April 10, 1962

Mr. A. G. Queymard
First City National Bank
Houston, Texas

Dear Mr. Queymard:

We have previously discussed with you the need of Alpha Mineral Company for additional funds for the purpose of conducting exploration for minerals in the State of Arkansas.

Alpha Mineral Company is a limited partnership organized under the laws of the State of Arkansas and is the owner of a block of leases covering lands in, and in the area of, Section 30, Township 2 South, Range 14 West in Saline County, Arkansas. We have certain geological and other data which in our opinion indicates that this lease block covers an excellent prospect for the discovery and production of magnetite (iron ore) and may well contain columbium, tantalum and other minerals common to an ultra-basic intrusion.

We have funds to the extent of $30,000.00 available for core drilling and other work to evaluate the prospect, but additional funds in the amount of $30,000.00 will be required to accomplish properly the work which we need to do. This letter therefore confirms our request for a loan in the amount of $30,000.00 to be secured by all of our leasehold interests covering this prospect.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Any additional information which you may require will be furnished upon request.

ALPHA MINERAL COMPANY

By L. W. Minturn

L. W. Minturn,
General Partner

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# FIRST CITY NATIONAL BANK
OF HOUSTON

HOUSTON, TEXAS
April 12, 1962

A. G. GUEYMARD
VICE PRESIDENT

Mr. L. W. Minturn, General Partner
Alpha Mineral Company
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

You have again requested our consideration of a loan in the amount of $30,000.00 to Alpha Mineral Company, which loan would be secured by a block of prospective mining leases in Saline County, Arkansas. You further advised that the proceeds of the loan would be used to further evaluate the mining prospects by obtaining results of additional core drilling.

We are sorry to advise that we can not meet your request, because the collateral offered does not meet our lending standard. We do not make loans on minerals in any form, unless the same can be properly evaluated and have reached the stage of actual production.

Thank you for considering us in this matter.

Yours very truly,

A. G. Gueymard
Vice President

AGG/es

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

April 10, 1962

Mr. Albert M. Ball, Vice President
Bank of the Southwest National
Association, Houston
Houston, Texas

Dear Mr. Ball:

We have previously discussed with you the need of Alpha Mineral Company for additional funds for the purpose of conducting exploration for minerals in the State of Arkansas.

Alpha Mineral Company is a limited partnership organized under the laws of the State of Arkansas and is the owner of a block of leases covering lands in, and in the area of, Section 30, Township 2 South, Range 14 West in Saline County, Arkansas. We have certain geological and other data which in our opinion indicates that this lease block covers an excellent prospect for the discovery and production of magnetite (iron ore) and may well contain columbium, tantalum and other minerals common to an ultra-basic intrusion.

We have funds to the extent of $30,000.00 available for core drilling and other work to evaluate the prospect, but additional funds in the amount of $30,000.00 will be required to accomplish properly the work which we need to do. This letter therefore confirms our request for a loan in the amount of $30,000.00 to be secured by all of our leasehold interests covering this prospect.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

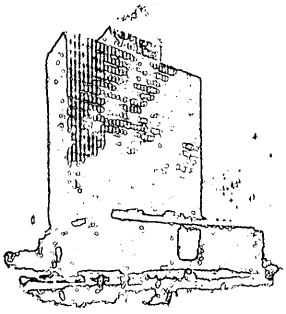
Any additional information which you may require will be furnished upon request.

ALPHA MINERAL COMPANY

By _____
L. W. Minturn,
General Partner



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS



# BANK OF THE SOUTHWEST

NATIONAL ASSOCIATION HOUSTON

HOUSTON, TEXAS

ALBERT M. BALL
VICE PRESIDENT

April 11, 1962

Mr. L. W. Minturn, General Partner
Alpha Mineral Company
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

This acknowledges your letter dated April 10, 1962, in which you apply for a loan of $30,000 for Alpha Mineral Company. The purpose of the loan is to cover part of the expense in drilling for magnetite on a lease block in Saline County, Arkansas.

Our Loan Committee has reviewed your application and it was not approved. We do not look with favor on loans based on undeveloped property. In fact, banking regulations do not permit it.

It is suggested that you check with us in the future when you think we may be of assistance.

Yours very truly,

A. M. Ball

Vice President

AMB b

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# NICKEL OCCURRENCES IN SOAPSTONE DEPOSITS SALINE COUNTY, ARKANSAS

PHILIP J. STERLING AND CHARLES G. STONE

REPORT 3

Reprinted from ECONOMIC GEOLOGY, Vol. 56, No. 1, January–February, 1961

RETURN TO
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

*Reprinted from*
*Economic Geology*
Vol. 56, 1961, pp. 100–110

# NICKEL OCCURRENCES IN SOAPSTONE DEPOSITS SALINE COUNTY, ARKANSAS

PHILIP J. STERLING AND CHARLES G. STONE

ABSTRACT

Nickel of possible economic interest has recently been found in an area 15 miles west of Little Rock in Saline County, Arkansas. The nickel occurs in sulfides in talc-carbonate rocks, in iron and manganese oxides in weathered serpentine dikes, and disseminated as sulfides in unweathered serpentine.

The dikes and the talc-carbonate rock occur in deposits that are currently being mined for soapstone. Assays of samples from the soapstone pits range from a trace to 15.0 percent nickel.

## INTRODUCTION

In mapping the geology of the Benton quadrangle in central Arkansas the authors noted several features of the rocks exposed in the soapstone pits of northern Saline County (Fig. 1) that were suggestive of nickel mineralization. Samples were collected and tested for nickel, cobalt, chromium, copper, and platinum, but only the percentage of nickel present seemed to justify further investigation.

Although a few cores were available from drill holes in the area, the study was based largely on the examination of the soapstone pits. Samples of the various rock units exposed in the pits were analyzed in order to isolate the nickeliferous rock. Subsequent channel sampling of the nickel-bearing rock units was then undertaken to determine the extent of the nickel mineralization.

The only previously reported nickel occurrence in Arkansas was described by Comstock (5). He states that several tons of ore containing millerite were shipped from a mine located 8 miles south of the area described in this report. The mine workings are inaccessible at the present time. Several brief reports have been written on the Saline County soapstone deposits, and although Daw (7) recognized the presence of nickel in the deposits, he indicated that only trace amounts to 0.22 percent nickel were present.

The writers are grateful to Mr. Albert J. Hess of the Milwhite Company, Houston, Texas for access to the pits and examinations of the available core samples. Mr. Norman F. Williams, State Geologist of Arkansas sponsored the study and furnished helpful advice. Mr. Drew F. Holbrook of the Arkansas Geological and Conservation Commission assisted in the field work and in writing the report. Mr. Troy W. Carney, Chemist of the Arkansas Geological and Conservation Commission, analyzed the samples.

