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FROM : GEOFF WOAD

SOUTHERN GEORGINA BASIN BORE HOLE SAMPLING

Introduction

The 1988 N.T.G.S. explanatory notes for the Elkedra 1:250,000 sheet contains information in Appendix 3 about stratigraphic diamond drill holes cored into the southern part of the Georgina Basin (Fig. 1) in 1986. The sediments intersected are largely Cambrian in age with minor Devonian and Mesozoic units. They consist of conglomerates, sandstones, siltstones, mudstones, calcareous clastic sediments, limestones and evaporites. The drill logs indicate carbonaceous units, silicification and brecciation. The mineral occurrences logged include pyrite, galena, sphalerite, chalcopyrite, fluorite and hydrocarbons. The core had never been sampled and analysed for either precious or base metals.

Regional Structure

From Stidolph et al (1988), the Early Proterozoic basement (Hatches Creek Group) forms a series of large synclines and anticlines which have a dominantly northwest trend. These folds were refolded about northeasterly axes to produce complex arcuate domes and basins. Numerous large and small faults, some marked by quartz veins, displace the Hatches Creek Group. Several major faults trend northwest across the middle of Elkedra. The dip of the faults is unknown but nearly all have a northeast side down displacement with variable strike slip. Several are associated with prominent arcuate spur faults which curve to the north and northeast. These faults are part of a suite of northwest-trending faults and monoclines which have similar characteristics. The age of this faulting is not known, but those faults that displace the Hatches Creek Group are believed to have formed during the late stages of deformation of the Hatches Creek Group. Some of the faults must also have been reactivated much later, initially in the Early Cambrian when regional tectonism and volcanism occurred. The faults were again activated during the Alice Springs Orogeny at about 300 - 400 Ma (Fig. 2).

Mineralisation Potential and Geochemistry

The occurrence of carbonaceous calcareous clastic sediments with fluorite, fine pyrite and hydrocarbons associated with large reactivated basement

faults suggests the possibility for Carlin style gold mineralisation (even though there is an absence of acid volcanics or intrusives into the sequence). On this basis the diamond core was sampled by compositing quarter-core over 5 or 10 m and analysing for Au, Pd, Cu, Pb, Zn, Ni, As and Ag. The raw geochemical data are shown in Appendix 1 and the graphic drill logs are shown in Appendix 2. Univariate statistics were performed on the geochemical data and the results are summarised in Table 1.

TABLE 1

UNIVARIATE STATISTICS SUMMARY OF GEOCHEMISTRY

ELEMENT	DETECTION LIMIT (ppm)	95th PERCENTILE (ppm)	99th PERCENTILE (ppm)	HIGHEST VALUE (ppm)	THRESHOLD FROM CUM FREQ PLOT (ppm)
Au	0.01	0.01	0.03	0.04	0.02
PD	0.01	0.01	0.01	0.01	-
Cu	2	27	63	170	70
Pb	5	32	49	214	40
Zn	2	66	296	335	75
As	2	10	31	53	12
Ag	1	1	1	1	-
Ni	5	28	64	133	30

Discussion of the Geochemistry

Carlin style mineralisation is characterised by an association of micron to submicron sized Au with As, Sb, Hg, Tl, Ba, F and in places W, Mo and Sn, but is deficient in base metals (Berger and Bagby, 1991). It was decided that Au and As would be the most appropriate to analyse for Carlin style mineralisation along with Zn, Pb, Cu, Ag, Pd and Ni to test for base metal potential.

In the core analysed only 10 samples out of 228 reported gold values above the detection limit of 10 ppb. The highest of these was 10 m at 40 ppb Au. Only two of the anomalous gold values were also associated with weakly anomalous arsenic values. The weakly anomalous gold is variably associated with calcareous clastic units, dololutites, carbonaceous clastic sediments, calcilutites, some evaporites and traces of pyrite. The majority of the elevated base metals are broadly associated with the carbonaceous calcareous clastic sediments, with Zn and Pb up to 335 ppm and 214 ppm respectively. Some elevated values of Ni were associated with

elevated Zn and Pb values, but also occurred (up to 133 ppm) away from high base metals.

One occurrence of anomalous Cu (170 ppm) occurred in clastic and carbonaceous units within an unnamed late Proterozoic unit rather than in the Cambrian sequence.

No anomalous Pd or Ag was observed.

Conclusion

The weakly anomalous gold and base metals are considered too low to justify any further work within the general vicinity of these bore holes at present.

References

Berger, B.R., and Bagby, W.C., 1991: The geology and origin of Carlin-type gold deposits. In Gold Metallogeny and Exploration, ed. Foster, R.P., Blackie, Glasgow, pp 210 - 248.

Stidolph, P.A., Bagas, L., Donnellan, N., Walley, A.M., Morris, D.G., and Simons, B., 1988: Elkedra, N.T., 1:250,000 Geological Series. Northern Territory Geological Survey, Explanatory Notes, S.F. 53-7.

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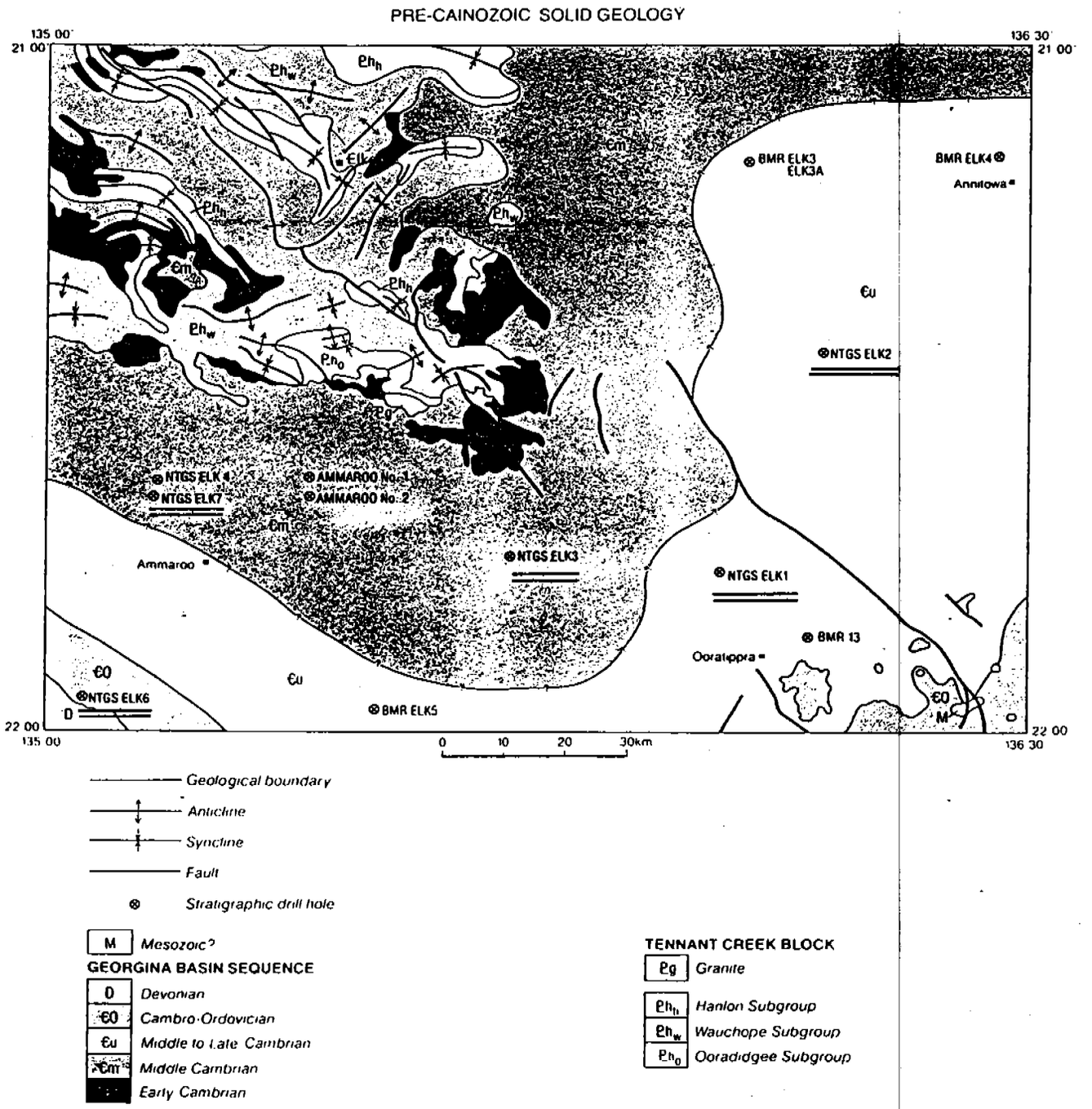
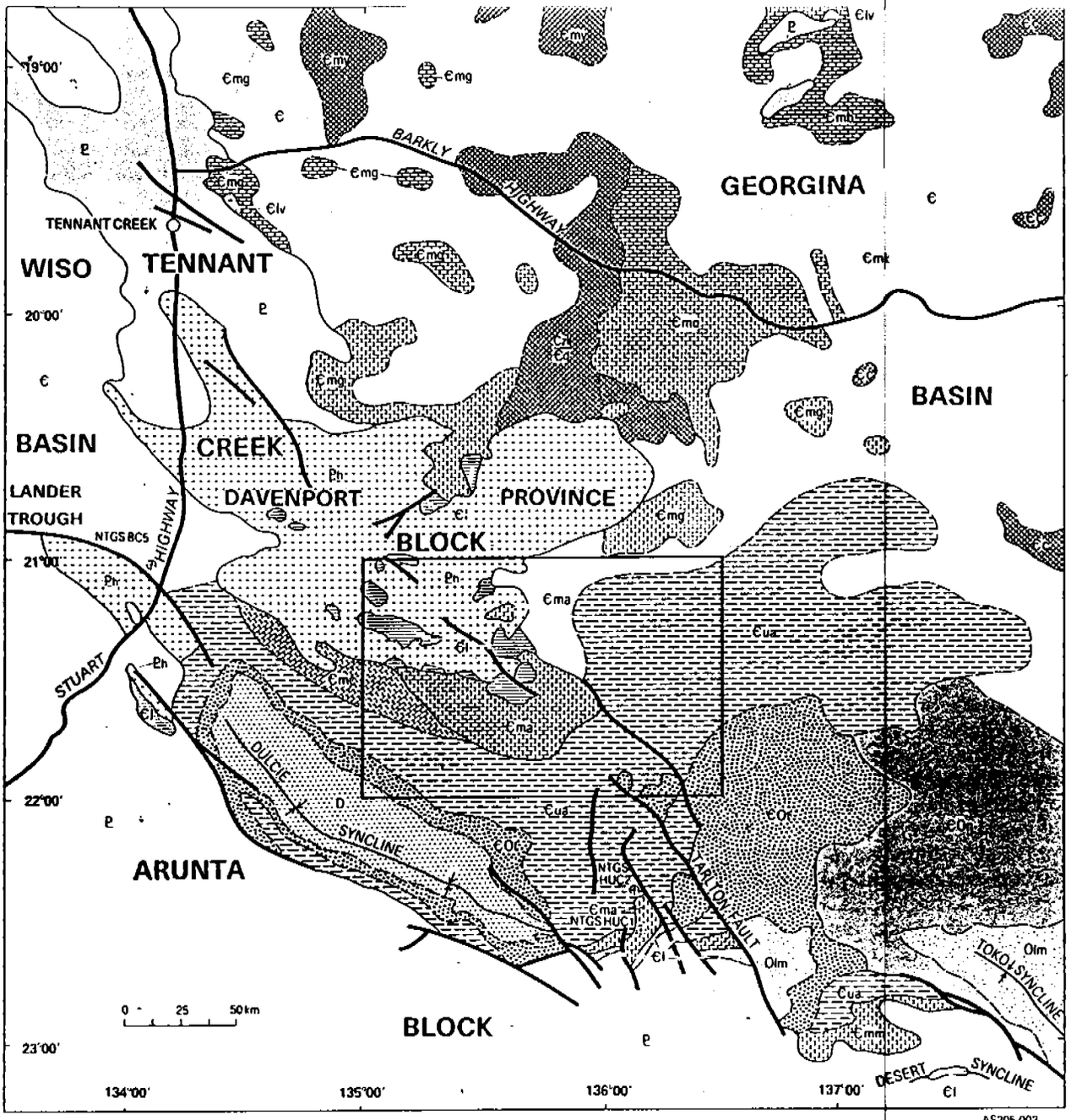


