Rapport nr. 86.040

# Avviksmåling av borhull i Raudbergfeltet

# Norges geologiske undersøkelse

Leiv Eirikssons vei 39, Postboks 3006, 7001 Trondheim - Tlf. (07) 92 16 11
Oslokontor, Drammensveien 230, Oslo 2 - Tlf. (02) 50 25 00



| Rapport nr. 86.040 | ISSN 0800-3416 | Åpen/Fortrolig til |
|---|---|---|


Tittel:

Avviksmåling av borhull i Raudbergfeltet


| Forfatter: | Oppdragsgiver: |
|---|---|
| Norodd Meisfjord | NGU/Norwegian Talc |


| Fylke: | Kommune: |
|---|---|
| Sogn og Fjordane | Vik |

| Kartbladnavn (M. 1:250 000) | Kartbladnr. og -navn (M. 1:50 000) |
|---|---|
| Odda | 1316 IV Myrkdalen |

| Forekomstens navn og koordinater: | Sidetall: 151 Pris: kr. 180,- |
|---|---|
| Raudberg UTM 3545 67580 | Kartbilag: |

| Feltarbeid utført: | Rapportdato: | Prosjektnr.: | Prosjektleder: |
|---|---|---|---|
| 28.05.-30.09.85 | 13.02.1986 | 2255.00 | Barkey/Meisfjord |


Sammendrag:

Avviksmåling av borhull i Raudbergfeltet med ABEM Reflex-Fotobor.



| Emneord | | |
|---|---|---|
| Avviksmåling | | |
| Fagrapport | | |

INNHOLD



TEKSTBILAG

## INNLEDNING

Det ble i 1985, blant annet etter ønske fra Norwegian Talc, anskaffet ABEM Reflex-Fotobor for avviksmåling i borhull. Utstyret er gjennomprøvet og sikkert og blir ikke påvirket av magnetiske forstyrrelser i berggrunnen.

Det som imidlertid kan sies å være en begrensning, er avhengigheten av maskin og rørgang.

Utstyret er basert på at en ved avslutningen av et borhull eller også underveis, måler hullet før maskinen flyttes bort.

Skal en måle tidligere boret hull, er en allikevel avhengig av transportutstyr for flytt mellom hullene. Videre er det meget usikkert om instrumentet vil kunne synke dypt nok i hullet p.g.a. sin egen tyngde, hvilket er nødvendig når instrumentet skal fires og heises ved hjelp av wirespill.

Som en følge av dette må en basere seg på å måle hullene før maskin og rørgang flyttes bort.

## KONKLUSJON

Avviksmåling med ABEM Reflex-Fotobor i 46-47 mm borhull er basert på bruk av rørgang og bormaskin montert på hullet. Slike målinger er viktig i de fleste hull. Om en tenker seg et relativt rett hull som bare bøyer av med 0,5 mm pr. meter, vil det i løpet av 1000 m ende opp med et totalavvik på 500 m dersom avbøyningen var konstant. All erfaring viser at rette borhull ikke finnes i praksis. Derimot viser målinger at det ikke er uvanlig med naturlig avvik opp til 50 m i 300 m hull og 200 m i 600 m hull.

En kan selvfølgelig diskutere betydningen av avviksmålinger ved sonderende boringer, men nytteverdien av hullet er betydelig større dersom en senere skal gjøre volumberegninger.

Når en i tillegg vet at det er forholdsvis mye dyrere å måle når en må tilbake med både maskin og rørgang, ser en tydelig fordelen i å måle når en allikevel er riktig plassert for det.

## UTFØRELSE

De første målingene ble utført i tiden 28.05.-01.06.85, og det ble målt i de 4 høyest prioriterte hull.

Målingene ble startet så snart vegen inn til feltet var brøytet, og som heisemaskin ble brukt et utstyr som var laget til vårt gamle Eastman single shot måleutstyr. Dette utstyret viste seg imidlertid å være for svakt for det nye måleutstyret som virker som et stempel i borhullet. Mot slutten var det også noe uregelmessig med framtrekk av film i selve instrumentet. Etter denne første erfaring med det nye måleutstyret, ble heisemaskinen ombygd ved NGU.

Imidlertid ble det senere bestemt at en skulle forsøke å måle alle hullene som ble boret i -84 og alle nye hull i -85 etter hvert som de ble ferdigboret.

Målingene ble derfor videreført i tiden 20.06.-27.06.85, og 7 borhull til ble målt med varierende resultat.

Disse forholdene førte til at en besluttet å utføre de gjenstående målinger fra borprogrammet i 1984 etter oppstart av nye

boringer i 1985. En fant også å kunne legge opp programmet slik at de to viktigste hullene som en tidligere ikke fikk målt fullstendig ble målt med maskin når denne var i rimelig nærhet av hullet. Dette var aktuelt for BH1C og 1A.

BH1A som også var spesielt interessant med hensyn til magnetiske borhullsmålinger, skulle avviksmåles fullstendig som et siste ledd i sesongens borprogram. Dette ble ikke mulig p.g.a. at selve måleinstrumentet sviktet. Feilen som nå er reparert var at motoren for framtrekk av film kjørte seg fast. Vi håper derfor på en mulighet til å komme tilbake med borutstyr i feltet slik at også BH1A blir fullstendig avviksmålt.

Trondheim, 13. februar 1986
NORGES GEOLOGISKE UNDERSØKELSE
Geofysisk avdeling

N. Meisfjord

Norodd Meisfjord
avd.ing.

NORGES GEOLOGISKE UNDERSØKELSE

TEKNISK BORRAPPORTSKJEMA II

# HULLENES PLASSERING OG LENGDE

Dato 7.1.86

Oppdrag nr. 2255 | Sign. NM

Sted Vikafjell

Oppdragsgiver NGU/Norwegian Talc

| Borhull nr. | Plassering UTM | | Retning | Fall, stigning | 47 Dimensjon | Meter boret | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Jord | Fjell | Total |
| -84 1A | 354.4 | 6757.9 | 345g | 75g | | 2.2 | 398.3 | 400.5 |
| 1B | 354.7 | 6757.2 | 345g | 75g | | 1.5 | 523.1 | 524.6 |
| 1C | 355.0 | 6757.6 | 345g | 75g | | 3.0 | 497.0 | 500.0 |
| 2B | 354.5 | 6757.6 | 345g | 75g | | 2.0 | 398.0 | 400.0 |
| 2C | 354.8 | 6758.0 | 345g | 75g | | 2.6 | 387.7 | 390.3 |
| 3A | 353.6 | 6757.6 | 345g | 75g | | 3.0 | 348.2 | 351.2 |
| 3C | 354.3 | 6758.3 | 345g | 75g | | 1.7 | 305.0 | 306.7 |
| 4 | 354.1 | 6757.0 | 345g | 75g | | 3.8 | 290.9 | 294.7 |
| 6 | 355.1 | 6758.0 | 345g | 75g | | 2.0 | 452.5 | 454.5 |
| 7 | 354.7 | 6758.1 | 345g | 75g | | 2.2 | 257.8 | 260.0 |
| 8 | 354.9 | 6757.9 | 345g | 75g | | 1.9 | 382.8 | 384.7 |
| 9 | 354.8 | 6757.9 | 345g | 75g | forlenget -85 | 1.3 | 399.5 | 400.8 |
| 10 | 354.9 | 6758.0 | 345g | 75g | " " | 1.4 | 388.3 | 389.7 |
| -85 5 | 353.9 | 6758.3 | 350g | 75g | | 2.7 | 230.4 | 233.1 |
| 11 | 353.6 | 6758.1 | 345g | 75g | | 2.0 | 157.5 | 159.5 |
| 12 | 353.5 | 6757.8 | 345g | 75g | | 3.1 | 90.7 | 93.8 |
| 13 | 353.9 | 6758.4 | 345g | flatt | | 3.6 | 196.4 | 200.0 |
| 14 | 353.8 | 6758.5 | 345g | 75g | | 2.7 | 146.5 | 149.2 |
| 15 | 353.1 | 6757.8 | 345g | 75g | | 1.3 | 72.8 | 74.1 |
| 16 | 354.8 | 6758.9 | 345g | 75g | | | | |
| 16A | 354.9 | 6758.9 | 345g | 75g | | 2.2 | 115.8 | 118.0 |
| 17 | 353.7 | 6757.8 | 345g | 75g | | 2.2 | 146.3 | 148.5 |
| 18 | 356.1 | 6760.0 | 345g | 75g | | 1.7 | 153.5 | 155.2 |
| 18A | 356.1 | 6760.0 | 345g | 75g | | 1.1 | 172.4 | 173.5 |
| 19 | 355.1 | 6759.1 | 345g | 75g | | 1.4 | 40.6 | 42.0 |
| 20 | 354.9 | 6757.8 | 355g | 75g | | 1.5 | 362.1 | 363.6 |
| 21 | 354.3 | 6757.1 | 345g | 75g | | 1.9 | 349.1 | 351.0 |
| 22 | 354.7 | 6757.9 | 345g | 75g | | 1.1 | 448.9 | 450.0 |
| 23 | 354.4 | 6757.7 | 345g | 50g | | 2.8 | 167.2 | 170.0 |
| 24 | 353.9 | 6757.1 | 345g | 75g | | 2.3 | 269.0 | 271.3 |
| 25 | 355.1 | 6757.8 | 345g | 75g | | 1.3 | 232.5 | 233.8 |
| 26 | 353.9 | 6757.0 | 345g | 75g | | 2.3 | 97.7 | 100.0 |
| 27 | 354.6 | 6758.0 | 345g | 75g | | 2.1 | 217.4 | 219.5 |
| 28 | 354.1 | 6757.2 | 345g | 75g | | 2.1 | 292.0 | 294.1 |
| | | | | | | | | |
| 34 | ← Antall hull | | | | Sum | 70.0 | 8987.9 | 9057.9 |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 4/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH1A-400M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 171 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 43.12 | -63.41 | 152.44 | 58.85 | 336.48 |

LOCAL COORDINATES AT 171 M
Y-LOC= -8.39 M TO THE LEFT
Z-LOC= 12.07 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.75 | 5.54 | 74.95 | 344.08 |
| 12 | 2.94 | -3.54 | 11.08 | 74.98 | 342.78 |
| 18 | 4.37 | -5.33 | 16.62 | 74.9 | 342.43 |
| 24 | 5.79 | -7.17 | 22.16 | 74.19 | 340.67 |
| 30 | 7.2 | -9.09 | 27.66 | 73.37 | 339.23 |
| *30 | 11.59 | -.43 | .12 | | |
| 36 | 8.61 | -11.08 | 33.14 | 73.33 | 338.63 |
| 42 | 10 | -13.09 | 38.62 | 73.28 | 338.12 |
| 48 | 11.38 | -15.11 | 44.1 | 73.13 | 338.1 |
| 54 | 12.77 | -17.15 | 49.57 | 72.7 | 337.34 |
| 60 | 14.15 | -19.24 | 55.02 | 72.3 | 336.94 |
| *60 | 23.81 | -1.73 | .94 | | |
| 66 | 15.54 | -21.37 | 60.46 | 71.95 | 336.14 |
| 72 | 16.91 | -23.52 | 65.89 | 71.88 | 336 |
| 78 | 18.29 | -25.69 | 71.31 | 71.65 | 335.86 |
| 84 | 19.67 | -27.88 | 76.72 | 71.43 | 335.74 |
| 90 | 21.06 | -30.08 | 82.13 | 71.35 | 336.12 |
| *90 | 36.55 | -3.52 | 2.33 | | |
| 96 | 22.47 | -32.28 | 87.53 | 71.1 | 336.19 |
| 102 | 23.89 | -34.5 | 92.92 | 70.91 | 336.65 |
| 108 | 25.34 | -36.72 | 98.3 | 70.53 | 337.42 |
| 114 | 26.84 | -38.96 | 103.66 | 69.84 | 337.27 |
| 120 | 28.36 | -41.25 | 109 | 69.11 | 337.05 |
| *120 | 49.78 | -5.22 | 4.28 | | |
| 126 | 29.9 | -43.61 | 114.29 | 68.07 | 336.46 |
| 132 | 31.48 | -46.06 | 119.54 | 66.87 | 336.62 |
| 138 | 33.12 | -48.57 | 124.73 | 66.32 | 336.85 |
| 144 | 34.78 | -51.11 | 129.91 | 65.65 | 337.1 |
| 150 | 36.5 | -53.7 | 135.04 | 64.42 | 337.8 |
| *150 | 64.53 | -7.12 | 7.94 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 38.3 | -56.35 | 140.11 | 63.08 | 338.56 |
| 162 | 40.19 | -59.08 | 145.11 | 61.45 | 338.46 |
| 171 | 43.12 | -63.41 | 152.44 | 58.85 | 336.48 |
| *171 | 76.21 | -8.39 | 12.07 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 4/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH1B-525M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 255 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 50.07 | -88.44 | 233.47 | 66.52 | 320.2 |

LOCAL COORDINATES AT 255 M
Y-LOC= -19.37 M TO THE LEFT
Z-LOC= 2.82 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.47 | -1.77 | 5.54 | 74.54 | 342.6 |
| 12 | 2.92 | -3.63 | 11.05 | 73.85 | 341.05 |
| 18 | 4.36 | -5.55 | 16.55 | 73.66 | 340.14 |
| 24 | 5.78 | -7.52 | 22.04 | 73.4 | 339.33 |
| 30 | 7.19 | -9.49 | 27.53 | 73.29 | 339.55 |
| *30 | 11.88 | -.69 | .44 | | |
| 36 | 8.62 | -11.47 | 33.01 | 73.3 | 340.21 |
| 42 | 10.07 | -13.45 | 38.49 | 72.98 | 340.64 |
| 48 | 11.54 | -15.44 | 43.95 | 72.71 | 340.02 |
| 54 | 13.01 | -17.46 | 49.4 | 72.58 | 340.19 |
| 60 | 14.49 | -19.47 | 54.86 | 73.07 | 341.37 |
| *60 | 24.21 | -1.63 | 1.37 | | |
| 66 | 15.97 | -21.41 | 60.34 | 74.29 | 342.13 |
| 72 | 17.41 | -23.25 | 65.87 | 74.9 | 342.51 |
| 78 | 18.83 | -25.05 | 71.41 | 75.07 | 342.32 |
| 84 | 20.23 | -26.85 | 76.96 | 75.53 | 340.89 |
| 90 | 21.57 | -28.66 | 82.53 | 75.58 | 339.15 |
| *90 | 35.79 | -2.21 | 1.49 | | |
| 96 | 22.85 | -30.5 | 88.09 | 75.71 | 338.24 |
| 102 | 24.1 | -32.34 | 93.66 | 76.18 | 336.79 |
| 108 | 25.28 | -34.19 | 99.25 | 76.3 | 335.21 |
| 114 | 26.41 | -36.05 | 104.84 | 76.4 | 334.14 |
| 120 | 27.51 | -37.92 | 110.43 | 76.34 | 332.63 |
| *120 | 46.7 | -3.7 | .88 | | |
| 126 | 28.57 | -39.83 | 116.02 | 76.36 | 330.72 |
| 132 | 29.57 | -41.77 | 121.61 | 76.04 | 328.5 |
| 138 | 30.51 | -43.77 | 127.19 | 75.9 | 327.35 |
| 144 | 31.44 | -45.8 | 132.76 | 75.55 | 326.97 |
| 150 | 32.37 | -47.85 | 138.32 | 75.19 | 327.2 |
| *150 | 57.4 | -6.46 | .1 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 33.32 | -49.94 | 143.86 | 74.69 | 326.61 |
| 162 | 34.27 | -52.06 | 149.39 | 74.42 | 326.95 |
| 168 | 35.24 | -54.2 | 154.92 | 74.18 | 327.33 |
| 174 | 36.23 | -56.36 | 160.43 | 73.88 | 327.14 |
| 180 | 37.21 | -58.55 | 165.92 | 73.54 | 326.51 |
| *180 | 68.68 | -9.72 | -.04 | | |
| 186 | 38.2 | -60.77 | 171.41 | 73.26 | 326.49 |
| 192 | 39.19 | -63 | 176.89 | 72.99 | 326.45 |
| 198 | 40.19 | -65.28 | 182.35 | 72.15 | 327 |
| 204 | 41.24 | -67.59 | 187.79 | 71.99 | 327.08 |
| 210 | 42.29 | -69.93 | 193.21 | 71.69 | 327.44 |
| *210 | 80.64 | -13.26 | .56 | | |
| 216 | 43.37 | -72.28 | 198.62 | 71.19 | 327.38 |
| 222 | 44.46 | -74.68 | 204.02 | 71.15 | 326.31 |
| 228 | 45.51 | -77.09 | 209.41 | 71.01 | 325.59 |
| 234 | 46.53 | -79.52 | 214.8 | 70.88 | 324.63 |
| 240 | 47.53 | -81.97 | 220.18 | 70.65 | 324.84 |
| *240 | 93.2 | -17.09 | 1.84 | | |
| 246 | 48.55 | -84.46 | 225.55 | 69.63 | 324.64 |
| 255 | 50.07 | -88.44 | 233.47 | 66.52 | 320.2 |
| *255 | 99.76 | -19.37 | 2.82 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 16/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH1C 500M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 423 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 77.71 | -104.65 | 400.52 | 82.07 | 315.82 |

LOCAL COORDINATES AT 423 M
Y-LOC= -8.87 M TO THE LEFT
Z-LOC= -33.13 M DOWNWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.74 | 5.54 | 75.08 | 346.11 |
| 12 | 3.02 | -3.48 | 11.08 | 74.2 | 345.44 |
| 18 | 4.57 | -5.26 | 16.59 | 74.03 | 345.88 |
| 24 | 6.15 | -7.05 | 22.1 | 73.8 | 346.28 |
| 30 | 7.74 | -8.85 | 27.59 | 73.53 | 346.34 |
| *30 | 11.75 | .14 | .3 | | |
| 36 | 9.36 | -10.67 | 33.08 | 73.28 | 346.47 |
| 42 | 10.99 | -12.48 | 38.56 | 73.29 | 347.3 |
| 48 | 12.65 | -14.28 | 44.04 | 73.24 | 348.01 |
| 54 | 14.33 | -16.06 | 49.52 | 73.01 | 348.34 |
| 60 | 16.02 | -17.85 | 54.99 | 72.94 | 347.44 |
| *60 | 23.98 | .59 | 1.11 | | |
| 66 | 17.67 | -19.7 | 60.45 | 73.02 | 343.32 |
| 72 | 19.19 | -21.63 | 65.92 | 73.28 | 340.66 |
| 78 | 20.64 | -23.59 | 71.41 | 73.59 | 340.8 |
| 84 | 22.08 | -25.52 | 76.9 | 73.89 | 340.73 |
| 90 | 23.5 | -27.42 | 82.41 | 74.49 | 340.97 |
| *90 | 36.11 | .06 | 1.82 | | |
| 96 | 24.9 | -29.27 | 87.95 | 75.04 | 341.65 |
| 102 | 26.29 | -31.08 | 93.5 | 75.28 | 341.93 |
| 108 | 27.68 | -32.87 | 99.05 | 75.43 | 342.28 |
| 114 | 29.08 | -34.64 | 104.61 | 75.59 | 343.22 |
| 120 | 30.49 | -36.37 | 110.18 | 75.68 | 343.77 |
| *120 | 47.46 | -.43 | 1.68 | | |
| 126 | 31.92 | -38.09 | 115.75 | 75.69 | 344.99 |
| 132 | 33.37 | -39.78 | 121.32 | 75.92 | 346.34 |
| 138 | 34.86 | -41.42 | 126.9 | 76.21 | 348.07 |
| 144 | 36.37 | -42.99 | 132.49 | 76.38 | 349.89 |
| 150 | 37.9 | -44.52 | 138.08 | 76.55 | 350.6 |
| *150 | 58.46 | -.09 | 1.17 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 39.45 | -46.02 | 143.68 | 76.79 | 351.24 |
| 162 | 40.99 | -47.49 | 149.29 | 76.84 | 351.49 |
| 168 | 42.53 | -48.96 | 154.9 | 76.97 | 351.42 |
| 174 | 44.06 | -50.43 | 160.52 | 77.06 | 351.42 |
| 180 | 45.58 | -51.89 | 166.13 | 77.41 | 350.83 |
| *180 | 69.05 | .97 | .22 | | |
| 186 | 47.07 | -53.33 | 171.76 | 77.69 | 350.96 |
| 192 | 48.54 | -54.75 | 177.4 | 77.82 | 351.14 |
| 198 | 50.02 | -56.18 | 183.04 | 77.85 | 350.92 |
| 204 | 51.48 | -57.59 | 188.69 | 78.39 | 351.76 |
| 210 | 52.93 | -58.95 | 194.35 | 78.71 | 351.73 |
| *210 | 79.19 | 1.97 | -1.21 | | |
| 216 | 54.35 | -60.3 | 200.02 | 78.97 | 351.24 |
| 222 | 55.74 | -61.64 | 205.7 | 79.47 | 350.09 |
| 228 | 57.07 | -62.99 | 211.39 | 79.87 | 348.67 |
| 234 | 58.35 | -64.33 | 217.1 | 80.23 | 347.56 |
| 240 | 59.56 | -65.68 | 222.82 | 81.12 | 344.29 |
| *240 | 88.62 | 2.64 | -3.4 | | |
| 246 | 60.67 | -67.02 | 228.56 | 81.57 | 343.91 |
| 252 | 61.74 | -68.32 | 234.32 | 82.85 | 342.6 |
| 258 | 62.71 | -69.56 | 240.11 | 83.53 | 340.52 |
| 264 | 63.6 | -70.78 | 245.92 | 84.2 | 339.63 |
| 270 | 64.44 | -71.96 | 251.74 | 85.22 | 339.59 |
| *270 | 96.56 | 2.27 | -7.13 | | |
| 276 | 65.24 | -73.07 | 257.58 | 85.38 | 338.96 |
| 282 | 66.01 | -74.18 | 263.43 | 85.99 | 337.17 |
| 288 | 66.72 | -75.26 | 269.28 | 86.58 | 334.71 |
| 294 | 67.35 | -76.34 | 275.15 | 86.88 | 332.29 |
| 300 | 67.95 | -77.41 | 281.03 | 86.75 | 331.76 |
| *300 | 102.98 | 1.4 | -12.4 | | |

| | | | | | |
|---|---|---|---|---|---|
| 306 | 68.55 | -78.5 | 286.9 | 86.41 | 331.6 |
| 312 | 69.15 | -79.62 | 292.76 | 86.29 | 330.76 |
| 318 | 69.74 | -80.76 | 298.62 | 86.19 | 329.57 |
| 324 | 70.32 | -81.91 | 304.48 | 86.12 | 329.26 |
| 330 | 70.89 | -83.08 | 310.34 | 85.86 | 327.97 |
| *330 | 109.21 | -.05 | -17.87 | | |
| 336 | 71.45 | -84.29 | 316.19 | 85.55 | 325.7 |
| 342 | 71.97 | -85.54 | 322.03 | 85.28 | 324.1 |
| 348 | 72.48 | -86.82 | 327.87 | 85.1 | 323.46 |
| 354 | 72.97 | -88.12 | 333.71 | 85.07 | 321.83 |
| 360 | 73.44 | -89.43 | 339.55 | 85.1 | 320.92 |
| *360 | 115.69 | -2.24 | -23.06 | | |
| 366 | 73.87 | -90.74 | 345.39 | 85.35 | 318.5 |
| 372 | 74.26 | -92.05 | 351.23 | 85.26 | 316.99 |
| 378 | 74.62 | -93.39 | 357.07 | 84.73 | 316.26 |
| 384 | 74.98 | -94.78 | 362.89 | 84.52 | 314.84 |
| 390 | 75.32 | -96.2 | 368.71 | 83.73 | 316.15 |
| *390 | 122.06 | -5.2 | -28.33 | | |
| 396 | 75.71 | -97.68 | 374.51 | 83.41 | 316.94 |
| 402 | 76.13 | -99.17 | 380.31 | 83.19 | 317.02 |
| 408 | 76.55 | -100.69 | 386.1 | 82.64 | 317.73 |
| 414 | 77.01 | -102.25 | 391.87 | 82.04 | 319.42 |
| 423 | 77.71 | -104.65 | 400.52 | 82.07 | 315.82 |
| *423 | 130.04 | -8.87 | -33.13 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 25/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH2B-390M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 267 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 66.33 | -90.31 | 242.29 | 72.63 | 339.52 |

LOCAL COORDINATES AT 267 M
Y-LOC= -8.22 M TO THE LEFT
Z-LOC= 10.52 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.76 | 5.54 | 74.82 | 344.69 |
| 12 | 2.98 | -3.53 | 11.07 | 74.59 | 344.33 |
| 18 | 4.48 | -5.32 | 16.6 | 74.23 | 343.82 |
| 24 | 5.98 | -7.15 | 22.11 | 73.94 | 343.42 |
| 30 | 7.49 | -9.01 | 27.61 | 73.66 | 343.69 |
| *30 | 11.71 | -.15 | .25 | | |
| 36 | 9.03 | -10.87 | 33.1 | 73.42 | 343.65 |
| 42 | 10.56 | -12.77 | 38.59 | 73.21 | 342.74 |
| 48 | 12.09 | -14.69 | 44.06 | 72.92 | 342.22 |
| 54 | 13.62 | -16.65 | 49.52 | 72.74 | 342.24 |
| 60 | 15.15 | -18.61 | 54.98 | 72.66 | 341.99 |
| *60 | 23.99 | -.56 | 1.12 | | |
| 66 | 16.68 | -20.59 | 60.44 | 72.6 | 341.56 |
| 72 | 18.2 | -22.58 | 65.89 | 72.42 | 340.98 |
| 78 | 19.72 | -24.59 | 71.33 | 72.33 | 341.3 |
| 84 | 21.24 | -26.6 | 76.78 | 72.47 | 340.79 |
| 90 | 22.74 | -28.62 | 82.22 | 72.18 | 340.05 |
| *90 | 36.53 | -1.29 | 2.28 | | |
| 96 | 24.23 | -30.69 | 87.66 | 71.89 | 339.1 |
| 102 | 25.71 | -32.79 | 93.08 | 71.49 | 338.58 |
| 108 | 27.19 | -34.93 | 98.48 | 71.39 | 338.24 |
| 114 | 28.67 | -37.08 | 103.89 | 71.26 | 338.14 |
| 120 | 30.14 | -39.25 | 109.29 | 71.22 | 337.81 |
| *120 | 49.41 | -2.57 | 3.83 | | |
| 126 | 31.61 | -41.41 | 114.68 | 71.38 | 337.8 |
| 132 | 33.06 | -43.57 | 120.09 | 71.46 | 338.27 |
| 138 | 34.54 | -45.71 | 125.5 | 71.61 | 338.69 |
| 144 | 36.01 | -47.83 | 130.91 | 71.65 | 338.52 |
| 150 | 37.48 | -49.96 | 136.33 | 71.55 | 338.61 |
| *150 | 62.33 | -3.95 | 5.41 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 38.96 | -52.09 | 141.74 | 71.62 | 338.84 |
| 162 | 40.44 | -54.21 | 147.16 | 71.81 | 338.43 |
| 168 | 41.89 | -56.32 | 152.58 | 71.93 | 338.2 |
| 174 | 43.34 | -58.43 | 158.01 | 72 | 338.35 |
| 180 | 44.79 | -60.54 | 163.44 | 71.98 | 338.6 |
| *180 | 75.11 | -5.26 | 6.85 | | |
| 186 | 46.25 | -62.63 | 168.86 | 71.87 | 339.27 |
| 192 | 47.74 | -64.72 | 174.29 | 71.86 | 339.32 |
| 198 | 49.22 | -66.81 | 179.71 | 71.93 | 339.29 |
| 204 | 50.7 | -68.9 | 185.14 | 71.92 | 339.31 |
| 210 | 52.19 | -70.99 | 190.56 | 71.88 | 339.55 |
| *210 | 87.87 | -6.42 | 8.25 | | |
| 216 | 53.68 | -73.07 | 195.99 | 72.07 | 339.53 |
| 222 | 55.16 | -75.14 | 201.42 | 72.35 | 339.73 |
| 228 | 56.63 | -77.19 | 206.87 | 72.47 | 339.83 |
| 234 | 58.1 | -79.22 | 212.32 | 72.52 | 340.16 |
| 240 | 59.59 | -81.25 | 217.77 | 72.34 | 340.67 |
| *240 | 100.48 | -7.45 | 9.49 | | |
| 246 | 61.1 | -83.27 | 223.21 | 72.45 | 340.85 |
| 252 | 62.6 | -85.28 | 228.66 | 72.57 | 341 |
| 258 | 64.1 | -87.29 | 234.11 | 72.54 | 340.6 |
| 267 | 66.33 | -90.31 | 242.29 | 72.63 | 339.52 |
| *267 | 111.74 | -8.22 | 10.52 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 4/7-85
PLACE: VIKAFJELL
DRILL HOLE: BH2C-390M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 357 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 110.86 | -138.4 | 308.88 | 62.61 | 346.43 |

LOCAL COORDINATES AT 357 M
Y-LOC= -5.59 M TO THE LEFT
Z-LOC= 45.53 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.76 | 5.53 | 74.4 | 344.51 |
| 12 | 3 | -3.57 | 11.05 | 73.99 | 344.15 |
| 18 | 4.54 | -5.41 | 16.55 | 73.44 | 344.05 |
| 24 | 6.09 | -7.29 | 22.03 | 73.02 | 343.88 |
| 30 | 7.67 | -9.2 | 27.5 | 72.43 | 343.85 |
| *30 | 11.97 | -.14 | .54 | | |
| 36 | 9.28 | -11.15 | 32.94 | 71.88 | 343.59 |
| 42 | 10.91 | -13.15 | 38.36 | 71.5 | 343.44 |
| 48 | 12.55 | -15.17 | 43.77 | 71.29 | 343.41 |
| 54 | 14.2 | -17.19 | 49.17 | 71.19 | 343.66 |
| 60 | 15.86 | -19.22 | 54.56 | 71.09 | 343.99 |
| *60 | 24.91 | -.42 | 2.13 | | |
| 66 | 17.54 | -21.25 | 59.95 | 71.12 | 344.13 |
| 72 | 19.22 | -23.26 | 65.35 | 71.08 | 344.27 |
| 78 | 20.91 | -25.28 | 70.74 | 71.03 | 344.38 |
| 84 | 22.61 | -27.3 | 76.13 | 70.92 | 344.39 |
| 90 | 24.31 | -29.33 | 81.51 | 70.79 | 344.17 |
| *90 | 38.09 | -.56 | 3.99 | | |
| 96 | 26.01 | -31.37 | 86.89 | 70.91 | 343.78 |
| 102 | 27.69 | -33.42 | 92.28 | 70.9 | 343.6 |
| 108 | 29.36 | -35.47 | 97.66 | 70.85 | 343.5 |
| 114 | 31.04 | -37.53 | 103.04 | 70.5 | 343.51 |
| 120 | 32.74 | -39.61 | 108.41 | 70.08 | 342.92 |
| *120 | 51.38 | -.83 | 5.98 | | |
| 126 | 34.43 | -41.74 | 113.75 | 69.61 | 342.49 |
| 132 | 36.14 | -43.92 | 119.08 | 69.21 | 341.88 |
| 138 | 37.84 | -46.14 | 124.39 | 68.93 | 340.88 |
| 144 | 39.53 | -48.4 | 129.68 | 68.67 | 340.29 |
| 150 | 41.2 | -50.7 | 134.96 | 68.22 | 339.34 |
| *150 | 65.31 | -1.6 | 8.68 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 42.87 | -53.05 | 140.23 | 67.61 | 338.8 |
| 162 | 44.55 | -55.46 | 145.46 | 67.01 | 338.41 |
| 168 | 46.24 | -57.92 | 150.66 | 66.4 | 338.23 |
| 174 | 47.96 | -60.42 | 155.84 | 65.54 | 338.23 |
| 180 | 49.71 | -62.98 | 160.98 | 65.36 | 338.08 |
| *180 | 80.16 | -3.1 | 12.46 | | |
| 186 | 51.46 | -65.55 | 166.11 | 64.9 | 337.99 |
| 192 | 53.23 | -68.15 | 171.22 | 64.7 | 337.94 |
| 198 | 55.01 | -70.76 | 176.32 | 64.46 | 338.48 |
| 204 | 56.82 | -73.38 | 181.41 | 64.31 | 339.14 |
| 210 | 58.67 | -75.98 | 186.48 | 64.07 | 339.82 |
| *210 | 95.88 | -4.73 | 17.21 | | |
| 216 | 60.56 | -78.58 | 191.55 | 64.15 | 340.4 |
| 222 | 62.46 | -81.15 | 196.63 | 63.98 | 340.99 |
| 228 | 64.41 | -83.72 | 201.69 | 63.64 | 341.46 |
| 234 | 66.38 | -86.3 | 206.73 | 63.64 | 342.48 |
| 240 | 68.39 | -88.84 | 211.79 | 63.87 | 343.04 |
| *240 | 111.96 | -5.69 | 22.39 | | |
| 246 | 70.42 | -91.35 | 216.84 | 63.5 | 343.41 |
| 252 | 72.48 | -93.88 | 221.88 | 63 | 343.9 |
| 258 | 74.58 | -96.43 | 226.89 | 62.51 | 343.87 |
| 264 | 76.71 | -99.01 | 231.87 | 61.86 | 343.83 |
| 270 | 78.87 | -101.62 | 236.82 | 61.52 | 344.02 |
| *270 | 128.49 | -6.02 | 28.08 | | |
| 276 | 81.05 | -104.25 | 241.75 | 61.22 | 344.22 |
| 282 | 83.25 | -106.88 | 246.68 | 61.58 | 344.38 |
| 288 | 85.44 | -109.48 | 251.62 | 61.77 | 344.65 |
| 294 | 87.63 | -112.07 | 256.57 | 61.92 | 344.94 |
| 300 | 89.82 | -114.64 | 261.53 | 62.12 | 345.24 |
| *300 | 145.5 | -6.15 | 34.33 | | |

| | | | | | |
|---|---|---|---|---|---|
| 306 | 92.01 | -117.18 | 266.5 | 62.18 | 345.66 |
| 312 | 94.22 | -119.71 | 271.48 | 62.11 | 345.76 |
| 318 | 96.43 | -122.24 | 276.45 | 62.05 | 345.83 |
| 324 | 98.65 | -124.77 | 281.41 | 62.24 | 345.92 |
| 330 | 100.86 | -127.28 | 286.39 | 62.46 | 346.29 |
| *330 | 162.29 | -5.96 | 40.33 | | |
| 336 | 103.08 | -129.77 | 291.38 | 62.64 | 346.55 |
| 342 | 105.3 | -132.24 | 296.38 | 62.69 | 346.76 |
| 348 | 107.52 | -134.7 | 301.38 | 62.68 | 346.67 |
| 357 | 110.86 | -138.4 | 308.88 | 62.61 | 346.43 |
| *357 | 177.23 | -5.59 | 45.53 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 5/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH3A-351.1M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 165 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 34.72 | -51.16 | 152.89 | 74.39 | 329.8 |

LOCAL COORDINATES AT 165 M
Y-LOC= -6.83 M TO THE LEFT
Z-LOC= -1.74 M DOWNWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.74 | 5.54 | 75.19 | 344.96 |
| 12 | 2.96 | -3.48 | 11.09 | 75.28 | 344.21 |
| 18 | 4.41 | -5.22 | 16.65 | 75.56 | 344.33 |
| 24 | 5.85 | -6.94 | 22.21 | 75.79 | 343.43 |
| 30 | 7.26 | -8.67 | 27.78 | 75.9 | 343.56 |
| *30 | 11.3 | -.11 | -.2 | | |
| 36 | 8.65 | -10.4 | 33.36 | 75.89 | 342.28 |
| 42 | 10.02 | -12.14 | 38.93 | 75.79 | 342.03 |
| 48 | 11.38 | -13.9 | 44.51 | 75.79 | 341.87 |
| 54 | 12.74 | -15.66 | 50.08 | 75.77 | 341.65 |
| 60 | 14.09 | -17.43 | 55.65 | 75.93 | 340.83 |
| *60 | 22.4 | -.6 | -.61 | | |
| 66 | 15.42 | -19.2 | 61.23 | 75.84 | 340.39 |
| 72 | 16.73 | -20.99 | 66.8 | 75.78 | 339.95 |
| 78 | 18.04 | -22.8 | 72.37 | 75.72 | 338.78 |
| 84 | 19.3 | -24.64 | 77.94 | 75.78 | 337.81 |
| 90 | 20.55 | -26.48 | 83.51 | 75.88 | 337.22 |
| *90 | 33.48 | -1.57 | -1.03 | | |
| 96 | 21.77 | -28.33 | 89.09 | 75.92 | 336.62 |
| 102 | 22.97 | -30.19 | 94.66 | 75.9 | 336.03 |
| 108 | 24.16 | -32.07 | 100.24 | 75.71 | 335.39 |
| 114 | 25.33 | -33.97 | 105.8 | 75.55 | 334.68 |
| 120 | 26.49 | -35.9 | 111.37 | 75.48 | 333.64 |
| *120 | 44.5 | -3.17 | -1.51 | | |
| 126 | 27.63 | -37.86 | 116.93 | 75.21 | 333.1 |
| 132 | 28.76 | -39.84 | 122.48 | 75.02 | 332.54 |
| 138 | 29.88 | -41.84 | 128.02 | 74.76 | 331.93 |
| 144 | 30.99 | -43.89 | 133.55 | 74.72 | 330.89 |
| 150 | 32.07 | -45.94 | 139.08 | 74.55 | 330.2 |
| *150 | 55.75 | -5.45 | -1.72 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 33.13 | -48.01 | 144.61 | 74.36 | 329.66 |
| 165 | 34.72 | -51.16 | 152.89 | 74.39 | 329.8 |
| *165 | 61.44 | -6.83 | -1.74 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 5/7-85
PLACE: VIKAFJELL
DRILL HOLE: BH3C-306.7M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 87 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 22.91 | -26.12 | 79.75 | 73.5 | 346.07 |

