

J.S. Cummings Inc.

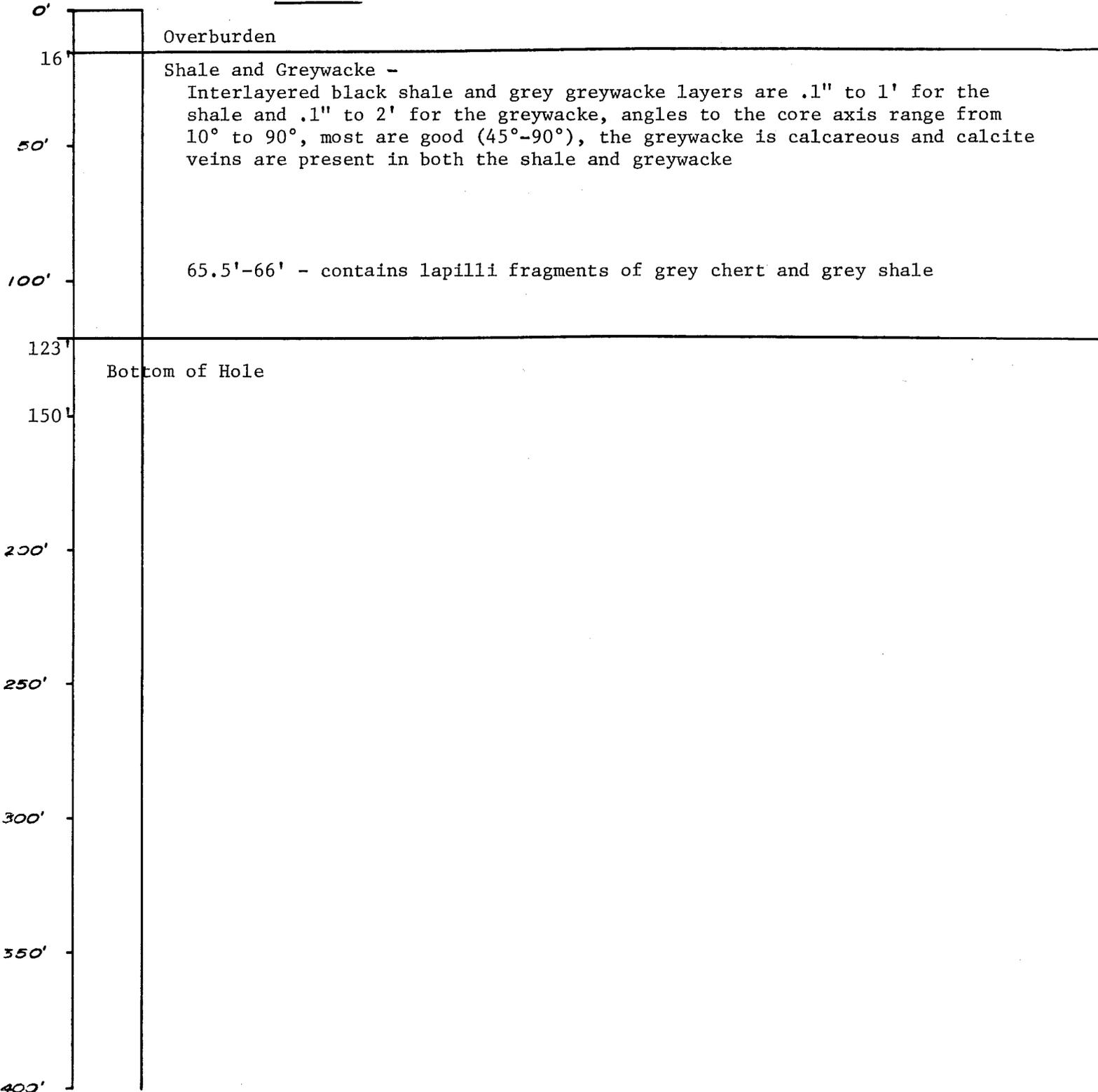
LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-2 Dip -45° Started 6/27/81 Elev. _____

Job no. 272 Township T9-R10 See Sketch
Coord. 272-9 Direction 156° Mag Completed 6/28/81

E 1/2 - S of main road

Lithotype



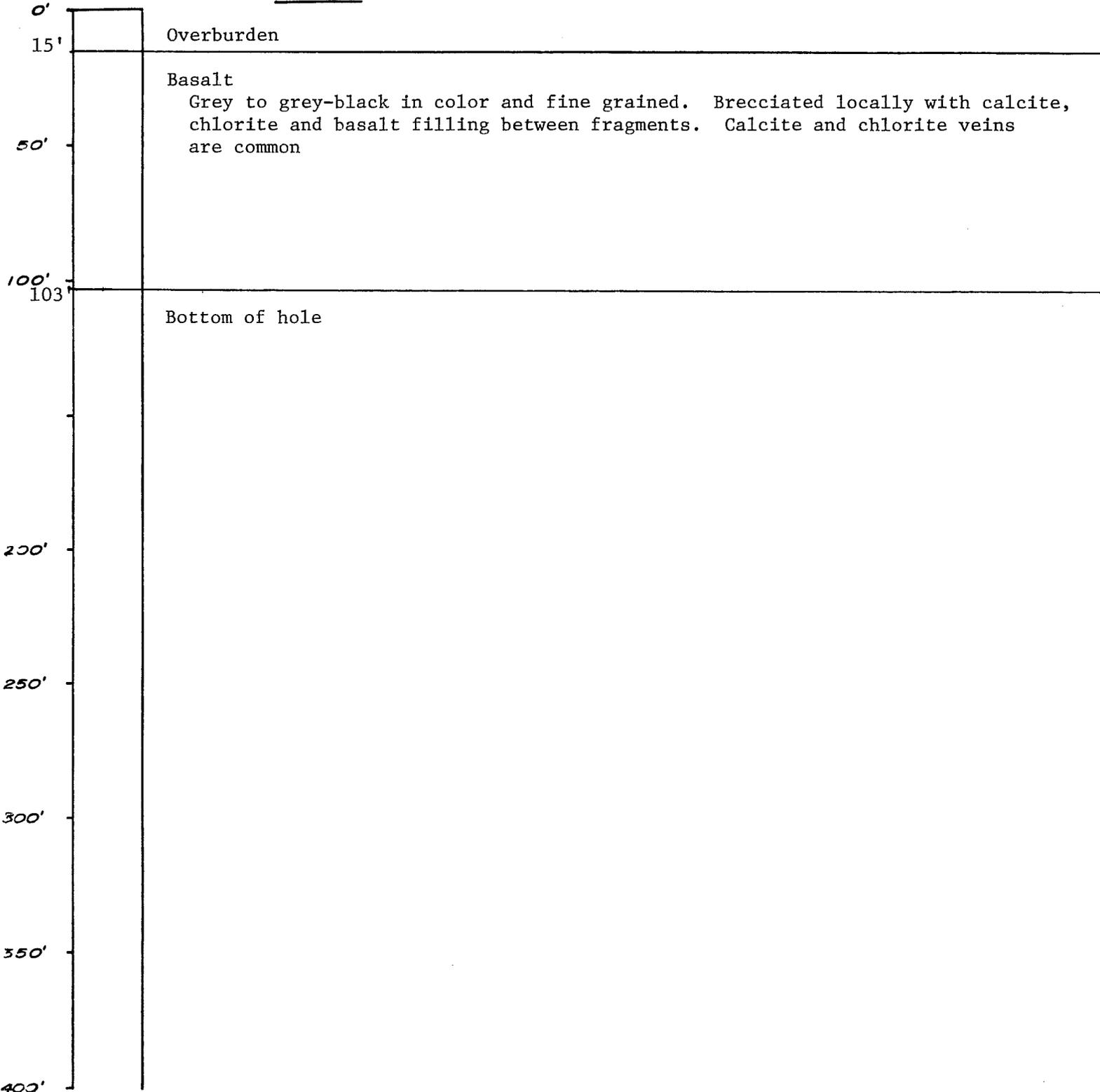
LITHOLOGIC LOG

Project 910 LITHOLOGIC DRILLING Hole no. 910-3 Dip -45° Started 7/6/81 Elev. _____

Job no. 272 Township T9-R10 See Sketch
Coord. 272-9 Direction 156° mag Completed 7/6/81

E 1/2 - S of main road

Lithotype



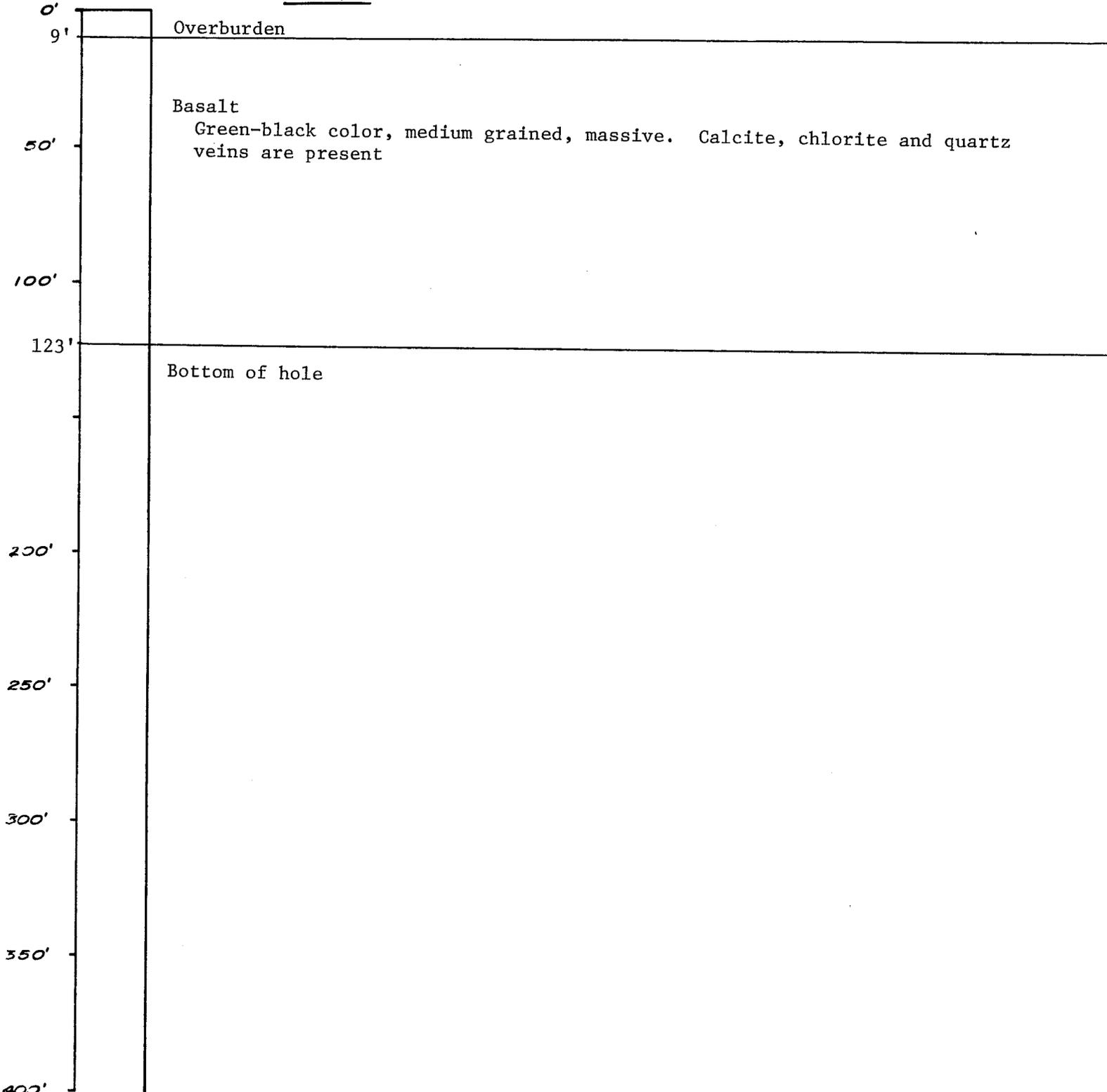
LITHOLOGIC LOG

Project 910 LITHOLOGIC DRILLING Hole no. 910-4 Dip -45° Started 7/7/81 Elev.

Job no. 272 Township T9-R10 See Sketch
Coord. 272-9 Direction 156°mag Completed 7/8/81

E 1/2 - S of main road

Lithotype



J.S. Cummings Inc.

LITHOLOGIC LOG

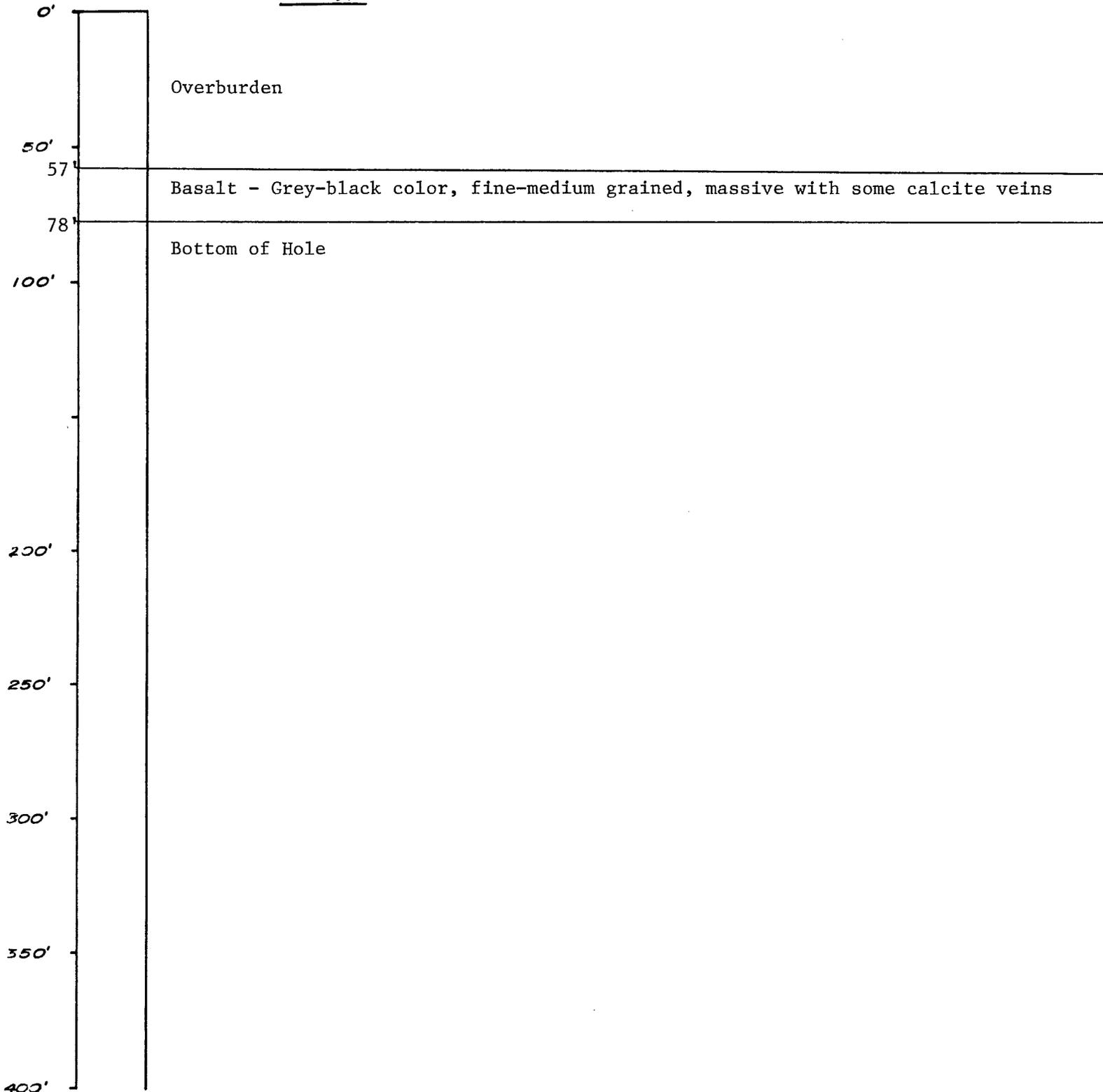
Project 910 LITHOLOGIC DRILLING Hole no. 910-5 Dip -45° Started 7/9/81 Elev.

See Sketch

Job no. 272 Township T9-R10 Coord. 272-9 Direction 156°mag Completed 7/10/81

E 1/2 - S of main road

Lithotype



J.S. Cummings Inc.

LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-6 Dip -45° Started 8/20/81 Elev.

See Sketch

Job no. 272 Township T9-R10 Coord. 272-28 Direction 156° Max Completed 8/20/81

SE 1/4

Lithotype

Overburden

Basalt - fine grained, grey-green to black-maroon color. It contains 3/4" to 1.5" sections of chlorite, calcite, quartz, with pyrite veins. The basalt changes to the grey-tan color characteristic of chill zones .25" before these areas. Perhaps these are pillow boundaries. Pillows are seen in outcrop just off the access road ± 1300' north of 910-6.