Figure 1. Borehole location plan, Elkedra 1:250000 Sheet notes.



DEVONIAN	D	Dulcie Sandstone
ORDOVICIAN	Olm	Kelly Creek Fm., Coolibah Fm., Nora Fm., Carlo Sst. Mithaka Fm., Ethabuka Sst.
CAMBRO-ORDOVICIAN	€Oc	Tomahawk beds
	€On	Ninmaroo Formation
UPPER CAMBRIAN	€ua	Arrinthrunga Formation (includes Meeta beds)
	€my	Anthony Lagoon beds
	€mc	Chabalowe Formation
	€mb	Burton beds
MIDDLE CAMBRIAN	€mk	Ranken Limestone
	€ma	Arthur Creek Formation
	€mm	Hay River Formation and Marqua Formation
	€mg	Gum Ridge Formation
LOWER CAMBRIAN	€lv	Helen Springs Volcanics; Peaker Piker Volcanics
	€l	Donkey Creek beds; Andagera Fm; Mount Baldwin Fm; Errarra Fm; Adam Shale; Red Heart Dolomite.
CAMBRIAN	€c	Camooweal Dolomite
	€c	Undifferentiated dolostone (Czk-Cainozoic calcrete cover)
	€	Undifferentiated
PROTEROZOIC	Ph	Hatches Creek Group
	P	Undifferentiated

Cainozoic cover omitted

Fault

Syncline

Geological boundary, approximate

stratigraphic drillhole

Figure 2. Regional geology map, From Elkedra 1:250,000 NTGS notes.

APPENDIX 1

Geochemistry for Bore Holes
ELK1, 2, 3, 6, 7, 7A

HOLE NAME	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	ZN ppm	PB ppm	CU ppm	AG ppm	AS ppm	NI ppm	AU ppm	AU_R ppm	PD ppm
ELK001	DD1451	3.80	9.00	18	37	24	1	5	20	0.03		0.01
	DD1452	9.00	14.00	15	33	13	1	3	20	0.01		0.01
	DD1453	14.00	19.00	34	30	20	1	5	20	0.01		0.01
	DD1454	19.00	24.00	19	23	18	1	5	11	0.01		0.01
	DD1455	24.00	29.10	7	5	10	1	2	6	0.01		0.01
	DD1456	29.10	34.80	8	5	9	1	3	5	0.01		0.01
	DD1457	34.80	39.80	14	5	13	1	4	10	0.04		0.01
	DD1458	39.80	45.10	20	9	9	1	2	10	0.01		0.01
	DD1459	45.10	55.31	25	5	12	1	4	11	0.01		0.01
	DD1460	55.31	65.15	17	9	9	1	2	6	0.01		0.01
	DD1461	65.15	75.25	11	7	6	1	2	5	0.01		0.01
	DD1462	75.25	85.15	10	8	5	1	2	5	0.01		0.01
	DD1463	85.15	95.65	7	5	7	1	2	5	0.01		0.01
	DD1464	95.65	105.50	5	5	6	1	2	5	0.01		0.01
	DD1465	105.50	115.45	9	8	7	1	4	5	0.01		0.01
	DD1466	115.45	125.10	10	5	7	1	2	5	0.01		0.01
	DD1467	125.10	135.52	6	5	5	1	4	5	0.01		0.01
	DD1468	135.52	150.00	5	5	5	1	2	5	0.01		0.01

HOLE NAME	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	ZN ppm	PB ppm	CU ppm	AG ppm	AS ppm	NI ppm	AU ppm	AU_R ppm	PD ppm
ELK002	DD1469	1.80	6.40	22	10	21	1	4	12	0.01		0.01
	DD1470	6.40	11.10	26	9	14	1	2	21	0.01		0.01
	DD1471	11.10	15.60	18	5	7	1	2	18	0.01		0.01
	DD1472	15.60	20.60	4	5	4	1	2	6	0.01		0.01
	DD1473	20.60	25.30	5	5	5	1	2	6	0.01		0.01
	DD1474	25.30	30.05	9	5	9	1	2	9	0.01		0.01
	DD1475	30.05	35.10	4	5	6	1	2	6	0.01		0.01
	DD1476	35.10	40.10	8	5	10	1	2	8	0.01		0.01
	DD1477	40.10	45.60	8	5	5	1	2	8	0.01		0.01
	DD1478	45.60	49.00	8	5	4	1	2	8	0.01		0.01
	DD1479	49.00	59.50	7	5	5	1	2	7	0.01		0.01
	DD1480	59.50	69.50	7	5	4	1	2	8	0.01		0.01
	DD1481	69.50	80.00	11	5	4	1	2	8	0.01		0.01
	DD1482	80.00	90.00	9	5	4	1	2	6	0.01		0.01
	DD1483	90.00	100.00	9	5	18	1	2	6	0.01		0.01
	DD1484	100.00	110.00	10	5	4	1	2	6	0.01		0.01
	DD1485	110.00	119.48	19	5	6	1	2	12	0.01		0.01
	DD1486	119.48	129.00	14	5	5	1	2	8	0.01		0.01
	DD1487	129.00	139.00	11	7	5	1	2	6	0.01		0.01
	DD1488	139.00	149.78	15	5	15	1	3	8	0.01		0.01
	DD1489	149.78	159.55	16	5	25	1	2	11	0.01		0.01
	DD1490	159.55	169.00	10	5	10	1	4	7	0.01		0.01
	DD1491	169.00	178.50	8	5	9	1	3	6	0.01		0.01
	DD1492	178.50	188.72	7	5	10	1	4	6	0.02		0.01
	DD1493	188.72	199.00	7	5	8	1	2	6	0.01		0.01
	DD1494	199.00	208.43	10	7	9	1	2	7	0.01		0.01
	DD1495	208.43	218.05	8	5	6	1	2	6	0.01		0.01
	DD1496	218.05	228.10	5	5	6	1	3	5	0.01		0.01
	DD1497	228.10	238.20	7	5	6	1	3	5	0.01		0.01
	DD1498	238.20	248.50	5	5	5	1	2	5	0.01		0.01
	DD1499	248.50	258.40	7	7	6	1	3	5	0.01		0.01
	DD1500	258.40	268.45	3	5	5	1	2	5	0.01		0.01
	DD1501	268.45	279.00	4	5	5	1	5	5	0.01		0.01
	DD1502	279.00	289.00	3	5	5	1	5	5	0.01		0.01
	DD1503	289.00	299.34	3	5	5	1	2	5	0.01		0.01
	DD1504	299.34	309.50	3	6	6	1	3	6	0.01		0.01
	DD1505	309.50	319.25	2	5	4	1	5	5	0.01		0.01
	DD1506	319.25	329.30	2	5	4	1	2	5	0.01		0.01
	DD1507	329.30	340.00	3	5	4	1	2	5	0.01		0.01
	DD1508	340.00	350.55	4	5	4	1	2	5	0.01		0.01
	DD1509	350.55	360.35	2	5	3	1	2	5	0.01		0.01
	DD1510	360.35	370.50	6	7	5	1	5	5	0.01		0.01
	DD1511	370.50	380.00	18	8	5	1	4	5	0.01		0.01
	DD1512	380.00	390.03	25	5	6	1	2	6	0.01		0.01
	DD1513	390.03	400.35	16	12	6	1	2	6	0.01		0.01
	DD1514	400.35	410.15	7	8	7	1	2	7	0.01		0.01
	DD1515	410.15	419.70	8	7	8	1	3	8	0.01		0.01
	DD1516	419.70	430.00	7	10	7	1	4	8	0.01		0.01
	DD1517	430.00	440.34	10	16	8	1	2	9	0.01		0.01
	DD1518	440.34	449.80	9	16	7	1	4	13	0.01		0.01
	DD1519	449.80	460.30	6	17	7	1	2	8	0.01		0.01
	DD1520	460.30	470.35	4	14	6	1	6	6	0.01		0.01