LOCAL COORDINATES AT 87 M
Y-LOC= .47 M TO THE RIGHT
Z-LOC= 1.57 M UPWARDS

# RESULTS

| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.75 | 5.54 | 74.69 | 345.16 |
| 12 | 3.01 | -3.52 | 11.07 | 74.38 | 345.27 |
| 18 | 4.55 | -5.3 | 16.58 | 74.32 | 345.34 |
| 24 | 6.09 | -7.08 | 22.1 | 74.09 | 345.46 |
| 30 | 7.65 | -8.88 | 27.61 | 73.84 | 345.49 |
| *30 | 11.72 | .05 | .26 | | |
| 36 | 9.23 | -10.69 | 33.11 | 73.61 | 345.4 |
| 42 | 10.81 | -12.52 | 38.6 | 73.46 | 345.58 |
| 48 | 12.41 | -14.35 | 44.09 | 73.4 | 345.85 |
| 54 | 14.02 | -16.17 | 49.57 | 73.52 | 346.22 |
| 60 | 15.63 | -17.98 | 55.06 | 73.36 | 346.46 |
| *60 | 23.82 | .21 | .93 | | |
| 66 | 17.26 | -19.79 | 60.54 | 73.41 | 346.66 |
| 72 | 18.89 | -21.6 | 66.03 | 73.54 | 346.55 |
| 78 | 20.51 | -23.4 | 71.52 | 73.6 | 346.18 |
| 87 | 22.91 | -26.12 | 79.75 | 73.5 | 346.07 |
| *87 | 34.73 | .47 | 1.57 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 24/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH4-294.8M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 279 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 73.23 | -67.93 | 260.4 | 77.08 | 358.34 |

LOCAL COORDINATES AT 279 M
Y-LOC= 11.57 M TO THE RIGHT
Z-LOC= -8 M DOWNWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.74 | 5.54 | 75.2 | 345.81 |
| 12 | 3 | -3.44 | 11.09 | 75.24 | 347.21 |
| 18 | 4.55 | -5.11 | 16.64 | 75.17 | 348.77 |
| 24 | 6.14 | -6.75 | 22.19 | 75.06 | 348.56 |
| 30 | 7.72 | -8.41 | 27.74 | 75.08 | 348.67 |
| *30 | 11.41 | .41 | -.08 | | |
| 36 | 9.31 | -10.06 | 33.28 | 75.24 | 348.84 |
| 42 | 10.89 | -11.69 | 38.84 | 75.32 | 348.92 |
| 48 | 12.46 | -13.31 | 44.39 | 75.49 | 349.15 |
| 54 | 14.03 | -14.92 | 49.96 | 75.51 | 349.28 |
| 60 | 15.61 | -16.53 | 55.52 | 75.67 | 349.14 |
| *60 | 22.7 | 1.14 | -.28 | | |
| 66 | 17.16 | -18.12 | 61.09 | 75.92 | 349.04 |
| 72 | 18.7 | -19.71 | 66.67 | 76.03 | 348.97 |
| 78 | 20.24 | -21.29 | 72.25 | 76.11 | 348.87 |
| 84 | 21.76 | -22.87 | 77.83 | 76.24 | 348.86 |
| 90 | 23.28 | -24.44 | 83.42 | 76.32 | 348.92 |
| *90 | 33.69 | 1.83 | -.8 | | |
| 96 | 24.79 | -26 | 89.01 | 76.48 | 348.97 |
| 102 | 26.3 | -27.55 | 94.61 | 76.62 | 349.12 |
| 108 | 27.8 | -29.09 | 100.21 | 76.73 | 349.38 |
| 114 | 29.3 | -30.61 | 105.82 | 76.82 | 349.72 |
| 120 | 30.81 | -32.12 | 111.43 | 76.81 | 350.19 |
| *120 | 44.43 | 2.57 | -1.6 | | |
| 126 | 32.32 | -33.62 | 117.04 | 76.89 | 350.69 |
| 132 | 33.85 | -35.1 | 122.65 | 76.99 | 351.11 |
| 138 | 35.37 | -36.57 | 128.26 | 77.11 | 351.5 |
| 144 | 36.9 | -38.02 | 133.88 | 77.16 | 351.95 |
| 150 | 38.43 | -39.46 | 139.5 | 77.15 | 352.41 |
| *150 | 54.96 | 3.6 | -2.61 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 39.98 | -40.88 | 145.12 | 77.18 | 352.99 |
| 162 | 41.53 | -42.29 | 150.74 | 77.25 | 353.45 |
| 168 | 43.1 | -43.69 | 156.36 | 77.32 | 353.87 |
| 174 | 44.66 | -45.07 | 161.99 | 77.29 | 354.43 |
| 180 | 46.25 | -46.44 | 167.61 | 77.26 | 354.77 |
| *180 | 65.34 | 5.01 | -3.78 | | |
| 186 | 47.84 | -47.8 | 173.23 | 77.31 | 355.07 |
| 192 | 49.43 | -49.15 | 178.86 | 77.38 | 355.28 |
| 198 | 51.02 | -50.5 | 184.48 | 77.5 | 355.51 |
| 204 | 52.61 | -51.83 | 190.11 | 77.57 | 355.68 |
| 210 | 54.2 | -53.15 | 195.75 | 77.53 | 355.81 |
| *210 | 75.61 | 6.7 | -5.06 | | |
| 216 | 55.8 | -54.47 | 201.38 | 77.45 | 356.37 |
| 222 | 57.41 | -55.78 | 207.01 | 77.43 | 357.16 |
| 228 | 59.04 | -57.08 | 212.63 | 77.34 | 357.57 |
| 234 | 60.68 | -58.36 | 218.26 | 77.4 | 357.66 |
| 240 | 62.32 | -59.65 | 223.89 | 77.37 | 357.88 |
| *240 | 85.83 | 8.66 | -6.39 | | |
| 246 | 63.97 | -60.93 | 229.51 | 77.26 | 358.14 |
| 252 | 65.63 | -62.21 | 235.13 | 77.18 | 358.52 |
| 258 | 67.31 | -63.48 | 240.75 | 77.06 | 358.91 |
| 264 | 69 | -64.74 | 246.37 | 77.08 | 358.94 |
| 270 | 70.69 | -66.01 | 251.98 | 76.98 | 358.96 |
| *270 | 96.1 | 10.88 | -7.65 | | |
| 279 | 73.23 | -67.93 | 260.4 | 77.08 | 358.34 |
| *279 | 99.21 | 11.57 | -8 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 23/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH5 |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 219 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 43.88 | -76.44 | 200.38 | 74.16 | 326.21 |

LOCAL COORDINATES AT 219 M
Y-LOC= -16.28 M TO THE LEFT
Z-LOC= 3.34 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.77 | 5.54 | 74.68 | 343.09 |
| 12 | 2.92 | -3.59 | 11.07 | 74.47 | 341.38 |
| 18 | 4.33 | -5.47 | 16.59 | 74.27 | 339.6 |
| 24 | 5.7 | -7.4 | 22.1 | 74.15 | 338.78 |
| 30 | 7.05 | -9.35 | 27.61 | 73.93 | 337.89 |
| *30 | 11.68 | -.71 | .22 | | |
| 36 | 8.39 | -11.34 | 33.11 | 73.38 | 335.98 |
| 42 | 9.69 | -13.42 | 38.59 | 72.84 | 335.58 |
| 48 | 11.01 | -15.53 | 44.05 | 72.76 | 334.87 |
| 54 | 12.29 | -17.65 | 49.51 | 73.1 | 334.27 |
| 60 | 13.55 | -19.77 | 54.98 | 73.17 | 333.67 |
| *60 | 23.83 | -2.54 | .97 | | |
| 66 | 14.79 | -21.89 | 60.46 | 73.1 | 333.5 |
| 72 | 16.02 | -24.02 | 65.93 | 72.9 | 333.07 |
| 78 | 17.25 | -26.17 | 71.39 | 72.86 | 332.63 |
| 84 | 18.46 | -28.33 | 76.86 | 72.86 | 332.3 |
| 90 | 19.67 | -30.5 | 82.32 | 72.98 | 332.46 |
| *90 | 35.96 | -4.85 | 1.72 | | |
| 96 | 20.87 | -32.66 | 87.79 | 73.12 | 332.59 |
| 102 | 22.07 | -34.8 | 93.26 | 73.41 | 332.67 |
| 108 | 23.27 | -36.91 | 98.75 | 73.81 | 333.08 |
| 114 | 24.46 | -38.96 | 104.26 | 74.6 | 334.07 |
| 120 | 25.65 | -40.97 | 109.79 | 74.52 | 334.42 |
| *120 | 47.8 | -7.1 | 2.15 | | |
| 126 | 26.85 | -42.97 | 115.32 | 74.51 | 334.67 |
| 132 | 28.06 | -44.98 | 120.84 | 74.42 | 334.48 |
| 138 | 29.27 | -46.99 | 126.36 | 74.48 | 333.78 |
| 144 | 30.45 | -49.02 | 131.88 | 74.17 | 332.49 |
| 150 | 31.6 | -51.1 | 137.39 | 73.65 | 331.52 |
| *150 | 59.38 | -9.15 | 2.28 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 32.75 | -53.23 | 142.88 | 73.28 | 331.25 |
| 162 | 33.9 | -55.39 | 148.36 | 73.3 | 330.28 |
| 168 | 35.01 | -57.58 | 153.84 | 73.12 | 328.91 |
| 174 | 36.09 | -59.79 | 159.31 | 73.08 | 328.89 |
| 180 | 37.17 | -62 | 164.78 | 73.08 | 328.91 |
| *180 | 71.28 | -12 | 2.79 | | |
| 186 | 38.25 | -64.21 | 170.25 | 73.06 | 328.59 |
| 192 | 39.32 | -66.43 | 175.72 | 73.06 | 328.52 |
| 198 | 40.38 | -68.65 | 181.2 | 72.92 | 327.66 |
| 204 | 41.42 | -70.9 | 186.66 | 73.01 | 326.94 |
| 210 | 42.43 | -73.15 | 192.13 | 73.57 | 326.59 |
| *210 | 83.17 | -15.24 | 3.31 | | |
| 219 | 43.88 | -76.44 | 200.38 | 74.16 | 326.21 |
| *219 | 86.62 | -16.28 | 3.34 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 4/7-85
PLACE: VIKAFJELL
DRILL HOLE: 6-454.7M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 261 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 55.16 | -89.49 | 238.76 | 73.57 | 334.13 |

LOCAL COORDINATES AT 261 M
Y-LOC= -16.17 M TO THE LEFT
Z-LOC= 4.59 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.76 | 5.54 | 74.72 | 343.93 |
| 12 | 2.95 | -3.56 | 11.07 | 74.58 | 343.19 |
| 18 | 4.41 | -5.38 | 16.6 | 74.45 | 342.44 |
| 24 | 5.85 | -7.23 | 22.12 | 74.3 | 341.71 |
| 30 | 7.29 | -9.11 | 27.63 | 74.04 | 341.3 |
| *30 | 11.65 | -.37 | .19 | | |
| 36 | 8.73 | -11.01 | 33.14 | 73.83 | 340.82 |
| 42 | 10.16 | -12.93 | 38.64 | 73.76 | 340.37 |
| 48 | 11.58 | -14.86 | 44.14 | 74.09 | 340.03 |
| 54 | 12.97 | -16.78 | 49.65 | 74.18 | 339.31 |
| 60 | 14.34 | -18.72 | 55.17 | 74.02 | 338.07 |
| *60 | 23.54 | -1.25 | .63 | | |
| 66 | 15.68 | -20.69 | 60.67 | 73.72 | 338.02 |
| 72 | 17.03 | -22.68 | 66.17 | 73.83 | 337.91 |
| 78 | 18.37 | -24.66 | 71.67 | 73.82 | 337.62 |
| 84 | 19.71 | -26.66 | 77.17 | 73.73 | 337.39 |
| 90 | 21.05 | -28.66 | 82.66 | 73.57 | 337.29 |
| *90 | 35.46 | -2.61 | 1.12 | | |
| 96 | 22.39 | -30.68 | 88.15 | 73.51 | 336.84 |
| 102 | 23.71 | -32.71 | 93.64 | 73.68 | 336.28 |
| 108 | 25.01 | -34.74 | 99.14 | 73.69 | 335.93 |
| 114 | 26.3 | -36.77 | 104.63 | 73.62 | 335.39 |
| 120 | 27.57 | -38.82 | 110.12 | 73.65 | 335.02 |
| *120 | 47.42 | -4.25 | 1.67 | | |
| 126 | 28.83 | -40.88 | 115.62 | 73.5 | 334.82 |
| 132 | 30.09 | -42.95 | 121.1 | 73.35 | 334.72 |
| 138 | 31.36 | -45.04 | 126.59 | 73.27 | 334.66 |
| 144 | 32.63 | -47.13 | 132.07 | 73.18 | 334.31 |
| 150 | 33.89 | -49.23 | 137.54 | 73.38 | 334.08 |
| *150 | 59.44 | -6.21 | 2.28 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 35.12 | -51.33 | 143.03 | 73.54 | 333.75 |
| 162 | 36.35 | -53.42 | 148.51 | 73.34 | 333.35 |
| 168 | 37.57 | -55.54 | 153.99 | 73.01 | 333 |
| 174 | 38.79 | -57.7 | 159.46 | 72.71 | 332.02 |
| 180 | 39.98 | -59.88 | 164.92 | 72.72 | 331.16 |
| *180 | 71.5 | -8.48 | 2.94 | | |
| 186 | 41.15 | -62.08 | 170.37 | 72.82 | 330.6 |
| 192 | 42.29 | -64.29 | 175.84 | 72.83 | 329.46 |
| 198 | 43.39 | -66.52 | 181.3 | 72.79 | 328.46 |
| 204 | 44.46 | -68.76 | 186.76 | 72.87 | 328.36 |
| 210 | 45.54 | -71 | 192.22 | 72.93 | 328.48 |
| *210 | 83.56 | -11.48 | 3.64 | | |
| 216 | 46.61 | -73.23 | 197.69 | 72.9 | 328.58 |
| 222 | 47.69 | -75.45 | 203.15 | 72.95 | 329.21 |
| 228 | 48.79 | -77.67 | 208.62 | 73.01 | 329.76 |
| 234 | 49.9 | -79.87 | 214.09 | 73.18 | 330.35 |
| 240 | 51.03 | -82.04 | 219.57 | 73.29 | 330.88 |
| *240 | 95.52 | -14.48 | 4.22 | | |
| 246 | 52.17 | -84.2 | 225.05 | 73.31 | 331.88 |
| 252 | 53.35 | -86.34 | 230.53 | 73.45 | 332.69 |
| 261 | 55.16 | -89.49 | 238.76 | 73.57 | 334.13 |
| *261 | 103.87 | -16.17 | 4.59 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 4/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH7-260M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 93 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 23.94 | -35.38 | 82.54 | 67.73 | 334.06 |

LOCAL COORDINATES AT 93 M
Y-LOC= -4.78 M TO THE LEFT
Z-LOC= 7.63 M UPWARDS

# RESULTS

| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.79 | 5.53 | 73.87 | 341.54 |
| 12 | 2.93 | -3.73 | 11.01 | 72.37 | 339.57 |
| 18 | 4.41 | -5.81 | 16.45 | 71.34 | 338.59 |
| 24 | 5.9 | -7.99 | 21.83 | 70.02 | 337.54 |
| 30 | 7.42 | -10.26 | 27.17 | 69.36 | 337.12 |
| *30 | 12.62 | -1.02 | 1.26 | | |
| 36 | 8.97 | -12.59 | 32.49 | 68.78 | 337.73 |
| 42 | 10.55 | -14.93 | 37.78 | 68.38 | 337.74 |
| 48 | 12.15 | -17.3 | 43.05 | 68.52 | 337.23 |
| 54 | 13.72 | -19.67 | 48.33 | 68.47 | 337.2 |
| 60 | 15.29 | -22.06 | 53.61 | 68.29 | 336.72 |
| *60 | 26.7 | -2.69 | 4.15 | | |
| 66 | 16.85 | -24.46 | 58.88 | 68.24 | 336.71 |
| 72 | 18.42 | -26.86 | 64.15 | 68.12 | 336.89 |
| 78 | 20 | -29.27 | 69.42 | 68 | 336.88 |
| 84 | 21.59 | -31.69 | 74.67 | 67.71 | 336.84 |
| 93 | 23.94 | -35.38 | 82.54 | 67.73 | 334.06 |
| *93 | 42.45 | -4.78 | 7.63 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 3/7-85
PLACE: VIKAFJELL
DRILL HOLE: 8-385M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 321 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 77.55 | -96.1 | 295.76 | 78.43 | 340.79 |

LOCAL COORDINATES AT 321 M
Y-LOC= -3.43 M TO THE LEFT
Z-LOC= .85 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.77 | 5.53 | 74.52 | 343.85 |
| 12 | 2.98 | -3.59 | 11.05 | 74.13 | 343.14 |
| 18 | 4.47 | -5.45 | 16.56 | 73.73 | 342.47 |
| 24 | 5.97 | -7.34 | 22.05 | 73.49 | 342.68 |
| 30 | 7.49 | -9.25 | 27.53 | 73.11 | 342.97 |
| *30 | 11.89 | -.31 | .44 | | |
| 36 | 9.03 | -11.17 | 33 | 72.77 | 342.89 |
| 42 | 10.59 | -13.11 | 38.46 | 72.51 | 343.1 |
| 48 | 12.17 | -15.07 | 43.91 | 72.28 | 343.17 |
| 54 | 13.76 | -17.04 | 49.35 | 72.02 | 342.76 |
| 60 | 15.36 | -19.05 | 54.77 | 71.51 | 342.24 |
| *60 | 24.45 | -.69 | 1.63 | | |
| 66 | 16.96 | -21.1 | 60.18 | 71.12 | 342.18 |
| 72 | 18.59 | -23.18 | 65.57 | 70.74 | 341.87 |
| 78 | 20.21 | -25.29 | 70.94 | 70.66 | 341.6 |
| 84 | 21.84 | -27.4 | 76.32 | 70.77 | 341.94 |
| 90 | 23.47 | -29.49 | 81.7 | 70.93 | 342.32 |
| *90 | 37.66 | -1.31 | 3.53 | | |
| 96 | 25.1 | -31.57 | 87.09 | 71.08 | 342.92 |
| 102 | 26.74 | -33.62 | 92.48 | 71.26 | 343.12 |
| 108 | 28.38 | -35.66 | 97.88 | 71.41 | 343.16 |
| 114 | 30 | -37.69 | 103.29 | 71.28 | 342.56 |
| 120 | 31.63 | -39.75 | 108.69 | 71.08 | 342.62 |
| *120 | 50.76 | -1.76 | 5.3 | | |
| 126 | 33.27 | -41.81 | 114.08 | 70.94 | 343.17 |
| 132 | 34.93 | -43.86 | 119.47 | 71.04 | 343.78 |
| 138 | 36.6 | -45.89 | 124.86 | 71.16 | 344.23 |
| 144 | 38.28 | -47.91 | 130.25 | 71.23 | 344.6 |
| 150 | 39.97 | -49.9 | 135.66 | 71.77 | 344.65 |
| *150 | 63.89 | -2.01 | 7.11 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 41.61 | -51.86 | 141.09 | 72.41 | 343.2 |
| 162 | 43.17 | -53.84 | 146.53 | 72.18 | 341.57 |
| 168 | 44.71 | -55.86 | 151.97 | 72.36 | 341.16 |
| 174 | 46.23 | -57.86 | 157.41 | 72.88 | 341.03 |
| 180 | 47.71 | -59.83 | 162.88 | 73.53 | 341.29 |
| *180 | 76.47 | -2.58 | 8.32 | | |
| 186 | 49.16 | -61.75 | 168.38 | 74.03 | 342.01 |
| 192 | 50.62 | -63.62 | 173.89 | 74.68 | 341.49 |
| 198 | 52 | -65.46 | 179.44 | 75.86 | 339.7 |
| 204 | 53.29 | -67.25 | 185.01 | 76.64 | 339.72 |
| 210 | 54.53 | -68.96 | 190.63 | 77.97 | 340.3 |
| *210 | 87.85 | -3.32 | 8.21 | | |
| 216 | 55.72 | -70.59 | 196.28 | 79.14 | 339.88 |
| 222 | 56.85 | -72.11 | 201.97 | 80.16 | 341.78 |
| 228 | 57.97 | -73.57 | 207.68 | 80.16 | 342.73 |
| 234 | 59.13 | -75 | 213.39 | 79.98 | 344.54 |
| 240 | 60.33 | -76.41 | 219.1 | 79.94 | 345.41 |
| *240 | 97.28 | -3.75 | 6.03 | | |
| 246 | 61.55 | -77.82 | 224.8 | 79.86 | 345.98 |
| 252 | 62.78 | -79.22 | 230.51 | 79.73 | 346.03 |
| 258 | 64.03 | -80.62 | 236.21 | 79.51 | 346.07 |
| 264 | 65.29 | -82.04 | 241.9 | 79.28 | 346.53 |
| 270 | 66.57 | -83.47 | 247.58 | 79.01 | 346.57 |
| *270 | 106.7 | -3.58 | 3.83 | | |
| 276 | 67.88 | -84.91 | 253.26 | 78.81 | 346.75 |
| 282 | 69.19 | -86.37 | 258.93 | 78.82 | 346.49 |
| 288 | 70.5 | -87.82 | 264.6 | 78.81 | 346.5 |
| 294 | 71.81 | -89.28 | 270.27 | 78.52 | 346.31 |
| 300 | 73.13 | -90.77 | 275.93 | 78.36 | 345.42 |
| *300 | 116.51 | -3.34 | 2.05 | | |
| 306 | 74.44 | -92.28 | 281.59 | 78.67 | 345.54 |
| 312 | 75.72 | -93.77 | 287.26 | 78.78 | 343.53 |
| 321 | 77.55 | -96.1 | 295.76 | 78.43 | 340.79 |
| *321 | 123.43 | -3.43 | .85 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 27/8-85
PLACE: VIKAFJELL
DRILL HOLE: BH9 400.9M F
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 387 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 103.71 | -151.68 | 339.77 | 70.94 | 315.53 |

LOCAL COORDINATES AT 387 M
Y-LOC= -19.65 M TO THE LEFT
Z-LOC= 38.76 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.77 | 5.53 | 74.21 | 344.08 |
| 12 | 3.01 | -3.61 | 11.04 | 73.39 | 343.39 |
| 18 | 4.55 | -5.51 | 16.52 | 72.95 | 343.52 |
| 24 | 6.12 | -7.44 | 21.98 | 72.41 | 343.33 |
| 30 | 7.71 | -9.41 | 27.42 | 71.81 | 343.13 |
| *30 | 12.16 | -.24 | .74 | | |
| 36 | 9.33 | -11.44 | 32.82 | 70.63 | 341.83 |
| 42 | 10.97 | -13.56 | 38.19 | 70.19 | 342.05 |
| 48 | 12.63 | -15.72 | 43.54 | 69.55 | 341.33 |
| 54 | 14.29 | -17.93 | 48.86 | 69.08 | 340.78 |
| 60 | 15.98 | -20.17 | 54.17 | 68.99 | 341.23 |
| *60 | 25.71 | -.95 | 3.02 | | |
| 66 | 17.67 | -22.41 | 59.47 | 68.98 | 341.92 |
| 72 | 19.4 | -24.63 | 64.77 | 69.1 | 342.75 |
| 78 | 21.14 | -26.8 | 70.08 | 69.36 | 343.71 |
| 84 | 22.91 | -28.94 | 75.4 | 69.54 | 344.11 |
| 90 | 24.67 | -31.07 | 80.73 | 69.37 | 343.7 |
| *90 | 39.64 | -1.42 | 5.73 | | |
| 96 | 26.43 | -33.23 | 86.05 | 69.27 | 343.31 |
| 102 | 28.18 | -35.39 | 91.36 | 69.15 | 343.31 |
| 108 | 29.94 | -37.57 | 96.67 | 69.19 | 343.37 |
| 114 | 31.69 | -39.74 | 101.98 | 69.24 | 343.44 |
| 120 | 33.44 | -41.92 | 107.29 | 68.84 | 342.71 |
| *120 | 53.59 | -1.79 | 8.45 | | |
| 126 | 35.2 | -44.13 | 112.58 | 68.57 | 342.46 |
| 132 | 36.96 | -46.38 | 117.86 | 68.28 | 341.98 |
| 138 | 38.71 | -48.65 | 123.13 | 68.03 | 341.77 |
| 144 | 40.48 | -50.95 | 128.38 | 67.64 | 341.83 |
| 150 | 42.27 | -53.27 | 133.62 | 67.35 | 340.97 |
| *150 | 67.95 | -2.45 | 11.64 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 44.02 | -55.64 | 138.84 | 67.19 | 339.44 |
| 162 | 45.73 | -58.06 | 144.06 | 66.75 | 338.59 |
| 168 | 47.43 | -60.53 | 149.25 | 66.19 | 338.19 |
| 174 | 49.15 | -63.06 | 154.42 | 66.01 | 337.56 |
| 180 | 50.85 | -65.6 | 159.58 | 65.57 | 337.65 |
| *180 | 82.9 | -3.93 | 15.52 | | |
| 186 | 52.58 | -68.16 | 164.73 | 65.5 | 337.75 |
| 192 | 54.3 | -70.73 | 169.86 | 65.41 | 337.66 |
| 198 | 56.03 | -73.32 | 175 | 64.83 | 337.79 |
| 204 | 57.8 | -75.93 | 180.1 | 64.18 | 338.01 |
| 210 | 59.61 | -78.59 | 185.16 | 63.51 | 337.82 |
| *210 | 98.47 | -5.71 | 20.12 | | |
| 216 | 61.44 | -81.29 | 190.2 | 63.03 | 338.49 |
| 222 | 63.31 | -84 | 195.22 | 63.4 | 338.78 |
| 228 | 65.18 | -86.67 | 200.26 | 63.7 | 339.05 |
| 234 | 67.04 | -89.31 | 205.31 | 63.81 | 340.42 |
| 240 | 68.98 | -91.89 | 210.37 | 64.05 | 342.23 |
| *240 | 114.66 | -7.22 | 25.43 | | |
| 246 | 70.95 | -94.4 | 215.45 | 64.34 | 342.63 |
| 252 | 72.94 | -96.9 | 220.53 | 64.02 | 343.05 |
| 258 | 74.94 | -99.41 | 225.6 | 64.37 | 342.42 |
| 264 | 76.9 | -101.91 | 230.69 | 65.15 | 341.81 |
| 270 | 78.78 | -104.37 | 235.83 | 66.25 | 340.73 |
| *270 | 130.52 | -7.87 | 30.34 | | |
| 276 | 80.57 | -106.77 | 241.03 | 68.45 | 340.77 |
| 282 | 82.23 | -109.05 | 246.32 | 69.66 | 338 |
| 288 | 83.72 | -111.3 | 251.68 | 72.18 | 334.61 |
| 294 | 84.98 | -113.48 | 257.13 | 73.18 | 329.31 |
| 300 | 86.07 | -115.73 | 262.58 | 71.1 | 327.49 |
| *300 | 143.89 | -9.71 | 32.45 | | |

| | | | | | |
|---|---|---|---|---|---|
| 306 | 87.22 | -118.14 | 267.96 | 69.64 | 329.78 |
| 312 | 88.47 | -120.6 | 273.28 | 69.41 | 331.13 |
| 318 | 89.78 | -123.04 | 278.6 | 69.16 | 331.53 |
| 324 | 91.12 | -125.51 | 283.91 | 69 | 332.06 |
| 330 | 92.48 | -127.96 | 289.21 | 68.94 | 332.4 |
| *330 | 157.36 | -12.78 | 34.7 | | |
| 336 | 93.85 | -130.41 | 294.51 | 68.84 | 332.59 |
| 342 | 95.23 | -132.87 | 299.81 | 69 | 332.54 |
| 348 | 96.58 | -135.33 | 305.11 | 69.15 | 330.44 |
| 354 | 97.88 | -137.81 | 310.42 | 69.01 | 331.18 |
| 360 | 99.19 | -140.28 | 315.73 | 69.32 | 330.35 |
| *360 | 171.09 | -15.68 | 37.24 | | |
| 366 | 100.44 | -142.77 | 321.04 | 69.32 | 327.31 |
| 372 | 101.56 | -145.31 | 326.36 | 69.49 | 323.95 |
| 378 | 102.54 | -147.87 | 331.7 | 70.66 | 320.71 |
| 387 | 103.71 | -151.68 | 339.77 | 70.94 | 315.53 |
| *387 | 182.69 | -19.65 | 38.76 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 26/8-85
PLACE: VIKAFJELL
DRILL HOLE: BH10 389.7M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 387 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 92.21 | -165.42 | 336.76 | 69.73 | 335.34 |

LOCAL COORDINATES AT 387 M
Y-LOC= -37.31 M TO THE LEFT
Z-LOC= 42.66 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.77 | 5.54 | 74.78 | 342.97 |
| 12 | 2.91 | -3.59 | 11.07 | 74.56 | 340.99 |
| 18 | 4.31 | -5.47 | 16.59 | 74.12 | 339.97 |
| 24 | 5.7 | -7.4 | 22.1 | 73.42 | 338.28 |
| 30 | 7.07 | -9.44 | 27.58 | 72.42 | 336.13 |
| *30 | 11.76 | -.76 | .31 | | |
| 36 | 8.41 | -11.59 | 33.01 | 71.66 | 334.45 |
| 42 | 9.74 | -13.82 | 38.42 | 71.25 | 333.83 |
| 48 | 11.08 | -16.07 | 43.82 | 70.93 | 334.1 |
| 54 | 12.42 | -18.36 | 49.2 | 70.42 | 333.14 |
| 60 | 13.76 | -20.7 | 54.56 | 69.96 | 332.79 |
| *60 | 24.68 | -2.98 | 1.92 | | |
| 66 | 15.11 | -23.08 | 59.9 | 69.72 | 332.98 |
| 72 | 16.48 | -25.47 | 65.24 | 69.42 | 333.31 |
| 78 | 17.86 | -27.87 | 70.56 | 69.36 | 333.91 |
| 84 | 19.28 | -30.25 | 75.88 | 69.4 | 334.67 |
| 90 | 20.72 | -32.62 | 81.2 | 69.37 | 334.65 |
| *90 | 38.26 | -5.43 | 4.27 | | |
| 96 | 22.16 | -35 | 86.51 | 69.08 | 334.91 |
| 102 | 23.63 | -37.39 | 91.82 | 68.89 | 335.33 |
| 108 | 25.11 | -39.79 | 97.11 | 68.71 | 335.13 |
| 114 | 26.59 | -42.2 | 102.4 | 68.62 | 334.97 |
| 120 | 28.08 | -44.63 | 107.69 | 68.28 | 335.03 |
| *120 | 52.17 | -7.63 | 6.98 | | |
| 126 | 29.58 | -47.08 | 112.95 | 68.03 | 334.91 |
| 132 | 31.08 | -49.55 | 118.21 | 67.59 | 334.73 |
| 138 | 32.6 | -52.06 | 123.44 | 67.07 | 334.41 |
| 144 | 34.13 | -54.61 | 128.65 | 66.6 | 334.65 |
| 150 | 35.68 | -57.19 | 133.85 | 66.42 | 334.77 |
| *150 | 66.65 | -10 | 10.36 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 37.25 | -59.77 | 139.03 | 66.24 | 334.69 |
| 162 | 38.82 | -62.36 | 144.21 | 66.14 | 334.64 |
| 168 | 40.39 | -64.97 | 149.38 | 66.15 | 334.6 |
| 174 | 41.96 | -67.58 | 154.55 | 65.97 | 334.64 |
| 180 | 43.54 | -70.21 | 159.71 | 65.57 | 334.29 |
| *180 | 81.66 | -12.48 | 14.32 | | |
| 186 | 45.13 | -72.86 | 164.85 | 65.42 | 333.91 |
| 192 | 46.69 | -75.55 | 169.98 | 65.04 | 333.22 |
| 198 | 48.25 | -78.27 | 175.09 | 64.67 | 332.61 |
| 204 | 49.79 | -81.04 | 180.19 | 64.21 | 331.99 |
| 210 | 51.33 | -83.86 | 185.25 | 63.47 | 331.3 |
| *210 | 97.1 | -15.43 | 18.82 | | |
| 216 | 52.87 | -86.74 | 190.29 | 63.42 | 331.07 |
| 222 | 54.39 | -89.62 | 195.33 | 63.44 | 330.94 |
| 228 | 55.91 | -92.51 | 200.36 | 63.2 | 330.37 |
| 234 | 57.4 | -95.44 | 205.38 | 62.86 | 329.14 |
| 240 | 58.84 | -98.41 | 210.39 | 62.85 | 328.07 |
| *240 | 113.04 | -19.17 | 23.92 | | |
| 246 | 60.25 | -101.4 | 215.4 | 62.88 | 328.41 |
| 252 | 61.68 | -104.38 | 220.41 | 62.85 | 328.48 |
| 258 | 63.11 | -107.36 | 225.41 | 62.83 | 328.38 |
| 264 | 64.54 | -110.35 | 230.42 | 62.77 | 328.62 |
| 270 | 65.98 | -113.33 | 235.42 | 62.72 | 328.94 |
| *270 | 129.02 | -23.43 | 29.11 | | |
| 276 | 67.43 | -116.31 | 240.42 | 62.63 | 329.11 |
| 282 | 68.9 | -119.29 | 245.42 | 62.82 | 328.86 |
| 288 | 70.34 | -122.26 | 250.43 | 63.25 | 328.72 |
| 294 | 71.76 | -125.2 | 255.46 | 63.98 | 328.35 |
| 300 | 73.12 | -128.08 | 260.55 | 65.63 | 327.63 |
| *300 | 144.87 | -27.58 | 34.13 | | |

| | | | | | |
|---|---|---|---|---|---|
| 306 | 74.39 | -130.85 | 265.72 | 67.03 | 327.27 |
| 312 | 75.64 | -133.53 | 270.94 | 67.27 | 328.77 |
| 318 | 76.93 | -136.18 | 276.16 | 67.32 | 329.45 |
| 324 | 78.25 | -138.82 | 281.39 | 67.39 | 329.75 |
| 330 | 79.57 | -141.44 | 286.62 | 67.47 | 330.06 |
| *330 | 159.23 | -31.35 | 37.42 | | |
| 336 | 80.91 | -144.05 | 291.86 | 67.65 | 330.09 |
| 342 | 82.23 | -146.64 | 297.1 | 68.01 | 330.34 |
| 348 | 83.56 | -149.21 | 302.36 | 68.15 | 330.36 |
| 354 | 84.88 | -151.76 | 307.63 | 68.38 | 330.78 |
| 360 | 86.21 | -154.29 | 312.9 | 68.37 | 330.85 |
| *360 | 173.31 | -34.64 | 40.37 | | |
| 366 | 87.54 | -156.82 | 318.18 | 68.49 | 330.67 |
| 372 | 88.86 | -159.34 | 323.46 | 68.76 | 330.76 |
| 378 | 90.17 | -161.83 | 328.76 | 69.6 | 331.56 |
| 387 | 92.21 | -165.42 | 336.76 | 69.73 | 335.34 |
| *387 | 185.67 | -37.31 | 42.66 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 24/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH11-159.5M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 117 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 30.45 | -34.65 | 107.5 | 77.1 | 345.03 |

