



Reply to 2880 Geologic Services and Resources

Date November 14, 1984

Subject Material Sites for Maple Canyon Road

FY-84

To William H. Boley, Forest Engineer

On July 5 and 6, Eric Jones, Physical Science Technician, under the supervision of Irene Savanyo-Lemley, Staff Geologist, conducted an on-the-ground investigation of borrow and riprap sources to be used for the reconstruction of the Maple Canyon Road (50066) in the San Pitch Division at the request of Brent Barney, Pre-Construction Engineer. The project would require 3,000 cubic yards of borrow and 4,000 cubic yards of riprap. The riprap needed for the project must be at least 24 inches in length with the width and thickness not less than one-third of the length.

Areas investigated include four sites previously identified in the Materials Inventory of Sanpete and Sevier Counties, published by the Utah State Department of Highways. Site test results from that publication have been included in this report (Appendices 1, 2). Site identification numbers have also been taken from that publication.

On the morning of July 5, Eric Jones was accompanied by Craig Knoell, Maple Canyon Project Engineer. The two potential borrow sites investigated are summarized below.

20014 This site is no longer an operating pit. The site has become overgrown with vegetation and is currently housing beehives. The present owner of the pit is B. Bailey (Map 1). Reopening of this site would not be feasible.

20015 This site contains an estimated 3,000 cubic yards of borrow. Possibly more volume can be obtained once extraction begins. This site is approximately 1.3 miles from the mouth of Maple Canyon and presently owned by C. Christensen (Map 1).

Later that day, Eric Jones hiked along the roadway from the mouth of Maple Canyon to Dutchman Flat. One potential riprap source, Site 1-27, was investigated.

Site 1-27 This site is located in the stream channel of Maple Canyon Creek (Map 1). There is at least 5,000 cubic yards of silica cemented, subrounded to rounded sandstone boulders in the alluvial channel from the mouth of the canyon to approximately 1.3 miles west of the mouth. The boulders range in size from two to five feet in diameter. The larger



boulders will need to be crushed to attain the size and angularity necessary to hold them in place.

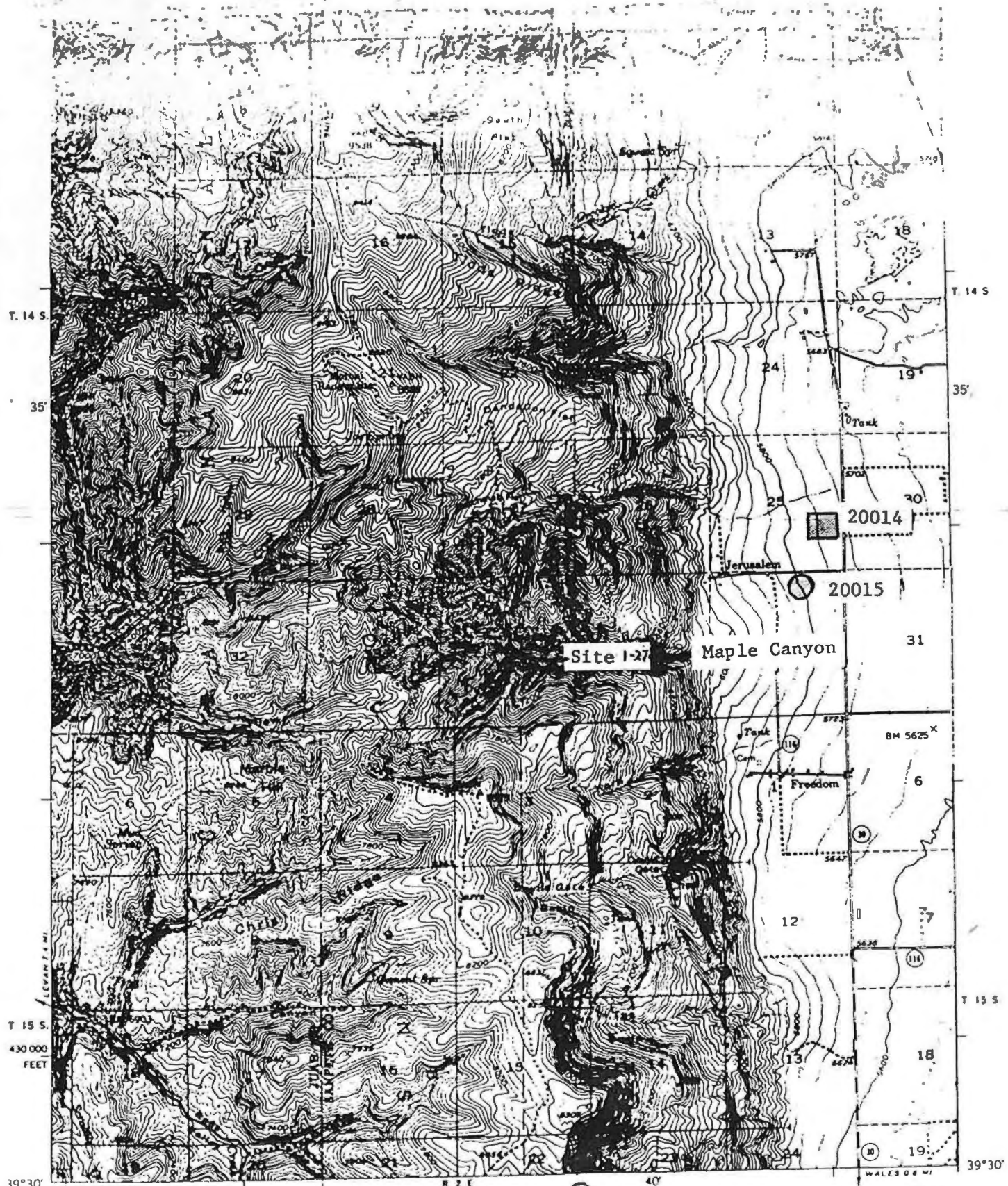
The following day two potential riprap sources were investigated. These sites are summarized below.