HOLE NAME	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	ZN ppm	PB ppm	CU ppm	AG ppm	AS ppm	NI ppm	AU ppm	AU_R ppm	PD ppm
ELK002	DD1521	470.35	480.30	3	18	5	1	6	6	0.01		0,01
	DD1522	480.30	490.35	39	6	5	1	5	5	0.01		0.01
	DD1523	490.35	500.15	72	53	5	1	4	6	0.01		0.01
	DD1524	500.15	510.00	39	20	5	1	3	6	0.01		0.01
	DD1525	510.00	514.90	302	18	6	1	7	8	0.01		0.01

HOLE NAME	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	ZN ppm	PB ppm	CU ppm	AG ppm	AS ppm	NI ppm	AU ppm	AU_R ppm	PD ppm
ELK003	DD1526	.00	5.42	8	32	7	1	5	7	0.01		0.01
	DD1527	5.42	10.60	15	15	8	1	7	10	0.01		0.01
	DD1528	10.60	15.97	27	15	10	1	6	15	0.01		0.01
	DD1529	15.97	21.10	19	15	11	1	4	13	0.01		0.01
	DD1530	21.10	26.15	21	16	12	1	9	16	0.01		0.01
	DD1531	26.15	31.27	14	15	13	1	3	9	0.01		0.01
	DD1532	31.27	36.10	9	13	7	1	2	14	0.01		0.01
	DD1533	36.10	41.00	11	8	11	1	2	11	0.01		0.01
	DD1534	41.00	51.00	11	6	7	1	2	7	0.01		0.01
	DD1535	51.00	61.30	60	14	22	1	5	27	0.01		0.01
	DD1536	61.30	71.28	11	8	26	1	7	29	0.01		0.01
	DD1537	71.28	81.05	9	6	26	1	5	30	0.01		0.01
	DD1538	81.05	91.50	102	5	22	1	6	24	0.01		0.01
	DD1539	91.50	101.48	240	8	54	1	17	51	0.02		0.01
	DD1540	101.48	111.45	282	11	67	1	17	69	0.01		0.01
	DD1541	111.45	121.25	204	10	34	1	5	36	0.02		0.01
	DD1542	121.25	131.00	8	8	5	1	2	7	0.01		0.01
	DD1543	131.00	141.45	4	6	4	1	2	5	0.01		0.01
	DD1544	141.45	151.00	6	12	12	1	4	9	0.01		0.01
	DD1545	151.00	160.91	13	6	8	1	2	9	0.01		0.01
	DD1546	160.91	170.60	10	6	3	1	2	11	0.01		0.01
	DD1547	170.60	180.45	15	8	5	1	2	15	0.01		0.01
	DD1548	180.45	190.30	12	8	4	1	2	12	0.01		0.01
	DD1549	190.30	200.41	16	12	3	1	3	16	0.01		0.01
	DD1550	200.41	210.19	13	13	3	1	3	13	0.01		0.01
	DD1551	210.19	220.50	30	18	5	1	13	8	0.04	0.04	
	DD1552	220.50	230.80	16	10	5	1	2	8	0.01		
	DD1553	230.80	239.95	10	10	3	1	2	10	0.01	0.01	
	DD1554	239.95	250.09	16	19	4	1	3	17	0.01		
	DD1555	250.09	260.61	22	12	3	1	3	26	0.01		
	DD1556	260.61	270.40	32	16	4	1	6	31	0.01		
	DD1557	270.40	280.53	39	12	3	1	4	29	0.01		
	DD1558	280.53	291.00	45	32	170	1	17	27	0.01		

HOLE NAME	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	ZN ppm	PB ppm	CU ppm	AG ppm	AS ppm	NI ppm	AU ppm	AU_R ppm	PD ppm
ELK006	DD1674	.00	5.00	10	13	8	1	3	8	0.01		
	DD1675	5.00	10.00	28	39	15	1	6	14	0.01	0.01	
	DD1676	10.00	20.30	16	31	9	1	5	8	0.01		
	DD1677	20.30	30.56	32	28	12	1	3	18	0.01		
	DD1678	30.56	43.09	26	30	14	1	10	14	0.01		
	DD1594	43.09	53.00	45	22	10	1	3	20	0.01		
	DD1595	53.00	63.05	75	32	19	1	8	30	0.01		
	DD1596	63.05	73.00	38	26	24	1	4	17	0.01		
	DD1597	73.00	83.00	39	25	13	1	3	18	0.01		
	DD1598	83.00	93.16	35	28	22	1	6	19	0.01		
	DD1599	93.16	103.35	20	21	14	1	3	18	0.01		
	DD1600	103.35	113.00	33	29	19	1	3	20	0.01		
	DD1601	113.00	122.80	35	30	10	1	3	20	0.01	0.01	
	DD1602	122.80	132.80	30	24	9	1	5	20	0.01		
	DD1603	132.80	143.00	15	28	13	1	4	12	0.01		
	DD1604	143.00	153.00	12	34	12	1	7	11	0.01		
	DD1605	153.00	162.50	10	13	10	1	5	6	0.01		
	DD1606	162.50	173.00	7	22	19	1	5	6	0.01		
	DD1607	173.00	182.96	10	13	11	1	4	5	0.01		
	DD1608	182.96	192.93	9	7	13	1	7	6	0.01		
	DD1609	192.93	203.00	6	11	8	1	6	6	0.01		
	DD1610	203.00	212.95	7	13	7	1	4	6	0.01		
	DD1611	212.95	224.00	6	9	9	1	6	5	0.01		
	DD1612	224.00	233.96	17	14	9	1	8	5	0.01		
	DD1613	233.96	243.90	28	37	11	1	10	6	0.01		
	DD1614	243.90	254.00	13	13	9	1	7	7	0.01		
	DD1615	254.00	264.30	13	12	11	1	4	9	0.01		
	DD1616	264.30	274.20	11	12	14	1	6	11	0.01	0.01	
	DD1617	274.20	284.99	8	6	9	1	6	7	0.01		
	DD1618	284.99	294.98	10	9	10	1	7	6	0.01		
	DD1619	294.98	305.00	11	9	7	1	5	6	0.01		
	DD1620	305.00	315.35	9	9	14	1	5	8	0.01		
	DD1621	315.35	326.00	21	9	28	1	4	13	0.01		
	DD1622	326.00	336.00	20	8	9	1	2	12	0.01	0.01	
	DD1623	336.00	346.40	23	8	12	1	2	15	0.01		
	DD1624	346.40	355.85	15	5	8	1	2	11	0.01		
	DD1625	355.85	366.00	18	8	19	1	2	13	0.01		
	DD1626	366.00	376.00	14	6	22	1	3	13	0.01		
	DD1627	376.00	386.00	17	14	26	1	7	23	0.01		
	DD1628	386.00	396.21	18	15	11	1	53	10	0.01		
	DD1629	396.21	406.00	12	9	7	1	8	8	0.01		
	DD1630	406.00	415.72	11	9	8	1	13	8	0.01		
	DD1631	415.72	425.90	120	12	16	1	12	10	0.01		
	DD1632	425.90	435.20	13	11	9	1	4	9	0.01		
	DD1633	435.20	445.55	16	8	10	1	3	10	0.01		
	DD1634	445.55	455.76	12	7	13	1	4	8	0.01		
	DD1635	455.76	465.10	11	8	6	1	3	7	0.01		
	DD1636	465.10	475.22	11	12	15	1	37	9	0.01		
	DD1637	475.22	485.43	15	8	9	1	13	10	0.01	0.01	
	DD1638	485.43	495.78	21	10	12	1	5	11	0.01		
	DD1639	495.78	505.05	18	7	14	1	4	10	0.02	0.03	
	DD1640	505.05	515.00	20	7	12	1	4	13	0.01		

