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Grover Heinrichs, Bert Reid and Bob Helming of Essex Inter. Inc. met with Phelps-Dodge representatives Skip Clark, ^{Ngr. Engineer} Bill Bowen, ^{Resident geologist} George Dilke ^{Surley, OR} and ^{Asst. Engineer} Lowell Hinkins at 10 AM, February 27, 1973 in Phelps-Dodge offices at the Safford Project.

Skip Clark ~~opened~~ initiated discussion by asking for Essex' reason for requesting the meeting. Grover responded by asking that P-D personnel show Essex the exact location on the ground of the southern boundary of Tract 37. Grover further pointed out that apparently neither Essex nor P-D know ^{on the ground} the precise location of said boundary and any future work by Essex along the boundary would be hampered by the possibility that Essex' employees ~~would~~ could unknowingly cross the boundary and thereby violating the court order. Bill Bowen ~~responded~~ that expressed doubt as to our exact intentions. Grover further explained that due to an inadequate survey by a contractor to Essex there ~~were~~ ^{were possible} open claim fractions between Tract 37 and Essex property which could be located by a third party. Grover said Essex wanted to cover these fractions without violating Tract 37. Mr. Hinkins suggested P-D cover the fractions to which Grover responded that Essex had already taken the initiative ^{by amending claims} and needed only to locate ~~claim~~ ^{end} corners on the Tract 37 south boundary. The Phelps-Dodge group, and Skip Clark in particular, seemed surprised that any open ^{might} ground still exist.

At about this time in the discussion Skip Clark read a prepared typewritten statement

which he felt reflected the attitude of the Phelps - Dodge employees present. He further ~~was~~ ~~stated~~ indicated the statement probably also reflected the attitude of the Phelps - Dodge Corporation in general. We were permitted to read the statement but ~~they refused to furnish~~ ~~not given~~ a copy. The pertinent points of the statement were:

- 1) Essex' intense interest in the southern boundary of Tract 37 is ill-conceived
- 2) Essex' drilling program so close to the Tract 37 boundary is not "bona fide" exploration
- 3) Essex' actions to date can only be interpreted as deliberate harassment of Phelps - Dodge Corp.
- 4) Phelps - Dodge will prohibit entry of Essex personnel on patented claims and Tract 37

Grover retoliated with comments that Phelps - Dodge actions in regard to Tract 37 and adjacent Essex property to the south were ~~possibly~~ ~~illegal~~ illegal and immoral. In particular, he said that Phelps - Dodge was attempting to acquire ownership by having said property declared ~~nonmineral~~ nonmineral and thereby eligible for land exchange. This approach by P-D jeopardized Essex' ~~holdings~~ ^{exploration of its holdings adjacent to P.D.} ~~property~~ and precipitated the encounter of last December 15th. Grover indicated ~~strongly suggested~~ ^{is} that there ~~were events taking~~ ^{is ~~being~~ information} ~~place~~ by P-D ^{to acquire by non mineral exchange} ~~management~~ ^{said info.} ~~with regard~~ ^{may be likely} to Essex ~~the~~ Safford property that ~~was~~ ^{is} unknown to Skip Clark, Bill Bowen, et al. but were known to Essex and had strongly influenced Essex' course of action.

on exploration philosophy ~~at~~

After ~~was~~ a discussion (Skip Clark ^{emphasized} ~~said~~) they had neither ^{general} the time nor personnel to conduct a tour of the Tract 37 south boundary. Bill Bowen suggested P-D could send someone out to work with us if ~~we~~ Essex would give them advance notice of the area of interest and the problem. Grover agreed that procedure might be satisfactory. Skip Clark and Bill Bowen then backed down somewhat by saying they would have to clear that type of arrangement with Douglas and they would contact us when a decision was made.

The meeting was reasonably amiable and both sides made their positions clear. The physical setting was typical P-D. Essex representatives were given standard chairs on one side of a very small room. P-D personnel hovered over us either standing or sitting on high stools and staring down our throats. They obviously believed themselves legally, morally and physically above Essex.

The statements recorded above are accurate to the best of our recollection.

Bob Helming

SEQUENCE OF EVENTS AT SAFFORD, ARIZONA
ON TRACT 37 AND ADJOINING ESSEX CLAIMS
STARTING DECEMBER 15, 1972

- 6:25 am A front end loader leased to Essex International, Inc. opened a roadway in the earthen barricade blocking access to a portion of the Kim 1 mining claim and Tract 37. Led by E. Grover Heinrichs, Bob Helming, and Bill Brown on foot, the loader proceeded through the opening in the barrier. Closely following the loader was a Boyles Bros. Drilling Company truck mounted drill rig and a supply truck accompanied by J.K. Jones and D.C. Temple on foot.
- 6:30 am Approximately 250 feet inside the earthen barricade a guard stood in the roadway and prohibited further entry. The guard was asked by E. Grover Heinrichs on what authority Essex's entry was being denied, and he responded that his actions were based on authority of Phelps-Dodge Corporation. Heinrichs then stated that Essex did not recognize that authority in this situation, and was entering the area for the purpose of prospecting on the public domain. The guard responded to this statement by displaying a handgun and stating, "I have a gun and know how to use it." The drill and supply truck were then backed up to a position approximately 150 feet inside the earthen barricade where terrain was level enough for the drill to be set up. The front end loader was released and departed from the area.
- 6:43 am The guard ordered Essex personnel not to raise the mast on the drill. All activity was halted except for activation of a portable heater.
- 7:00 am The guard turned away from the drill and fired his handgun into the air.
- 7:05 am A pickup truck appeared several hundred yards to the northeast. The pickup, marked with a sign "O.B. Willis Co." proceeded down the hill to the drill.
- 7:08 am The guard, identified as Hank Briggs, accompanied by the driver of the pickup, Clifford Willis, stated that as an agent of Phelps-Dodge Corporation he was ordering us to leave Phelps-Dodge property. J.K. Jones responded that Essex was attempting to prospect on public domain.

