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HERB SHIPLEY

CIVIL ENGR. & LAND SURVEYOR

ARIZ., COLO., NEW MEXICO, NEVADA, UTAH

Shipley #97A

WESTERN CIVIL ENGINEERING
AND SURVEYING

DEC 14 1974

BOX 542

KINGMAN, ARIZONA

602 753-3525

602 753-2606

HOWARD F. BARTLETT

Geologist

Energy and Materials Department



E. I. DU PONT DE NEMOURS & COMPANY (INC.)
Wilmington, DE 19898
(302) 774-5961

Job # 974

Rady

C. G. RUDERSHAUSEN

Minerals

Polymer Intermediates Department

DEC 14 1974



E. I. DU PONT DE NEMOURS & COMPANY (INC.)
1007 Market Street

Wilmington, DE 19898

(302) 774-2523

Jack Kundsén Bob # 974
302.774-7657

DEC 14 1974

Attn:

MARSHALL NEWTON

Development Manager

Minerals

Polymer Intermediates Department

E. I. DU PONT DE NEMOURS & COMPANY (INC.)

1007 Market Street

Wilmington, DE 19898

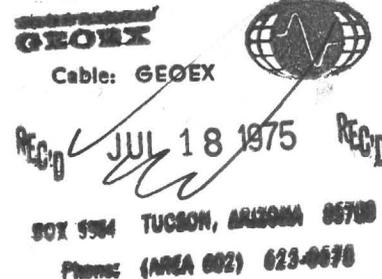
(302) 774-7738





E. I. DU PONT DE NEMOURS & COMPANY

INCORPORATED
WILMINGTON, DELAWARE 19898



POLYMER INTERMEDIATES DEPARTMENT

July 16, 1975

Mr. Walter E. Heinrichs, Jr.
President and General Manager
Heinrichs Geoexploration Company
P. O. Box 5964
Tucson, Arizona 85703

Reference: Your Letter of 6/27/75
and Subsequent Conversation
with Wes Spence in Tucson

Dear Walt:

After reviewing the reference information, we have decided we would like to acquire your list of shallow, acid soluble copper deposits in Arizona. In order to minimize HGC's time and cost in completing this assignment, we would propose sending you a list of those properties we are already aware of in Arizona, thereby requiring you only to submit information on deposits you are familiar with which are not on Du Pont's list.

If, after reviewing the list, we believe site visits are necessary in order to broaden our information base, we could then consider your Phase II proposal.

Please advise if our request is acceptable to you, and include your estimate of cost. I might add that we have twenty to thirty candidates on our list.

After completing Arizona, we will consider broadening the scope of work to include Nevada, New Mexico, etc.

Sincerely,

E. M. Newton
Manager, Minerals

EMN:MAP

Chico - Check assays

2168-3806 US 498

2168-3808

" -3810

" 3812

~~as of 12/24/74 Not for~~

Mc Alistair

called in above. from ~~any one~~ 12/24/79

W.W. Jew.

As
<.005

Ag
< 0.01

Chico /
BRIGHTER
DAYS

T23N R17W
Sec 32

5 0.22

5 < 0.01

5 0.06

~~lost. DA. today~~
~~State - Soap MAC~~
W.

WALT: 12/23/74
1:30 pm Jack Knudsen called
Dadout
Chico - no decision
until after 1st

send bill now please
will be talking to us
in a week or two

I told Mary already



Missing Interval
BD -20 - 05' - 110'

Au 0.006 Ag 0.21

115' - 120'

Mr. McAlister Called
12/23/74

As of 12/24/74
not transmitted
to DuPont.

D.A. today Guy's M&C.
JW.