HOLE NAME	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	ZN ppm	PB ppm	CU ppm	AG ppm	AS ppm	NI ppm	AU ppm	AU_R ppm	PD ppm
ELK006	DD1641	515.00	524.80	19	8	10	1	4	10	0.01		
	DD1642	524.80	534.93	20	10	13	1	6	8	0.01		
	DD1643	534.93	544.47	21	7	12	1	3	11	0.01		
	DD1644	544.47	554.69	22	6	14	1	2	12	0.01		
	DD1645	554.69	563.00	23	5	9	1	2	14	0.01		
	DD1646	563.00	573.25	27	7	36	1	3	15	0.01		
	DD1647	573.25	583.70	22	7	7	1	2	13	0.01		
	DD1648	583.70	593.00	23	7	2	1	2	12	0.01		
	DD1649	593.00	603.20	23	7	11	1	7	12	0.02	0.02	
	DD1650	603.20	613.59	25	5	12	1	6	12	0.01		
	DD1651	613.59	623.55	25	6	23	1	5	13	0.01		
	DD1652	623.55	633.59	25	9	41	1	3	13	0.01		
	DD1653	633.59	643.85	26	10	8	1	4	18	0.01		
	DD1654	643.85	653.18	19	6	10	1	7	13	0.01	0.01	
	DD1655	653.18	662.71	20	9	7	1	4	13	0.01		
	DD1656	662.71	672.68	20	8	13	1	4	13	0.01		
	DD1657	672.68	682.95	25	7	19	1	5	15	0.01		
	DD1658	682.95	692.38	35	11	13	1	3	14	0.01		
	DD1659	692.38	702.59	27	7	12	1	3	13	0.01		
	DD1660	702.59	711.75	29	9	12	1	4	15	0.01		
	DD1661	711.75	721.31	25	9	14	1	2	14	0.01		
	DD1662	721.31	733.51	21	9	10	1	4	13	0.01		
	DD1663	733.51	742.10	17	11	11	1	3	12	0.01		
	DD1664	742.10	752.85	14	9	8	1	2	11	0.01		
	DD1665	752.85	763.26	19	8	4	1	3	10	0.01		
	DD1666	763.26	773.53	19	5	22	1	6	14	0.01	0.01	
	DD1667	773.53	782.83	14	10	13	1	3	11	0.01		
	DD1668	782.83	793.26	13	5	12	1	3	8	0.01		
	DD1669	793.26	802.82	23	6	9	1	8	11	0.01		
	DD1670	802.82	812.25	17	8	9	1	4	15	0.01		
	DD1671	812.25	822.77	14	21	14	1	5	6	0.01		
	DD1672	822.77	832.24	10	6	3	1	3	6	0.01		
	DD1673	832.24	845.95	10	24	24	1	10	8	0.01		

HOLE NAME	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	ZN ppm	PB ppm	CU ppm	AG ppm	AS ppm	NI ppm	AU ppm	AU_R ppm	PD ppm
ELK007	DD1559	15.00	19.96	29	18	28	1	3	23	0.01		
	DD1560	19.96	25.00	45	16	20	1	4	25	0.01		
	DD1561	25.00	30.20	71	14	34	1	5	46	0.01		
	DD1562	30.20	40.50	43	16	21	1	6	40	0.01		
	DD1563	40.50	45.20	34	8	20	1	2	26	0.01		
	DD1564	45.20	49.70	33	12	15	1	2	18	0.01		
	DD1565	49.70	54.02	35	9	16	1	3	10	0.01		
	DD1566	54.02	64.29	19	7	11	1	5	11	0.01		

HOLE NAME	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	ZN ppm	PB ppm	CU ppm	AG ppm	AS ppm	NI ppm	AU ppm	AU_R ppm	PD ppm
ELK007A	DD1567	64.29	74.76	24	6	11	1	2	9	0.02		
	DD1568	74.76	85.00	24	16	12	1	2	11	0.01		
	DD1569	85.00	95.00	21	20	44	1	4	7	0.01		
	DD1570	95.00	106.55	21	10	8	1	2	9	0.01		
	DD1571	106.55	116.31	26	10	19	1	5	13	0.01		
	DD1572	116.31	126.61	21	18	15	1	4	8	0.01		
	DD1573	126.61	136.75	36	28	13	1	6	10	0.01		
	DD1574	136.75	147.00	59	17	10	1	4	10	0.01		
	DD1575	147.00	157.11	17	5	10	1	2	133	0.01		
	DD1576	157.11	166.88	16	6	9	1	2	9	0.01		
	DD1577	166.88	177.00	15	15	9	1	4	5	0.01		
	DD1578	177.00	187.00	11	6	7	1	4	6	0.01		
	DD1579	187.00	196.77	13	5	6	1	2	5	0.01		
	DD1580	196.77	206.58	12	22	9	1	4	7	0.01		
	DD1581	206.58	216.10	9	12	5	1	3	5	0.01	0.02	
	DD1582	216.10	225.83	6	5	5	1	2	5	0.01		
	DD1583	225.83	236.29	5	5	4	1	2	5	0.01	0.01	
	DD1584	236.29	245.56	12	37	6	1	6	7	0.01		
	DD1585	245.56	255.30	15	22	9	1	8	8	0.01		
	DD1586	255.30	265.69	20	27	10	1	8	10	0.01		
	DD1587	265.69	275.81	16	32	8	1	8	11	0.01		
	DD1588	275.81	285.21	71	9	6	1	7	6	0.01		
	DD1589	285.21	295.40	335	12	6	1	7	6	0.01		
	DD1590	295.40	304.86	32	214	18	1	9	9	0.01		
	DD1591	304.86	314.71	8	8	49	1	2	6	0.01	0.01	
	DD1592	314.71	324.73	25	8	8	1	2	8	0.01		
	DD1593	324.73	327.81	57	18	6	1	2	18	0.01		

228 records selected.

SQL> SPOOL OFF

APPENDIX 2

Graphic Bore Hole Logs with Anomalous Geochemistry
ELK1, 2, 3, 6, 7 and 7A


Dololutite


Dolarenite


Dolorudite


Quartz sandstone


Siltstone, mudstone


Carbonaceous siltstone, mudstone


Quartzite


Calcilutite


Calcarenite


Algal dolostone or limestone


Granule or pebble conglomerate
Cobble or boulder conglomerate


Gypsiferous beds (some anhydrite)


Dacitic volcanics


Granite, gneiss

Unconformity


Chert, silicified bed


Vugs


Ooliths


Dolomitic

Shale laminae

Carbonaceous laminae

Brecciation


Calcareous


Intraclasts


Nodular beds, dolomitic


Clay pellets

COLOUR *(siltstone and claystone only)*

g	*Olive, greyish green*	b	*Greenish black, dark grey*
r	*Dusky red, reddish brown*	y	*Yellowish orange*