Bottom of Hole

0'
3'
50'
100'
103'
150'
200'
250'
300'
350'
400'

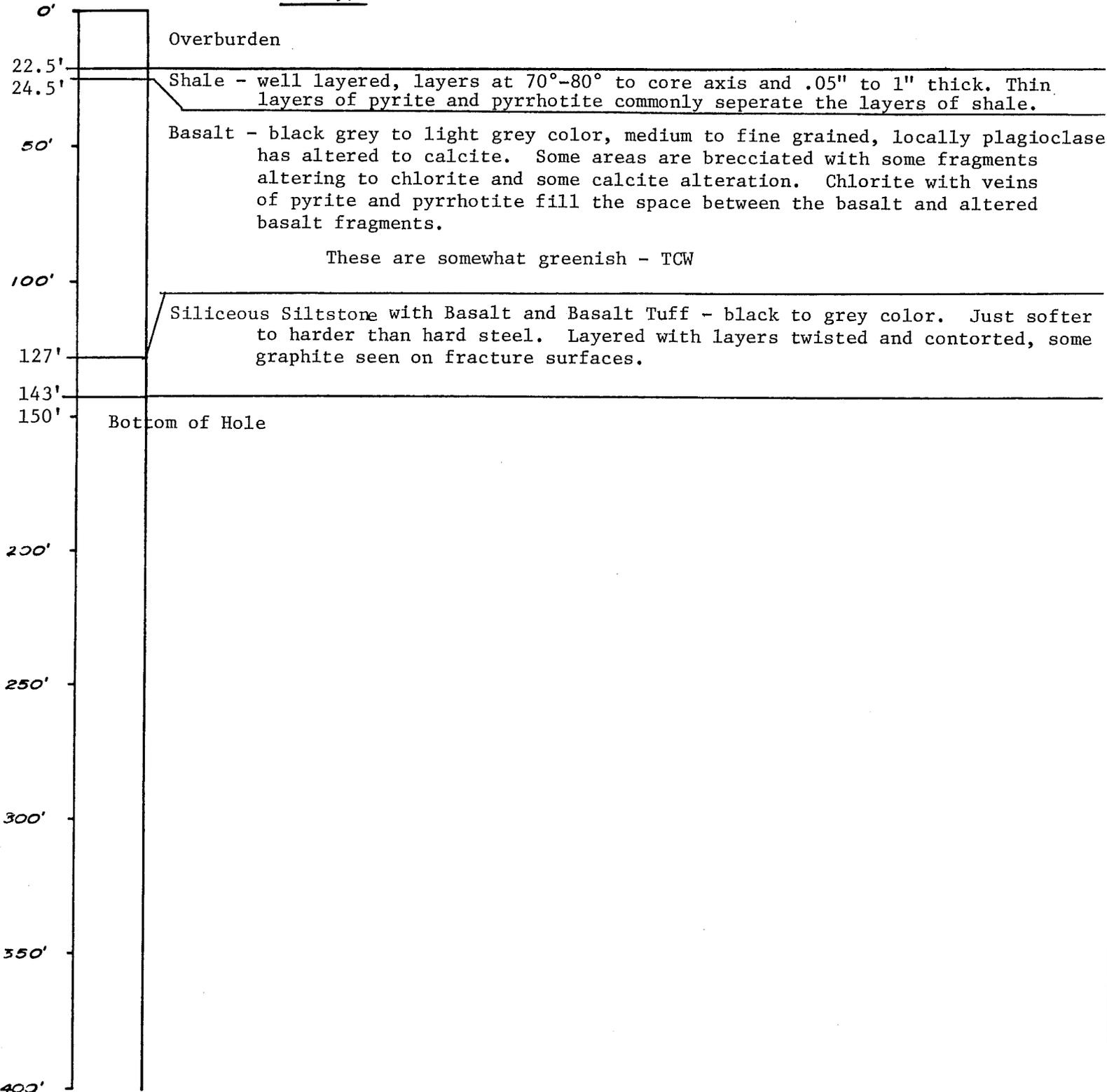
LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-7 Dip -45° Started 8/21/81 Elev. _____

Job no. 272 Township T9-R10 See Sketch
Coord. 272-28 Direction 156° Completed 8/22/81

SE 1/4

Lithotype



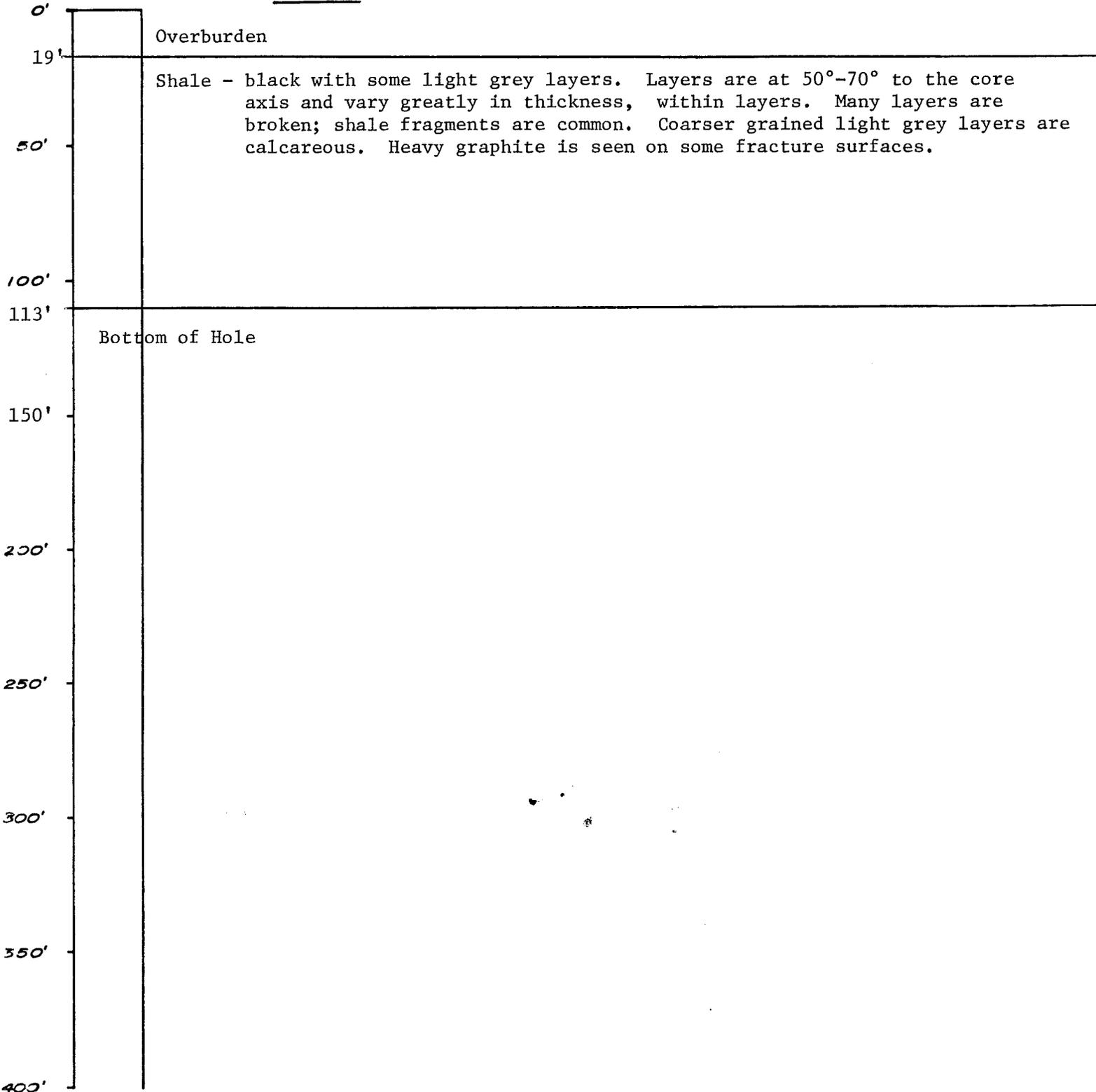
LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-8 Dip -45° Started 8/22/81 Elev.

Job no. 272 Township T9-R10 See Sketch
Coord. 272-28 Direction 156° Mag Completed 8/23/81

SE 1/4

Lithotype



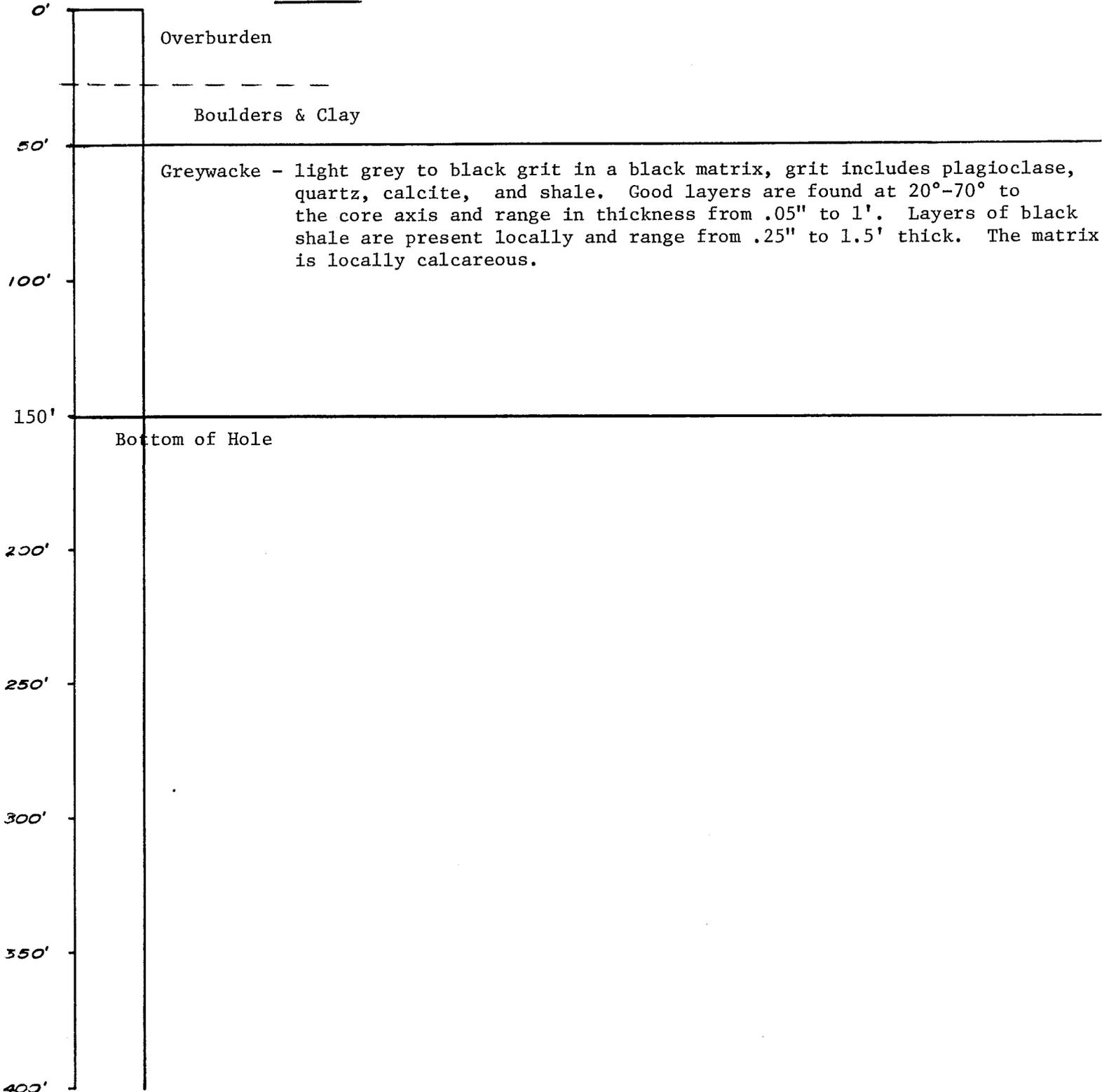
LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-9 Dip -45° Started 8/24/81 Elev. _____

Job no. 272 Township T9-R10 See Sketch
Coord. 272-28 Direction 156° Mag Completed 8/25/81

SE 1/4

Lithotype



J.S. Cummings Inc.

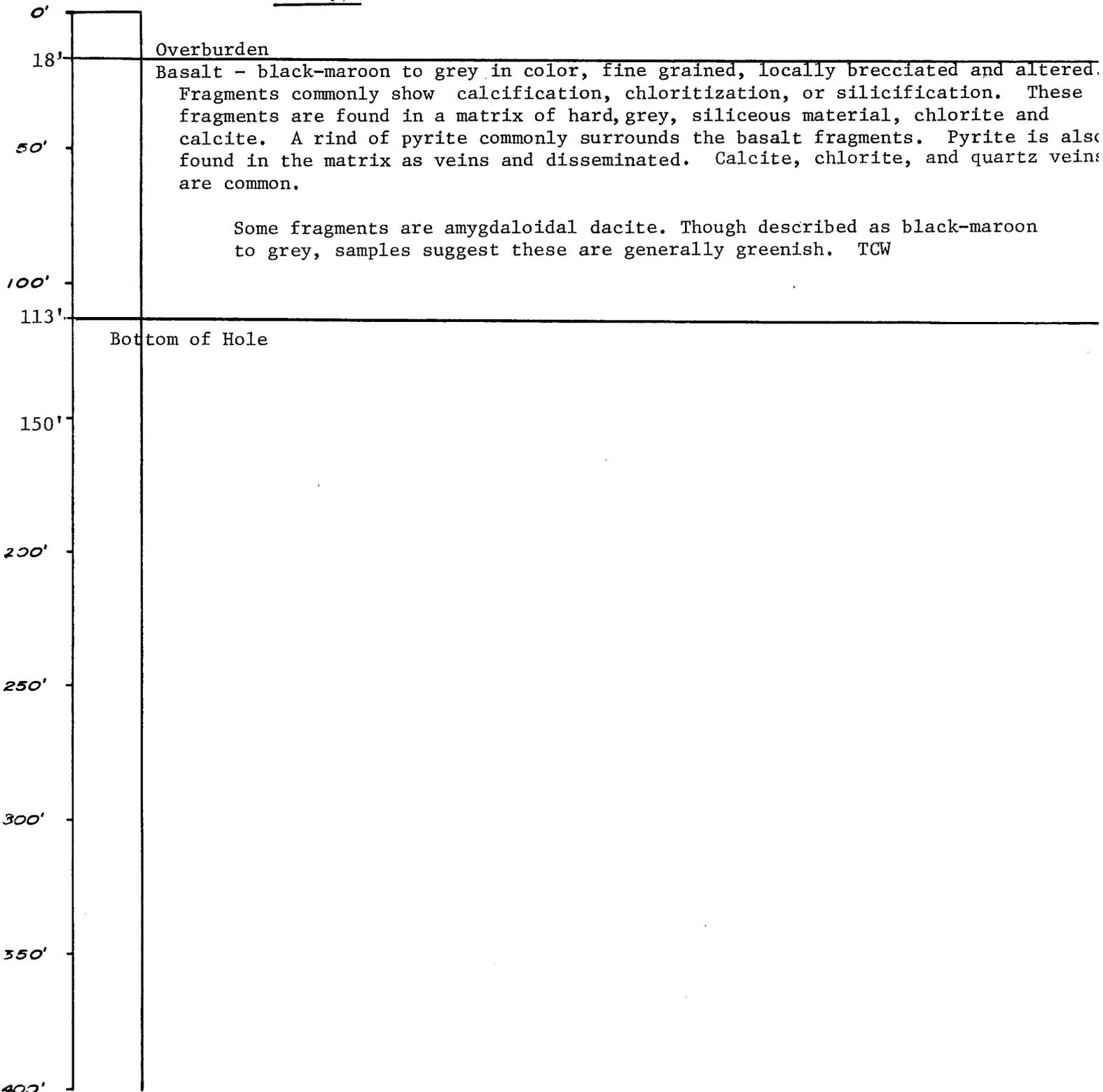
LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-10 Dip -45° Started 8/26/81 Elev.

Job no. 272 Township T9-R10 See Sketch
 Coord. 272-28 Direction 156° Mag Completed 8/31/81

SE 1/4

Lithotype



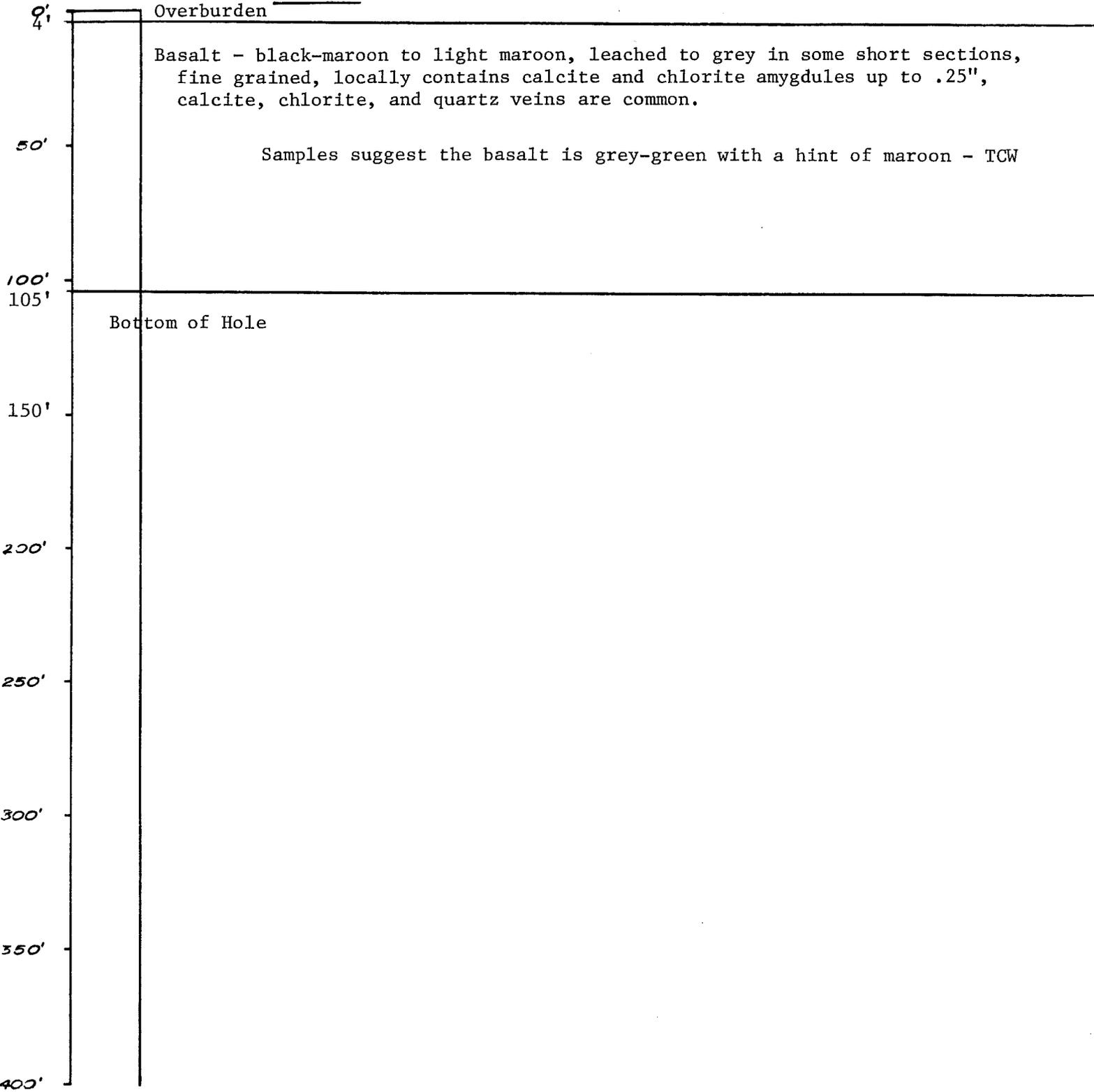
J.S. Cummings Inc.

LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-11 Dip -45° Started 8/31/81 Elev. _____

Job no. 272 Township T9-R10 See Sketch
Coord. 272-28 Direction 156° Mag Completed 9/1/81
SE 1/4

Lithotype



J.S. Cummings Inc.

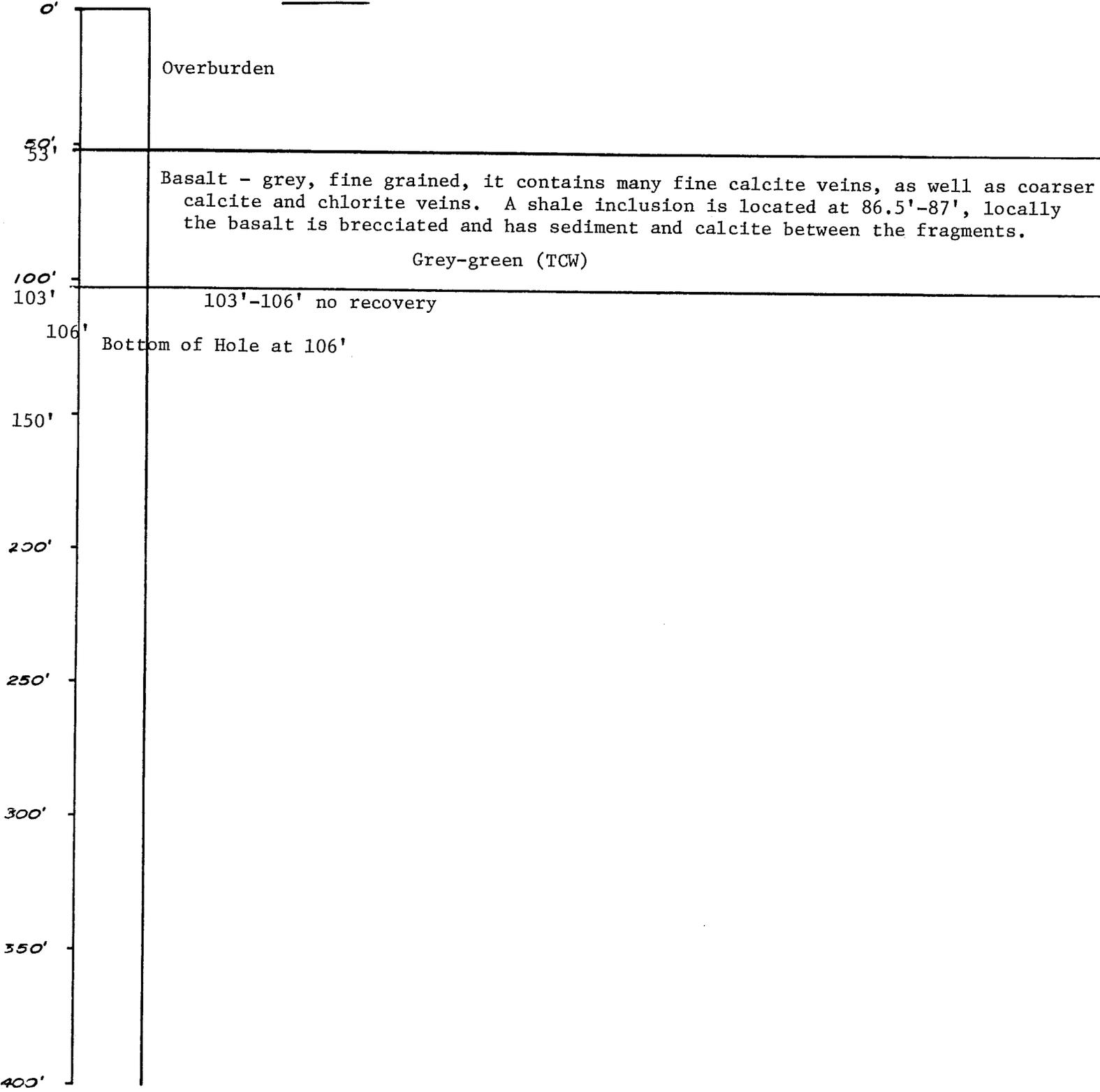
LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-12 Dip -45° Started 9/1/81 Elev.

