HECLA MINING COMPANY
TEL. SKYLINE 2-1251
WALLACE, IDAHO
P. O. BOX 320

October eighteenth
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OME
DEPARTMENT OF THE INTERIOR
OCT 21 1963
REGION III
DENVER, COLORADO

Mr. Hugh M. Connors, Acting Field Officer
OME - Region 3
Building 20 - Federal Center
Denver 25, Colorado - 80225

OFFICIAL FILE COPY
O. M. E
RECEIVED OCT 23 1963

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Royalty

Dear Mr. Connors:

Re: DMEA - 4981 (copper-lead-zinc, etc., as shown on the attached letter)

As requested in your letter to Mr. John G. Simos dated October 11, 1963, we are forwarding a copy of the final report submitted by H. J. Vander Veer and Associates. We are sorry that this was omitted from our original letter.

Yours very truly,

D. W. Morehouse
Assistant Secretary

DWM
EMZ

Enc.

Mr Selfridge with only copy of report.
Hmc 10-21-63

To Determine Location of Line 1-4
Ammie Lode, Lot 202
With Respect to 2000 Level
Mayflower Mine

H. J. VANDER VEER AND ASSOCIATES
CONSULTING ENGINEERS AND GEOLOGISTS
701 JUDGE BUILDING
SALT LAKE CITY, UTAH
PHONE DAVIS 2-1191
SALT LAKE CITY, UTAH

INVESTIGATIONS & REPORTS
PUBLIC LANDS
MINING
GEOLOGICAL
OIL & GAS
SURVEYS
MINERAL PATENTS

July 26, 1963

Mr. Knute Kirkeberg
Mine Engineer
Mayflower Mine
Hecla Mining Company
Star Route
Heber City, Utah

Dear Mr. Kirkeberg:

At your request for the Hecla Mining Company this office was commissioned to conduct an investigation or survey concerning the End Line 1-4 of the Ammie Lode, Lot No. 202, with respect to the 2,000 Foot Level of the Mayflower Mine. The services of Mr. Clarence R. Hagen, Mineral Surveyor and Mining Engineer of Salt Lake City, Utah, was obtained for this work. The results of this survey with complete sets of calculations are made a part of this report, so that they may be entered into the permanent records of your Company. The typed calculations have been carefully compared to the original calculations in the possession of Mr. Hagen.

During the course of this survey, it was necessary to ascertain the correct position of the claim corners in respect to the public land net and the mine triangulation system. Your attention is called to the fact that in several instances in the records in your office which were checked by Mr. Hagen transpositions were found in the calculations in the books containing the survey notes. However, the actual position of the Stations were found to be correct. Recomputing some of these transpositions resulted in more time being spent in this case.

We are herewith transmitting to you three (3) copies of this report with attached maps for inclusion in the permanent survey records of the Mayflower Mine. This report is respectfully submitted.

Sincerely yours,

H. J. Vander Veer

H. J. Vander Veer
Consulting Geologist

HJV:eyn

Attachments: Report - 3 copies.

TELEPHONE
EM 3-9328
DA 2-0531

CLARENCE R. HAGEN
MINING ENGINEER
218 FELT BUILDING
SALT LAKE CITY, UTAH

MINERAL SURVEYOR
AND GEOLOGIST

July 16, 1963

Mr. H. J. Vander Veer
701 Judge Building
Salt Lake City, Utah

Dear Mr. Vander Veer:

The location of Line 1-4 (end line) of the Ammie Lode, Lot No. 202, with respect to the 2000 Level of the Mayflower Mine, now operated by the Hecla Mining Company at Park City, Utah, has been established.

Most of the survey data was furnished from mine survey records. Some surveying was done by me to make the chain of several surveys complete. All data has been very thoroughly checked, and minor errors in the survey records are corrected.

I am indebted to Mr. Knute Kirkeberg for his help and for furnishing records of mine surveys.

Five copies of the report are handed to you herewith for your distribution. I trust this work will be satisfactory.

Respectfully submitted,

C. R. Hagen

C. R. Hagen
Mineral Surveyor

TO DETERMINE LOCATION OF LINE 1-4

AMMIE LODE, LOT 202

WITH RESPECT TO 2000 LEVEL, MAYFLOWER MINE

A continuous survey line from the Ammie Lode, Lot 202, corner monuments identified on the surface by virtue of the more recent survey of the Ammie Fraction Lode, Survey No. 7281, to the 2000 Level of the Mayflower Mine has been established.

The objective of this survey was to establish on the 2000 Level, the intersection of Line 1-4 of the Ammie Lode, Lot 202, with the Pearl Fissure Drift and with the Pearl Fissure Split Drift.

It has been determined that Line 1-4 of the Ammie Lode runs N. 9° 30' W. and intersects the Pearl Fissure Drift at a point N. 79° 45' E., 13.33 feet from Spad Station 5673 or at a point S. 79° 45' W., 106.42 feet from Spad Station 5674.

The Pearl Split Fissure was intersected by Line 1-4 of the Ammie Lode, at a point S. 56° 52'30" W., 59.50 feet from Spad Station 5687 or at a point N. 56° 52'30" E., 11.20 feet from Spad Station 5689 at 908 Raise. These intersections are shown on Map C-501 which accompany this report.

The surveys to determine the intersections are as follows:

1. MINE TRIANGULATION SYSTEM (MAP E-502).
2. TRAVERSE FROM TRIANGULATION ON SURFACE TO AMMIE LODE ON SURFACE.
3. EIGHT HUNDRED (800) LEVEL MAYFLOWER MINE TRAVERSE TO SHAFT FROM TRIANGULATION SYSTEM.
4. PLUMBING THE MAYFLOWER SHAFT IN FIVE SUCCESSIVE DROPS FROM THE 800 LEVEL TO THE 2000 LEVEL.
5. TRAVERSE FROM SHAFT TO PEARL DRIFT AND PEARL SPLIT DRIFT ON THE 2000 LEVEL OF THE MAYFLOWER MINE.

The above five links of the survey are shown on the accompanying maps which may be found in the envelope at the back of this report.

Map C-501 - Mining claims superimposed upon 2000 Level. Scale: 1" = 50'.

Map E-502 - Triangulation and 800 Level Traverse of Mayflower Mine. Scale: 1" = 500'.

Map C-503 - Shaft Plumbing Mayflower Mine. Scale: 1" = 20'.

With the aid of these maps the following surveys may be easily followed.

The corner posts of the Ammie Fraction Lode, Survey No. 7281, were pipes with brass caps with appropriate markings stamped on the cap. Only these corners could be identified positively.

All other corners were merely rock monuments with no posts or anything to identify which monument it might be.

However, the survey tied into such postless monuments, and by their surveyed position with respect to Ammie Fraction corners, they could be identified.

The monument for Corner No. 4 of the Ammie Lode, Lot No. 202, fell at the edge of a new road, and the monument had been apparently destroyed by dozer work on the road. Corner No. 1 of the Ammie Lode is intact as a monument but without a post and was identified by its position with respect to Survey No. 7281, Ammie Fraction Lode.

Index to Survey Data	Pages
1. Calculation of Triangulation Coordinates from Portal of Mayflower 800 Level and Triangulation Station 3691 to Triangulation Station 2331	2-a, 2-b
2. Traverse from Triangulation Station 2331 to Cor. No. 1 Survey No. 7281, Ammie Fraction Lode	2-c
3. Coordinate Calculation of Official Notes of Survey No. 7281, Ammie Fraction Lode	2-d, 2-e
4. Traverse from Triangulation Station No. 3691 Along 800 Level of Mayflower Mine to Shaft	2-f, 2-g
5. Plumbing Mayflower Shaft from 800 Level to 2000 Level in Five Drops	2-h, 2-i
6. Traverse from Shaft on 2000 Level to Pearl Fissure Drift and to 908 Raise on Pearl Split Fissure	2-j
7. Calculation from Drift Stations No. 5689 and No. 5773 to Intersect Line 1-4 Ammie Lode, Lot 202	2-k

CALCULATION OF TRIANGULATION COORDINATES FROM PORTAL OF MAYFLOWER 800 LEVEL AND TRIANGULATION STATION 3691 TO TRIANGULATION STATION 2331

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To Station
					10347.50	15709.39	3691
3691	S. 5° 54'24"E.	2321.63	-2309.30	+ 238.91	8038.20	15948.30	3801
3801	N. 63° 17'16"W.	3390.32	+1523.98	-3028.49	9562.18	12919.81	3804
3804	N. 74° 16'37"E.	2898.01	+ 785.32	+2789.58	10347.50	15709.39	3691
					8038.20	15948.30	3801
3801	S. 76° 43'53"W.	5540.54	-1271.65	-5392.63	6766.55	10555.67	3802
3802	N. 40° 13'11"E.	3661.24	+2795.63	+2364.14	9562.18	12919.81	3804
3804	S. 63° 17'16"E.	3390.32	-1523.98	+3028.49	8038.20	15948.30	3801
					8038.20	15948.30	3801
3801	S. 76° 43'53"W.	5540.54	-1271.65	-5392.63	6766.55	10555.67	3802
3802	N. 36° 36'03"E.	3267.57	+2623.24	+1948.25	9389.79	12503.92	2327
2327	S. 68° 34'29"E.	3700.08	-1351.59	+3444.38	8038.20	15948.30	3801
					6766.55	10555.67	3802
3802	N. 0° 46'30"W.	3576.88	+3576.54	- 48.38	10343.09	10507.29	2325-A
2325-A	S. 64° 28'39"E.	2212.54	- 953.30	+1996.63	9389.79	12503.92	2327
2327	S. 36° 36'03"W.	3267.57	-2623.24	-1948.25	6766.55	10555.67	3802
					6766.55	10555.67	3802
3802	N. 48° 22'20"W.	1542.50	+1024.67	-1152.97	7791.22	9402.70	2331
2331	N. 23° 24'20"E.	2780.67	+2551.87	+1104.59	10343.09	10507.29	2325-A
2325-A	S. 0° 46'30"E.	3576.88	-3576.54	+ 48.38	6766.55	10555.67	3802
					9389.79	12503.92	2327
2327	S. 80° 36'15"W.	2361.39	- 385.51	-2329.71	9004.28	10174.21	S.D. (Star Dump)
S.D.	N. 13° 58'15"E.	1379.62	+1338.81	+ 333.08	10343.09	10507.29	2325-A
2325-A	S. 64° 28'39"E.	2212.54	- 953.30	+1996.63	9389.79	12503.92	2327

CALCULATION OF TRIANGULATION COORDINATES FROM PORTAL OF MAYFLOWER 800 LEVEL AND TRIANGULATION STATION 3691 TO TRIANGULATION STATION 2331

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To Station
					9389.79	12503.92	2327
2327	S. 36° 36'03"W.	3267.57	-2623.24	-1948.25	6766.55	10555.67	3802
3802	N. 9° 40'27"W.	2270.01	+2237.73	- 379.19	9004.28	10174.21	S.D.
S.D.	N. 80° 36'15"E.	2361.39	+ 385.51	+2329.71	9389.79	12503.92	2327
					9389.79	12503.92	2327
2327	S. 62° 43'50"W.	3488.98	-1598.57	-3101.22	7791.22	9402.70	2331
2331	N. 23° 24'20"E.	2780.67	+2551.87	+1104.59	10343.09	10507.29	2325-A
2325-A	S. 64° 28'39"E.	2212.54	- 953.30	+1996.63	9389.79	12503.92	2327
					9389.79	12503.92	2327
2327	S. 36° 36'03"W.	3267.57	-2623.24	-1948.25	6766.55	10555.67	3802
3802	N. 48° 22'20"W.	1542.50	+1024.67	-1152.97	7791.22	9402.70	2331
2331	N. 62° 43'50"E.	3488.98	+1598.57	+3101.22	9389.79	12503.22	2327

TRAVERSE FROM TRIANGULATION STATION 2331 TO COR. NO. 1
SURVEY NO. 7281, AMMIE FRACTION LODE

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To
					7791.22	9402.70	Sta. 2331
2331	N. 78° 03'10"W.	171.59	+ 35.52	- 167.87	7826.74	9234.83	Sta. 28
28	N. 78° 02'10"W.	280.74	+ 58.20	- 274.64	7884.94	8960.19	Sta. 29
29	N. 10° 02'10"W.	241.12	+ 237.43	- 42.02	8122.37	8918.17	Sta. 29-A
29-A	N. 38° 01'50"E.	291.09	+ 229.29	+ 179.34	8351.66	9097.51	*Cor. 2 - Ammie Fraction, 7281
*2/7281	N. 75° 55'20"E.	99.47	+ 24.19	+ 96.48	8375.85	9193.99	Cor. 1 - Ammie Fraction, 7281

*Note -- Cor. No. 2, Survey No. 7281 - Ammie Fraction Lode is a pipe with brass cap. It stands askew. Cor. No. 1 has not been disturbed. Use Cor. No. 1 as starting point for coordinates of claim surveys.