STRUCTURES

Cross lamination

Cross bedding

Ripple marks


Slumping

Desiccation cracks

Burrows

FOSSILS


Bioturbated


Macrofossil fragments


Microfossils

Trilobite

Brachiopod


Hyolith

Sponge spicule


Trace fossil

MINERALS

Gypsum, anhydrite

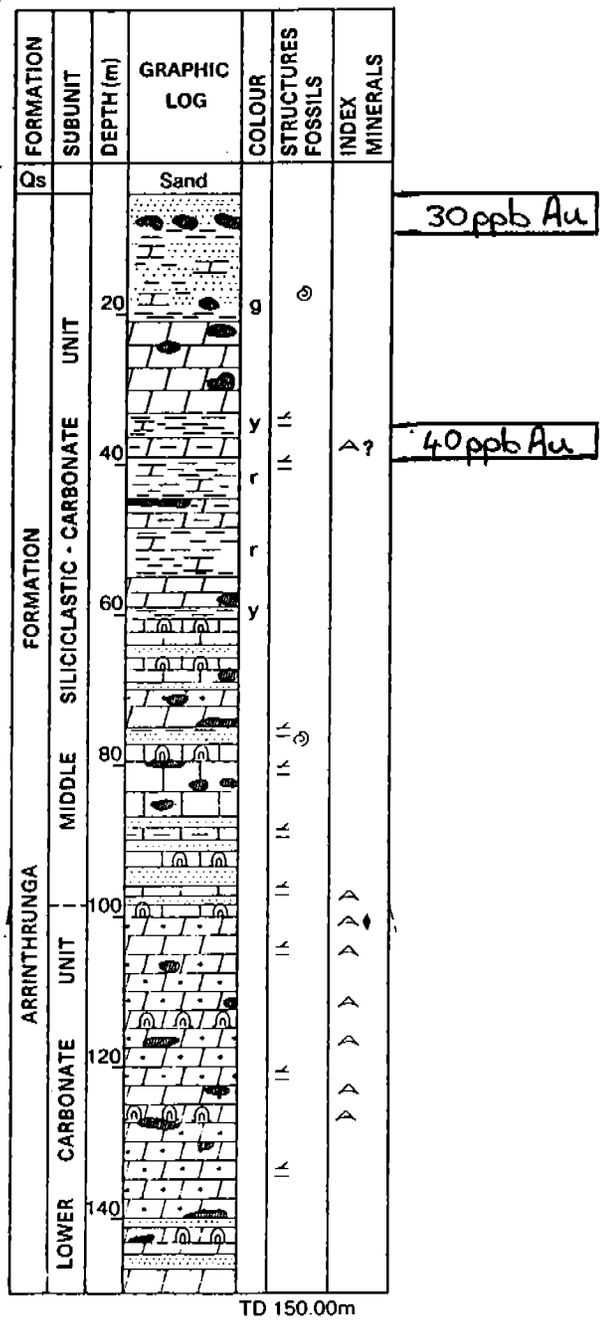
Pyrite

Hydrocarbon show

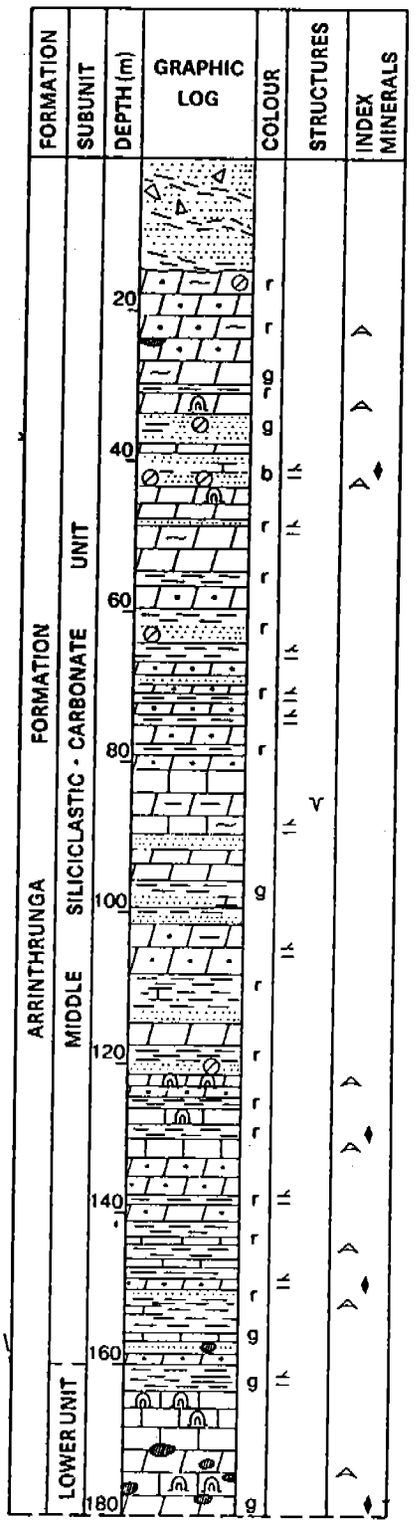
Pb	*Galena*	Cp	*Chalcopyrite*		
gl	*Glauconite*			Zn	*Sphalerite*
P	*Phosphatic*			Fe	*Ferruginous*
F	*Fluorite*			f	*Feldspathic*

Figure 12 Symbols used on stratigraphic sections.

NTGS ELK 1
Lat 21°45'49"S Long 136°01'23"S
collar elevation: 328m

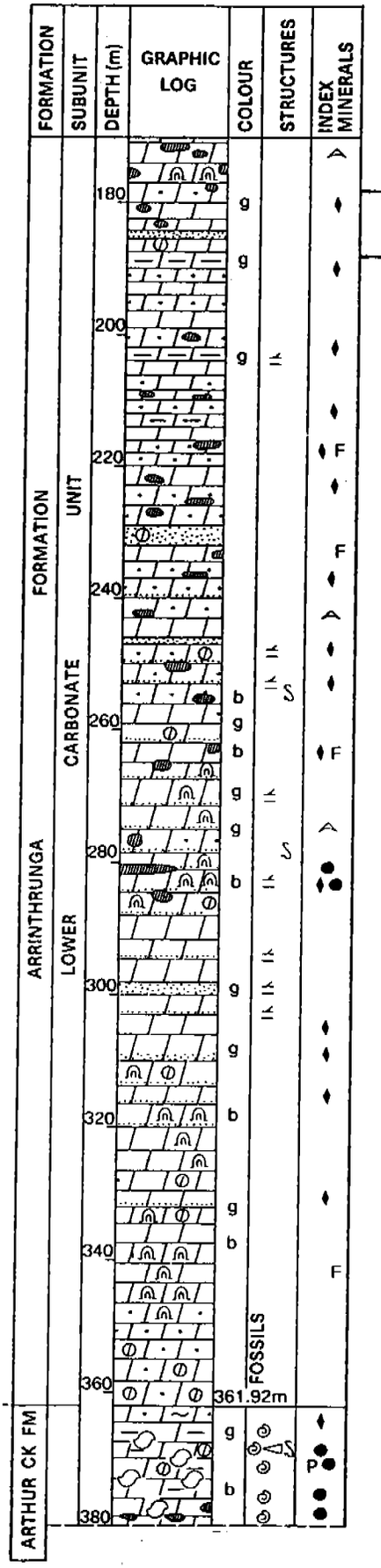


NTGS ELK 2
Lat 21°26'58"S Long 136°10'49"E
collar elevation: 318m



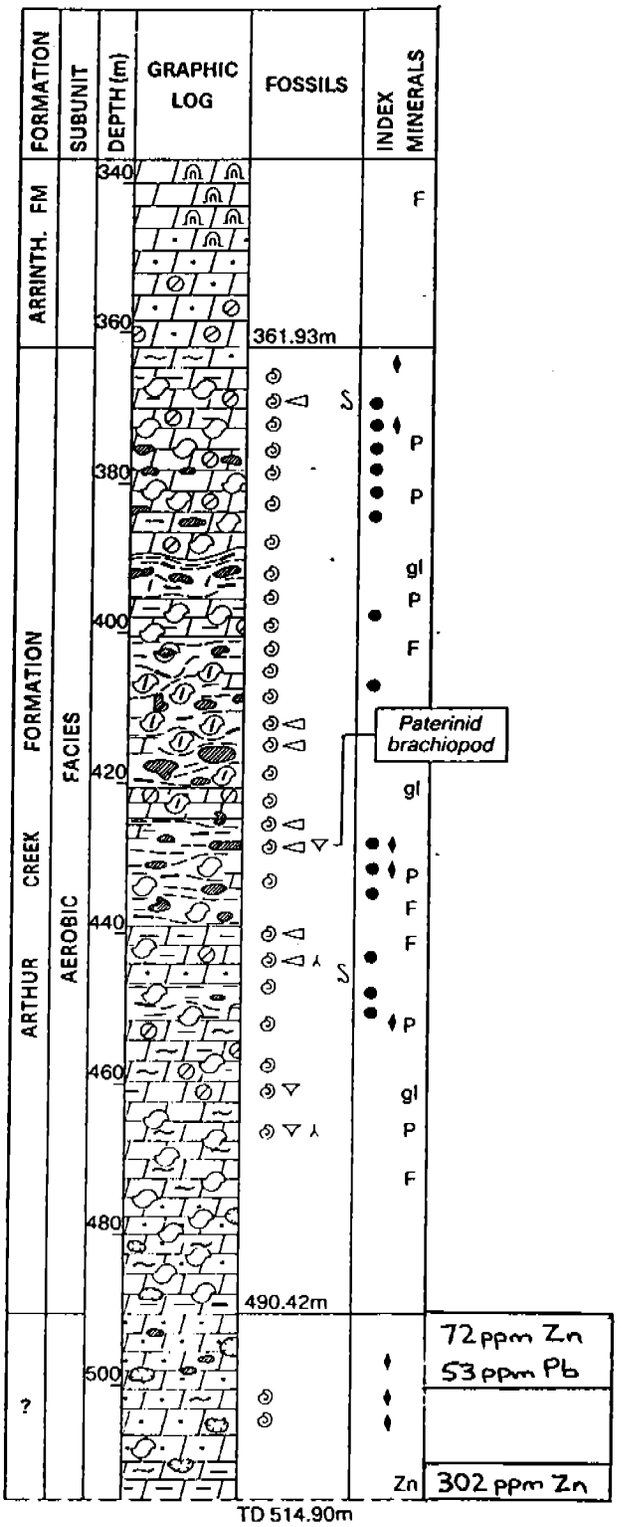
Log by P.A.S.

