

ROTARY DRILLING  
NASTY CLAIM GROUP

by

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Introduction

Aeromagnetic survey results disclosed a large number of extensive anomalies in the Anvil Range district. Copious claims were staked, and this fact, coupled with encouraging diamond drill results on the S.E. Sea Claims (see report), necessitated a rapid, inexpensive, and mobile, method of drilling to ascertain with little delay, if anomalous sulphide concentrations cause the magnetics.

The Mayhew 1000, oil-well-type rig, mounted on a Nodwell (track vehicle), drills dry or wet according to conditions, and provided substantial decreases in footage costs and mobilization down time, with increased penetration rates, and only slightly less accrued information as compared to standard diamond drilling techniques.

Three rotary holes, totalling 1100 feet, were placed on magnetic "highs" (see Appendix for locations).

Summary and Conclusions

1. No mineralized quartzose sericite schist was intersected but minor amounts of galena may have some association with a lowgrade, uniform, black, "sericite" schist.
2. No economic grades of lead, zinc, or copper were intersected.

3. NRH-3 indicates an average pyrrhotite content across 500 feet which is probably sufficient to cause the anomaly present.
4. The unaltered appearance of the country rock and lack of mineralization suggest follow-up drilling is unwarranted.

#### Drilling and Sampling Method

The following is a brief description, further discussion will be found in Rotary Drilling, General, a report to follow.

The present phase of exploration is centered about the rotary drilling thus all camp activities and mobilization are co-ordinated accordingly. Four trailers, consisting of a utility shed, cook house, bunk house, and office are moved to a central location and commuting to drill-sites is by Bombardier.

Operations are continuous with four drillers and a foreman working two twelve hour shifts. Two samplers, employed by Dynasty, collect samples, and pan these for heavy metal content at the drill site.

The Mayhew 1000 drill has a standard kelly drive with power take off from the Nodwell engine. Depth limitation is approximately 1000 feet. One compressor (580 c.f.m. @ 50 p.s.i.) plus a water pump and reservoir is mounted on a separate Nodwell. An auxiliary compressor, a Gardner-Denver (365 c.f.m. @ 100 p.s.i.) and used to drive the down-the-hole hammer is self-contained. Various bit types have been tried, but to date, the 4 $\frac{1}{4}$  inch tricone has been most used. A 6 1/8 inch tricone is used in overburden, in theory allowing casing to be placed to bedrock.

Penetration and bitlife is improved by attaching a down-the-hole hammer in dry drilling conditions. Overall penetration rate including bit-change time is approximately 6 ft/hr. Actual penetration may be up to 1 ft./min. in soft rock.

Samples are taken over 5 feet intervals, giving an average dry sample weight of 120 lb. of this, a representative 15 lb. is retained. A portion of the cuttings and pannings are kept on tack boards for microscopic examination and a continuous record. Caving of the overburden may occasionally dilute samples as much as 40% but generally stays within acceptable limits of 0 to 5%.

The boxed samples are stacked at the various base camps.

#### Rock Types

The black "sericite" schist was previously encountered in Sea Group Rotary Holes 3, 4 and 6 but appears even more uniform and lower grade in the Nasty Group intersections. It is black, chloritic, phyllite which is fine grained, homogeneous, soft, and highly fissile, producing angular and shard-like cuttings. Foliation surfaces have a high sheen. Varying amounts of this rock were encountered in NRH 2 and 3.

Light grey, sericitic schist in its normal form (more fully described in the Sea Group Diamond Drilling Report) was the only other rock type intersected.

### Mineralization

Pyrite and Pyrrhotite (pyrite dominating) (as is normal) occur throughout in very-fine-grain form. Percentages rarely rise above 2%, with no preference to either rock type.

Traces and minor percentages of very fine grained galena are disseminated in one eighty-foot and one twenty-five foot section in NRH-3.

### Structure

Minor structures are, of course, obliterated in the cuttings. Thin, uniform, foliation apparently predominates.

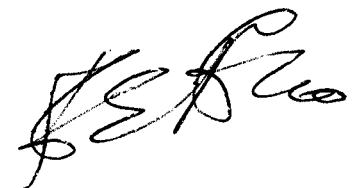
Surface geology to the west suggests gentle folding of the F1 foliation with the drill holes generally centered on an east-west trending antiform. The drill logs tend to support this.

Extent, or configuration, of the dark sericite schist bands is uncertain.

SUMMARY OF COSTS

(Shortened Form)

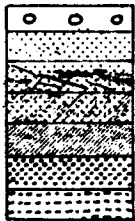
| Hole No.                                   | 1.             | 2.             | 3.                    |
|--|----------------|----------------|-----------------------|
| Date                                       | Apr. 8-10      | Apr. 10-12     | Apr. 13-16            |
| Footage                                    | 85             | 5425           | 590                   |
| Hours                                      | 35<br>-----    | 50<br>-----    | 68.5<br>-----         |
| Contract                                   | 1261           | 1149           | 1574                  |
| Bit Cost                                   |                | 150            | 300                   |
| Fuel                                       | 94.76          | 73.00          | 105.30                |
| Misc. Equipment                            | 23.90          | 15.90          | 16.00                 |
| Dynasty Personnel                          | 121.25         | 121.25         | 194.00                |
| Camp Costs                                 | 120.00         | 120.00         | 192.00                |
| Travel Time                                | <u>25.00</u>   | <u>43.00</u>   | <u>68.00</u>          |
| Sub Totals                                 | <u>1645.85</u> | <u>1672.15</u> | <u>2449.30</u>        |
| TOTAL                                      |                |                | 5767.30               |
| PLUS: Supervision (35/day for 8 days)      |                |                | 280.00                |
| Transportation (20/day for 8 days)         |                |                | 160.00                |
| Drill Site Preparation (3 sites @ 50/site) |                |                | <u>150.00</u>         |
|  |                |                | <u><u>6357.30</u></u> |