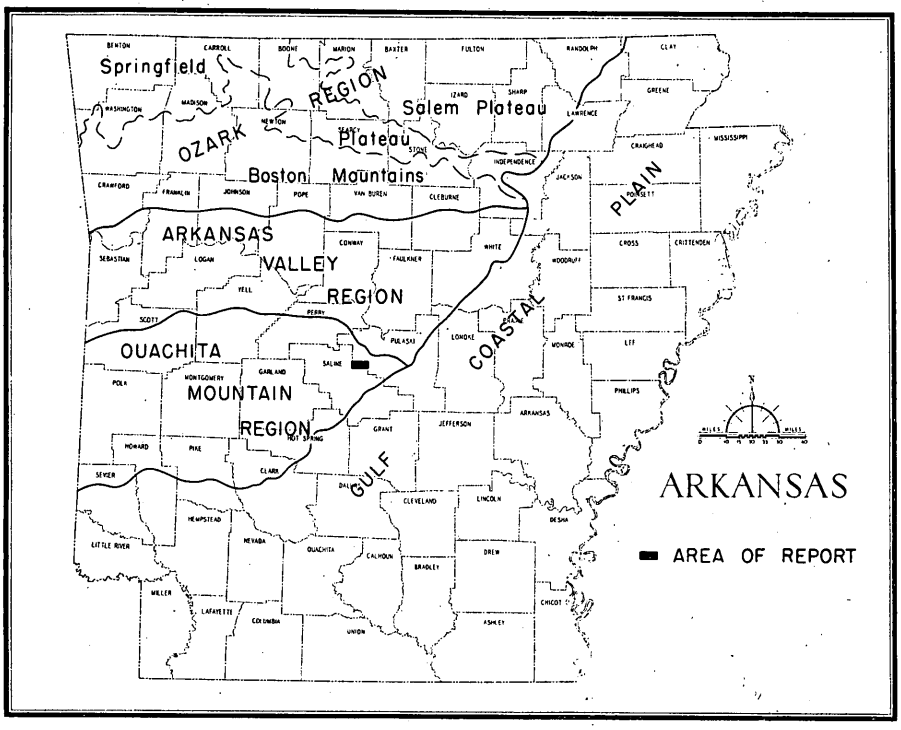



FIG. 1. Index map showing location of nickeliferous serpentine dike area in central Arkansas.

## SEDIMENTARY ROCKS

The Saline County soapstone deposits are located within the Novaculite Uplift sub-province of the Ouachita Mountains. The exposed sedimentary rocks are all of Paleozoic age. Table 1 is a measured section of the formations exposed in the general area.

The sedimentary rocks enclosing the soapstone deposits are the Womble shale and the Bigfork chert formations of Ordovician age (Fig. 2).

The Womble shale in this area consists of black to gray shale that locally contains lenses of dense black limestone and layers of siltstone and phosphatic conglomerate. Numerous milky quartz veins cut the shale. Graptolites are fairly common in the upper part of the formation. Two of the four soapstone pits examined during this study lie within the Womble shale near its contact with the Bigfork chert.

TABLE 1

| System | Formation | Thickness in feet |
|---|---|---|
| Mississippian | Stanley shale | 3,500–6,100 |
| Mississippian-Devonian | Arkansas novaculite | 365 |
| Ordovician | Polk Creek shale | 80 |
| | Bigfork chert | 195 |
| | Womble shale | 900–1,800 |
| | Blakely sandstone | 550 ± |

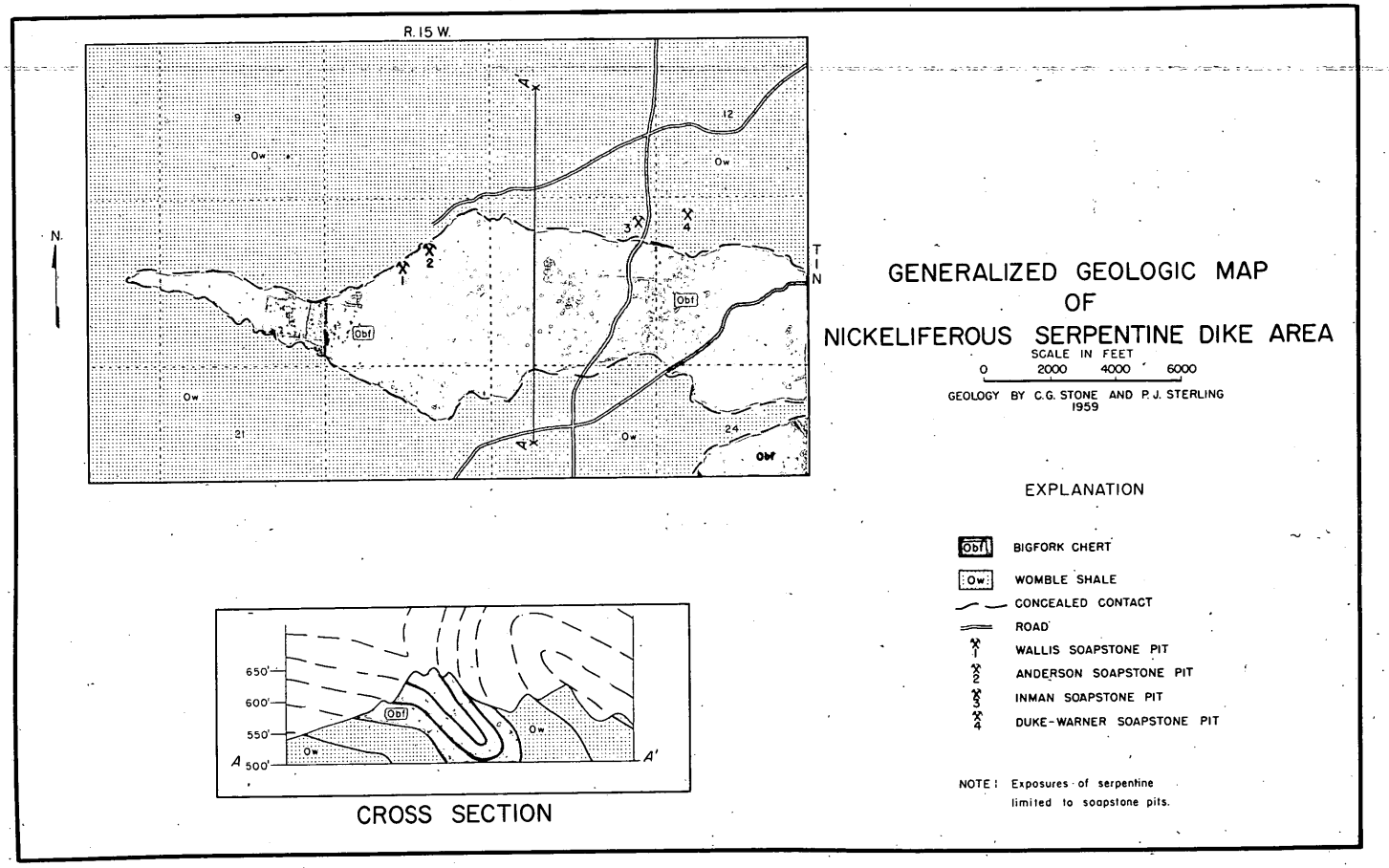

R. 15 W.
T. 1 N.
N.
9
12
21
24
Ow
Obf
A
A'
1
2
3
4
GENERALIZED GEOLOGIC MAP
OF
NICKELIFEROUS SERPENTINE DIKE AREA
SCALE IN FEET
0 2000 4000 6000
GEOLOGY BY C.G. STONE AND P.J. STERLING
1959
EXPLANATION
Obf BIGFORK CHERT
Ow WOMBLE SHALE
CONCEALED CONTACT
ROAD
WALLIS SOAPSTONE PIT
ANDERSON SOAPSTONE PIT
INMAN SOAPSTONE PIT
DUKE-WARNER SOAPSTONE PIT
NOTE: Exposures of serpentine limited to soapstone pits.
650'
600'
550'
500'
CROSS SECTION

FIG. 2.