- 7:12 am Clifford Willis told the guard that he had done his job and both men departed in the pickup. At that time an order was given by J.K. Jones to the drill crew to start the engine, raise the mast, and prepare to drill.
- 7:15 am The drill mast was raised and drilling started at a location 111 feet in a N49°E direction from the location monument of mining claim Kim 1.
- 7:17 am Bill Bowen, Phelps-Dodge Corporation geologist, arrived and stated that the Essex drill was situated on Tract 37 belonging to Phelps-Dodge Corporation. E. Grover Heinrichs responded that Essex was aware that the drill was on Tract 37, and J.K. Jones stated that entry had been made in order to prospect on the public domain. Bowen informed us of existence of the mining claim named "Scorpion" located between Tract 37 and the D&L claim, and Heinrichs advised Bowen of existence of mining claims Kim 1 and Kim 2. Bowen then departed.
- 7:25 am Skip Clark, manager of the Safford project for Phelps-Dodge Corporation, arrived at the drill, advised us that he was moving a bulldozer down to the area, and made an inspection on foot of claim posts and survey markers in the vicinity. Clark then returned to his pickup truck several hundred feet away and remained at that location.
- 7:45 am A bulldozer and another pickup approached from the northeast and stopped at Skip Clark's pickup.
- 7:50 am Paul Eimon and Howard Lanier arrived. Lanier took the notes describing events back to Safford. A front end loader arrived and parked behind the bulldozer.
- 8:05 am Bill Bowen, Skip Clark, Clifford Willis, and one other man came to the drill and advised us that they would give us a reasonable time to cease drilling and move the drill rig off their property or they would bring the bulldozer down and push the drill off the property. Paul Eimon ordered the drillers to cease drilling, lower the mast, and move the drill to a position approximately 150 feet southeast of its present location to a spot still inside the Phelps-Dodge barricade, outside of Tract 37 but on the Kim 1 claim. The drill stopped at a depth of 15 feet and moved as ordered.
- 8:15 am Clark Hirshi, field superintendent for Boyles Bros. Drilling Company, arrived and said that at 7:40 am he had been contacted

by phone by Bill Bowen of Phelps-Dodge who threatened to destroy the drill rig unless it was moved off Phelps-Dodge property. As the drill mast started to raise on the new site on Kim 1, Bowen, Willis, and others began walking to the Essex drill beside the bulldozer advancing with its blade down. The bulldozer was stopped on a signal from Bowen approximately 3 feet from Paul Eimon who had placed himself between the bulldozer and the drill rig. Bowen again identified himself as an agent for Phelps-Dodge and stated that the rig must be moved outside of the barricade in 15 minutes or he would order the bulldozer operator to push the rig into the wash. He stated that Essex was drilling on Phelps-Dodge claims. Orders were then given to the drillers to cease operation and remove the drill to a position outside of the barricade.

8:30 am Eimon, Heinrichs and Jones established the position of the south edge of the Kim 1 claim. Brown and Temple were sent to patrol other portions of the Essex claim group. Numerous Phelps-Dodge personnel inspected claim corners in the area. Bowen approached and stated that the land in dispute, Tract 37, was part of the exchange and that Phelps-Dodge had retained old mineral rights and claimed mineral ownership of the parcel. Bowen also stated that Phelps-Dodge had not done assessment work on Tract 37 for the past 3 years because they did not have to do the assessment work. Bowen refused to say that the barricade was the boundary of Tract 37. Bowen stated that the Kim 2 had not been located yesterday and that Essex should not explore the Scorpion claim. E. Grover Heinrichs assured Bowen that the Kim 2 had been located on December 13, the same day as Kim 1. Bowen was asked if a location on Kim 1 outside the barricade would be acceptable as a drill site, and Bowen said, "Happy drilling." The drill was then moved to a site outside the barricade determined to be on mining claim Kim 1 and drilling was started. A second front end loader arrived and parked with the other loader and bulldozer.

On Dec. on the basis of court order # all drilling and exploration activity was ceased on Sandwash #2, Kim 1, Tract 37 and any areas in conflict as defined by the court order.

THURSDAY, DEC. 21, 1972 -

8:05 am At 7:05 am I was called at home by Art Beattie of Boyles Bros., who said that at 7:00 am Jack Langton of Phelps Dodge had called him to warn him that the next time a Boyles Bros. truck entered into Phelps Dodge property there was a good chance it would incur physical damage. (Bob Helming - by telephone).

On Christmas eve in Tucson, Arizona, two subpoena duces tecums were served on Paul Eimon by a process server who said he couldn't understand why the defendant was so anxious to have the subpoenas served before Christmas.

December 26, 1972

P.I. Eimon

ESSEX - SAFFORD PROJECT
Tract 37
Memorandum Re Phone Conversation
with Messrs. Haggard and Ferguson

DEC 13 1972
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On 12-11-72, while on another phone conversation, I received a phone call from Jerry Haggard who asked that I return the call. I did so and after introducing himself and advising me that Fred Ferguson was also on the line, Jerry Haggard commented that he had received our "cheery" protest. He stated that it was their understanding that Essex is claiming fractions on the basis of the "D&L and the other claim," to which I replied that he was correct. He then asked if I knew and had available the location dates of the Sandwash and D&L claims mentioned in the protest. I told him that I did not have the dates but that I could get the dates and get back in touch with him in five minutes or so if he wished me to do so. He quickly remarked that this was not necessary and that they could get the same information with a phone call. There then followed a long pause in the conversation and finally Jerry Haggard asked why Essex had picked a drill site on Sandwash that they had picked. I told Jerry that I really didn't know but I assumed that Essex picked it in connection with their exploration operations on the Sandwash. At this point Jerry indicated that he understood and then asked if I was aware of the fact that PD's position was that Essex was drilling on PD ground. I told Jerry that it was my understanding that the Essex employee who was supervising the drilling was so advised on Saturday afternoon. Jerry then mentioned that PD claimed ownership of the area on which Essex was doing the drilling and that they also claimed ownership of the portion of the D&L claim listed in the protest and commented that he guessed Essex knew what they were doing. There seemingly being nothing else on Jerry's mind, he said that he would be talking to me in the future. End of phone conversation.

LNS
12-11-72

Mining Development
SAFFORD-PHELPS-DODGE HISTORY

<u>YEAR</u>	<u>DATE</u>	<u>EVENT</u>
1886-1907		Lone Star District produced 110,000 lbs. Cu.
1900-1920		Development and production at San Juan Mine
1949-1951		Consolidated Copper Mines and American Metal Company explored Lone Star.
1951		Tuab Mineral Corp. formed to lease San Juan.
1955		Bear Creek began reconnaissance of Lone Star Area.
1956		Bear Creek optioned claims. P.D. entered area west of San Juan. Ruskin Lines and Roper to Lawson & Moolick of P.D. (rapid discovery)
1956-1958		Bear Creek did drilling.
1958		Anderson and Claridge acquired Tuab Claims after Bear Creek dropped its option.
1960 (?)		P.D. acquired their deposit.
1962		Bear Creek developed shaft.

YEAR	DATE	EVENT
1963	May 27	Patent application on MS 4579 (survey grants)
1964	July 28	Patent granted
1967		Phalen Oil Co. of Houston optioned San Juan from

Anderson and Claridge.