LOCAL COORDINATES AT 117 M
Y-LOC= .65 M TO THE RIGHT
Z-LOC= 1.47 M UPWARDS

# RESULTS

| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.5 | -1.76 | 5.53 | 74.59 | 345.58 |
| 12 | 3.03 | -3.52 | 11.06 | 74.43 | 345.51 |
| 18 | 4.58 | -5.29 | 16.58 | 73.97 | 346.13 |
| 24 | 6.18 | -7.08 | 22.08 | 73.66 | 346.85 |
| 30 | 7.81 | -8.86 | 27.57 | 73.5 | 347.26 |
| *30 | 11.8 | .19 | .35 | | |
| 36 | 9.45 | -10.64 | 33.06 | 73.5 | 347.56 |
| 42 | 11.1 | -12.42 | 38.55 | 73.52 | 347.63 |
| 48 | 12.76 | -14.19 | 44.04 | 73.51 | 347.44 |
| 54 | 14.4 | -15.97 | 49.53 | 73.6 | 347.33 |
| 60 | 16.03 | -17.75 | 55.02 | 73.79 | 346.68 |
| *60 | 23.9 | .66 | 1.03 | | |
| 66 | 17.63 | -19.53 | 60.52 | 73.87 | 346.13 |
| 72 | 19.21 | -21.33 | 66.02 | 73.97 | 345.25 |
| 78 | 20.76 | -23.14 | 71.53 | 74.07 | 344.28 |
| 84 | 22.28 | -24.97 | 77.04 | 74.02 | 343.69 |
| 90 | 23.79 | -26.81 | 82.54 | 73.94 | 343.91 |
| *90 | 35.83 | .68 | 1.51 | | |
| 96 | 25.31 | -28.65 | 88.05 | 74.25 | 344.65 |
| 102 | 26.82 | -30.44 | 93.57 | 74.97 | 345.28 |
| 108 | 28.32 | -32.16 | 99.12 | 75.84 | 345.17 |
| 117 | 30.45 | -34.65 | 107.5 | 77.1 | 345.03 |
| *117 | 46.12 | .65 | 1.47 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 24/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH12-93.7M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 87 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 20.63 | -24.31 | 80.93 | 78.42 | 340.95 |

LOCAL COORDINATES AT 87 M
Y-LOC= -.1 M TO THE LEFT
Z-LOC= -1.52 M DOWNWARDS

# RESULTS

| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.75 | 5.54 | 75 | 344.58 |
| 12 | 2.96 | -3.51 | 11.08 | 74.9 | 344.25 |
| 18 | 4.43 | -5.28 | 16.62 | 74.98 | 344.17 |
| 24 | 5.9 | -7.04 | 22.17 | 75.22 | 344.13 |
| 30 | 7.36 | -8.78 | 27.72 | 75.43 | 344.67 |
| *30 | 11.45 | -.11 | -.03 | | |
| 36 | 8.81 | -10.5 | 33.28 | 75.6 | 345.1 |
| 42 | 10.27 | -12.19 | 38.85 | 75.77 | 345.46 |
| 48 | 11.73 | -13.87 | 44.43 | 76 | 345.9 |
| 54 | 13.19 | -15.52 | 50.01 | 76.11 | 346.27 |
| 60 | 14.64 | -17.15 | 55.6 | 76.69 | 345.87 |
| *60 | 22.54 | 0 | -.45 | | |
| 66 | 16.04 | -18.76 | 61.2 | 77.19 | 345.42 |
| 72 | 17.41 | -20.35 | 66.82 | 77.53 | 344.73 |
| 78 | 18.74 | -21.93 | 72.46 | 77.91 | 343.53 |
| 87 | 20.63 | -24.31 | 80.93 | 78.42 | 340.95 |
| *87 | 31.88 | -.1 | -1.52 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 25/7-85
PLACE: VIKAFJELL
DRILL HOLE: BH14
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 141 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 37.78 | -35.05 | 131.12 | 81.17 | 367.74 |

LOCAL COORDINATES AT 141 M
Y-LOC= 5.97 M TO THE RIGHT
Z-LOC= -2.89 M DOWNWARDS

# RESULTS

| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.75 | 5.54 | 75.1 | 345.27 |
| 12 | 2.98 | -3.47 | 11.09 | 75.38 | 346.13 |
| 18 | 4.49 | -5.16 | 16.65 | 75.27 | 346.75 |
| 24 | 6.01 | -6.85 | 22.2 | 75 | 346.95 |
| 30 | 7.56 | -8.54 | 27.74 | 75.25 | 347.26 |
| *30 | 11.4 | .2 | -.09 | | |
| 36 | 9.1 | -10.21 | 33.3 | 75.27 | 347.74 |
| 42 | 10.66 | -11.87 | 38.85 | 75.21 | 348.58 |
| 48 | 12.24 | -13.51 | 44.4 | 75.38 | 349.23 |
| 54 | 13.82 | -15.11 | 49.96 | 75.47 | 350.13 |
| 60 | 15.43 | -16.7 | 55.52 | 75.37 | 350.28 |
| *60 | 22.71 | .89 | -.26 | | |
| 66 | 17.04 | -18.29 | 61.07 | 75.25 | 351.03 |
| 72 | 18.69 | -19.86 | 66.62 | 75.24 | 352.41 |
| 78 | 20.36 | -21.4 | 72.18 | 75.26 | 353.14 |
| 84 | 22.06 | -22.93 | 77.73 | 75.08 | 353.72 |
| 90 | 23.77 | -24.44 | 83.28 | 75.36 | 354.9 |
| *90 | 34.01 | 2.21 | -.45 | | |
| 96 | 25.49 | -25.9 | 88.83 | 75.44 | 355.58 |
| 102 | 27.23 | -27.35 | 94.39 | 75.55 | 356.14 |
| 108 | 28.95 | -28.77 | 99.96 | 76.2 | 356.83 |
| 114 | 30.65 | -30.11 | 105.56 | 77.27 | 358.9 |
| 120 | 32.31 | -31.36 | 111.19 | 78.39 | 359.25 |
| *120 | 44.82 | 4.2 | -1.14 | | |
| 126 | 33.9 | -32.54 | 116.85 | 79.12 | 360.61 |
| 132 | 35.47 | -33.62 | 122.54 | 80.16 | 363.4 |
| 141 | 37.78 | -35.05 | 131.12 | 81.17 | 367.74 |
| *141 | 51.18 | 5.97 | -2.89 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 25/7-85
PLACE: VIKAFJELL
DRILL HOLE: BH15-74.1
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 51 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 9.78 | -9.85 | 48.77 | 90.56 | 354.75 |

LOCAL COORDINATES AT 51 M
Y-LOC= 1.04 M TO THE RIGHT
Z-LOC= -5.88 M DOWNWARDS

# RESULTS

| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.75 | 5.54 | 74.96 | 344.96 |
| 12 | 2.97 | -3.51 | 11.08 | 75.13 | 345.04 |
| 18 | 4.46 | -5.24 | 16.63 | 75.22 | 345.07 |
| 24 | 5.87 | -6.81 | 22.25 | 82.76 | 353.68 |
| 30 | 6.98 | -7.71 | 28.07 | 88.49 | 362.07 |
| *30 | 10.39 | .3 | -1.14 | | |
| 36 | 7.86 | -8.33 | 33.98 | 88.87 | 359.4 |
| 42 | 8.68 | -8.95 | 39.89 | 89.49 | 357.17 |
| 51 | 9.78 | -9.85 | 48.77 | 90.56 | 354.75 |
| *51 | 13.84 | 1.04 | -5.88 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 23/7-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH18-155M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 147 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 35.27 | -44.97 | 135.4 | 76.51 | 347.66 |

LOCAL COORDINATES AT 147 M
Y-LOC= -2.39 M TO THE LEFT
Z-LOC= .94 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.75 | 5.54 | 75.01 | 344.25 |
| 12 | 2.94 | -3.52 | 11.08 | 74.99 | 342.29 |
| 18 | 4.35 | -5.34 | 16.63 | 74.9 | 341.07 |
| 24 | 5.73 | -7.18 | 22.17 | 74.98 | 340.76 |
| 30 | 7.1 | -9.03 | 27.71 | 74.96 | 339.69 |
| *30 | 11.47 | -.46 | -.01 | | |
| 36 | 8.44 | -10.89 | 33.25 | 75.03 | 339.5 |
| 42 | 9.77 | -12.76 | 38.8 | 75.11 | 339.38 |
| 48 | 11.09 | -14.62 | 44.35 | 75.12 | 338.91 |
| 54 | 12.41 | -16.49 | 49.89 | 74.99 | 338.73 |
| 60 | 13.72 | -18.38 | 55.43 | 74.85 | 338.86 |
| *60 | 22.88 | -1.5 | -.07 | | |
| 66 | 15.06 | -20.27 | 60.97 | 74.72 | 339.51 |
| 72 | 16.41 | -22.16 | 66.5 | 74.48 | 339.51 |
| 78 | 17.78 | -24.07 | 72.02 | 74.37 | 340.27 |
| 84 | 19.19 | -25.96 | 77.54 | 73.95 | 341.24 |
| 90 | 20.64 | -27.87 | 83.04 | 73.77 | 341.78 |
| *90 | 34.59 | -2.4 | .18 | | |
| 96 | 22.11 | -29.77 | 88.54 | 73.67 | 342.28 |
| 102 | 23.61 | -31.66 | 94.03 | 73.59 | 343.06 |
| 108 | 25.13 | -33.55 | 99.52 | 73.73 | 343.55 |
| 114 | 26.65 | -35.4 | 105.02 | 73.85 | 344.44 |
| 120 | 28.2 | -37.23 | 110.52 | 74 | 345.4 |
| *120 | 46.62 | -2.73 | .78 | | |
| 126 | 29.77 | -39.02 | 116.03 | 74.13 | 346.7 |
| 132 | 31.36 | -40.79 | 121.53 | 74.14 | 346.98 |
| 138 | 32.96 | -42.51 | 127.05 | 75.02 | 348.23 |
| 147 | 35.27 | -44.97 | 135.4 | 76.51 | 347.66 |
| *147 | 57.1 | -2.39 | .94 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 27/8-85
PLACE: VIKAFJELL
DRILL HOLE: BH18B 173.5M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 165 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 44.39 | -48.58 | 151.28 | 74.26 | 350.11 |

LOCAL COORDINATES AT 165 M
Y-LOC= 2.21 M TO THE RIGHT
Z-LOC= 2.86 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.75 | 5.54 | 74.81 | 344.93 |
| 12 | 2.99 | -3.51 | 11.07 | 74.7 | 345.01 |
| 18 | 4.51 | -5.27 | 16.61 | 74.55 | 345.15 |
| 24 | 6.03 | -7.04 | 22.13 | 74.33 | 345.18 |
| 30 | 7.56 | -8.82 | 27.65 | 74.3 | 345.84 |
| *30 | 11.61 | .02 | .15 | | |
| 36 | 9.12 | -10.59 | 33.17 | 74.21 | 345.8 |
| 42 | 10.68 | -12.37 | 38.69 | 74.11 | 345.36 |
| 48 | 12.23 | -14.16 | 44.2 | 74.01 | 345.77 |
| 54 | 13.8 | -15.95 | 49.7 | 73.73 | 346.03 |
| 60 | 15.4 | -17.75 | 55.2 | 73.7 | 345.66 |
| *60 | 23.49 | .18 | .58 | | |
| 66 | 16.98 | -19.56 | 60.7 | 73.7 | 345.63 |
| 72 | 18.56 | -21.38 | 66.19 | 73.69 | 345.49 |
| 78 | 20.14 | -23.19 | 71.69 | 73.61 | 345.35 |
| 84 | 21.71 | -25.03 | 77.18 | 73.46 | 344.64 |
| 90 | 23.29 | -26.88 | 82.67 | 73.38 | 345.76 |
| *90 | 35.56 | .25 | 1.22 | | |
| 96 | 24.9 | -28.7 | 88.15 | 73.44 | 347.11 |
| 102 | 26.55 | -30.49 | 93.64 | 73.04 | 347.97 |
| 108 | 28.25 | -32.3 | 99.1 | 72.58 | 348.11 |
| 114 | 29.97 | -34.11 | 104.55 | 72.64 | 349.18 |
| 120 | 31.71 | -35.89 | 110.01 | 73.13 | 349.81 |
| *120 | 47.88 | .81 | 2.13 | | |
| 126 | 33.44 | -37.62 | 115.49 | 73.41 | 350.09 |
| 132 | 35.16 | -39.33 | 120.98 | 73.61 | 350.24 |
| 138 | 36.87 | -41.03 | 126.48 | 73.96 | 349.61 |
| 144 | 38.54 | -42.72 | 131.98 | 74.1 | 349.7 |
| 150 | 40.21 | -44.4 | 137.49 | 74.18 | 350.03 |
| *150 | 59.88 | 1.74 | 2.7 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 41.88 | -46.08 | 143.01 | 74.22 | 350 |
| 165 | 44.39 | -48.58 | 151.28 | 74.26 | 350.11 |
| *165 | 65.76 | 2.21 | 2.86 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 26/8-85
PLACE: VIKAFJELL
DRILL HOLE: BH20 363.5M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 357 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 84.73 | -117.1 | 326.16 | 68.76 | 333.18 |

LOCAL COORDINATES AT 357 M
Y-LOC= -11.62 M TO THE LEFT
Z-LOC= 8.28 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.75 | 5.54 | 74.97 | 344.59 |
| 12 | 2.96 | -3.52 | 11.08 | 74.94 | 343.82 |
| 18 | 4.42 | -5.3 | 16.62 | 74.83 | 343.13 |
| 24 | 5.86 | -7.11 | 22.16 | 74.75 | 342.49 |
| 30 | 7.29 | -8.93 | 27.69 | 74.64 | 342.15 |
| *30 | 11.52 | -.25 | .04 | | |
| 36 | 8.72 | -10.77 | 33.22 | 74.59 | 341.85 |
| 42 | 10.14 | -12.62 | 38.75 | 74.56 | 341.58 |
| 48 | 11.55 | -14.48 | 44.28 | 74.51 | 341.21 |
| 54 | 12.95 | -16.35 | 49.8 | 74.4 | 341.01 |
| 60 | 14.36 | -18.22 | 55.32 | 74.33 | 341.16 |
| *60 | 23.18 | -.91 | .24 | | |
| 66 | 15.78 | -20.11 | 60.84 | 74.17 | 341.16 |
| 72 | 17.21 | -22 | 66.35 | 74.03 | 340.9 |
| 78 | 18.63 | -23.91 | 71.86 | 73.89 | 340.95 |
| 84 | 20.06 | -25.83 | 77.36 | 73.91 | 340.88 |
| 90 | 21.49 | -27.74 | 82.87 | 73.93 | 340.85 |
| *90 | 35.05 | -1.67 | .67 | | |
| 96 | 22.92 | -29.66 | 88.37 | 74.03 | 340.86 |
| 102 | 24.34 | -31.56 | 93.88 | 74.1 | 341.04 |
| 108 | 25.77 | -33.46 | 99.39 | 74.13 | 341.39 |
| 114 | 27.2 | -35.35 | 104.9 | 74.14 | 341.57 |
| 120 | 28.64 | -37.23 | 110.41 | 74.26 | 341.78 |
| *120 | 46.91 | -2.4 | 1.08 | | |
| 126 | 30.08 | -39.1 | 115.93 | 74.3 | 342.13 |
| 132 | 31.53 | -40.95 | 121.45 | 74.42 | 342.36 |
| 138 | 32.98 | -42.8 | 126.97 | 74.52 | 342.79 |
| 144 | 34.44 | -44.63 | 132.5 | 74.57 | 343 |
| 150 | 35.89 | -46.45 | 138.03 | 74.49 | 343 |
| *150 | 58.63 | -2.87 | 1.34 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 37.36 | -48.28 | 143.55 | 74.42 | 342.81 |
| 162 | 38.82 | -50.12 | 149.07 | 74.36 | 342.53 |
| 168 | 40.27 | -51.97 | 154.59 | 74.31 | 342.56 |
| 174 | 41.73 | -53.82 | 160.11 | 74.27 | 342.61 |
| 180 | 43.2 | -55.67 | 165.62 | 74.2 | 342.72 |
| *180 | 70.38 | -3.31 | 1.64 | | |
| 186 | 44.67 | -57.53 | 171.13 | 74.04 | 342.79 |
| 192 | 46.15 | -59.39 | 176.64 | 74.06 | 342.84 |
| 198 | 47.64 | -61.25 | 182.15 | 74.11 | 343.07 |
| 204 | 49.12 | -63.1 | 187.66 | 74.15 | 342.97 |
| 210 | 50.6 | -64.95 | 193.17 | 74.19 | 343.24 |
| *210 | 82.25 | -3.7 | 2.06 | | |
| 216 | 52.09 | -66.79 | 198.69 | 74.23 | 343.59 |
| 222 | 53.59 | -68.63 | 204.2 | 74.1 | 343.09 |
| 228 | 55.07 | -70.48 | 209.71 | 74.1 | 342.78 |
| 234 | 56.55 | -72.35 | 215.22 | 74.01 | 342.58 |
| 240 | 58.03 | -74.21 | 220.72 | 74.1 | 342.82 |
| *240 | 94.11 | -4.07 | 2.48 | | |
| 246 | 59.51 | -76.07 | 226.23 | 73.94 | 342.64 |
| 252 | 60.99 | -77.95 | 231.74 | 73.89 | 342.04 |
| 258 | 62.46 | -79.84 | 237.24 | 73.84 | 341.71 |
| 264 | 63.91 | -81.76 | 242.74 | 73.51 | 340.53 |
| 270 | 65.35 | -83.71 | 248.22 | 73.32 | 340.34 |
| *270 | 106.09 | -4.67 | 3.03 | | |
| 276 | 66.8 | -85.69 | 253.7 | 72.79 | 339.55 |
| 282 | 68.25 | -87.74 | 259.15 | 71.84 | 337.37 |
| 288 | 69.65 | -89.9 | 264.57 | 71.35 | 334.24 |
| 294 | 70.96 | -92.16 | 269.97 | 71.08 | 331.97 |
| 300 | 72.23 | -94.47 | 275.36 | 70.96 | 331.75 |
| *300 | 118.74 | -6.43 | 4.33 | | |

| | | | | | |
|---|---|---|---|---|---|
| 306 | 73.49 | -96.8 | 280.74 | 70.54 | 331.38 |
| 312 | 74.76 | -99.17 | 286.11 | 70.28 | 331.62 |
| 318 | 76.05 | -101.54 | 291.47 | 70.19 | 332.04 |
| 324 | 77.36 | -103.9 | 296.82 | 70.22 | 332.26 |
| 330 | 78.68 | -106.28 | 302.17 | 70.01 | 332.13 |
| *330 | 131.9 | -9.19 | 6.22 | | |
| 336 | 80 | -108.66 | 307.52 | 69.97 | 332.24 |
| 342 | 81.32 | -111.05 | 312.86 | 69.74 | 332.18 |
| 348 | 82.66 | -113.45 | 318.2 | 69.34 | 332.59 |
| 357 | 84.73 | -117.1 | 326.16 | 68.76 | 333.18 |
| *357 | 144.07 | -11.62 | 8.28 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 10/9-85
PLACE: VIKAFJELL
DRILL HOLE: BH21
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 351 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 56.27 | -132.84 | 319.51 | 74.9 | 336.36 |

LOCAL COORDINATES AT 351 M
Y-LOC= -43.48 M TO THE LEFT
Z-LOC= 4.8 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.46 | -1.78 | 5.54 | 74.78 | 341.38 |
| 12 | 2.85 | -3.64 | 11.07 | 74.35 | 339.04 |
| 18 | 4.2 | -5.58 | 16.59 | 74.05 | 337.21 |
| 24 | 5.5 | -7.58 | 22.09 | 73.53 | 335.76 |
| 30 | 6.78 | -9.64 | 27.58 | 73.15 | 333.84 |
| *30 | 11.73 | -1.1 | .28 | | |
| 36 | 8.02 | -11.78 | 33.04 | 72.66 | 332.29 |
| 42 | 9.23 | -13.98 | 38.5 | 72.27 | 331.66 |
| 48 | 10.43 | -16.2 | 43.94 | 72.18 | 330.94 |
| 54 | 11.62 | -18.45 | 49.37 | 71.98 | 330.64 |
| 60 | 12.8 | -20.72 | 54.8 | 71.94 | 330.33 |
| *60 | 24.06 | -3.72 | 1.26 | | |
| 66 | 13.97 | -22.99 | 60.22 | 71.91 | 330.39 |
| 72 | 15.16 | -25.27 | 65.65 | 71.66 | 330.69 |
| 78 | 16.35 | -27.55 | 71.07 | 71.76 | 329.96 |
| 84 | 17.51 | -29.85 | 76.49 | 72.07 | 328.4 |
| 90 | 18.57 | -32.16 | 81.92 | 72.46 | 325.83 |
| *90 | 36.51 | -6.76 | 2.38 | | |
| 96 | 19.56 | -34.46 | 87.37 | 72.78 | 325.02 |
| 102 | 20.5 | -36.77 | 92.83 | 72.56 | 323.54 |
| 108 | 21.4 | -39.13 | 98.28 | 72.02 | 321.6 |
| 114 | 22.24 | -41.56 | 103.69 | 71.09 | 319.58 |
| 120 | 23.01 | -44.08 | 109.08 | 70.82 | 316.92 |
| *120 | 48.46 | -11.13 | 3.02 | | |
| 126 | 23.68 | -46.66 | 114.46 | 70.68 | 314.86 |
| 132 | 24.29 | -49.25 | 119.84 | 71.02 | 314.35 |
| 138 | 24.88 | -51.81 | 125.23 | 71.21 | 314.66 |
| 144 | 25.48 | -54.36 | 130.63 | 71.45 | 314.89 |
| 150 | 26.09 | -56.88 | 136.04 | 71.73 | 314.95 |
| *150 | 60.19 | -17.1 | 3.54 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 26.69 | -59.38 | 141.46 | 71.97 | 315.22 |
| 162 | 27.3 | -61.86 | 146.89 | 71.88 | 315.55 |
| 168 | 27.92 | -64.35 | 152.32 | 71.89 | 316.09 |
| 174 | 28.57 | -66.82 | 157.74 | 72.04 | 316.73 |
| 180 | 29.24 | -69.29 | 163.17 | 71.99 | 316.94 |
| *180 | 71.67 | -22.76 | 3.76 | | |
| 186 | 29.92 | -71.75 | 168.6 | 72.04 | 317.94 |
| 192 | 30.64 | -74.19 | 174.04 | 72.12 | 318.87 |
| 198 | 31.39 | -76.62 | 179.47 | 72.18 | 319.45 |
| 204 | 32.16 | -79.03 | 184.91 | 72.32 | 320.03 |
| 210 | 32.95 | -81.43 | 190.35 | 72.61 | 320.9 |
| *210 | 83.31 | -27.83 | 4.12 | | |
| 216 | 33.76 | -83.79 | 195.81 | 72.78 | 321.7 |
| 222 | 34.6 | -86.13 | 201.27 | 72.99 | 322.25 |
| 228 | 35.45 | -88.44 | 206.74 | 73.04 | 322.69 |
| 234 | 36.32 | -90.75 | 212.21 | 73.18 | 323.16 |
| 240 | 37.2 | -93.03 | 217.69 | 73.26 | 323.48 |
| *240 | 94.89 | -32.13 | 4.36 | | |
| 246 | 38.08 | -95.31 | 223.17 | 73.27 | 324.1 |
| 252 | 38.99 | -97.57 | 228.65 | 73.36 | 324.55 |
| 258 | 39.91 | -99.83 | 234.13 | 73.37 | 325.21 |
| 264 | 40.86 | -102.07 | 239.62 | 73.4 | 325.76 |
| 270 | 41.82 | -104.3 | 245.1 | 73.54 | 326.28 |
| *270 | 106.47 | -35.93 | 4.57 | | |
| 276 | 42.8 | -106.52 | 250.59 | 73.6 | 326.54 |
| 282 | 43.78 | -108.72 | 256.09 | 73.61 | 326.94 |
| 288 | 44.78 | -110.92 | 261.58 | 73.63 | 327.31 |
| 294 | 45.79 | -113.11 | 267.07 | 73.76 | 328.08 |
| 300 | 46.83 | -115.28 | 272.57 | 73.88 | 328.92 |
| *300 | 118.06 | -39.26 | 4.77 | | |

| | | | | | |
|---|---|---|---|---|---|
| 306 | 47.88 | -117.42 | 278.08 | 74.11 | 329.23 |
| 312 | 48.93 | -119.54 | 283.59 | 74.25 | 329.23 |
| 318 | 49.98 | -121.65 | 289.11 | 74.36 | 330.01 |
| 324 | 51.06 | -123.74 | 294.63 | 74.48 | 330.76 |
| 330 | 52.15 | -125.81 | 300.15 | 74.43 | 331.89 |
| *330 | 129.53 | -42.04 | 4.8 | | |
| 336 | 53.29 | -127.86 | 305.68 | 74.38 | 333.46 |
| 342 | 54.47 | -129.88 | 311.2 | 74.87 | 333.95 |
| 351 | 56.27 | -132.84 | 319.51 | 74.9 | 336.36 |
| *351 | 137.55 | -43.48 | 4.8 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 10/9-85
PLACE: VIKAFJELL
DRILL HOLE: BH22
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 405 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 98.34 | -145.55 | 364.8 | 71.83 | 337.48 |

LOCAL COORDINATES AT 405 M
Y-LOC= -19.75 M TO THE LEFT
Z-LOC= 21.65 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.46 | -1.77 | 5.54 | 74.99 | 341.33 |
| 12 | 2.86 | -3.63 | 11.07 | 73.73 | 340.02 |
| 18 | 4.28 | -5.62 | 16.55 | 72.27 | 338.36 |
| 24 | 5.71 | -7.72 | 21.99 | 71.84 | 337.01 |
| 30 | 7.12 | -9.87 | 27.4 | 71.26 | 337.02 |
| *30 | 12.13 | -1 | .72 | | |
| 36 | 8.56 | -12.07 | 32.8 | 70.93 | 336.38 |
| 42 | 9.99 | -14.3 | 38.18 | 70.67 | 336.04 |
| 48 | 11.42 | -16.55 | 43.56 | 70.63 | 336.17 |
| 54 | 12.86 | -18.8 | 48.93 | 70.48 | 335.86 |
| 60 | 14.29 | -21.08 | 54.29 | 70.42 | 335.57 |
| *60 | 25.3 | -2.82 | 2.59 | | |
| 66 | 15.72 | -23.35 | 59.66 | 70.31 | 336.04 |
| 72 | 17.16 | -25.63 | 65.02 | 70 | 335.35 |
| 78 | 18.6 | -27.95 | 70.36 | 69.79 | 334.89 |
| 84 | 20.03 | -30.3 | 75.7 | 69.74 | 334.42 |
| 90 | 21.44 | -32.65 | 81.03 | 69.72 | 334.38 |
| *90 | 38.74 | -4.9 | 4.78 | | |
| 96 | 22.85 | -35.01 | 86.36 | 69.53 | 334.23 |
| 102 | 24.26 | -37.38 | 91.69 | 69.56 | 333.76 |
| 108 | 25.65 | -39.76 | 97.02 | 69.52 | 333.41 |
| 114 | 27.04 | -42.15 | 102.35 | 69.67 | 333.27 |
| 120 | 28.4 | -44.53 | 107.68 | 69.8 | 333.18 |
| *120 | 52.3 | -7.32 | 7.11 | | |
| 126 | 29.77 | -46.9 | 113.02 | 70.07 | 333.09 |
| 132 | 31.12 | -49.25 | 118.38 | 70.43 | 333.91 |
| 138 | 32.49 | -51.56 | 123.74 | 70.57 | 334.57 |
| 144 | 33.87 | -53.84 | 129.12 | 70.77 | 335.23 |
| 150 | 35.28 | -56.09 | 134.5 | 70.66 | 336.24 |
| *150 | 65.56 | -9.6 | 9.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 36.73 | -58.34 | 139.87 | 70.64 | 337.1 |
| 162 | 38.2 | -60.56 | 145.25 | 70.76 | 337.48 |
| 168 | 39.68 | -62.76 | 150.63 | 70.97 | 338.21 |
| 174 | 41.18 | -64.93 | 156.02 | 71.33 | 338.98 |
| 180 | 42.68 | -67.05 | 161.42 | 71.59 | 339.46 |
| *180 | 78.7 | -11.09 | 10.93 | | |
| 186 | 44.18 | -69.15 | 166.84 | 71.81 | 339.51 |
| 192 | 45.67 | -71.24 | 172.26 | 71.85 | 339.55 |
| 198 | 47.17 | -73.32 | 177.69 | 71.86 | 340.05 |
| 204 | 48.68 | -75.39 | 183.11 | 71.86 | 340.48 |
| 210 | 50.21 | -77.45 | 188.54 | 71.97 | 340.56 |
| *210 | 91.5 | -12.12 | 12.38 | | |
| 216 | 51.73 | -79.51 | 193.97 | 72 | 340.54 |
| 222 | 53.24 | -81.56 | 199.4 | 72.05 | 340.35 |
| 228 | 54.75 | -83.61 | 204.83 | 72.1 | 340.16 |
| 234 | 56.25 | -85.67 | 210.26 | 72.06 | 339.9 |
| 240 | 57.75 | -87.73 | 215.69 | 72.14 | 339.8 |
| *240 | 104.21 | -13.07 | 13.73 | | |
| 246 | 59.23 | -89.8 | 221.13 | 72.15 | 339.56 |
| 252 | 60.71 | -91.86 | 226.57 | 72.21 | 339.41 |
| 258 | 62.17 | -93.92 | 232.01 | 72.26 | 339.11 |
| 264 | 63.63 | -95.99 | 237.45 | 72.32 | 338.8 |
| 270 | 65.08 | -98.06 | 242.89 | 72.32 | 339.07 |
| *270 | 116.83 | -14.2 | 14.98 | | |
| 276 | 66.54 | -100.13 | 248.33 | 72.19 | 339.4 |
| 282 | 68.01 | -102.2 | 253.77 | 72.07 | 339.6 |
| 288 | 69.5 | -104.27 | 259.2 | 71.96 | 339.82 |
| 294 | 70.99 | -106.35 | 264.62 | 71.95 | 339.78 |
| 300 | 72.49 | -108.42 | 270.05 | 72.03 | 339.79 |
| *300 | 129.51 | -15.29 | 16.31 | | |

| | | | | | |
|---|---|---|---|---|---|
| 306 | 73.98 | -110.48 | 275.48 | 72.12 | 339.94 |
| 312 | 75.47 | -112.54 | 280.92 | 72.11 | 339.81 |
| 318 | 76.96 | -114.6 | 286.35 | 72.06 | 340.12 |
| 324 | 78.46 | -116.67 | 291.78 | 71.8 | 340 |
| 330 | 79.98 | -118.75 | 297.2 | 71.43 | 340 |
| *330 | 142.24 | -16.31 | 17.67 | | |
| 336 | 81.51 | -120.87 | 302.61 | 71.2 | 339.94 |
| 342 | 83.04 | -122.99 | 308 | 71.19 | 339.52 |
| 348 | 84.57 | -125.13 | 313.4 | 71.14 | 339.34 |
| 354 | 86.09 | -127.27 | 318.79 | 71.03 | 339.25 |
| 360 | 87.61 | -129.42 | 324.18 | 71.35 | 338.64 |
| *360 | 155.3 | -17.44 | 19.42 | | |
| 366 | 89.08 | -131.57 | 329.59 | 71.64 | 337.85 |
| 372 | 90.52 | -133.71 | 335 | 71.71 | 337.62 |
| 378 | 91.96 | -135.85 | 340.42 | 71.75 | 337.83 |
| 384 | 93.39 | -138 | 345.84 | 71.62 | 337.06 |
| 390 | 94.81 | -140.16 | 351.25 | 71.62 | 336.72 |
| *390 | 168.15 | -18.93 | 20.93 | | |
| 396 | 96.22 | -142.33 | 356.67 | 71.72 | 336.87 |
| 405 | 98.34 | -145.55 | 364.8 | 71.83 | 337.48 |
| *405 | 174.54 | -19.75 | 21.65 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 11/9-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH23 170.0M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 159 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 35.25 | -46.07 | 148 | 79.38 | 343.78 |

LOCAL COORDINATES AT 159 M
Y-LOC= -3.12 M TO THE LEFT
Z-LOC= -3.13 M DOWNWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.75 | 5.54 | 75 | 344.54 |
| 12 | 2.95 | -3.51 | 11.08 | 75.12 | 344.3 |
| 18 | 4.41 | -5.27 | 16.63 | 75.07 | 343.65 |
| 24 | 5.85 | -7.04 | 22.18 | 75.17 | 342.78 |
| 30 | 7.26 | -8.83 | 27.73 | 75.41 | 341.27 |
| *30 | 11.42 | -.21 | -.06 | | |
| 36 | 8.61 | -10.63 | 33.29 | 75.36 | 340.55 |
| 42 | 9.95 | -12.46 | 38.85 | 75.39 | 339.77 |
| 48 | 11.27 | -14.29 | 44.41 | 75.31 | 339.74 |
| 54 | 12.6 | -16.13 | 49.96 | 75.46 | 339.6 |
| 60 | 13.91 | -17.96 | 55.52 | 75.53 | 339.6 |
| *60 | 22.69 | -1.09 | -.29 | | |
| 66 | 15.22 | -19.8 | 61.09 | 75.61 | 339.84 |
| 72 | 16.52 | -21.61 | 66.65 | 75.66 | 339.88 |
| 78 | 17.84 | -23.43 | 72.22 | 75.68 | 340.43 |
| 84 | 19.17 | -25.23 | 77.78 | 75.75 | 340.79 |
| 90 | 20.5 | -27.01 | 83.36 | 75.84 | 341.17 |
| *90 | 33.85 | -1.95 | -.63 | | |
| 96 | 21.84 | -28.78 | 88.93 | 76 | 341.19 |
| 102 | 23.17 | -30.54 | 94.51 | 76.12 | 341.19 |
| 108 | 24.48 | -32.3 | 100.1 | 76.54 | 341.28 |
| 114 | 25.78 | -34.01 | 105.7 | 76.82 | 341.61 |
| 120 | 27.08 | -35.7 | 111.31 | 77.03 | 342.09 |
| *120 | 44.73 | -2.59 | -1.27 | | |
| 126 | 28.37 | -37.36 | 116.92 | 77.42 | 342.28 |
| 132 | 29.65 | -39 | 122.55 | 77.68 | 342.43 |
| 138 | 30.92 | -40.62 | 128.19 | 77.94 | 342.42 |
| 144 | 32.17 | -42.21 | 133.84 | 78.21 | 342.32 |
| 150 | 33.41 | -43.79 | 139.49 | 78.67 | 342.97 |
| *150 | 54.99 | -3.03 | -2.58 | | |

| | | | | | |
|---|---|---|---|---|---|
| 159 | 35.25 | -46.07 | 148 | 79.38 | 343.78 |
| *159 | 57.92 | -3.12 | -3.13 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: NM
DATE: 11/9-85
PLACE: VIKAFJELL
DRILL HOLE: BH24 271.3M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 267 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 58.21 | -58.7 | 253.6 | 81.89 | 356.09 |