ROTARY DRILLING RESULTS

LEGEND

Rock Types:



Overburden  
 Sericite Schist  
 Quartzose Sericite Schist  
 Chloritic Sericite Schist  
 Greenstone, Chlorite Schist  
 Graphitic Schist  
 Limy Sediments

Notations Used:

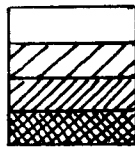
|       |       |              |
|-------|-------|--------------|
| $\pi$ | $\pi$ | Pyrite       |
| Pyr   | pyr   | Pyrrhotite   |
| Cp    | cp    | Chalcopyrite |
| Sp    | sp    | Sphalerite   |
| Ga    | ga    | Galena       |
| M     | m     | Magnetite    |

↙ Less ) Relative  
 ↘ Greater) Concentra-  
           tions

qtz.      Free Quartz

Estimated Sulphide Content:

(left side of hole logs)



0%  
 2%  
 5%  
 30%  
 Massive

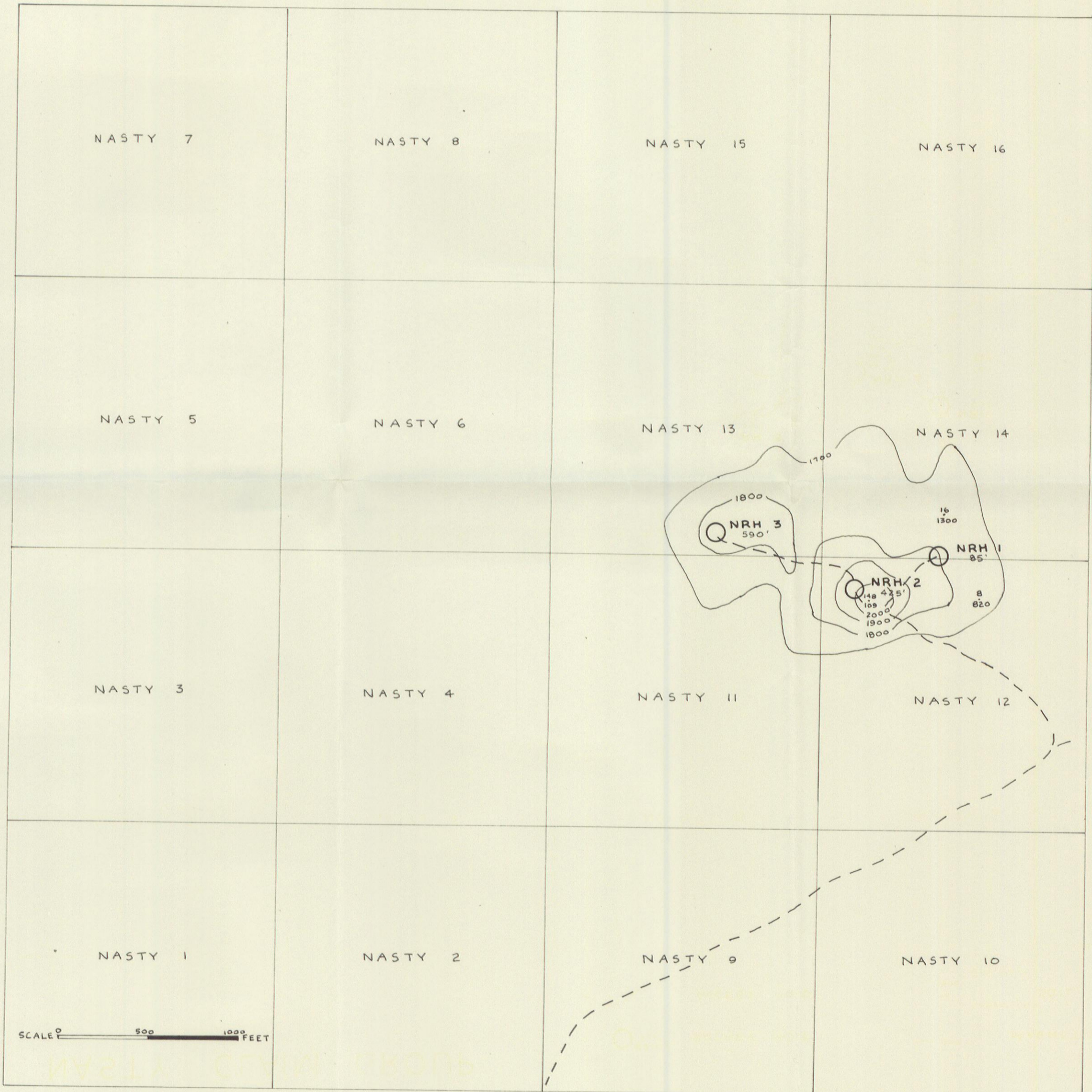
# NASTY CLAIM GROUP

○ NRH 2  
425' ROTARY HOLE

1900 } MAGNETIC CONTOUR

- - - ACCESS ROAD

16 } Copper ppm  
1300 } SOIL ANOMALY  
Zinc ppm



NRH 1

NRH 2

NRH 3

$\pi > \text{Pyr}$   
throughout

$\pi > \text{Pyr}$

Quartz

$\pi > \text{Pyr}$   
throughout

dark  
sericite

trace ga.

trace ga.

very minor  
ga. in  
approx.  
1% sulphides

dark  
sericite,  
generally a  
soft, low-  
grade, schist

minor ga.  
in approx. 2%  
sulphides  
tr. ga.

end

end

end

50  
100  
150  
200  
250  
300  
350  
400  
450  
500  
550  
600  
650  
700  
750  
800