Job no. 272 Township T9-R10 See Sketch
Coord. 272-28 Direction 156° Mag Completed 9/3/81

SE 1/4

Lithotype



J.S. Cummings Inc.

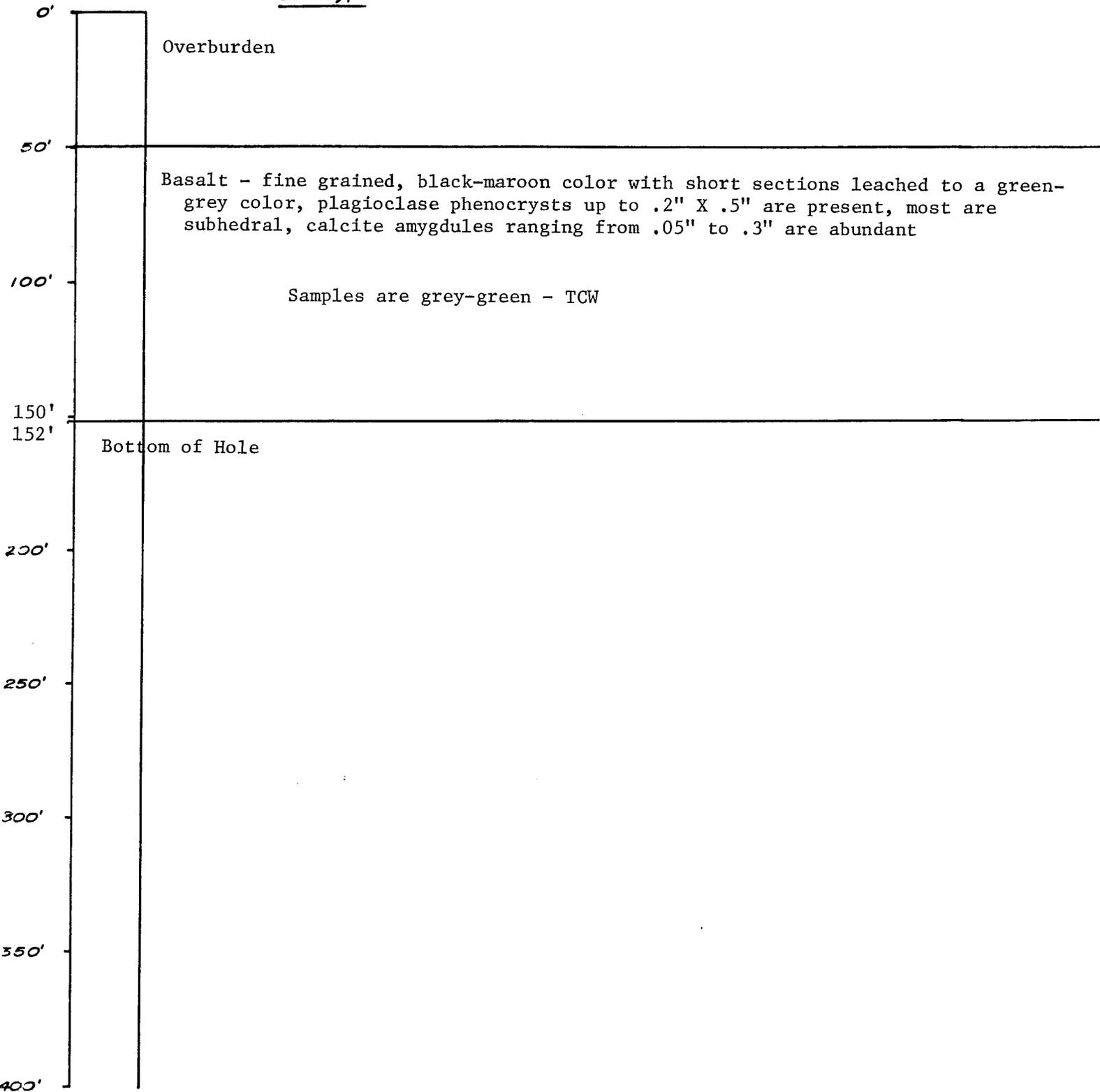
LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-13 Dip -45° Started 9/3/81 Elev. _____

Job no. 272 Township T9-R10 See Sketch
Coord. 272-28 Direction 156° Mag Completed 9/9/81

SE 1/4

Lithotype



J.S. Cummings Inc.

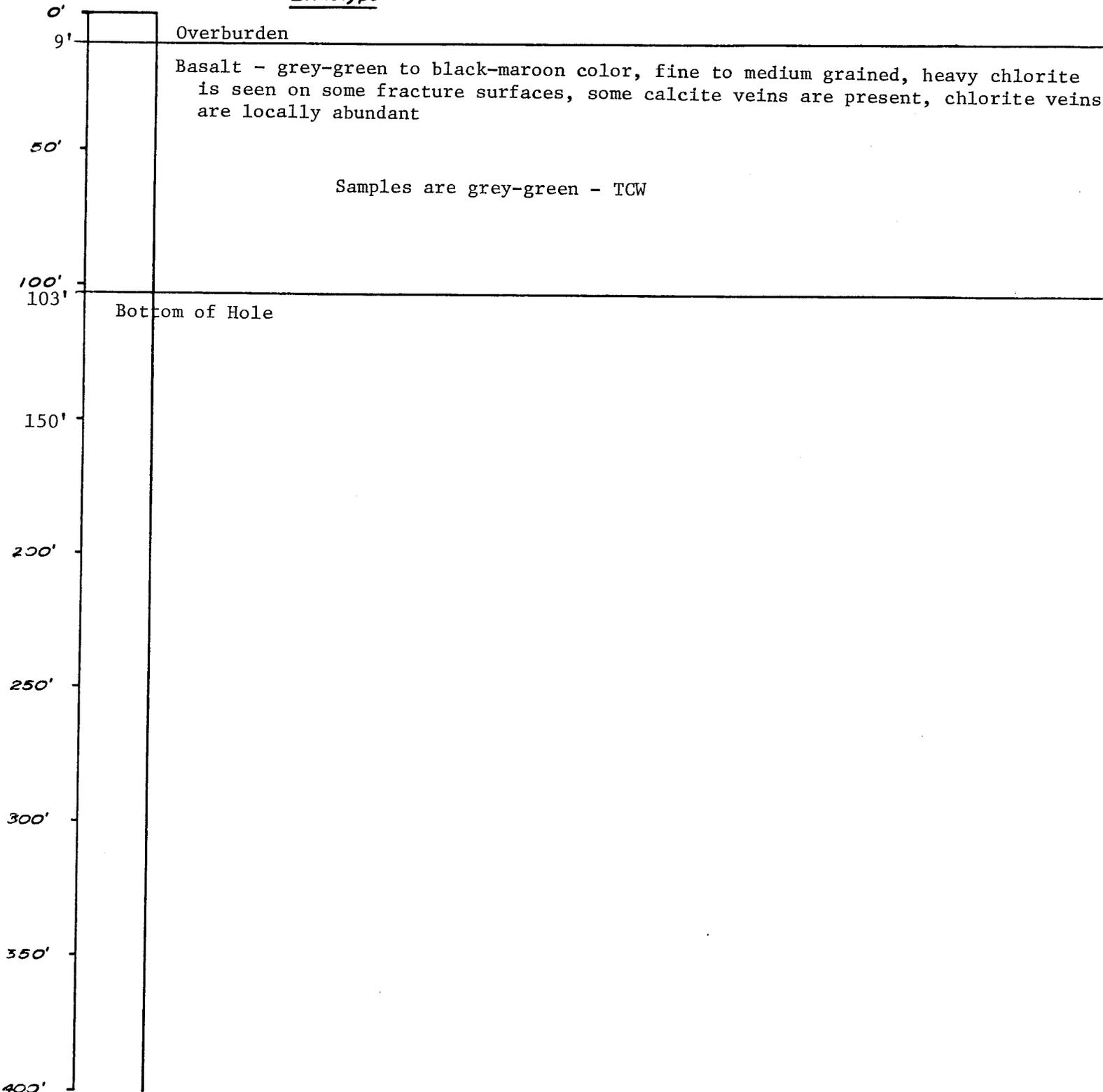
LITHOLOGIC LOG

Project T9-R10 Lithologic Hole no. 910-14 Dip -45° Started 9/10/81 Elev.

Job no. 272 Township T9-R10 See Sketch
Coord. 272-28 Direction 156° Mag Completed 9/10/81

SE 1/4

Lithotype



HOLE #	COORDINATES	DATE COLLARED	DATE COMPLETED	DIP	MAGNETIC BEARING	DEPTH	DRILLED BY
910-1A	See Sketch 272-28	10/24/80	10/24/80	Vert.		Abandoned 45'	Kennebec II
910-1	See Sketch 272-28	10/25/80	10/27/80	-45°	West	265'	Kennebec II
910-2	See Sketch 272-28	6/27/81	6/28/81	-45°	156°	123'	Longyear
910-3	See Sketch 272-28	7/06/81	7/06/81	-45°	156°	103'	Longyear
910-4	See Sketch 272-28	7/07/81	7/08/81	-45°	156°	123'	Longyear
910-5	See Sketch 272-28	7/09/81	7/10/81	-45°	156°	78'	Longyear
910-6	See Sketch 272-28	8/20/81	8/20/81	-45°	156°	103'	Longyear
910-7	See Sketch 272-28	8/21/81	8/22/81	-45°	156°	143'	Longyear
910-8	See Sketch 272-28	8/22/81	8/23/81	-45°	156°	113'	Longyear
910-9	See Sketch 272-28	8/24/81	8/25/81	-45°	156°	150'	Longyear
910-10	See Sketch 272-28	8/26/81	8/31/81	-45°	156°	113'	Longyear
910-11	See Sketch 272-28	8/31/81	9/1/81	-45°	156°	105'	Longyear
910-12	See Sketch 272-28	9/01/81	9/03/81	-45°	156°	103'	Longyear
910-13	See Sketch 272-28	9/03/81	9/08/81	-45°	156°	152'	Longyear
910-14	See Sketch 272-28						

910 (T9-R10) DRILLING

C. Woodard
Feb., 1982

RE-EVALUATION

RM-1

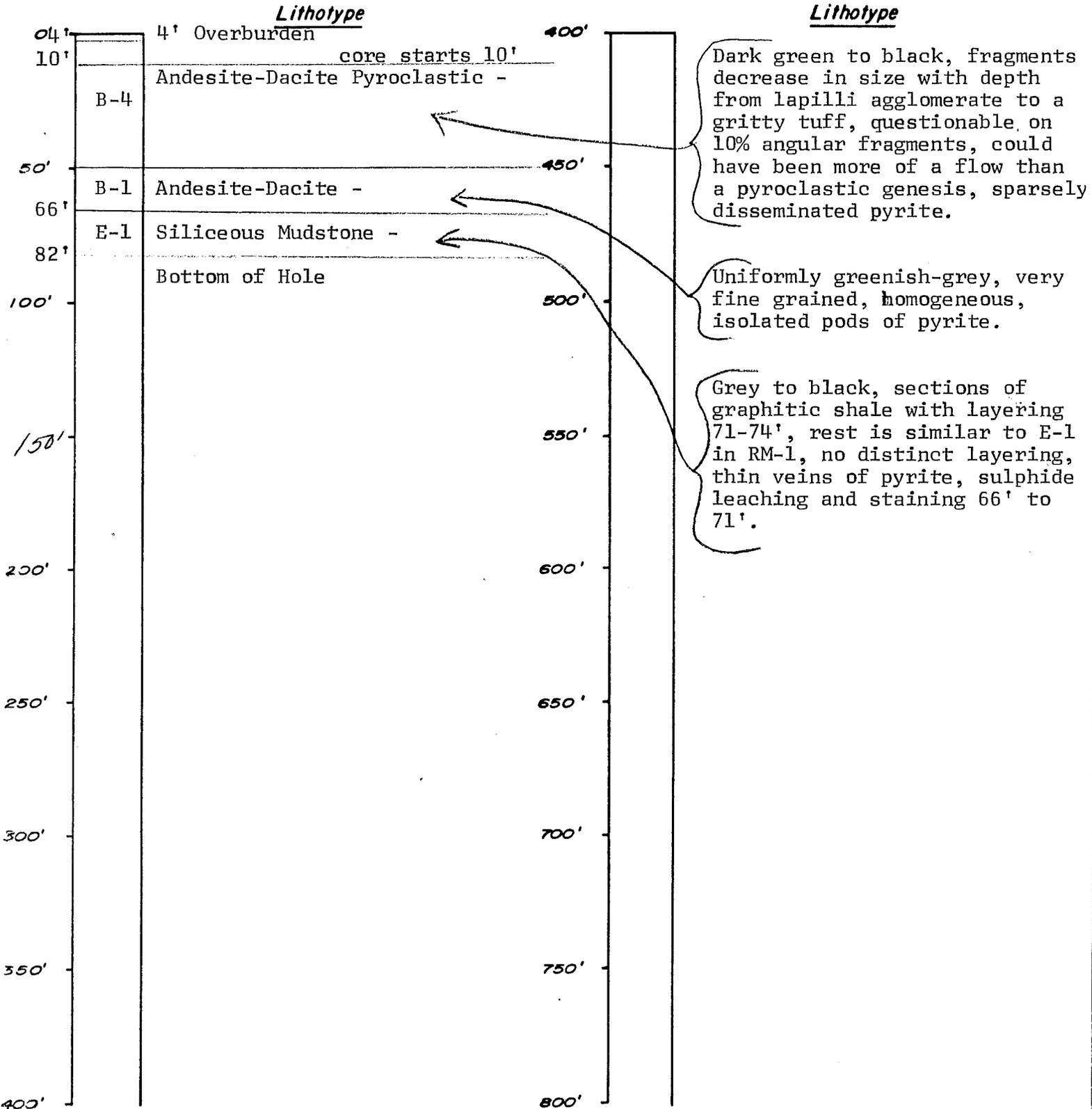
- 10 - 32 - gritty felsic tuff, layered, weakly welded gritty felsic tuff, contains abundant angular feldspars and qtz crystals and ~10-15% rock frags, sericitic alteration of micro matrix and angular feldspars, binoc done at 24'
- 32 - 74 - black siliceous siltstone, drill log says siliceous mudstone, no core in office

J.S. Cummings Inc.

LITHOLOGIC LOG

Project Ragged Mtn. Hole no. RM-2 Dip Vert. Started 7/5/79 Elev.

Job no. 272 Township T9-R10 Coord. 1983W 3748N Direction Completed 7/6/79



RE-EVALUATION

RM-2

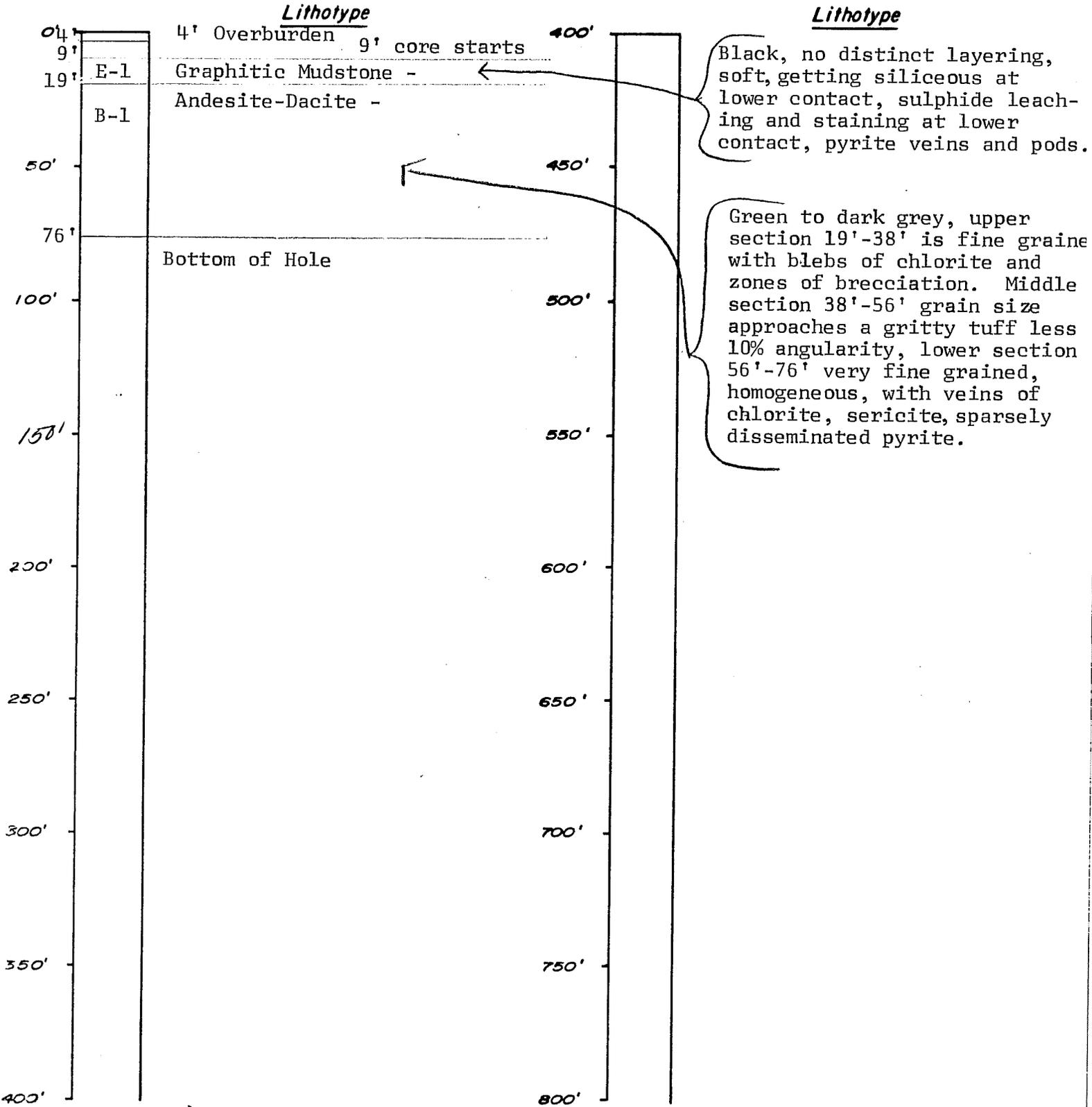
- 10 - 50 - fractured basalt, drill log says andesite-dacite pyroclastic, core is too mafic and soft to be an andesite or dacite, core contains abundant fractures, breaking core into lapilli sized angular basalt pieces, fractures are filled with thin chlorite veins, core at 16' and 33' is more broken up, giving core a brecciated appearance, core at 48' is much less fractured and more massive in appearance, binoc done at 16', examined core at 16', 33', and 48'
- 50 - 66 - basalt, lighter colored and finer grained than the above, too soft and mafic to be an andesite or dacite, core at 58' is only weakly fractured with minor chlorite and calcite filling fractures, examined core at 58', no binoc
- 66 - 82 - siliceous siltstone, probably tuffaceous, fine, but visibly layered grains producing megascopically banded texture, core is siliceous, and weakly fractured and contains minor pyrite pods and 1-2% pyrite blebs, non-graphitic, examined core at 80', no binoc

J.S. Cummings Inc.