The Bigfork chert formation in this area consists of interbedded black chert and black siliceous shale that weathers to a gray color on the outcrop. The chert is highly shattered and has been recrystallized by metamorphism to a finely granular quartz rock resembling a siltstone. The shale is characteristically siliceous and weathers into splintery fragments. Two of the four soapstone pits lie within the Bigfork chert formation near the Womble-Bigfork contact.

### IGNEOUS ROCKS

Igneous rocks are fairly common in the soapstone area. The largest intrusives are the serpentine bodies that contain soapstone deposits. These are discussed in more detail in the section on soapstone deposits. In addition to these larger masses, there are many small dikes and sills of monchiquite, ouachitite, fourchite, nepheline syenite, phonolite, syenite, trachyte, and diorite. These igneous bodies, though numerous, make up an extremely small percentage of the surface area and do not appear related to the serpentine-soapstone bodies. These smaller bodies are considered Cretaceous in age.

Quartz veins mentioned in the discussion of the Womble shale consist essentially of milky quartz with scattered chlorite inclusions, some adularia, platy calcite and dickite. Sulfides are extremely rare in these veins. The quartz veins are considered to be of hydrothermal origin (19) and are believed to be a possible source of the steatitizing solutions. The quartz veins are classified as epithermal fracture-filling veins (9). These veins commonly cut the enclosing shales and cherts and appear to surround the serpentine-soapstone bodies. The relationship of the quartz veins to the serpentine-soapstone bodies indicates that the quartz veins are younger in age. According to Engel (9) quartz veins in the Ouachitas are dated as late middle Pennsylvanian.[1] As stated before the serpentine-soapstone bodies cut the Womble-Bigfork formations (dated as middle Ordovician); therefore, it must be concluded that the intrusion of the original mass in the serpentine-soapstone area occurred between middle Ordovician and late Pennsylvanian. Thus, the intrusion is pre-orogenic or orogenic, as the Ouachita orogeny is dated as Pennsylvanian (19).

### REGIONAL STRUCTURE

The sedimentary rocks of the soapstone area have been intensely folded and faulted. Generally, the folds are overturned to the south as indicated by the persistent northerly dip of the strata (Fig. 2). The soapstone deposits lie in the south limb of an overturned anticline near the Womble-Bigfork contact. The intense local crumpling of beds suggests that there is much faulting in the area, but the degree and direction of movement is difficult to establish because of poor exposures and similarity of beds.

[1] Hess (12) indicates that at Schuyler, Virginia, clear glassy lenses of quartz were found in the hanging wall above the altered ultrabasic intrusive. He states that this may represent $SiO_2$ lost from the ultrabasics during the last stages of steatitization. In the Saline County soapstone area, possibly some of the smaller quartz lenses on the outer edges of the soapstone deposits are of this origin; however, in most instances it can be illustrated that the quartz veins are of hydrothermal origin.

## THE SOAPSTONE DEPOSITS

Since the soapstone deposits are the locus of the nickel mineralization a generalized description of them is included. The four known deposits are the Wallis, Anderson, Inman and Duke-Warner pits (Fig. 2). All but the Wallis deposit are currently being mined. In order to avoid confusion in the discussion of rock types exposed in the soapstone pits the principal types are defined as follows:

| | |
|---|---|
| Talc | Rock containing 90 percent or more of the mineral talc. |
| Soapstone | Over 50 percent talc with dolomite, serpentine, and minor sulfides making up the remainder. |
| Serpentine | Over 60 percent of the rock is the mineral serpentine (antigorite) with appreciable dolomite and talc, and traces of sulfides. |
| Serpentine dikes | Over 90 percent serpentine. |
| Dolomite rock | Over 75 percent of the rock is dolomite with some calcite, serpentine and minor sulfides and talc. |

It is believed that the irregular lense-shaped soapstone deposits occur along an east-west trending, sill-like, serpentine intrusion. This intrusion is believed to pinch, swell, and plunge, causing the soapstone deposits to appear as completely isolated bodies; however, their alignment and the presence of serpentine float and small serpentine dikes in test pits between them makes it probable they occur along a single mass. There is a roughly zonal arrangement of the principal rock units in the soapstone deposits (Fig. 3) proceeding from the sedimentary contact inward to the core as follows:[2]

1. Talcose shale or metamorphosed chert.
2. Milky quartz veins and, at some deposits, contiguous serpentine dikes.
3. Soapstone.
4. Dolomite.
5. Serpentine rock (core).

## NICKEL MINERALIZATION

Positive identification of all of the nickeliferous minerals has not as yet been made, but both primary and secondary nickel mineralization are present.

The primary nickel minerals in the deposits are nickeliferous sulfides (probably nickeliferous pyrite and pyrrhotite). These sulfides occur as thin seams or stringers in dolomite rock lenses that border the Inman pit. A selected sample of this sulfide-rich dolomite rock from one corner of the pit assayed 3.1 percent nickel. Although finely crystalline sulfides are disseminated throughout the dolomite rock unit elsewhere in this pit, samples of this rock assayed less than one percent nickel. Drill cores of unweathered serpentine rocks from the Duke-Warner and Anderson deposit revealed

[2] The entire body is cut by small discordant veins of crystalline talc and calcite.

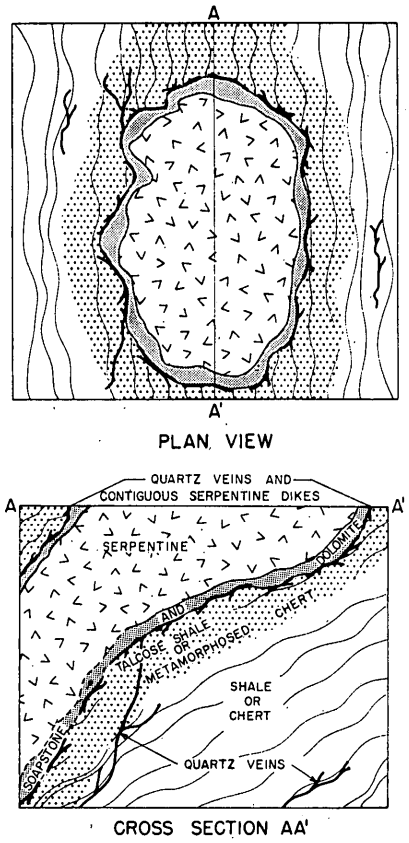



FIG. 3. Diagrammatic sketch of serpentine-soapstone body showing zonal arrangement of rock units.

similar sulfides as finely crystalline disseminations and as minute veinlets. Typical core samples of this serpentine rock from the Duke-Warner pit analyzed from 0.025 to 0.39 percent nickel and similar cores from the Anderson pit ranged from 0.05 to 0.27 percent nickel. It is probable that some of this nickel is in the silicate structure of the serpentine itself.[3]

There apparently has been some enrichment of nickel during the weathering process as the weathered rock types invariably show higher nickel content than their fresh equivalents. Secondary nickel mineralization is most pronounced in two of the rock units exposed in the soapstone pits; the partially weathered serpentine rock, and the limonitic soapstone. The partially weathered serpentine rock that contains nickel is exposed only at the Wallis and Anderson pits. Weathering in this rock has resulted in the

[3] It should be noted here that several selected samples were taken from the peridotite mass at Murfreesboro, Arkansas, and checked for their nickel content. They averaged 0.23 percent nickel. Most of this nickel is contained in silicates. Further investigation of this area is being conducted at present.

oxidation of the sulfides and possibly the removal of some carbonate leaving the serpentine essentially unaltered. Channel samples of this rock range from 0.66 to 1.50 percent nickel and the greatest thickness is exposed at the Anderson pit. It is believed that most of the nickel in this rock is associated with goethite.