1967 Mar. 3 P.D. application to BLM for patent on Tract #37.

(Certificate issued March 25, 1968.)

1971 ~~Jan. 4~~ ~~Met with Joe Durek in Oakland.~~ Most of January -

mapping at Morenci. Meeting with P.D. men.

Feb. 8 Discussion with Jacobson on Korn Kob in Essex

office.

Mar. 1(?) - 4 Ray Robinson mapping at Safford for ESSEX Feb. 24 Eimon's accident near Safford.

Mar. 5 J.K. Jones review of Safford district with Robinson

Mar. 6 Robinson review of Safford with Eimon & Jones in Tucson Mar. 18 Meeting - Lentz-Little, Eimon-Lanier - at Douglas.

MAR. 19 Field inspection of KCC exchange with McColley, Eimon, Jones, et al.

Mar. 30 Hearing on Kennecott-BLN exchange - Safford, Ariz.

(Essex did not attend but exchange was denied.)

Apr. 2 Filing of exchange proceedings with the BLM by P.D.

~~Apr. 13 Discussion - Lanier, Saegart, Eimon - Joint~~

~~venture at Safford.~~

May 18 Ray Ludden and Herb Jacobson at office for

Aug. 3 ^{in Tucson} discussions on Korn Kob. Discussion with Bill Kurtz, Steve Davis, and land man from ASARCO about Safford joint venture

as a proven reserve, but represent what is reasonably inferred from the three mineralized drill holes, adjacent unmineralized holes, and geologic interpretation. To prove this reserve six to ten additional drill holes would be required at a cost of \$400,000 to \$600,000. The average copper grades encountered cannot be considered ore at present copper prices using conventional mining and processing methods. For this reason the additional expenditure to prove the ore reserve does not seem justified. However, in the future the price of copper may increase significantly and consideration could be given to mining all or portions of the mineralization. Since the deep Essex mineralization cannot be mined by block caving methods without adversely affecting the shallower adjacent Phelps Dodge operation, one possibility would be mining the ore as an integral part of the Phelps Dodge operation during the late stages of that mine 30 to 60 years in the future. An alternative possibility that might be conducted solely by Essex would be consideration of new, unproven, in-place solution mining techniques such as the ammonia leach process being investigated by Kennecott in the Safford district.

In order to provide a 45° protection line from the bottom of mineralization known to date the property parcels listed below would have to be acquired.

<u>Parcel Number</u>	<u>Number of Claims</u>	<u>8-20-73 Payment</u>	<u>8-20-73 Purchase Price</u>	<u>2-10-73 Payment</u>	<u>8-20-74 Purchase Price</u>
1	19	\$ 4,750	\$238,450	\$ 7,600	\$264,100
2	5	1,250	62,750	2,000	69,500
4	30	7,500	286,500	12,000	327,000
5	5	1,250	47,750	2,000	54,500
8	8	2,000	76,400	3,200	87,200
15	2	500	19,100	800	21,800
16	<u>1</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
	70	\$17,250	\$730,950	\$27,600	\$824,100

If Essex were to elect to purchase these claims additional costs would be incurred for annual assessment work and other items as long as they were maintained. Neither is it possible to predict at this time what effect pending changes in the mining and land laws will have on Essex' ability to retain ownership.

Essex has developed a substantial reserve of low grade, deep copper mineralization which may be of considerable value in the distant future. However, the present worth of this copper is very small, and the cost to purchase and maintain ownership of the property involves considerable risk and the expenditure of more than \$1,000,000.


J.K. Jones

May 24, 1973

JKJ:td

STILL, LOWELL & STILL
ASSOCIATES
CONSULTING MINING ENGINEERS & GEOLOGISTS
TUCSON, ARIZONA 85704

J. W. STILL
J. DAVID LOWELL
ARTHUR R. STILL

December 7, 1972

5211 N. ORACLE
602 - 887-5341

Mr. Paul Eimon, Exploration Manager
Essex International
1704 West Grant Road
Tucson, Arizona 85705

Dear Mr. Eimon:

At your request I have examined B.L.M. Mineral Entry Final Receipt Number 55085 dated March 25, 1968, and a memorandum from R. A. McColly to the BLM District Manager, Safford District. Both of these documents relate in part to the mineral character of a group of unpatented lode claims including "Birthday", "Foothill", "Chino" and "Pasoford" claims. These claims are located immediately southwest of the Phelps Dodge Doc Pobres orebody in the Safford, Arizona, district. I was asked to comment on the mineral character of these claims based on this information.

The Phelps Dodge patent application describes the structural geology of the area as follows:

"Northwesterly block faulting then raised the Gila Mountains and caused the Doc Pobres orebody to be transected. The southern part, over which the Birthday Group is located, contains the downdropped portion of that orebody, and the deep mineralization that extends westward below the fault."

The general origin of the copper mineralization in the Birthday Group is described as follows:

"The Mineralization underlying the Birthday claims is both the laterally faulted upper portion of the oxidized mineralization exposed to the northeast, and the very deep mineralization that is continuous in the footwall below the fault. This mineralization is an integral part of the better exposed zone northeast of the fault, and it must be incorporated in any orderly plan for extraction of ore."

Assays are reported for portions of the holes drilled in the Birthday group which suggest bulk grades in 0.13-0.33% Cu range in the lower portions of these holes with a general tendency for increase in grade with depth. The deepest one of these holes was apparently drilled to a depth of 2800 feet. Information given on the strike and dip and estimated displacement of the fault which transects the Doc Pobres orebody together with information in the Doc Pobres claims patent application suggest that ore grade mineralization might be expected at depths of 3-4000 feet on the Birthday Group.

APPENDIX B

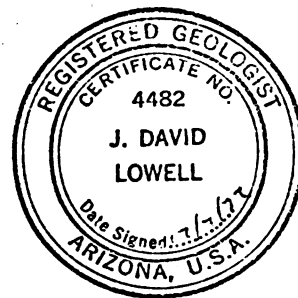
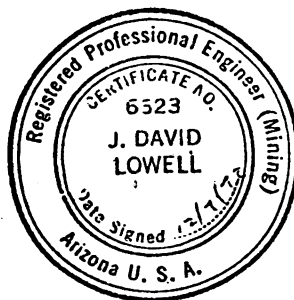
I have participated in preliminary feasibility studies for two other porphyry copper orebodies in which consideration was given to underground mining at depths in excess of 4000 feet. By comparison with these deposits the depth, character of mineralization, and expected grade in the Birthday Groups would not appear to present insurmountable obstacles to a mining operation if the geology is as interpreted by Phelps Dodge.