- 20011 This site has been recently worked. There is an estimated 500 cubic yards of sandstone and limestone riprap material. Many of the boulders are much larger than desirable and would need to be crushed. This site is 13 miles from the mouth of Maple Canyon and is owned by K. and N. Jorgensen (Map 2).
- 20033 This site is not developed. There is at least an estimated 5,000 cubic yards of in-place limestone. This site is approximately 15 miles away from the mouth of Maple Canyon and is owned by G. Hanson (Map 3).

Sufficient amounts of borrow are available at Pit 20015 for construction purposes in Maple Canyon. Site 1-27 contains ample amounts of riprap source material. The silica cement of the sandstone would make the rock very resistant to chemical weathering and mechanical abrasion. The distance of pits 20011 and 20033 from Maple Canyon would be a deterrent to the use of these sites as riprap sources.

Irene Savanyo-Lemley

IRENE SAVANYO-LEMLEY
Staff Geologist



39°30' 111°45'

Mapped, edited, and published by the Geological Survey
 Control by USGS, USC&GS, and USFS

Topography from aerial photographs by multiplex methods
 Aerial photographs taken 1947 Field check 1951

Polyconic projection 1927 North American datum
 10,000 foot grid based on Utah coordinate system, central zone

Red tint indicates area in which only landmark buildings are shown
 Dashed land lines indicate approximate locations