The limonitic soapstone zones occur at all four of the deposits. These zones vary in thickness from 2.6 feet in the Inman pit to 26 feet in the Anderson pit. The nickel content of the limonitic soapstone varies from 0.66 to 1.22 percent and it is believed that the nickel occurs in the goethite and manganese oxides associated with this soapstone.

A thin green coating of garnierite (?) is found in the weathered dolomite zone of Inman, Duke-Warner and Anderson pits, and in weathered cores from the Duke-Warner deposit. As this mineralization occurs only sparingly, no samples of this material were analyzed.

The highest assay (15 percent nickel) obtained from any of the pits was a sample of nickeliferous iron and manganese oxides from a narrow vein in serpentine rock in the Anderson pit. These small veins are composed chiefly of crystalline talc stained by small quantities of limonite, but in the Anderson pit they contain nickeliferous iron and manganese oxides. The veins are too narrow, widely scattered and discontinuous to be important commercially.

## ORIGIN

In a preliminary report without the aid of many thin sections or polished sections only a few obvious generalizations may be made concerning the origin of either the serpentine-soapstone bodies or the nickel mineralization.

*Serpentine-Soapstone Bodies.*—The serpentine dikes in the area are considered by the authors to be the result of automorphism of an ultrabasic intrusive. The intrusion of this ultrabasic body took place prior to or during the Ouachita orogeny (Pennsylvanian). The talc-dolomite-soapstone alteration was accomplished by the steatitization of the serpentine body, by low-temperature hydrothermal solution. The origin of the talc veins is not known but possibly are hydrothermal fracture-filling veins formed during the process of steatitization.

*Nickel Mineralization.*—The nickel in the sulfides and in the serpentine was probably derived from olivine, present in the original ultrabasic intrusive, during serpentization. According to Moorhouse (20) small deposits of nickel are often found in serpentine or peridotite bodies associated with differentiated sills and in isolated small intrusions. The sulfides carrying the nickel are always disseminated grains or pods that replace the serpentine. They are generally limited to the intrusive, and the nickel in them may have been derived from the olivine during its alteration to serpentine.

The nickeliferous iron and manganese oxides occur as disseminations and fracture coatings in the weathered serpentine and the limonitic soapstone. The limonitic soapstone and weathered serpentine zones owe their higher nickel content chiefly to the oxidation and residual concentration of the nickeliferous sulfides.

The oxides occurring in the talc veins are considered to have been deposited originally as sulfides from hydrothermal solutions during steatitization and later oxidized and concentrated by weathering. It is interesting to note that an assay of this nickeliferous oxide showed a zinc content of more than 1 percent. The zinc was probably introduced by these solutions.

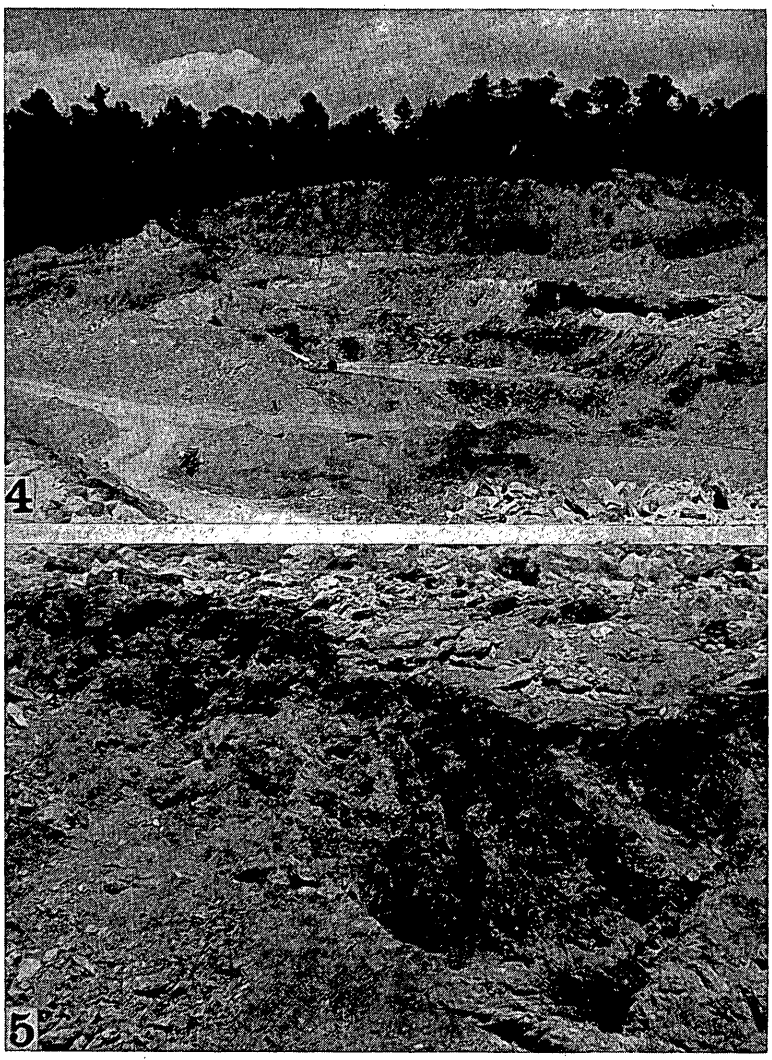


FIG. 4. Anderson pit, east face. Note sharp contact in the center of the photo between overlying Bigfork chert and soapstone-serpentine body. Black zone in the right center is a limonitic-soapstone zone that overlies the serpentine dike exposed at the base of the pit.

FIG. 5. Anderson pit at base of east wall. Soapstone (white) capping a partially weathered serpentine dike (black).