COORDINATE CALCULATION OF OFFICIAL NOTES OF SURVEY NO. 7281, AMMIE FRACTION LODE

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To
					8375.85	9193.99	COR. NO. 1 - Ammie Fraction
Cor. 1	S. 76° 44'E.	3470.83	- 796.50	+3378.20	7579.35	12572.19	Sec. Cor. 26|25 / 35|36
							T. 2 S., R. 4 E.
Cor. 1	S. 45° 07'W.	15.60	- 11.01	- 11.05	8364.84	9182.94	B. T. Pine 14"
Cor. 1	N. 48° 28'W.	70.83	+ 46.96	- 53.02	8422.81	9140.97	4/2956 - Pearl J. C.
Cor. 1	N. 58° 29'W.	85.01	+ 44.44	- 72.47	8420.29	9121.52	4/202 - Ammie = 1/168 - Sunset 2
Cor. 1	N. 61° 06'W.	55.91	+ 27.02	- 48.95	8402.87	9145.04	Sur. Pt. XX
Cor. 1	S. 75° 47'W.	50.00	- 12.28	- 48.47	8363.57	9145.52	Lode Line
Lode Line	N. 14° 04'W.	79.71	+ 77.32	- 19.37	8440.89	9126.15	Disc. Point
Cor. 1	S. 75° 47'W.	99.30	- 24.39	- 96.26	8351.46	9097.73	COR. NO. 2
Cor. 2	N. 89° 29'W.	472.06	+ 4.26	- 472.04	8355.72	8625.69	2/100 - Northside 3 = 4/169 - Mazeppa 2
Cor. 2	N. 54° 36'E.	27.80	+ 16.10	+ 22.66	8367.56	9120.39	B. T. Aspen 8"
Cor. 2	N. 14° 04'W.	65.63	+ 63.66	- 15.95	8415.12	9081.78	* X - 1-2/168 and 3-4/202
* X - 1-2/168	N. 82° 35'E.	40.08	+ 5.17	+ 39.74	8420.29	9121.52	1/168 = 4/202 Ammie
* X - 1-2/168	S. 82° 35'W.	459.92	- 59.37	- 456.07	8355.75	8625.71	2/100 = 2/169 Mazeppa
Cor. 2	N. 14° 04'W.	266.99	+ 258.98	- 64.89	8610.44	9032.84	* X - 3-4/168 Sunset 2
* X - 3-4/168	N. 82° 35'E.	64.41	+ 8.31	+ 63.87	8618.75	9096.71	Cor. 4/168 Sunset 2
Cor. 2	N. 14° 04'W.	499.50	+ 484.52	- 121.40	8835.98	8976.33	COR. NO. 3
Cor. 3	S. 73° 29'W.	107.33	- 30.51	- 102.90	8805.47	8873.43	6/152 Lucy (Lot 152)
Cor. 3	N. 67° 27'W.	18.50	+ 7.09	- 17.08	8843.07	8959.25	Loc. Cor.
Cor. 3	?	3.00	---	---	---	---	B. T. Aspen 6"
Cor. 3	N. 75° 47'E.	49.30	+ 12.11	+ 47.79	8848.09	9024.12	Lode Line
Cor. 3	N. 75° 47'E.	74.84	+ 18.38	+ 72.55	8854.36	9048.88	* X - 1-4/202 - Ammie = 1-4/201 - Rosebud
* X - 1-4/202	N. 9° 30'W.	87.89	+ 86.69	- 14.51	8941.05	9034.37	1/202 - Ammie = 2/200 - W. H. C.

COORDINATE CALCULATION OF OFFICIAL NOTES OF SURVEY NO. 7281, AMMIE FRACTION LODE

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To
Cor. 3	N. 75° 47' E.	99.30	+ 24.39	+ 96.26	8860.37	9072.59	COR. NO. 4
Cor. 4	N. 25° 21' W.	89.27	+ 80.67	- 38.22	8941.04	9034.37	1/202 - Ammie • 2/200 - W.H.C.
Cor. 4	S. 25° 37' W.	50.97	- 45.96	- 22.04	8814.41	9050.55	8/2956 - Geo. H.C.
Cor. 4	S. 20° 33' W.	48.67	- 45.57	- 17.08	8814.80	9055.51	2/201 - Rosebud
Cor. 4	S. 14° 04' E.	44.28	- 42.95	+ 10.76	8817.42	9083.35	*X - 1-2/201 - Rosebud & 7-8/2956 - Geo. HC
*X - 1-2/201	S. 84° 38' W.	27.98	- 2.62	- 27.86	8814.80	9055.49	2/201 - Rosebud
*X - 1-2/201	S. 84° 38' W.	32.94	- 3.08	- 32.80	8814.34	9050.55	8/2956 - Geo. H.C.
					8860.37	9072.59	Cor. No. 4
Cor. 4	S. 14° 04' E.	245.14	- 237.79	+ 59.58	8622.58	9132.17	*X = 9-6/2956 - Geo. H.C. & 2-3/2956 - Pearl J.C.
*X - 9-6/2956	S. 83° 42' W.	36.61	- 4.02	- 36.39	8618.56	9095.78	9/2956 = 3/2956
Cor. 4	S. 14° 04' E.	445.72	- 432.35	+ 108.33	8428.02	9180.92	*X - 4-5/2956 - Pearl J.C. & 1-2/100 - Northside 3
*X - 4-5/2956	S. 82° 35' W.	40.29	- 5.20	- 39.95	8422.82	9140.97	4/2956 - Pearl J.C.
*X - 4-5/2956	S. 82° 35' W.	559.86	- 72.27	- 555.17	8355.75	8625.75	2/100 - Northside 3
Cor. 4	S. 14° 04' E.	499.50	- 484.52	+ 121.40	8375.85	9193.99	COR. NO. 1 - Beg.

Note -- Used coordinates from traverse for initial coordinates of Cor. No. 1; thence to official survey bearings.

*X - signifies intersection.

TRAVERSE FROM TRIANGULATION STATION NO. 3691
ALONG 800 LEVEL OF MAYFLOWER MINE TO SHAFT

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To
					10347.50	15709.39	Sta. 3691
3691	S. 29° 13'W.	106.12	- 92.62	- 51.80	10254.88	15657.59	1a
1a	S. 46° 13'E.	196.10	- 135.69	+ 141.58	10119.19	15799.17	2a
2a	N. 85° 20'45"E.	46.52	+ 3.77	+ 46.37	10122.96	15845.54	3690 - Steel at SW Cor. Warehouse
2a	S. 71° 36'W.	91.18	- 28.78	- 86.52	10090.41	15712.65	3481 - Portal
3481	S. 70° 05'30"W.	147.21	- 50.13	- 138.41	10040.28	15574.24	4330
4330	S. 70° 32'45"W.	145.82	- 48.57	- 137.49	9991.71	15436.75	4055
4055	S. 70° 44'W.	136.42	- 45.01	- 128.78	9946.70	15307.97	4324
4324	S. 70° 42'30"W.	126.34	- 41.74	- 119.25	9904.96	15188.72	4145
4145	S. 70° 37'15"W.	208.26	- 69.10	- 196.46	9835.86	14992.26	4325
4325	S. 70° 24'45"W.	208.73	- 69.98	- 196.65	9765.88	14795.61	4146
4146	S. 70° 41'30"W.	141.56	- 46.81	- 133.60	9719.07	14662.01	4326
4326	S. 70° 34'15"W.	142.50	- 47.40	- 134.39	9671.67	14527.62	4147
4147	S. 69° 39'30"W.	219.34	- 76.25	- 205.66	9595.42	14321.96	4327
4327	S. 79° 35'45"W.	105.83	- 19.11	- 104.09	9576.31	14217.87	4328
4328	N. 62° 20'45"W.	151.69	+ 70.40	- 134.36	9646.71	14083.51	4329
4329	N. 63° 17'W.	139.73	+ 62.82	- 124.81	9709.53	13958.70	4150
4150	N. 63° 08'W.	142.44	+ 64.37	- 127.07	9773.90	13831.63	4331
4331	N. 63° 29'W.	147.35	+ 65.79	- 131.85	9839.69	13699.78	4151
4151	N. 63° 27'W.	217.40	+ 97.17	- 194.47	9936.86	13505.31	4332
4332	N. 63° 28'W.	139.09	+ 62.13	- 124.44	9998.99	13380.87	4333
4333	N. 63° 30'15"W.	258.14	+ 115.16	- 231.03	10114.15	13149.84	4153
4153	N. 64° 10'30"W.	152.45	+ 66.41	- 137.22	10180.56	13012.62	4154
4154	S. 74° 27'45"W.	68.60	- 18.38	- 66.09	10162.18	12946.53	4155
4155	S. 58° 27'30"W.	158.23	- 82.77	- 134.85	10079.41	12811.68	4334
4334	S. 51° 17'W.	106.66	- 66.71	- 83.22	10012.70	12728.46	4157
4157	S. 47° 06'15"W.	84.17	- 57.29	- 61.66	9955.41	12666.80	4353
4353	S. 64° 15'15"W.	123.59	- 53.68	- 111.32	9901.73	12555.48	4354
4354	S. 62° 17'45"W.	90.18	- 41.93	- 79.84	9859.80	12475.64	4160
4160	S. 79° 17'15"W.	127.35	- 23.67	- 125.13	9836.13	12350.51	4161

TRAVERSE FROM TRIANGULATION STATION NO. 3691
ALONG 800 LEVEL OF MAYFLOWER MINE TO SHAFT

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To	
4161	S. 48° 22'30"W.	206.44	- 137.13	- 154.32	9699.00	12196.19	3575	
3575	S. 88° 23'15"W.	69.72	- 1.97	- 69.69	9697.03	12126.50	4162	
4162	S. 68° 39'15"W.	107.52	- 39.14	- 100.14	9657.89	12026.36	3572	
3572	S. 13° 15'15"W.	42.86	- 41.72	- 9.83	9616.17	12016.53	4163	
4163	S. 20° 17'30"W.	80.41	- 75.42	- 27.89	9540.75	11988.64	4164	
4164	S. 55° 17'W.	196.85	- 112.02	- 161.87	9428.73	11826.77	3565	
3565	S. 68° 49'W.	134.96	- 48.77	- 125.84	9379.96	11700.93	4355	
4355	S. 64° 57'45"W.	135.41	- 57.31	- 122.69	9322.65	11578.24	4166	
4166	S. 41° 06'30"W.	56.87	- 42.85	- 37.39	9279.80	11540.85	3578	
3578	S. 58° 48'15"W.	90.85	- 47.06	- 77.71	9232.74	11463.14	4167	
4167	S. 73° 50'30"W.	169.94	- 47.29	- 163.23	9185.43	11299.91	4168	
4168	S. 77° 15'15"W.	216.74	- 47.82	- 211.40	9137.63	11088.51	4356	
4356	S. 76° 34'15"W.	201.27	- 46.74	- 195.77	9090.89	10892.74	4169	
4169	S. 46° 15'30"W.	431.62	- 298.43	- 311.83	8792.46	10580.91	4170	
4170	S. 57° 38'45"W.	183.25	- 98.07	- 154.80	8694.39	10426.11	3420	
3420	S. 49° 21'W.	194.05	- 126.41	- 147.23	8567.98	10278.88	4176	
4176	S. 46° 22'30"W.	215.75	- 148.85	- 156.18	8419.13	10122.70	3741	
3741	S. 44° 12'15"W.	142.08	- 101.85	- 99.06	8317.28	10023.64	3739	
3739	S. 56° 29'30"W.	79.72	- 44.01	- 66.47	8273.27	9957.17	4177	
4177	S. 78° 15'00"W.	279.99	- 57.02	- 274.12	8216.25	9683.05	3885	
3885	S. 87° 58'30"W.	90.62	- 3.20	- 90.56	8213.05	9592.49	4305	- Steel Pin East of Compressor Room.
4305	N. 89° 35'30"W.	129.79	+ 0.92	- 129.79	8213.97	9462.70	4306	- Steel Pin NE from Shaft.