LOCAL COORDINATES AT 267 M
Y-LOC= 6.15 M TO THE RIGHT
Z-LOC= -20.89 M DOWNWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.75 | 5.54 | 75.14 | 345.03 |
| 12 | 2.96 | -3.48 | 11.09 | 75.3 | 344.51 |
| 18 | 4.41 | -5.21 | 16.65 | 75.46 | 344.09 |
| 24 | 5.84 | -6.95 | 22.21 | 75.63 | 343.15 |
| 30 | 7.24 | -8.69 | 27.78 | 75.99 | 342.35 |
| *30 | 11.31 | -.14 | -.19 | | |
| 36 | 8.6 | -10.43 | 33.36 | 76.15 | 342.32 |
| 42 | 9.96 | -12.15 | 38.95 | 76.35 | 342.87 |
| 48 | 11.31 | -13.85 | 44.54 | 76.5 | 342.86 |
| 54 | 12.66 | -15.53 | 50.14 | 76.7 | 343.28 |
| 60 | 14.01 | -17.19 | 55.74 | 77.35 | 343.68 |
| *60 | 22.16 | -.51 | -.86 | | |
| 66 | 15.33 | -18.78 | 61.37 | 78.13 | 345.47 |
| 72 | 16.65 | -20.29 | 67.03 | 78.74 | 346.23 |
| 78 | 17.96 | -21.75 | 72.7 | 79.18 | 347.15 |
| 84 | 19.26 | -23.15 | 78.39 | 79.67 | 348.48 |
| 90 | 20.56 | -24.5 | 84.09 | 79.89 | 349.25 |
| *90 | 31.98 | -.27 | -2.63 | | |
| 96 | 21.86 | -25.83 | 89.79 | 80.34 | 349.33 |
| 102 | 23.13 | -27.12 | 95.51 | 80.59 | 349.46 |
| 108 | 24.4 | -28.41 | 101.24 | 80.66 | 349.47 |
| 114 | 25.66 | -29.68 | 106.96 | 80.75 | 349.81 |
| 120 | 26.92 | -30.95 | 112.69 | 80.85 | 349.9 |
| *120 | 41.01 | .37 | -5.24 | | |
| 126 | 28.17 | -32.2 | 118.42 | 80.94 | 350.1 |
| 132 | 29.43 | -33.45 | 124.15 | 81.02 | 350.32 |
| 138 | 30.69 | -34.69 | 129.89 | 81.15 | 350.54 |
| 144 | 31.94 | -35.91 | 135.63 | 81.13 | 351 |
| 150 | 33.2 | -37.12 | 141.37 | 81.16 | 351.56 |
| *150 | 49.79 | 1.14 | -8.11 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 34.47 | -38.33 | 147.11 | 81.19 | 352.14 |
| 162 | 35.75 | -39.51 | 152.85 | 81.24 | 352.67 |
| 168 | 37.04 | -40.69 | 158.59 | 81.32 | 353.08 |
| 174 | 38.32 | -41.85 | 164.33 | 81.4 | 353.54 |
| 180 | 39.62 | -43 | 170.08 | 81.49 | 353.74 |
| *180 | 58.42 | 2.2 | -11.11 | | |
| 186 | 40.9 | -44.14 | 175.83 | 81.72 | 353.96 |
| 192 | 42.18 | -45.26 | 181.58 | 81.84 | 354.58 |
| 198 | 43.45 | -46.36 | 187.34 | 82 | 355.18 |
| 204 | 44.73 | -47.44 | 193.1 | 82.04 | 355.49 |
| 210 | 46.01 | -48.51 | 198.86 | 82.07 | 355.73 |
| *210 | 66.77 | 3.48 | -14.42 | | |
| 216 | 47.29 | -49.58 | 204.63 | 82.06 | 356.16 |
| 222 | 48.58 | -50.64 | 210.39 | 81.99 | 356.05 |
| 228 | 49.87 | -51.71 | 216.15 | 81.98 | 356.03 |
| 234 | 51.17 | -52.78 | 221.91 | 81.99 | 356.09 |
| 240 | 52.46 | -53.84 | 227.67 | 82.04 | 356.18 |
| *240 | 75.01 | 4.93 | -17.83 | | |
| 246 | 53.75 | -54.9 | 233.44 | 81.93 | 355.24 |
| 252 | 55.03 | -55.99 | 239.2 | 82.09 | 354.93 |
| 258 | 56.3 | -57.07 | 244.96 | 82.01 | 354.79 |
| 267 | 58.21 | -58.7 | 253.6 | 81.89 | 356.09 |
| *267 | 82.44 | 6.15 | -20.89 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: OO
DATE: 23/9-85
PLACE: VIKAFJELL
DRILL HOLE: BH25-233.8M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 231 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 49.29 | -47.38 | 220.06 | 85.08 | 365.37 |

LOCAL COORDINATES AT 231 M
Y-LOC= 6.71 M TO THE RIGHT
Z-LOC= -21.36 M DOWNWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.49 | -1.73 | 5.54 | 75.35 | 345.12 |
| 12 | 2.94 | -3.46 | 11.1 | 75.4 | 342.62 |
| 18 | 4.32 | -5.26 | 16.66 | 75.18 | 339.96 |
| 24 | 5.66 | -7.11 | 22.21 | 74.56 | 337.92 |
| 30 | 6.96 | -9.04 | 27.74 | 74.77 | 338.32 |
| *30 | 11.39 | -.57 | -.09 | | |
| 36 | 8.27 | -10.95 | 33.27 | 74.94 | 338.68 |
| 42 | 9.59 | -12.83 | 38.81 | 75.1 | 339.6 |
| 48 | 10.91 | -14.66 | 44.37 | 76.1 | 340.97 |
| 54 | 12.24 | -16.4 | 49.96 | 76.85 | 342.86 |
| 60 | 13.57 | -18.05 | 55.57 | 77.08 | 344.67 |
| *60 | 22.53 | -1.4 | -.45 | | |
| 66 | 14.93 | -19.64 | 61.2 | 78.07 | 346.3 |
| 72 | 16.27 | -21.12 | 66.85 | 79.01 | 348 |
| 78 | 17.6 | -22.53 | 72.53 | 79.45 | 349.07 |
| 84 | 18.93 | -23.87 | 78.23 | 79.93 | 351.35 |
| 90 | 20.27 | -25.15 | 83.93 | 80.23 | 352.42 |
| *90 | 32.28 | -.91 | -2.3 | | |
| 96 | 21.62 | -26.38 | 89.65 | 80.6 | 353.32 |
| 102 | 22.96 | -27.57 | 95.38 | 80.88 | 354.23 |
| 108 | 24.3 | -28.73 | 101.11 | 81.19 | 355.48 |
| 114 | 25.63 | -29.84 | 106.85 | 81.73 | 356.92 |
| 120 | 26.95 | -30.89 | 112.61 | 82.31 | 358.57 |
| *120 | 40.98 | .43 | -5.23 | | |
| 126 | 28.25 | -31.88 | 118.38 | 82.59 | 358.11 |
| 132 | 29.53 | -32.87 | 124.16 | 82.85 | 357.84 |
| 138 | 30.79 | -33.85 | 129.95 | 83.03 | 358.02 |
| 144 | 32.04 | -34.81 | 135.73 | 83.1 | 358.43 |
| 150 | 33.28 | -35.76 | 141.53 | 83.33 | 358.52 |
| *150 | 48.81 | 2.08 | -9.07 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 34.52 | -36.71 | 147.32 | 83.3 | 358.59 |
| 162 | 35.76 | -37.65 | 153.11 | 83.15 | 358.88 |
| 168 | 37.02 | -38.6 | 158.9 | 83.12 | 359.92 |
| 174 | 38.29 | -39.5 | 164.7 | 83.61 | 361.78 |
| 180 | 39.53 | -40.36 | 170.51 | 84.38 | 359.58 |
| *180 | 56.36 | 3.85 | -13.18 | | |
| 186 | 40.69 | -41.24 | 176.33 | 84.63 | 357.8 |
| 192 | 41.82 | -42.13 | 182.15 | 84.35 | 357.03 |
| 198 | 42.96 | -43.03 | 187.97 | 84.76 | 357.14 |
| 204 | 44.07 | -43.91 | 193.8 | 85.05 | 358.46 |
| 210 | 45.18 | -44.74 | 199.64 | 85.08 | 360.53 |
| *210 | 63.36 | 5.3 | -17.86 | | |
| 216 | 46.33 | -45.54 | 205.48 | 85.13 | 363.77 |
| 222 | 47.5 | -46.28 | 211.31 | 85.02 | 364.75 |
| 231 | 49.29 | -47.38 | 220.06 | 85.08 | 365.37 |
| *231 | 68.03 | 6.71 | -21.36 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | NM |
| DATE: | 11/9-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH26 100.0M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 99 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 17.1 | -31.93 | 92.03 | 78.21 | 321.88 |

LOCAL COORDINATES AT 99 M
Y-LOC= -7.74 M TO THE LEFT
Z-LOC= -2.53 M DOWNWARDS

# RESULTS

| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.47 | -1.76 | 5.54 | 75.08 | 343.24 |
| 12 | 2.9 | -3.55 | 11.09 | 75.21 | 341.18 |
| 18 | 4.25 | -5.37 | 16.64 | 75.58 | 339.46 |
| 24 | 5.54 | -7.2 | 22.21 | 75.79 | 337.7 |
| 30 | 6.77 | -9.05 | 27.78 | 76.07 | 335.98 |
| *30 | 11.27 | -.73 | -.22 | | |
| 36 | 7.92 | -10.92 | 33.36 | 76.29 | 333.5 |
| 42 | 9 | -12.81 | 38.95 | 76.39 | 331.58 |
| 48 | 10.03 | -14.73 | 44.55 | 76.28 | 329.98 |
| 54 | 11.01 | -16.69 | 50.13 | 76.18 | 328.57 |
| 60 | 11.94 | -18.67 | 55.72 | 76.03 | 325.98 |
| *60 | 21.95 | -3.04 | -1.05 | | |
| 66 | 12.81 | -20.7 | 61.3 | 75.82 | 324.41 |
| 72 | 13.63 | -22.77 | 66.87 | 75.88 | 323.78 |
| 78 | 14.43 | -24.83 | 72.45 | 75.99 | 323.44 |
| 84 | 15.23 | -26.89 | 78.03 | 76.09 | 323.09 |
| 90 | 16 | -28.95 | 83.61 | 76.43 | 322.58 |
| *90 | 32.4 | -6.63 | -2.06 | | |
| 99 | 17.1 | -31.93 | 92.03 | 78.21 | 321.88 |
| *99 | 35.38 | -7.74 | -2.53 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: NT
SURVEYOR: GV
DATE: 25/9-85
PLACE: VIKAFJELL
DRILL HOLE: BH27-219.5M
HOLE DIAMETER (MM): 47
NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 207 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 55.52 | -64.31 | 188.68 | 73.49 | 349.38 |

LOCAL COORDINATES AT 207 M
Y-LOC= .45 M TO THE RIGHT
Z-LOC= 6.28 M UPWARDS

# RESULTS



| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.76 | 5.54 | 74.77 | 343.96 |
| 12 | 2.95 | -3.55 | 11.07 | 74.47 | 342.85 |
| 18 | 4.41 | -5.4 | 16.59 | 74.27 | 341.77 |
| 24 | 5.85 | -7.27 | 22.11 | 74.28 | 340.94 |
| 30 | 7.26 | -9.17 | 27.62 | 73.67 | 340.74 |
| *30 | 11.68 | -.43 | .22 | | |
| 36 | 8.72 | -11.11 | 33.11 | 72.92 | 340.99 |
| 42 | 10.21 | -13.1 | 38.57 | 72.74 | 340.99 |
| 48 | 11.71 | -15.08 | 44.03 | 72.68 | 341.48 |
| 54 | 13.23 | -17.07 | 49.48 | 72.51 | 341.61 |
| 60 | 14.76 | -19.06 | 54.93 | 72.3 | 341.53 |
| *60 | 24.07 | -1.16 | 1.22 | | |
| 66 | 16.29 | -21.07 | 60.37 | 72.14 | 341.63 |
| 72 | 17.85 | -23.09 | 65.8 | 71.9 | 341.85 |
| 78 | 19.42 | -25.12 | 71.23 | 71.74 | 342.5 |
| 84 | 21.02 | -27.14 | 76.64 | 71.64 | 343.04 |
| 90 | 22.64 | -29.15 | 82.06 | 71.76 | 343.24 |
| *90 | 36.86 | -1.72 | 2.65 | | |
| 96 | 24.26 | -31.15 | 87.48 | 71.77 | 343.57 |
| 102 | 25.89 | -33.14 | 92.9 | 71.83 | 344.13 |
| 108 | 27.53 | -35.11 | 98.33 | 72.11 | 344.98 |
| 114 | 29.18 | -37.03 | 103.77 | 72.6 | 346.32 |
| 120 | 30.85 | -38.88 | 109.22 | 72.9 | 347.94 |
| *120 | 49.59 | -1.78 | 4.02 | | |
| 126 | 32.55 | -40.68 | 114.69 | 72.98 | 348.38 |
| 132 | 34.25 | -42.47 | 120.16 | 73.19 | 348.26 |
| 138 | 35.93 | -44.25 | 125.64 | 73.36 | 348.35 |
| 144 | 37.61 | -46.01 | 131.12 | 73.42 | 348.81 |
| 150 | 39.29 | -47.76 | 136.61 | 73.41 | 348.83 |
| *150 | 61.83 | -1.14 | 4.84 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 40.98 | -49.51 | 142.09 | 73.42 | 348.9 |
| 162 | 42.67 | -51.26 | 147.58 | 73.36 | 349.06 |
| 168 | 44.37 | -53.01 | 153.06 | 73.35 | 349.13 |
| 174 | 46.07 | -54.75 | 158.55 | 73.35 | 349.25 |
| 180 | 47.78 | -56.49 | 164.03 | 73.27 | 349.61 |
| *180 | 73.98 | -.36 | 5.58 | | |
| 186 | 49.49 | -58.23 | 169.51 | 73.26 | 349.67 |
| 192 | 51.21 | -59.97 | 174.99 | 73.23 | 349.69 |
| 198 | 52.94 | -61.71 | 180.46 | 73.25 | 349.98 |
| 207 | 55.52 | -64.31 | 188.68 | 73.49 | 349.38 |
| *207 | 84.95 | .45 | 6.28 | | |

# DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

| | |
|---|---|
| CUSTOMER: | NT |
| SURVEYOR: | OER |
| DATE: | 25/9-85 |
| PLACE: | VIKAFJELL |
| DRILL HOLE: | BH28-294.0M |
| HOLE DIAMETER (MM): | 47 |

NO CASING

COLLAR POSITION

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 0 | 0 | 0 | 74.99 | 344.99 |

POSITION AT 291 M

| X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS) |
|---|---|---|---|---|
| 44.41 | -69.98 | 278.36 | 85.65 | 339.52 |

LOCAL COORDINATES AT 291 M
Y-LOC= -11.68 M TO THE LEFT
Z-LOC= -30.73 M DOWNWARDS

# RESULTS

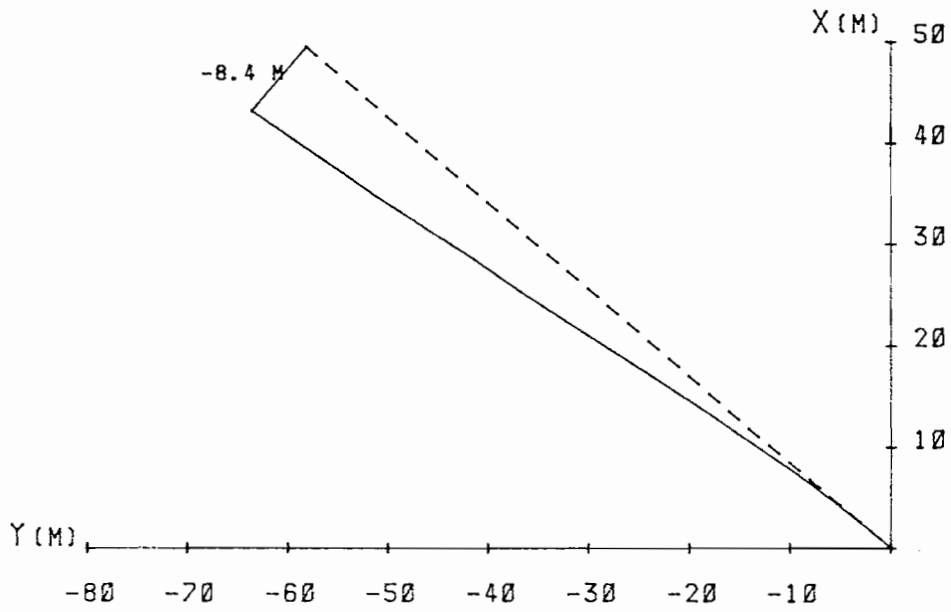


| STATION (M) | X(M) | Y(M) | Z(M) | DIP (GONS) | DIR. (GONS |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 74.99 | 344.99 |
| 6 | 1.48 | -1.75 | 5.54 | 75.26 | 344.55 |
| 12 | 2.93 | -3.48 | 11.1 | 75.59 | 343.84 |
| 18 | 4.35 | -5.22 | 16.66 | 75.7 | 343.55 |
| 24 | 5.76 | -6.95 | 22.23 | 76 | 343.05 |
| 30 | 7.13 | -8.67 | 27.81 | 76.18 | 342.69 |
| *30 | 11.22 | -.21 | -.28 | | |
| 36 | 8.49 | -10.4 | 33.4 | 76.34 | 342.01 |
| 42 | 9.81 | -12.11 | 38.99 | 76.4 | 341.41 |
| 48 | 11.13 | -13.84 | 44.59 | 76.55 | 341.01 |
| 54 | 12.43 | -15.57 | 50.18 | 76.75 | 340.78 |
| 60 | 13.7 | -17.28 | 55.79 | 76.84 | 340.3 |
| *60 | 22.03 | -.8 | -1 | | |
| 66 | 14.95 | -19 | 61.4 | 76.93 | 339.42 |
| 72 | 16.17 | -20.74 | 67.01 | 77.04 | 338.2 |
| 78 | 17.34 | -22.49 | 72.63 | 77.59 | 336.6 |
| 84 | 18.45 | -24.22 | 78.27 | 78.18 | 335.58 |
| 90 | 19.5 | -25.91 | 83.93 | 79.3 | 334.29 |
| *90 | 32.36 | -2 | -2.22 | | |
| 96 | 20.47 | -27.54 | 89.62 | 80.02 | 333.11 |
| 102 | 21.38 | -29.14 | 95.33 | 80.33 | 333.16 |
| 108 | 22.27 | -30.71 | 101.05 | 81.16 | 332.33 |
| 114 | 23.12 | -32.22 | 106.8 | 81.53 | 332.17 |
| 120 | 23.94 | -33.7 | 112.55 | 82.37 | 332.13 |
| *120 | 41.17 | -3.68 | -5.04 | | |
| 126 | 24.72 | -35.14 | 118.33 | 82.64 | 329.88 |
| 132 | 25.42 | -36.58 | 124.11 | 83.07 | 327.2 |
| 138 | 26.08 | -38.01 | 129.9 | 83.14 | 326.71 |
| 144 | 26.71 | -39.45 | 135.69 | 83.17 | 326.62 |
| 150 | 27.35 | -40.89 | 141.48 | 83.58 | 327.75 |
| *150 | 48.85 | -5.76 | -9.01 | | |

| | | | | | |
|---|---|---|---|---|---|
| 156 | 27.99 | -42.28 | 147.28 | 83.97 | 328.4 |
| 162 | 28.64 | -43.62 | 153.09 | 84.09 | 328.3 |
| 168 | 29.28 | -44.95 | 158.91 | 84.32 | 328.93 |
| 174 | 29.92 | -46.27 | 164.73 | 84.63 | 327.95 |
| 180 | 30.54 | -47.56 | 170.55 | 84.59 | 328.41 |
| *180 | 55.99 | -7.66 | -13.54 | | |
| 186 | 31.16 | -48.86 | 176.38 | 84.57 | 328.71 |
| 192 | 31.78 | -50.16 | 182.2 | 84.52 | 329.18 |
| 198 | 32.42 | -51.46 | 188.03 | 84.56 | 329.99 |
| 204 | 33.08 | -52.74 | 193.85 | 84.52 | 331.03 |
| 210 | 33.76 | -54.01 | 199.67 | 84.48 | 332.65 |
| *210 | 62.99 | -9.41 | -18.22 | | |
| 216 | 34.47 | -55.28 | 205.5 | 84.34 | 333.97 |
| 222 | 35.22 | -56.53 | 211.31 | 84.36 | 334.76 |
| 228 | 35.98 | -57.78 | 217.13 | 84.34 | 335.72 |
| 234 | 36.76 | -59.02 | 222.95 | 84.47 | 336.43 |
| 240 | 37.54 | -60.24 | 228.78 | 84.6 | 336.98 |
| *240 | 70.18 | -10.57 | -22.71 | | |
| 246 | 38.33 | -61.44 | 234.6 | 84.7 | 337.9 |
| 252 | 39.13 | -62.63 | 240.43 | 84.84 | 338.14 |
| 258 | 39.93 | -63.79 | 246.26 | 84.86 | 338.8 |
| 264 | 40.74 | -64.95 | 252.09 | 84.89 | 339.62 |
| 270 | 41.56 | -66.1 | 257.92 | 85.09 | 340.61 |
| *270 | 77.25 | -11.32 | -27.34 | | |
| 276 | 42.4 | -67.21 | 263.76 | 85.27 | 340.25 |
| 282 | 43.21 | -68.32 | 269.6 | 85.29 | 339.87 |
| 291 | 44.41 | -69.98 | 278.36 | 85.65 | 339.52 |
| *291 | 82.05 | -11.68 | -30.73 | | |

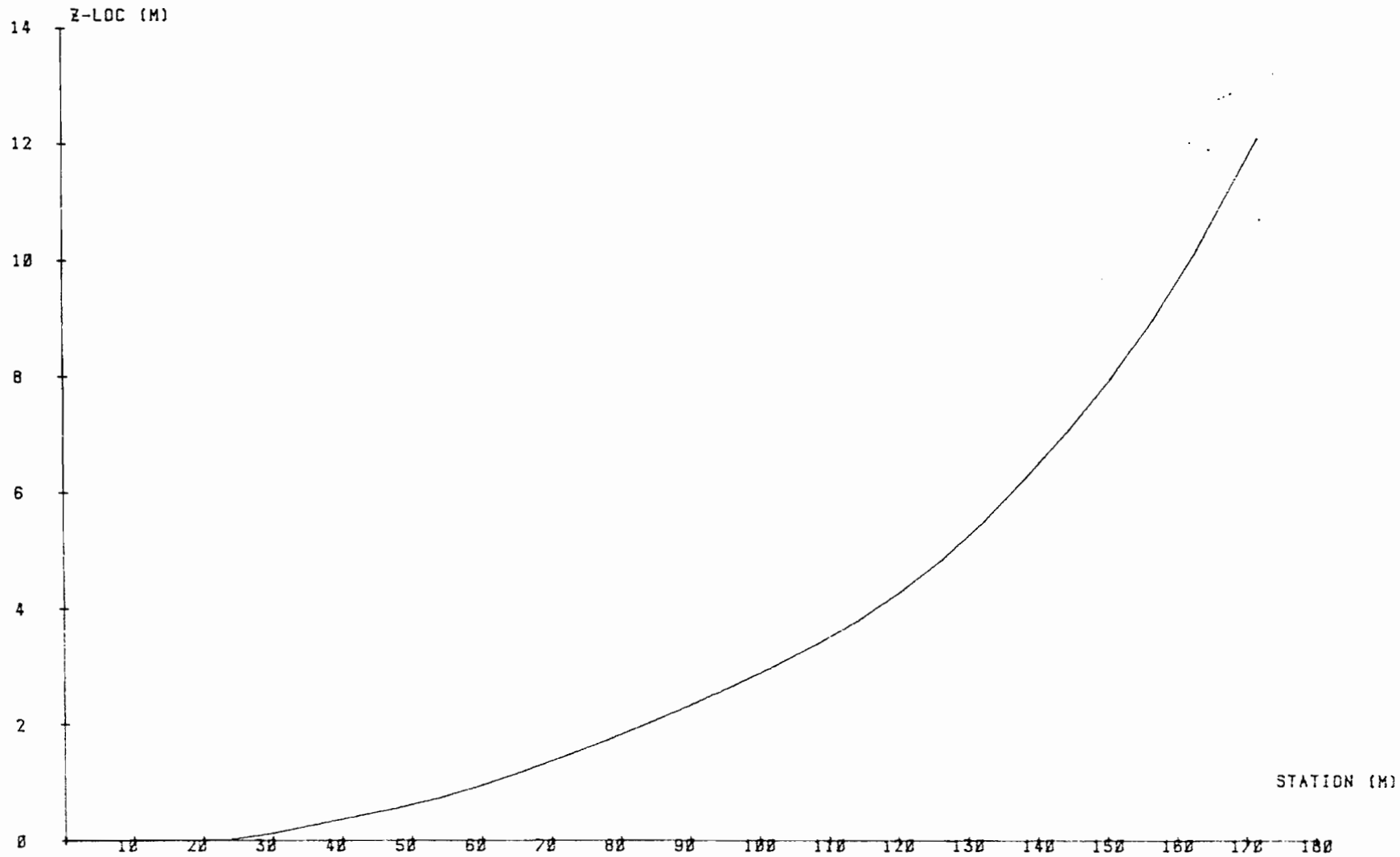
NT
VIKAFJELL
HOLE: BH1A-400M
4/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



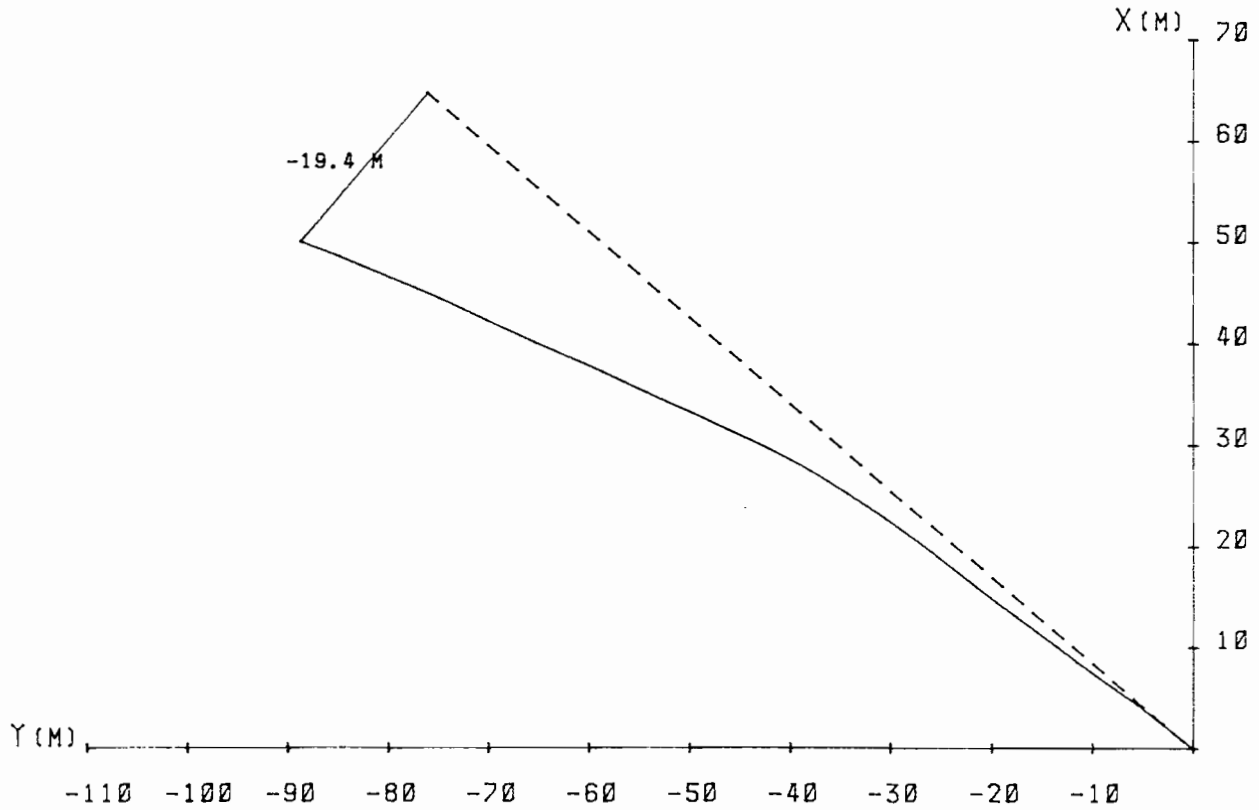
NT
VIKAFJELL
HOLE: BH1A-400M
4/7-85

PLOT NO: 10
Z-LOC-PLANE



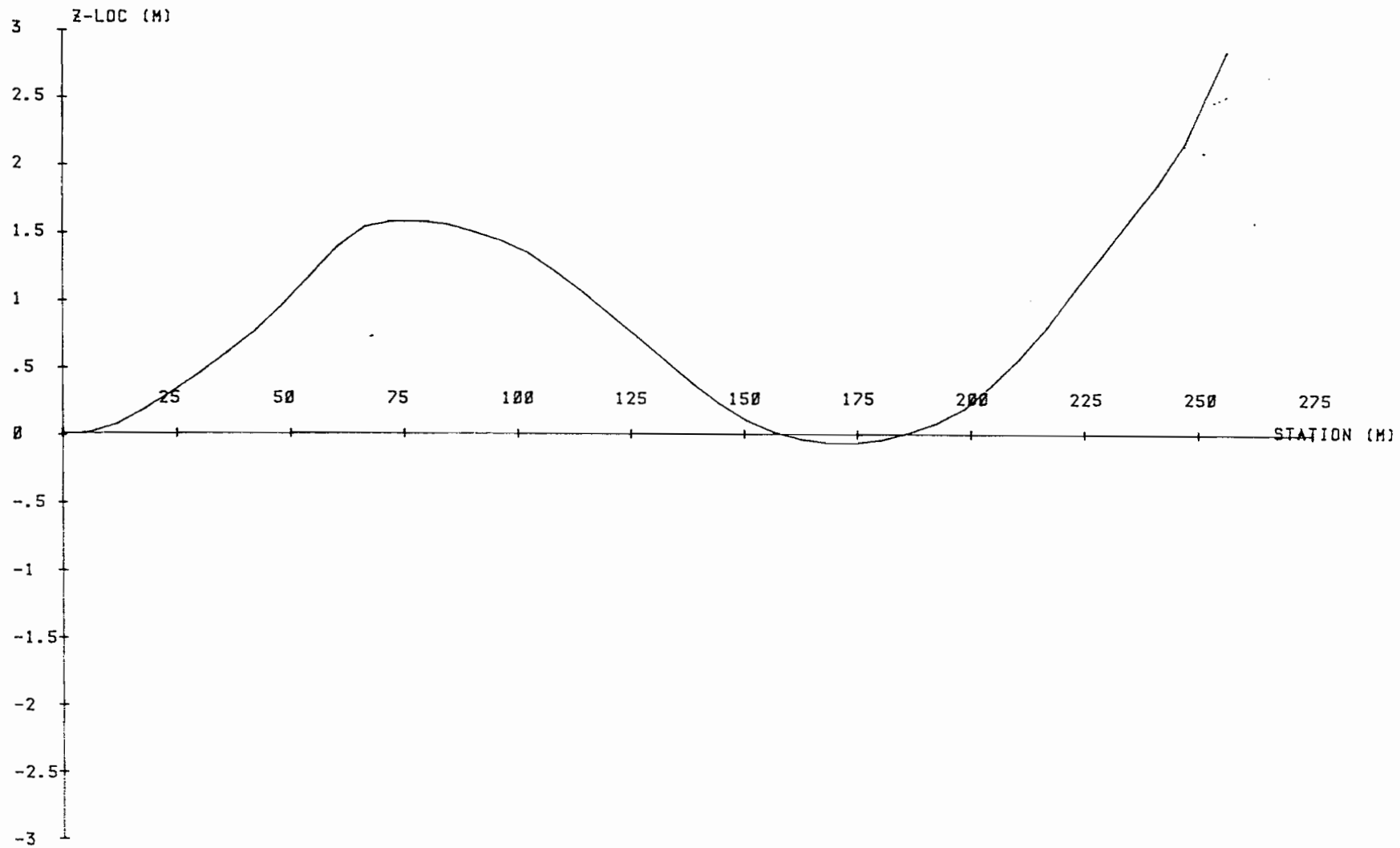
NT
VIKAFJELL
HOLE: BH1B-525M
4/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



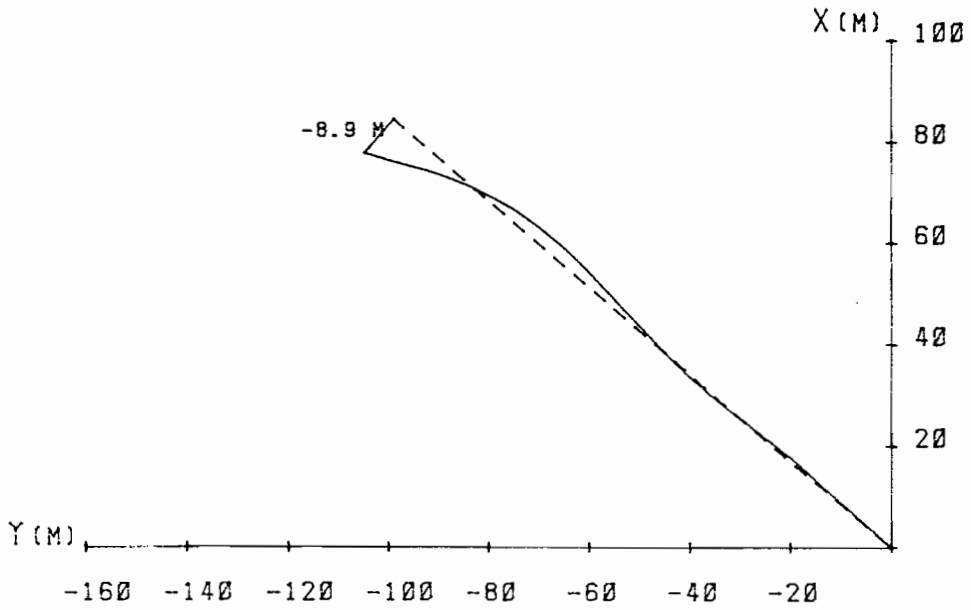
NT
VIKAFJELL
HOLE: BH1B-525M
4/7-85

PLOT NO: 1Ø
Z-LOC-PLANE



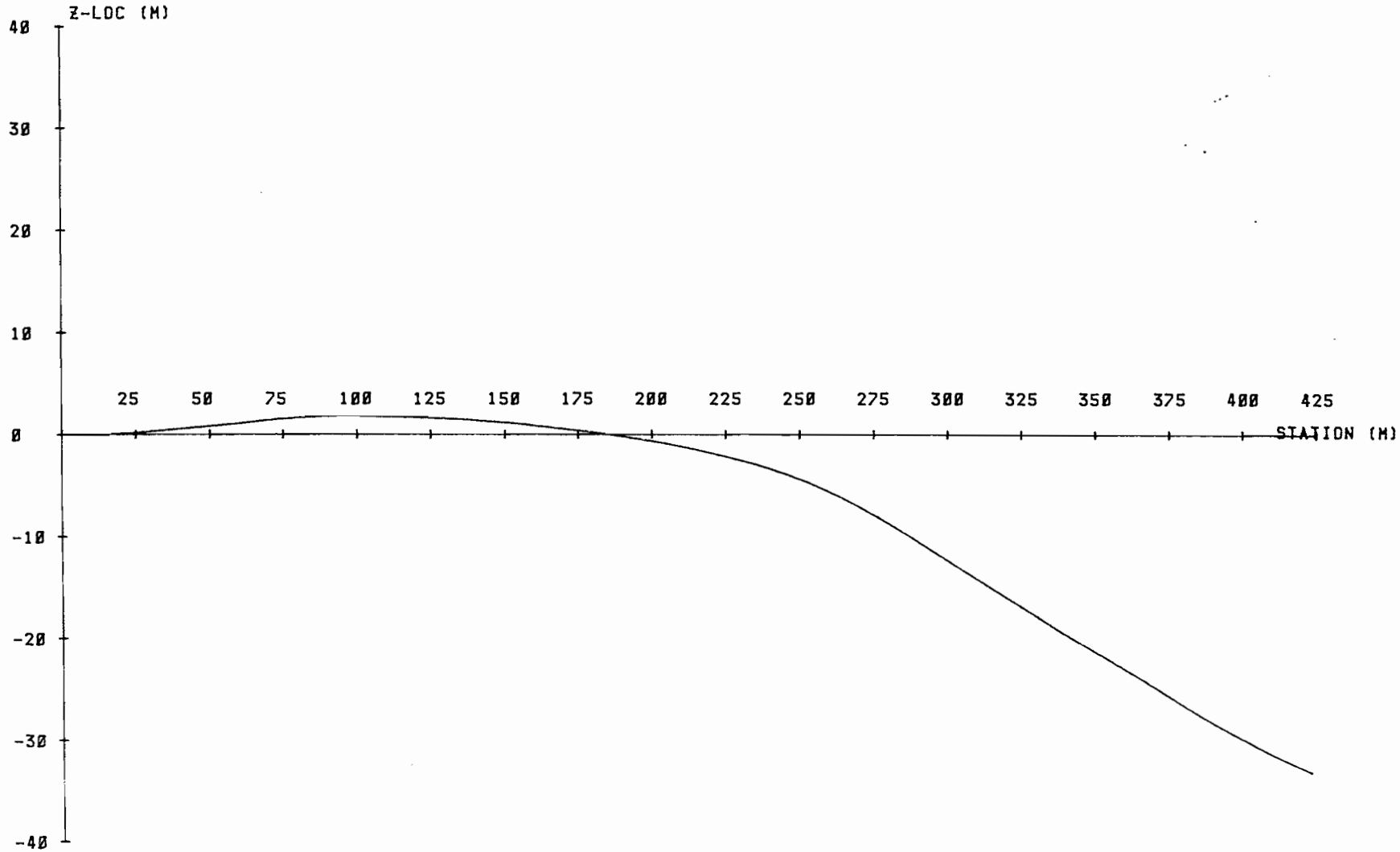
NT
VIKAFJELL
HOLE: BH1C 500M
16/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:1000