TABLE II ANALYSIS

| No. | Location | Sampling method | Width of zone sampled | % Ni. | Description |
|---|---|---|---|---|---|
| 1 | Gallis Pit | Selected | - | 1.02 | Limonitic-soapstone zone. |
| 2 | " | " | - | 1.20 | Highly weathered serpentine dike. |
| 3 | Anderson Pit | Channel | 4.3 | 1.5 | Weathered serpentine dike. |
| 4 | " | " | 2.0 | 0.74 | " |
| 5 | " | " | 8.5 | 1.0 | " |
| 6 | " | " | 5.0 | 1.04 | " |
| 7 | " | " | 5.5 | 0.86 | " |
| 8 | " | " | 2.0 | 1.28 | " |
| 9 | " | " | 2.0 | 1.22 | " |
| 10 | " | " | 8.0 | 1.22 | " |
| 11 | " | " | 4.5 | 1.20 | " |
| 12 | " | " | 29.0 | 0.66 | " |
| 13 | " | " | 20.0 | 0.84 | " |
| 14 | " | " | 4.5 | 0.54 | Limonitic-soapstone zone overlying serpentine dike. |
| 15 | " | " | 26.0 | 0.66 | " |
| 16 | " | Selected | - | 15.0 | Nickeliferous manganese oxide as vein residue. |
| 17 | " | " | - | 0.3 | Soapstone containing sulfides. |
| 18 | Inman Pit | Channel | 3.5 | 0.8 | Limonitic-soapstone zone. |
| 19 | " | " | 5.5 | 0.26 | " " " |
| 20 | " | " | 4.0 | 0.20 | " " " |
| 21 | " | " | 2.6 | 0.66 | " " " |
| 22 | " | " | 3.5 | 0.8 | " " " |
| 23 | " | Selected | - | 3.1 | Sulfide Stringer in dolomite rock. |
| 24 | " | " | - | 1.45 | Green encrustation on sulfide in dolomite rock. |
| 25 | " | " | - | 0.38 | Sulfide stringer in dolomite rock. |
| 26 | " | " | - | 0.36 | Sulfide stringer in soapstone. |
| 27 | " | Chip | Average sample of unit | Trace | Dolomite rock. |
| 28 | " | " | " | Trace | Soapstone. |
| 29 | Duke-Warner | Channel | 3.8 | 0.96 | Limonitic-soapstone zone. |
| Hole #1 | | | | | |
| 30 | " | Chip sampled from core | 5.0 | 0.39 | Serpentine, sulfides common. |
| 31 | " | " | 2.0 | 0.12 | Ditto, less sulfides, darker green. |
| 32 | " | " | 11.7 | 0.31 | Serpentine, sulfides common. |
| 33 | " | " | 1.3 | 0.16 | Ditto, less sulfides. |
| Hole #2 | | | | | |
| 34 | Duke-Warner Pit | Chip sampled from core | 4.5 | 0.24 | Weathered serpentine, limonitic. |
| 35 | " | " | 3.0 | 0.25 | Partially weathered serpentine, sulfides common, limonitic. |
| 36 | " | " | 19.0 | 0.025 | Serpentine, sparse sulfides. |
| 37 | " | " | 19.0 | 0.09 | Ditto. |
| 38 | " | " | 19.0 | 0.04 | Ditto. |
| 39 | " | " | 5.5 | 0.27 | Dolomite, stringers of serpentine and sulfides common. |
| 40 | " | " | 2.6 | 0.02 | Soapstone. |
| Hole #3 | | | | | |
| 41 | Anderson Pit | " | 1.5 | 0.05 | Serpentine, traces of sulfides. |
| 42 | " | " | 6.0 | 0.10 | Ditto. |
| 43 | " | " | 6.0 | 0.25 | Ditto. |
| 44 | " | " | 6.0 | 0.13 | Ditto. |
| 45 | " | " | 6.0 | 0.17 | Ditto. |
| 46 | " | " | 6.0 | 0.27 | Ditto. |

*Sampling Methods and Assays.*—Sampling techniques were adapted to the poor exposures. Three types of samples were taken: (1) selected, (2) chip, and (3) channel. Channel samples do not necessarily represent true thicknesses of units sampled, as true thickness of units was undeterminable

from pit exposures. The drill cores were chip sampled and each lithologic unit was sampled at one foot intervals.

Nickel assays (Table II) were made by Troy W. Carney, Chief Chemist of the Arkansas Geological and Conservation Commission, using colorimetric methods.

## ECONOMIC CONSIDERATION

Any economic considerations of the nickel producing potential of this area would be influenced by numerous factors. The most important factor is that the exact form of the nickel-bearing mineral or minerals at present is unknown. The sulfides and oxides discussed previously are known to be nickeliferous; however, an undetermined amount of the nickel in the assays in Table II is undoubtedly tied up in the silicate structure of the serpentine. Under the best of circumstances the tenor of the prospective ore is extremely low and spotty; therefore, it is mandatory that the nickel-bearing minerals be isolated, identified, and assayed and that the amount of nickel tied up in the serpentine be determined.

The nickeliferous sulfides occur as small veinlets and minute disseminations. The nickel content of these sulfides is highly erratic and although larger more concentrated masses of nickeliferous sulfides are possible within the serpentine-soapstone bodies, thus far no appreciable quantities of concentrated nickeliferous sulfides have been found.

There is apparently a limited potential tonnage of secondary nickel in the serpentine-soapstone bodies thus discovered, due to the shallow uneven depth of weathering.

The serpentine is close to the surface and follows a definite strike but is extremely irregular in outline, pinching and swelling so that exploration would require an extensive drilling program.

Assays taken during the investigation indicate that the nickel content is not uniform throughout the various zones and such small percentages of nickel are involved that the richer zones are not easily recognizable in the field.

ARKANSAS GEOLOGICAL AND CONSERVATION COMMISSION,
LITTLE ROCK, ARKANSAS,
*April 26, 1960*

## REFERENCES

1. Aho, A. E., 1956, Geology and genesis of ultrabasic nickel-copper-pyrrhotite deposits at the Pacific nickel property, Southwestern British Columbia: ECON. GEOL., v. 51, p. 444–482.
2. Anderson, R. J., 1942, Mineral resources of Montgomery, Garland, Saline, and Pulaski Counties, Arkansas: Arkansas Geol. Survey, County Mineral Report 3.
3. Branner, G. C., 1942, Mineral resources of Arkansas: Arkansas Geol. Survey, Bull. 6, p. 77–78.
4. Clarke, E. de C., and Ellis, A. A., 1939, Metasomatism of country near ore bodies and its possible economic significance: ECON. GEOL., v. 34, p. 777–790.
5. Comstock, C. B., 1888, Annual report of the Geological Survey of Arkansas for 1888: Arkansas Geol. Survey, v. 1, pt. 2.
6. Croneis, Carey, 1930, Geology of the Arkansas Paleozoic area: Arkansas Geol. Survey, Bull. 3.
7. Daw, R. N., 1956, Origin and occurrence of the soapstone deposits, Saline County, Arkansas: unpublished M. Sc. thesis submitted at Univ. of Oklahoma.