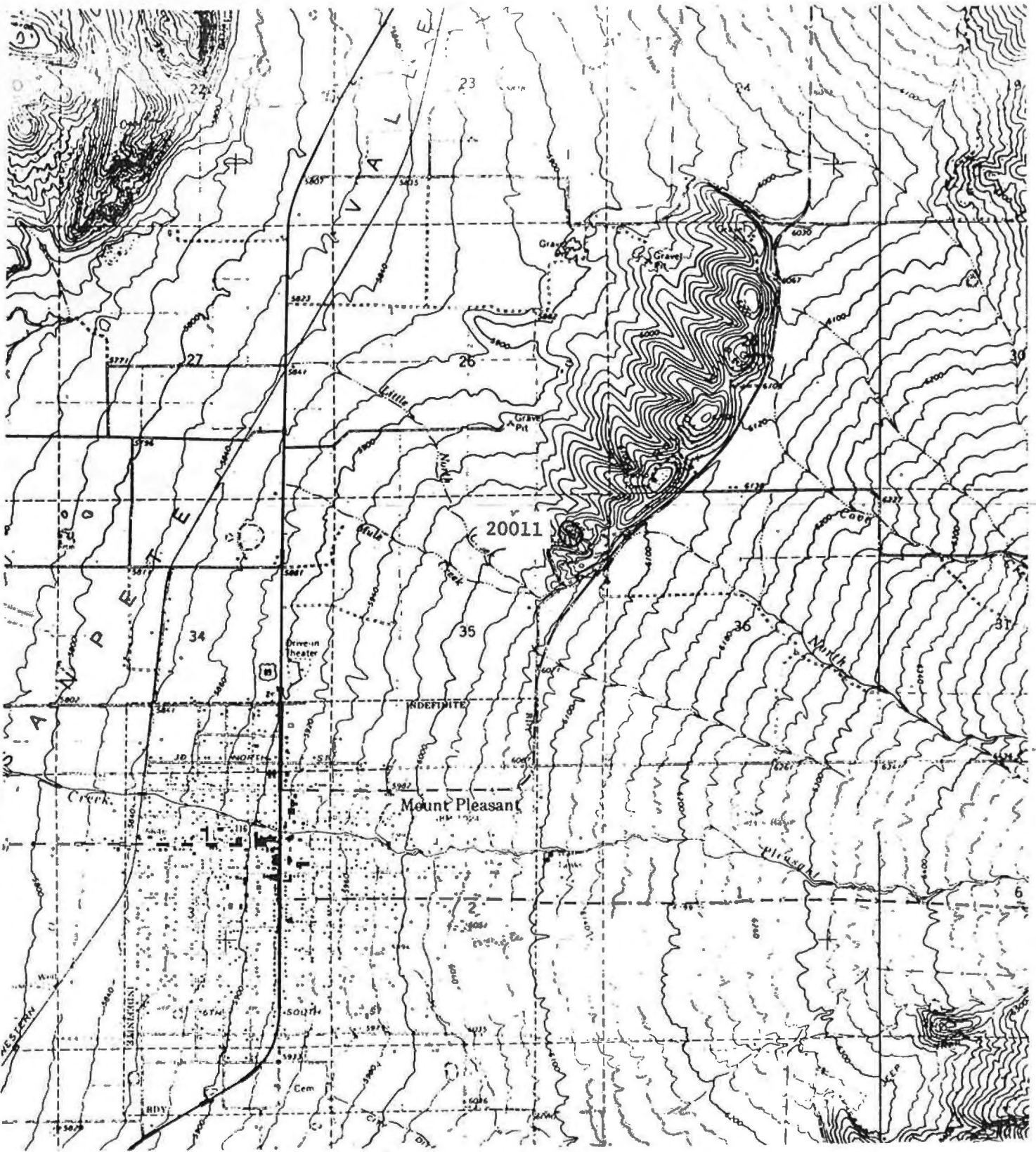
Worked Pit ○
 Unworked Pit □

— Road Construction Area

TRUE NORTH
 MAGNETIC NORTH

APPROXIMATE ME

MORONI, UTAH SW



T145

T155

North



Worked Pit



Unworked Pit



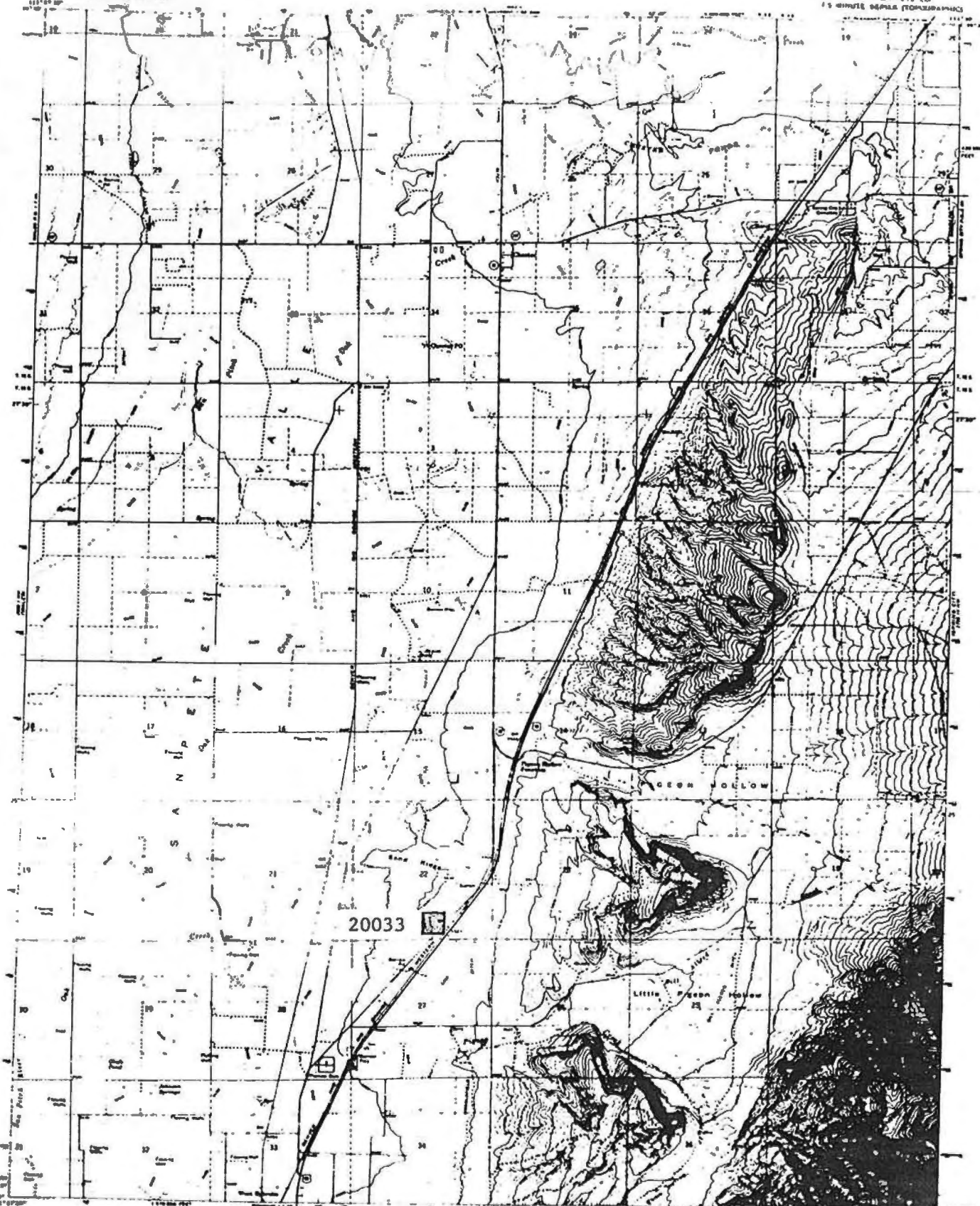
Mount Pleasant Quadrangle

15 Minute Map

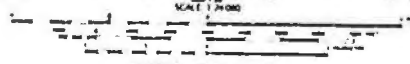
Scale 1:24000





Contour Interval 40 Feet



20033



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the Director, Geological Survey, Washington, D.C. 20541

Worked Pit 
Unworked Pit 

ROAD CLASSIFICATION
Highway Lightly
Highway Unimproved
U.S. Road
Other Road

CHESTER, UTAH
1927 A - 1113 10-11
1928
U.S. GEOLOGICAL SURVEY

PITS AND POTENTIAL SITES - TEST DATA SHEET

From Materials Inventory of Sanpete and Sevier Counties, Utah Department of Highway