NTGS ELK 2
(continued)



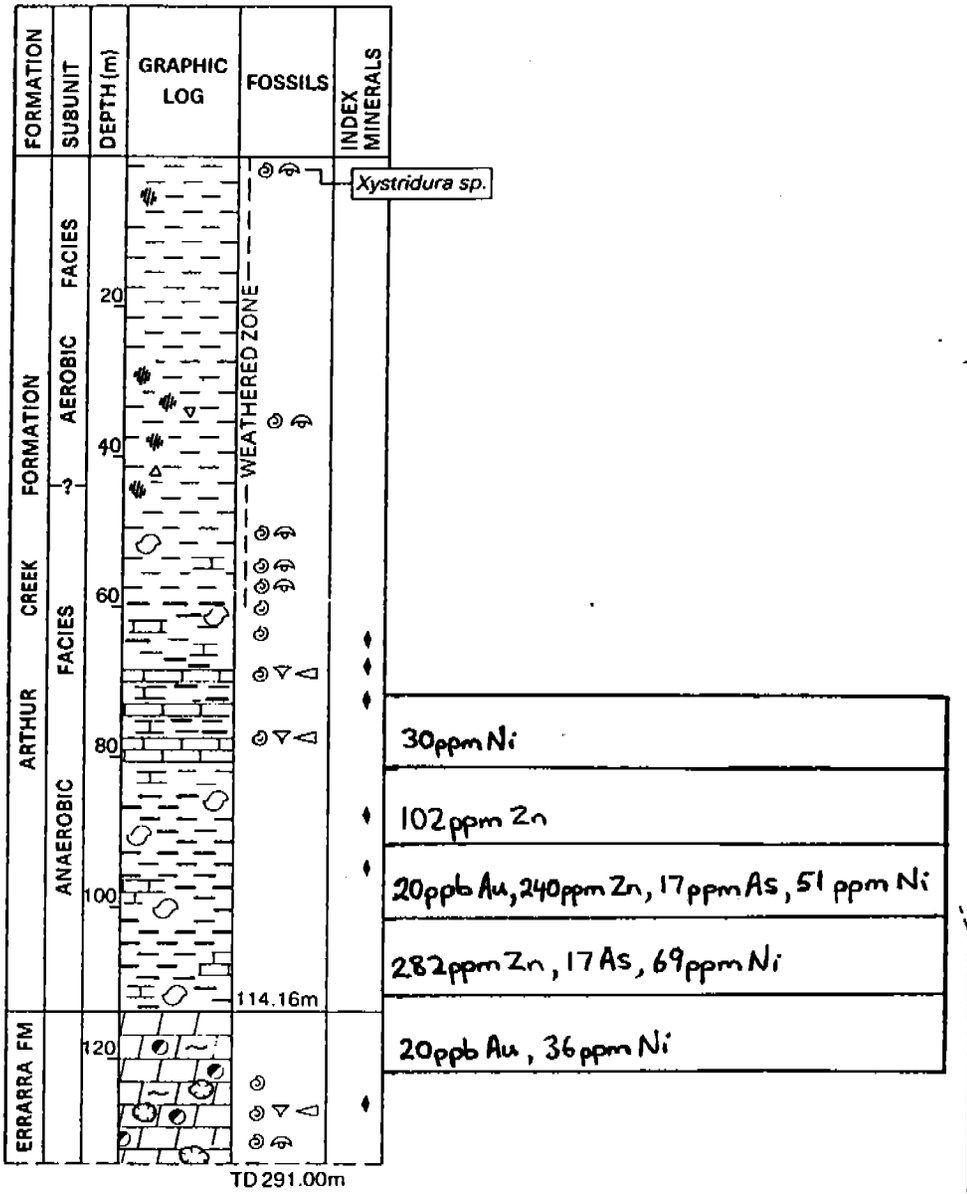
20ppb Au

NTGS ELK 2



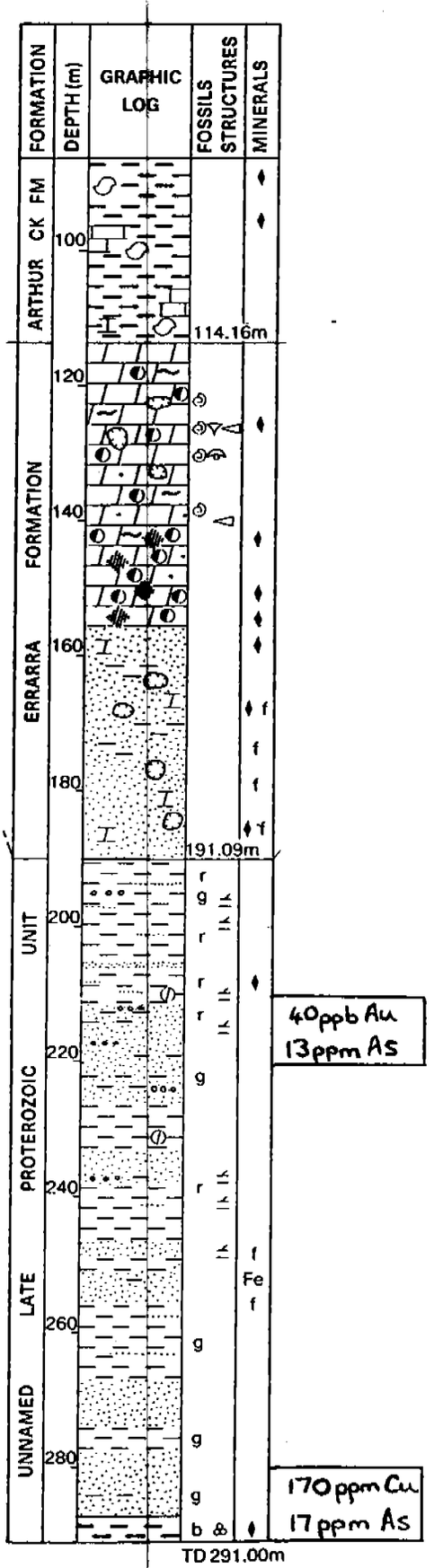
Log by P.A.S.

NTGS ELK 3
Lat 21°44'45"S Long 135°42'25"E
collar elevation: 370m



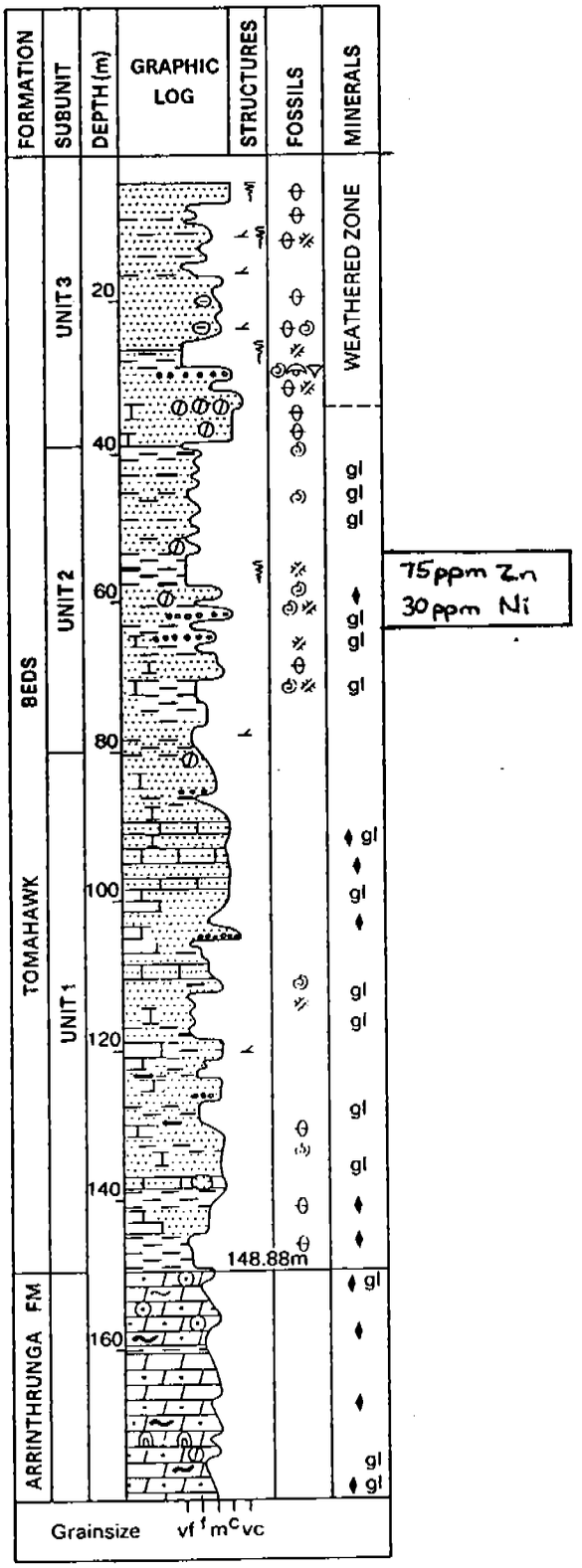
Log by A.M.W., L.B., D.G.M.

