD SUBMIT ADD/DEDUCT PRICES NOW, IN LIGHT OF THIS EXPERIENCE. MR. MANDEL WOULD CHECK ON IT.

THE BACKFILL FOR FULTON B WAS CHANGED TO 100%, BECAUSE THE WORK REMAINING COMES AS BORE HOLE WORK, EXPLORATORY, & PLUGGING.

AT CUMMINS, THE EXCAVATION AROUND THE SHAFT WAS DOWN TO 8' ON BOTH LONG DIRECTIONS. NOTHING EXCAVATED IN THE SHORT DIRECTION. THE WATER LEVEL WAS DOWN ~5'. TED BEAHR & I DISCUSSED WAYS OF CLOSING THE FRONT WALL. A TEMPORARY PIPE TO PASS THE FLOW WAS SUGGESTED, TO BE GROUTED LATER. I'LL CHECK TO SEE IF THERE'S ANY OBJECTION.

EXCAVATION TO DATE LOOKS LIKE



ALL DISTANCES ARE APPROX "EYEBALL" MEASUREMENTS. WHEN FINISHED EXCAVATING, IT WILL BE CROSS, SECTIONED.

TO REMOVE FROST, CONTRACTOR ASKED TO REMOVE FENCE ON TOP. IT WAS AGREED, AS LONG AS SOME PROTECTION WAS MAINTAINED, EITHER A FENCE AROUND THE EXCAVATION AREA, OR THE VERTICAL SHAFT WALLS. THE OUTLET FOR WATER WOULD HAVE A FENCE ACROSS IT.

Dale L Rowlison

TUESDAY, FEB 9, 1971 CLEAR, COLD, MUCH SNOW OVERNIGHT 12°

TED CALLED @ 8:00 am - no work today because OF HEAVY SNOW OVERNIGHT ~ 10". ROADS ARE BAD - NO PLOWING ONLY SALTING.

Dale L. Rowlison

WEDNESDAY, FEB 10, 1971 CLOUDY, COLD 16°

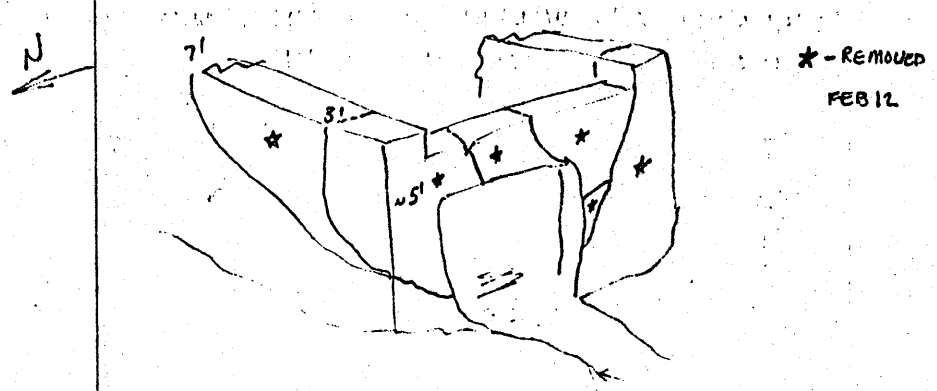
NO SITE VISIT: CONTRACTOR GOT TO SITE IN AFTERNOON AND WORKED ON GETTING SNOW OUT OF THE WAY & PREP. WORK ON COMMINGS.

Dale L. Rowlison

THURSDAY, FEB 11, 1971 CLOUDY, COOL
30°

AT CUMMINGS, THE CONTRACTOR HAD REMOVED THE PROTECTIVE FENCE FROM THE TOP OF THE SHAFT. EXCAVATION AROUND THE SHAFT IS 7.5' OR MORE, SO FENCE IS NOT REQUIRED. EXCAVATED AREAS ARE PROTECTED W/ SNOW FENCE. THE ENTRANCE TO THE SHAFT, WHERE THE WATER ISSUES, IS ALSO SNOW-FENCED.

THE CONCRETE OF THE SHAFT IS QUITE BADLY CRACKED, BOTH FRONT & SIDE. (PHOTO'S TAKEN)

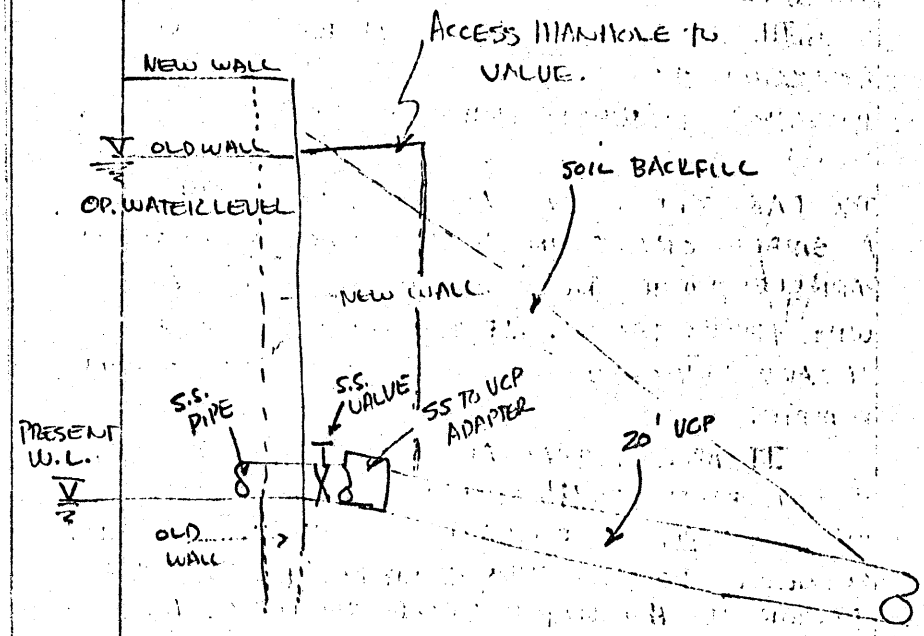


REMOVING THE FRONT PIECES, AS CALLED FOR, WILL PROBABLY ENDANGER THE SIDEWALL. IT MAY BE NECESSARY TO REMOVE AND REPLACE ALL CONCRETE CRACKED OFF. A ROUGH ESTIMATE IS 3 TO 4 YARDS ABOVE THE BID ESTIMATE.

THE HOLES FOR THE DOWEL RODS WERE DRILLED TODAY, SOME ON LESS THAN 4' CENTERS, TO AVOID BAD PLACES IN CONCRETE.

THE SOIL AT 9' DEEP ALONG THE SOUTH SIDE OF THE SHAFT IS A SILT WITH ROCK FRAGMENTS. WE WILL DIG A TEST PIT THERE TO SEE IF A MORE SUITABLE MATERIAL IS AVAILABLE NEAR THIS LOCATION.

ANOTHER THOUGHT ON PLACING THE FRONT WALL



ADVANTAGES:
1. LOWER VALVE PLACEMENT IS EASIER FOR CONSTRUCTION
2. PROTECTION FROM FREEZING.
3. NO HOUSE TO ATTRACT VANDALS, HUNTERS, ETC.
4. UCP IS ACID RESISTANT & RELATIVELY CHEAP. (ALSO PERMANENT.)
5. UCP EASILY JOINED & PLACED.

THE WATER WAS PUMPED FROM THE HOLE FOR FULTON B BOREHOLES, TODAY.

Dale L. Rawlson