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STATE OF UTAH
DEPARTMENT OF HEALTH

NORMAN H. BANGERTER, GOVERNOR

SUZANNE DANDOY, M.D., M.P.H., EXECUTIVE DIRECTOR

August 27, 1985
533-6146

RECEIVED
AUG 29 1985
DIVISION OF OIL
GAS & MINING

Ms. Pamela Grubaugh - Liettig
Reclamation Engineer
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Pam:

In response to your letter of June 24, and with regard to the draft MOU between DOGM and DEH the following questions remain unresolved:

1. The scope of DOGM required reclamation bonding in the case of solution mines remains undefined. As you are aware, vertical shafts are classified by the UIC regulations as injection wells. In the case of vertical shafts and wells utilized in solution mining projects, will DOGM require reclamation bonding for the shafts only, wells, or both?
2. Due to the nature of the drilling industry, published average price indices for services are not available. This will require that any reclamation bond amount be reviewed annually by contacting individual drilling service companies for price quotes for the reclamation of both shafts and wells used in UIC projects. With this data current average industry prices can be determined and compared to the bond amount. If necessary, the bond amount can be adjusted at that point. It is my understanding that this method of reclamation bond review is not standard operating procedure in the mine reclamation program at DOGM. Is your agency willing to commit to such a labor intensive review process?
3. At present only one conventional mine in Utah has been converted to solution mining. If DOGM's interests are only with regard to mine shafts, will future conversions of conventional mines to solution mines warrant the effort necessary to establish a MOU?

Once these points are resolved we should be able to come to a logical decision about the need and terms of a DOGM - DEH Memorandum of Understanding for UIC Class III solution mining activities.

KENNETH L. ALKEMA, DIRECTOR • DIVISION OF ENVIRONMENTAL HEALTH

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For your information and review I have enclosed a copy of data provided by Texasgulf Chemicals Company on the methods and estimated costs for the reclamation of the the two vertical shafts used in their potash solution mining project near Moab.

If you have questions or comments I can be reached at 533-6146.