NTGS ELK 3



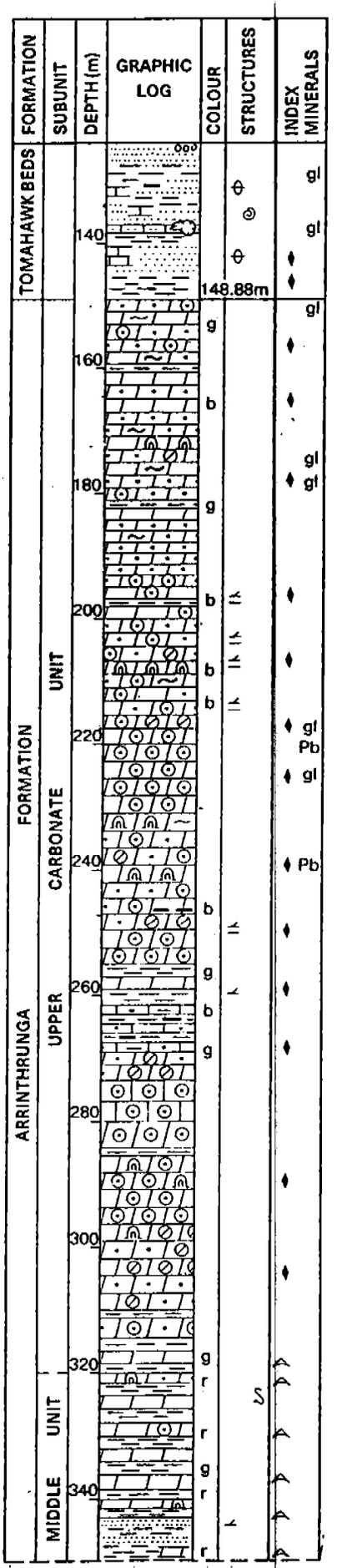
Log by N.D., A.M.W., D.G.M.

NTGS ELK 6
Lat 21°56'15"S Long 135°03'00"E
collar elevation: 415m

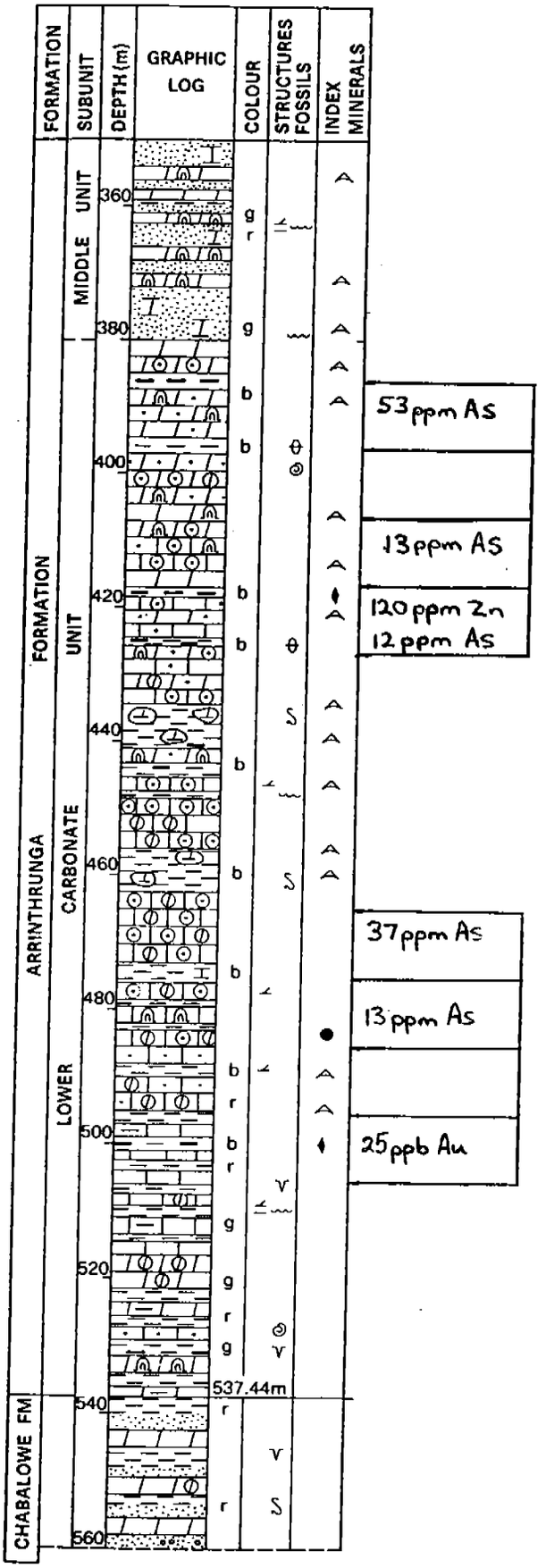


75ppm Zn
30ppm Ni

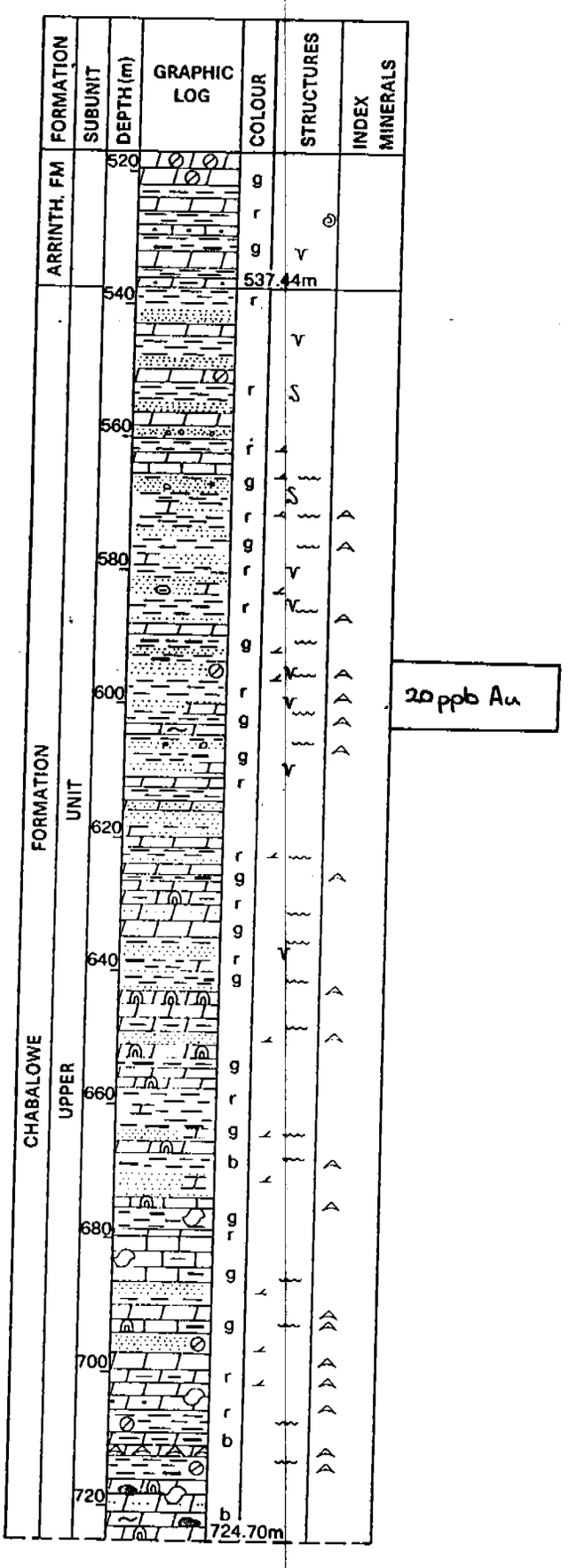
NTGS ELK 6



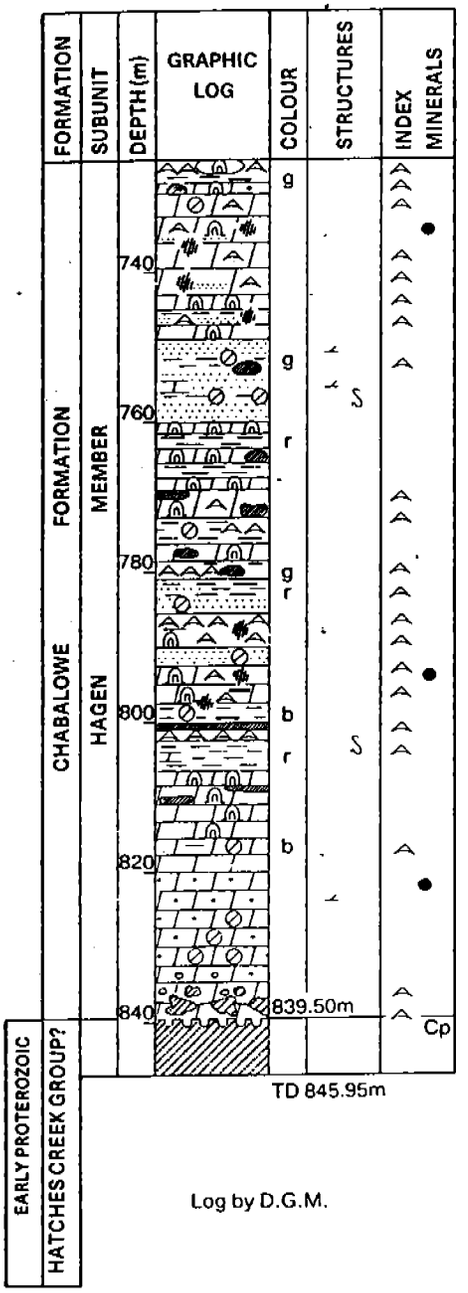
NTGS ELK 6
(continued)