My general conclusion is that the Birthday group holes have not blocked out a commercial orebody, but they have indicated the probable existence of an orebody at greater depth which would be minable under current economics if similar in grade to the Doc Pobres orebody. In its present state of exploration the Birthday Group must be considered to be mineral ground.

Yours very truly,

J. David Lowell

J. David Lowell



Portions of Phelps-Dodge Application for Patent
on Birthday Group of "Tract 37" in 1967 (see pages 13 and 14).

LAW OFFICES

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Evans, Kitchel & Jernick

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PM 3 51 A

April 3, 1967

LAND OFFICE
PHOENIX, ARIZONA

United States Department of the Interior
Bureau of Land Management
Land Office
3022 Federal Building
Phoenix, Arizona 85025

Re: Application of Phelps Dodge Corporation
for patent to Birthday Group of lode
mining claims

Gentlemen:

On behalf of Phelps Dodge Corporation we transmit herewith the following instruments, the first set of patent papers in connection with its application for patent to the Birthday Group of lode mining claims, situate in the Lone Star Mining District, Graham County, Arizona:

- ✓ 1. Application for patent, in duplicate, which has been duly executed, and to which there is attached a duly executed corroborative report.
- ✓ 2. Certificate of John E. Masten, Secretary of Phelps Dodge Corporation, of adoption of resolution of Board of Directors authorizing the appointment of Walter C. Lawson, J. A. Lentz, and J. E. O'Neill as attorneys in fact.
- ✓ 3. Power of attorney to Walter C. Lawson, J. E. Lentz, and J. E. O'Neill.
- ✓ 4. Proof of Posting Notice of Application for United States Patent and Plats of Survey, with a duly executed copy of the notice of application attached.
- ✓ 5. Proof of Citizenship of J. E. O'Neill.
- ✓ 6. Publisher's Agreement of Gila Printing and Publishing Company.
- ✓ 7. Certified copies of Notices of Mining Locations of claims in Birthday Group.

Portions of Phelps-Dodge Application for Patent
on Birthday Group of "Tract 37" in 1967 (see pages 13 and 14)

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United States Department of the Interior
Bureau of Land Management
April 3, 1967
Page Two

- ✓ 8. Two (2) copies of Plats of Mineral Survey
No. 4632.
- 9. Two (2) copies of Field Notes.
- ✓ 10. Original and three (3) copies of form of
Notice for Publication of Application for United
States Patent.
- 11. Our firm check for \$25.00 for filing fee.

We are ordering an abstract of title to the claims, to
be dated after the date of filing this application, which we will
deliver to you in due course.

If any further data in support of the application is
required, kindly advise us.

Yours very truly,

Alfred B. Carr

Alfred B. Carr
For EVANS, KITCHEL & JENCKES

ABC:kh
Enclosures

Land Office
Phoenix, Arizona
PHOENIX, ARIZONA

1209435

IN THE MATTER OF THE APPLICATION)
OF PHELPS DODGE CORPORATION FOR)
PATENT TO THE BIRTHDAY GROUP OF)
LODE MINING CLAIMS)

APPLICATION FOR PATENT
AND CORROBORATIVE REPORT

PHELPS DODGE CORPORATION, a corporation organized under the laws of the State of New York and duly authorized to conduct its corporate affairs in the State of Arizona, whose post office address for the purpose of this application for patent is Morenci, Arizona 85540, hereby applies for patent to that certain group of twenty-three (23) contiguous lode mining claims known and referred to herein as the Birthday Group and consisting of the Birthday #s 2, 4, 5, 6, 7, 8, 9, 10, 11, Chino #1A, Foothill 33, 34, 35, #37, 42, #43, #44, #45, 46, and Pasoford 6, 7, #8, #9 Lode Mining Claims, and in support of such application shows:

1. Description of Claims According to Mineral Survey

No. 4632. The lode mining claims for which patent is applied herein are situated upon and comprise portions of the surveyed public lands in Sections 28, 32, 33, and 34, Township 5 South, Range 26 East, and Section 3, Township 6 South, Range 26 East, G. & S. R. B. & Meridian, in the Lone Star Mining District, Graham County, State of Arizona, as shown on the plats of Mineral Survey No. 4632, two copies of which are filed herewith as Exhibit 1 and by reference made a part hereof, and as described with particularity in the Field Notes of Mineral Survey No. 4632, two copies of which are filed herewith as Exhibit 2 and by reference made a part hereof.

2. Location of Claims. The lode claims, for which patent application is hereby made, were located, amended, and conveyed as

Foothill 42 Lode; therefore, it benefits or improves the value of both lodes.

\$500, or over, has been expended in such a manner as tends to the development of each of the stated lodes subsequent to its location and to the times since which common ownership and contiguity have prevailed; therefore, an undivided one-half interest is hereby credited to each of the stated lodes. No portion of, or interest in this improvement has been credited heretofore as past expenditure to any lode claim.

4. Description of Veins and Lodes. A general description and the geology and mineralization of the area and of each of claims for which application for patent is made are given to show the kind and character of the veins or lodes. No ore has been extracted from the claims.

General Geology

General Location

The lode claims of the Birthday Group are located in the Lone Star Mining District and are largely within the bounds of Section 33, Township 5 South, Range 26 East, which is about eight and one-half miles north of the center of Safford, Graham County, Arizona. The claims are near the southwestern edge of the Dos Pobres Group of patented claims owned by applicant, and they are accessible by several roads constructed by applicant.

Topography and Vegetation

The claims lie on the partially gravel-covered pediment of the Gila Mountains about a mile southwest of the mountain front. The gravel covering is irregular in thickness, ranging from a few feet to hundreds of feet, and the area has been eroded in a series of gently sloping southwesterly-trending ridges between dry washes.

There are no springs or perennial streams on the claims, and the vegetation consists of desert varieties such as greasewood, quinine bush, clump grasses, ocotillo, and the smaller varieties of cacti.

The ground is under grazing lease at the present time, but there are no feed troughs, sheds, corrals, or other cultural improvements.

Geologic History

The oldest rocks found on or near these claims are part of a series of andesitic flows which are divisible into four units. The oldest of these is a gray andesite which is overlain by a porphyritic unit, tuffaceous beds, and by fragmental andesite. All of these units were sheared and fractured along an eastern to northeastern trend. They were first intruded by plugs of monzonite porphyry and dacite porphyry and later by dikes of hornblende andesite.

Following the period of fracturing and faulting, this area was hydrothermally mineralized and altered by copper-bearing and iron-bearing solutions. After an extensive period of oxidation, the area was covered by a series of tuff, andesite, and basalt.

Northwesterly block faulting then raised the Gila Mountains and caused the Dos Pobres orebody to be transected. The southern part, over which the Birthday Group is located, contains the down-dropped portion of that orebody, and the deep mineralization that extends westward below the fault.