Rudy says he is
Missing one ●
Sample

BD 20

105 - 110

M

12.20.74

Wally:
RE: CHICO Proj
GEOEX #974

Rudy Fisher called these in
m

<u>Description</u>	<u>GOLD</u>	<u>SILVER</u>
Geetz Dump High Grade	.123	9.03
Dump at C-7A	.006	2.78
Grab 50' Shear Zone at 1/4 Corner	.002	0.23
4' Cut between Goetz & 98	.075	2.06
Short Adit 300' West of BD-8	.043	0.83
Dump below JA-8	.342	10.56
Dump Grab	.010	1.03
Dumb Below JA-5	.590	3.67
4' Vein 82' W of 98 Shaft	.017	3.22
Vein at C-8	.013	1.08
Dump Alpha Shaft	.500	1.94
Dump Alpha Shaft 12-7-74	.025	1.57
Dump at Upper Mint	.030	3.66
Glory Hole Dump	.006	4.20
5' Cut at M-6	.010	0.78
2 High Grade Dumps at 98 Shaft	.025	6.33
Grab at Drift above U-1	.014	1.04
Dump below C-5	.040	2.48
Cashier Shaft Dump	.431	2.28
5' & cut in Bobcat Pit	0.010	3.46
Dump Cashier Adit	.010	0.24
Small Pit 700' NW BD-14	.005	3.32
Goetz Dump Low Grade	.011	1.82
Jamison Ore Pi	.399	4.11
Waste Dump 98	.009	1.41
Muck Pile 100' Below JA-1	.107	.94

<u>HOLE #</u>	<u>INTERVAL</u>	<u>GOLD</u>	<u>SILVER</u>
BD-24	5' 10'	.002	.02
	10' 15'	.001	.01
	20' 25'	.001	.18
	25' 30'	.001	.13
	30' 35'	.005	.10
	65' 70'	.001	.01
	70' 75'	.001	.01
BD-26	70' 15'	.001	.01
	50' 55'	.002	.01
	85' 90'	.001	.07
BD-20	20' 25'	.002	.12
	85' 90'	.003	.16
	100' 105'	.004	.08
	110' 115'	.001	.02
	120' 125'	.003	.14
	125' 130'	.001	.06
	130' 135'	.003	.18
	135' 140'	.002	1.25
	145' 150'	.002	.62
	150' 155'	.002	.20
	160' 165'	.001	.12
	165' 170'	.011	.01
BD-18	55' 60'	.002	.10
	65' 70'	.004	.12
	70' 75'	.001	.12
	105' 110'	.002	.05
BD-14	25' 30'	.001	.10
	95' 100'	.002	.22
BD -16	15' 20'	.001	.10
	45' 50'	.002	.04
	75' 80'	.001	.09
	80' 85'	.001	.16
	90' 95'	.001	.17
	95' 100'	.001	.16
BD-22	20' 25'	.001	.06
BD-20	70' - 75'	.003	1.43
	75' 80'	.002	.50
	80' 85'	.002	.27

Rudy at Mtn States

Hole #	Int	Gold	Subs
BD-24	5'10'	.002	.02
	10'15'	.001	.01
	20'25'	.001	.18
	25'30'	.001	.13
	30'35'	.005	.10
	65'70'	.001	.01
	70'75'	.001	.01
BD-26	10'15'	.001	.01
	50'55'	.002	.01
	85'90'	.001	.07
BD-20	20'25'	.002	.12
	85'90'	.003	.16
	100'105'	.004	.08
	110'115'	.001	.02
	120'125'	.003	.14

cont.

Short adit 300' W of BD-8	.043	0.83
D below JA-8	.342	10.56
D Grab	.010	1.03
D below JA-5	.590	3.67
4' vein 82' W of 98 shaft	.017	3.22
vein AT C-8	.013	1.08

D Alpha
Shaft

.500 1.94

D at
Shaft

.025 1.57

12-7-74

D at
upper
mint

.030 3.66

Glory Hole
D

.006 4.20

5' cut
at M-6

.010 0.78

2 HG
Dumps
at 98
Shaft

.025 6.33

BD 20

125	130	.001	.06
130	135	.003	.18
135	140	.002	1.25
145	150	.002	.62
150	155	.002	.20
160	165	.001	.12
165	170	.011	.01

<u>Dress</u>			
Goety D		.123	9.03
H & G			
<u>D at C-7A</u>		.006	2.78
<u>Grab 50'</u>			
Shear zone		.002	0.23
at 1/4 corner			
<u>4' Cut D</u>			
Goety v 98		.075	2.06

BD-18	55-60	.002	.10
	65-70	.004	.12
	70-75	.001	.12
	105-110	.002	.05
BD-14	25' 30'	.001	.10
	95' 100'	.002	.22
BD-16	15' 20	.001	.10
	45 50	.002	.04
	75 80	.001	.09
	80 85	.001	.16
	90 95	.001	.17
	95 100	.001	.16
BD-22	20 25	.001	.06
BD-20	70, 75	.003	1.43
	75, 80	.002	.50
	80, 85	.002	.27