8. Dowden, J., 1952, Report on the Saline County soapstone deposits: unpublished, Arkansas Geol. Survey.
9. Engel, A. E. J., 1951, Quartz Crystal deposits of Western Arkansas: U. S. Geol. Survey Bull. 973-E.
10. Fulcher, M., 1953, Report on the Saline County soapstone deposits: unpublished, Arkansas Geol. Survey.
11. Hardy, M., 1953, Report on the Saline County soapstone deposits: unpublished, Arkansas Geol. Survey.
12. Hess, H. H., 1933, Serpentinization: origin of certain asbestos, talc, and soapstone deposits: ECON. GEOL., v. 28, p. 634–658.
13. Holbrook, D. F., 1948, Molybdenum in Magnet Cove, Arkansas: Arkansas Resources and Development Comm. Bull. 12, p. 16.
14. Kennedy, G. C. and Walton, M. S. Jr., 1946, Nickel investigations in Southeastern Alaska: U. S. Geol. Survey Bull. 947-C, p. 64.
15. Lewis, D. V., 1955, Relationships of ore bodies to dikes and sills: ECON. GEOL., v. 50, p. 495–517.
16. Melton, F. A., 1930, Age of the Ouachita orogeny and its tectonic effects: Am. Assoc. Petroleum Geologists Bull., v. 14, p. 57–72.
17. Michener, C. E., and Yates, A. B., 1944, Oxidation of primary nickel sulfides: ECON. GEOL., v. 39, p. 506–515.
18. Miser, H. D., 1929, Structure of the Ouachita Mountains of Oklahoma and Arkansas: Oklahoma Geol. Survey, Bull. 50.
19. Miser, H. D., 1943, Quartz veins in the Ouachita Mountains of Arkansas and Oklahoma (their relation to structure, metamorphism, and metalliferous deposits): ECON. GEOL., v. 38, p. 91–118.
20. Moorhouse, W. W., 1959, The Study of rocks in Thin-Section. Harper.
21. Pecora, W. T., and Hobbes, S. W., 1942, Nickel deposit near Riddle, Douglas County, Oregon: U. S. Geol. Survey Bull. 931-1, p. 205–226.
22. Powers, Sidney, 1928, Age of folding of the Oklahoma mountains: Geol. Soc. America Bull., v. 30, p. 1931–1970.
23. Purdue, A. H., and Miser, H. D., 1923, Geologic Atlas of the United States, Hot Springs Folio: U. S. Geol. Survey, No. 215.
24. Rankama, K., and Sahama, T. G., 1950, Geochemistry. Univ. of Chicago.
25. Williams, J. F., and Kemp, J. F., 1891, The igneous rocks of Arkansas: Arkansas Geol. Survey Annual Report for 1890, v. 2.

LANCASTER PRESS, INC., LANCASTER, PA.

FRANK RYBA
OIL AND GAS LEASES
P. O. BOX 6401
HOUSTON 6, TEXAS

JACKSON 2-2426
DAY OR NIGHT

Little Rock, Arkansas
November 25, 1962.

Mr. L. W. Minturn,
753 West Creekside Drive,
Houston, 24, Texas.

Dear Sir:

In connection with oil, gas and mineral lease dated April 17, 1961, to you, covering 5 acres, more or less, out of the E½ of NE¼ of SW¼ of Section 30, Township 2 South Range 14 West, Saline County, Arkansas, we do not wish to execute the Government Form Lien and Subordination agreement.

Yours very truly,

Boyd E Allinson

Boyd Allinson

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

FRANK RYBA
OIL AND GAS LEASES
P. O. BOX 6401
HOUSTON 6, TEXAS

JACKSON 2-2426
DAY OR NIGHT

Benton, Arkansas
November 25, 1961.

Mr. L. W. Minturn,
753 West Creekside Drive,
Houston, Texas.

Dear Sir:

In connection with the oil, gas and mineral lease covering 20 acres in Section 29, Township 2 South, Range 14 West, Saline County, Arkansas, to you and dated April 22, 1961, we do not wish to sign the Government Form Lien and Subordination agreement.

Yours very truly,

W. G. Tudor

W. G. Tudor, For the Tudor Estate.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# INTERNATIONAL PAPER COMPANY

MOBILE 9, ALABAMA

November 29, 1961

SOUTHERN KRAFT DIVISION

DIVISION OFFICE

Re: Ark. O & G 63-6

Mr. L. W. Minturn
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

This is to advise that we do not care to execute the Lien and Subordination which you left with me, covering your magnetite operation in Saline County, Arkansas.

I returned to your attorneys today the amendment to the lease which corrects the description.