PLUMBING MAYFLOWER SHAFT FROM 800 LEVEL TO 2000 LEVEL IN FIVE DROPS

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To 2000 Foot Level
4305	N. 89° 35'30"W.	129.79	+ 0.92	- 129.79	8213.97	9462.70	4306 - 800 Level
4306	(1)S. 16° 39'45"W.	23.14	- 22.17	- 6.64	8191.80	9456.06	"A" - 800 Level
"A"	N. 88° 56'45"W.	22.78	+ 0.42	- 22.78	8192.22	9433.28	West Wire- 800 Level
"A"	N. 88° 56'45"W.	9.80	+ 0.18	- 9.80	8191.98	9446.26	East Wire- 800 Level
		- DROP FROM 800 LEVEL TO 1380 LEVEL -					
					8191.98	9446.26	East Wire
East Wire	N. 22° 15'47"W.	47.69	+ 44.14	- 18.07	8236.12	9428.19	4263 - 1380 Level
4263	N. 14° 01'E.	33.09	+ 32.10	+ 8.01	8268.22	9436.20	4259 - 1380 Level
4259	S. 01° 46'30"E.	61.50	- 61.47	+ 1.90	8206.75	9438.10	TS-1 - 1380 Level
TS-1	S. 29° 55'30"E.	15.80	- 13.69	+ 7.88	(1)8193.06	9445.98	East Wire-1380 Level
East Wire	S. 89° 28'30"W.	12.72	- 0.12	- 12.72	8192.94	9433.26	West Wire-1380 Level
		- DROP FROM 1380 LEVEL TO 1630 LEVEL -					
					8193.06	9445.98	East Wire
East Wire	N. 18° 27'W.	18.47	+ 17.52	- 5.85	8210.58	9440.13	Spad B - 1630 Level
Spad B	N. 88° 54'W.	39.34	+ 0.76	- 39.33	8211.34	9400.80	5027 - 1630 Level
5027	N. 73° 16'30"W.	39.17	+ 11.27	- 37.51	8222.61	9363.29	5028 - 1630 Level
5028	S. 89° 00'30"E.	39.08	- 0.67	+ 39.07	8210.67	9439.87	1630 Spad-1630 Level
1630	S. 20° 14'E.	18.84	- 17.68	+ 6.52	8192.99	9446.39	East Wire-1630 Level
East Wire	S. 89° 31'W.	13.067	- 0.11	- 13.07	8192.88	9433.32	West Wire-1630 Level
		- DROP FROM 1630 LEVEL TO 1755 LEVEL -					
					8192.99	9446.39	East Wire
East Wire	N. 23° 33'W.	17.38	+ 15.93	- 6.94	8208.92	9439.45	5287 - 1755 Level
5287	N. 79° 38'30"E.	15.51	+ 2.79	+ 15.26	8211.71	9454.71	5286 - 1755 Level
5286	S. 87° 28'W.	46.51	- 2.06	- 46.46	8209.65	9408.25	5283 - 1755 Level
5283	N. 89° 57'E.	35.48	+ 0.03	+ 35.48	8209.68	9443.73	1755 Spad-1755 Level

PLUMBING MAYFLOWER SHAFT FROM 800 LEVEL TO 2000 LEVEL IN FIVE DROPS

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To 2000 Foot Level
1755	S. 09° 23'30"W.	17.016	- 16.79	- 2.78	8192.89	9446.51	East Wire-1755 Level
East Wire	S. 88° 48'40"W.	12.522	- 0.26	- 12.52	8192.63	9433.99	West Wire-1755 Level
		- DROP FROM 1755 LEVEL TO 1880 LEVEL -					
					8192.89	9446.51	East Wire
East Wire	N. 14° 08'30"W.	19.292	+ 18.71	- 4.71	8211.60	(2)9441.~~80~~ 77	5456 - 1880 Level
5456	N. 77° 50'W.	32.20	+ 6.79	- 31.48	8218.39	9410.32	5457 - 1880 Level
5457	N. 66° 19'30"W.	58.87	+ 23.64	- 53.92	8242.03	9356.40	5466 - 1880 Level
5466	S. 05° 13'W.	11.29	- 11.24	- 1.03	8200.36	9440.74	Spad (No Number)
Spad	S. 31° 07'E.	7.285	- 6.24	+ 3.76	8194.12	9444.50	Wire #1 - 1880 Level
Spad	S. 31° 07'E.	11.223	- 9.61	+ 5.80	8190.75	9446.54	Wire #2 - 1880 Level
		- DROP FROM 1880 LEVEL TO 2000 LEVEL -					
					8194.12	9444.50	Wire #1
Wire #1	(3)N. 31° 08'30"W.	6.363	+ 5.45	- 3.29	8199.57	9441.21	P-1 - 2000 Level
P-1	N. 19° 09'W.	20.64	+ 19.50	- 6.77	8219.07	9434.44	5585 - 2000 Level

Note: (1) Recorded incorrectly on mine file sheets.

(2) An error in New Park records of 0.03 feet is "fudged" to be 9441.77 instead of 9441.80 to make the records of this report to agree with the mine survey records.

(3) A take-off triangle on the 2000 Level with measured sides is adjusted as follows:

Angle	Side Opposite
00° 00'36"	3.9494 ft.
00° 00'58"	6.363 ft.
179° 58'26"	10.3126 ft.

This accounts for the 00° 01'30" correction applied to survey.

TRAVERSE FROM SHAFT ON 2000 LEVEL
TO PEARL FISSURE DRIFT AND TO 908 RAISE ON PEARL SPLIT FISSURE

From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To
					8199.57	9441.21	P-1
P-1	N. 19° 09'W.	20.64	+ 19.50	- 6.77	8219.07	9434.44	5585
5585	S. 85° 50'W.	39.45	- 2.87	- 39.35	8216.20	9395.09	5587
5587	N. 84° 56'30"W.	84.84	+ 7.48	- 84.51	8223.68	9310.58	5588
5588	N. 60° 52'30"W.	99.02	+ 48.20	- 86.50	8271.88	9224.08	5589
5589	N. 64° 14'W.	156.60	+ 68.08	- 141.03	8339.96	9083.05	5590
5590	N. 67° 27'W.	103.67	+ 39.76	- 95.74	8379.72	8987.31	5592
5592	N. 76° 10'W.	38.36	+ 9.17	- 37.25	8388.89	8950.06	5601
5601	N. 23° 57'W.	97.38	+ 89.00	- 39.53	8477.89	8910.53	5665
5665	N. 00° 23'30"W.	106.63	+ 106.63	- 0.73	8584.52	8909.80	5666
5666	N. 51° 00'30"E.	22.27	+ 14.01	+ 17.31	8598.53	8927.11	5670
5670	N. 78° 59'30"E.	58.35	+ 11.14	+ 57.28	8609.67	8984.39	5671
5671	N. 61° 06'E.	96.12	+ 46.45	+ 84.15	8656.12	9068.54	5673
5673	N. 79° 45'E.	119.75	+ 21.31	+ 117.84	8677.43	9186.38	5674
5674	N. 62° 05'E.	39.88	+ 18.67	+ 35.24	8696.10	9221.62	5675
5675	S. 64° 24'W.	62.53	- 27.02	- 56.39	8669.08	9165.23	5686
5686	S. 39° 36'W.	39.24	- 30.23	- 25.01	8638.85	9140.22	5687
5687	S. 56° 52'30"W.	70.70	- 38.64	- 59.21	8600.21	9081.01	5689 = "908 Raise"
5689	S. 49° 12'30"W.	57.01	- 37.25	- 43.16	8562.96	9037.85	5690

CALCULATION FROM DRIFT STATIONS NO. 5689 AND NO. 5773
TO INTERSECT LINE 1-4 AMMIE LODE, LOT 202

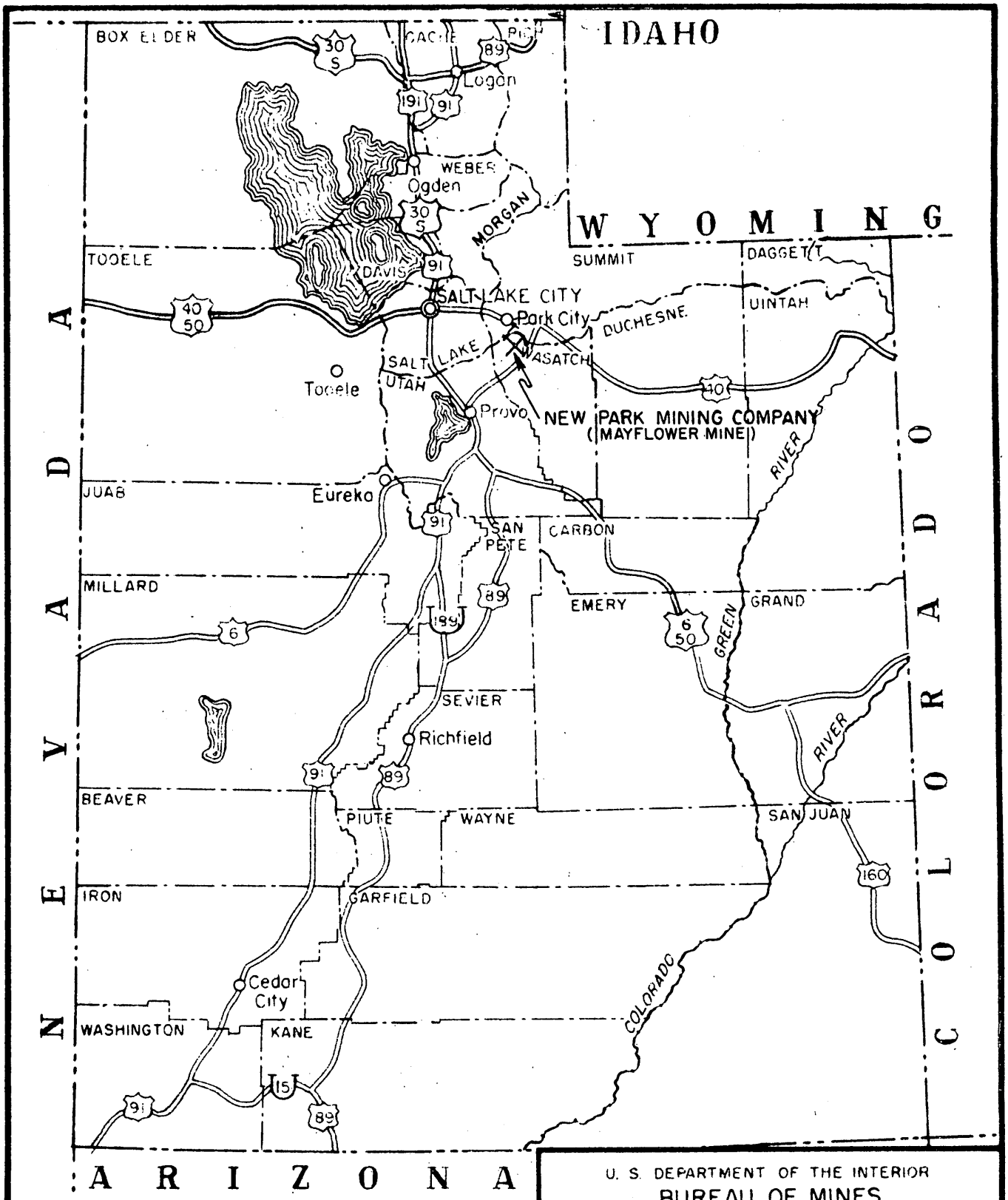
From	Bearing	Distance	Lat.	Dep.	Coordinates North	Coordinates East	To
					8941.04	9034.37	Cor. #1 Ammie - 202
Cor. 1/202	S. 09° 30'E.	528.00	- 520.75	+ 87.15	8420.29	9121.52	Cor. #4 Ammie - 202
			CALCULATION OF TRIANGLE				
					8600.21	9081.01	5689 = 908 Raise 2000 Level
5689	S. 12° 41'20"E.	184.42	- 179.92	+ 40.51	8420.29	9121.52	Cor. #4 Ammie - 202
Cor. 4/202	N. 09° 30'W.	188.62	+ 186.03	- 31.13	8606.32	9090.39	X
Xing - Drift	S. 56° 52'30"W.	11.20	- 6.11	- 9.38	8600.21	9081.01	5689

Line 1-4 Ammie Lode, Lot 202, crosses 2000 Level Pearl Split Drift at
Sta. 5687 + 59.50 ft. - (S. 56° 52'30"W.) or at
Sta. 5689 - 11.20 ft. - (N. 56° 52'30"E.)

			CALCULATION OF TRIANGLE				
					8656.12	9068.54	5673 - Pearl Drift
5673	S. 12° 39'40"E.	241.71	- 235.83	+ 52.98	8420.29	9121.52	Cor. #4 Ammie - 202
Cor. 4/202	N. 09° 30'W.	241.52	+ 238.20	- 39.86	8658.49	9081.66	X Line 5673-5674
Xing	S. 79° 45'W.	13.33	- 2.37	- 13.12	8656.12	9068.54	5673

Line crosses Pearl Drift at Sta. 5673 + 13.33 ft. - (S. 79° 45'W.)

* X - signifies intersection.