Gravel at Drift above U-1	.014	1.04
D. below C-5	.040	2.48
Cashier Shaft D	.431	2.28
5' cut in Bobcat Pit	.010	3.46
D Cashier Adit	.010	0.24

Small Pit
700' NW
BD-14 .005 3.32

Goety D.
Low G .011 1.82

Jamison
Oke Pile .399 4.11

Waste D
98 .009 1.41

Much Pile
100' below .107 .94
JA-1

Blue Jay - James get car & review w/ Stewart when notes will be drilled DDH

\$

1. Call Bob Metz - Duval Tucson: get assays, etc.

~~2. Give Wally copy of letter~~

~~3. Drill M-4A, B, C~~

~~4. Drill M-5 Vertical~~

✓ ~~5. All samples from Drill to Tucson this week.~~

b. Have Herb send copy of overlay to Jack Knudsen (302-774-7657 office) w/ section corners.

7. a) X-sections of drill logs

✓ b) long section along ① Mint-98, ② Tashiter (2), ③ ¹²⁰⁰/₁₄₀₀ Branco, ④ Jamison ⑤ Unknown, ⑥ other.

c) surface map of sample where possible

east & west side of Branco. Plot on

① overlay. Show all assay data, drill hole inclinations & bearings.

What surface mine data from publications etc. in Chico & around.

✓ d) Make composite long section &/or cross-sections of Jamison ^{working} & using Duval data w/ ours.

✓ e) ditto for others as Mint, etc.

f) brief written summary of drill hole data & what was found. Also comments on where to drill & why.

✓ 8. call Bob Metler about costs for DDH & DD on Chico (vertical, inclined) and depths. 10⁰⁰/ft BXWL + diamond cost.

$$\begin{array}{r}
 45 \\
 30 \\
 \hline
 1350 \\
 104 \\
 \hline
 13 \overline{) 1350} \\
 13 \\
 \hline
 50
 \end{array}$$

$$\begin{array}{r}
 200 \\
 400 \\
 \hline
 80000 \\
 6154 \\
 \hline
 13 \overline{) 89000} \\
 28 \\
 \hline
 20 \\
 13 \\
 \hline
 70 \\
 65 \\
 \hline
 50
 \end{array}$$

$$\begin{array}{r}
 90 \\
 45 \\
 \hline
 450 \\
 360 \\
 \hline
 4050 \\
 7.5 \\
 \hline
 20250 \\
 28350 \\
 \hline
 30375
 \end{array}$$

$$\begin{array}{r}
 2336 \\
 13 \overline{) 30375} \\
 26 \\
 \hline
 43 \\
 39 \\
 \hline
 47 \\
 39 \\
 \hline
 85
 \end{array}$$

1000 ft 8000
 700000000

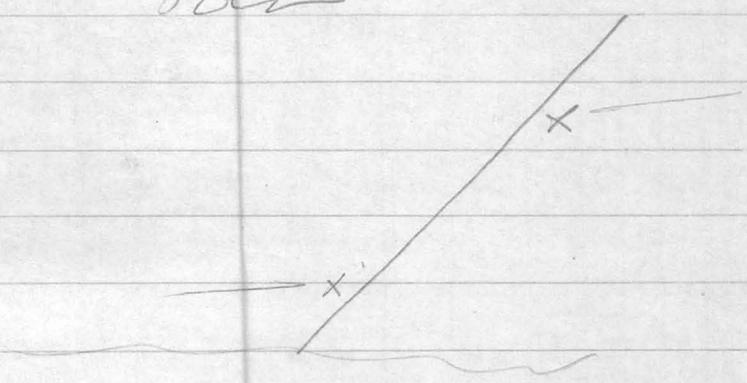
CASHIER Area

90'	C-9	100' - 55°	Cashier B (East)	100
	C-10	Don't Drill	" A (West)	100
70'	C-11	100' - 60°	" B	142
65'	C-12	70' - 50°	B	20
100'	C-13	100' - 60°	Dike parallel to FW	25
		3-10 left to drill 2 days ±		22