LOCATION					OWNERSHIP		MATERIAL				TEST DATA - REPRESENTATIVE SAMPLE																					
PIT OR SITE NUMBER	TOWNSHIP	RANGE	40 ACRE TRACT	QUARTER SECTION	SECTION	P = PRIVATE C = COMMERCIAL CO = COUNTY F = FEDERAL S = STATE	OWNER	USE OF MATERIAL	TYPE OF DEPOSIT	PRESENT ESTIMATED QUANTITY (CU. YDS.)	THICKNESS OF MATERIAL	DEPTH OF OVERBURDEN	DATE SAMPLED *	TYPE OF SAMPLE	DEPTH OF SAMPLE	SIEVE ANALYSIS								LIQUID LIMIT	PLASTICITY INDEX	SWELL	A. A. S. H. O. CLASSIFICATION	IMMERSION COMPRESSION AVE. P. S. I.		ABRASION 500 REV.	SODIUM SULPHATE LOSS	
																BEFORE CRUSHING		PERCENT PASSING AFTER CRUSHING TO 1" MAX. SIZE				NO. 4	NO. 10					NO. 40	NO. 200		LIME	W/
>3"	>1"	1"	1/2"	NO. 4	NO. 10	NO. 40	NO. 200																									
20001	12S	4E	SE	SE	20	P	Howard Nielsen	B.G., S.G.	Pediment	100,000	10	1-2	1963				100	74.5	29.0	20.3	9.0	3.4			.001	A-1-a			35.0	0.4	0.4	
20002	12S	4E	SE	NE	32	P	Lorna Terry	B.G., S.G.	Pediment	30,000	6	0-3	1963	Test Hole	0-6		100	75.3	48.9	38.8	16.6	6.6	20.3	N.P.	.030	A-1-a	110	198	22.0	3.6	4.7	
20003	13S	4E	NE	NE	26	P	Eskel L. Mower	B.G., S.G.	Stream Channel	88,000	10	1-5	1946			45.3	100	88.0	45.6	35.7	20.2	7.3	16.0	N.P.	.016	A-1-a			31.5			
20004	13S	4E	SW	NE	35	P	Charles Fowles		Alluvial Fan	Mined Out																						
20005	14S	4E	NE	NW	1	P	Ira Garlick	B.G., S.G.	Alluvial Fan	320,000	20	0-2	1958			100		34.6	24.7	16.7	8.6	15.0	N.P.	.005	A-1-a			35.1				
20006	13S	5E	NW	NE	24	F	Forest Service	B.G., S.G.	Limestone Bedrock	32,000	10	0-1	1961	Cut Bank		100	67.0	38.2	29.2	20.1	11.9	29.1	9.9	.042	A-1-a			25.3				
20007	14S	4E	SW	SE	13			B.G., S.G.	Alluvial Fan	5,000	5	0-1	1960	Test Hole		0	5.6	100	89.7	68.3	53.6	31.9	11.2	18.9	N.P.	.032	A-1-b			24.3		
20008	14S	4E	NE	NE	26	P	Niels A. Nielson	B.G., S.G.	Pediment	1,800,000	30	0-1	1961			3.1	28.9	100	71.9	46.6	34.2	19.5	6.1	21.3	N.P.	.009	A-1-a			22.2		
20009	14S	4E	NW	NE	25	CO	Sanpete County	B.G., S.G.	Pediment	350,000	15	0-1	1963			3.8	25.8	100	86.1	56.9	46.0	18.1	6.8	20.0	N.P.	.011	A-1-a	123	186	20.0	6.8	9.3
20010	14S	4E	NW	SE	26	P	J. Dean Staker 462 - 2663 Mt. Pleasant	B.G., S.G.	Pediment	64,000	10	0-1	1956			20.7	46.3	100	44.2	32.8	19.2	7.3	25.0	N.P.	.050	A-1-a			24.8			