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 DMEA Docket No. 4981

Location Map

NEW PARK MINING COMPANY
MAYFLOWER MINE
WASATCH COUNTY, UTAH

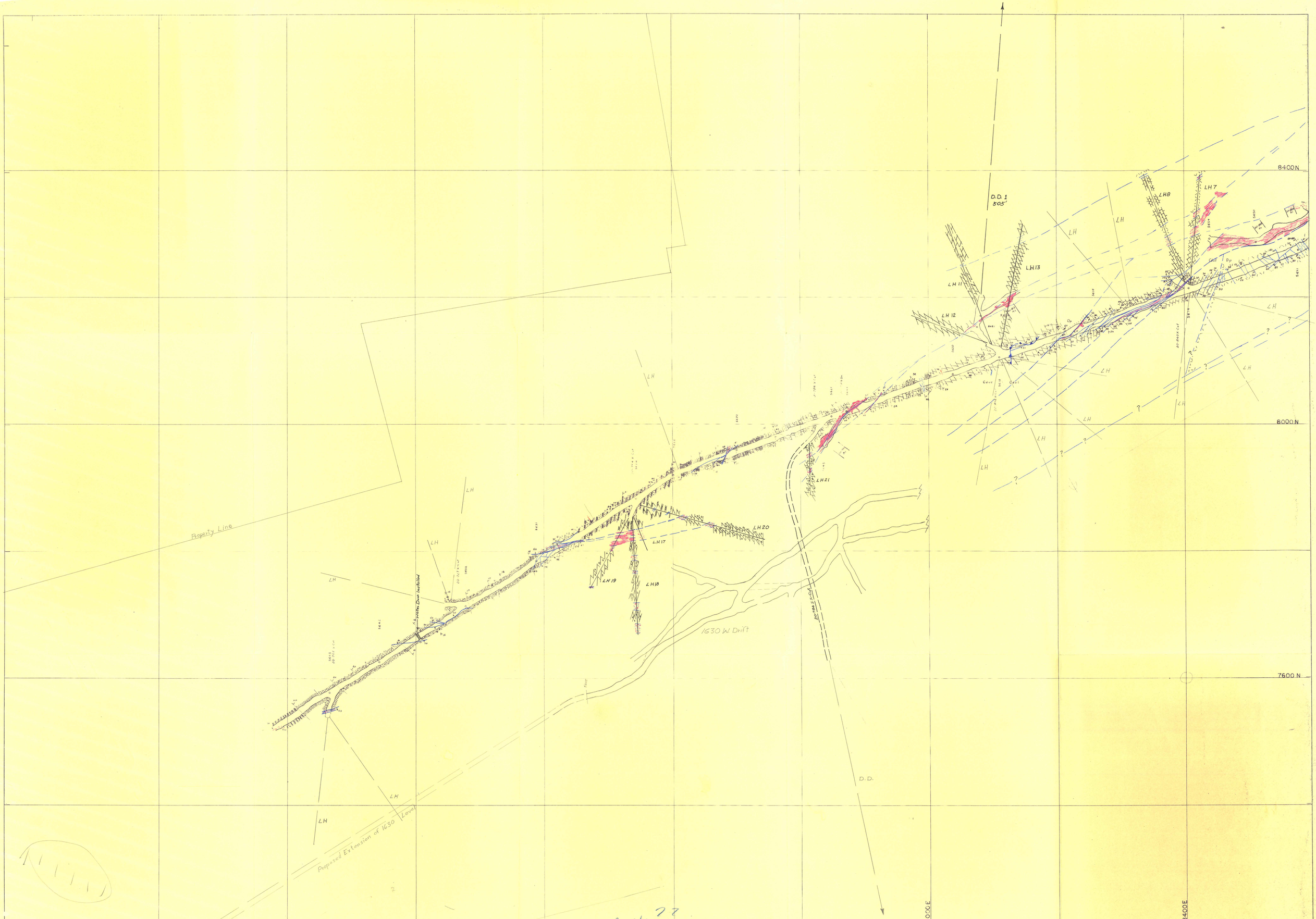
ENGINEER: M.H. HOWES	DATE: MAY 19, 1958
TRACED: MAY, 1958; A.P.T.S.	1500-1230-G
CHECKED:	

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 29 19
DATE | INITIALS

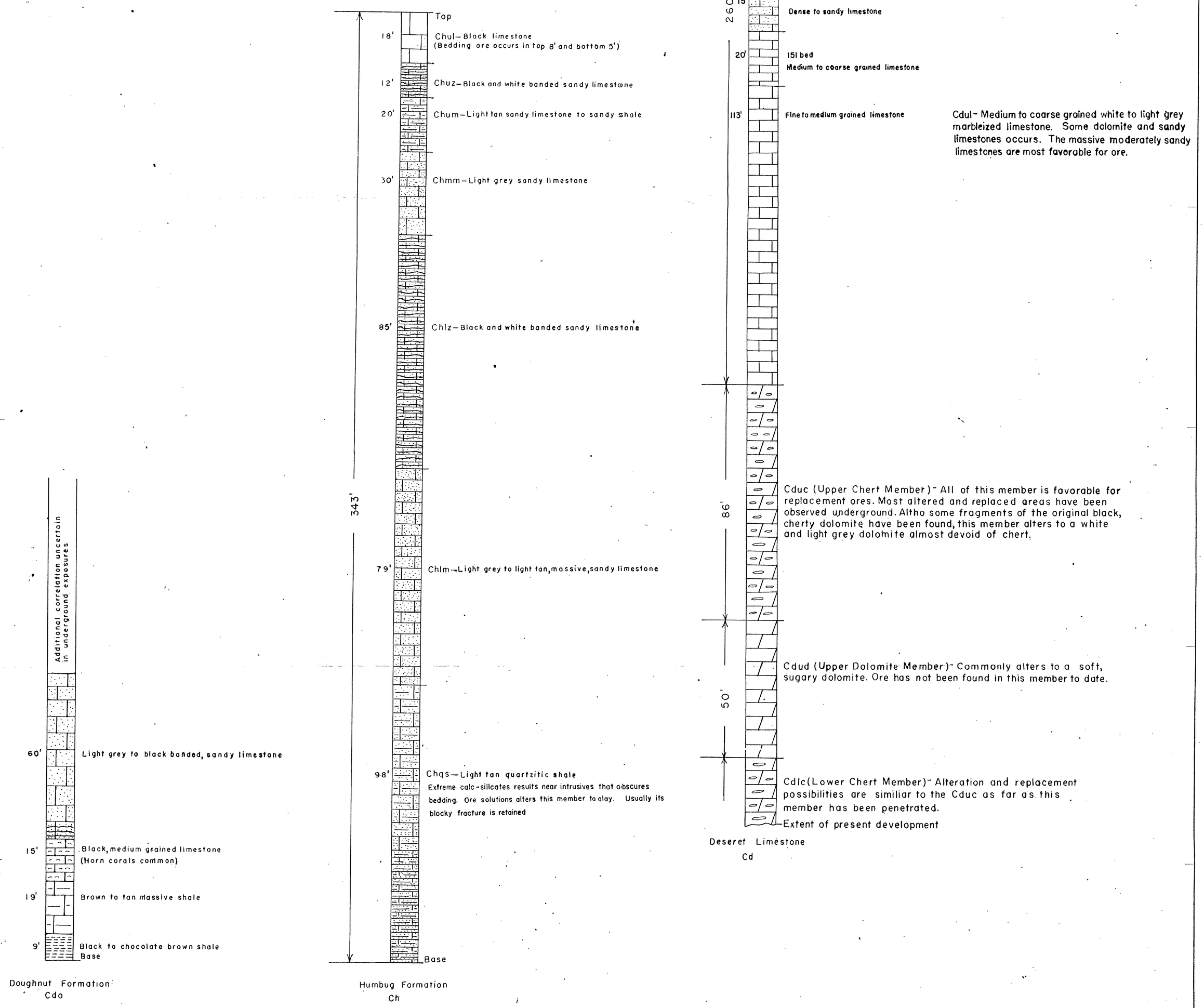
FIGURE 10.--LONGITUDINAL SECTION ALONG THE MAYFLOWER-PEARL FISSURE SYSTEM SHOWING RECOMMENDED EXPLORATION, MAYFLOWER MINE, WASATCH COUNTY, UTAH.

DATE 1958	SECTION Longitudinal Section E (DMEA Report)	PLAN	PLACE NEW PARK MINING COMPANY
BY Bauer	LOOKING N 25 W	SCALE 1" = 200'	KEETLEY, UTAH FILE NO.

"PEMBROKE CO." - #166 PHOENIX



Reg. III. Memo 3/29/61 Folder #1



PLACE Mayflower Mine	Stratigraphic Section Exposed In New Parks 800 To 1755 Levels To Date
NEW PARK MINING COMPANY	SCALE 1"=20'
KEETLEY, UTAH	DATE 1958
FILE NO.	BY Annes
	LOOKING
	SECTION Map I

FIGURE 9.--STRATIGRAPHIC SECTION EXPOSED TO MAY 1958, IN THE 800 TO 1755 LEVELS, MAYFLOWER MINE, WASATCH COUNTY, UTAH

PEMBROKE CO. - Z-166 PHOENIX

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

EXAMINATION REPORT
DMEA 4981

PREPARED FOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

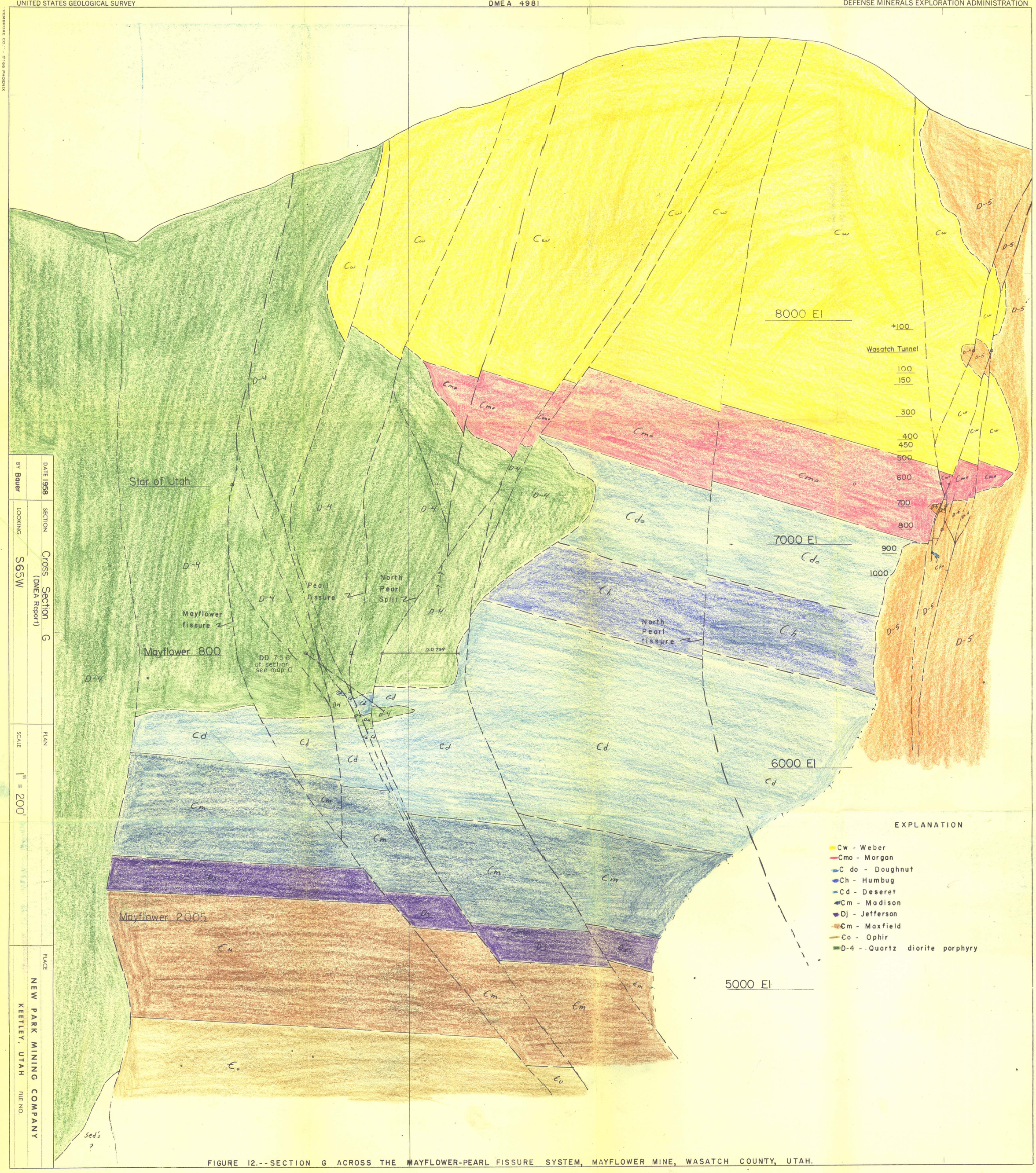


FIGURE 12.--SECTION G ACROSS THE MAYFLOWER-PEARL FISSURE SYSTEM, MAYFLOWER MINE, WASATCH COUNTY, UTAH.

"PEMBROKE CO." #166 PHOENIX

DATE 1958	SECTION Cross Section G (DMEA Report)
BY Bauer	LOOKING S65W
SCALE 1" = 200'	PLAN
PLACE NEW PARK MINING COMPANY KEETLEY, UTAH	FILE NO.