LITHOLOGIC LOG

Project Ragged Mtn. Hole no. RM-3 Dip Vert. Started 7/6/79 Elev.

Job no. 272 Township T9-R10 Coord. 1972W 3855N Direction Completed 7/7/79



C. Woodard
Feb., 1982

RE-EVALUATION

RM-3

- 9 - 19 - graphitic siliceous siltstone, core at 11' is black, fine grained, layered, and siliceous, may also be weakly tuffaceous as minor fine angular qtz crystals and feldspar grains are visible in matrix, core has abundant qtz filled very thin veinlets, 2-5% pyrite, very finely disseminated throughout, but heavily concentrated in some layers, assay says 7.06% S from 12-17', examined core at 11', no binoc
- 19 - 76 - basalt, drill log says andesite-dacite, core at 43' is too soft and contains too many mafic minerals to be an andesite or dacite, drill log notes zones of brecciation between 19' and 38'

J. S. Cummings, Inc.

DDH RM-3 - (Assays for Portion of Hole)

<u>DEPTH (FEET)</u> <u>FROM COLLAR</u>	<u>% Zn</u>	<u>% Cu</u>	<u>% Pb</u>	<u>Oz/Ag</u>	<u>Oz/Au</u>	<u>S</u>
12 - 17	None	.006				7.06

Length of Hole: 76 feet

C. Woodard
Feb., 1982

RE-EVALUATION

RM-4

- 10 - 33 - weakly fractured basalt-andesite, core at 13' and 29' is fine grained, massive and weakly fractured with some chlorite plus oxide staining along fractures, drill log says "andesite-dacite pyroclastic", core pieces in office (13', 16' and 29') lack pyroclastic or brecciated textures, core at 13' and 29' is too soft and contains too many mafic minerals to be anything more siliceous than basalt, core at 16' is andesite-(porphyry?) - see binoc, core examined at 13', 16', and 29' with binoc at 16'

NOTE: RM-2, 3, and 4 basalt core is very similar (fine grained, fairly soft, massive, grey color megascopically, plagioclase as dominant mineral, much lesser mafic minerals, most of the core is weakly to moderately fractured, non-magnetic)

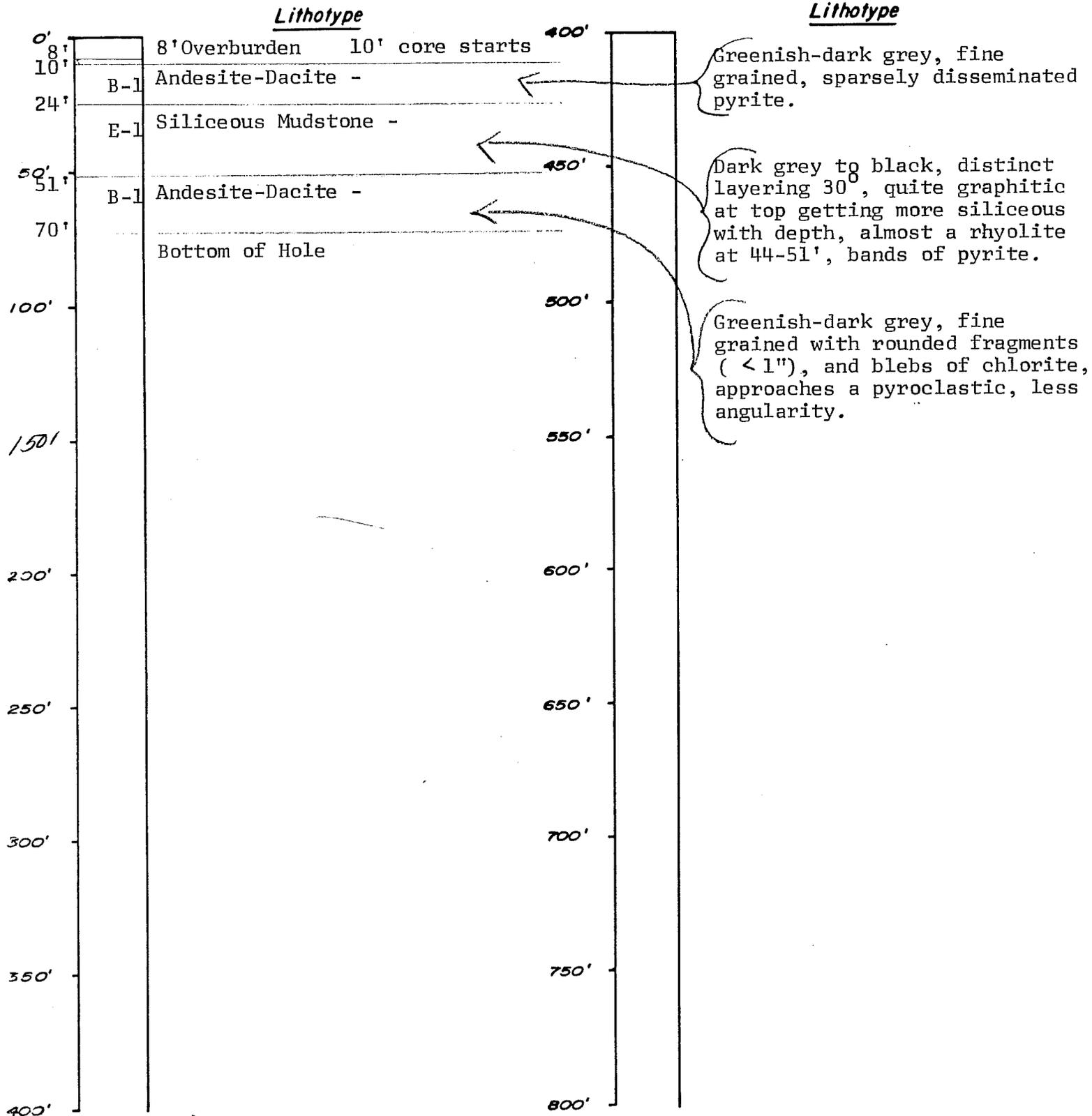
- 33 - 58 - graphitic siliceous siltstone, well layered and banded looking, hard and graphitic, may be weakly tuffaceous as core at 44' contains minor fine white visible feldspar and/or qtz crystals, see binoc at 44'

J.S. Cummings Inc.

LITHOLOGIC LOG

Project Ragged Mtn. Hole no. RM-5 Dip Vert. Started 7/8/79 Elev.

Job no. 272 Township T9-R10 Coord. 1946W 4062N Direction Completed 7/9/79



C. Woodard
Feb., 1982

RE-EVALUATION

RM-5

- 10 - 24 - basalt, drill log says andesite-dacite, core at 13' is basalt, similar but slightly greener megascopically than other RM basalt core plus slightly harder, examined core at 13', no binoc
- 24 - 51 - (locally) graphitic siliceous siltstone, much like other siliceous RM units, grey, siliceous and layered grains, locally graphitic, may be weakly tuffaceous with minor visible angular qtz crystals, drill log says quite graphitic at top getting more siliceous towards bottom, core at 35' shows some real good pyrite bands (3-5% total pyrite?), examined core at 35' and 48', no binocs
- 51 - 70 - (weakly to more highly) fractured basalt, same type basalt as most RM basalt units, core at 67' is weakly fractured with calcite and chlorite along fractures, core at 58' is more highly fractured (possibly brecciated?) and shows a few basalt frags within the dk. chlorite fracture fill, core examined at 58' and 67', binoc at 58'

J. S. Cummings, Inc.

DDH RM-5 - (Assays for Portion of Hole)

<u>DEPTH (FEET)</u> <u>FROM COLLAR</u>	<u>% Zn</u>	<u>% Cu</u>	<u>% Pb</u>	<u>Oz/Ag</u>	<u>Oz/Au</u>	<u>S</u>
36 - 41	.10	.012				6.94

Length of Hole: 70 feet

J.S. Cummings Inc.

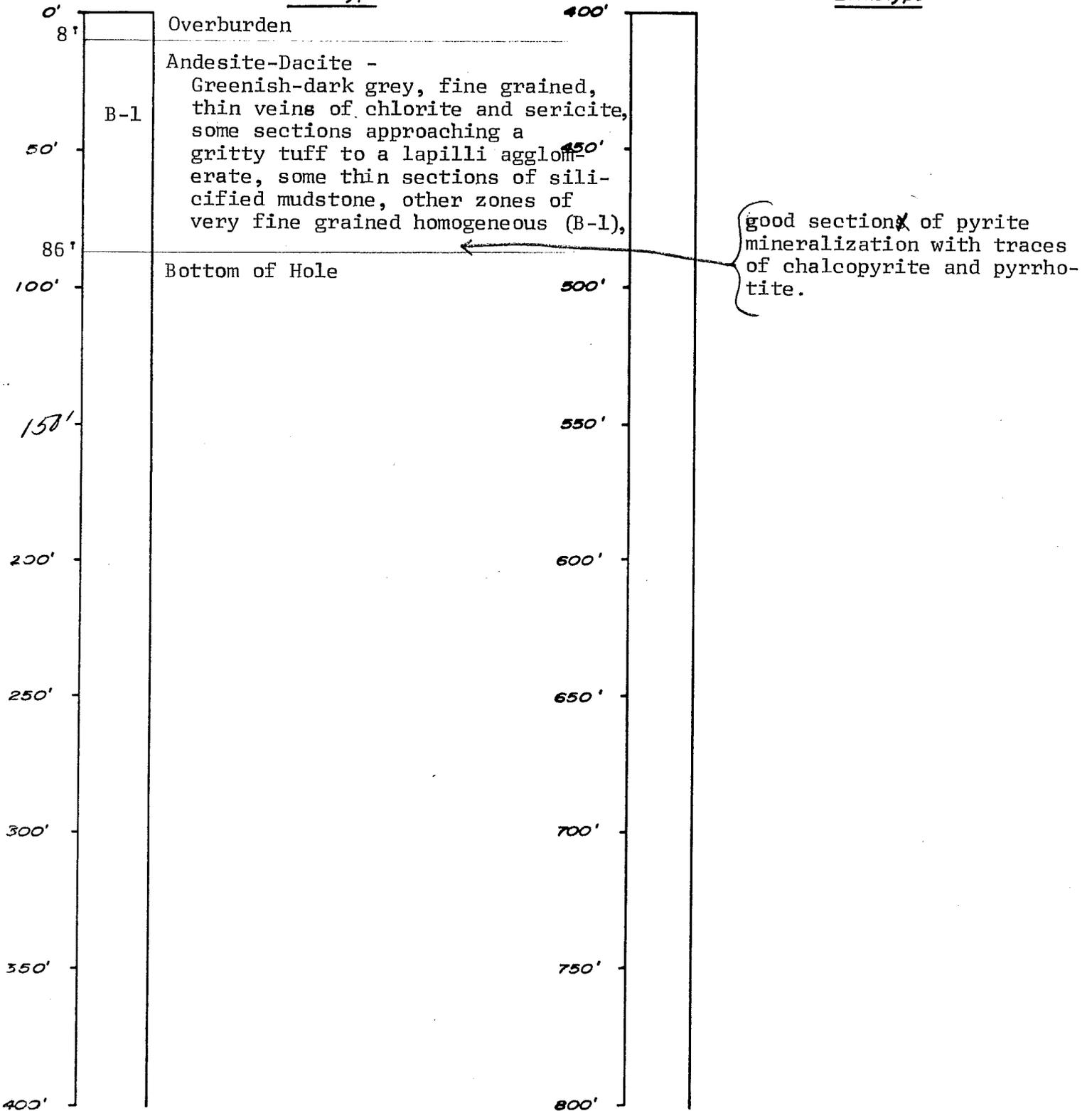
LITHOLOGIC LOG

Project Ragged Mtn. Hole no. RM-6 Dip Vert. Started 7/9/79 Elev.

Job no. 272 Township T9-R10 Coord. 4176N
1905W Direction Completed 7/10/79

Lithotype

Lithotype



C. Woodard
Feb., 1982

RE-EVALUATION

RM-6

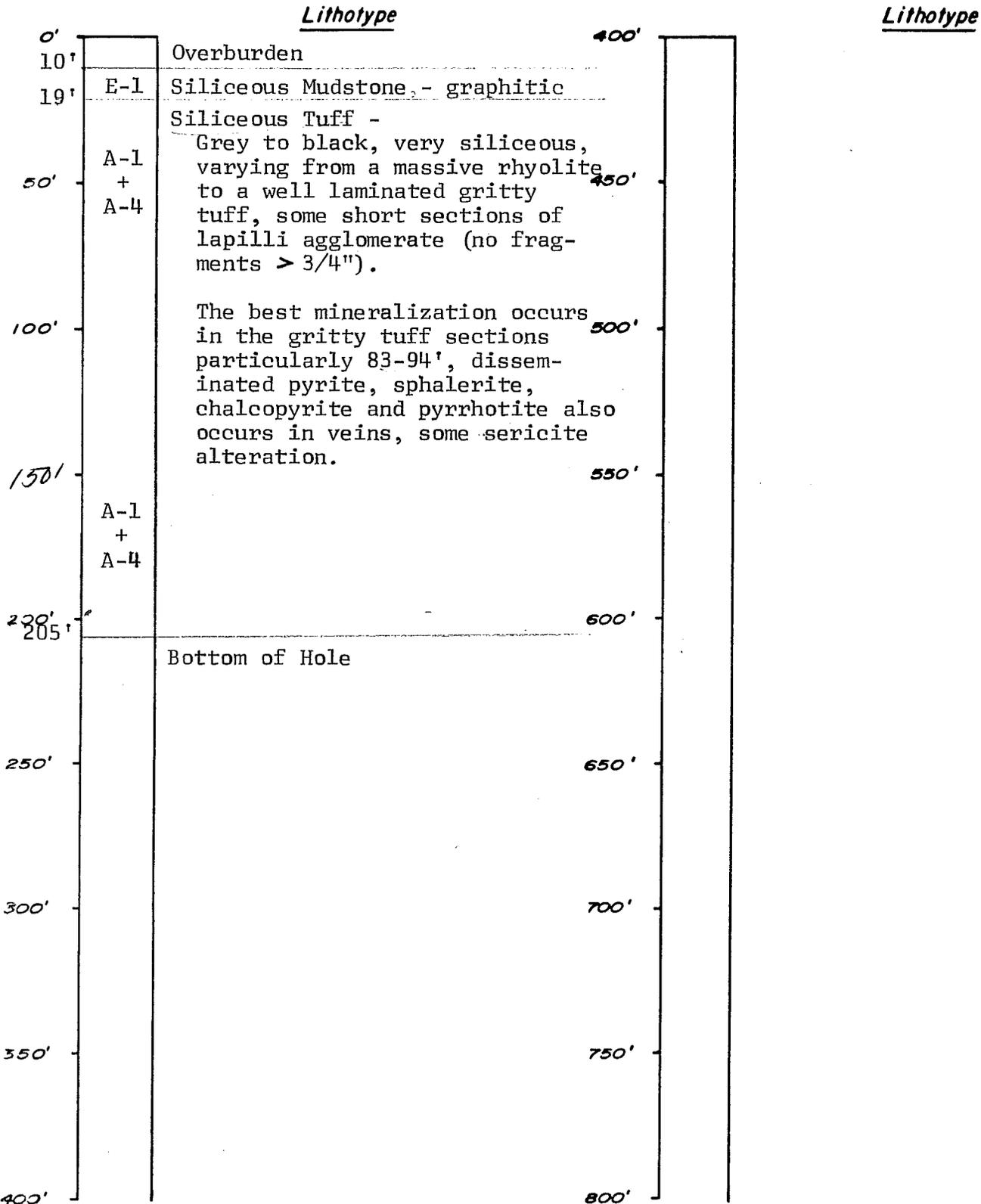
(weakly to highly) fractured basalt with minor dacite lapilli sections, core at 12' and 44' is weakly fractured basalt, overall a greenish-grey in color (much like RM-5 at 13'), core at 44' is very similar to that at 12' only at 44' core is much softer and altered looking, (grain boundaries fuzzy), core at 68' is probably a calcareous basalt (see binoc), drill log says some sections approaching a gritty tuff to lapilli agglomerate, lapilli agglomerate referred to in log are probably short sections of dacite lapilli fragments as contained in core at 77', (see binoc), examined core at 12', 44', 68', and 77', binocs at 12', 68', and 77'

J.S. Cummings Inc.