NTGS ELK 6

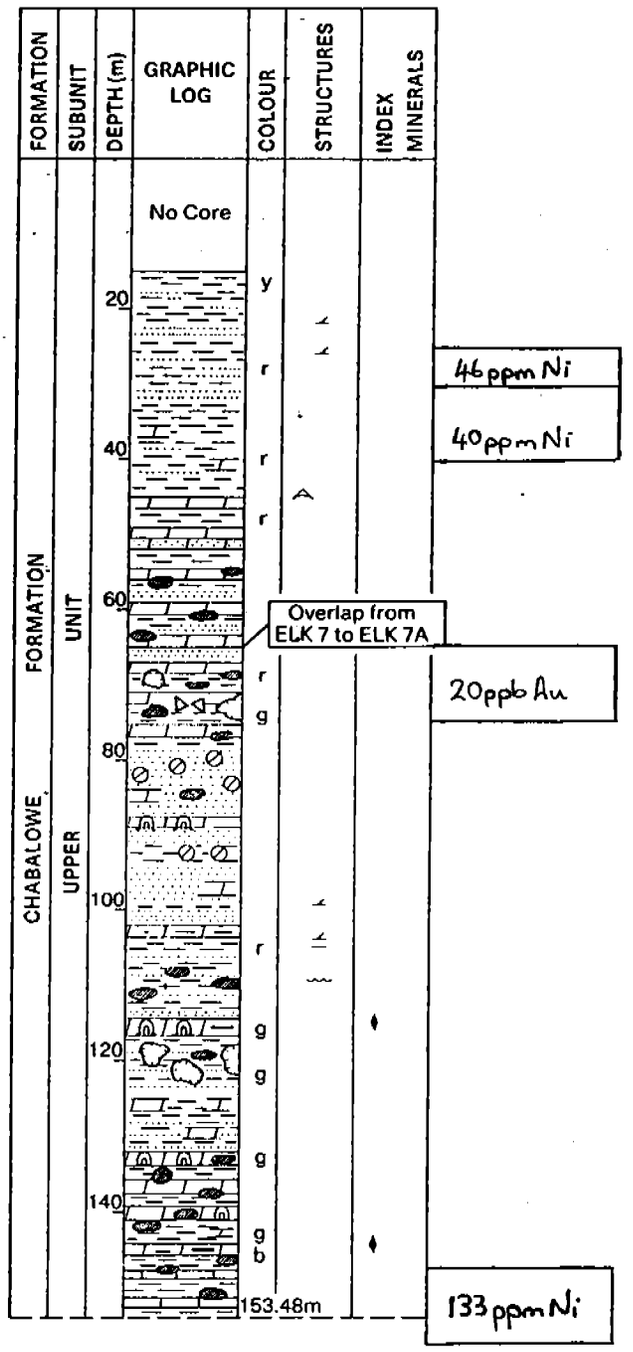


NTGS ELK 6
(continued)

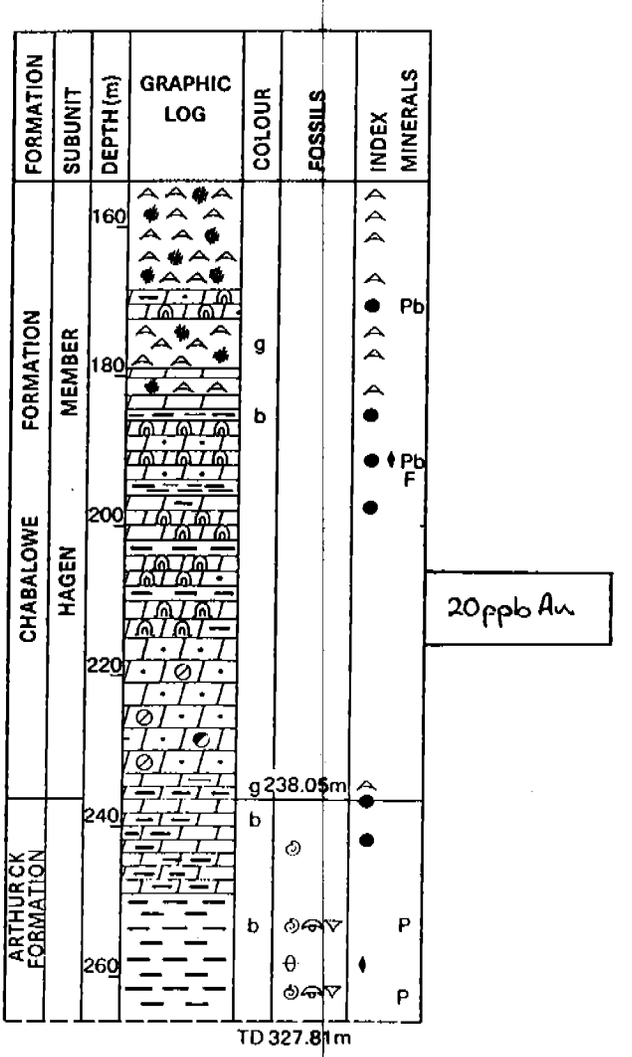


Log by D.G.M.

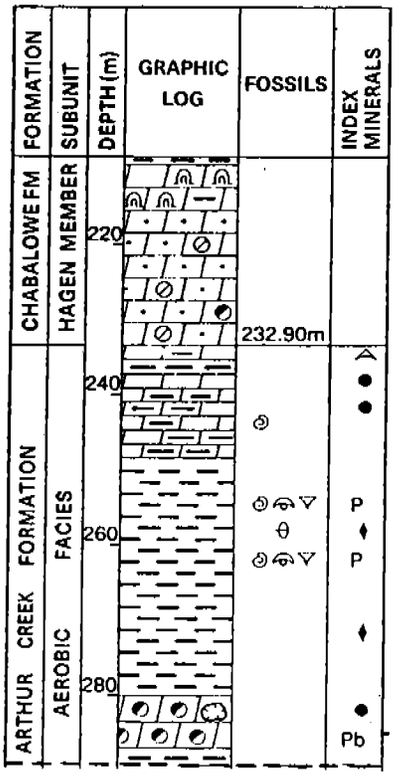
NTGS ELK 7 and 7A
Lat 21°39'20"S Long 135°09'20"E
collar elevation: 398m



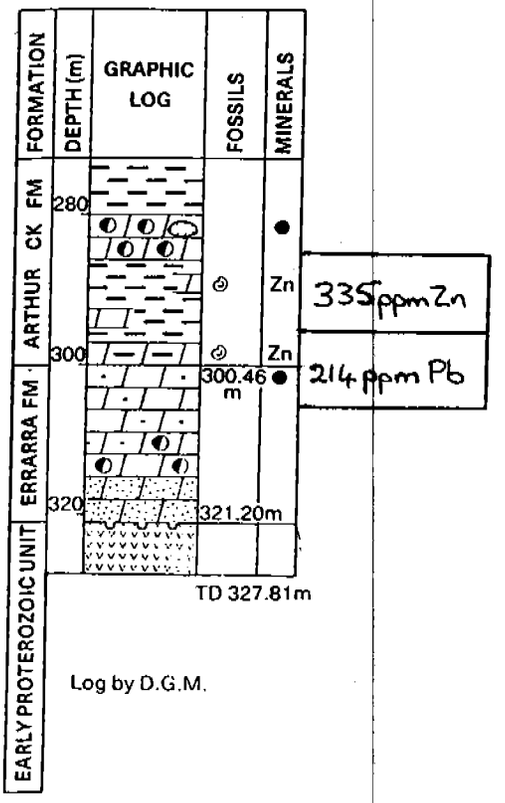
NTGS ELK 7A
(continued)



NTGS ELK 7A



NTGS ELK 7A



Log by D.G.M.

elevated Zn and Pb values, but also occurred (up to 133 ppm) away from high base metals.

One occurrence of anomalous Cu (170 ppm) occurred in clastic and carbonaceous units within an unnamed late Proterozoic unit rather than in the Cambrian sequence.

No anomalous Pd or Ag was observed.

Conclusion

The weakly anomalous gold and base metals are considered too low to justify any further work within the general vicinity of these bore holes at present.

References

Berger, B.R., and Bagby, W.C., 1991: The geology and origin of Carlin-type gold deposits. In Gold Metallogeny and Exploration, ed. Foster, R.P., Blackie, Glasgow, pp 210 - 248.

Stidolph, P.A., Bagas, L., Donnellan, N., Walley, A.M., Morris, D.G., and Simons, B., 1988: Elkedra, N.T., 1:250,000 Geological Series. Northern Territory Geological Survey, Explanatory Notes, S.F. 53-7.

GEOFF WOAD
Senior Geologist

GW:RA
1349G
E8/16/1-H