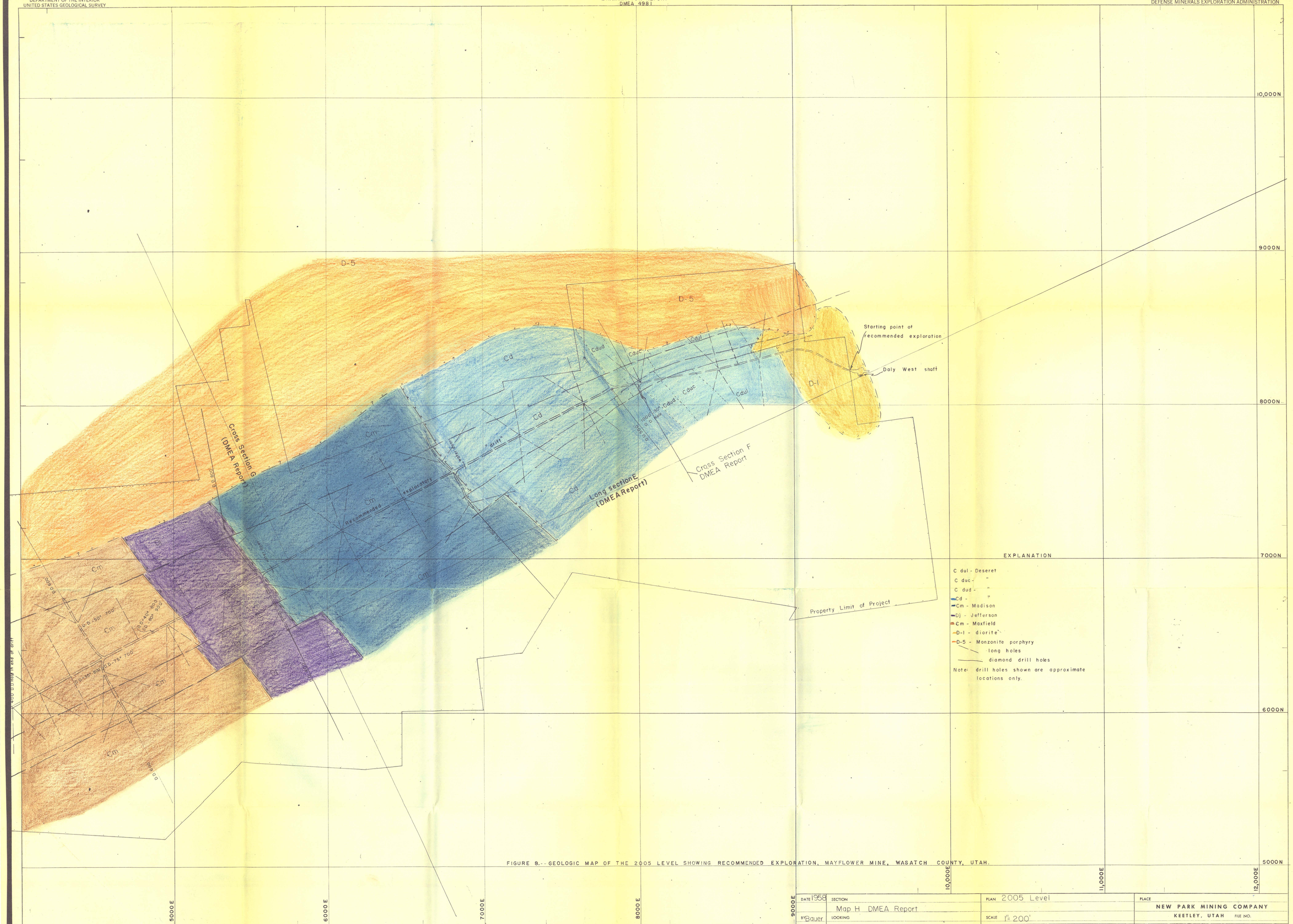


FIGURE 8.--GEOLOGIC MAP OF THE 2005 LEVEL SHOWING RECOMMENDED EXPLORATION, MAYFLOWER MINE, WASATCH COUNTY, UTAH.

"PEMBROKE CO." - Z166 PHOENIX

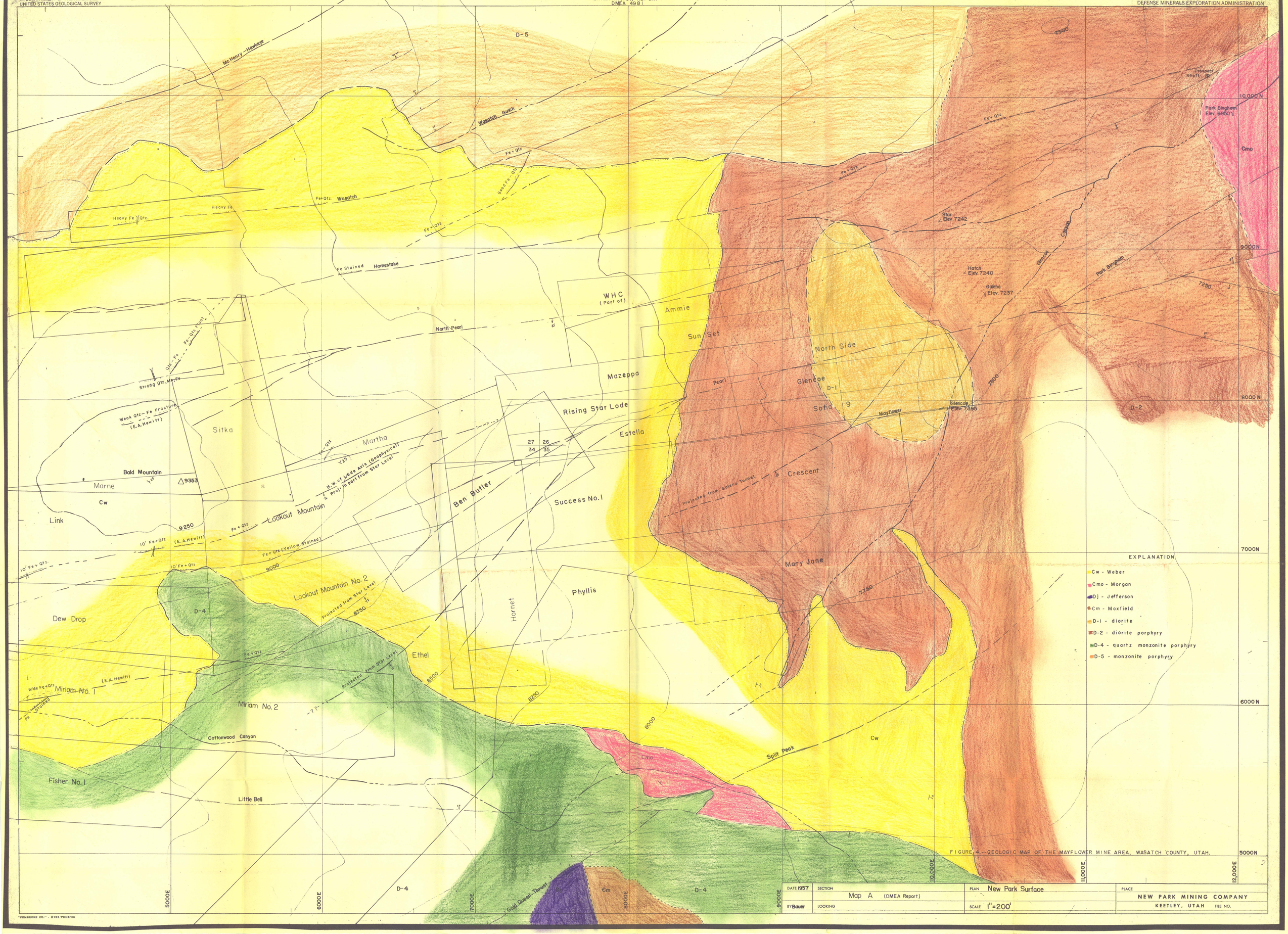


FIGURE 4.--GEOLOGIC MAP OF THE MAYFLOWER MINE AREA, WASATCH COUNTY, UTAH.

DATE 1957	SECTION	PLAN New Park Surface	PLACE
	Map A (DMEA Report)		NEW PARK MINING COMPANY
BY Bauer	LOOKING	SCALE 1"=200'	KEETLEY, UTAH FILE NO.

"PEMBROKE CO." - #166 PHOENIX

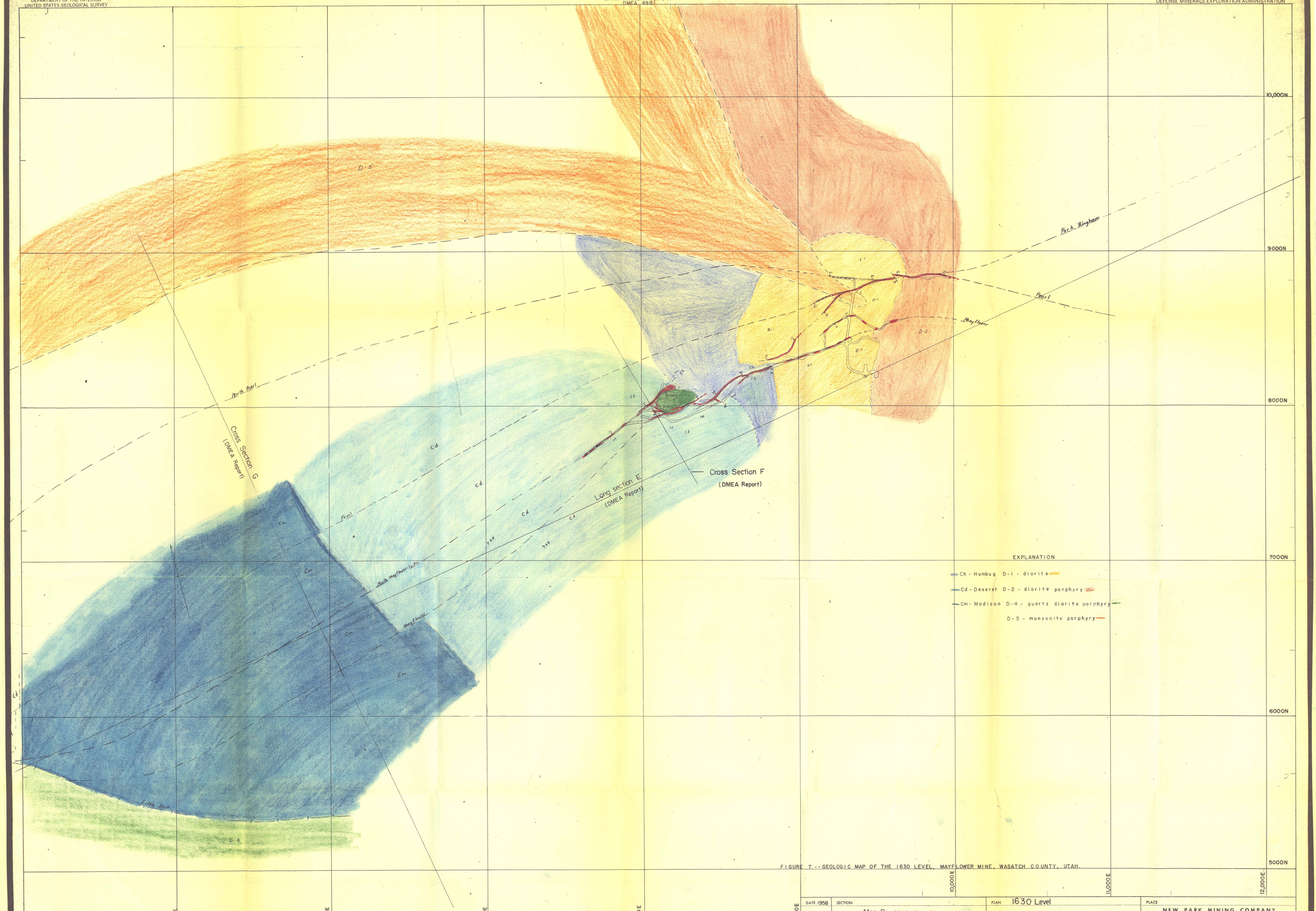


FIGURE 7.--GEOLOGIC MAP OF THE 1630 LEVEL, MAYFLOWER MINE, WASATCH COUNTY, UTAH.

DATE 1958	SECTION	PLAN 1630 Level	PLACE
	Map D (DMEA Report)		NEW PARK MINING COMPANY
BY Bauer	LOOKING	SCALE 1"=200'	KEETLEY, UTAH FILE NO.