LITHOLOGIC LOG

Project Ragged Mtn. Hole no. RM-7 Dip 45° Started 7/10/79 Elev. _____

Job no. 272 Township T9-R10 Coord. 3985N
1900W Direction 111° Completed 7/18/79



C. Woodard
Feb., 1982

RE-EVALUATION

RM-7

- 10 - 19 - graphitic siliceous siltstone, no sample in office but from TCW's description and drill log, this is probably a siliceous siltstone
- 19 -200 - in drill log the section from 19-200' is called a siliceous tuff, but this should instead be broken down into 3 different lithologic zones
- (A) 19 - 83, tuffaceous siliceous siltstone, core at 35' and 67' is too granular or sugary textured to be a siliceous tuff as indicated in log, core is fine grained, layered, sugary, or granular, and somewhat megascopically banded, contains minor fine white disseminated kaolin specks plus some fine visible qtz and feldspar crystals, no graphite, binocs done at 35' and 67'
- (B) 83 - 94, felsic lithic tuff with 2-5% sulphide, this section includes good pyrite, pyrrhotite, $\leq 1\%$ sphalerite and trace chalcopyrite mineralization, assays done from 83-93' indicate best mineralization is from 89.8-91.8', 3.33% S, 1.40% Zn, .025 Cu; the tuff consists of sub-rounded to rounded grit and small lapilli sized all grey felsic volcanic rock frags, (welded tuff or rhyolite?), in a black chlorite-sericite matrix
- (C) 94 -200, layered and welded granular felsic tuff, megascopically banded light (almost white) and darker grey layers, darker layers contain fine equa-granular weakly welded grains, probably somewhat waterlain as they still have a somewhat sugary texture, light colored layers (see core at 144') are coarser grained and clearly more pyroclastic in nature, grains are equa-granular but much more welded than darker layers, light layers are welded (granular) felsic tuff and dark layers are weakly welded fine granular felsic tuff, binocs done at 123' and 144'

J. S. Cummings, Inc.

DDH RM-7 - (Assays for Portion of Hole)

<u>DEPTH (FEET)</u> <u>FROM COLLAR</u>	<u>% Zn</u>	<u>% Cu</u>	<u>% Pb</u>	<u>Oz/Ag</u>	<u>Oz/Au</u>	<u>S</u>
83.0 - 85.8	.70	.006		.3	None	1.47
85.8 - 87.8	Trace	.006		None	None	1.47
87.8 - 89.8	.20	.012		None	None	1.43
89.8 - 91.8	1.40	.025		None	None	3.33
91.8 - 93.8	Trace	.012		None	None	1.62

10.2' of 3.7% S
8.8' of 4% S + .6%

1.88 S
 0.6 Zn
 8.8 / 10'

Length of Hole: 205 feet

19.9'
 0.25 S
 0.1
 3% S

HOLE #	COORDINATES	DATE COLLARED	DATE COMPLETED	DIP	BEARING	DEPTH	MOST SIGNIFICANT SULPHIDE INTERSECTION
RM-1	3600N, 2000W	7/04/79	7/05/79	-45°	North	74'	
RM-2	3748N, 1983W	7/05/79	7/06/79	Vert.		82'	
RM-3	3855N, 1972W	7/06/79	7/07/79	Vert.		76'	
RM-4	3964N, 1970W	7/07/79	7/08/79	Vert.		58'	
RM-5	4062N, 1946W	7/08/79	7/08/79	Vert.		70'	
RM-6	4176N, 1905W	7/09/79	7/10/79	Vert.		86'	
RM-7	3985N, 1900W	7/10/79	7/18/79	-45°	East	205'	
TOTAL						651'	

RAGGED MOUNTAIN (T9-R10) DRILLING

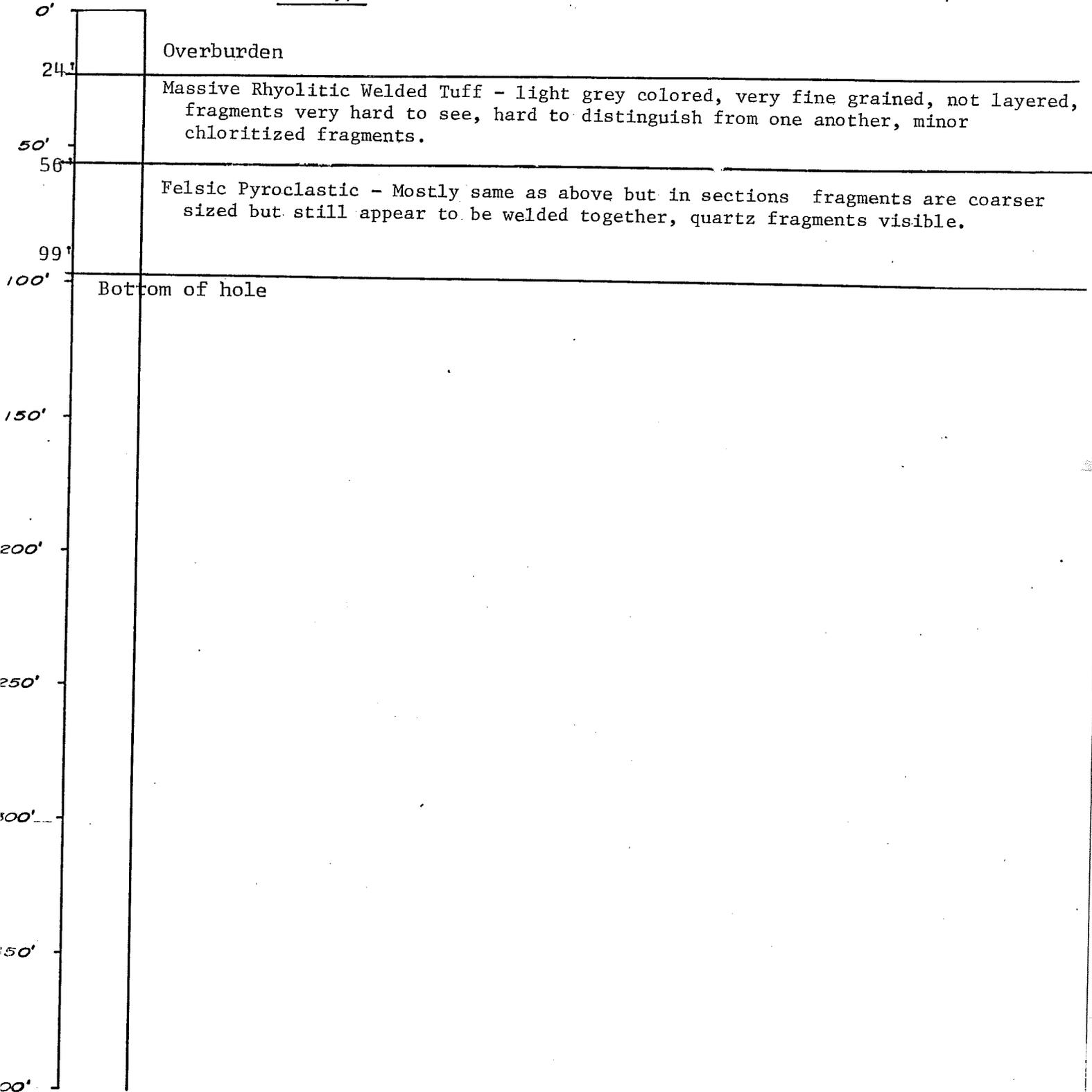
LITHOLOGIC LOG

Project Ragged Mtn. Ext. Hole no. RMX-1 Dip -45° Started 11/10/80 Elev. _____

Job no. 272.2 Township T9-R10 See Sketch
Coord. 272-8 Direction 156° Completed 11/11/80

SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



C. Woodard
Feb., 1982

RE-EVALUATION

RMX-1

24 - 99 - Welded felsic tuff with felsic gritty lapilli
frags

examined core at 45'-66' and 79', welded felsic
tuff matrix containing, varying from minor (at 45')
to abundant, white and grey wispy looking welded
felsic volcanic frags, mostly grit sized and some
lapilli, only very weakly altered with sericite-
chlorite, frags become coarser and more abundant
nearer bottom of core (see log), core is weakly
layered, binocs done at 45', 66' and 79'

J.S. Cummings Inc.

C. Mattson

LITHOLOGIC LOG

Ragged Mtn. Ext. Hole no. RMX-2 Dip -45° Started 11/11/80 Elev.

See Sketch
Township T9-R10 Coord. 272-8 Direction 156° Completed 11/12/80

SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype

Overburden

Fractured & Brecciated Basalt - dark grey broken basalt with fractures filled with calcite, in places highly brecciated. Fragments range from .1" to >2" in size, minor chloritized sections of basalt near calcite veins, in last 4' of core are two minor tuffaceous sections both <6" but showing layers +60° to core axis, highly calcareous matrix with chloritized fragments and felsic fragments.

Bottom of hole

Probably Andesitic
TCW, CW

RE-EVALUATION

D. Coles
February, 1982

RMX-2 (109'-113')

limey tuff with felsic and chloritized mafic grit in a calcite matrix with minor chlorite, locally layered with layers near 60° to the core axis, some lapilli sized fragments are present, very calcareous unit

TCW - sample at 111' - calcite-pyrite vein with pyritic altered dacite fragment

sample at 112' - 1" of laminated calcite, trace sericite and qtz with altered dacitic grit (ser/chl) and 1" of calcite/pyrite

J. S. Cummings, Inc.

DDH RMX-2 - (Assays for Portion of Hole)

<u>DEPTH (FEET) FROM COLLAR</u>	<u>LENGTH</u>	<u>% Zn</u>	<u>% Cu</u>	<u>% Pb</u>	<u>Oz/Ag</u>	<u>Oz/Au</u>	<u>Approx. % Sulphide</u>
109 - 113	4'	Trace	None		0.1	None	19.2

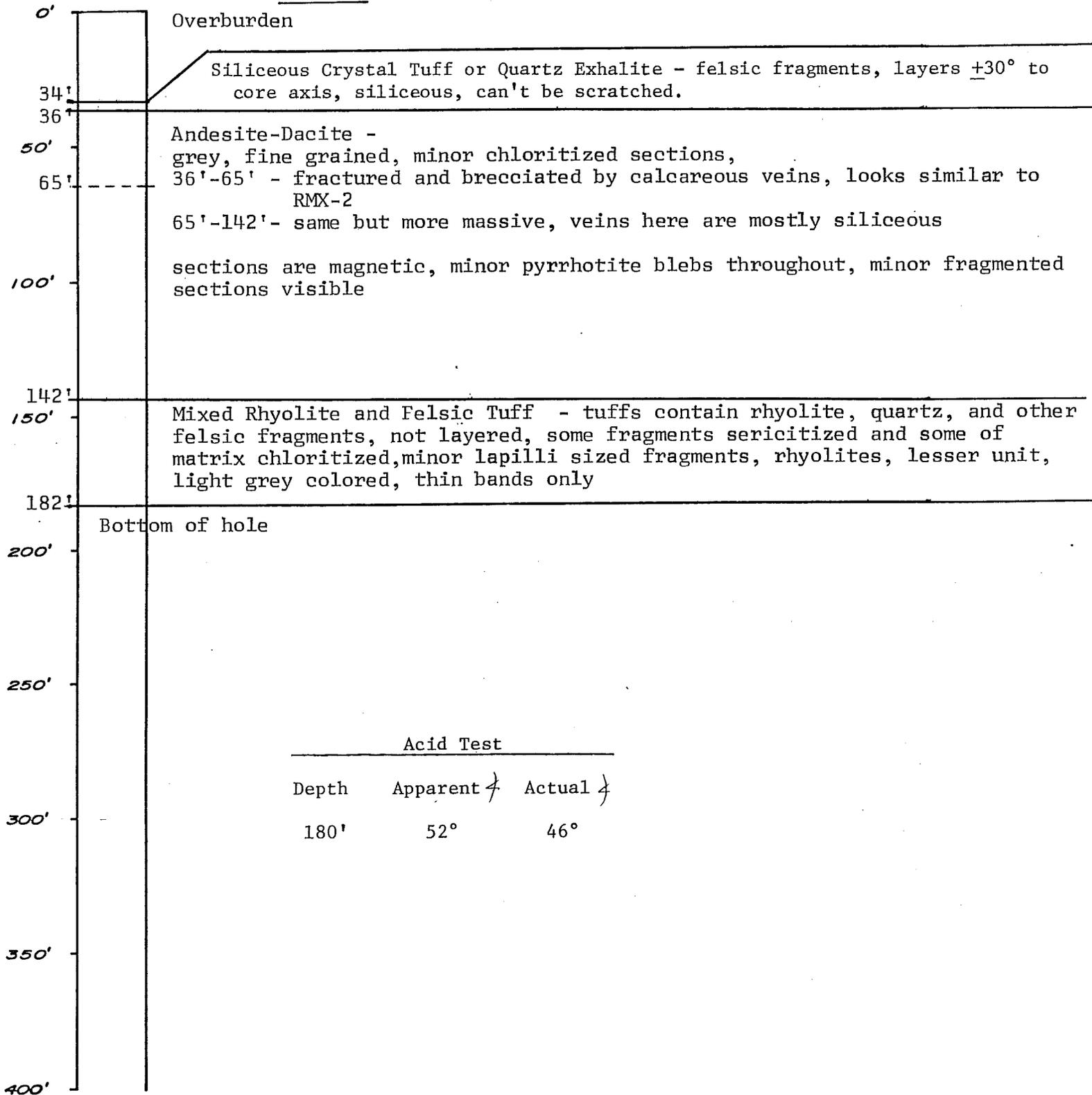
Bottom of Hole: 113'

LITHOLOGIC LOG

Project Ragged Mtn. Ext. Hole no. RMX-3 Dip -45° Started 11/18/80 Elev.

Job no. 272.2 Township T9-R10 See Sketch
 Coord. 272-8 Direction 156° Completed 11/20/80
 SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



RE-EVALUATION

RMX-3

- 34 - 36 - Layered welded felsic tuff
core at 35' has alternating layers of greenish-grey welded felsic tuff and dark grey fine welded felsic tuff, core is very hard with no sericitic alteration, but does contain 2-4% pyrite distributed along layers, binoc done at 35'
- 36 - 142 - log okay
- 36 - 65 - grey grecciated dacite (or andesite?) with calcareous matrix (light colored and hard enough to be dacite - binoc at 55')
- 65 - 142 - dacite - non-brecciated, somewhat fractured, (dacite - see binoc at 126')
- 142 - 182 - mixed rhyolite and felsic tuff with weakly altered felsic lapilli fragments (felsic tuffaceous lapilli fragmental?)
core at 172' dominantly of felsic lapilli fragments up to 2.5" in size, most frags have some chlorite and sericite alteration, matrix is welded felsic tuff with minor sericite and chlorite alteration, drill log indicates only minor lapilli sized frags are contained from 142'-182' and core contains thin rhyolite bands, binoc done at 172'

J. S. Cummings, Inc.

DDH RMX-3 - (Assays for Portion of Hole)

<u>DEPTH (FEET) FROM COLLAR</u>	<u>LENGTH</u>	<u>% Zn</u>	<u>% Cu</u>	<u>% Pb</u>	<u>Oz/Ag</u>	<u>Oz/Au</u>	<u>Approx. % Sulphide</u>
34 - 36	2'	Trace	None		0.4	0.020	1.8

Bottom of Hole: 182'

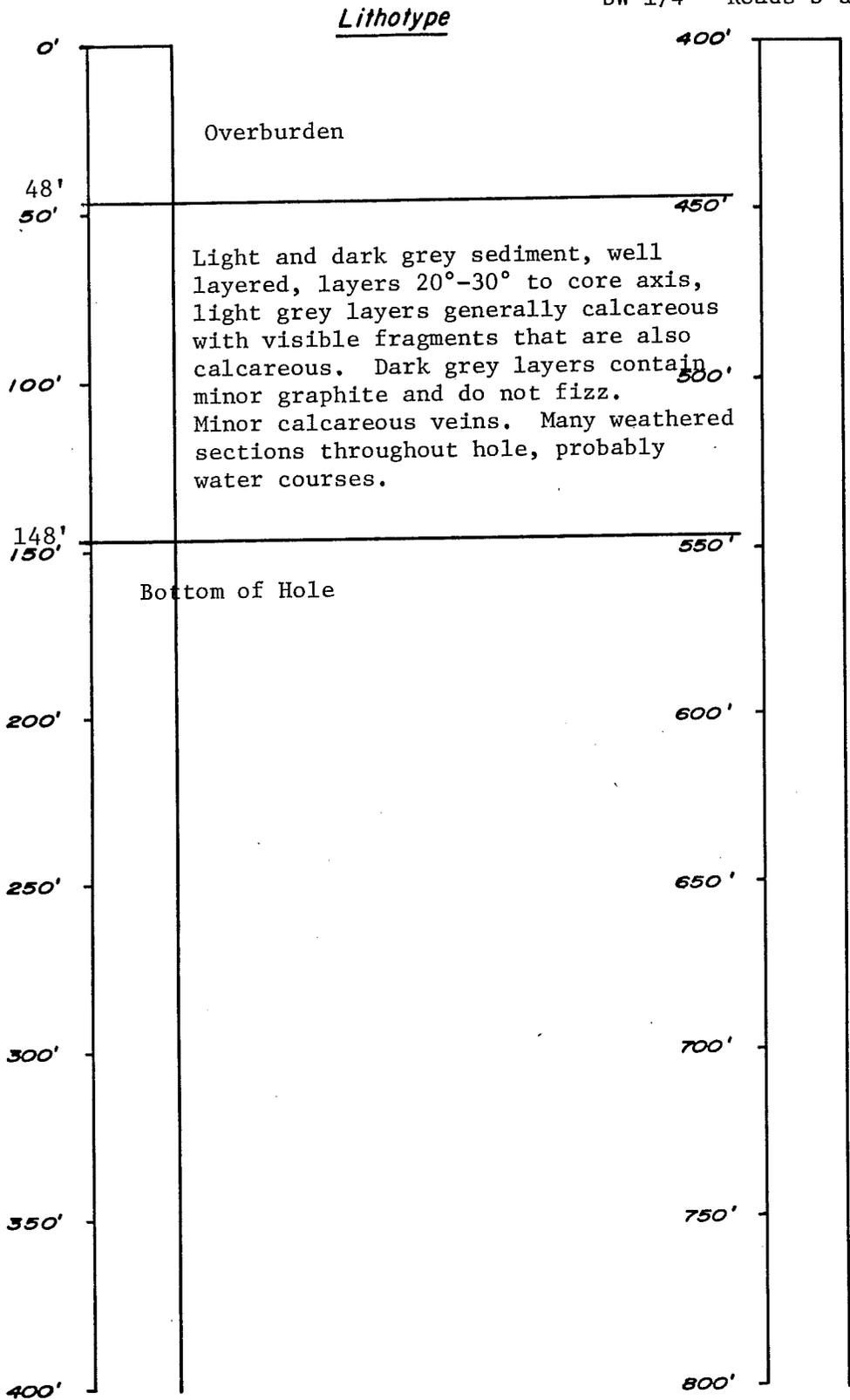
LITHOLOGIC LOG

Project Ragged Mtn. Extension Hole no. RMX-4 Dip -45° Started 11/20/80 Elev.

Job no. 272.2 Township T9-R10 Coord. 272-8 Direction 156°Mag Completed 11/21/80

See Sketch

SW 1/4 - Roads S & W of Ragged Mtn.



C. Woodard
Feb., 1982

RE-EVALUATION

RMX-4

highly calcareous layered siltstone, drill log says lt. and
dk. grey sediment, examined core at 94', no binoc

LITHOLOGIC LOG

Ragged Mtn. Extension

Hole no. RMX-5 Dip -45° Started 11/22/80 Elev. _____

See Sketch

Coord. 272-8 Direction 156° Mag. Completed 11/23/80
SW 1/4 - Roads S & W of Ragged Mtn.

2.2. Township T9-R10

Lithotype

Overburden

Boulders

Greywacke or Gritty Tuffaceous Sediment -
Mostly fine grained sediment, grey-green colored with black mottling scattered throughout. Layers when visible are $+20^\circ$ to core axis, most very soft and powder feels very talcy, possibly sericite. Minor felsic units at top of hole (fractured rhyolite $< 6''$ and possibly a fractured dacite at 66').
Minor variations throughout the hole.

Bottom of Hole

NOTE: sample at 99' is a gritty tuff and I. Carlson describes a sample at 87' as a felsic tuff.
TCW

0'

50'

100'

C. Woodard
Feb., 1982

RE-EVALUATION

RMX-5

altered felsic tuff?,
sample at 99', is altered felsic tuff (TCW says gritty tuff)
and IK Carlson describes sample at 87' as welded felsic tuff,
drill log says greywacke or gritty tuffaceous sediment with
minor felsic units at top of hole, not enough info from drill
log or core in office to tell if drill hole is altered felsic
tuff, binoc done at 99'

LITHOLOGIC LOG

RMX-5 Re-Evaluation Hole no. _____ Dip _____ Started _____ Elev. _____

Township _____ Coord. _____ Direction _____ Completed _____

Lithotype

Overburden

Entire hole is felsic tuff, fine grained to very fine grained, grey-green color with some darker sections. The matrix is clear and siliceous looking, hard to just scratched fine ash is seen floating in it. The grit is feldspar and quartz with minor hard black siliceous grit and some soft chloritic grit. At 63' is a 6" section of cracked rhyolite or welded tuff with Mn staining in the cracks. 141'-147.5' - very fine grained felsic tuff, soft, greasy feel, sericitic?.

Bottom of Hole

Layers .05" thick to 3"+?