Finally, the area was partly covered by gravel derived from the receding Gila Mountain front.

Structure

The claims cover a dropped fault block lying between two major faults. These faults are Basin and Range type structures and are northwesterly trending and parallel the axis of the Gila Mountains. The fault lying along the northeastern border of the group, named the Foothill fault, has been traced approximately 1-1/2 miles northwest and at least 4 miles southwest of the claims. It is a normal fault dipping approximately 62 degrees to the southwest, and its displacement is 2,000 feet or more. The second fault, named the Valley fault, lies along the southwestern edge of the claim group and is also a normal fault, but its vertical displacement is unknown. Laterally, it has been traced for about 1-1/2 miles.

The graben between these two faults, which are 1,000 to 2,200 feet apart near the surface, has been sheared and broken into several smaller blocks. Diamond drilling has indicated that the top of the pre-mineral volcanic flows have been tilted or step-faulted toward the northwest with an average slope of approximately 20 degrees.

Surface Geology

Outcrops are not abundant on these claims. The tops of the highest hills are uncovered but the lower hills, ridges, and valleys are concealed under recent alluvium which varies from only a few feet to several hundred feet in thickness.

All of the exposed rocks between the Foothill and Valley faults are post-mineralization. Tertiary volcanic flows consist of brown to gray vesicular basalt, dense gray andesite, and rhyolitic to dacitic tuff agglomerates. The vesicular basalt is the most abundant unit at outcrop.

South of the Valley fault, the outcrops are all fragmental andesite. They are medium greenish gray with subangular inclusions of older flows. They are unmineralized and virtually unaltered.

All of the exposed rock north of the Foothill fault is strongly mineralized and is the oxidized part of the Dos Pobres orebody.

Mineralization and Alteration

The lode claims of the Birthday group are covered by

post-mineralization volcanic flows and gravel. Their character has been determined by deep drilling on individual claims to depths sufficient to confirm the continuity of mineralization, and by projections based on drilling and geological mapping of the exposed northeastern part of the orebody where bornite and chalcopyrite were oxidized to a depth of 1,000 feet but are present to below the explored depth of 3,000 feet.

The mineralization underlying the Birthday claims is both the laterally faulted upper portion of the oxidized mineralization exposed to the northeast, and the very deep mineralization that is continuous in the footwall below the fault. This mineralization is an integral part of the better exposed zone northeast of the fault, and it must be incorporated in any orderly plan for extraction of ore.

The mineralized zone can be divided into three indistinct zones. Mineralization in the upper zone consists of limonite, hematite, goethite, chrysocolla, native copper, and cuprite. Mineralization in the intermediate zone consists of all of the above minerals plus some relict sulfides, mostly pyrite. Mineralization in the lower zone consists of pyrite, chalcopyrite, and bornite. Oxidized minerals in the latter zone are present only in wide fractures or in fault zones.

The alteration associated with the mineralization can also be divided into zones. In the central area quartz-sericite was formed and the rock was partially bleached, especially along the fractures and shears. In addition, some secondary biotite was formed. Peripheral to this zone is a zone of less intense alteration characterized by weak bleaching and the formation of chlorite.

Claim Descriptions

Birthday #2

Geology. The Birthday #2 claim is at the northeast corner of the group. The claim is completely covered with gravel, and the nearest outcrop is the mineralized andesite north of the Foothill fault approximately 300 feet northeast of the claim.

Mineralization. Mineralization on this claim was encountered in diamond drill hole A-73 below 1170 feet. The rock contained weak to fair limonite staining, hematite blebs usually associated with strong bleaching that increased in strength with depth, and minor native copper below 1600 feet which is typical of the oxidized top of the ore zone. The hole caved and was lost at 2099 feet. The highest 10-foot assay was 0.09% copper which was obtained from 2030 to 2040 feet.

Birthday #4

Geology. The Birthday #4 claim is completely covered by gravel. The nearest outcrop is an exposure of post-mineral andesite a few hundred feet to the west.

Mineralization. Mineralization on this claim was encountered in a diamond drill hole A-66 which is located approximately 130 feet west of the east center end. The pre-mineral rock was encountered at 1490 feet and contained limonite films along the fractures

STILL, LOWELL & STILL
ASSOCIATES
CONSULTING MINING ENGINEERS & GEOLOGISTS
TUCSON, ARIZONA 85704

J. W. STILL
J. DAVID LOWELL
ARTHUR R. STILL

December 7, 1972

5211 N. ORACLE
602 - 687-5341

Mr. Paul Eimon, Exploration Manager
Essex International
1704 West Grant Road
Tucson, Arizona 85705

Dear Mr. Eimon:

At your request I have examined B.L.M. Mineral Entry Final Receipt Number 55085 dated March 25, 1968, and a memorandum from R. A. McColly to the BLM District Manager, Safford District. Both of these documents relate in part to the mineral character of a group of unpatented lode claims including "Birthday", "Foothill", "Chino" and "Pasoford" claims. These claims are located immediately southwest of the Phelps Dodge Doc Pobres orebody in the Safford, Arizona, district. I was asked to comment on the mineral character of these claims based on this information.

The Phelps Dodge patent application describes the structural geology of the area as follows:

"Northwesterly block faulting then raised the Gila Mountains and caused the Doc Pobres orebody to be transected. The southern part, over which the Birthday Group is located, contains the downdropped portion of that orebody, and the deep mineralization that extends westward below the fault."

The general origin of the copper mineralization in the Birthday Group is described as follows:

"The Mineralization underlying the Birthday claims is both the laterally faulted upper portion of the oxidized mineralization exposed to the northeast, and the very deep mineralization that is continuous in the footwall below the fault. This mineralization is an integral part of the better exposed zone northeast of the fault, and it must be incorporated in any orderly plan for extraction of ore."

Assays are reported for portions of the holes drilled in the Birthday group which suggest bulk grades in 0.13-0.33% Cu range in the lower portions of these holes with a general tendency for increase in grade with depth. The deepest one of these holes was apparently drilled to a depth of 2800 feet. Information given on the strike and dip and estimated displacement of the fault which transects the Doc Pobres orebody together with information in the Doc Pobres claims patent application suggest that ore grade mineralization might be expected at depths of 3-4000 feet on the Birthday Group.

APPENDIX B

Aug. 4, 5
 Aug. 11?
 Aug 11-13
 YEAR

Safford field trip Jones, Heinrichs who by now has most of
 property signed up
 Lentz advised Lanier that PD interested in joint venture
 Jones in field mapping geology
 DATE EVENT

Page 3

1971

Aug. 19

Eimon met with Rogers to discuss possible joint

venture at Safford.