"PEMBROKE CO." - 2168 PHOENIX

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

EXAMINATION REPORT
DMEA 498

PREPARED FOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

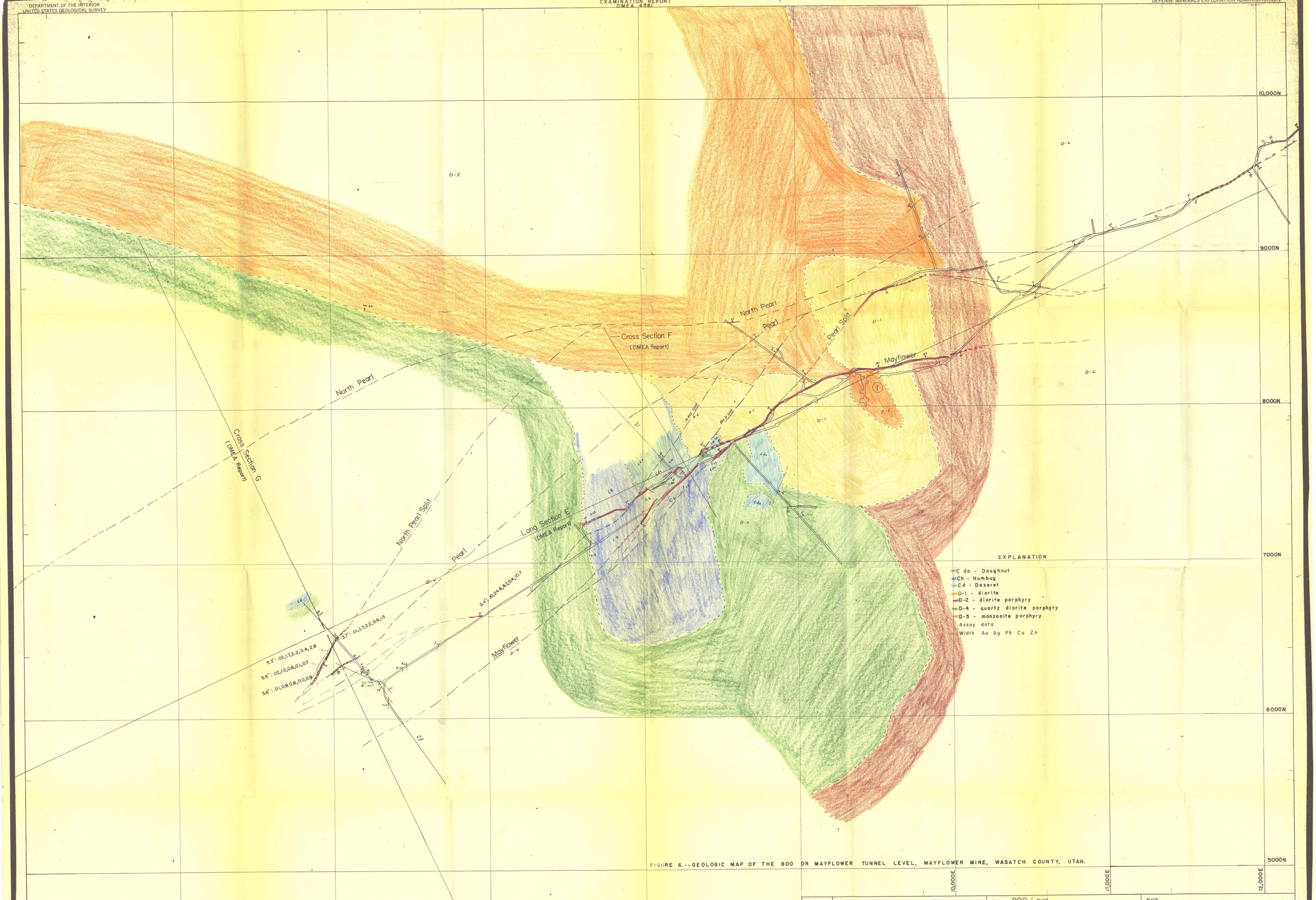
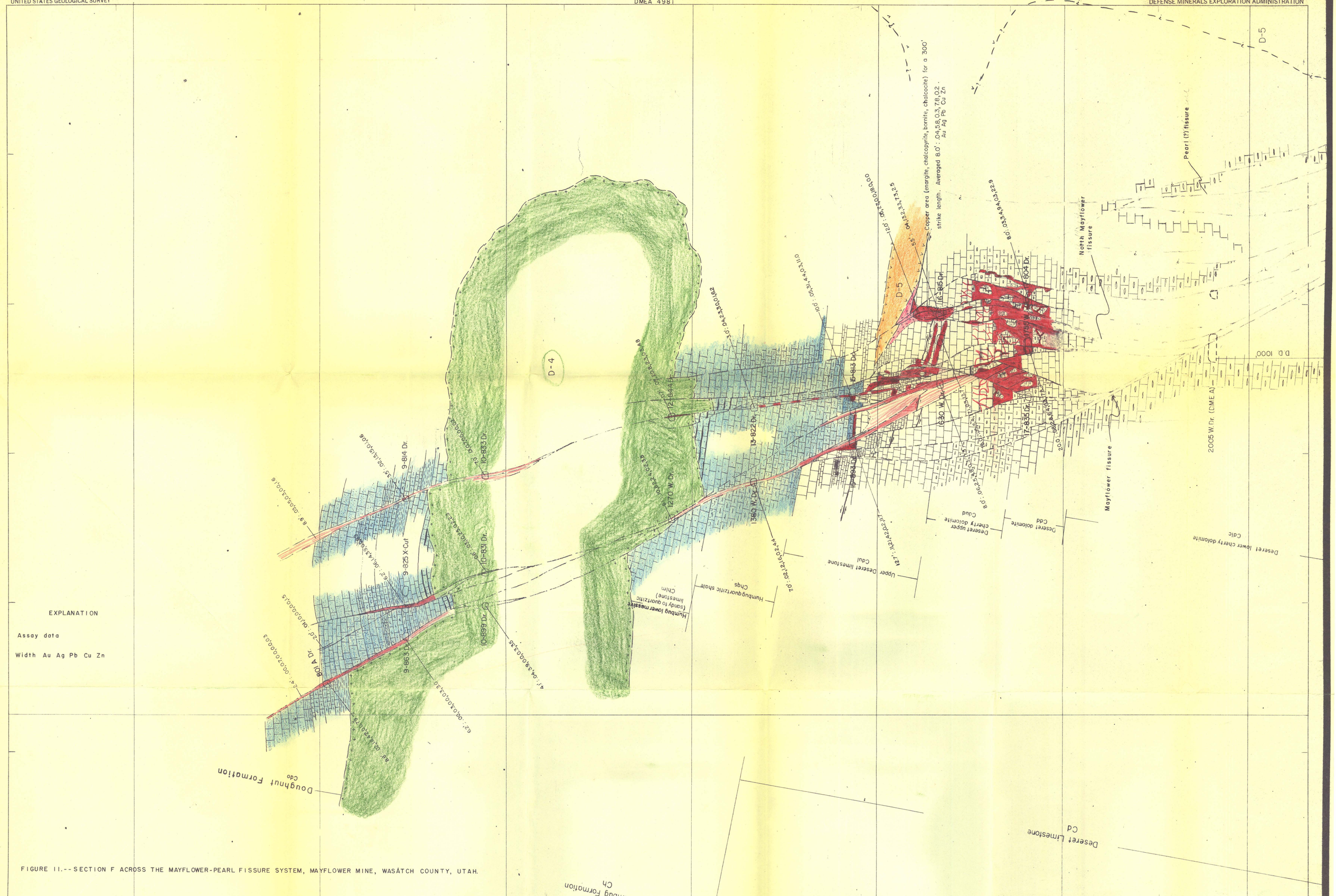


FIGURE 6.--GEOLOGIC MAP OF THE 800 OR MAYFLOWER TUNNEL LEVEL, MAYFLOWER MINE, WASATCH COUNTY, UTAH.

DATE 1958	SECTION	PLAN 800 Level	PLACE
	Map C (DMEA Report)		NEW PARK MINING COMPANY
BY Bauer	LOOKING	SCALE 1" = 200'	KEETLEY, UTAH FILE NO.

"PEMBROKE CO." - 2166 PHOENIX



EXPLANATION

Assay data

Width Au Ag Pb Cu Zn

FIGURE 11.--SECTION F ACROSS THE MAYFLOWER-PEARL FISSURE SYSTEM, MAYFLOWER MINE, WASATCH COUNTY, UTAH.

DATE 1958	SECTION	PLAN	PLACE
BY Archer	Cross Section F (DMEA Report) LOOKING S 65° W	SCALE 1" = 50'	NEW PARK MINING COMPANY KEETLEY, UTAH FILE NO.

"PEMBROKE CO." - #166 PHOENIX

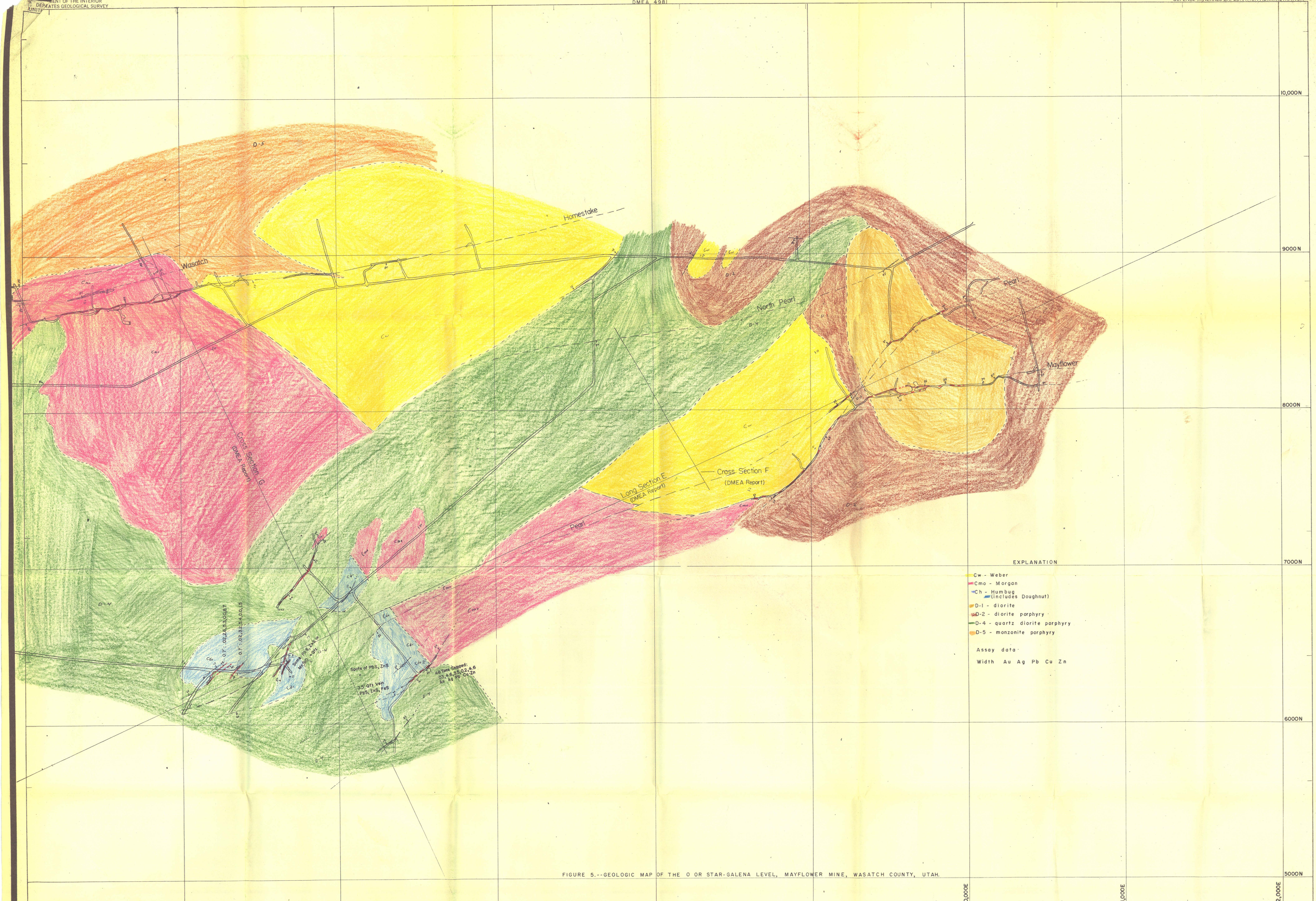


FIGURE 5.--GEOLOGIC MAP OF THE O OR STAR-GALENA LEVEL, MAYFLOWER MINE, WASATCH COUNTY, UTAH.

DATE 1958	SECTION	PLAN Star-Galena Level	PLACE
	Map B (DMEA Report)		NEW PARK MINING COMPANY
BY Bauer	LOOKING	SCALE 1"=200'	KEETLEY, UTAH FILE NO.