Sincerely,

Loren B. Morton

Loren B. Morton
UIC Geologist
Bureau of Water Pollution Control

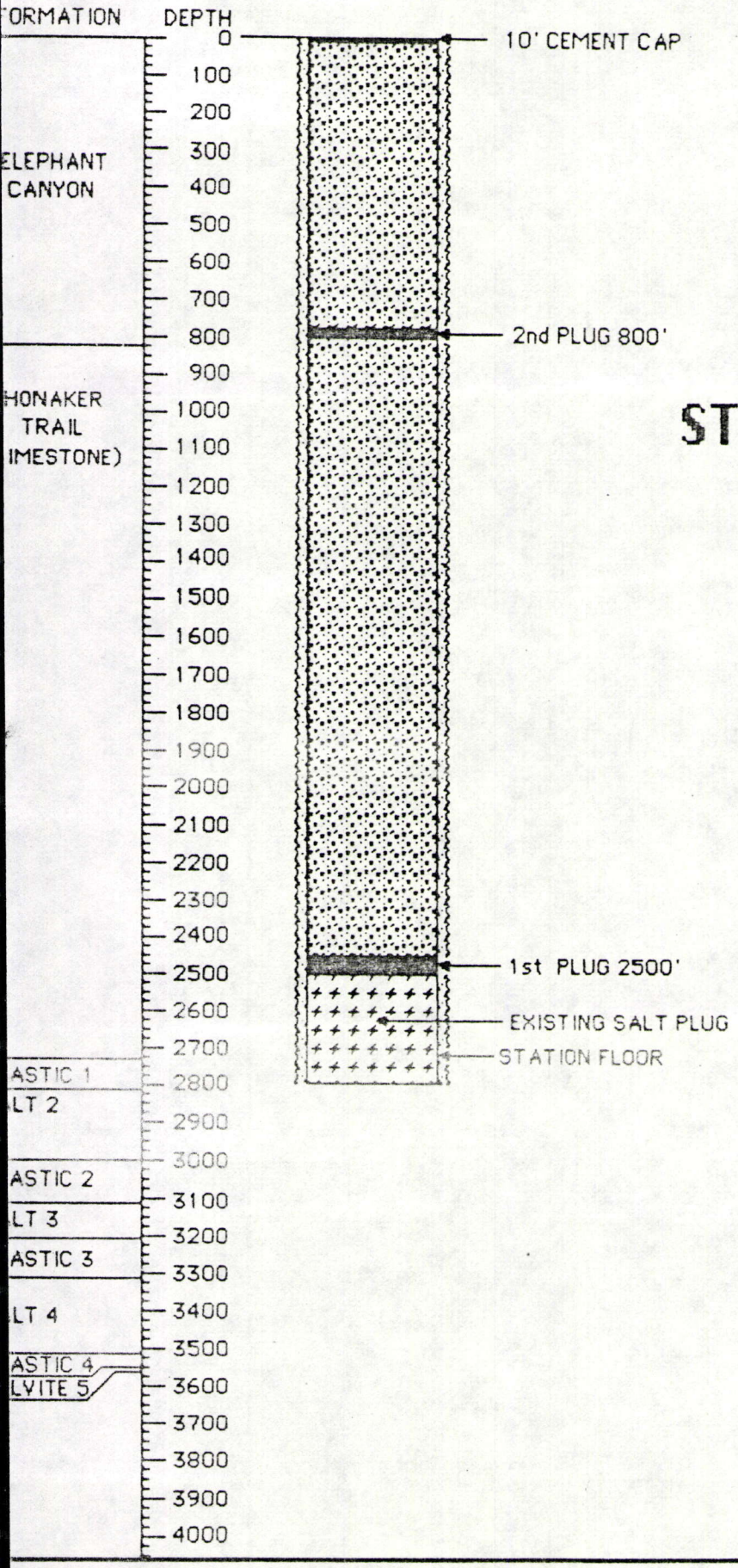
Enclosure
pa
471

COST ESTIMATE FOR PLUGGING #1 SHAFT

PLUG #1 SHAFT

WASH OUT SALT (30 DAYS) — what salt, diagram shows a salt plug will exist below 1st plug	
RIG TO INSTALL PIPE 3 DAYS	$5,116.00
2500' 8" PIPE RENTAL AT $.12 / DAY/ FT	$9,000.00
SETUP PUMPING SYSTEM (EXISTING PUMPS)	$5,000.00
PUMPING COSTS 250HP	$7,000.00
RIG TO REMOVE 8" PIPE 3 DAYS	$2,880.00
	$28,996.00
INSTALL FIRST PLUG AT 2500' (4 DAYS)	
RIG COSTS FOR TUBING	$5,236.00
DRILL PIPE RENTAL 2500' $.08 / FT/ DAY	$800.00
PLUG 22' X 50' 16200 SACKS AT 5.95 / SACK	$96,390.00
CEMENT PUMPING COSTS 4 DAYS	$7,582.00
	$110,008.00
GRAVEL FILL BETWEEN FIRST AND SECOND PLUG	
22' DIA X 1650' = 23230 CU YDS @ 2.50 / YD	$58,075.00
INSTALL SECOND PLUG AT 800'	
RIG COSTS	$3,807.00
DRILL PIPE RENTAL	$123.00
PLUG 22' X 25' 8100 SACKS AT 5.95 / SACK	$48,195.00
CEMENT PUMPING COSTS 2 DAYS	$4,242.00
	$56,367.00
GRAVEL FILL ABOVE SECOND PLUG	
22' DIA X 800' = 11263 CU YDS @ 2.50 / YD	$28,157.00
TOTAL COST	$281,603.00