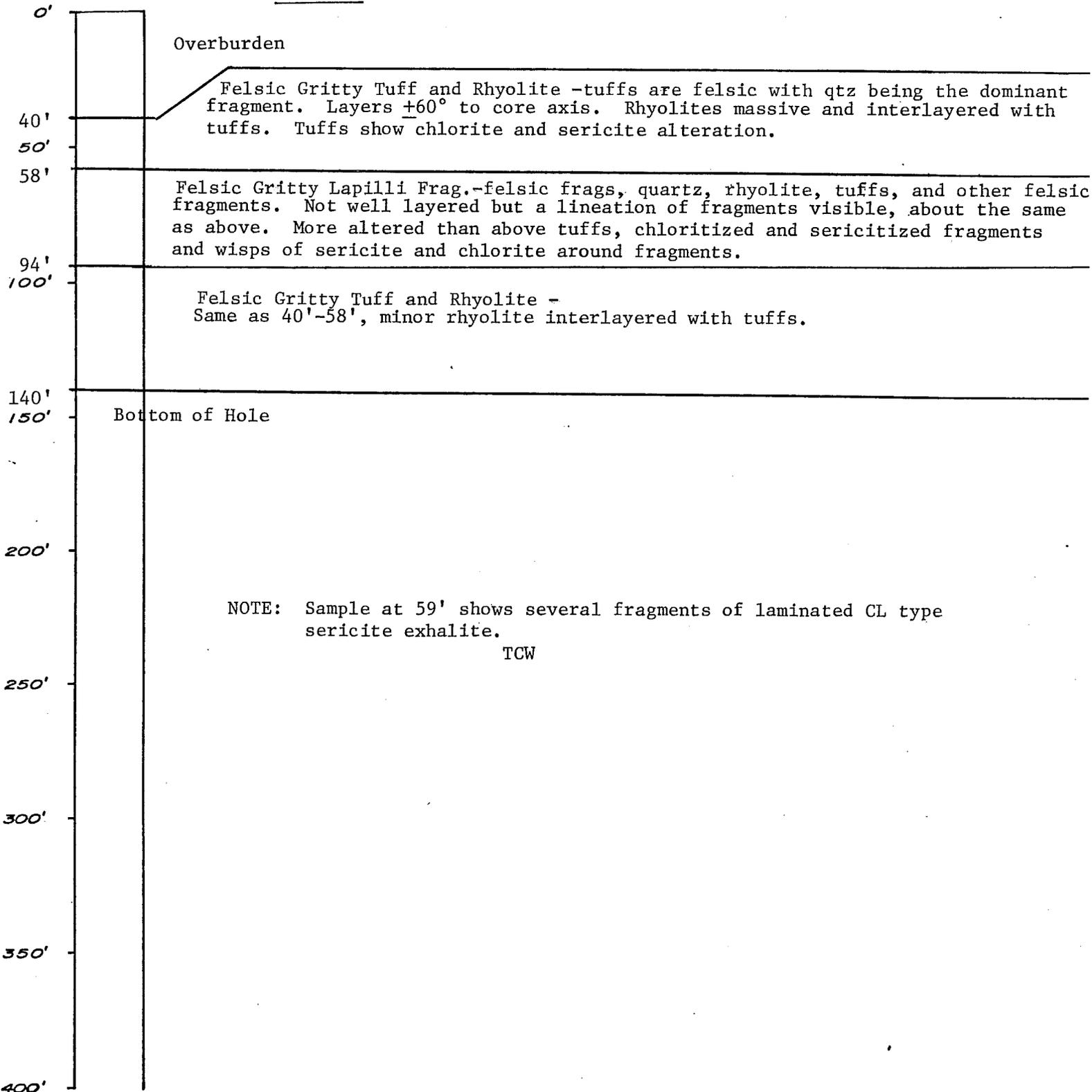
<u>Depth</u>	<u>Angle to Core Axis</u>
51'	25°
68'	18°
77'	18°
85'	20°
100'	35°
107'	20°
137'	5°
147'	25°

LITHOLOGIC LOG

Project Ragged Mtn. Extension Hole no. RMX-6 Dip -45° Started 11/24/80 Elev. _____

Job no. 272.2 Township T9-R10 See Sketch
 Coord. 272-8 Direction 336° Mag Completed 11/25/80
 SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



C. Woodard
Feb., 1982

RE-EVALUATION

RMX-6

- 40 - 58 - no sample in office, drill log says: felsic gritty tuff with interlayered massive rhyolite
- 58 - 94 - felsic tuffaceous lapilli fragmental, sample at 59' contains abundant angular grit and lapilli sized altered volcanic rock fragments, welded and weakly layered into an altered felsic tuff matrix, total alteration about 25-30% sericite and chlorite, no visible grit, binoc done at 59'
- 94 - 140 - weakly calcareous felsic gritty tuff, sample at 107' is weakly calcareous and very weakly altered with only minor grit, sample at 133' is altered (25-30% chl/ser alteration) and contains quite abundant black soft shaley grit; Note: drill log says minor rhyolite interlayered with felsic tuffs, rhyolites could actually be fine welded felsic tuffs (see sample at 125'), binoc done at 107', 125', and 133'

RE-EVALUATION

D. Coles
February, 1982RMX-6

wispy chlorite and some sericite are found in the matrix of the felsic gritty lapilli fragmental, all CL-type sericite exhalites are found in this unit between 58' and 94'

61.5'	.2" X .3"	frag	ser/chl	good layers
64.2'	.8" X .3"	frag	ser/chl	layered
67.5'	.3" X .2"	frag	qtz/chl	poor layers
71.6'	.2" X .2"	frag	ser/chl/qtz	good layers
91.8'	1.2" X .3"	frag	ser/chl	poor layers

Fragments in this fragmental are elongated. It is possible that there are other CL-type exhalite fragments which appear to be part of the matrix.

LITHOLOGIC LOG

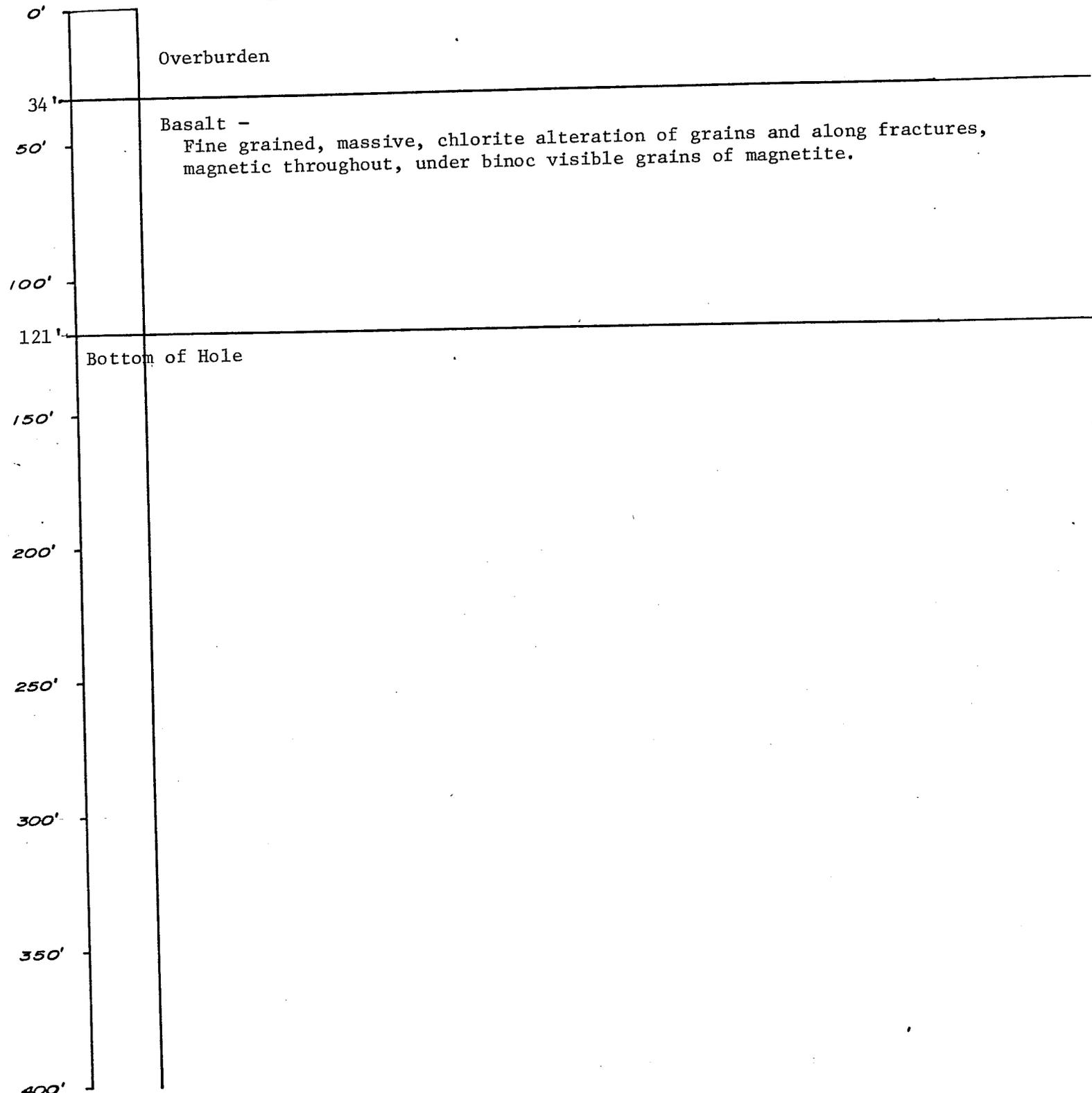
Project Ragged Mtn. Extension Hole no. RMX-7 Dip -45° Started 12/1/80 Elev. _____

See Sketch

Job no. 272.2 Township T9-R10 Coord. 272-8 Direction 336° Mag. _____ Completed 12/2/80

SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



C. Woodard
Feb., 1982

RE-EVALUATION

RMX-7

drill log okay - basalt,

(weakly calcareous, magnetic basalt, plag, sericitically
altered > 10%), examined RMX-7 at 85', no binoc

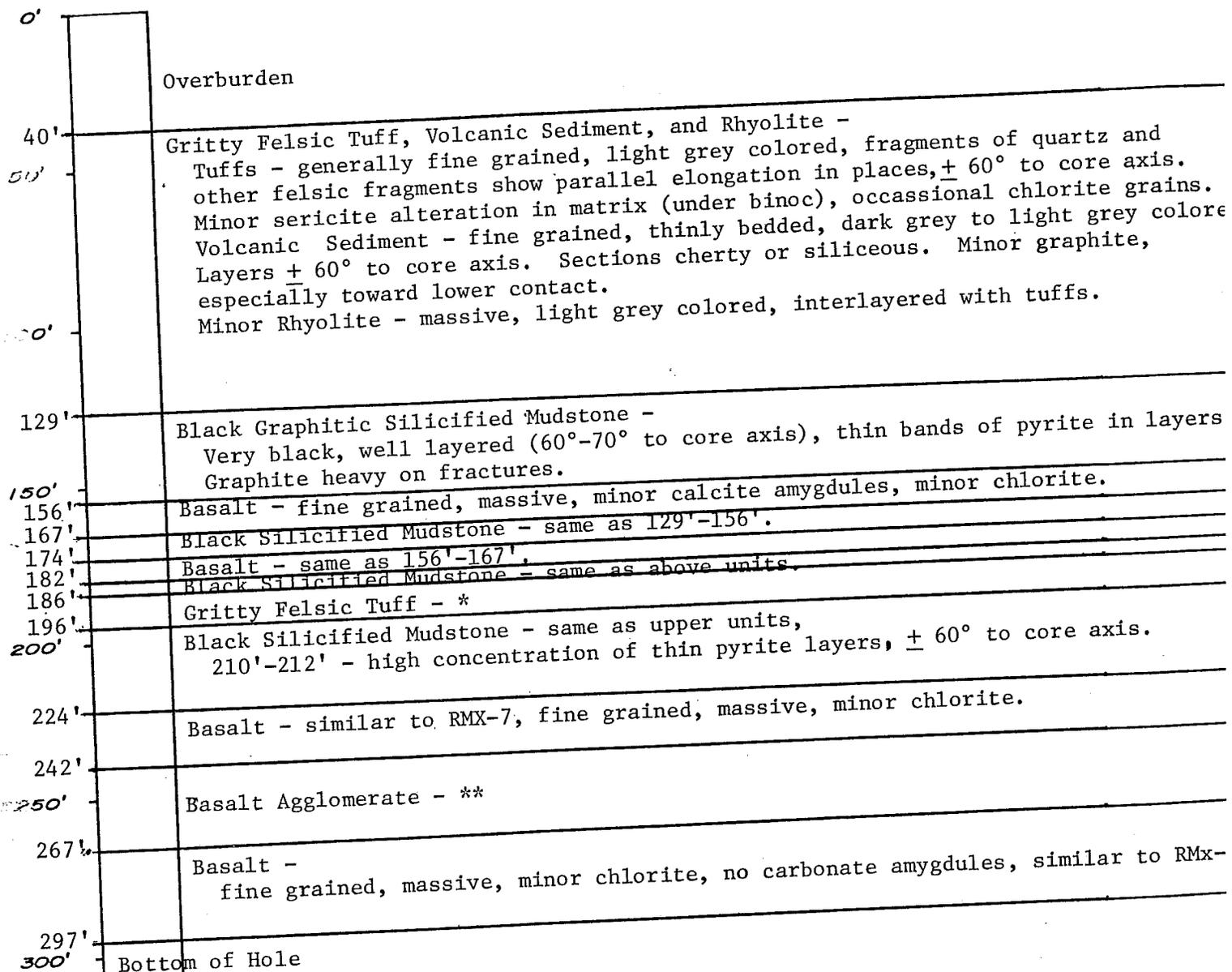
LITHOLOGIC LOG

Project Ragged Mtn. Extension Hole no. RMX-8 Dip -45° Started 12/1/80 Elev. _____

See Sketch

Job no. 272.2 Township T9-R10 Coord. 272-8 Direction 336° Mag Completed 12/7/80
 SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



Depth	Acid Test	
	Apparent \neq	Actual \neq
200'	51°	45°

* Gritty Felsic Tuff - minor lapilli fragments, first 1' looks very similar to mineralized tuff in RM drilling, similar alteration, elongation of fragments, and types of fragments, few flecks sph. visible.

** Basalt Agglomerate - large basalt fragments $> 3''$ mixed with smaller fragments $< 1''$ of chloritized basalt, felsic fragments of rhyolite and dacite, pyrite clasts (possibly only blebs), some black mudstone as well, chlorite alteration and pyrite stringers in places.

RE-EVALUATION

D. Coles
February, 1982RMX-8 (242'-267')

matrix	chlorite	+6%	
	pyrite	2%	
	calcite	2%	
	rhyolite frags	5%	sub-angular
	dacite frags	2%	sub-angular
	and./basalt	5%	sub-angular
	basalt	78%	sub-angular

Most massive pyrite appears to be blebs. They generally are found in veinlike clumps as part of the matrix. They tend to be irregular shaped and commonly have diffuse boundaries. Some dacite and basalt fragments have pyrite rinds on them. One dacite fragment at 253' is now 2/3 pyrite suggesting that pyrite may have been replacing the material in some fragments. 60% of the sulphide is in blebs.

A small fraction (5%) of the massive pyrite may be clasts. These are generally isolated rounded shapes from the blebs of pyrite. They have distinct boundaries and appear to be finer grained.

Pyrrhotite blebs are seen locally. Fine grained Po is seen throughout this rock unit.

Sulphide-60% in blebs, 5% clasts?, 35% veins and fine grained Po and Py

RE-EVALUATION

RMX-8

- 40 - 129 - gritty felsic tuff, volcanic sediment (layered lithic tuff?), and rhyolite
- weakly gritty altered felsic tuff, sample at 58' of layered qtz and sericite (15-20% sericitic alteration?), matrix containing minor grit sized siliceous rounded fragments layered into matrix, IK Carlson describes sample at 56' similarly,
- volcanic sediment referred to in log may be layered lithic tuff, layered all grey siliceous rock fragments in a sericite-qtz matrix, (sample at 76'), drill log indicates minor rhyolite interlayered with tuffs, binocs done at 58' and 76'
- 129 - 156 - black siltstone, (qtz-sericite, minor biotite, too coarse grained and hard for shale and non-fissile), drill log says "black graphitic silicified mudstone", no binoc, examined core at 146'
- 156 - 167 - amygdaloidal basalt (7-10% amygdules), core at 163' is amygdaloidal (calcite and chlorite), weakly calcareous and contains (15-20%?) sericite-chlorite alteration of groundmass (olive green and grey, very soft, altered plag grains), no binoc but examined core at 163'

Interlayered black siltstone and basalt from 129' - bottom (see log) except for:

- 1) 186 - 196 - gritty felsic tuff, layered, and contains 3-5% black grit, some sericitic alteration, drill log indicates minor lapilli fragments, binoc done at 191'
- 2) 242 - 267 - (proximal?) agglomerate, dominated by lapilli sized dacite or andesite frags with varying degrees of chlorite-sericite-sulphide alteration, contains also lesser other volcanic rock frags and some chert and black siltstone frags, all frags are contained in a highly chloritic matrix, total alteration > 20%, binoc done at 265'

LITHOLOGIC LOG

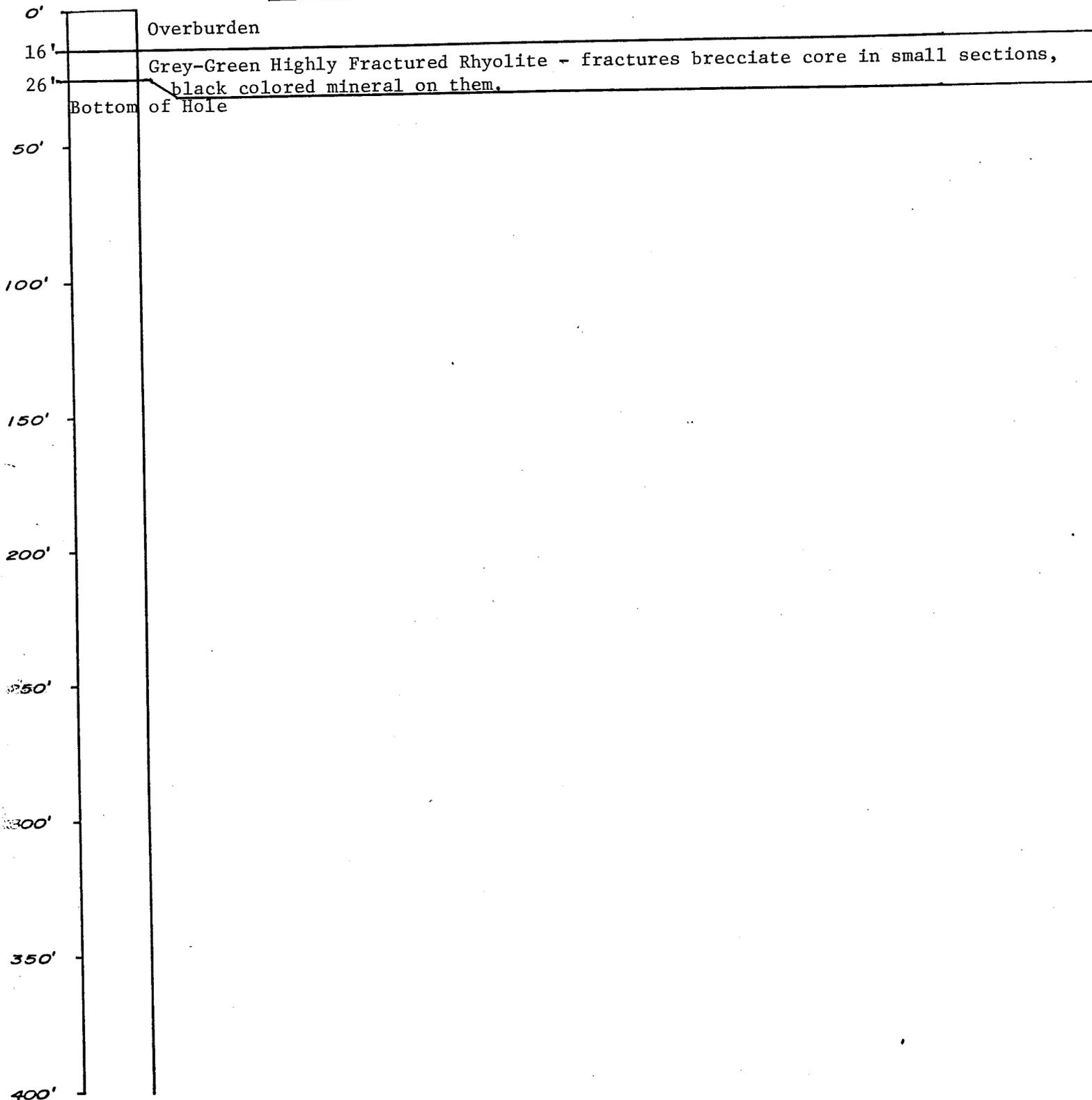
Project Ragged Mtn. Extension Hole no. RMX-9 Dip -45° Started 12/8/80 Elev.