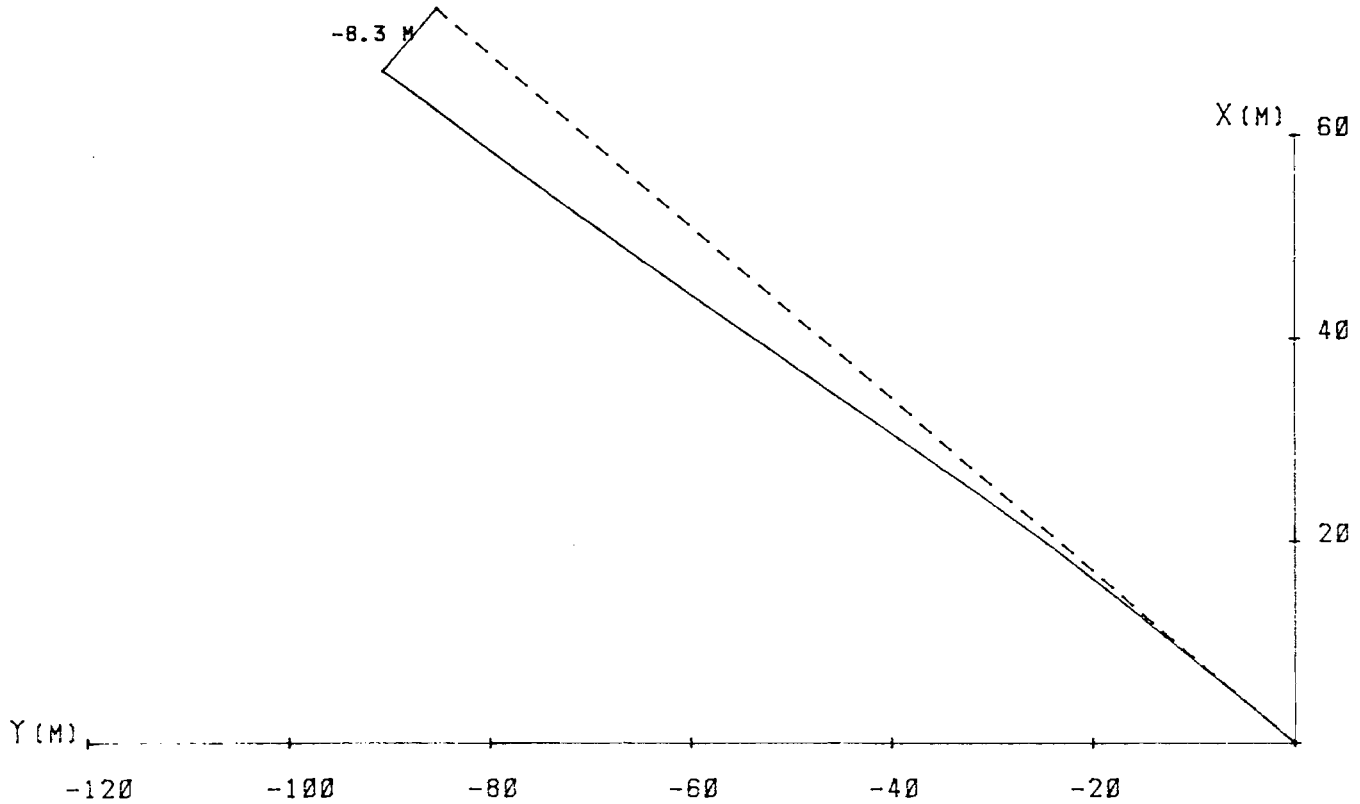
NT
VIKAFJELL
HOLE: BH1C 500M
16/7-85

PLOT NO: 10



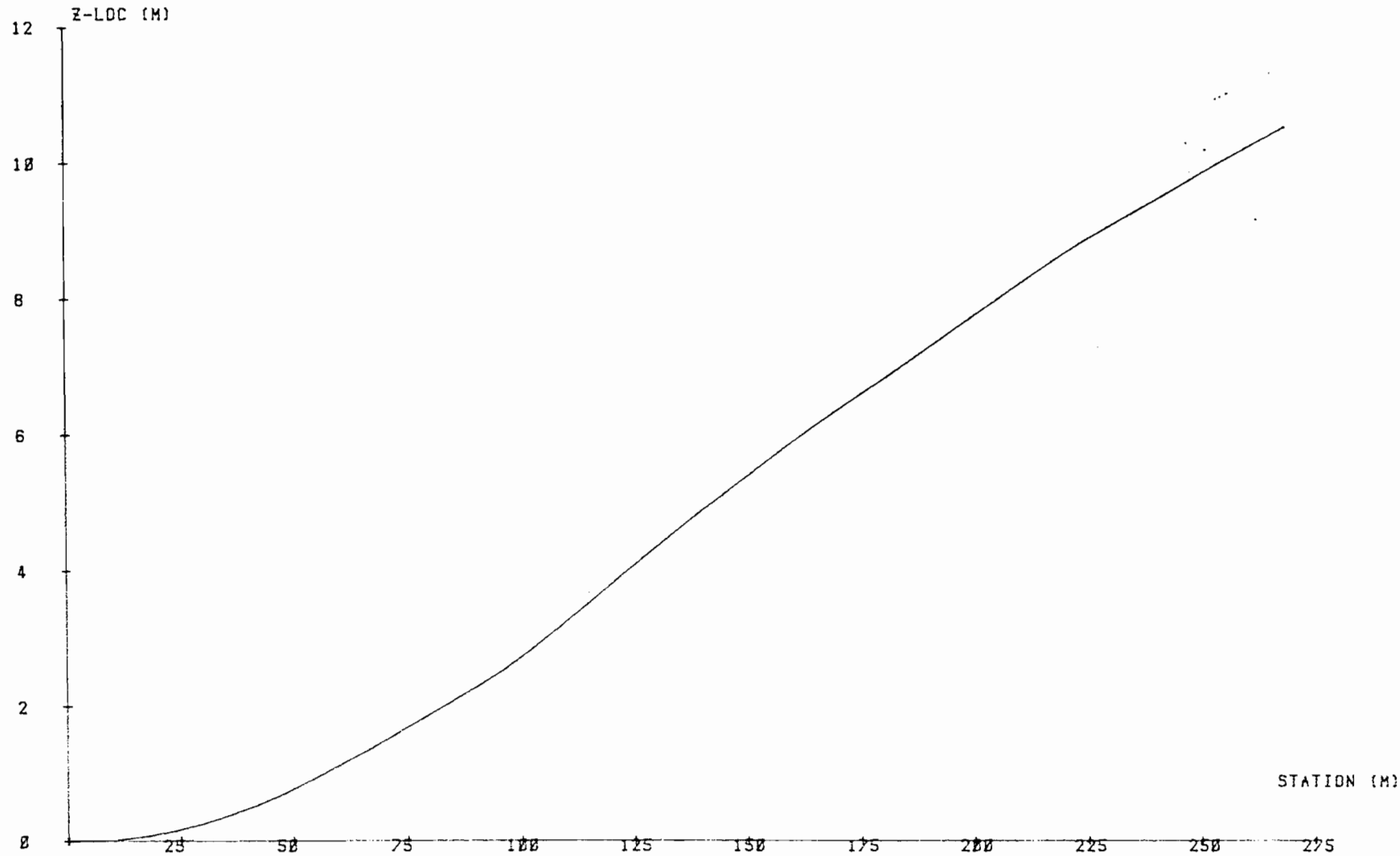
NT
VIKAFJELL
HOLE: BH2B-390M
25/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:5ØØ



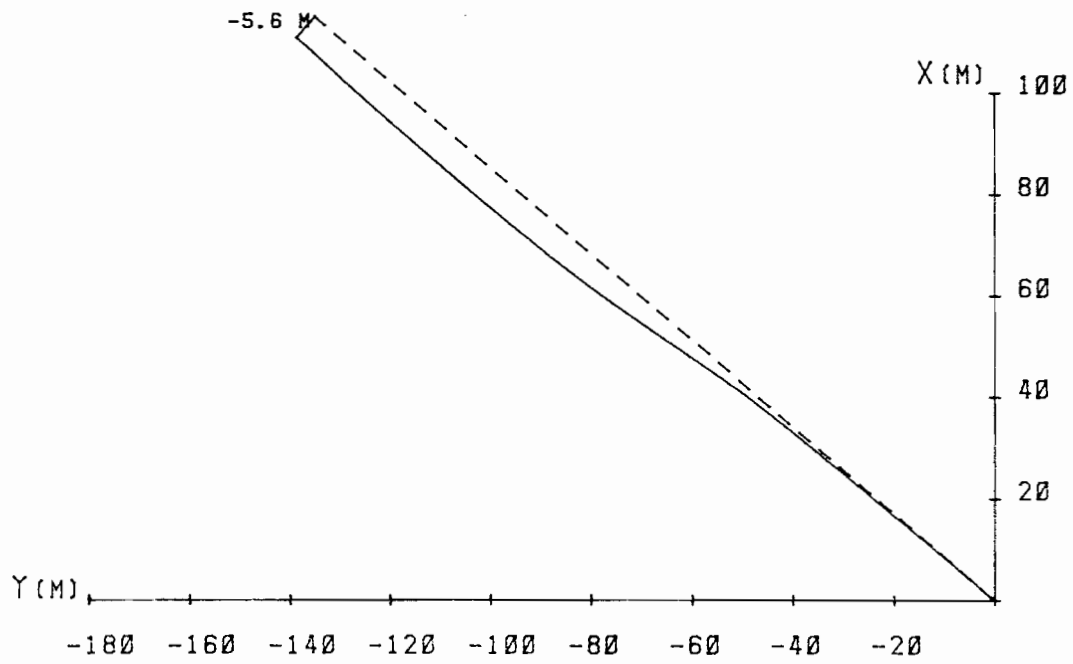
NT
VIKAFJELL
HOLE: BH2B-390M
25/7-85

PLOT NO: 10
Z-LOC-PLANE



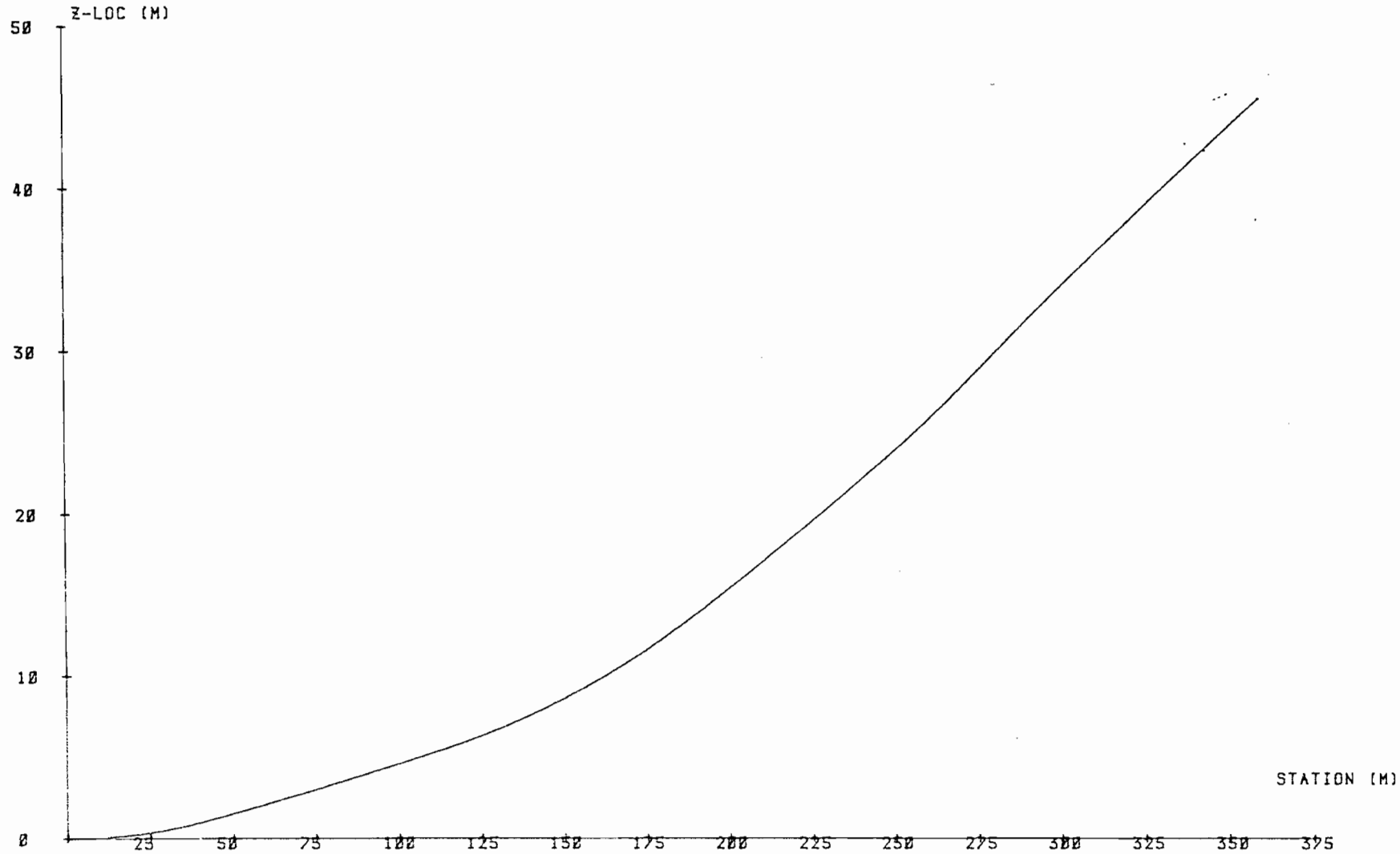
NT
VIKAFJELL
HOLE: BH2C-390M
4/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:1000



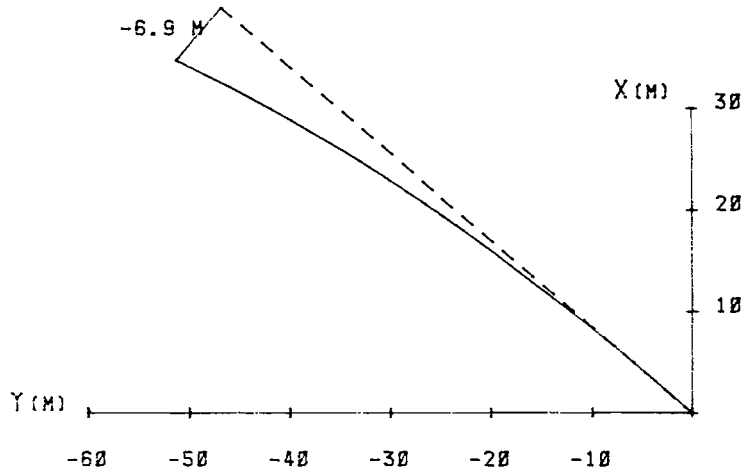
NT
VIKAFJELL
HOLE: BH2C-390M
4/7-85

PLOT NO: 10
Z-LOC-PLANE



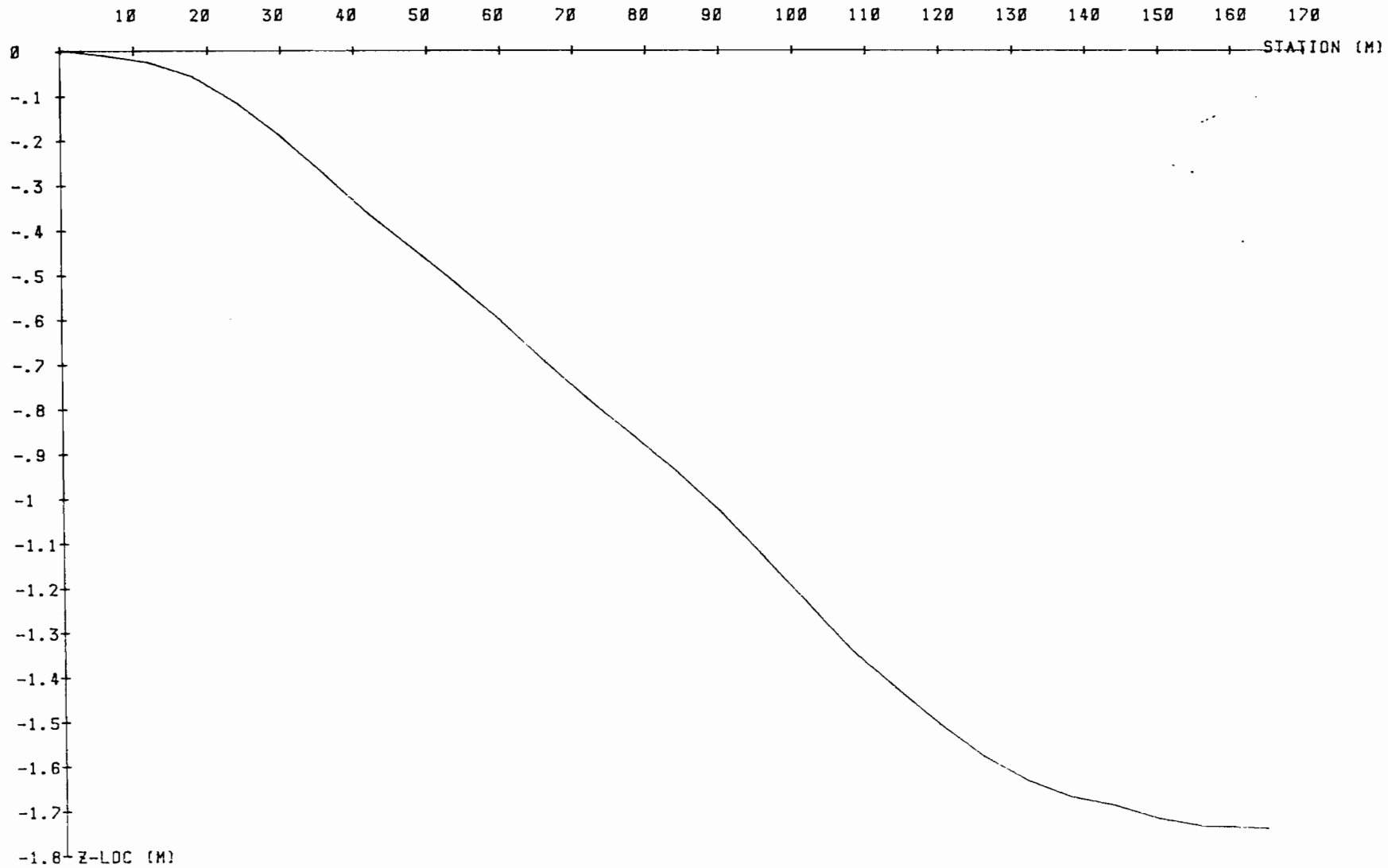
NT
VIKAFJELL
HOLE: BH3A-351.1M
5/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



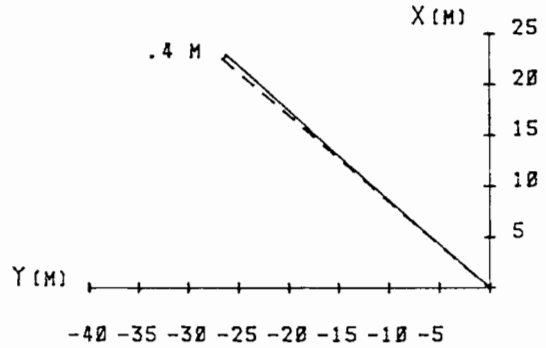
NT
VIKAFJELL
HOLE: BH3A-351.1M
5/7-85

PLOT NO: 10
Z-LOC-PLANE



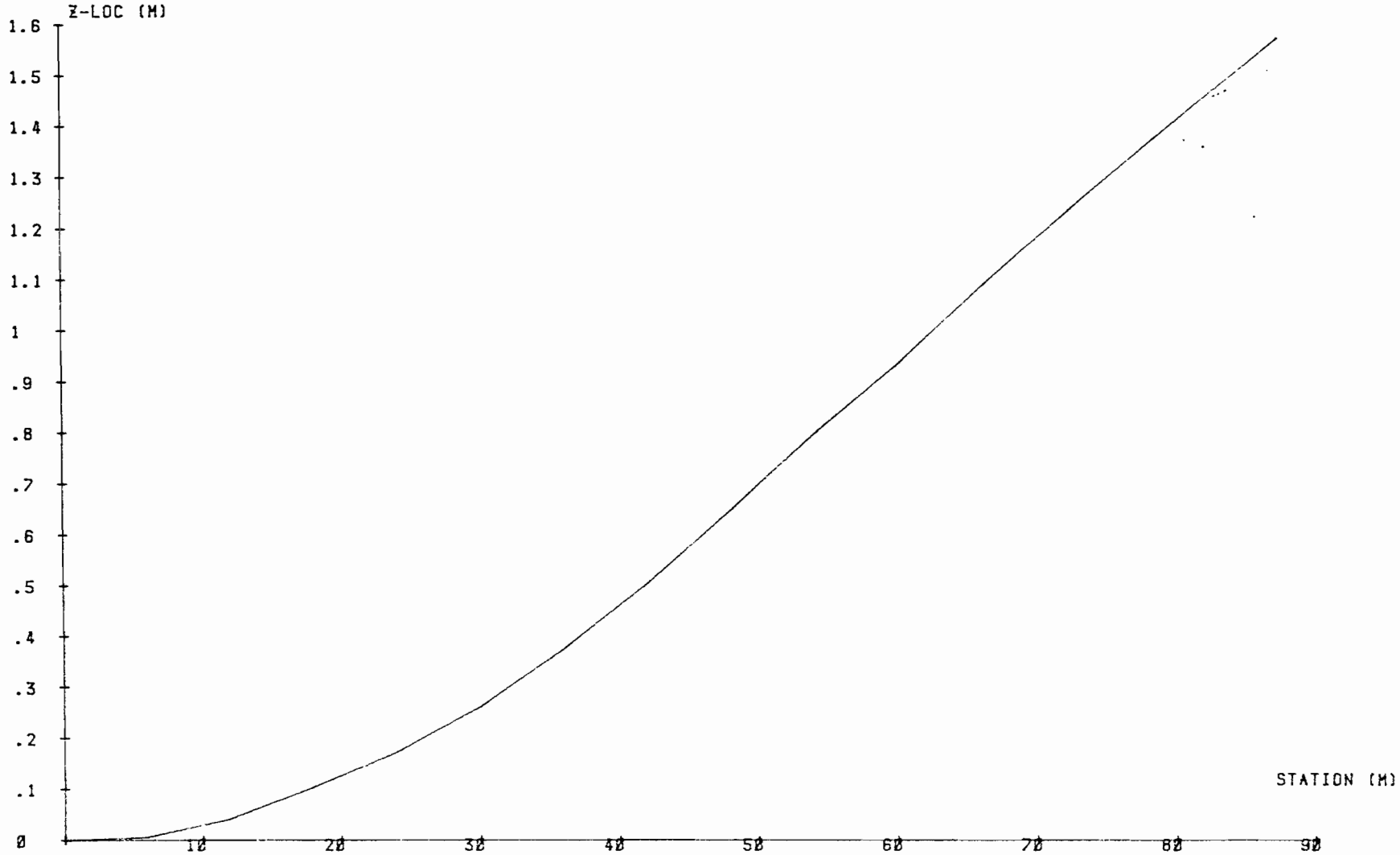
NT
VIKAFJELL
HOLE: BH3C-306.7M
5/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



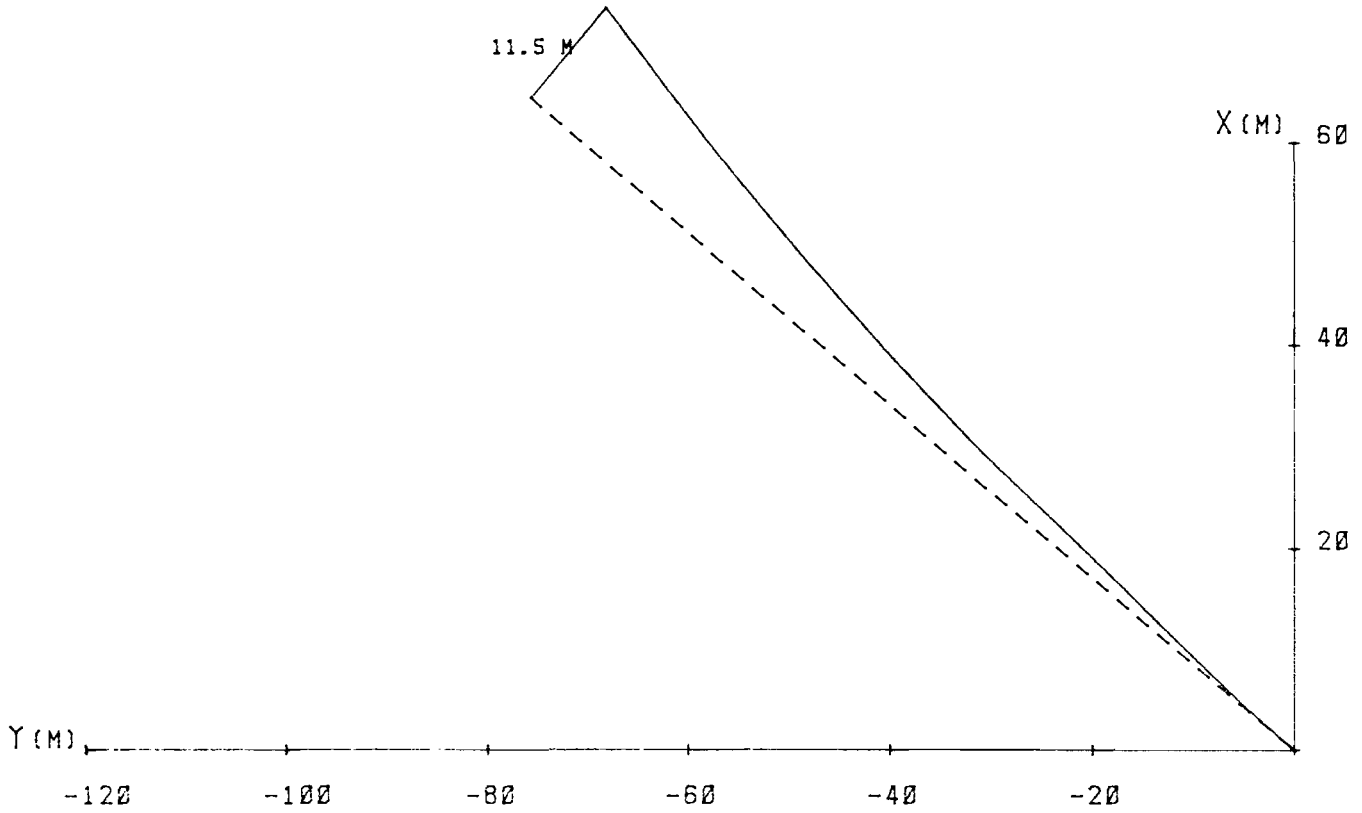
NT
VIKAFJELL
HOLE: BH3C-306.7M
5/7-85

PLOT NO: 10
Z-LOC-PLANE



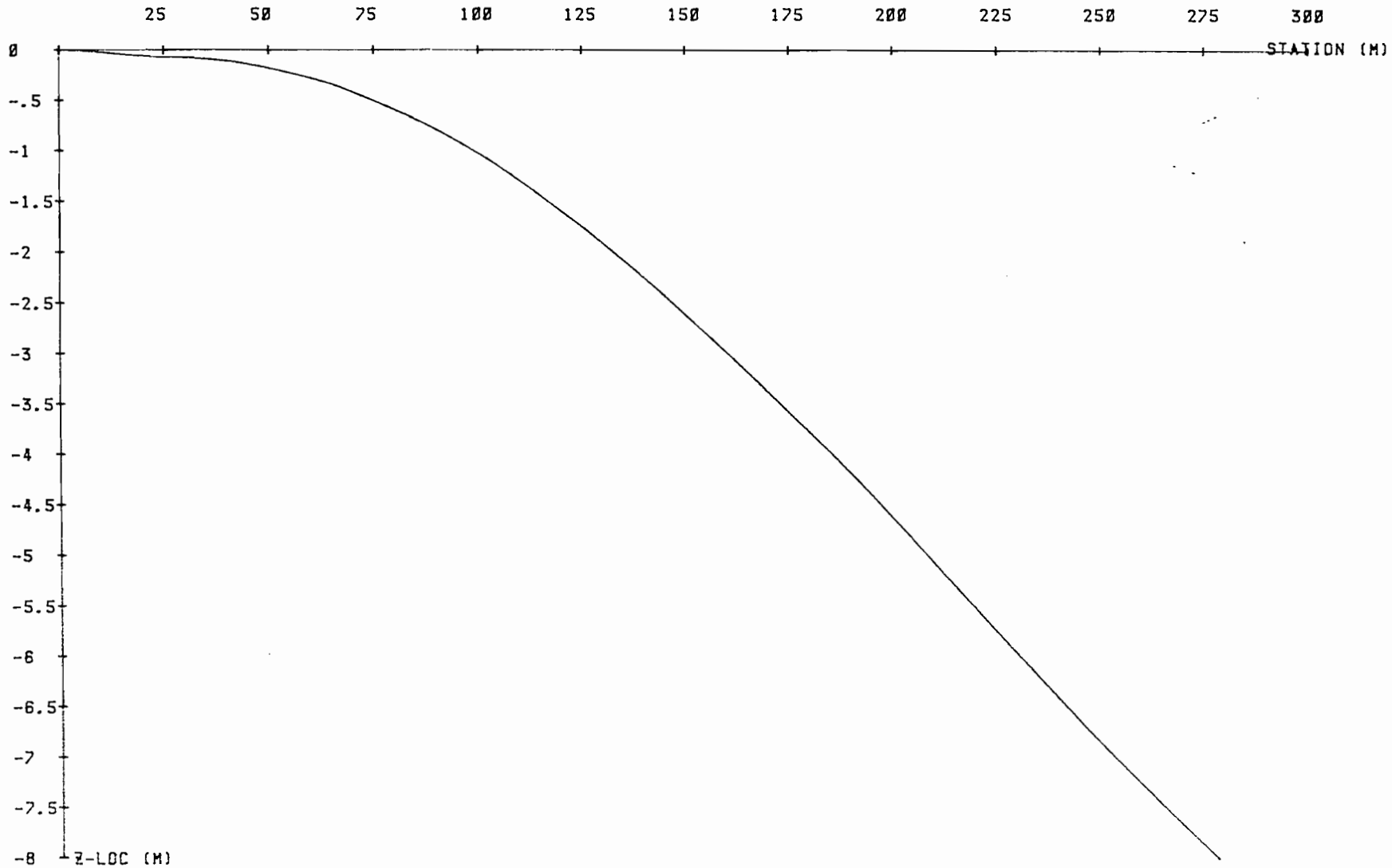
NT
VIKAFJELL
HOLE: BH4-294.8M
24/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:5ØØ



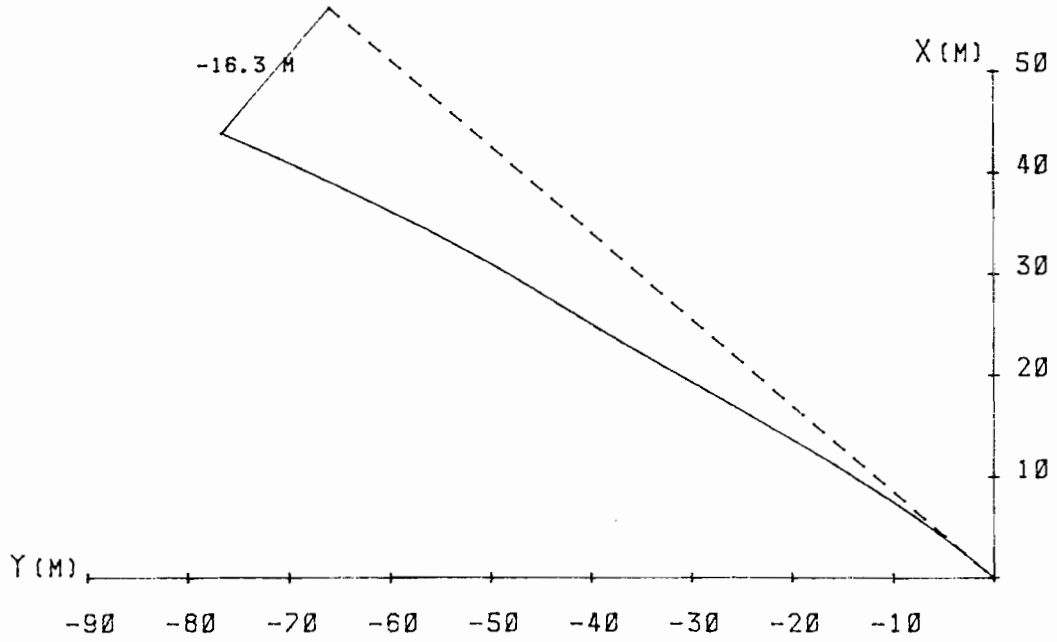
NT
VIKAFJELL
HOLE: BH4-294.8M
24/7-85

PLOT NO: 10
Z-LOC-PLANE



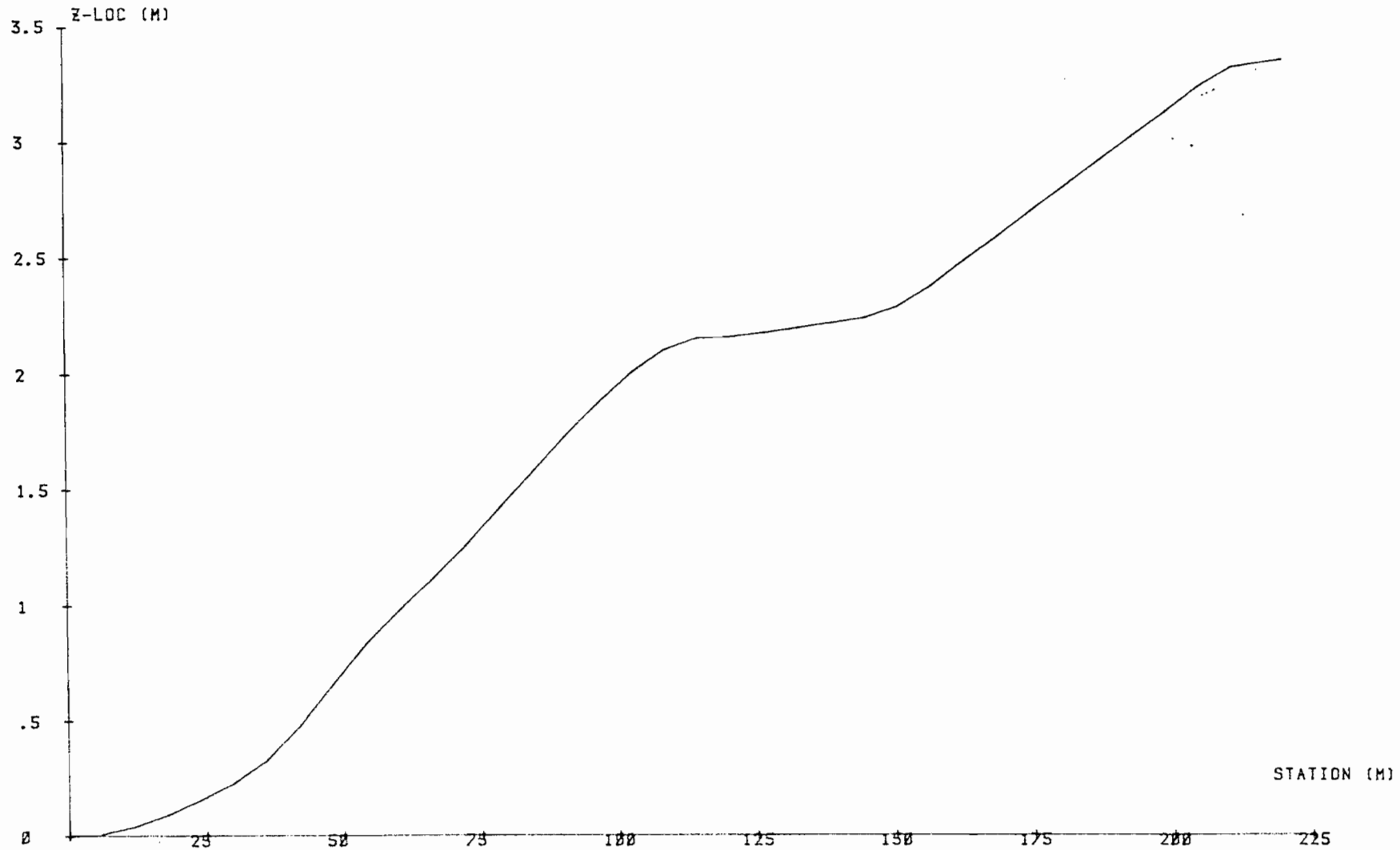
NT
VIKAFJELL
HOLE: BH5
23/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