SHAFT ABANDONMENT PLAN



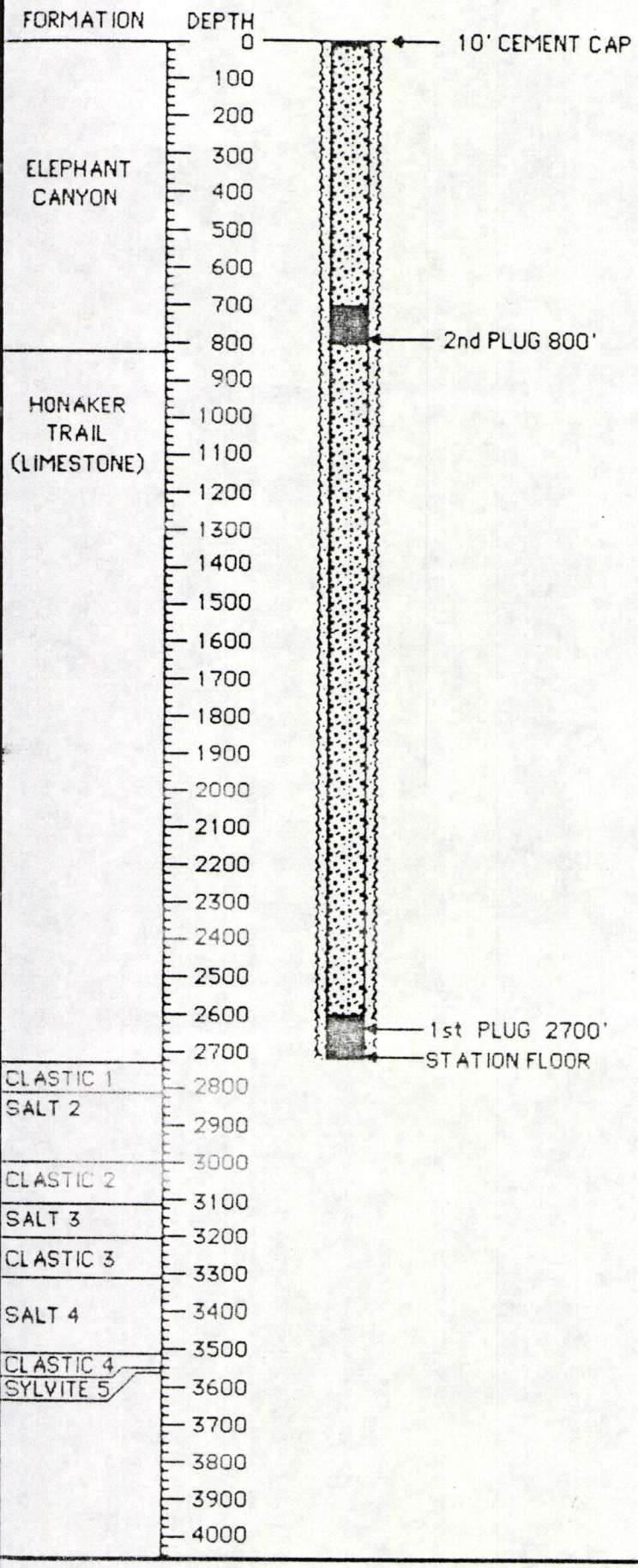
#1 SHAFT
LOCATION
2,526,389 E
680,532 N
ELEV.
SURFACE 4032'
STATION FLOOR 1310'
BOTTOM 1236'

COST ESTIMATE FOR #2 SHAFT

PLUG #2 SHAFT

INSTALL FIRST PLUG AT 2500'	
RIG COSTS FOR TUBING	$2,498.00
DRILL PIPE RENTAL 2500' $.08 / FT/ DAY	$200.00
PLUG 4' X 100' 1065 SACKS AT 5.95 / SACK	$6,337.00
CEMENT PUMPING COSTS 1 DAYS	$2,572.00
	$11,607.00
GRAVEL FILL BETWEEN FIRST AND SECOND PLUG	
4' DIA X 1800' = 837 CU YDS @ 2.50 / YD	$2,093.00
INSTALL SECOND PLUG AT 800'	
RIG COSTS	$2,498.00
DRILL PIPE RENTAL	$62.00
PLUG 4' X 100' 1065 SACKS AT 5.95 / SACK	$6,337.00
CEMENT PUMPING COSTS 2 DAYS	$2,572.00
	$11,469.00
GRAVEL FILL ABOVE SECOND PLUG	
4' DIA X 800' = 372 CU YDS @ 2.50 / YD	$930.00
TOTAL COST	$26,099.00

SHAFT ABANDONMENT PLAN



#2 SHAFT
LOCATION
2,526,752 E
680,717 N
ELEV.
SURFACE 4018'
STATION FLOOR 1318'
BOTTOM 1308'