MINT - 98 Area

70	M-1A	100' - 55°	Upper Level	100
35	U-1			
100	M-1	100' - 70°		
100	M-2	100' - 75°		
99 100	M-3A			
50	M-4	60' - 60°		
32	M-5	abandon casing hole		
	M-8	Don't Drill		
60	LB-1	60' - 60°		
60	LB-2	60' - 60°		
		<u>540'</u>		
			310	
			540	
			<u>850'</u>	

over



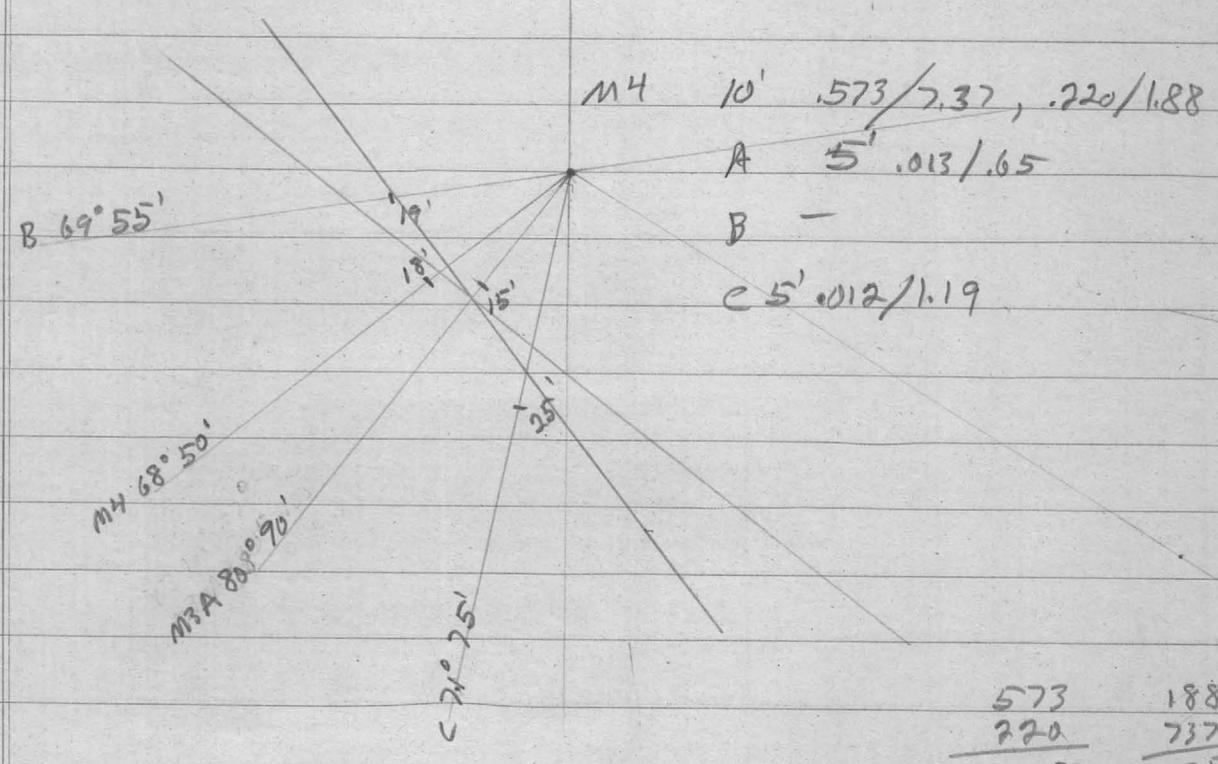
JAMISON AREA

- 60 JA-1 60' - 60° Vein between Mint & Cashier
- 75 JA-2 100' - 60° ditto
- ✓ JA-3 Don't Drill
- 100 JA-4 100' - 60° Mint?
- 106 JA-5 150 - 60° Same as 182
- 45 -6 60' - 60° Unknown Vein
- 50 -7 60' - 60° Between Unknown & Mint
- 75 -8 60' - 70° Unknown Vein
- 55 -9 100' - 60° Same as 7
- 125 -10 150' - 60° Jamison
- 95 -11 100' - 60° Same as 182, 85?
- 100 -12 940'

Bromo Dike

BD - 12	95	50'	- 60°		770'	153 + 45
- 14	107		"	sub pines	1200	240 + 80
- 16	120		"			393 + 125
- 18	125		"			125
- 20	170		"			518
- 27	100		"			
- 24	"		"			
- 26	"		"			
						<u>1,200'</u>

- ① 20 scale sections: draw on dashed lines to show HW & PW of Broncho Dike.
- ② Complete drill holes & assays on sections.
- ③ make 2 new sections (100 scale) across the vein.
- ④ Color code a print of the overlay to show holes:
 - no color = barren
 - Green = <.1 Au, 1. Ag
 - Red = >.1 1.
- ⑤ Sketch in Rhyolite dike near BD 16, 18