Very truly yours,

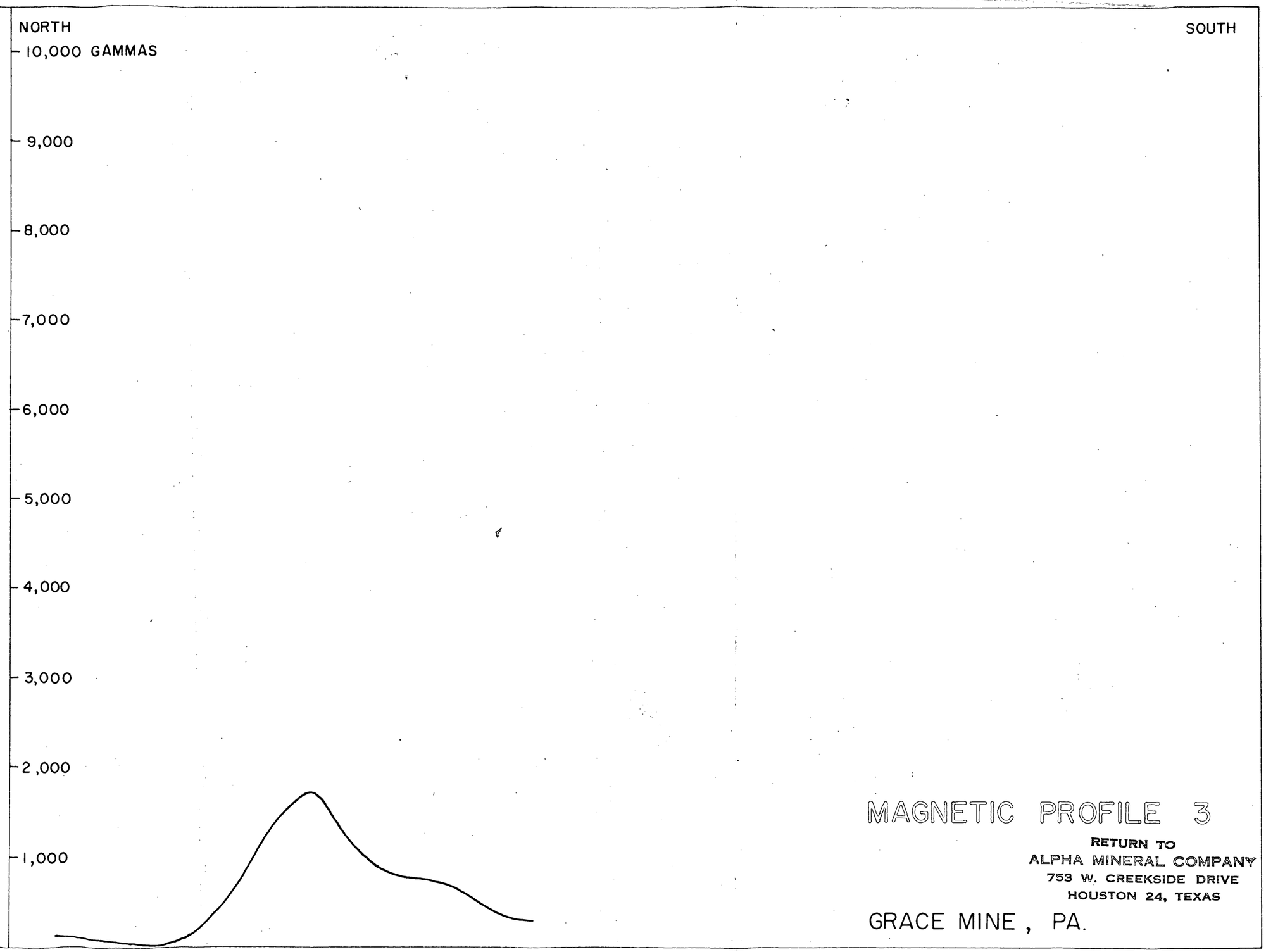
Jim

James W. Williams, Jr.,
Minerals Manager
Woodlands Department

JWWjr/rfm
Atts.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

SURVEY: AIRBORNE
COMPONENT: TOTAL FIELD
DIST. ABOVE GND.: 500'
DEPTH OF ORE: 1600'
RESERVES:
STRIKE OF ORE:
DIP OF ORE:
LENGTH OF ORE BODY:
WIDTH OF ORE BODY:
TENOR OF ORE:
ANOMALY: 1700 GAMMAS
CALC. ANOM. AT ORE: 38,000 G.
TYPE DEPOSIT:



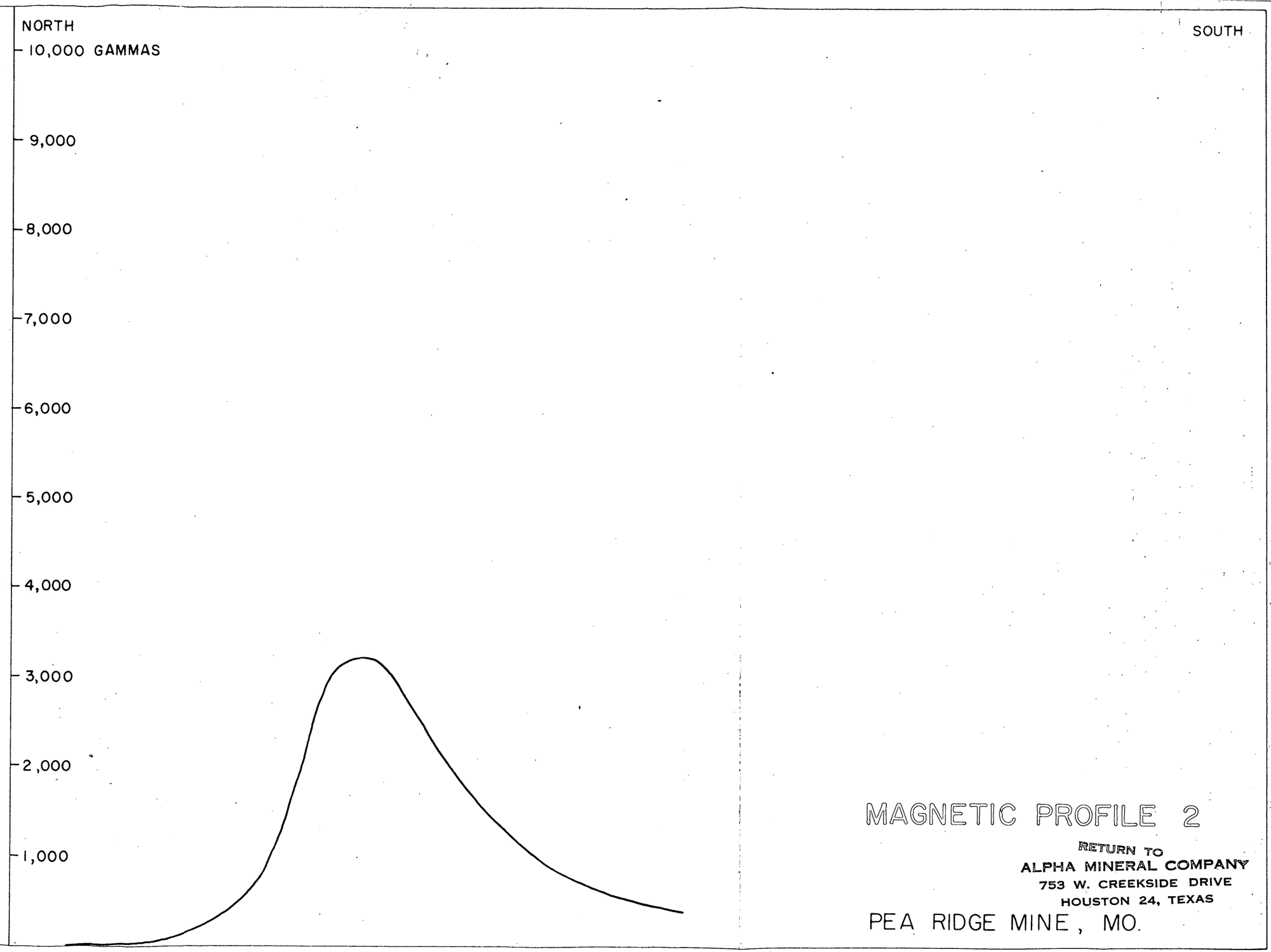

1 MILE

# MAGNETIC PROFILE 3

RETURN TO
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

GRACE MINE, PA.