Aug. 20

Grover obtained most of Essex options in Safford

Aug. 24-28 Geo. Warnock mapping ^{area} east of San Juan Mine for ESSEX

Aug. 25 Office rented in Safford

Aug 24? Drill hole ES-1 Collared Aug.-Sept.-Nov. ES #1

Aug. 26 Robinson in Safford looking at San Juan Mine for Du Pont.

Sept. 7 Chas. Sewell & Bill Brown returned to assist at Safford

Oct. 29

Letter from Lentz to Lanier cutting off BYU-Anderson-

Sept. O'Malley visit to Safford

Sept. 15 Eimon & Jones meet with McColly at BLM

Sept. 24 Eimon & Jones meet with McColly at BLM
 office in Phoenix to ask for Claridge claim negotiations.
 patent data.

Sept. 29 Skip Clark provided coordinates of PD triangulation stations
 1972 Dec.-Jan.-Feb.-

Mar.-Apr. ES#2

Oct. 5 BLM files on PD patent data arrived in Phoenix, ~~putting up~~

Feb. 22

Jack Langton paper on Morenci - AIME - San Francisco.

Apr. 11

Meeting with Brown and Ludden of P.D. at

Ft. Wayne.

June-July-Aug.

ES #3. P.D. I.P. on Winkler-Faulkner ground.

June 9

Letter from Wm. Brown, Exploration Mgr. -

Phelps Dodge, turning down (?) joint venture

possibilities at Safford

<u>YEAR</u>	<u>DATE</u>	<u>EVENT</u>
1972	Sept. 2	Location notice posted on D&N (Pickup #1)
	Sept. 29	P.D. relinquished all rights to the Winkler-Faulkner. They reportedly had over 65% control of ownership.
	Oct.	Essex I.P. survey. P.D. I.P. crews active.
	Oct.-Nov.-Dec.	Essex - 3 drills at Safford
	Oct. 11	First publication Safford newspaper. BLM-P.D. exchange Tract #37
	Oct. 24	Meeting with Leonard Howard in Punxsutawney, Pa.
	Nov. 13	Lunch with Pennebaker at MCSW. Odd discussions. When I suggested that I had to return to work he discussed Safford and offered to send me copy of his letter to P.D.
	Nov. 27	Discovery work on D&N Sandwash and our claims should begin.

VERITY & SMITH
ATTORNEYS AT LAW
SUITE 902 TRANSAMERICA BUILDING
177 NORTH CHURCH AVENUE
TUCSON, ARIZONA 85701

VICTOR H. VERITY
LEO N. SMITH
JOHN C. LACY
DESMOND P. KEARNS

AREA CODE 602
TELEPHONE 622-7445

December 15, 1972

SXM

DEC 18 1972

RECEIVED

Mr. Howard Lanier
Vice President & General Manager
Metallurgical & Mining Division
Essex International, Inc.
1601 Wall Street
Fort Wayne, Indiana 46804

Re: Safford Project

Dear Howard:

Enclosed is a copy of the Complaint which was filed this afternoon in the United States District Court under file number CIV. 72-204 GLO. Also enclosed is a copy of a pleading filed by Phelps Dodge designated as Answer, Counterclaim and Applications for Temporary Restraining Order, etc., in Case No. CIV. 72-203 TUC.

Judge Walsh conducted a very informal hearing and after a brief description by Ken Allen of the rights that Essex was asserting, the judge stated that he wanted to prevent any further acts or threats of violence and that he would hope that the parties would stipulate to freezing the status quo. The essence of the stipulation is that neither party will conduct any activities within the disputed area pending a hearing to be held in Phoenix on January 8, 1973. The formal Order will not be typed and entered until Monday and I will furnish you a copy thereof when we receive it. In balance, it would appear that we achieved our purpose.

Very truly yours,

Leo N. Smith

LNS:dmd
Enclosures

cc: Edward D. Downing w/enclosure
Paul I. Eimon/w/enclosure

P.S.

Dear Paul:

Enclosed are the attachments to PD's pleading, which pleading you picked up at the office this afternoon.

LNS

C
O
P
Y

The United States of America

To all to whom these presents shall come, Greeting:

WHEREAS

Phelps Dodge Corporation

is entitled to a Land Patent pursuant to Section 8, Act of June 28, 1934 (48 Stat. 1272), as amended by Section 3, Act of June 26, 1936 (49 Stat. 1976; 43 U.S.C. 315g), in exchange for certain other lands situated in the State of Arizona, for the following described lands:

Gila and Salt River Meridian, Arizona.

T. 5 S., R. 25 E.,
Sec. 35, All;
Sec. 36, All;

T. 6 S., R. 25 E.,
Sec. 2, Lots 1, 2, $S\frac{1}{2}NE\frac{1}{4}$, $SE\frac{1}{4}$;

T. 5 S., R. 26 E.,
Sec. 31, Lots 1, 2, 3, 4, $S\frac{1}{2}NE\frac{1}{4}$,
 $S\frac{1}{2}N\frac{1}{2}NE\frac{1}{4}$, $E\frac{1}{2}W\frac{1}{2}$, $SE\frac{1}{4}$;
Sec. 32, All;

T. 6 S., R. 26 E.,
Sec. 4, $SW\frac{1}{4}NW\frac{1}{4}$;
Sec. 5, Lots 2, 3, 4, $S\frac{1}{2}N\frac{1}{2}$, $W\frac{1}{2}SW\frac{1}{4}$;
Sec. 6, Lots 1, 2, 3, 4, 5, $S\frac{1}{2}NE\frac{1}{4}$,
 $SE\frac{1}{4}NW\frac{1}{4}$, $E\frac{1}{2}SW\frac{1}{4}$, $SE\frac{1}{4}$;
Sec. 7, $E\frac{1}{2}$, $E\frac{1}{2}E\frac{1}{2}W\frac{1}{2}$, $W\frac{1}{2}SE\frac{1}{4}SW\frac{1}{4}$;
Sec. 8, $W\frac{1}{2}W\frac{1}{2}NW\frac{1}{4}$, $W\frac{1}{2}NW\frac{1}{4}SW\frac{1}{4}$, $SW\frac{1}{4}SW\frac{1}{4}$,
 $W\frac{1}{2}SE\frac{1}{4}SW\frac{1}{4}$;

Containing 4,297.12 acres;

NOW KNOW YE, That there is, therefore, granted by the UNITED STATES unto the above named claimant the lands above described; TO HAVE AND TO HOLD the said lands with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereunto belonging, unto the said claimant, its successors and assigns forever;

EXCEPTING AND RESERVING TO THE UNITED STATES:

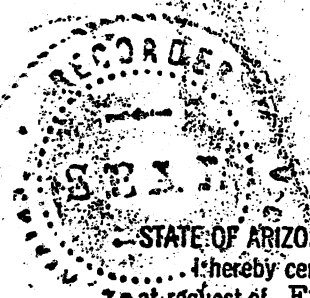
A right-of-way for ditches and canals
constructed by the authority of the
United States. Act of August 30, 1890,
26 Stat. 391; 43 U.S.C. 945;

Patent Number

02-69-0053

AR 035107

SUBJECT TO and Reserving to the State of Arizona all minerals as appear of record in deed dated May 11, 1945, recorded in Book 47 of Deeds, pages 211-212 of the records of Graham County, as to said sec. 36, Township 5 South, Range 25 East; lots 1 and 2, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$, said sec. 2, Township 6 South, Range 25 East, and said sec. 32, Township 5 South, Range 26 East.