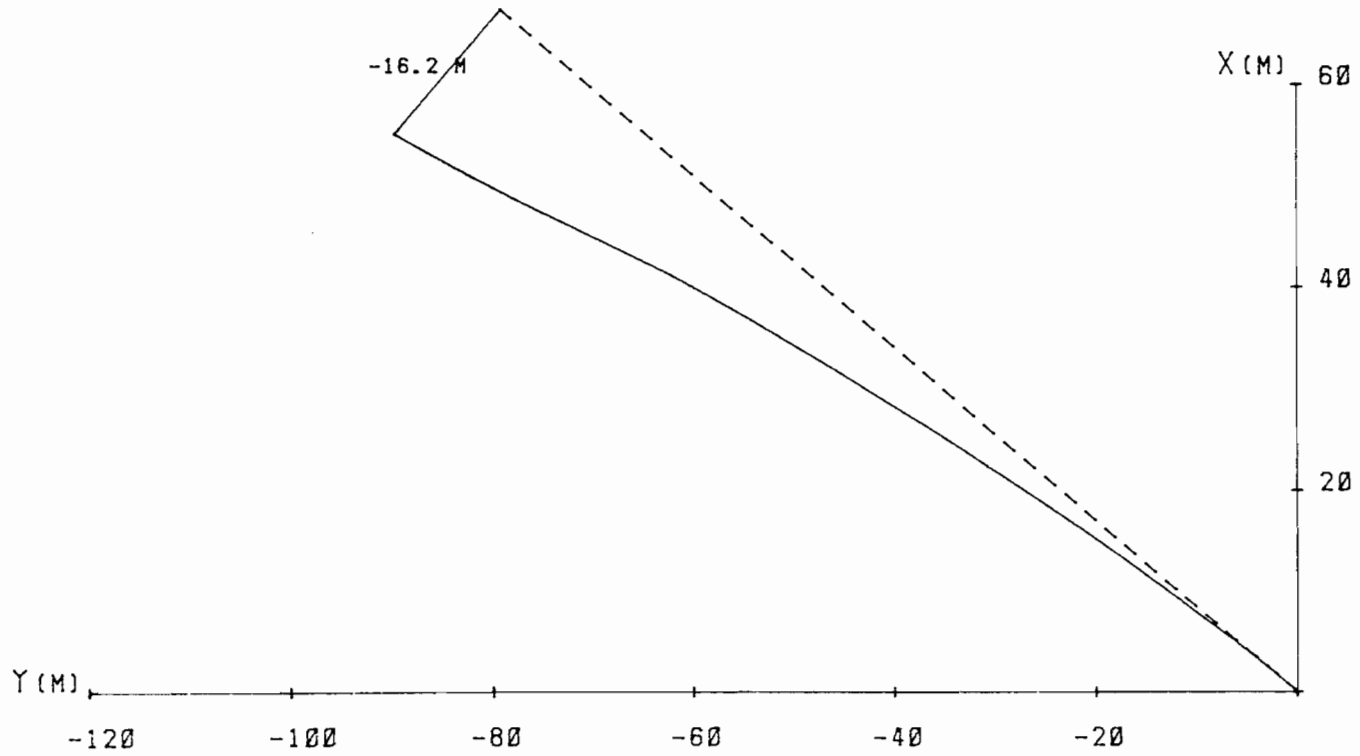
NT
VIKAFJELL
HOLE: BH5
23/7-85

PLOT NO: 10
Z-LOC-PLANE



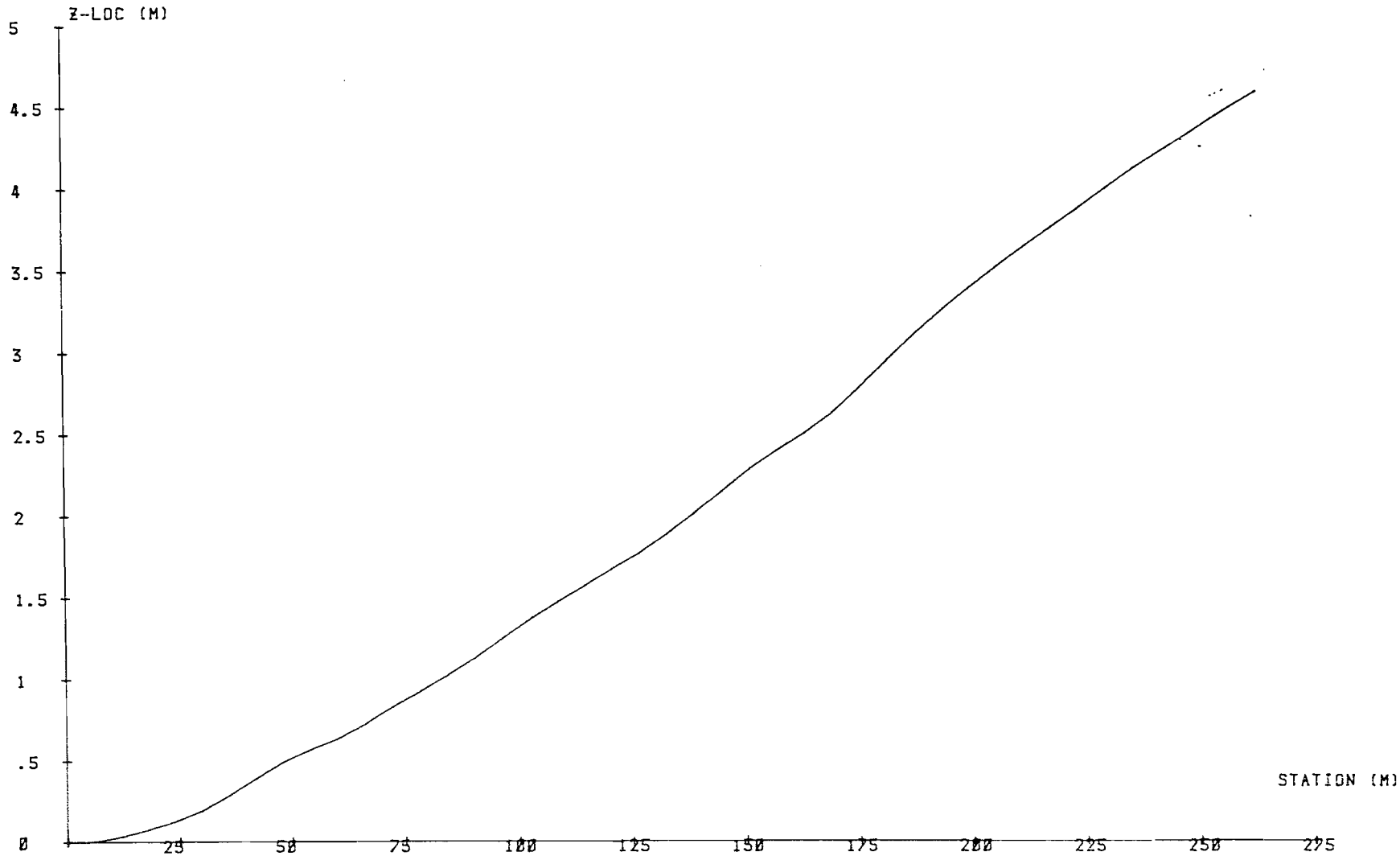
NT
VIKAFJELL
HOLE: 6-454.7M
4/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



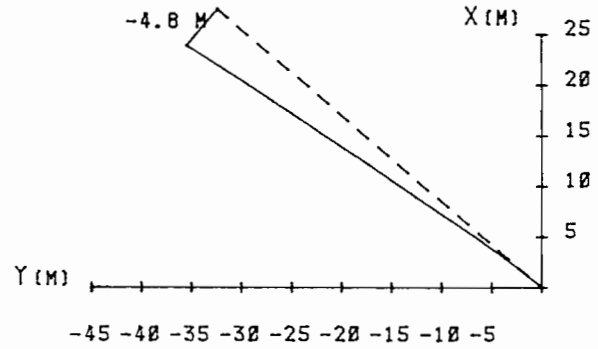
NT
VIKAFJELL
HOLE: 6-454.7M
4/7-85

PLOT NO: 10
Z-LOC-PLANE



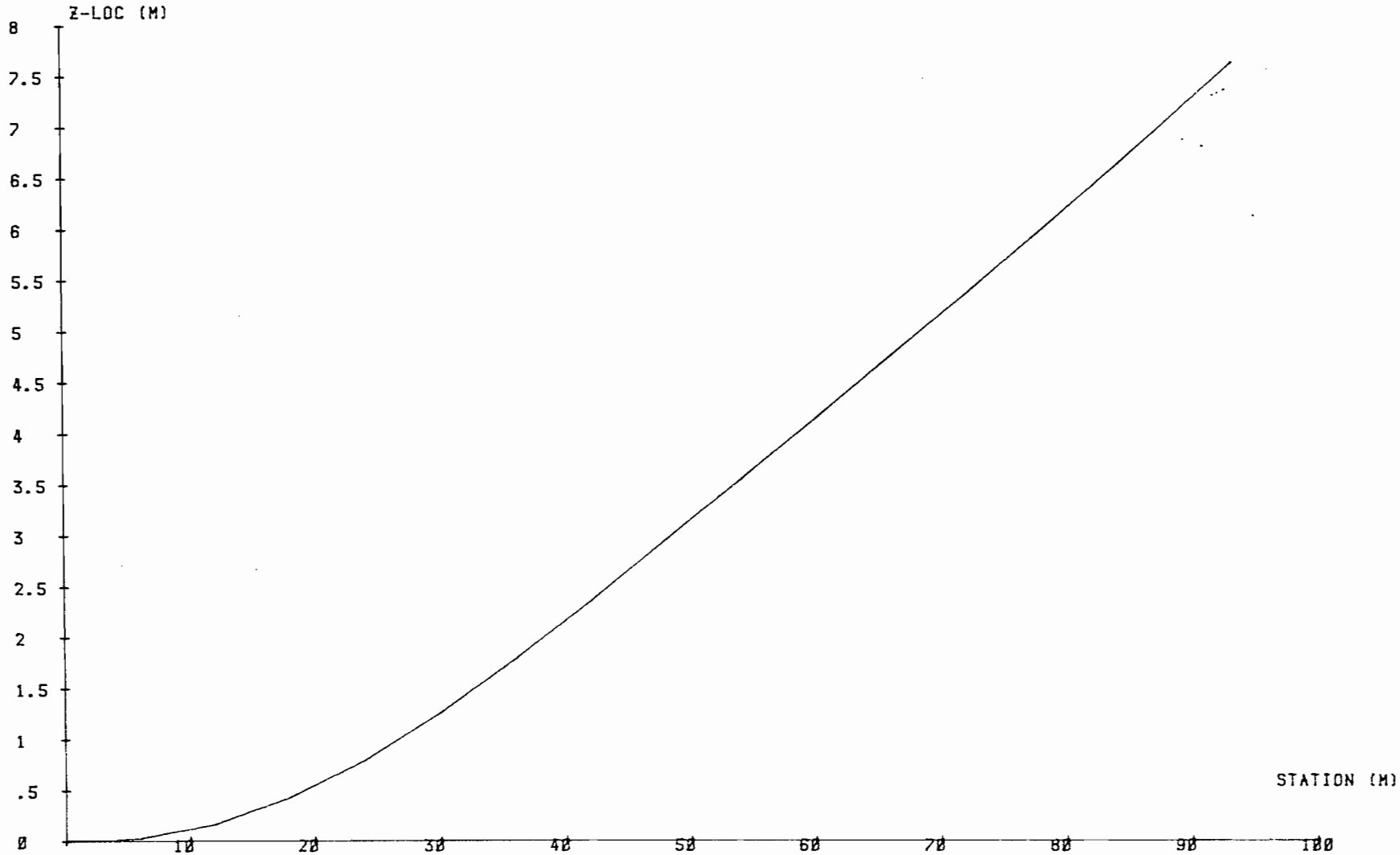
NT
VIKAFJELL
HOLE: BH7-260M
4/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



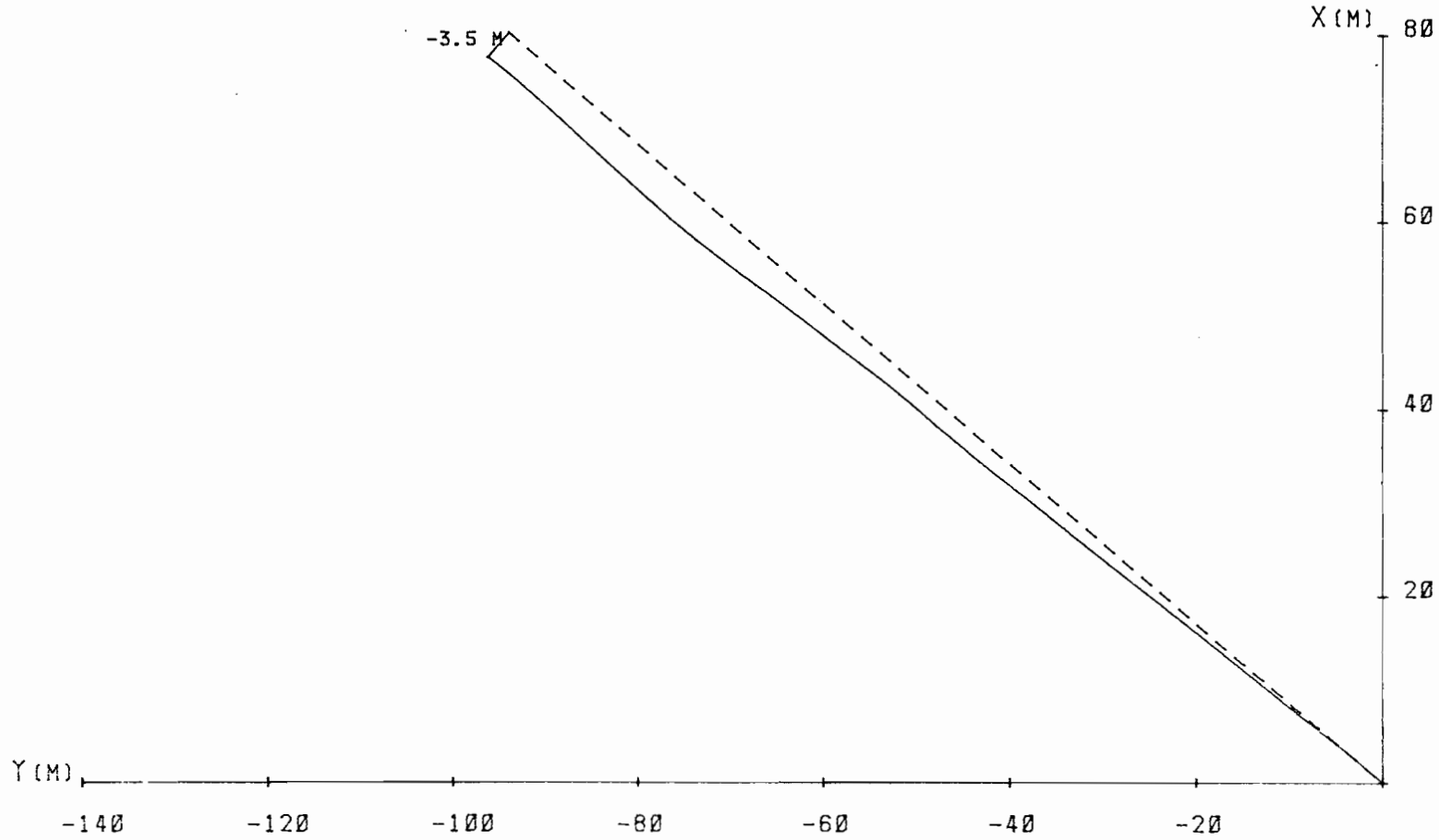
NT
VIKAFJELL
HOLE: BH7-260M
4/7-85

PLOT NO: 10
Z-LOC-PLANE



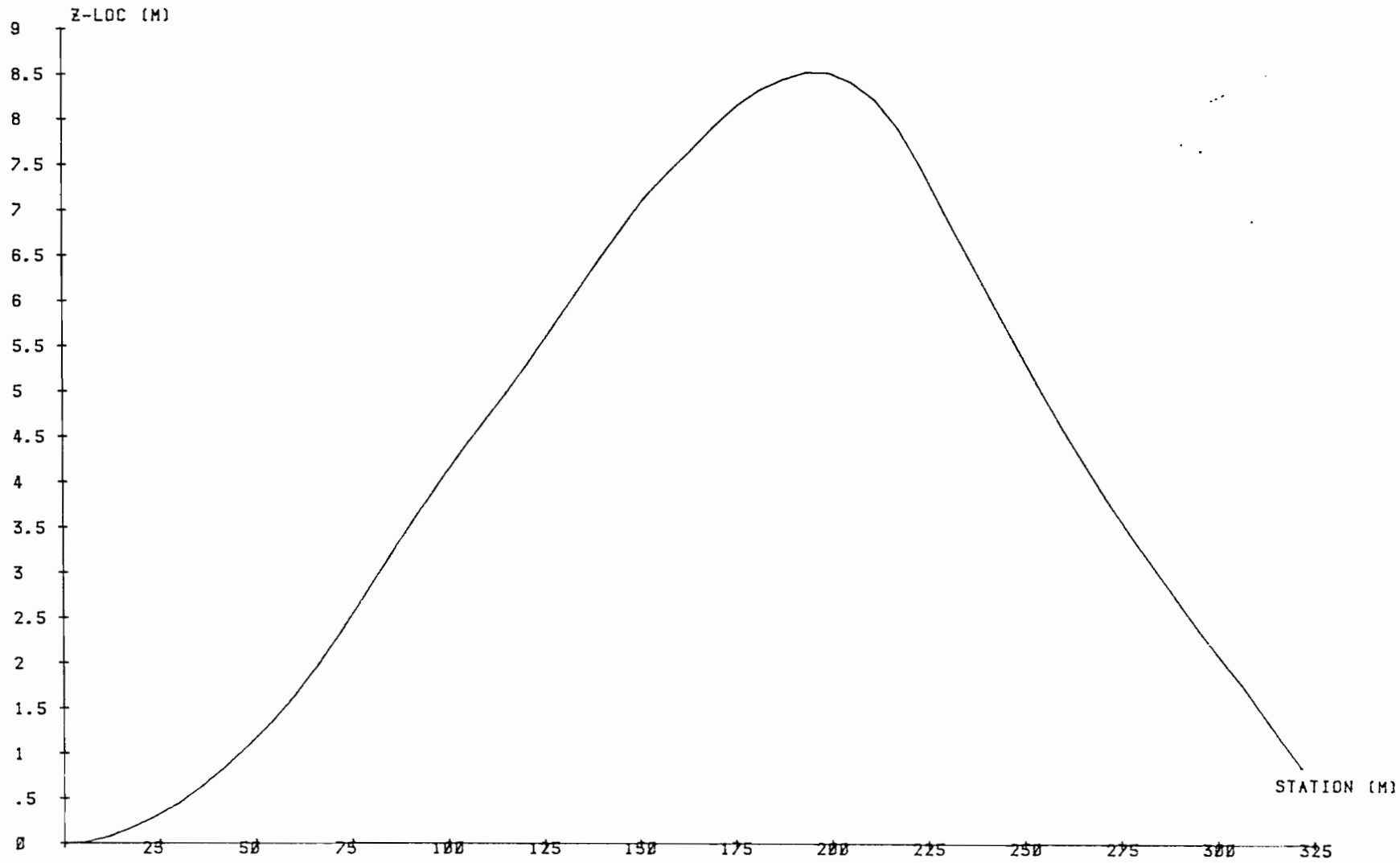
NT
VIKAFJELL
HOLE: 8-385M
3/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:5ØØ



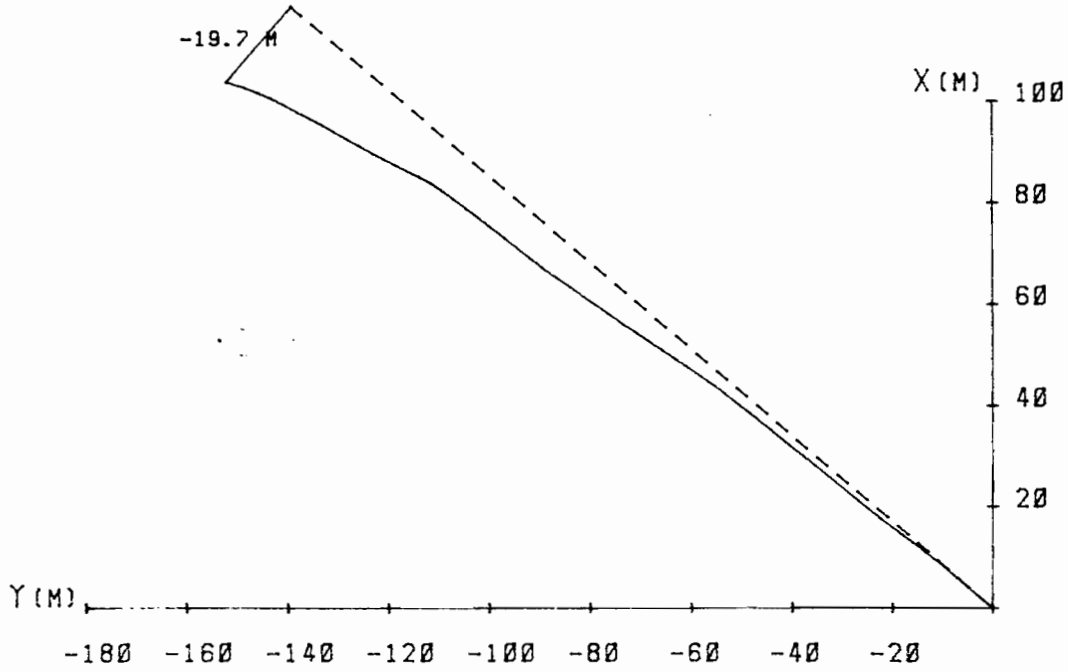
NT
VIKAFJELL
HOLE: 8-385M
3/7-85

PLOT NO: 10
Z-LOC-PLANE

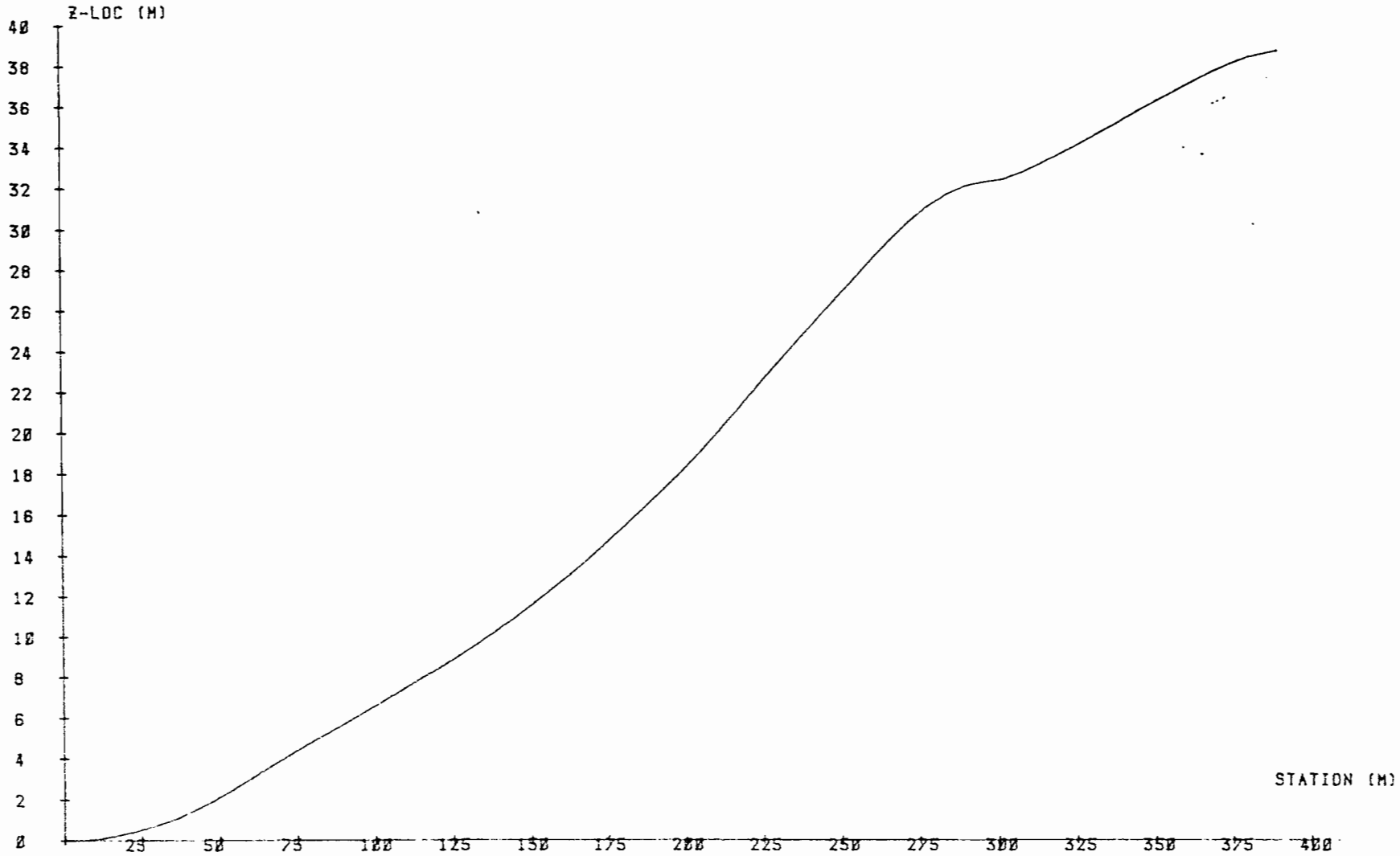


NT
VIKAFJELL
HOLE: BH9 400.9M F
27/8-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:1000

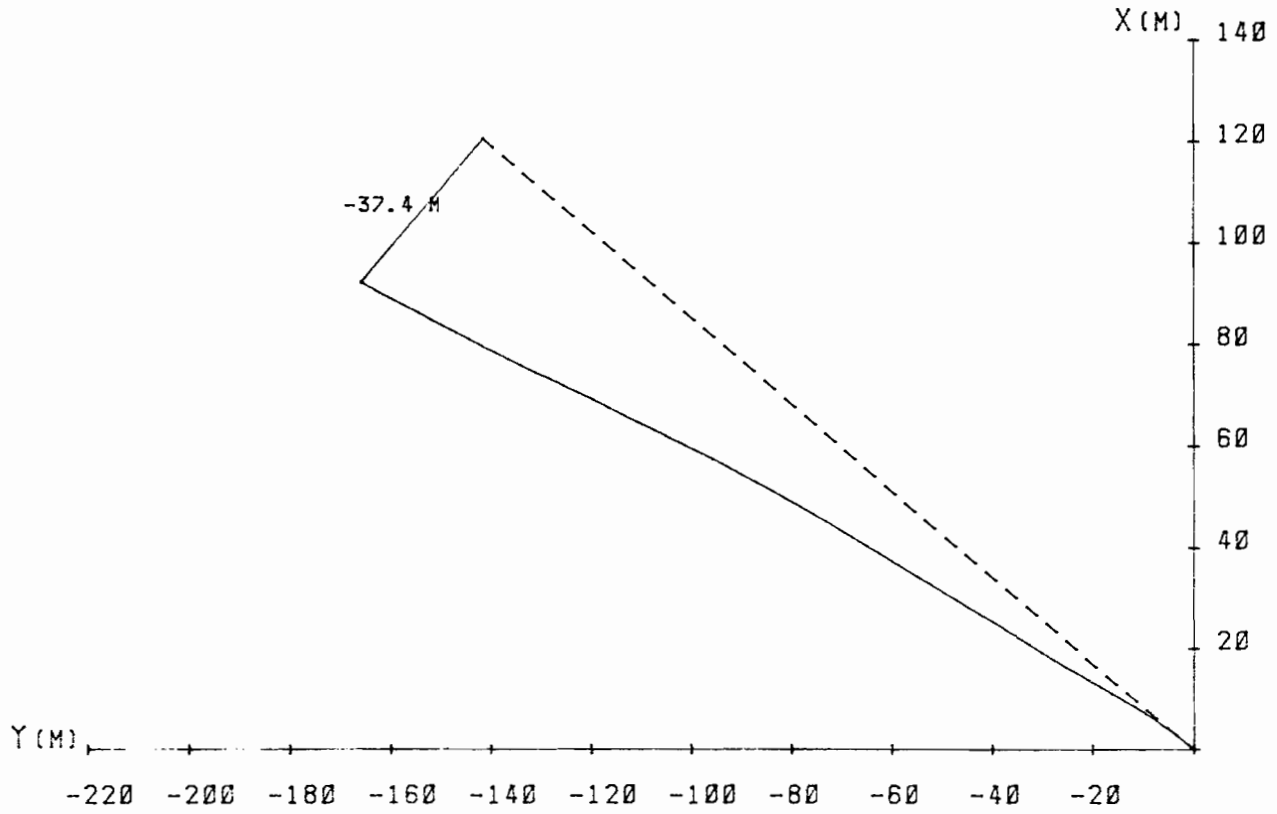


NT
VIKAFJELL
HOLE: BH9 400.9M F



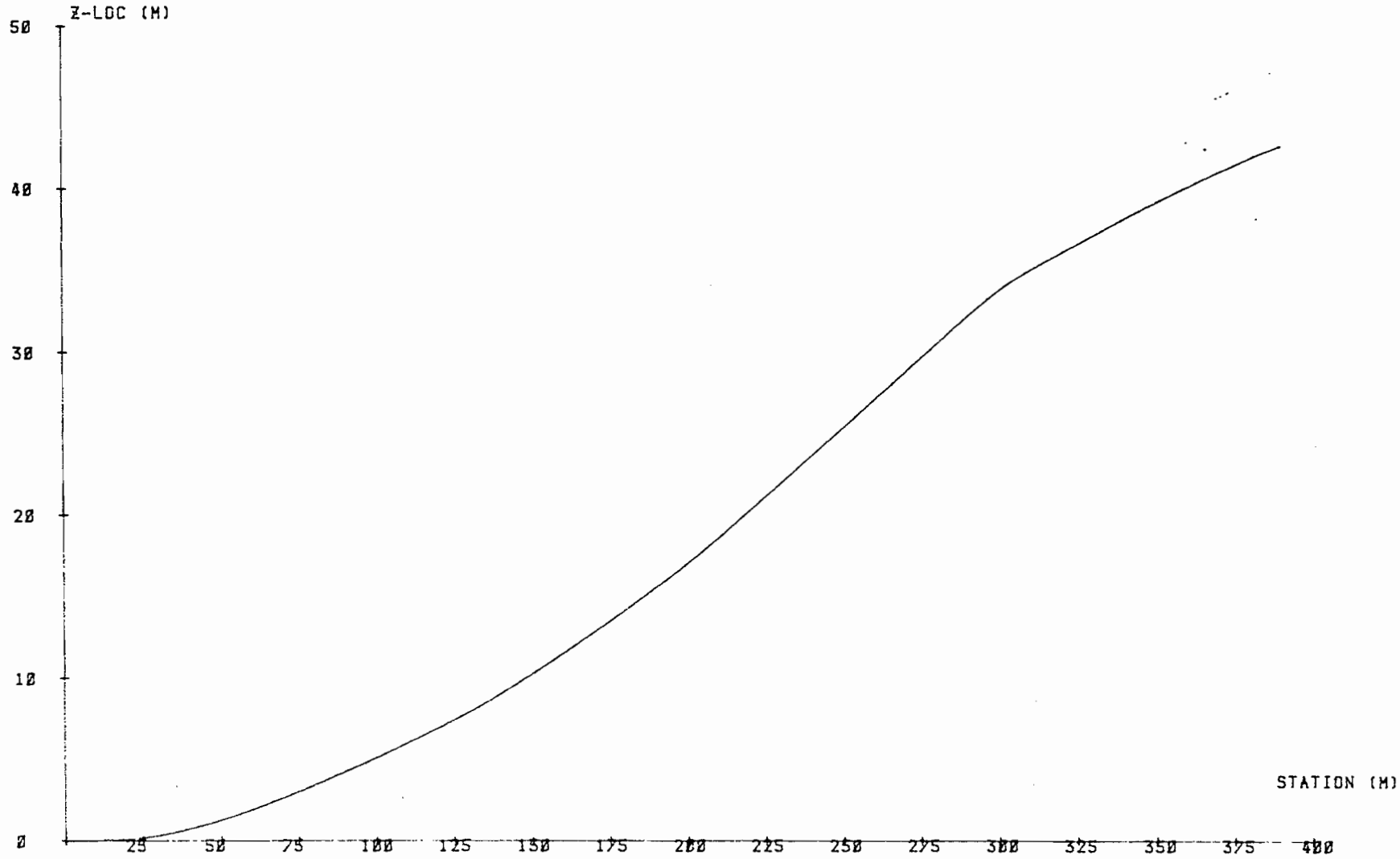
NT
VIKAFJELL
HOLE: BH10 389.7M
26/8-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:1000



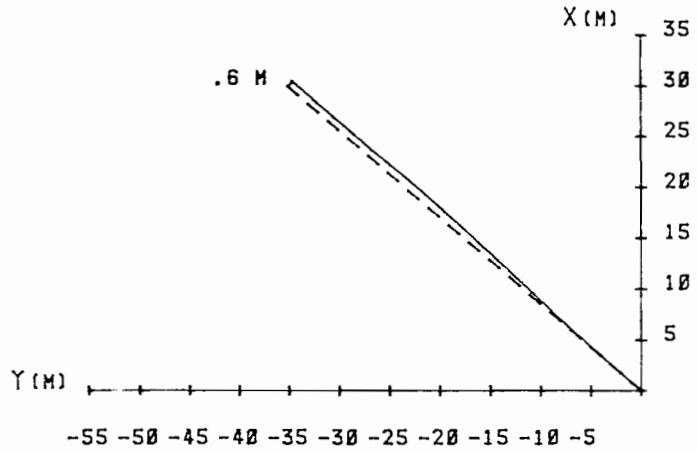
NT
VIKAFJELL
HOLE: BH10 389.7M
26/8-85

PLOT NO: 10
Z-LOC-PLANE



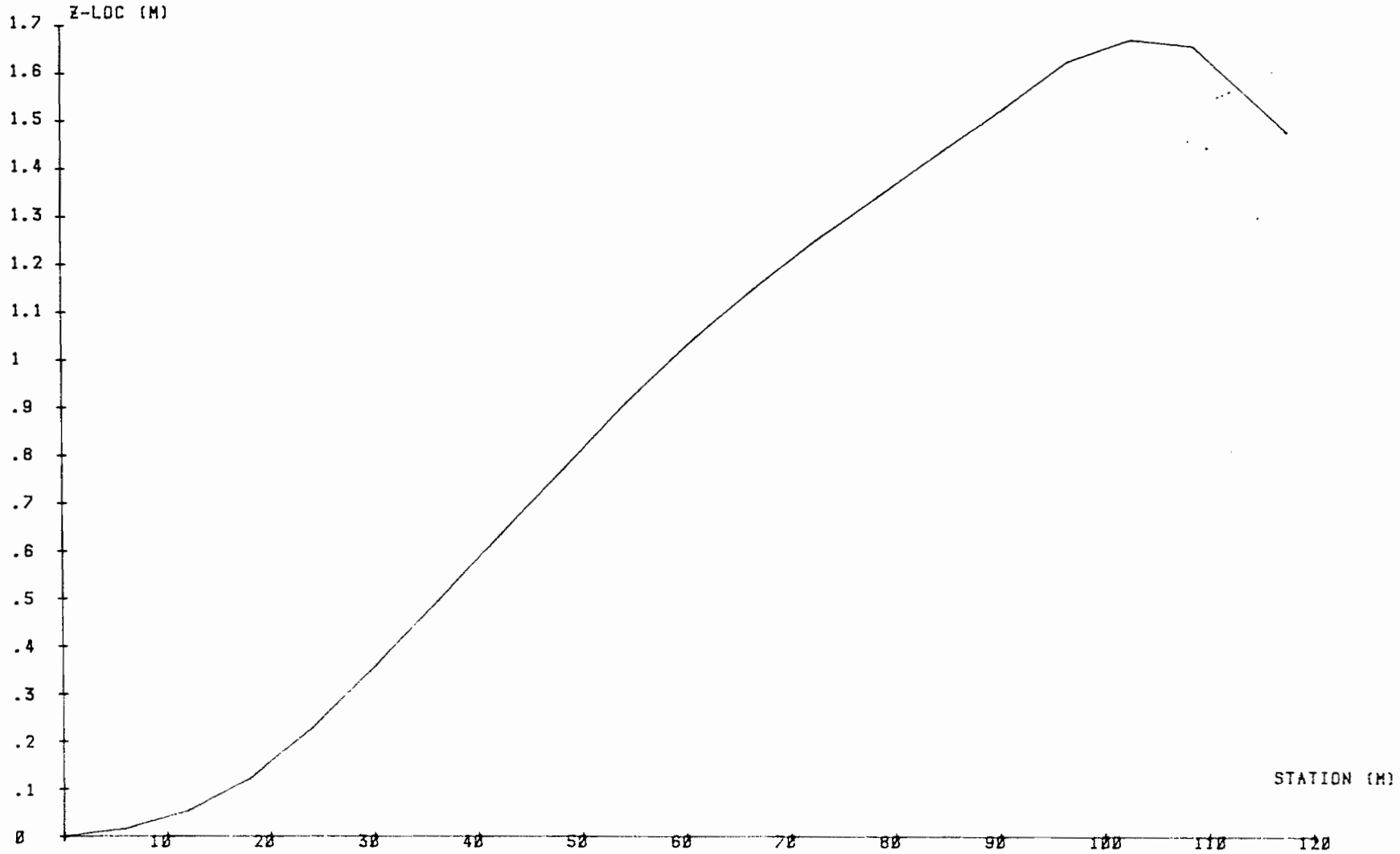
NT
VIKAFJELL
HOLE: BH11-159.5M
24/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:5ØØ