573	188
<u>220</u>	<u>737</u>
793	925
376	462
<u>2723</u>	<u>2725</u>
6	8
12	12
<u>18</u>	
13	

Mint -
Knight hawk -
Jamison & 98 -
Cashier -
alpha -
Summit -

Paymaster -
Mahawk -
Little Boy -
Bluebell -
American Legion -

Polaris -
De la Fontaine -
Golconda -



E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED

WILMINGTON, DELAWARE 19898

POLYMER INTERMEDIATES DEPARTMENT

HEINRICH
GEOEX
GEOLOGICAL ASSISTANCE
TUCSON, ARIZONA



REC'D OCT 31 1974

BOX 5964 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

October 29, 1974

Mr. Walter E. Heinrichs, Jr.
President & General Manager
Heinrichs GEOEXploration Company
P. O. Box 5964
806 West Grant Road
Tucson, Arizona 85703

Reference:

GEOEX Job No. 974
Du Pont Job No. 7126-442045
Your Letter of 10/7/74

Dear Walter:

This letter will acknowledge Du Pont's acceptance of your proposal dated October 7, 1974 (as amended in Attachment No. 1) for providing geological assistance on the referenced project.

Work will start Monday, October 17, 1974 and continue until such time as Phase I feasibility is completed or terminated by Du Pont - estimated at four to eight weeks.

Howard Bartlett, Du Pont geologist, will have supervisory responsibility at the job site and in this capacity will coordinate the activities of GEOEX personnel involved in this work agreement. Jack Knudson will be project coordinator for our Wilmington office (telephone 302/774-7657) in the event you have any administrative problems or questions requiring our assistance. To insure prompt processing, please forward all invoices for payment to Jack's attention:

Mr. J. R. Knudson
E. I. du Pont de Nemours & Company
Polymer Intermediates Department
Minerals
Nemours Building 6516
Wilmington, Delaware 19898

- 2 -

Unless otherwise requested, all correspondence from your office concerning the subject job should be addressed to this office. Nothing should be sent to the job site.

Should you have any questions concerning this letter or the scope of work to be undertaken, please give me a call (telephone 302/774-7738).

Sincerely,

E. I. DU PONT DE NEMOURS & COMPANY

A handwritten signature in cursive script, appearing to read "E. M. Newton".

E. M. NEWTON
Development Manager
Minerals

EMN:MAP

Attachments

Attachment No. 1

Reference: GEOEX letter of
October 7, 1974
as amended

PROJECT: GEOEX Job No. 974
Du Pont Job No. 7126-442045

Description of Services and Fee

- Provide one geologist to log samples and drill results, including making a mineral inventory of drilled material and assigning percentage estimates for relative quantity of each material contained. Representative samples will also be cut at assigned intervals and submitted for assay analysis at Du Pont's direction.

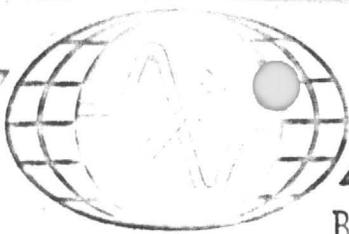
Period - 10/17/74 to 12/1/74 if not otherwise terminated by Du Pont

Fee - \$165.00 per man per work day (10 hour day) plus travel expense (estimated at \$25.00/day)
- Provide a pickup truck vehicle at \$10.00/day plus 20¢ per mile.
- Deliver ore and drill cutting samples to Mountain States Engineering as directed by Du Pont.

Fee - To be provided by GEOEX.
- Ship, as directed by Du Pont, when requested by Du Pont ore and drill cutting samples to other locations specified by Du Pont.

Fee - To be provided by GEOEX.
- Provide other services as requested by Du Pont per the attached schedule of Base Rates for Services.
- Provide those essential materials that are required in the performance of the above services as requested by Du Pont - Ex. Sample bags, etc.

EMN:MAP
October 29, 1974



March 1973

Approx 10% MAY 1973

CONFIDENTIAL

BASE RATES FOR SERVICES

RETAINER, OR TURN-KEY JOBS AND RATES BASED ON CONTINUING EFFORT IN EXCESS OF 20 WORK DAYS, OR RATES BASED ON UNITS OF PRODUCTION, OR ON ANY OTHER BASIS ARE NEGOTIABLE, AS ARE EXTRA PERSONNEL, EQUIPMENT & SERVICES.