20011	14S	4E	NE	NE	35	P	Rodney L. Rowe	B.G., S.G.	Pediment	620,000	15	0-2	1955			15.5	31.4	100	55.8	41.5	23.4	4.6	21.0	N.P.	.013	A-1-a			22.0			
20012	14S	3E	NW	SE	6	P	K. & N. Jorgensen	B.G., S.G.	Pediment	260,000	15	0-1	1956			15.5	52.1	100	36.6	27.1	15.8	5.8	23.3	N.P.	.022	A-1-a			21.5			
20013	14S	3E	S 1/2	SE	7	P	Cleo Christiansen	B.G., S.G.	River Terrace	20,000	7	0-1	1965	Cut Bank	0-6	10.7	25.0	100	79.0	61.8	56.9	43.0	30.6	23	4	.030			27.4	5.21	4.94	
20014	14S	2E	NE	SE	25	P	Lawrence Olsen	B.G., S.G.	Stream Channel	190,000	12	0	1961	Test Hole	0-4	0	No crushing	10.0	90.0	72.2	67.1	59.9	36.6	19.0	4.4	0.9	A-4(0)					
20015	14S	2E	W 1/2	NE	36	P	Bailey	S.G., B.G., Borrow	Pediment	250,000	10	0-1	1961	Test Hole	0-10	4.4	36.6	63.4	38.6	33.2	25.3	9.5	16.5	N.P.		A-1-a						
20016	15S	2E	NE	NE	33	P	C. Christensen	Borrow	Pediment	280,000	10	0	1961	Test Hole	0-4	0	No crushing	0.5	99.5	97.0	96.4	92.4	52.7	15.3	N.P.	0.7	A-4(4)					
20017	14S	3E	SW	NW	33	P	Elsie L. Taylor	Borrow	Alluvial Fan	28,000	8	0	1959	Cut Bank	0-4	0	No crushing	0	100	93.9	89.7	85.8	73.3	32.4	9.9	1.0	A-4(8)					
20018	15S	3E	SW	SE	4	P	Leo Cloward	B.G., S.G.	River Terrace	150,000	15	2	1956			4.8	22.2	100	41.9	31.1	18.2	5.1	16.5	N.P.	.020	A-1-a			27.2			
20019	15S	3E	NE	NE	9		Sophia Bruno	B.G., S.G.	Alluvial Fan	10,000	15	0-2	1954	Cut Bank		0	5.8	100	43.3	29.3	12.1	3.3	22.7	N.P.	.023	A-1-a			27.3			
20020	15S	3E	SW	SW	3	P	Henrietta Cloward	B.G., S.G.	Alluvial Fan	5,000	6	0	1960			4.4	25.7	100	50.3	42.0	28.0	9.6	27.9	N.P.	.149	A-1-a			20.3			
20021	15S	3E	SE	SW	3	S	Frank Madsen	Borrow	River Terrace	84,000	15	0	1959	Test Hole	0-19	12.3	35.5	100	43.2	32.4	18.3	7.4	24.0	N.P.	.053	A-1-a			23.0			
20022	15S	3E	E 1/2	NW	10	P	State Land Board	Borrow	River Terrace	72,000	15	1	1952	Test Hole	0-6	7.4	33.9	100	54.5	47.2	32.6	12.6	23.8	N.P.	.018	A-1-a			30.6			
20023	15S	3E	NE	NE	10	P	L. Blackham	B.G., S.G.	River Terrace	48,000	10	3-4	1965	Cut Bank	0-5	5.1	24.5	100	73.4	57.4	51.3	32.8	21.0	26	6	.018			26.3	5.67	8.61	
20024	15S	3E	NE	NE	11	P	Rodney L. Rowe	B.G., S.G.	River Terrace	51,000	4	1	1960			39.4	100	58.4	35.6	28.1	16.0	6.5	21.5	N.P.	.030	A-1-a			22.3			