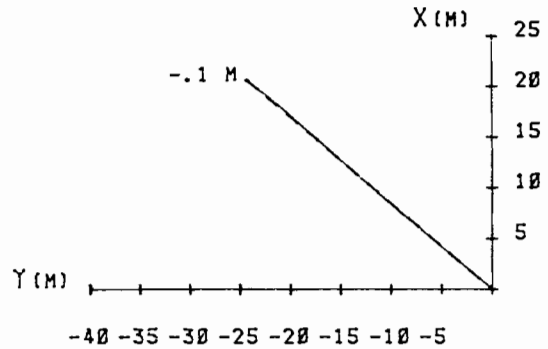
NT
VIKAFJELL
HOLE: BH11-159.5M
24/7-85

PLOT NO: 10
Z-LOC-PLANE



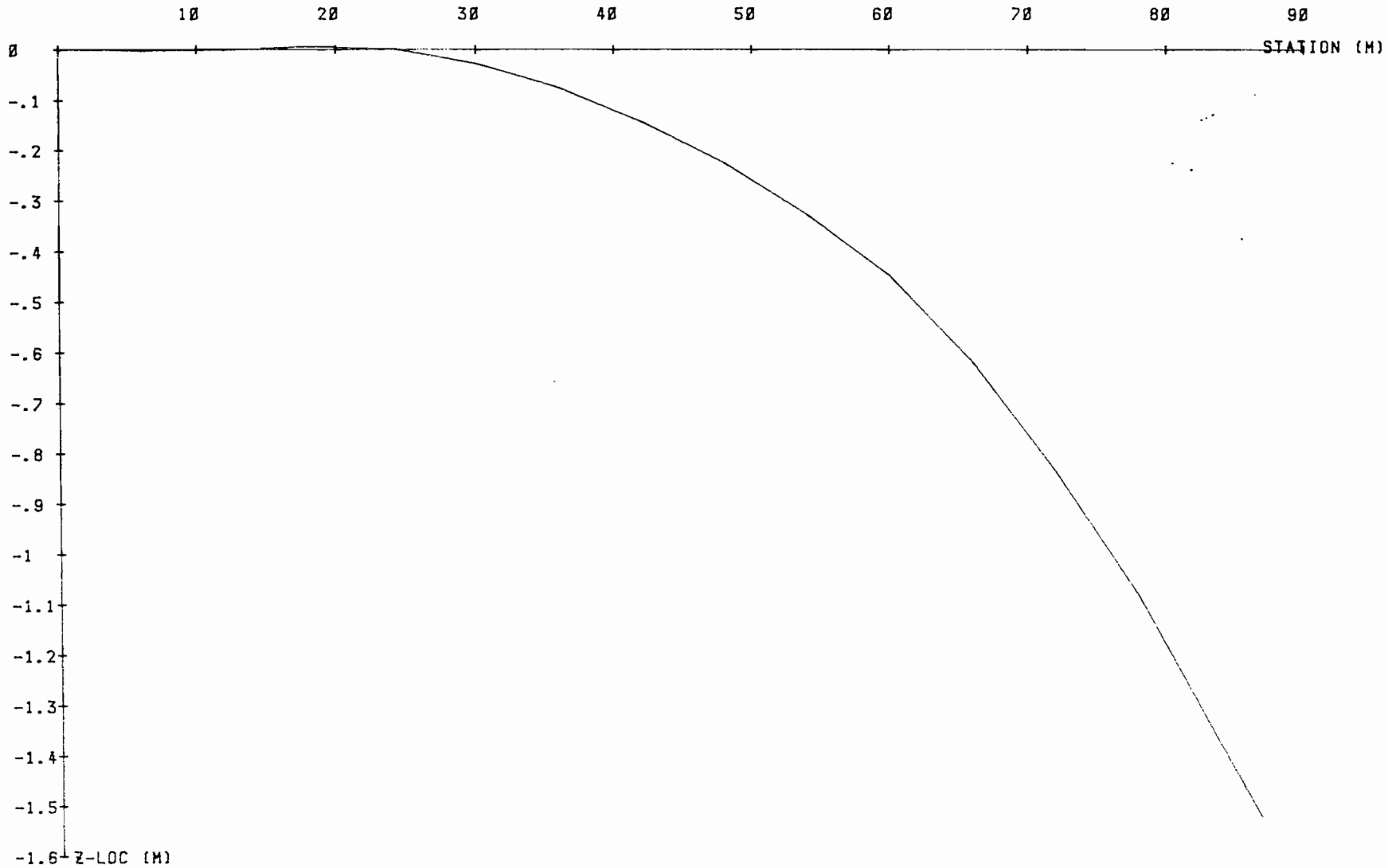
NT
VIKAFJELL
HOLE: BH12-93.7M
24/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



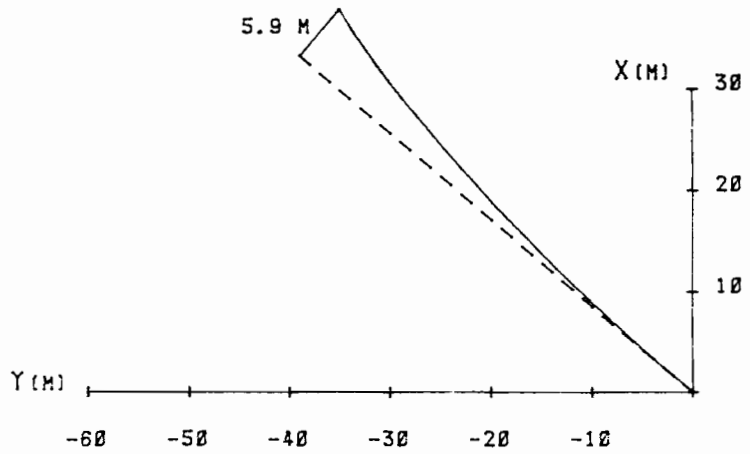
NT
VIKAFJELL
HOLE: BH12-93.7M
24/7-85

PLOT NO: 10
Z-LOC-PLANE



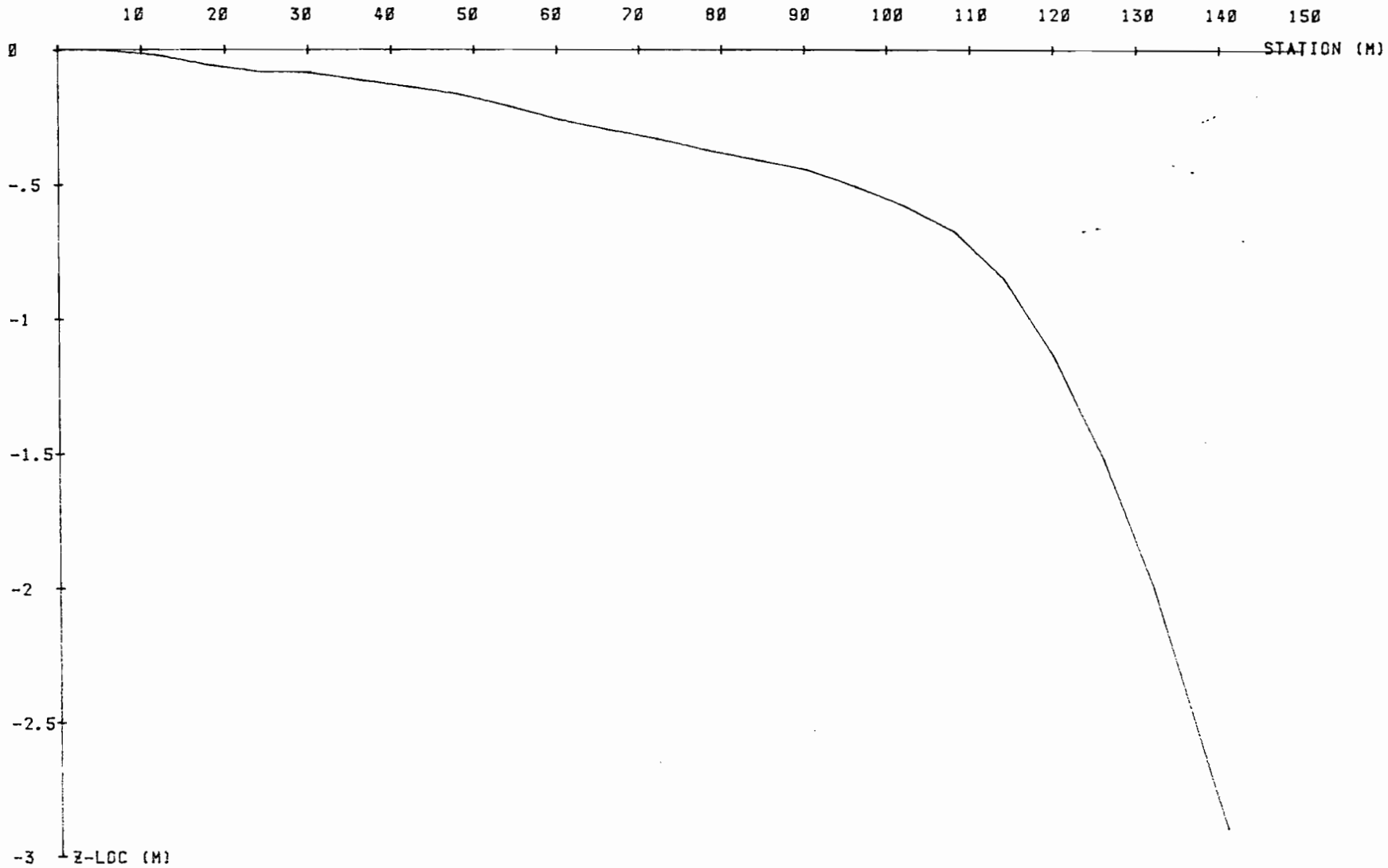
NT
VIKAFJELL
HOLE: BH14
25/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:5ØØ



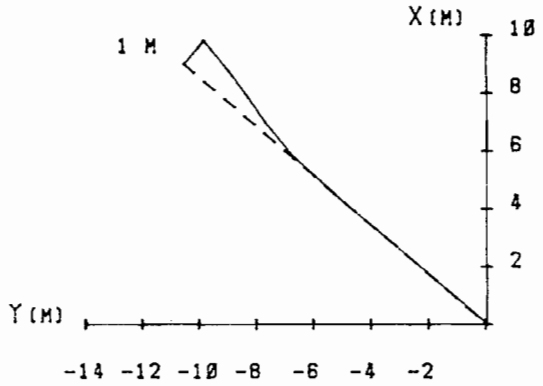
NT
VIKAFJELL
HOLE: BH14
25/7-85

PLOT NO: 10
Z-LOC-PLANE



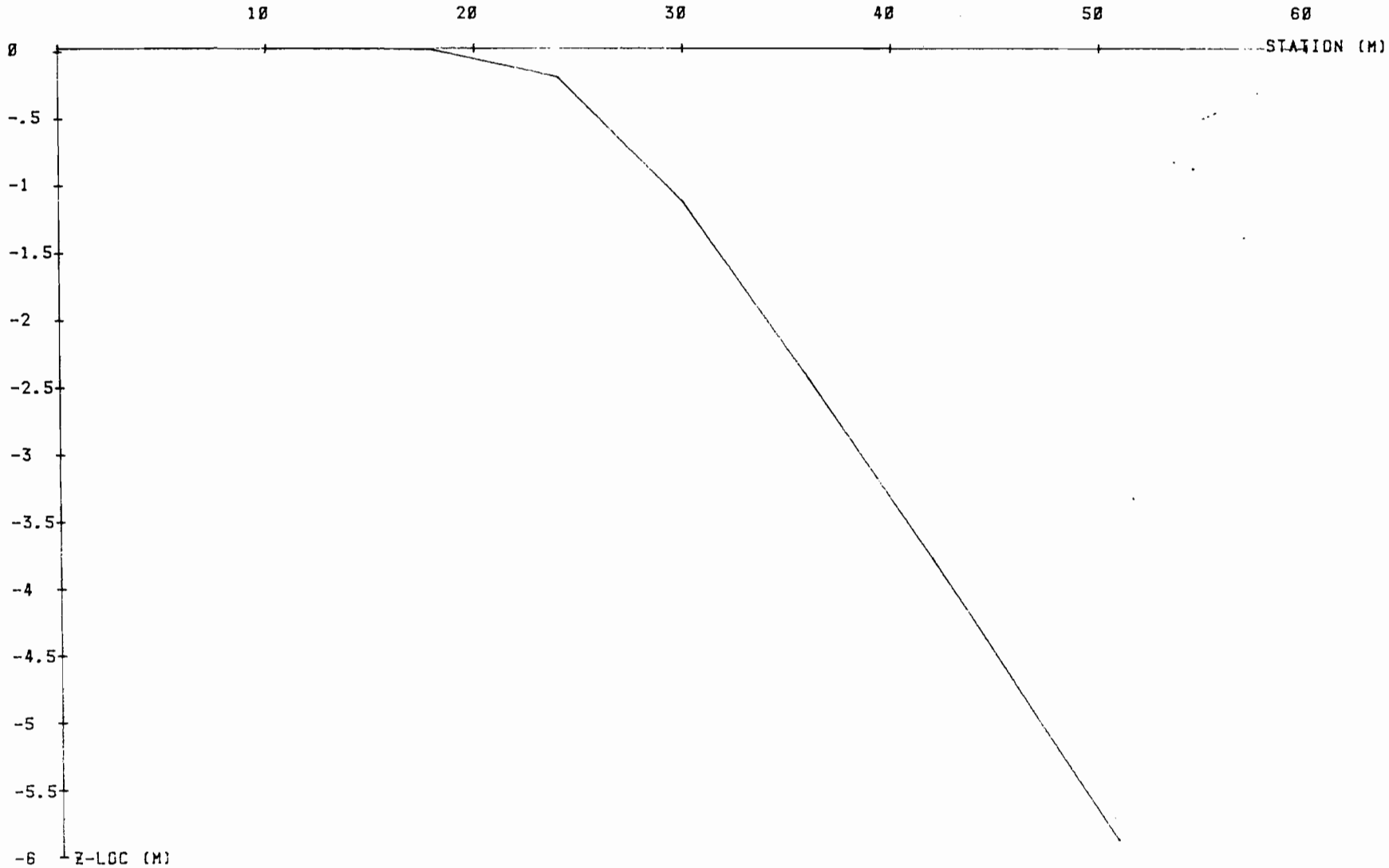
NT
VIKAFJELL
HOLE: BH15-74.1
25/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:175



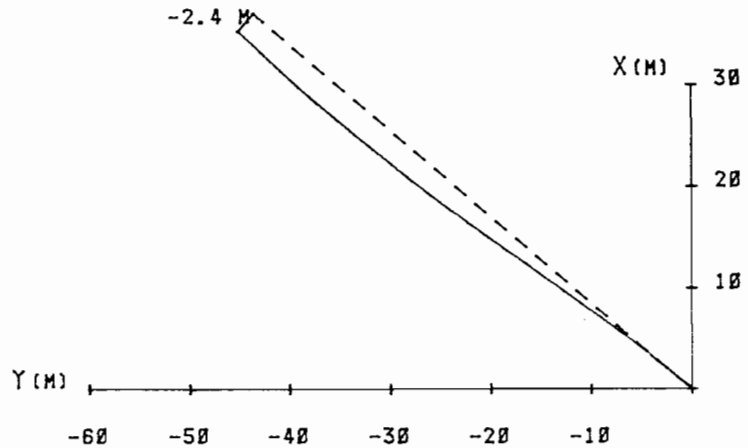
NT
VIKAFJELL
HOLE: BH15-74.1
25/7-85

PLOT NO: 10
Z-LOC-PLANE



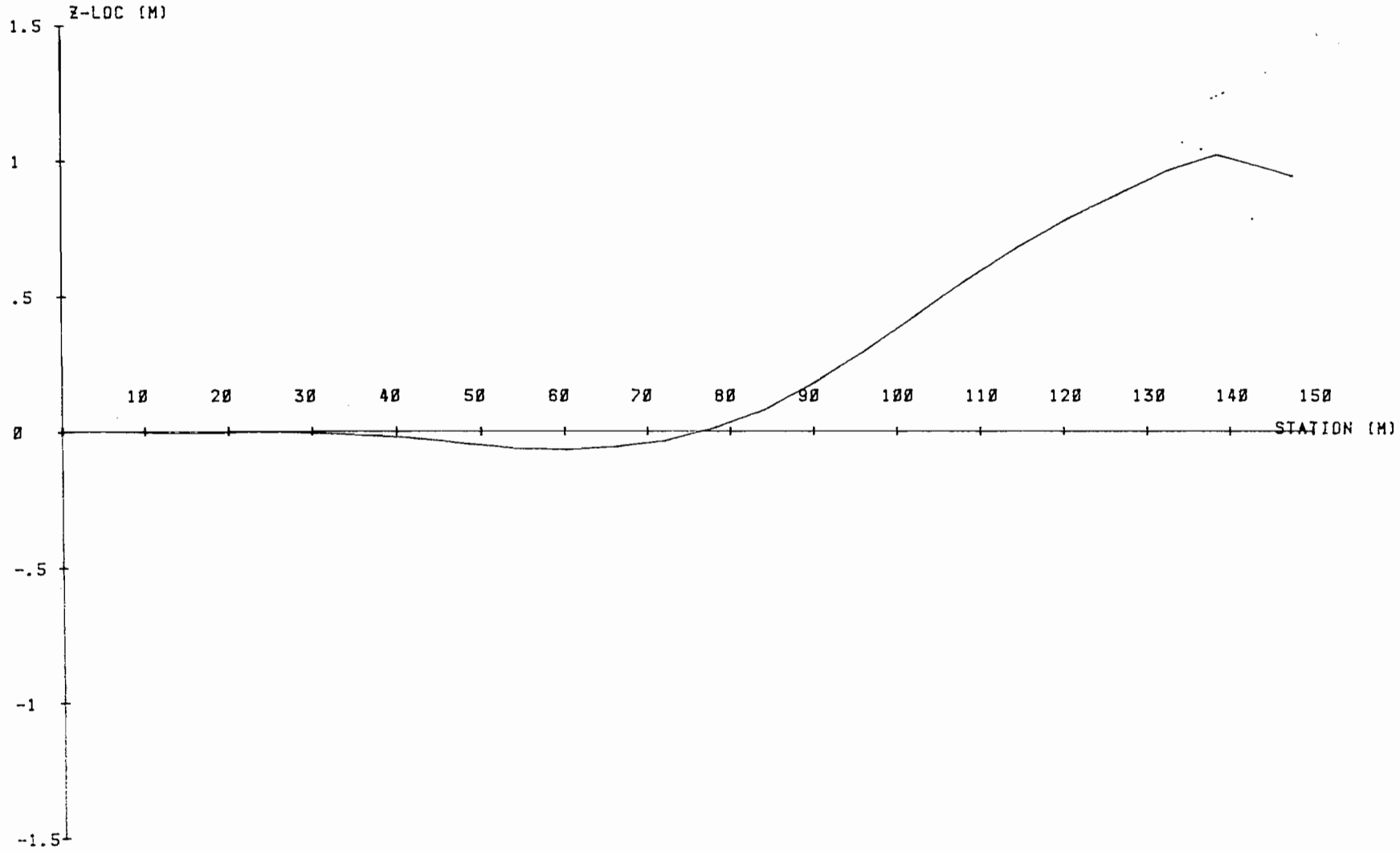
NT
VIKAFJELL
HOLE: BH18-155M
23/7-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:5ØØ



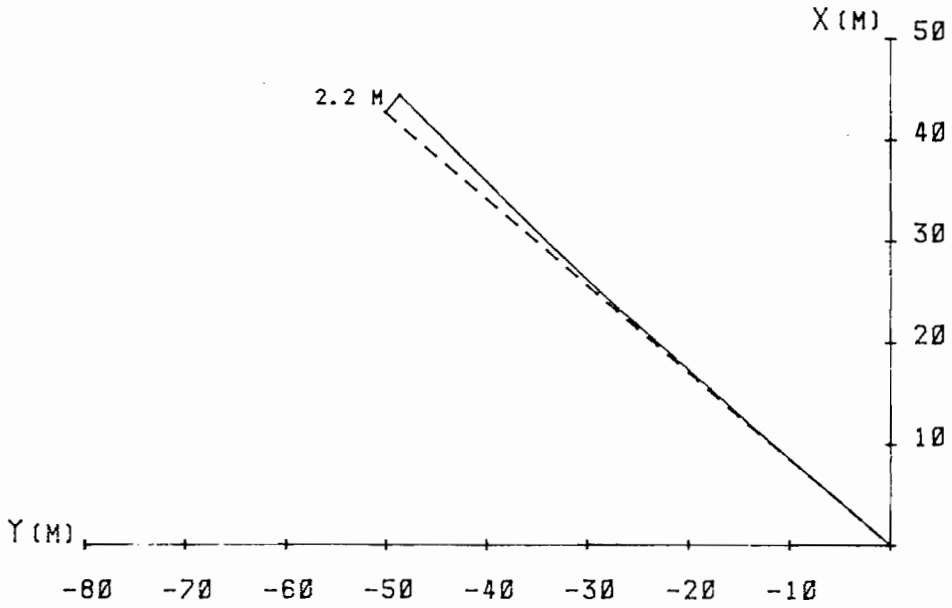
NT
VIKAFJELL
HOLE: BH18-155M
23/7-85

PLOT NO: 10
Z-LOC-PLANE



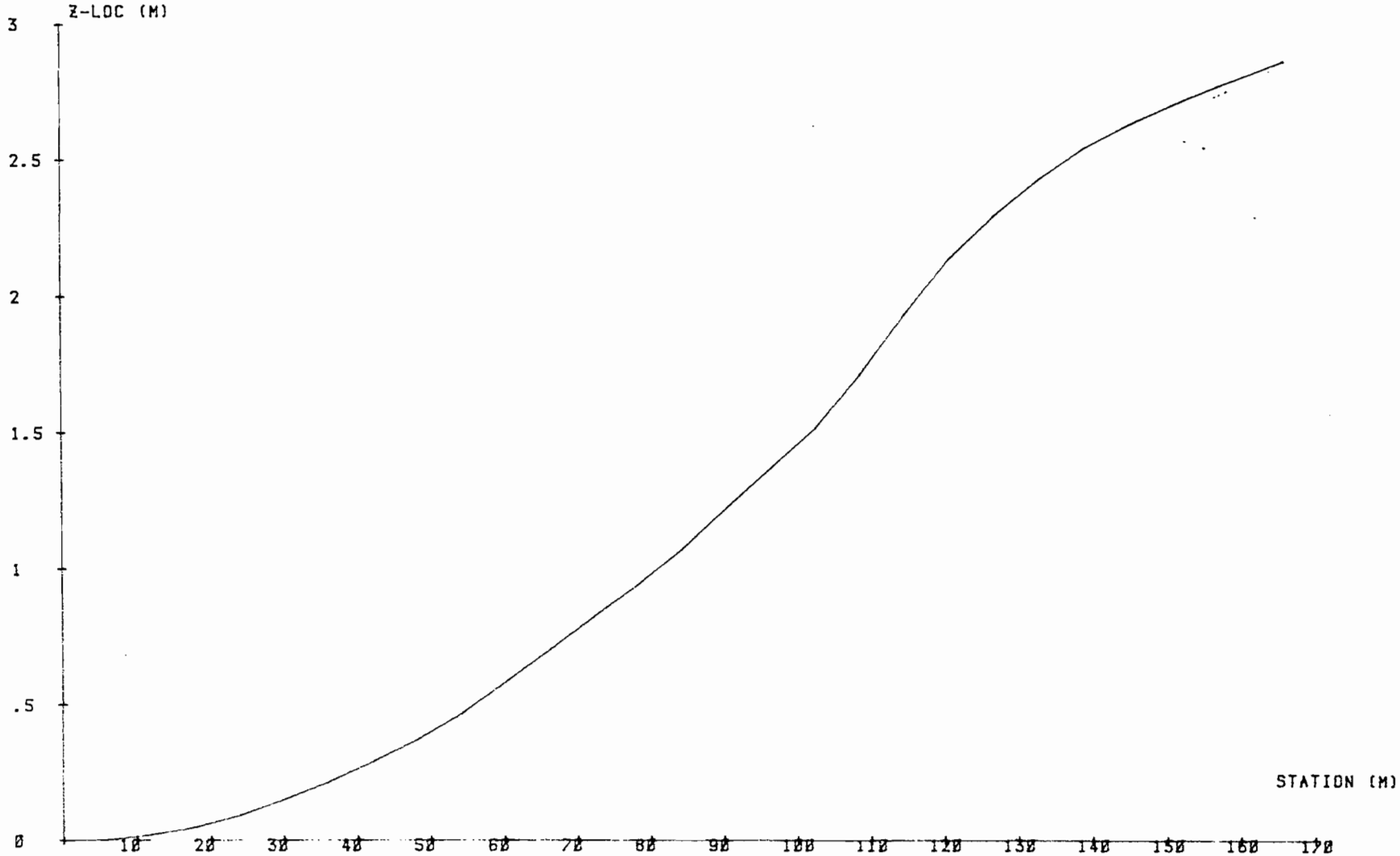
NT
VIKAFJELL
HOLE: BH18B 173.5M
27/8-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



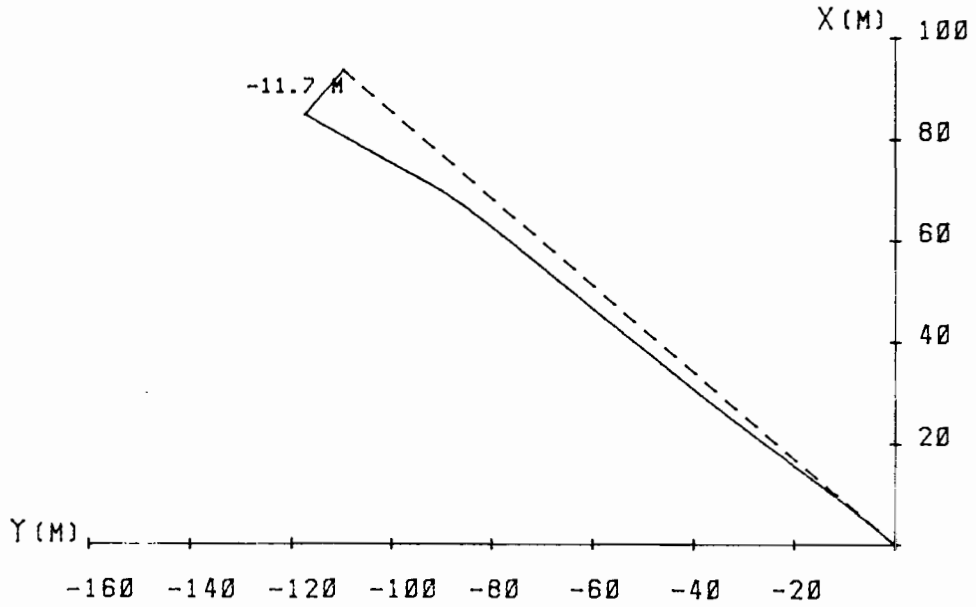
NT
VIKAFJELL
HOLE: BH18B 173.5M
27/8-85

PLOT NO: 10
Z-LOC-PLANE



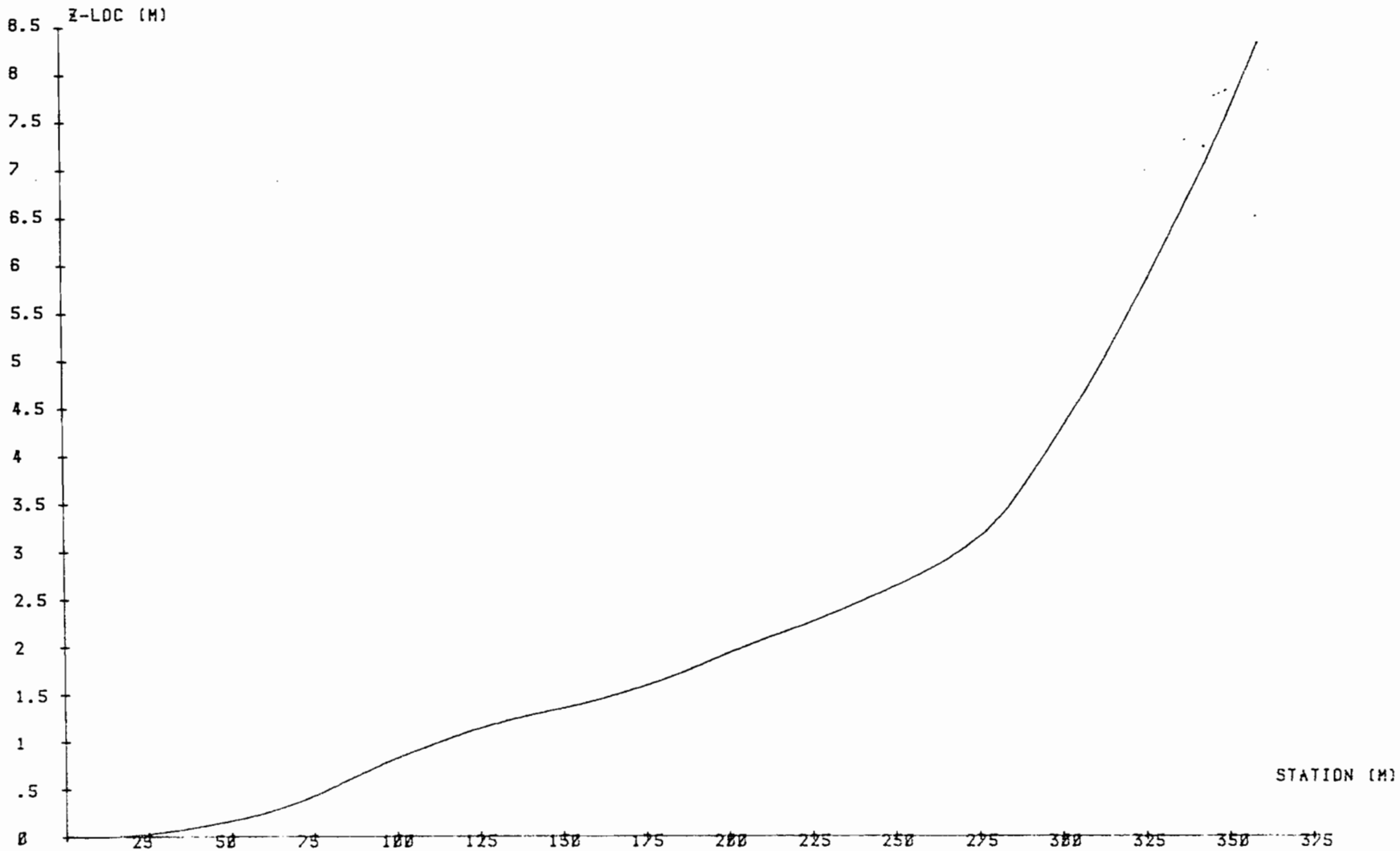
NT
VIKAFJELL
HOLE: BH2Ø 363.5M
26/8-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:1ØØØ



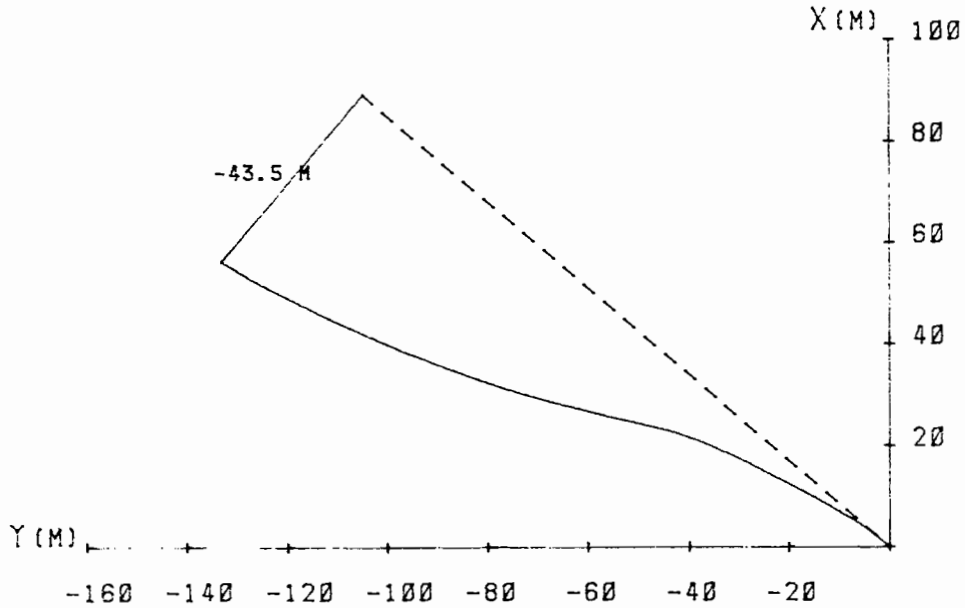
NT
VIKAFJELL
HOLE: BH2Ø 363.5M
26/8-85

PLOT NO: 1Ø
Z-LOC-PLANE



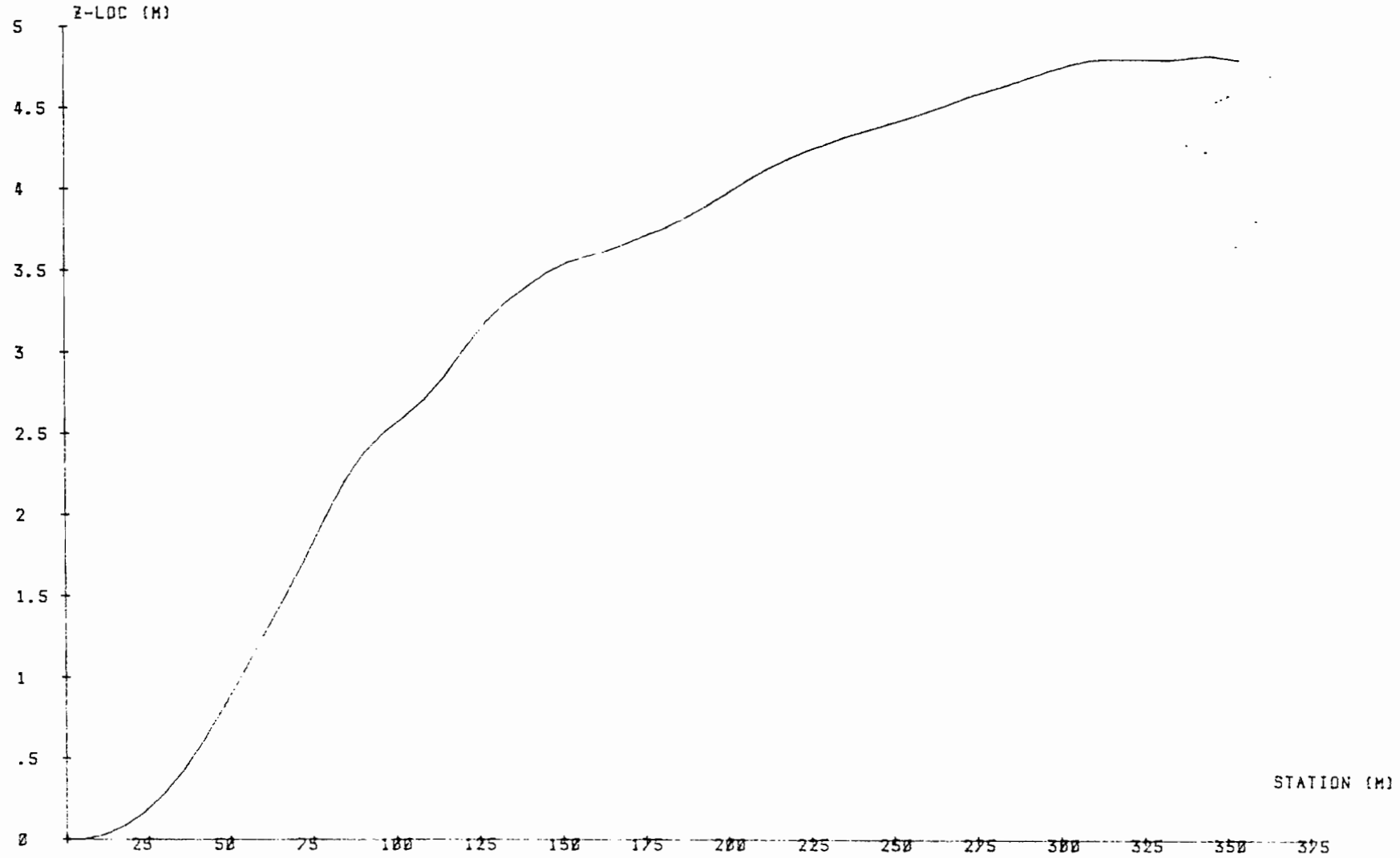
NT
VIKAFJELL
HOLE: BH21
10/9-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:1000