STATE OF ARIZONA, County of Graham, ss Fee \$2.00 No. 683
I hereby certify that the within instrument was filed and recorded
at request of Evans, Kitchel & Jenckes 2-28-69 2:00 P.M.
in Docket No. 138 Page 244-245 and indexed in Patents

Witness my hand and official seal the day and year aforesaid.

H. LYLE GRANT
COUNTY RECORDER

By H. Lyle Grant Deputy

IN TESTIMONY WHEREOF, the undersigned authorized officer of the Bureau of Land Management, in accordance with the provisions of the Act of June 17, 1948 (62 Stat. 476), has, in the name of the United States, caused these letters to be made Patent, and the Seal of the Bureau to be hereunto affixed.



GIVEN under my hand, in Phoenix, Arizona, the THIRD day of FEBRUARY in the year of our Lord one thousand nine hundred and SIXTY-NINE and of the Independence of the United States the one hundred and NINETY-THIRD.

By Glendon E. Collins
Manager, Arizona Land Office.

Patent Number 02-69-0058

a v o

TO Howard Lanier LOCATION Ft. Wayne, Ind.
FROM Paul Eimon LOCATION Tucson, Arizona
SUBJ. Tract 37 Evaluation DATE Dec. 28, 1973
Safford, Arizona

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INTRODUCTION

Enclosed are four documents, a plan map, property map, and two cross sections to support and illustrate this evaluation of Essex' position on Tract 37 at Safford, Arizona. This evaluation is built on a series of facts, technical judgments, educated opinions, and inferences that are variable in quality but are typical of the type of data utilized in reaching mining exploration decisions. The May 24, 1973 memorandum by Jones and the enclosed maps summarize present knowledge of copper mineralization developed on Essex claims and the Dos Pobres orebody of Phelps-Dodge Corporation. These two known mineral occurrences are immediately adjacent to the north and south sides of Tract 37 and thus are of primary importance in any evaluation.

LOCATION

Tract 37, a parcel of 366 acres, is located in the Lone Star Mining District between the northwest edge of a large group of unpatented mining claims optioned to Essex and the Dos Pobres group of patented claims owned by Phelps-Dodge. The enclosed property map shows Tract 37 in relation to Essex' holdings and other major property holders in the district.

HISTORY

In the late 1950's Phelps-Dodge optioned the Dos Pobres mining claims and numerous other mining claims in the vicinity and commenced an exploration program. The first few holes indicated a major discovery and in the ensuing 15 years systematic development has been pursued. Due to Phelps-Dodge's strong position in domestic copper reserves, development has proceeded more slowly than if certain other companies had been involved. Apparently the early success of exploration and policy procedures or internal politics caused the Mine Operating Department to take control of development before exploration studies had progressed far enough to fully define the mineral potential. Personal communication with ex-Phelps-Dodge exploration personnel indicates that considerable bitterness was generated when the operators took over and would not permit completion of the recommended exploration program. In 1963 patent application was filed on a large group of claims and patent subsequently was granted by the

Bureau of Land Management. By 1966 it probably became apparent to Phelps-Dodge geologists that a portion of the orebody had been cut off and displaced down 2000 feet or more by a strong fault. In 1967 an attempt was made to patent the group of mining claims now known as Tract 37 and in the patent application Phelps-Dodge geologists made a strong statement to the effect that a displaced segment of mineralization existed on Tract 37 (see attachments). The Operating Department had not invested the necessary funds in deep drilling on Tract 37 and though existing shallow drill holes indicated increasing copper values with depth no ore intercepts had been found and the patent application was denied. In 1972 a move was made to declare the tract non-mineral in character and thus effect a land exchange and gain ownership of the surface. Information made available to Essex by a third party indicates that consideration was given to extending the non-mineral exchanges farther south to gain control of land presently under option to Essex.

In August 1971 Essex optioned the large block of claims south and southwest of Tract 37 and immediately started a drilling program. Upon learning of the pending exchange Essex took legal action in order to prevent possible erosion of Essex' mining rights and, if possible, to gain mineral rights on Tract 37.

GEOLOGY

Published announcements by Phelps-Dodge Corporation and thorough study of reports submitted in support of patent applications have provided Essex with considerable information on the Dos Pobres orebody. Mineral assemblages, alteration types, rock type, and structural features have been cataloged and systematically compared with results of geologic studies on Essex property. Published reserve at the Dos Pobres orebody is 250 million tons at a grade of .92% copper, but Essex' evaluation and statements by technical personnel familiar with development results indicate that the orebody has not been totally drilled out and that it will eventually be found to contain at least 500 million tons and very possibly 1 billion tons of ore or more. The enclosed map and cross sections are a simplified portrayal of the Dos Pobres orebody and vicinity based on the above mentioned data. Sulfide mineralization occurs beneath 1000 to 1500 feet of oxidized material and barren post mineral rocks, so plans are to mine by underground block caving methods. Although underground mining usually is more costly than open pit mining this increased cost at the Dos Pobres Mine will be offset by the .92% copper grade, the highest known for any primary porphyry copper deposit in North America. The orebody is cut by a strong fault with the upthrown block on the Phelps-Dodge patented claims on the north and the downthrown block on Tract 37 and on Essex' optioned claims. A portion of the Essex exploration program in the district was directed toward discovery of the down-faulted portion of the Dos Pobres orebody, estimated

to be 2000 to 3000 feet deep. Unfortunately the displaced portion of the orebody did not slide along the fault in the right manner to give Essex a mineable orebody.

DATA USED

Evaluation of Tract 37 is based in large part on the following information.

Essex generated data. Essex has drilled 22 holes to depths of up to 4960 feet, mapped surface exposures of geology over a large area in the district, and conducted detailed studies using all members of the staff and consulting geologists. This data is available in the Tucson and Safford office files.