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LOCATION					OWNERSHIP		MATERIAL				TEST DATA - REPRESENTATIVE SAMPLE																							
PIT OR SITE NUMBER	TOWNSHIP	RANGE	40 ACRE TRACT	QUARTER SECTION	SECTION	P = PRIVATE C = COMMERCIAL CO = COUNTY F = FEDERAL S = STATE	OWNER	USE OF MATERIAL	TYPE OF DEPOSIT	PRESENT ESTIMATED QUANTITY (CU. YDS.)	THICKNESS OF MATERIAL	DEPTH OF OVERBURDEN	DATE SAMPLED *	TYPE OF SAMPLE	DEPTH OF SAMPLE	SIEVE ANALYSIS						LIQUID LIMIT	PLASTICITY INDEX	SWELL	A. A. S. H. O. CLASSIFICATION	IMMERSION COMPRESSION M AVE. P.S.I.		ABRASION 500 REV.	SODIUM SULPHATE LOSS					
																BEFORE CRUSHING		PERCENT PASSING AFTER CRUSHING TO 1" MAX. SIZE								NO. 4	NO. 10		NO. 40	NO. 200	WO/	W/	+4	-4
																> 3"	> 1"	1"	1/2"	NO.	NO.													
20026	15S	3E	SW	SE	23	P	Howarth Draper	B.G., S.G.	River Terrace	10,800	4	0-1	1950				24.8	100	48.0	35.2	21.7	8.4	23.3	N.P.	.017	A-1-a			33.2					
20027	15S	3E	NW	SW	29	P	Lloyd Price	Borrow	Pediment	19,000	12	0-1	1951			0	23.1	100	46.5	35.6	24.6	14.9	32.8	12.0	.068	A-1-a			36.8					
20028	15S	2E	SW	NE	25	F	B.L.M.	B.G., S.G.	Alluvial Fan	288,000	40	0-1	1949				43.9	100	39.5	27.0	15.4	7.2	16.5	2.7	.029	A-1-a			27.9					
20029	15S	2E	NE	NE	36	P	H. B. Lamb	B.G., S.G.	Alluvial Fan	288,000	10	0-1	1949				51.3	100	39.9	30.3	22.2	11.5	18.0	2.6	.028	A-1-a			29.1					
20030	16S	2E	SE	NE	1			B.G., S.G.	Alluvial Fan	60,000	6	0-1	1951	Cut Bank Test Hole	0-12	3.5	17.8	100	47.4	34.4	23.4	11.5	17.0	2.6	.016	A-1-a			27.7					
20031	16S	3E	NE	SE	10	P	Clyde Stevens	Borrow	Pediment	38,000	6	0	1959	Test Hole	0-12	0	26.2	100	41.9	31.4	21.1	12.0	20.9	7.0	.040	A-1-a			37.4					
20032	16S	3E	SW	SE	10	P	Calvert Larsen	B.G., S.G.	Pediment	240,000	10	0	1959	Test Hole	0-13	0	9.9	100	58.3	49.2	35.8	16.8	19.3	N.P.	.023	A-1-b			38.3					
20033	16S	3E	SW	SE	22	P	Gayle Lester Hansen	Borrow	Talus	12,000	5	0	1959		0-5	26.0	No Crushing	44.2	55.8		38.8	31.1	21.1	13.9	33.5	8.2	0.1	A-2-4(0)						
20034	17S	3E	SE	SE	9	P	Afton C. Larsen	B.G., S.G.	Alluvial Fan	128,000	20	0	1965				100	63.0	40.1	32.0	18.4	10.8	18	N.P.	.009	A-1-a			30.4	9.55	11.25			
20035	17S	3E	SW	SW	10	P	H. W. Sorensen	B.G., S.G.	Alluvial Fan	36,000	15	0-1	1958			9.5	42.2	100	35.6	23.3	12.1	6.7	17.9	2.9	.024	A-1-a			26.0					
20036	17S	3E	NW	SE	10	P	Ephraim City	B.G., S.G.	Stream Channel	16,000	5	0	1955			17.0	54.5	100	34.7	24.9	14.7	5.2	16.4	N.P.	.018	A-1-a			28.7					
20037	17S	4E	SE	NE	21	F	Forest Service	Borrow	Colluvium	96,000	20	0-1	1965				100	52.8	29.6	25.9	19.7	14.3	27	8	.014	A-1-a			35.7					
20038	17S	3E	N $\frac{1}{2}$	NE	21	P	Harold Jensen	B.G., S.G.	Alluvial Fan	144,000	15	0-1	1958	Test Hole		20.0	54.4	100	36.4	23.1	11.6	6.4	18.3	N.P.	.005	A-1-a			29.4					
20039	17S	3E	SW	NE	21	P	Stanley Nielsen	B.G., S.G.	Alluvial Fan	72,000	15	0-1	1958	Test Hole		0	32.9	100	38.2	28.5	15.9	4.9	17.4	N.P.	.020	A-1-a			29.3					
20040	17S	3E	NE	NE	31	P	David P. Shand	Borrow	Talus & Bedrock	16,000	4	0	1958		0-3	2.5	No Crushing	17.3	82.7	55.3	39.6	32.8	30.0	28.1	6.4	1.33	A-2-4(0)							
20041	18S	2E	S $\frac{1}{2}$	NE	11	P	Cal Mickelson	B.G., S.G.	Floodplain	21,000	9	0-1	1958	Test Hole	0-9	0	29.4	100	58.8	49.6	39.3	20.7	20.2	N.P.	.067	A-1-b			28.8					
20042	18S	2E	SE	NE	14	P	Hal Lowry	Borrow	Floodplain	217,000	17	0	1959	Test Hole	0-12	6.4	40.6	100	37.8	27.4	16.3	8.7	17.2	1.4	.188	A-1-a			28.6					
20043	18S	2E	NE	SW	13	P	Gillespie, Bond & Giles	Borrow	Alluvial Fan	160,000	10	0	1959	Test Hole	0-7	5.4	No Crushing	18.5	81.5	37.2	30.0	25.3	17.6	23.3	4.3	1.1	A-1-b							
20044	18S	2E	SE	NW	27	P	Royal B. Brown	Borrow	Talus & Bedrock RIVER	112,000	10	0	1959	Test Hole	0-3	6.0	No Crushing	39.2	60.8	43.1	33.5	26.6	21.8	31.5	6.0	1.1	A-1-b							
20045	18S	2E	NE	SE	28	P	L. G. Anderson	B.G., S.G.	Terrace	240,000	10	0	1959	Test Hole	0-10	13.7	47.5	100	37.8	28.6	17.4	6.9	16.0	N.P.	.025	A-1-a			27.4					
20046	18S	2E	NE	NE	33	P	Leah Marx	B.G., S.G.	River Terrace	115,000	6	0-1	1959			33.3	56.9	100	38.2	27.4	17.1	8.0	17.1	N.P.	.028	A-1-a			29.2					
20047	18S	2E	SE	SW	33	P	Harry Campbell	Borrow	River Terrace	78,000	7	0	1959			6.8	No Crushing	26.7	73.3	36.0	28.3	23.2	19.4	34.1	N.P.	0.2	A-1-b							
20048	19S	2E	NE	NW	9	P	Eldon Larsen	Borrow	Alluvial Fan	76,000	15	0	1962			50.0	No Crushing			61.8	54.8	45.8	30.4	9.1		A-4(2)								
20049	19S	2E	SW	NE	20	P	Anzures Hansen	Borrow	Colluvium	101,000	18	0	1946				100	69.2	47.7	36.7	27.7	38.2	2.6	0.3	A-2-6									