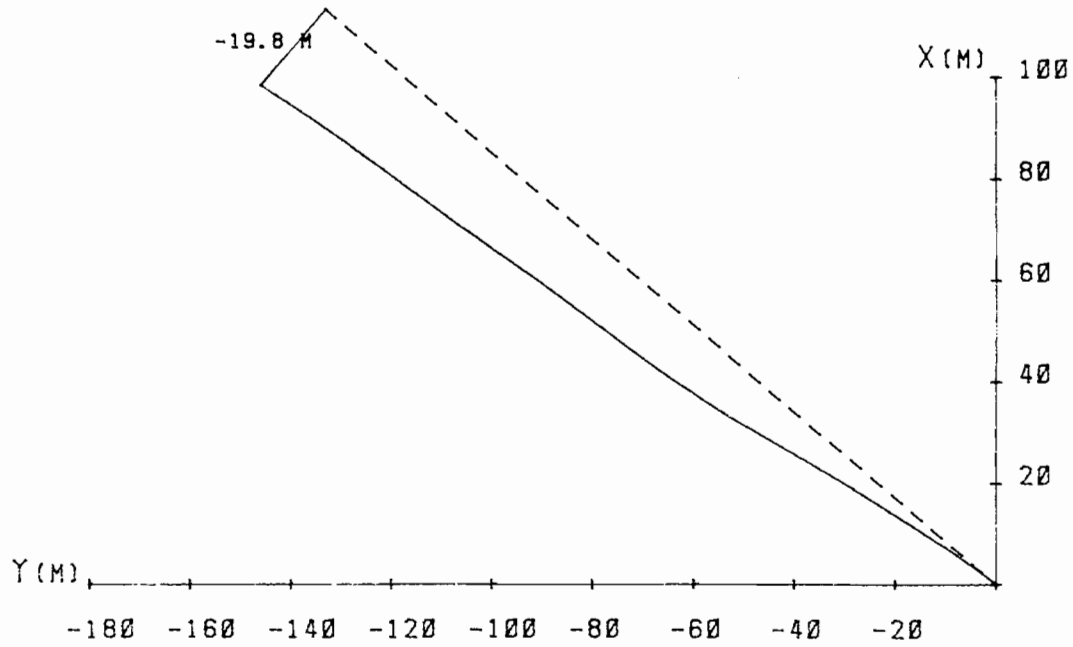
NT
VIKAFJELL
HOLE: BH21
10/9-85

PLOT NO: 10
Z-LOC-PLANE



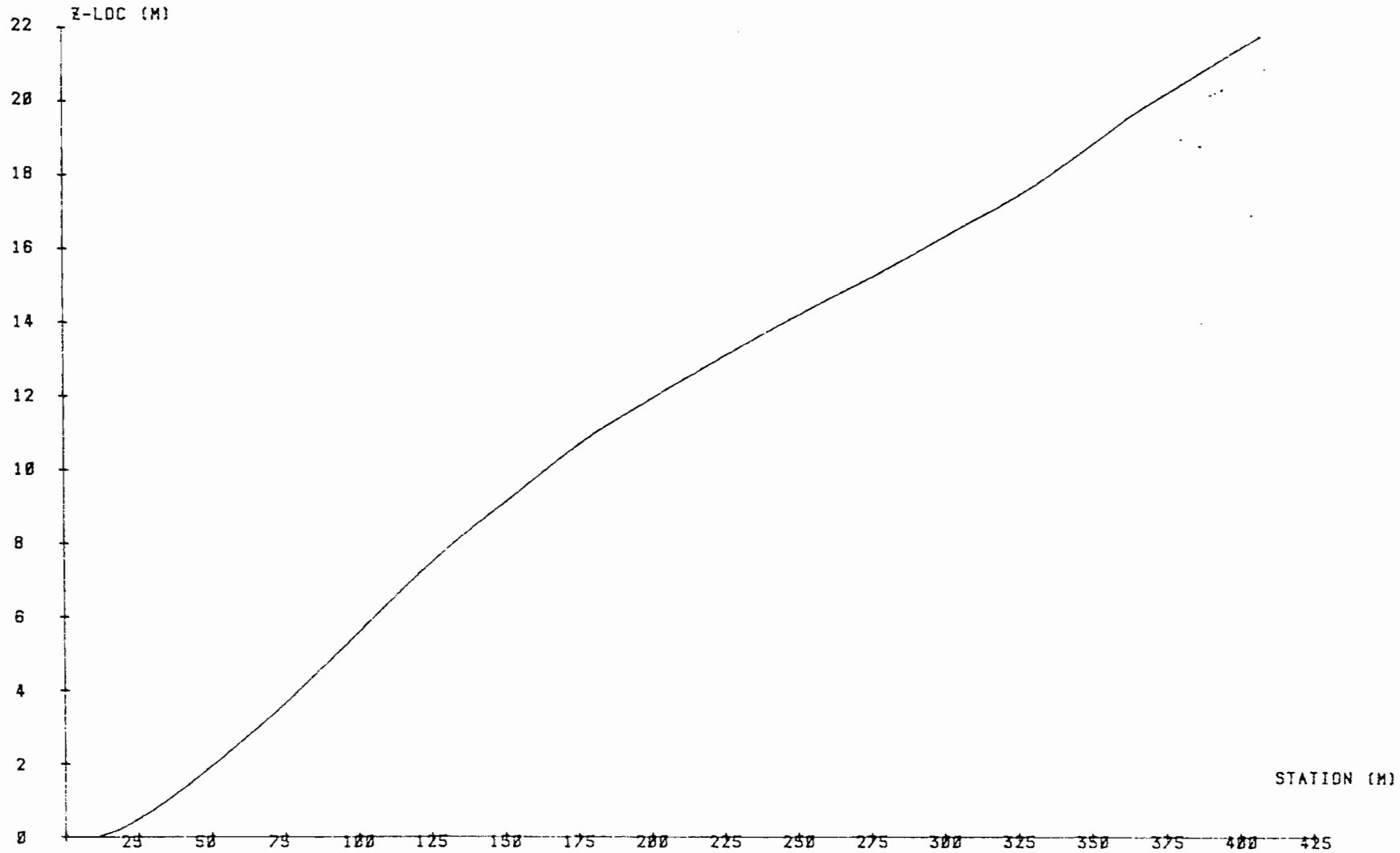
NT
VIKAFJELL
HOLE: BH22
10/9-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:1000



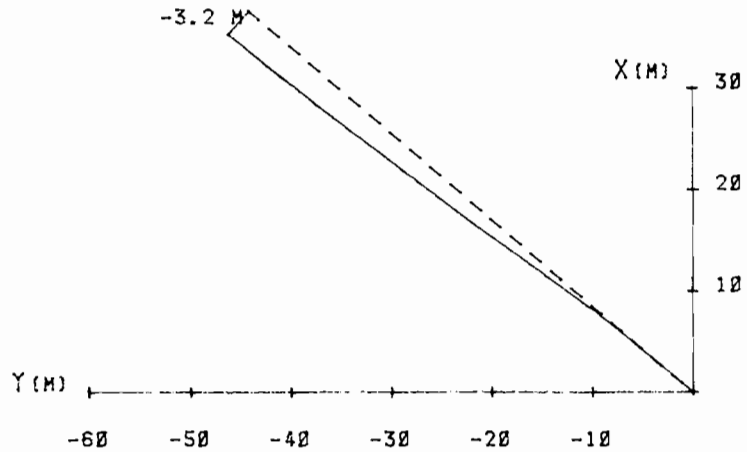
NT
VIKAFJELL
HOLE: BH22
10/9-85

PLOT NO: 10
Z-LOC-PLANE



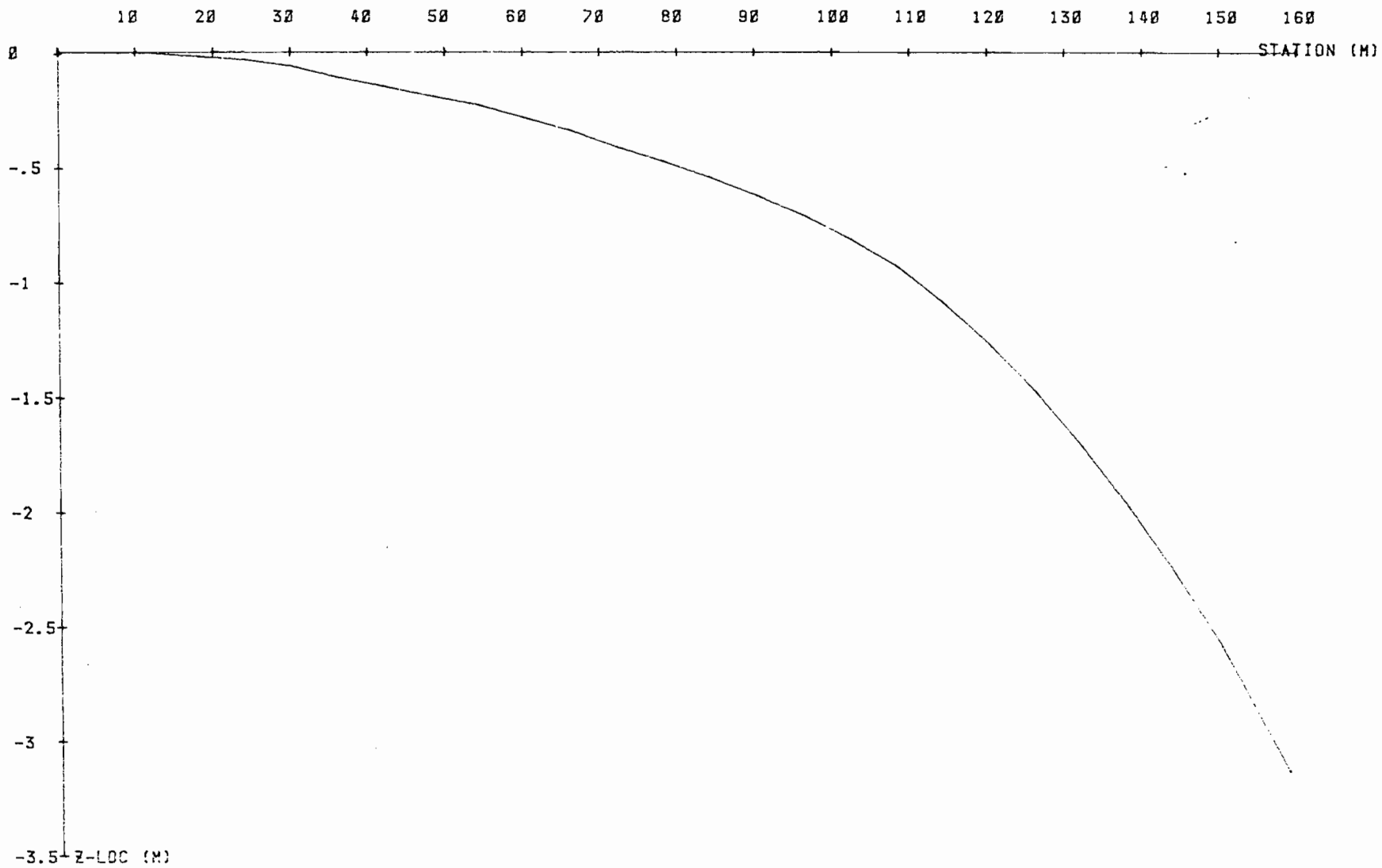
NT
VIKAFJELL
HOLE: BH23 170.0M
11/9-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



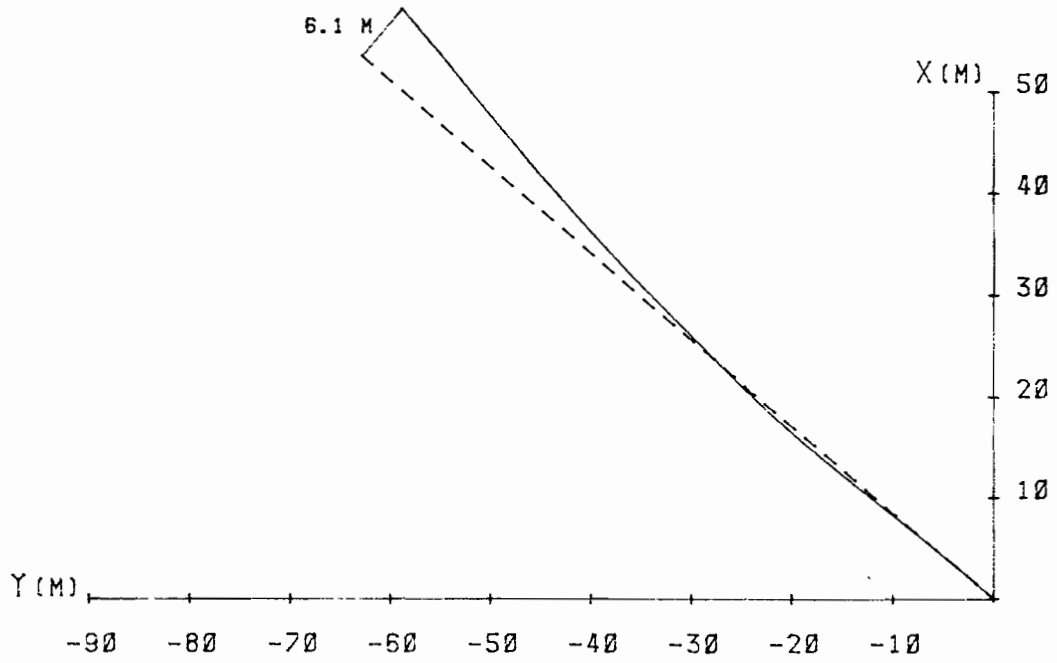
NT
VIKAFJELL
HOLE: BH23 170.0M
11/9-85

PLOT NO: 10
Z-LOC-PLANE



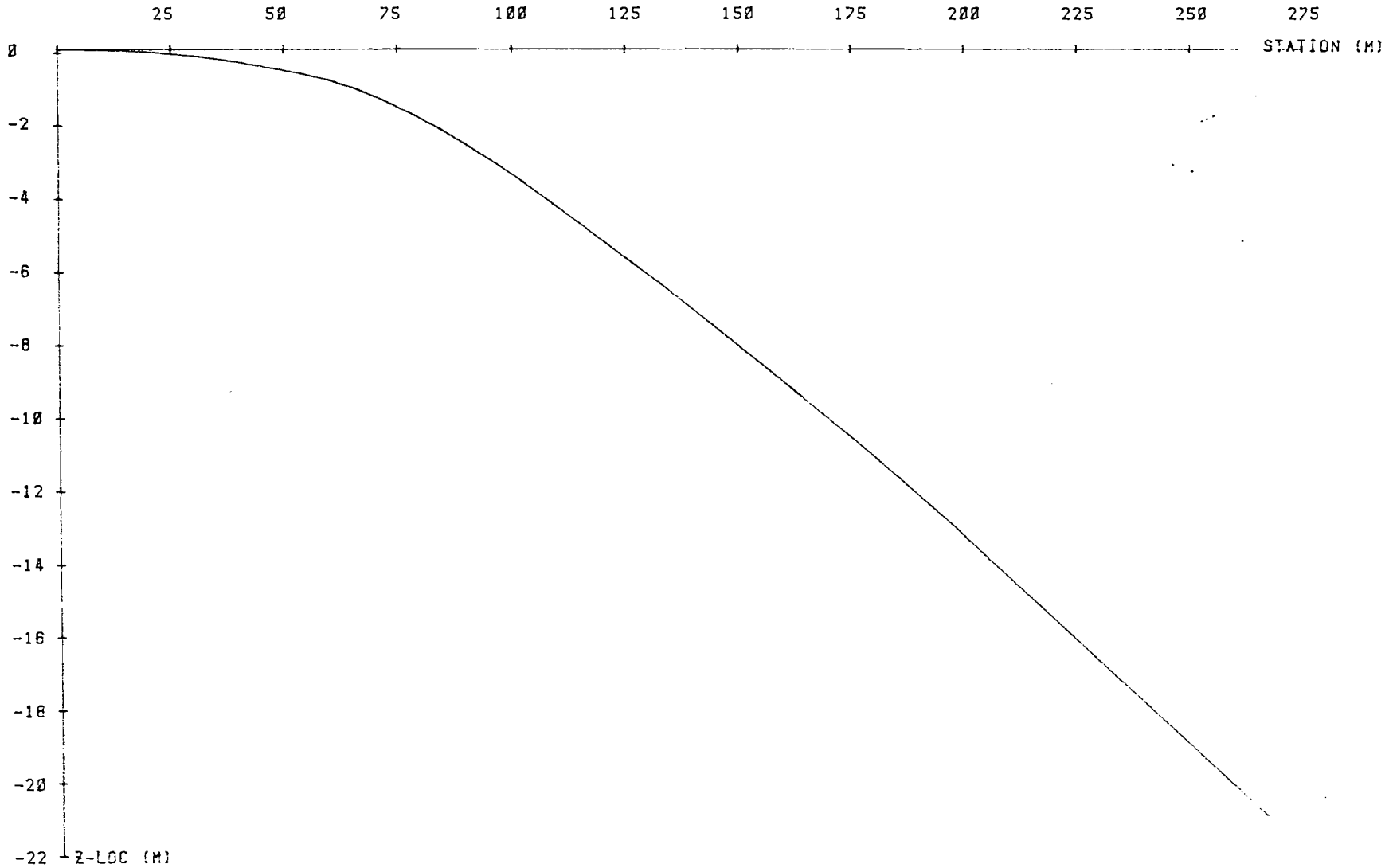
NT
VIKAFJELL
HOLE: BH24 271.3M
11/9-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



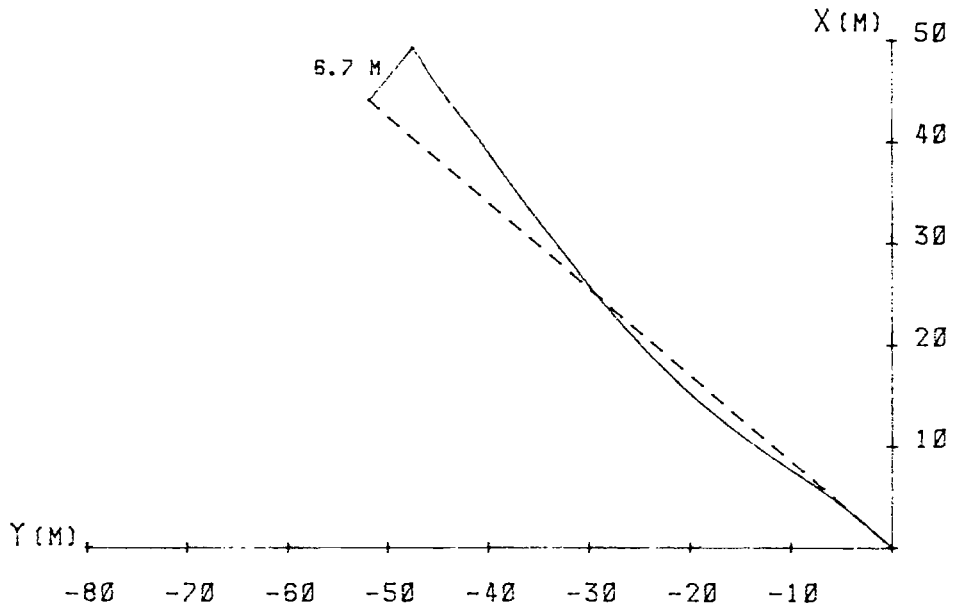
NT
VIKAFJELL
HOLE: BH24 271.3M
11/9-85

PLOT NO: 10
Z-LOC-PLANE



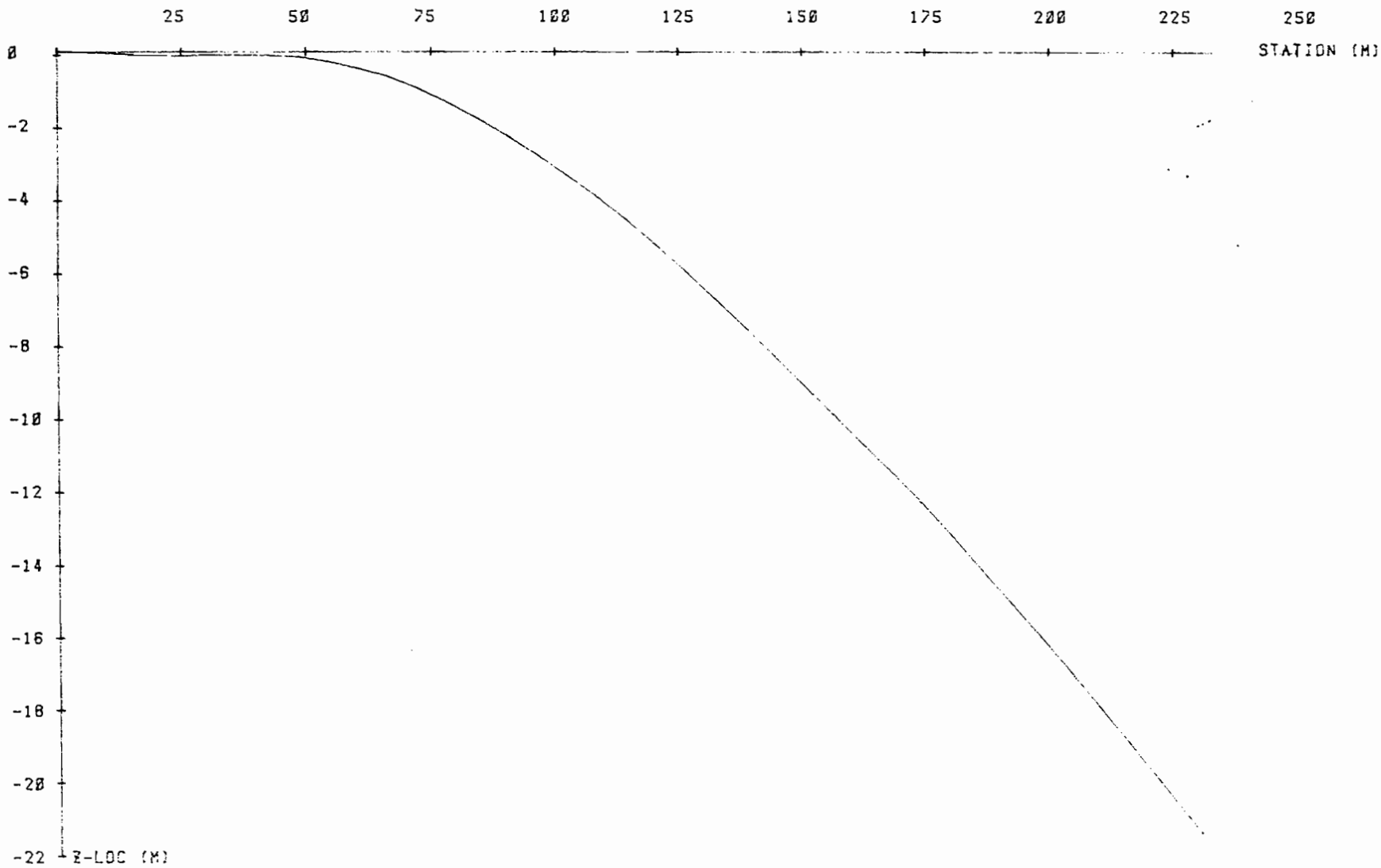
NT
VIKAFJELL
HOLE: BH25-233.8M
23/9-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:5ØØ



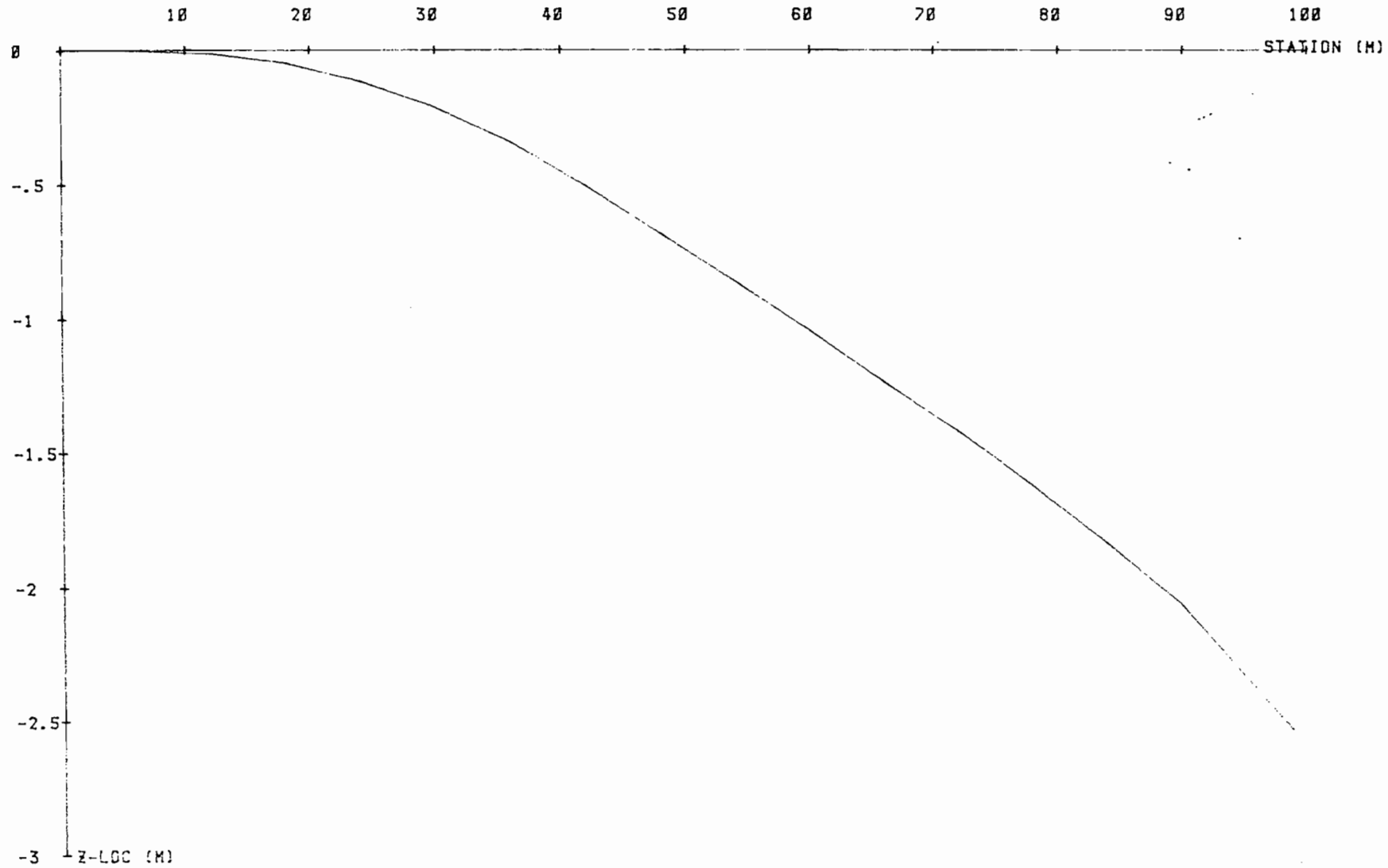
NT
VIKAFJELL
HOLE: BH25-233.8M
23/9-85

PLOT NO: 10
Z-LOC-PLANE



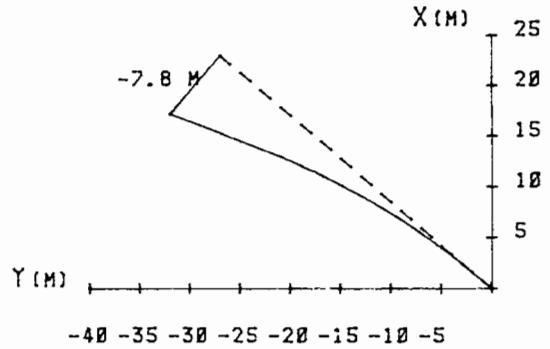
NT
VIKAFJELL
HOLE: BH26 100.0M
11/9-85

PLOT NO: 10
Z-LOC-PLANE



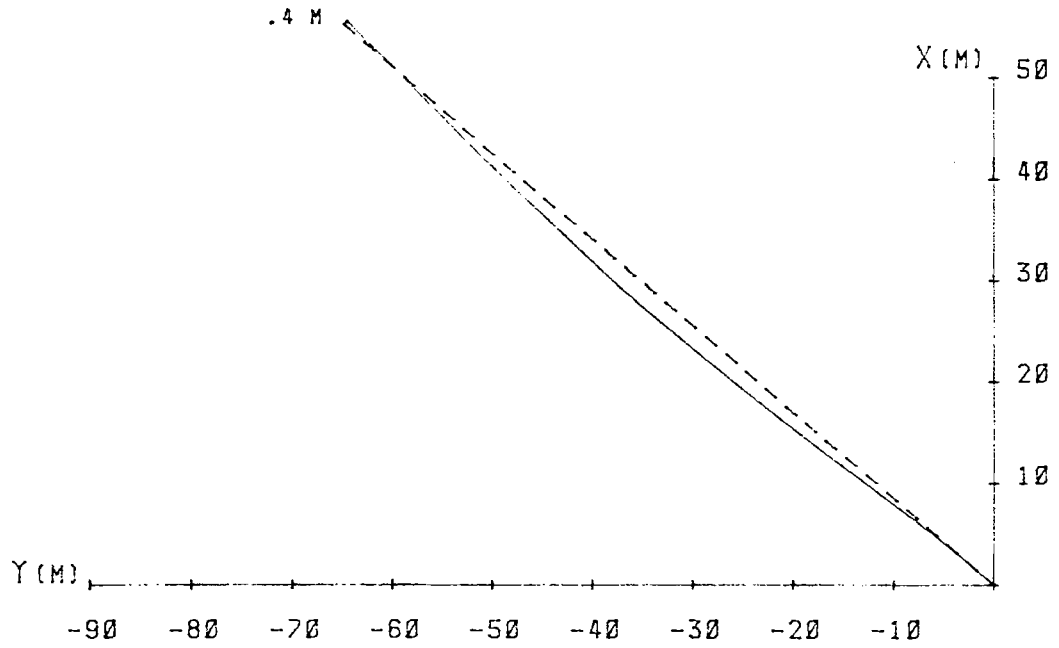
NT
VIKAFJELL
HOLE: BH26 100.0M
11/9-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



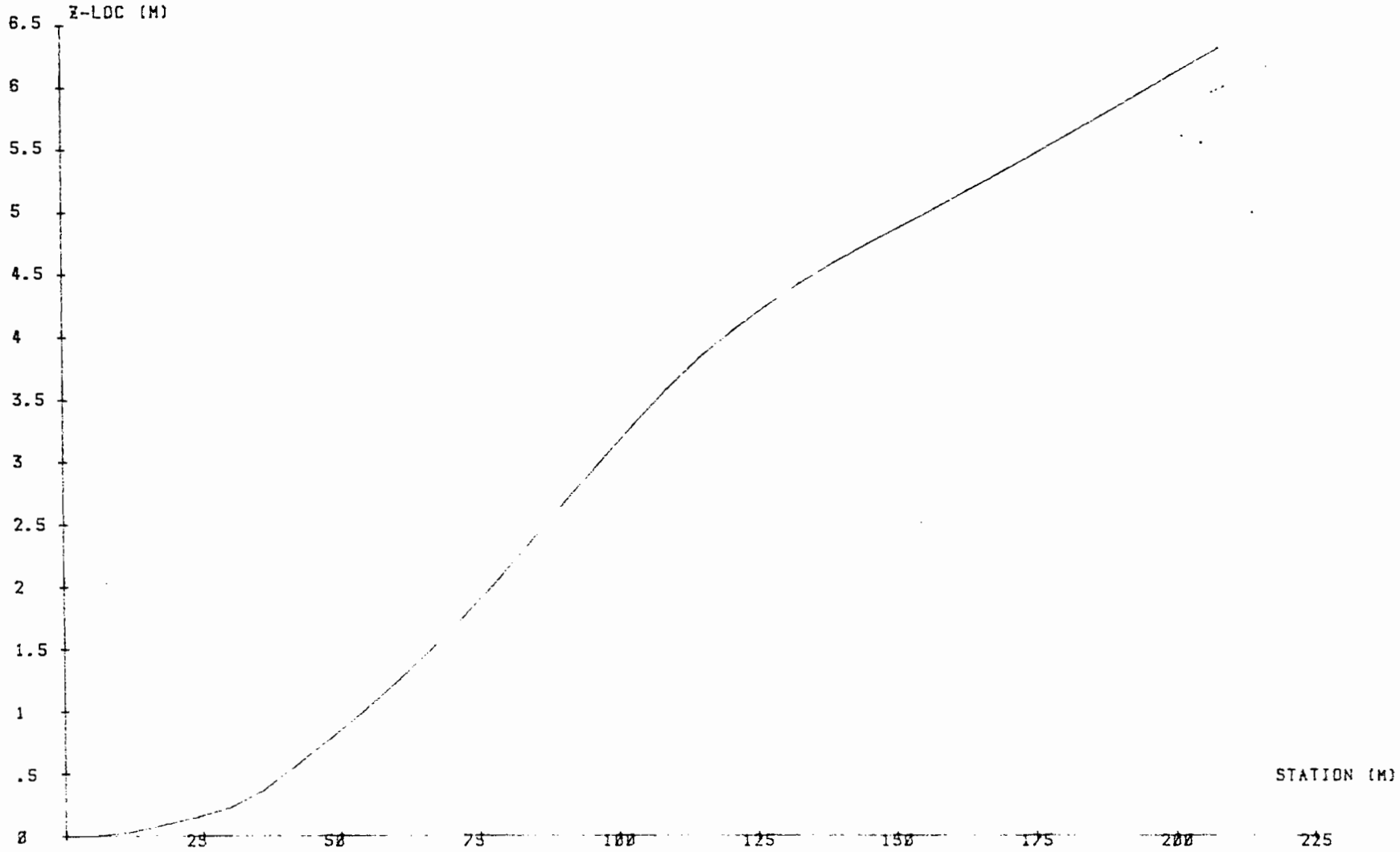
NT
VIKAFJELL
HOLE: BH27-219.5M
25/9-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= Ø M
Y= Ø M
SCALE 1:5ØØ



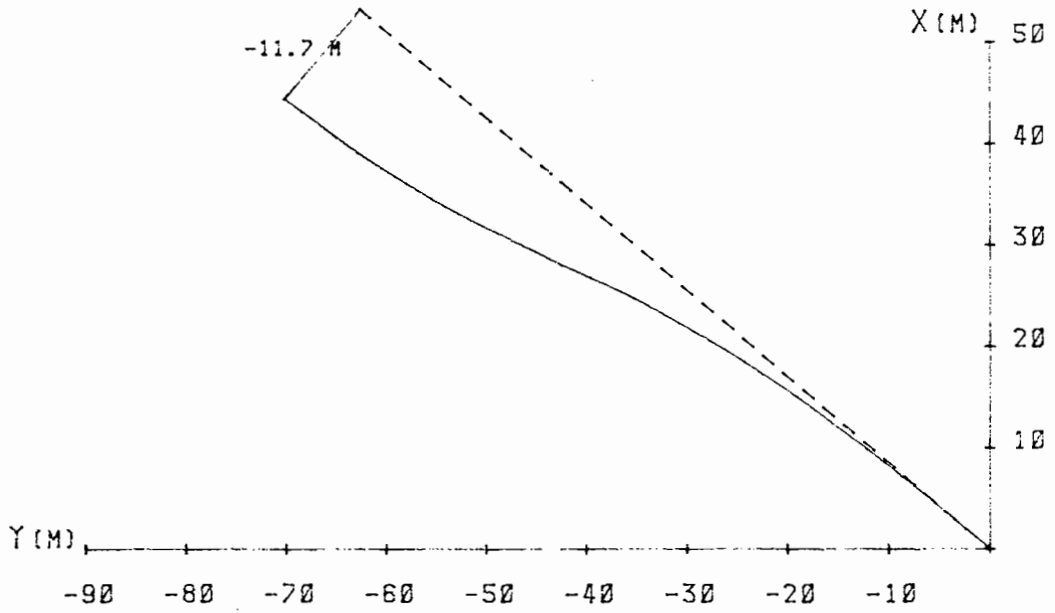
NT
VIKAFJELL
HOLE: BH27-219.5M
25/9-85

PLOT NO: 10
Z-LOC-PLANE



NT
VIKAFJELL
HOLE: BH28-294.0M
25/9-85

PLOT NO: 1
HORISONTAL PROJECTION
X,Y-PLANE
ORIGON: X= 0 M
Y= 0 M
SCALE 1:500



NT
VIKAFJELL
HOLE: BH28-294.0M
25/9-85

PLOT NO: 10
Z-LOC-PLANE