See Sketch

Job no. 272.2 Township T9-R10 Coord. 272-8 Direction 336° Mag. Completed 12/8/80

SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



C. Woodard
Feb., 1982

RE-EVALUATION

RMX-9

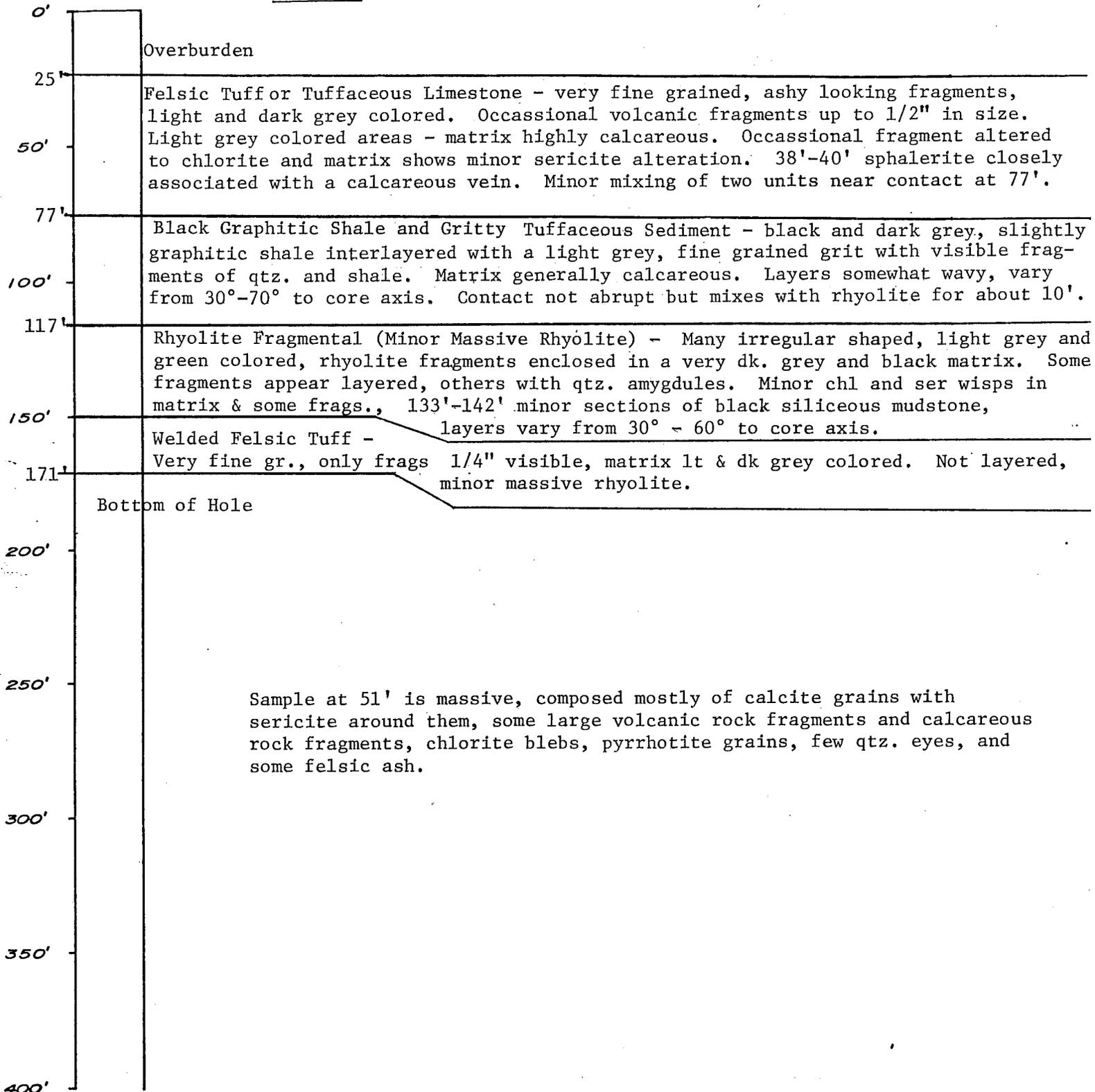
log says "highly fractured rhyolite", but core at 18' fractured weakly altered felsic tuff (total alteration \leq 5% ser/chl), binoc done at 18'

LITHOLOGIC LOG

Project Ragged Mtn. Extension Hole no. RMX-10 Dip -45° Started 12/9/80 Elev. _____

Job no. 272.2 Township T9-R10 Coord. See Sketch 272-8 Direction 336° Mag Completed 12/16/80
 SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



RE-EVALUATION

RMX-10

- 25 - 77 - highly altered (sericitic) felsic tuff? or fragmental?, abundant sericitic alteration (> 50%), highly sericitic wispy (matrix?) containing abundant seritized feldspar (many lath shapes), lesser qtz and 10-20% altered volcanic rock frags, sericitic "matrix" may also be fine pyroclastic frags, core varies from weakly to strongly calcareous (as fragments?) from 31' down, very wispy looking core, difficult to tell matrix from frags, NOTE - core is locally broken up into large lapilli sized pieces (see core at 30', 35', and 39'), good pyrrhotite and pyrite mineralization, from 38'-40' sphalerite, binocs done at 30', 38.5', 51' and 54'
- 77 - 117 - from core piece at 89':
layered intermixed shale and calcareous greywacke (no binoc)
- 117 - 150 - felsic tuffaceous lapilli fragmental, core at 140' contains abundant weakly altered rhyolite frags in a grey hard matrix, drill log notes minor sections (133'-142') of black siliceous siltstone - no samples in office, called "mudstone" in log, sample at 118' is fine welded felsic tuff, sample is not described in log, binocs done on core at 118' and 140'
- 150 - 171 - fine felsic tuff with minor grit??, drill log says welded felsic tuff, matrix is either a weakly altered felsic tuff or also a possible rhyolite as fine grains are interlocking and look massive locally, matrix contains minor both gritty and felsic volcanic rock frags, plus minor massive to semi-massive sulphide grit sized frags, (not really sure what sample is) binoc sheet for sample at 168'

J. S. Cummings, Inc.

DDH RMX-10 - (Assays for Portion of Hole)

<u>DEPTH (FEET)</u> <u>FROM COLLAR</u>	<u>LENGTH</u>	<u>% Zn</u>	<u>% Cu</u>	<u>% Pb</u>	<u>Oz/Ag</u>	<u>Oz/Au</u>	<u>Approx. % Sulphide</u>	<u>SiO₂</u>	<u>CaCO₃</u>
25 - 35	10'	None	0.012		None	Trace	11.8	39.09	14.13
35 - 45	10'	0.40	None	None	None	None	4.9	23.03	46.42
45 - 55	10'	None	None		None	None	6.2		
55 - 65	10'	None	0.006		0.3	None	4.0		
65 - 71	6'	None	None		0.3	None	6.5		
71 - 81	10'	None	None		0.4	Trace	8.0		

Bottom of Hole: 171'

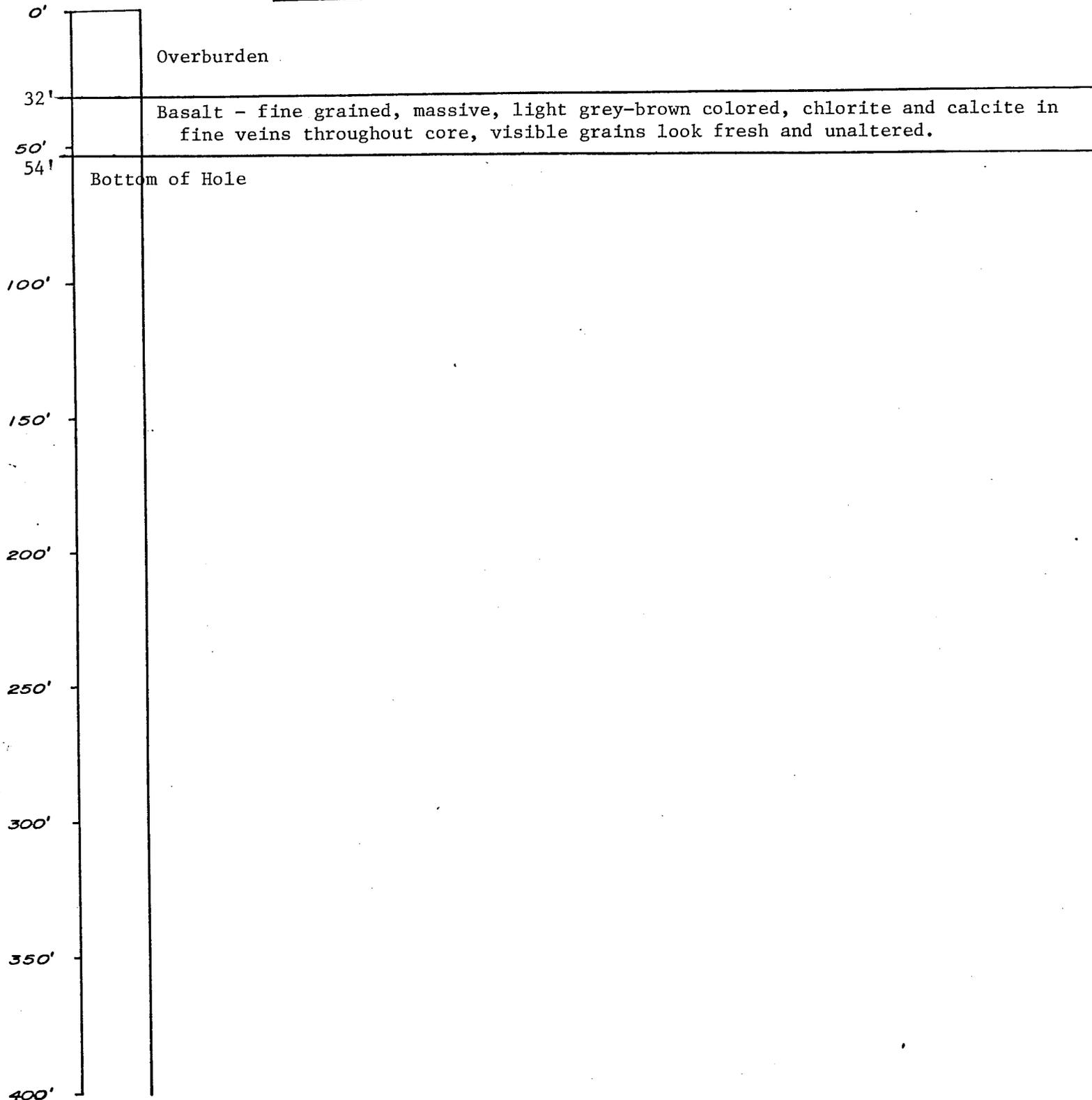
LITHOLOGIC LOG

Project Ragged Mtn. Extension Hole no. RMX-11 Dip -45° Started 12/17/80 Elev.

Job no. 272.2 Township T9-R10 See Sketch
Coord. 272-8 Direction 336° Mag Completed 12/18/80

SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



C. Woodard
Feb., 1982

RE-EVALUATION

RMX-11

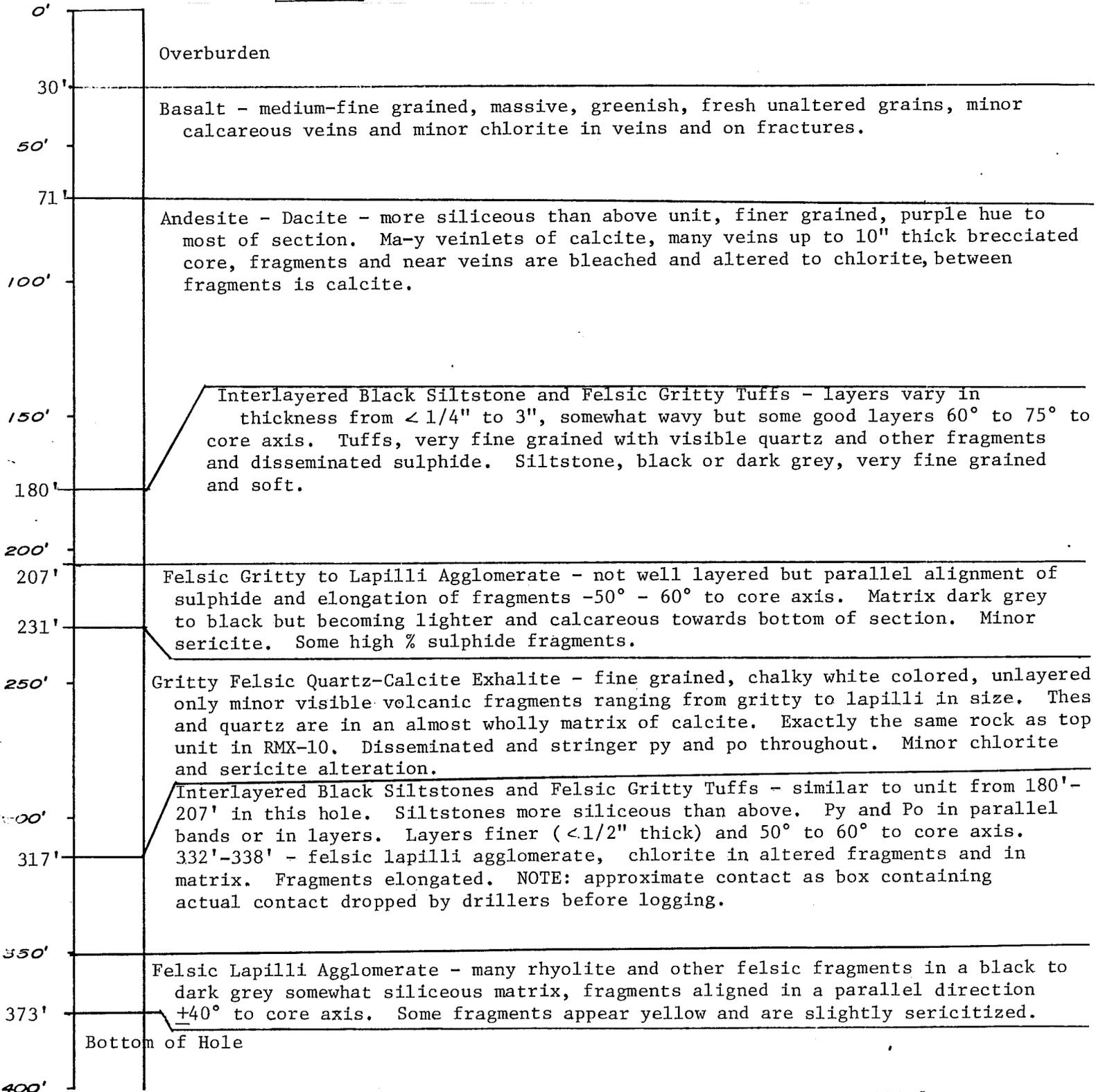
drill log okay - basalt, see binoc at 38'

LITHOLOGIC LOG

Project Ragged Mtn. Extension Hole no. RMX-12 Dip -45° Started 12/19/80 Elev. _____

Job no. 272.2 Township T9-R10 See Sketch
 Coord. 272-8 Direction 336° Mag Completed 1/10/81
 SW 1/4 - Roads S & W of Ragged Mtn.

Lithotype



NOTE: 207-317' is the limey tuff section with grit and lapilli fragments at the top. (TCW)

RE-EVALUATION

RMX-12

- 30 - 71 - basalt, examined core at 54', no binoc, log okay
- 71 - 150 - andesite-dacite (core ranges in composition), examined core at 95', andesite (or possible basalt), slightly harder, lighter colored and contains less mafic minerals than above unit, no binoc, examined core at 132'; dacite (or possible andesite?), core is identical to RMX-2 at 69' only without brecciation
- 180 - 207 - layered intermixed siltstone and weakly calcareous greywacke, very similar in appearance to RMX-10 at 89', examined core at 194', no binoc
- 207 - 231 - altered tuffaceous lapilli fragmental, core at 229' contains abundant obvious altered felsic lapilli volcanic frags, some with semi-massive to massive sulphide alteration, frags show parallel alignment in a matrix of dk. grey patches of fine siliceous grains plus fine white sericitic wisps, sericitic wisps are very similar to lapilli fragments in texture and may possibly be fine altered volcanic frags, examined core at 229' and did binoc, core at 216' (no binoc) very similar to 229', but contains lesser lapilli sized frags, these core pieces are somewhat similar to weakly calcareous portion of RMX-10 (25'-31'), the differences are: 1) presence grey, hard, siliceous material in core of RMX-12; and 2) abundance, clarity and layering of altered felsic lapilli volcanic frags; and 3) lesser total sericitic alteration in RMX-12
- 231 - 317 - highly sericitic and calcareous felsic tuff?, a fragmental?, examined core at 259', no binoc, core is identical to RMX-10, 25'-77', calcareous section from 31' down (see binoc for RMX-10 at 51'), as in RMX-10 at 51', this core is highly altered (sericite >50%) and contains abundant calcite (as fragments?), sericitic "matrix", could be fine altered frags, contains 3-5% pyrrhotite and pyrite
- 317 - 350 - layered intermixed shale and greywacke, drill log says interlayered black siltstones and felsic gritty tuffs like 180' to 207' above, black siltstones referred to are probably shales and from core at 346', felsic gritty tuff referred to in log is probably a weakly tuffaceous greywacke, (binoc done at 346'), drill log also notes felsic lapilli agglomerate from 332' to 338', from description this is probably a felsic lapilli fragmental (need core in office)
- 350 - 373 - weakly altered felsic tuffaceous lapilli fragmental, as described in log, abundant white rhyolites and other felsic volcanic rock frags with varying degrees of chlorite-sericite alteration contained in a fine grey somewhat siliceous matrix, matrix also contains some grit sized altered felsic volcanic frags, all frags are weakly aligned and highly welded to matrix

RE-EVALUATION

D. Coles
February, 1982

RMX-12 (207'-231') - "Felsic Gritty to Lapilli Agglomerate"
(upper part of limey tuff)

Hard black siliceous matrix	-	+ 30%	
Calcite matrix	-	+ 20%	
Quartz grit	-	+ 15%	sub-rounded
Altered felsic grit	-	+ 2%	sub-angular
Rhyolite	-	+ 30%	sub-rounded
Black chert or rhyolite	-	+ 3%	sub-angular

This rock looks like it is probably not a true pyroclastic. The chemical precipitate matrix (especially the calcite) tend to indicate that the fragments of volcanic rock were washed or blown? (is some pyroclastic nature) into a sedimentary basin.