"PEMBROKE CO." - 2166 PHOENIX

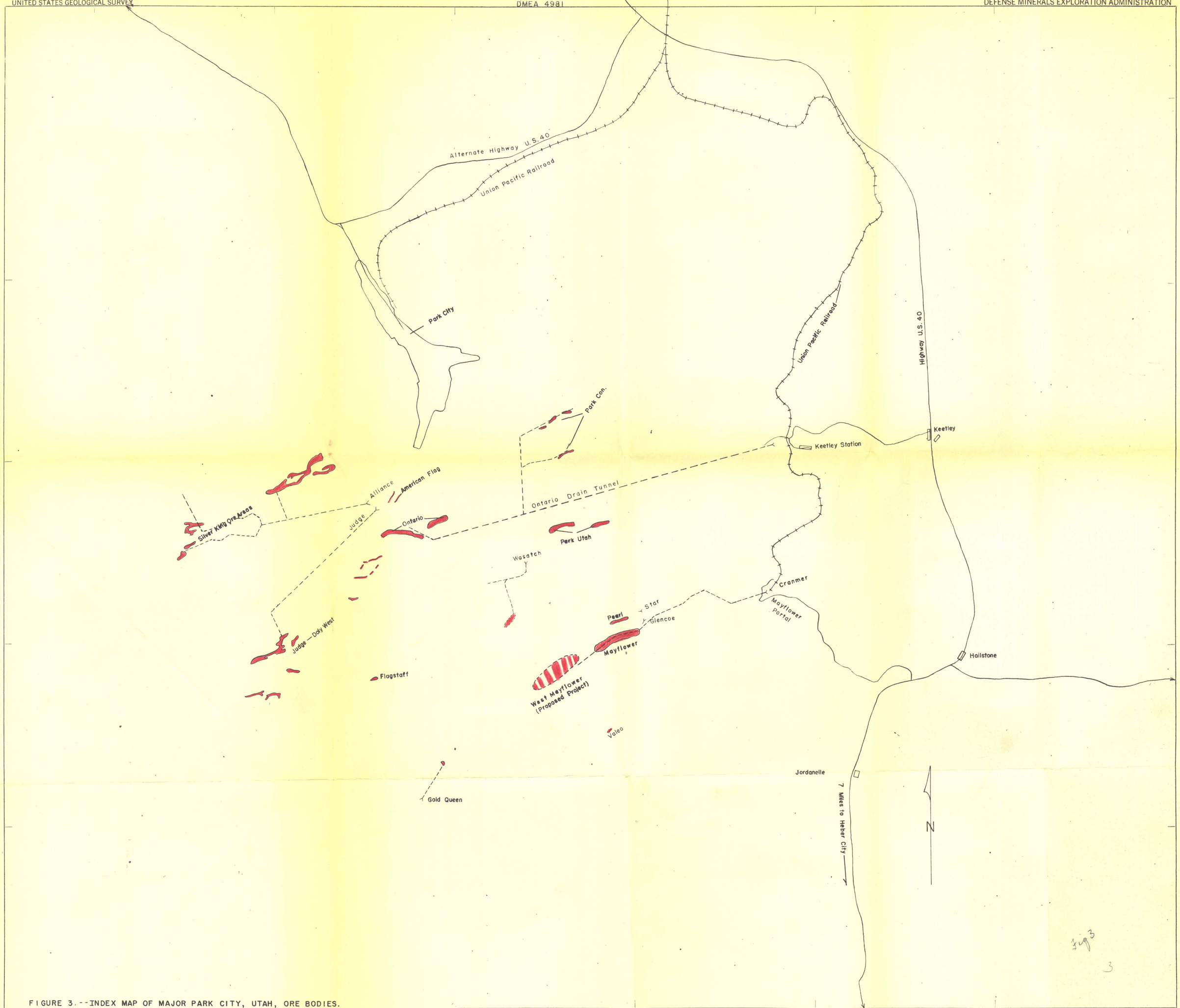
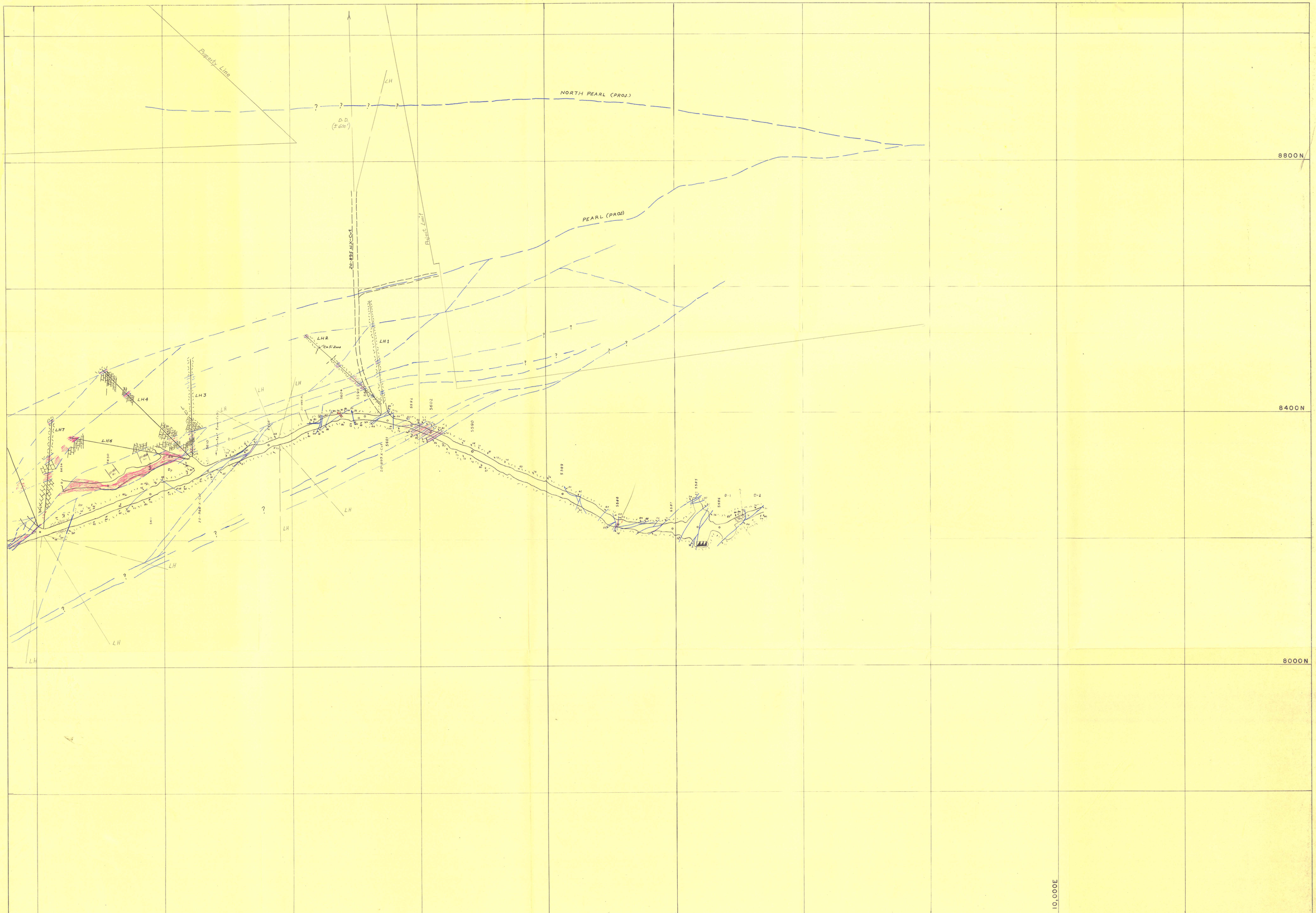


FIGURE 3.--INDEX MAP OF MAJOR PARK CITY, UTAH, ORE BODIES.

DATE 1958	SECTION	PLAN Fig. 1 (DMEA Report)	PLACE
BY Bauer	LOOKING	SCALE 1" = 2000'	NEW PARK MINING COMPANY KEETLEY, UTAH FILE NO.