Patent information. In order to obtain patent on a mining claim mineral character must be proven, and this information becomes part of the public record. The attached preamble to the Tract 37 patent application by Phelps-Dodge clearly states that the claims contain a portion of the orebody.

J. David Lowell. In the course of legal action on Tract 37 Essex asked the well known consulting geologist and author of several definitive articles on porphyry copper deposits to review Phelps-Dodge patent data. In the attached opinion Lowell states that "The Birthday group holes have not blocked out a commercial orebody, but they have indicated the probable existence of an orebody at greater depth which would be mineable under current economics if similar in grade to the Dos Pobres orebody."

Personal communications. Various conversations have taken place between Essex and Phelps-Dodge personnel and with former Phelps-Dodge employees since start of Essex' activity in the district. Various comments have been made by the late George Rogers, Chief Geophysicist; John Sumner, former geophysicist for Phelps-Dodge; Josep Durek, former Chief Geologist at Morenci; Jackson Langton, Chief Geologist of the Morenci Mine division; Bill Bowen, Mine Geologist at the Dos Pobres mine, and others. Although some comments by Phelps-Dodge personnel might be suspect, several statements originally considered questionable have been proven correct. Bowen, Langton, Durek, and Sumner all have positively stated that a portion of the Dos Pobres orebody has been downfaulted and lies at depth on Tract 37.

SUMMARY

1. The Dos Pobres orebody discovered by Phelps-Dodge adjacent to the north side of Tract 37 is a very large and rich porphyry copper

deposit that will be brought into production as soon as technical problems are solved.

2. Essex has explored mining claims adjacent to the south side of Tract 37 and found a substantial but as yet incompletely developed tonnage of copper ore which is too low grade and too deep to be mined at a profit at present.
3. No factual information exists to prove ore on Tract 37, but the amount of indirect information pointing to presence of copper mineralization at depth is overwhelming. Actual value of mineralization can only be determined by drilling. Because this mineralization will be relatively deep, it cannot be mined even if the grade proves to be good, until shallower portions of the adjacent Dos Pobres orebody have been mined.
4. Development of the Dos Pobres orebody will be stopped if Phelps-Dodge cannot secure the right to occupy and cave the surface of Tract 37.
5. Essex mining claims adjacent to the south boundary of Tract 37 will have to be controlled by Phelps-Dodge at some time 20 to 30 years in the future in order to cave deep portions of their orebody.

CONCLUSIONS

Tract 37 is of considerable value as it controls development of the extremely valuable Dos Pobres ore deposit and may prove to contain mineable ore at depth. Unless Phelps-Dodge can secure this property, development of a large mining operation and the resulting copper production and profit will be stopped. However, Essex' ability to influence control of Tract 37 is contingent on undetermined legal factors and could be described as tenuous.

The Essex optioned mining claim position adjacent to the south side of Tract 37 contains a deeply buried, low grade portion of the Dos Pobres orebody that can be owned provided that Essex exercises options and continues assessment work or other requirements under possible new mining laws.

It would be to Phelps-Dodge's advantage to reach an accommodation with Essex on Tract 37 in order to permit continued development. Phelps-Dodge at some time will need a portion of Essex' optioned claims in order to continue development of the orebody, but control of this property is not of immediate concern. Furthermore, profound changes in public land laws expected in the next few years may alter status of the optioned claims so that Phelps-Dodge may consider that it has little to lose by waiting on any optioned claim accommodation.

The somewhat emotional reaction of Phelps-Dodge's operating division to Essex' activities probably is partly a defensive reaction resulting from their mis-handling of the property situation, but also results from resentment of what they see as a chiefly obstructionist action on Tract 37 of the sort that major mining companies have avoided in modern times. Whether these considerations will prevent an agreement mutually beneficial to both Essex and Phelps-Dodge can only be determined at higher levels in both companies.

It is my opinion, based on our knowledge of the situation and a detailed review with Leo Smith, that the most advantageous solution of the present situation created both by Phelps-Dodge and Essex would be a cooperative venture to restore valid mineral ownership to Tract 37. If Essex were to withdraw from the litigation without this cooperation, third parties might enter and damage both the Phelps-Dodge and the Essex position. The cooperation of Phelps-Dodge and Essex to resolve the situation may be emotionally difficult to obtain.

A handwritten signature in cursive script, reading "Paul E. Smith". The signature is written in dark ink and is positioned to the right of the typed name.

PIE:td
attachments (8)

EVALUATION OF COPPER MINERALIZATION

ON ESSEX OPTIONED CLAIMS

Safford, Arizona

May 24, 1973

J.K. Jones

Deep drill holes on the northwest portion of the mining claims under option to Essex near Safford, Arizona, have discovered what can reasonably be inferred as a large tonnage of low grade copper mineralization. Mineralization on Essex claims probably represents a low grade fringe of the much higher grade Phelps Dodge orebody situated a short distance to the north, and probably is contiguous with comparable or possibly better grade mineralization on the incompletely explored Tract 37 lying between Essex' claims and Phelps Dodge patented mining claims.

Data available on the Phelps Dodge orebody suggest that it may be an elliptical-shaped cylinder averaging 2000 feet in diameter with approximately 1000 feet of oxidized material overlying a minimum thickness of 1400 to 1600 feet of sulfide ore. Accepting these assumptions the orebody would contain 377 million tons. This total is somewhat larger than the announced reserve of 250 million tons at 0.92% copper so the area assumed for the mineralized cylinder may be too large. Many other porphyry copper deposits have a vertical extent in excess of 5000 feet and a comparable extension at depth at the Phelps Dodge orebody would result in a total in the range of 500 million to one billion tons. Phelps Dodge is proceeding with systematic evaluation of the deposit and probably will elect to start development in the near future. At a production rate of 50,000 tons per day the announced ore reserve will provide a 14 year life. However, it seems likely that the operation would be started at a lower production rate, perhaps in the range of 20,000 tons per day, and later expanded to 40,000 to 60,000 tons daily as mining problems are defined and solved. With a seven to eight year pre-production period required for a large block caving operation the announced reserves will not be depleted for 21 years to possibly as much as 30 years. During this period Essex' claims adjacent to Tract 37 should not be affected by mining. At a later time, as mining takes place progressively deeper, subsidence will reach surface portions of Essex' property.

Three widely spaced drill holes on Essex property near the boundary of Tract 37 indicate that an area approximately 1000 by 3000 feet and 800 feet in thickness contains 0.37% copper. This volume would represent approximately 200 million tons containing 1,480,000,000 pounds of copper on Essex property. These figures should not be considered