<1% of this rock is made up of high sulphide clasts.

Matrix looks like sediment, not like infilling.

RMX-12 (332'-338') - Agglomerate Layer in Black S. Stone and
Felsic Gritty Tuff

Matrix - white filament like material between fragments,
purplish siliceous material and minor calcite (25% of rock)

Rhyolite frags and grit	-	+ 35%	sub-rounded
Chloritized frags	-	+ 15%	sub-rounded
Quartz grit	-	+ 10%	anhedral
Feldspar grit	-	+ 15%	anhedral

Fragments are aligned with their long axis parallel to each other.

Appears more pyroclastic than clastic. There is fine quartz and feldspar ash that was not noted in 207'-231'. There is also the absence of "sedimentary matrix".

RE-EVALUATION

D. Coles
February, 1982

RMX-12 (350'-373')

Matrix - hard siliceous material and chlorite - ± 35%

Rhyolite fragments	-	60% sub-angular to angular
Quartz grit	-	<1% sub-hedral to anhedral
Feldspar grit		5% anhedral or sub-rounded

This unit is probably pyroclastic, the fragments are generally angular and a nondetrital matrix with feldspar and quartz ash is present. Mudstone layers were found at 362'-363' and at 372' tending to make a pyroclastic origin less than definite.

The felsic gritty tuffs found with mudstones within this hole consist of rounded very fine grit. They are probably true gritty tuffs (some mudstone in matrix). Sometimes very little matrix.

J. S. Cummings, Inc.

DDH RMX-12 - (Assays for Portion of Hole)

<u>DEPTH (FEET) FROM COLLAR</u>	<u>LENGTH</u>	<u>% Zn</u>	<u>% Cu</u>	<u>% Pb</u>	<u>Oz/Ag</u>	<u>Oz/Au</u>	<u>Approx. % Sulphide</u>
207 - 217	10'	Trace	None		None	None	11.1
217 - 227	10'	0.10	0.006		None	None	9.2
227 - 237	10'	0.05	0.037		None	None	7.7
315 - 325	10'	Trace	None		0.4	None	5.5
325 - 338	13'	None	None		0.4	None	5.2

Bottom of Hole: 373'

C. E. Mattson

LITHOLOGIC LOG

Project Ragged Mtn. Ext. Hole no. RMX-13 Dip -45° Started 6/22/82 Elev.

Job no. 272.2 Township T9-R10 Coord. 7890N 6950E Direction 336° Mag Completed 6/29/82

Lithotype

0'	Overburden
13'	Interlayered Shale and Greywacke - black and grey calcareous shale interlayered with a calcareous matrix, fine grained greywacke, some graphite along fracture surfaces some thin layers with high % pyrite, layers vary from 1' to 1/4" in thickness and from 5°-80° to core axis (at 43' layering λ is 80° and at 45' the layering λ is 5°) changing very quickly
50'	
98'	Felsic Lapilli Fragmental - some fractured rhyolite frags, other dark colored siliceous fragments, matrix dark and siliceous, makes frags hard to see, some calcareous blebs, some frags contain sulphide and the rest stringer and disseminated
100'	
115'	Altered Felsic Lapilli Fragmental - frags of rhyolite, quartz and some altered exhalite frags, sericite and some chlorite alteration in patches (matrix) or altered frags, some wavy tuffaceous layering visible, at 117' is 35° to core axis and at 182' is 50° to core axis, lost 10' becoming less altered
150'	
184'	Dacite (see 213'-256') - Calcite and Po and Py brecciate this section
190'	Same as last 10' of 115'-184'
196.5'	Dacite (see 213'-256') - Calcite veins and amygdules
203'	Contact between Dacite and Alt. Felsic Lapilli Fragmental
213'	Dacite - grey-green colored, massive to fractured and broken, calcite amygdules in the massive sections and calcite veins in the fractured section, last 10' picking up graphite on fractures
250'	Black Shale and Greywacke - sections calcareous like 13'-98', graphite on fractures, not well layered, some broken greywacke layers at 256', sulphide in layers
256'	
260'	Altered Felsic Lapilli Fragmental - same as 115'-184', except contains less total alteration, less sulphide, some wavy tuffaceous layers, at 317' - 50° to core axis, at 319' - 10° to core axis
300'	
320'	Black and Grey Calcareous Shale - graphite on fractures, some layers almost down the core axis
330'	Altered Felsic Lapilli Fragmental - same at 260'-320'
349'	
350'	Bottom of Hole

ACID TESTS

Depth	Actual λ	Corrected λ
200'	53°	47°
340'	53°	47°

APPALACHIAN RESOURCES, INC.

DDH RMX-13- (Assays for Portion of Hole)

<u>DEPTH (FEET) FROM COLLAR</u>	<u>LENGTH</u>	<u>% Zn</u>	<u>% Cu</u>	<u>% Pb</u>	<u>Oz/Ag</u>	<u>Oz/Au</u>	<u>Approx. % Sulphide</u>	<u>Ni</u>
100-110	10'	None	None	None	None	None	5.3	None
159-169	10'	None	None	None	None	None	2.1	None

Bottom of Hole: 349'

CHEVRON RESOURCES

Property Reaged Sec. T 9 R 10 State Me. Drill Hole No. RHE 1 Sheet 1
 Scale 1" = 10' Coord. N E Bearing S45E Dip 45 Collar Elev
 Acid Test: Apparent 37.5' Actual 46" 40"
 52.5' 45" 39"

Logged by CPW

Rock Type & Structures	Mineralization and Alteration	Hole Depth	% Rec	SAMPLE		ASSAY				
				Interval	Rec. No.	Number				
<p><u>Overburden</u> Hole cased to 15'</p>		10								
<p>Argillite / Mudstone / Siltstone w/ semi to massive pyrite interbeds, shaly cleavage 50%</p>	<p>92% calcite vls (2-6/ft) Some contorted few py streaks + clots (2 FT, 4m)</p>	20	60							
<p>20 locally tuffaceous component Minor graphite throughout mudstone sequence EMS: contorted bedding + brecciation 27-29</p>	<p>right lateral microfold py</p>	30	100							
<p>35' 2" thick pale yel.-gn fig. felsic tuff</p>	<p>35' dense qtz micro-stkuk + pervasive sericite 38-45% bedded calcite pyrite beds (.5-2 cm) 100% py micro-folds sheared</p>	40	4							38
<p>40 1/4 grey tuffaceous siltstone w/ abundant wisps/beds of pyrite</p>	<p>parallel to cleavage (~20" to core); pyrite clots broken into rotated rectangular fragments i.e. fragments of contorted beds</p>	50								45
<p>50 51' small fold ~ 1" across limbs oriented as drawn</p>	<p>50% CaCO₃ veins 52-53 lam qz-calcite vn w/ radiating bk vls (H13)</p>	60								54
<p>Pyritic slat/litic wacke 50% stringer, dissem and clastic pyrite in slat, litic wacke, tops? 56.5'</p>	<p>40-60% dissem and clastic sulfide (pyrite)</p>	60	100							61
<p>Argillite / Mudstone / Siltstone w/ minor tuffaceous interbeds and 2-4% dissem pyrite generally contorted bedding + brecciation</p>	<p>10% CaCO₃ veins often contorted</p>	70								
<p>80</p>	<p>83' contorted calcite vl</p>	80								
<p>90</p>	<p>90</p>	90								
<p>tuff-wacke w/ lesser argillite interbeds, grading to felsic tuffs; strongly contorted bedding + auto-brecciation</p>	<p>silic + 1/4 green chlorite + sericite (?) Abundant calcite veins py 2-3% contorted clots</p>	100								93
<p>100 1/4 green felsic tuff w/ abundant qz full veining</p>		100								103

CHEVRON RESOURCES

Property Raguel Sec. _____ T _____ R _____ State _____ Drill Hole No. RAG 1 Sheet 2
 Scale 1" = 10' Coord. N _____ E _____ Bearing _____ Dip _____ Collar Elev _____

Logged by CPW

Rock Type & Structures	Mineralization and Alteration	Hole Depth	% Rec.	Interval	Rec. fig.	SAMPLE Number	ASSAY	ASSAY
100 ft. green felsite tuff.	qtz - chl veins	100						103
Blk. siliceous mudstone/argillite (possibly rhyolitic tuff?) massive texture; extreme hard	3-5% dissem pyrite + py bands (<1cm, <1/ft) + clots (contorted fragmented bands)	110	100					113
110 fine grained locally carbonaceous (graphite common on shears parallel to cleavage, py. concentrated with graphite together weakly to strongly conductive)	10% qtz veins	120						123
120								
125' gy-bl mottled tuff with bxd	blk microsthk + qz + fsp?	130						
130 bleached felsite tuff white to lt. green/gray fine grained tuff; relict fsp microclites + ltn qz eyes common	pervasive silicification w/ v. stng. qz microsthk MnOx? soaks microsthk foliated sericite overprint sporadic, weak to moderate	140	100					131
140 brittle fracturing w/ sporadic frag. rotation;	py diss. + 10% (131-154) 2-3% (154-146) FeOx + CO ₂ wk mod on fx (1-2/ft)	150						141
145-146 relict blk bedded tuffaceous argillite; bedding + cleavage $\approx 50^\circ$ to core axis	146' FeOx @ bedded py? 1-2cm contorted w/ breccia in FeOx-CO ₂ matrix	160						151
150	150' tectonic? bx tuff in FeOx-CO ₂ matrix	160						
160								161
170		170						171
180		180						181
190		190						191
200 fine grained, green-gray interbed to felsic tuff w/ abundant qtz-CaCO ₃ veins and CaCO ₃ vugs (?)	2% dissem py. minor sericite + chlorite (?) + CaCO ₃	200						201

CHEVRON RESOURCES

Property Ragge Sec. T R State Drill Hole No. RAG 1 Sheet 3

Scale 1" = 10 Coord. N E Bearing Dip Collar Elev

Logged by CPW

Rock Type & Structures	Mineralization and Alteration	Hole Depth	% Rec.	SAMPLE		ASSAY				
				Interval	Rec. ftg. Number					
200 Gray/green intermed to felsic tuff w/ 10-15% CaCO ₃ minor clastic interbeds	sericite + chlorite + CaCO ₃ veins and vugs 2-4% diss. py.	200	100%							200
210 ↓	some patchy silicification ↓	210								210
220 Same	Same	220								220
230 increasingly basaltic w/ small CaCO ₃ veins and amygdules(?) in basaltic units	?	230	100%							230
240		240								240
250 tuff brecciated w/ silicified - gy matrix		250								250
260 gn-gy Int-mafic tuff, f.g. often brecciated w/ CO ₃ ²⁻ matrix	strong silicification w/ 30-30% sericite wisps py as blebs, deformed layers + diss. 5-10% w/ CO ₃ ²⁻	260	100%							260
270	Basalts altered to chlorite/epidote w/ CaCO ₃ veins abundant (spilitized?) patchy silicification	270								270
280	273-275 py 10-15% as blebs + deformed layers	280								280
290	tuff is lt bn w/ gn selvages soaking out from dk chl-CO ₃ ²⁻ -py filled fr	290								290
300 gn-gy int-felsic? tuff (blech mafic?) as 253-261; sheared texture in heated outcrop; + few blech f.g. mafic frags	massive sulfide (py) slurry-like (80%) shallow-dip clastic/exhalite str. silicification w/ 10-20% sericite wisps; mod-stng qz-CO ₃ ²⁻ alteration w/ MnOx soaking	300								294.5 300

295-297 py + po. diss + layers 8-10%

297-320 py + po diss 2-3%

320-324 py + po diss + layers 15-20%

CHEVRON RESOURCES

Property Rosed Sec. _____ T. _____ R. _____ State _____ Drill Hole No. R69 Sheet 4

Scale 1" = 10' Coord. N. _____ E. _____ Bearing _____ Dip _____ Collar Elev. _____

Rock Type & Structures	Mineralization and Alteration	Hole Depth	% Rec.	Interval	SAMPLE		ASSAY		
					Rec. fig.	Number			
300 gn-gy int-felsic? tuff (bluish matrix)	strong silicification w/ 10-20% sericite wisps strong qz-co ₃ streak w/ wk MnOx soaking 297-320 py+po disc 2-3%	300	100%						301
310 note: 1" thick f-m. g. tuff layer on top of bslt fines downward; but v.f.g. layers lie just uphole	qz-calcite v. 1.5" thick	310	100%						311
320 Tons ↑ by sed structure contact zone (splitting of basalts?) qz/calcite veins in gray green altered st Epilite	320-325 1/2 po; py in veins 15-20% qz/calcite veins stratiform sulfide	320	100%						321
Footwall Basalts: Brecciated Pillow (?) basalt w/ altered rims on contacts Inter-pillow seds. common throughout section	3-5% po/py intergrown as veins/veinlets in stockworkings Abundant epidote? + calcite as matrix and veins/pillow rim alteration, etc.	330	100%						331
340 Calcite veins are common as are CaCO ₃ amygdolites	1-2% disseminated py	340	100%						
350 Same		350	100%						
360 Same		360	100%						
370 Same		370	100%						
380 Same		380	100%						
390 Same		390	100%						
400		400	100%						

CHEVRON RESOURCES

Property Paged Sec. T R State Drill Hole No. PA5 1 Sheet 5

Scale 1" = 10' Coord. N E Bearing S45E Dip 45 Collar Elev

Logged by

Rock Type & Structures	Mineralization and Alteration	Hole Depth	SAMPLE			ASSAY				
			%Rec.	Interval	Rec. fig.	Number				
400 Basalt: brecciated in chl/CO ₃ matrix some pillow rinds likely	chl / CO ₃ / epidote? in matrix + vl + @ bslt approx rinds on frags + pillows	400	100%							
410 415-419 interflow bx in gn chl/CO ₃ matrix		410								
420		420								
430		430	100%							
440		440								
450 451-453 interflow tuft bx laminated w/ CO ₃ matrix	452 po vein (2 cm.) (inter-pillow?)	450								
460 459-460 interflow tuft bx in bk matrix	4s	460								
470		470	100%							
480	Inter-pillow fl/po inter-pillow layer in inter flow tuft ~ 1 FT thick	480								
490		490								
500		500								

Same to 525

- T.D. 525

CHEVRON RESOURCES

Property Rogers Mtn. Sec. T 9 R 10 State Maine Drill Hole No. RAG 2 Sheet 2

Scale 1" = 16' Coord. N E Bearing Dip 45° Collar Elev.

Logged by P. Rogers

Rock Type & Structures	Mineralization and Alteration	Hole Depth	SAMPLE		ASSAY					
			% Rec.	Interval	Rec. fig.	Number				
Pale gray-green feld porph <u>Rhyolite</u> const.	mod sericite			100/110	10'					102
110 Rhyo looks much the same as in top of hole w/ less sericite and more black chl? glass?	Zone of intense qtz + minor calcite veining	110		110/120	10'					112
120 Scattered subhedral bleached feldspars.		120		120/130	10'					122
130	127' qtz filled fract w/ black - glass? chl? as selvage, 1' around fract.	150		130/140	10'					132
140	Diss very fine grained py. Trace	140		140/150	10'					142
150	Some scattered Trace coarse py xls. Spotty black alt.	150		150/160	10'					152
155-180 Brecciated Rhyolite		160		160/170	10'					162
Some as above - Rhyo frags 2"-3" - feld porph - pale green alt -	qtz vein + minor calcite no s.	170		170/180	10'					172
180	Black alt forms matrix of Breccia	180		180/190	10'					182
182-190 Black sil slst/mudstone - soft sed deformation - slumping fracturing of bedding random 45° to core axis	Trace bedded fine gr. py.	190		190/200	10'					190
190 Lt. grey sil tuff - <u>Volcanic wacke</u>	rip-up: lam. slst/argst like 184-189 in H gy f.m.g. tuff	200		190/200	10'					200
200 Contains beds of black fr. gr. mudstone - mud fragments up to 2cm dia										
f.g. felsic lapilli tuff										

EMS - mostly homogeneous textured w/ possible relict hyaloclastic texture of lithic fragments & broken crystals in white matrix (possible devitrified glass) elongate frags + intergrain matrix structure 30-60° to core axis, sporadic bedded tuffaceous sand layers occur.

CHEVRON RESOURCES

Property Ragged Mtn Sec. _____ T 9 R 10 State Maine Drill Hole No. RHG 2 Sheet 3

Scale 1" = 10' Coord. N _____ E _____ Bearing _____ Dip _____ Collar Elev _____

Logged by P. Rogers

Rock Type & Structures	Mineralization and Alteration	Hole Depth	SAMPLE			ASSAY				
			% Rec.	Interval	Rec. Intg.	Number				
Lt. grey sil Tuff and f.g. lapilli tuff → <u>Volcanic wacke</u> EMS Contains fragments of light grey tuff - and dk grey mudstone up to 1/2" dia. frags scattered, isolated and generally oriented w/ bedding. Some frags semi rounded but predom. jagged (volcanic)	tops up?	210								
220-230 dk grey mudstone up to 1/2" dia. frags scattered, isolated and generally oriented w/ bedding.	Predom. min. Py in mottled - contorted beds sparse mix? on fr	220								220
230-240 Some frags semi rounded but predom. jagged (volcanic)	226-230 py dia - on fr Py - beds 1/8"	230								230
240-250 native darkens specifically giving patchy look	246-266 3-4 py on fr - dia Py bedded 1/5"	250								250
260-270 native darkens specifically giving patchy look	Bedded 1/2" massive Py - clastic - coarse Py - slurry	260								260
270-280 native darkens specifically giving patchy look	276-280 2-3 py on fr - dia Py to core axis 1/8"	280								280
290-300 Lt. grey sil <u>Volcanic wacke</u> cont. f.g. lapilli tuff	286 mixture of 2 1/2 caliche (pyrite) increased thru 290 1/8" Py deformed bed	290								290
300-310 Lt. grey sil <u>Volcanic wacke</u> cont. f.g. lapilli tuff	1/8" Py deformed bed	300								300

CHEVRON RESOURCES

Property _____ Sec. _____ T _____ R _____ State _____ Drill Hole No. _____ Sheet _____

Scale 1" = _____ Coord. N _____ E _____ Bearing _____ Dip _____ Collar Elev _____

Logged by	Mineralization and Alteration	Hole Depth	% Rec.	Interval	Rec. Itg.	Number	ASSAY				
Rock Type & Structures 400 dk gy c.g. muddy volc conglomerate 30-40% subround to round clasts < 5 cm, silts 20% argt/silt 25%, matrix 15%, S 5% matrix f.g. bk lam argt	po 2-3% disc low con v. 45-90% to bedding	400									
410 Some volc frags here 5-10 disc + f. S		410									
420 bk f.g. lam argillite w/ by siltstone interbeds 24.5' f.g. sandy till scours argt + fine siltstone (20% disc pv) top down hole	po 5-8% deformed layers (< 1cm) + disc	420									
430 dk gy c.g. pebble washer in bk lam argt matrix ~30' scour marks	po 2-3 disc	430									
440		440									
450		450									
460 bk f.g. lam argt 331 Small po layer (~3mm thick) interbedded c.g. washers & bk lam argt	10-15 lam po po 2-5 lam disc	460									
470 bk f.g. lam argt	2-10 lam + deformed po	470									
480 gy f.-m.g. graywacke w/ bk lam argt interbeds (< 6" thick, < 30% vol.) some layer w/ c.g. clasts sed clasts > volc clasts	po 2-3 disc	480									
490 base of waste cycle fines down hole		490									
500 trace of waste cycle fines down hole		500									

Box 44
 418-427
 dropped
 &
 restored

Box 45
 427-
 430
 dropped
 restored

Box 4
 455-
 465
 dropped
 restored