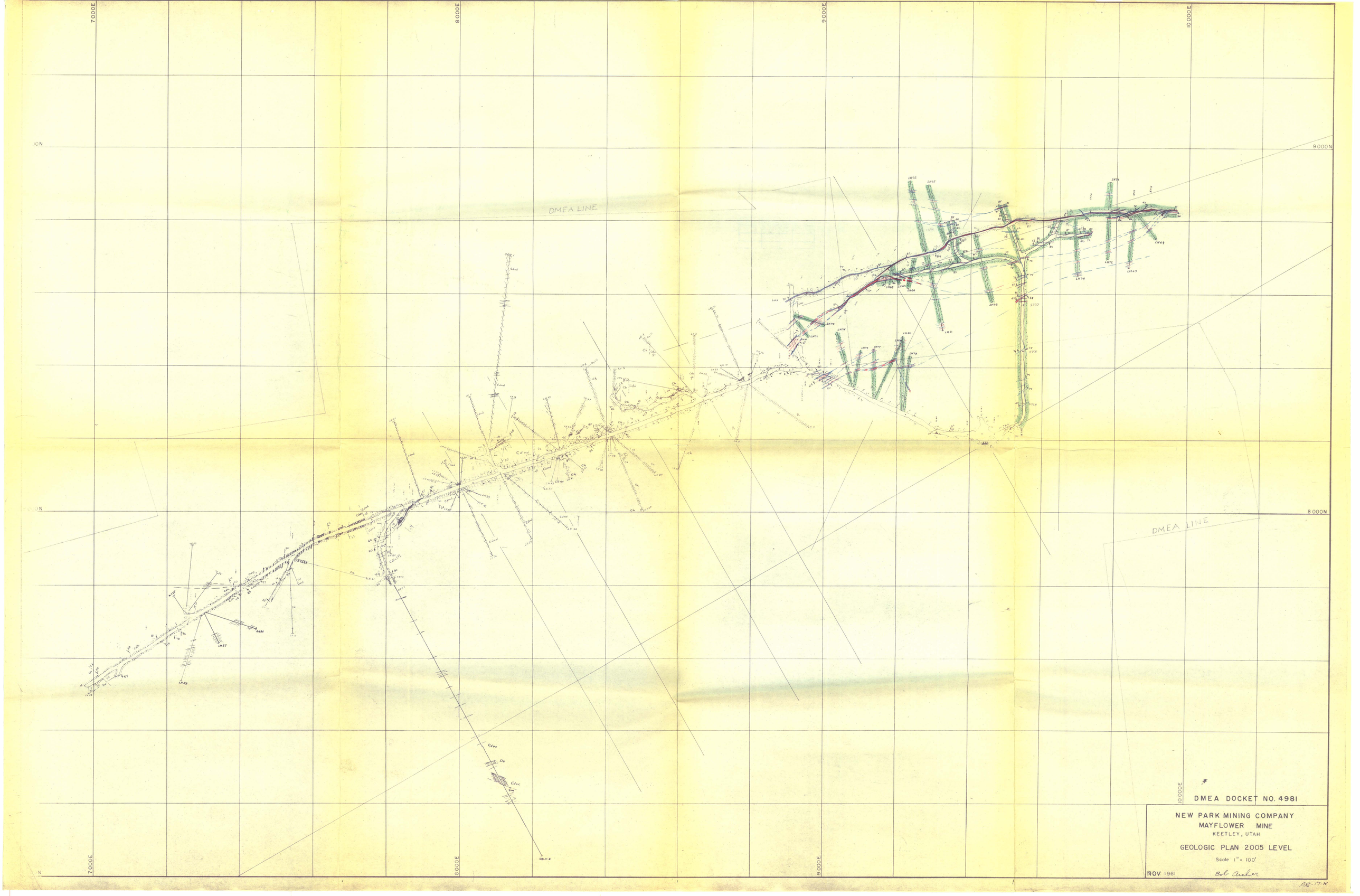
"PEMBROKE CO." - #166 PHOENIX

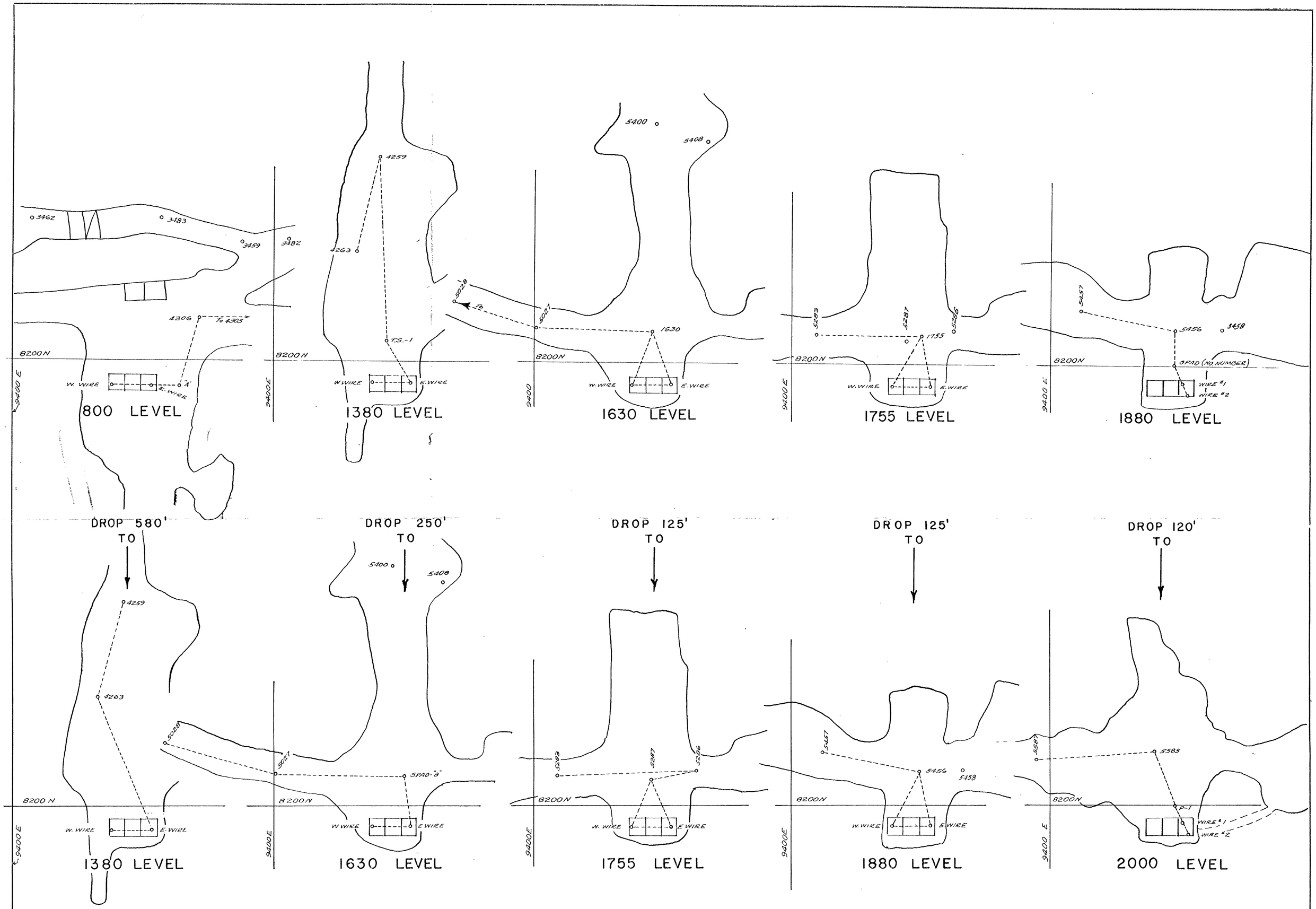


DATE	SECTION	PLAN 2005 LEVEL	PLACE MAYFLOWER MINE
	DMEA DOCKET No. 4981	GEOLOGY	NEW PARK MINING COMPANY
BY	LOOKING	SCALE 1" = 50'	KEETLEY, UTAH FILE NO.

"PEMBROKE CO." - Z166 PHOENIX

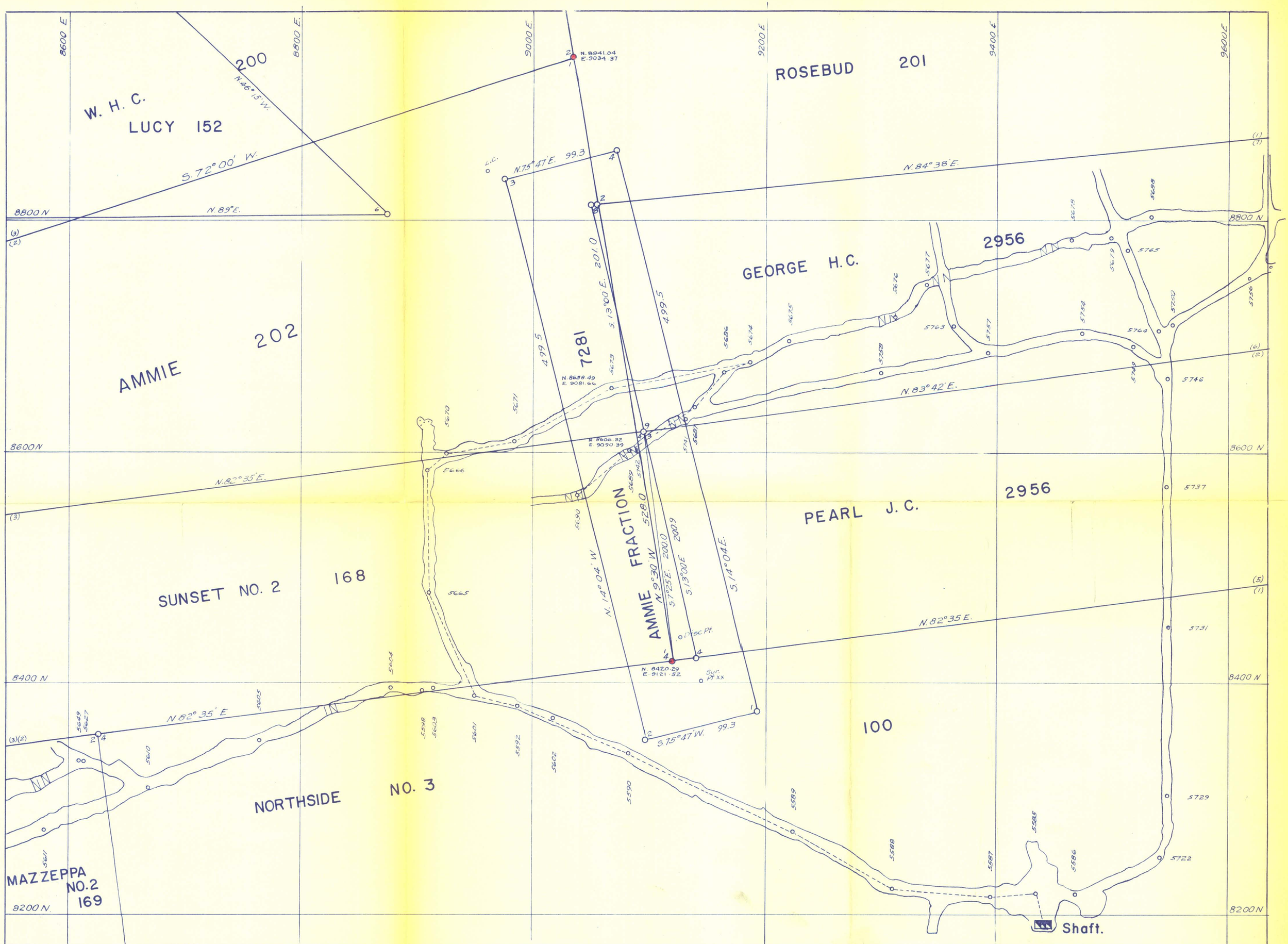
Reg. III Memo 3/29/61 Folder #1


7000E
8000E
9000E
10000E
9000N
8000N
DMEA LINE
DMEA LINE
DMEA DOCKET NO. 4981
NEW PARK MINING COMPANY
MAYFLOWER MINE
KEETLEY, UTAH
GEOLOGIC PLAN 2005 LEVEL
Scale 1" = 100'
NOV. 1961
Bob Archer
AR-17-K



REVISIONS	REFERENCES	WORK				
	To accompany report and survey to determine position of Annie lode – line 1-4 on 2000 Level.	DRAWN C.R. Hagen	6/14/63	HECLA MINING CO.	SHAFT PLUMBING MAYFLOWER MINE	SCALE 1" = 20'
		TRACED				C-503
		CHECKED				
		APPROVED				

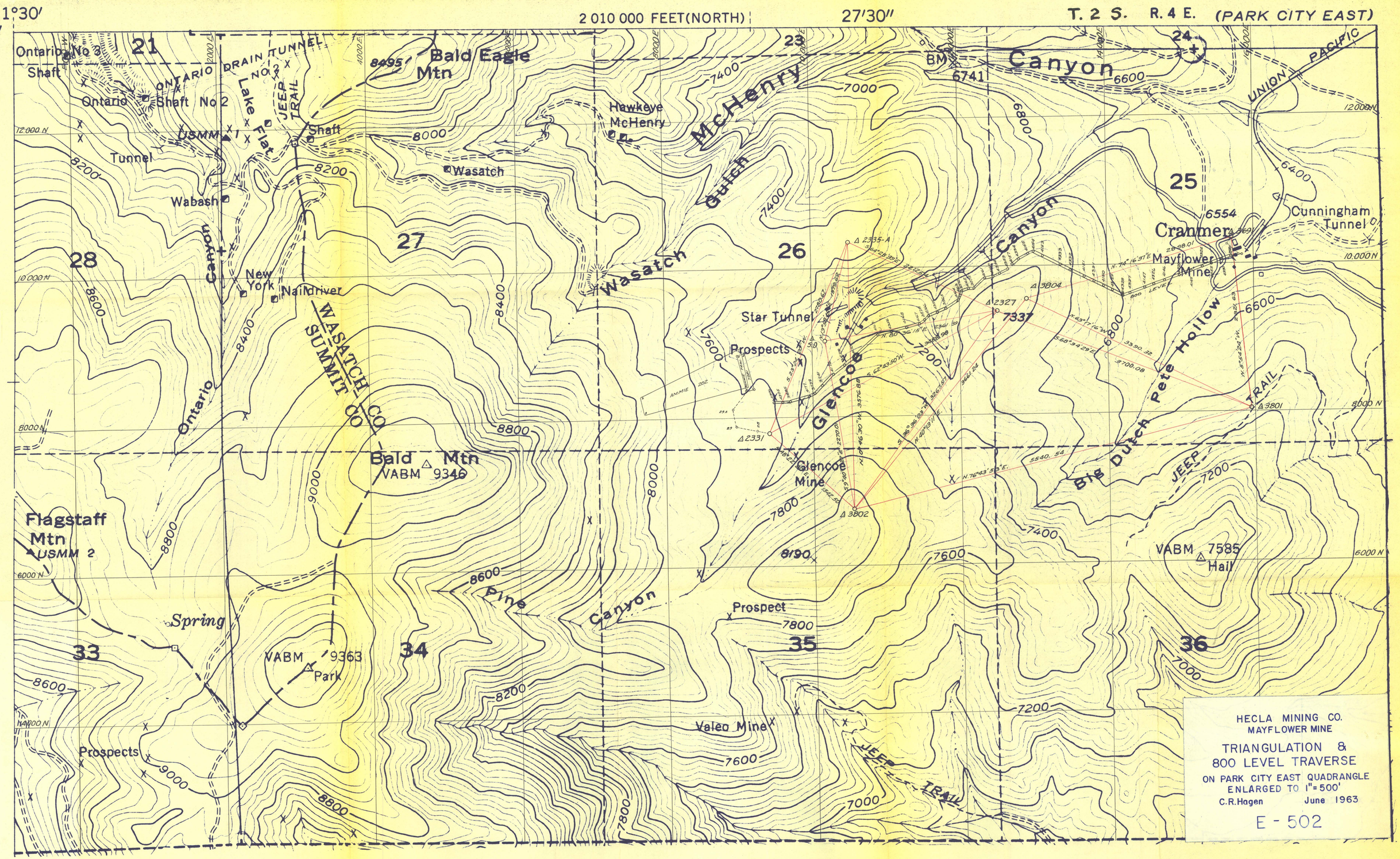
SALT LAKE BLUE



REVISIONS	REFERENCES	WORK		
	FROM PATENT SURVEYS AND MINE SURVEYS	DRAWN C.R. Hagen 6/1963	HECLA MINING CO. Mayflower Mine	MINING CLAIMS SUPERIMPOSED UPON 2000 LEVEL
		TRACED		SCALE 1" = 50'
		CHECKED		C- 501
		APPROVED		

SALT LAKE BLUE

© 29-A


111°30′
40°37′30″
2 010 000 FEET (NORTH)
27′30″
T. 2 S. R. 4 E. (PARK CITY EAST)
Ontario No 3 Shaft
21
ONTARIO DRAIN TUNNEL NO 2
Bald Eagle Mtn
8495
23
24
BM 6741
McHenry Canyon
UNION PACIFIC
Ontario Shaft No 2
Lake Flat
JEEP TRAIL
Shaft
USMM 1
Tunnel
Wabash
Hawkeye McHenry
Wasatch
McHenry Gulch
25
6554
Cranmer
Cunningham Tunnel
Mayflower Mine
Canyon
28
27
26
New York
Naildriver
Wasatch
Canyon
Star Tunnel
Prospects
Glencoe
Pete Hollow
Big Dutch
WASATCH SUMMIT CO
Ontario
Bald Mtn
VABM 9340
Glencoe Mine
JEEP TRAIL
Flagstaff Mtn
USMM 2
VABM 7585
Hall
Spring
Pine Canyon
Prospect
33
VABM 9363
Park
34
35
36
Prospects
Valeo Mine
JEEP TRAIL
HECLA MINING CO.
MAYFLOWER MINE
TRIANGULATION &
800 LEVEL TRAVERSE
ON PARK CITY EAST QUADRANGLE
ENLARGED TO 1"=500'
C.R.Hagen June 1963
E - 502