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																BEFORE CRUSHING		PERCENT PASSING AFTER CRUSHING TO 1" MAX. SIZE				NO. 4	NO. 10					NO. 40	NO. 200		WO/	W/	+4	-4
																> 3"	> 1"	1"	1/2"															
20026	15S	3E	SW	SE	23	P	Howarth Draper	B.G., S.G.	River Terrace	10,800	4	0-1	1950				24.8	100	48.0	35.2	21.7	8.4	23.3	N.P.	.017	A-1-a			33.2					
20027	15S	3E	NW	SW	29	P	Lloyd Price	Borrow	Pediment	19,000	12	0-1	1951				0	23.1	100	46.5	35.6	24.6	14.9	32.8	12.0	.068	A-1-a			36.8				
20028	15S	2E	SW	NE	25	F	B.L.M.	B.G., S.G.	Fan	288,000	40	0-1	1949				43.9	100	39.5	27.0	15.4	7.2	16.5	2.7	.029	A-1-a			27.9					
20029	15S	2E	NE	NE	36	P	H. B. Lamb	B.G., S.G.	Alluvial Fan	288,000	10	0-1	1949				51.3	100	39.9	30.3	22.2	11.5	18.0	2.6	.028	A-1-a			29.1					
20030	16S	2E	SE	NE	1			B.G., S.G.	Alluvial Fan	60,000	6	0-1	1951	Cut Bank Test Hole	0-12	3.5	17.8	100	47.4	34.4	23.4	11.5	17.0	2.6	.016	A-1-a			27.7					
20031	16S	3E	NE	SE	10	P	Clyde Stevens	Borrow	Pediment	38,000	6	0	1959	Test Hole	0-12	0	26.2	100	41.9	31.4	21.1	12.0	20.9	7.0	.040	A-1-a			37.4					
20032	16S	3E	SW	SE	10	P	Calvert Larsen	B.G., S.G.	Pediment	240,000	10	0	1959	Test Hole	0-13	0	9.9	100	58.3	49.2	35.8	16.8	19.3	N.P.	.023	A-1-b			38.3					
20033	16S	3E	SW	SE	22	P	Gayle Lester Hansen	Borrow	Talus	12,000	5	0	1959		0-5	26.0	44.2	55.8	38.8	31.1	21.1	13.9	33.5	8.2	0.1	A-2-4(0)								
20034	17S	3E	SE	SE	9	P	Afton C. Larsen	B.G., S.G.	Alluvial Fan	128,000	20	0	1965					100	63.0	40.1	32.0	18.4	10.8	18	N.P.	.009	A-1-a			30.4	9.55	11.25		
20035	17S	3E	SW	SW	10	P	H. W. Sorensen	B.G., S.G.	Alluvial Fan	36,000	15	0-1	1958				9.5	42.2	100	35.6	23.3	12.1	6.7	17.9	2.9	.024	A-1-a			26.0				
20036	17S	3E	NW	SE	10	P	Ephraim City	B.G., S.G.	Stream Channel	16,000	5	0	1955				17.0	54.5	100	34.7	24.9	14.7	5.2	16.4	N.P.	.018	A-1-a			28.7				
20037	17S	4E	SE	NE	21	F	Forest Service	Borrow	Colluvium	96,000	20	0-1	1965					100	52.8	29.6	25.9	19.7	14.3	27	8	.014	A-1-a			35.7				
20038	17S	3E	N $\frac{1}{2}$	NE	21	P	Harold Jensen	B.G., S.G.	Alluvial Fan	144,000	15	0-1	1958	Test Hole		20.0	54.4	100	36.4	23.1	11.6	6.4	18.3	N.P.	.005	A-1-a			29.4					
20039	17S	3E	SW	NE	21	P	Stanley Nielsen	B.G., S.G.	Alluvial Fan	72,000	15	0-1	1958	Test Hole		0	32.9	100	38.2	28.5	15.9	4.9	17.4	N.P.	.020	A-1-a			29.3					
20040	17S	3E	NE	NE	31	P	David P. Shand	Borrow	Talus & Bedrock	16,000	4	0	1958		0-3	2.5	17.3	82.7	55.3	39.6	32.8	30.0	28.1	6.4	1.33	A-2-4(0)								
20041	18S	2E	S $\frac{1}{2}$	NE	11	P	Cal Mickelson	B.G., S.G.	Floodplain	21,000	9	0-1	1958	Test Hole	0-9	0	29.4	100	58.8	49.6	39.3	20.7	20.2	N.P.	.067	A-1-b			28.8					
20042	18S	2E	SE	NE	14	P	Hal Lowry	Borrow	Floodplain	217,000	17	0	1959	Test Hole	0-12	6.4	40.6	100	37.8	27.4	16.3	8.7	17.2	1.4	.188	A-1-a			28.6					
20043	18S	2E	NE	SW	13	P	Gillespie, Bond & Giles	Borrow	Alluvial Fan	160,000	10	0	1959	Test Hole	0-7	5.4	18.5	81.5	37.2	30.0	25.3	17.6	23.3	4.3	1.1	A-1-b								
20044	18S	2E	SE	NW	27	P	Royal B. Brown	Borrow	Talus & Bedrock	112,000	10	0	1959	Test Hole	0-3	6.0	39.2	60.8	43.1	33.5	26.6	21.8	31.5	6.0	1.1	A-1-b								
20045	18S	2E	NE	SE	28	P	L. G. Anderson	B.G., S.G.	River Terrace	240,000	10	0	1959	Test Hole	0-10	13.7	47.5	100	37.8	28.6	17.4	6.9	16.0	N.P.	.025	A-1-a			27.4					
20046	18S	2E	NE	NE	33	P	Leah Marx	B.G., S.G.	River Terrace	115,000	6	0-1	1959				33.3	56.9	100	38.2	27.4	17.1	8.0	17.1	N.P.	.028	A-1-a			29.2				
20047	18S	2E	SE	SW	33	P	Harry Campbell	Borrow	River Terrace	78,000	7	0	1959				6.8	26.7	73.3	36.0	28.3	23.2	19.4	34.1	N.P.	0.2	A-1-b							
20048	19S	2E	SE	NW	9	P	Eldon Larsen	Borrow	Alluvial Fan	96,000	15	0	1962				50.0	No Crushing		61.8	54.8	45.8	30.4	9.1			A-4(2)							
20049	19S	2E	NW	SE	10	P	Angus Hansen	Borrow	Colluvium	60,000	18	0	1946					100	69.2	47.7	36.7	27.7	34.2	2.6	0.3	A-2-6								