Per work day, plus expenses:

- Master Professional & witness work-\$160.00 to \$250.00 (Min. job \$250.00)
- Senior Professional-\$165.00
- Junior Professional-\$137.50
- Senior Technician-\$110.00
- Junior Technician-\$ 82.50
- Helpers & general labor-\$60.00 ✓

Field crews may include a geologist, geophysicist, or senior technician as crew chief and technicians or helpers as assistants. Depending on personnel, method, and equipment, typical crews: 2 men - \$225.00 (per work day); 3 men - \$300.00. Certain types of outside rented E.M. equipment, gravity meters, etc., may add up to \$500.00 or more per month, or per job (see rental rates).

- Drafting, routine data compute & compile, eqpt. maint. & repair-\$12.50/hr
- Professionally interpret, report, train, design, & test-----\$175.00/day
- Laboratory Physical Property testing of samples, etc.-----\$15.00/hr

Expenses

Vehicles - \$15.00 per day per vehicle and ^{20¢} \$0.75 per mile per vehicle.
 Living Expenses - our invoice or voucher cost plus 15%, or per diem rates at \$20.00 per man per day for professionals and crew chiefs and \$25.00 per man per day for assistants and helpers.

Directly incidental job expenses (communications, reproductions, special fees, permits, insurance, taxes, expendable field and drafting supplies, routine sub-contracting, assays, and analyses, etc.) - at 115% of our invoiced cost. Positioning time between Tucson and job sites in excess of 1/2 day on short term work is charged at 1/2 the daily base rate plus expenses as above. All other mobilization or travel, e.g.: between job locations, or long term work, etc. is negotiable. Inclement weather or client requested standby time is charged at 1/2 the daily base rate plus expenses as above.

A work day is 8 hours-office, or field work plus commuting time up to one hour per day each way between work and lodging sites. Overtime accumulated for work done in excess of 8 hours per day in the field or office and/or 5 days per week will be charged at 15% of the daily base rate per overtime hour plus expenses as above (Reasonable exceptions for professionals).

Property permits, line preparation and trespass-liability, and related costs incurred on projects are chargeable as expenses at our cost plus 15%.

October 18, 1974

E. I. Du Pont De Nemours & Company (Inc.)
1007 Market Street
Wilmington, DE 19898

Attention: Mr. Marshall Newton
Development Manager
Minerals
Polymer Intermediates Dept.

Re: Your Chico Project
GEOEX Job #974

Dear Mr. Newton:

This letter will serve to confirm personal conferences and telephone conversations this week with yourself, Mr. Howard F. Bartlett, Geologist, Energy and Minerals Department, and Mr. Wesley F. Spence of your company.

Reference is made to our quotation letter dated 7 October 1974 and addressed to Mr. Spence and the edited machine copy of a sheet entitled base rates for services of our Company updated from March 1973 with the notation "plus approximately 10% as of 1 May 1974." It is understood that GEOEX services are being provided in your behalf at your request per our discussions and these two above-mentioned references. GEOEX will be providing at least one professional geologist plus an assistant professional geologist and/or sub-professionals and helpers as may be requested and supplied, plus vehicle and transportation and certain professional geologic instruments and materials discussed. Contrary to our published rate sheets and letter to Mr. Spence, vehicle charges will be \$10.00 per vehicle day plus \$0.20 per vehicle mile rather than the \$15.00 per vehicle day stated.

We have already assisted Mr. Bartlett in several procurement matters related to necessary supplies and are scheduled to have one of our senior personnel in Kingman, Arizona, this coming Sunday evening 20 October 1974, ready to start drill work the next morning.

We understand you will also confirm these matters in a letter to us, probably some time next week, we meanwhile have your verbal authorization to proceed as indicated above.

E. I. Du Pont De Nemours & Co.(Inc.)
October 18, 1974
Page Two

We understand other personnel besides those mentioned above may be involved in the work such as Mr. Charles Ruderhausen and Mr. Jack Knudson also of your company.

For your information GEOEX is an Arizona Corporation. Our Internal Revenue Service Number is XI 86-0141923. Our office will be happy to supply any further information that you may require.

We are looking forward to working with you and providing this service.

Very truly yours,

HEINRICHS GEOEXPLORATION COMPANY

Walter E. Heinrichs, Jr.
President and General Manager

WEH:mt

Enclosure:

*1 May 1974 edited
GEOEX base Rates for
Service.*