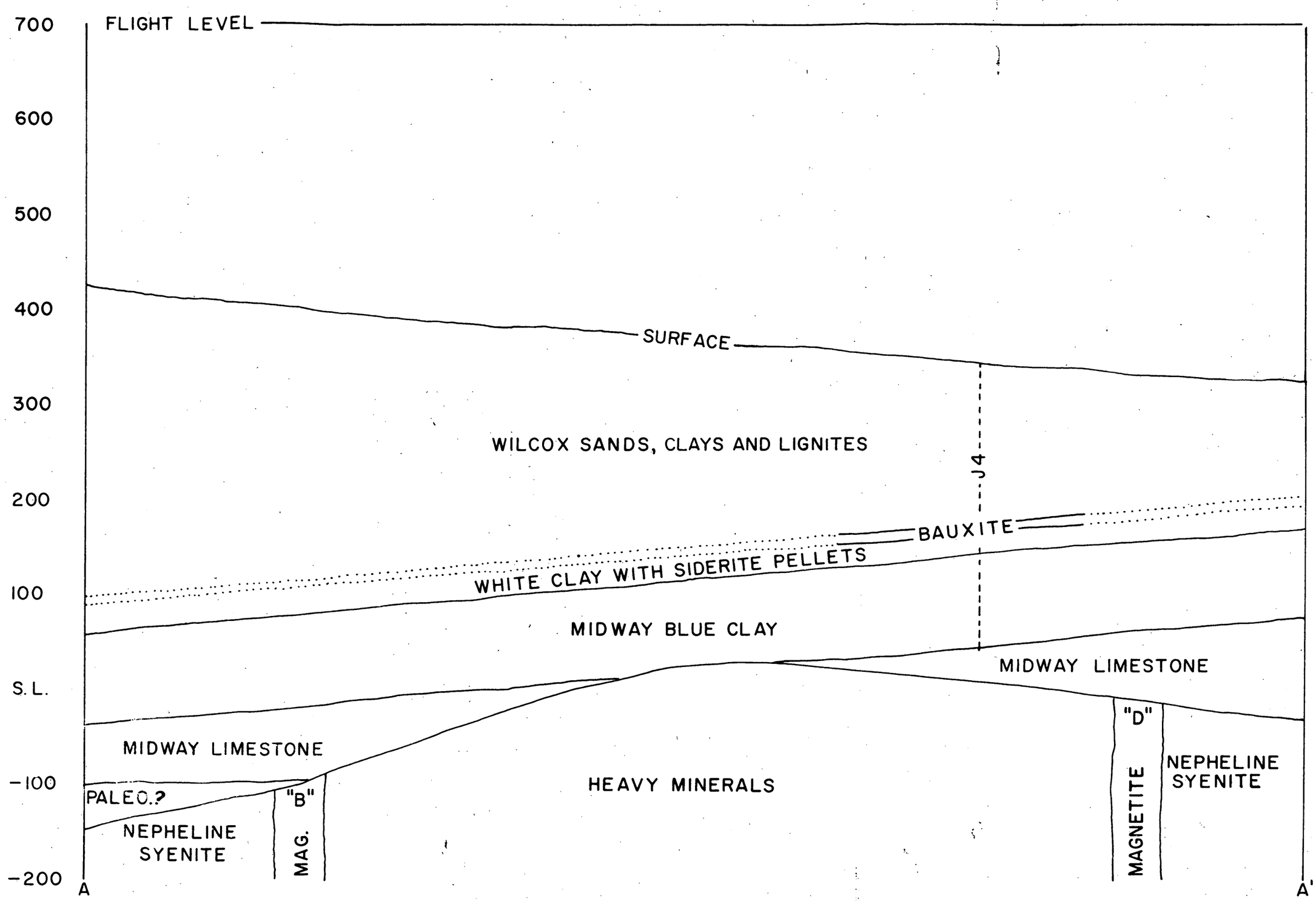
SURVEY: AIRBORNE
COMPONENT: TOTAL FIELD
DIST. ABOVE GND.: 1000'
DEPTH OF ORE: 1300'
RESERVES: 100 MILLION TONS
STRIKE OF ORE: E-W
DIP OF ORE: 80° S
LENGTH OF ORE BODY: 2500'
WIDTH OF ORE BODY: 200-300'
TENOR OF ORE:
ANOMALY: 3200 GAMMAS
CALC. ANOM. AT ORE: 76,000 G.
TYPE DEPOSIT:




# MAGNETIC PROFILE 2

RETURN TO
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

PEA RIDGE MINE, MO.


700
600
500
400
300
200
100
S. L.
-100
-200
FLIGHT LEVEL
SURFACE
WILCOX SANDS, CLAYS AND LIGNITES
J4
BAUXITE
WHITE CLAY WITH SIDERITE PELLETS
MIDWAY BLUE CLAY
MIDWAY LIMESTONE
MIDWAY LIMESTONE
PALEO.?
NEPHELINE SYENITE
"B"
MAG.
HEAVY MINERALS
"D"
MAGNETITE
NEPHELINE SYENITE
A
A'

SECTION A-A'

# INTERNATIONAL PAPER COMPANY

MOBILE 9, ALABAMA

November 29, 1961

SOUTHERN KRAFT DIVISION

DIVISION OFFICE

Re: Ark. O & G 63-6

Mr. L. W. Minturn
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

This is to advise that we do not care to execute the Lien and Subordination which you left with me, covering your magnetite operation in Saline County, Arkansas.

I returned to your attorneys today the amendment to the lease which corrects the description.

Very truly yours,

Jim

James W. Williams, Jr.,
Minerals Manager
Woodlands Department

JWWjr/rfm
Atts.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

FRANK RYBA
OIL AND GAS LEASES
P. O. BOX 6401
HOUSTON 6, TEXAS

JACKSON 2-2426
DAY OR NIGHT

Little Rock, Arkansas
November 25, 1962.

Mr. L. W. Minturn,
753 West Creekside Drive,
Houston, 24, Texas.

Dear Sir:

In connection with oil, gas and mineral lease dated April 17, 1961, to you, covering 5 acres, more or less, out of the E½ of NE¼ of SW¼ of Section 30, Township 2 South Range 14 West, Saline County, Arkansas, we do not wish to execute the Government Form Lien and Subordination agreement.

Yours very truly,

Boyd E Allinson

Boyd Allinson

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

FRANK RYBA
OIL AND GAS LEASES
P. O. BOX 6401
HOUSTON 6, TEXAS

JACKSON 2-2426
DAY OR NIGHT

Benton, Arkansas
November 25, 1961.

Mr. L. W. Minturn,
753 West Creekside Drive,
Houston, Texas.

Dear Sir:

In connection with the oil, gas and mineral lease covering 20 acres in Section 29, Township 2 South, Range 14 West, Saline County, Arkansas, to you and dated April 22, 1961, we do not wish to sign the Government Form Lien and Subordination agreement.

Yours very truly,

W. G. Tudor

W. G. Tudor, For the Tudor Estate.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

April 10, 1962

Mr. A. G. Gueymard
First City National Bank
Houston, Texas

Dear Mr. Gueymard:

We have previously discussed with you the need of Alpha Mineral Company for additional funds for the purpose of conducting exploration for minerals in the State of Arkansas.

Alpha Mineral Company is a limited partnership organized under the laws of the State of Arkansas and is the owner of a block of leases covering lands in, and in the area of, Section 30, Township 2 South, Range 14 West in Saline County, Arkansas. We have certain geological and other data which in our opinion indicates that this lease block covers an excellent prospect for the discovery and production of magnetite (iron ore) and may well contain columbium, tantalum and other minerals common to an ultra-basic intrusion.

We have funds to the extent of $30,000.00 available for core drilling and other work to evaluate the prospect, but additional funds in the amount of $30,000.00 will be required to accomplish properly the work which we need to do. This letter therefore confirms our request for a loan in the amount of $30,000.00 to be secured by all of our leasehold interests covering this prospect.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Any additional information which you may require will be furnished upon request.

ALPHA MINERAL COMPANY

By _____
L. W. Minturn,
General Partner

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# FIRST CITY NATIONAL BANK
OF HOUSTON

HOUSTON, TEXAS
April 12, 1962

A. G. GUEYMARD
VICE PRESIDENT

Mr. L. W. Minturn, General Partner
Alpha Mineral Company
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

You have again requested our consideration of a loan in the amount of $30,000.00 to Alpha Mineral Company, which loan would be secured by a block of prospective mining leases in Saline County, Arkansas. You further advised that the proceeds of the loan would be used to further evaluate the mining prospects by obtaining results of additional core drilling.

We are sorry to advise that we can not meet your request, because the collateral offered does not meet our lending standard. We do not make loans on minerals in any form, unless the same can be properly evaluated and have reached the stage of actual production.

Thank you for considering us in this matter.

Yours very truly,

A. G. Gueymard
Vice President

AGG/os

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

April 10, 1962

Mr. Albert M. Ball, Vice President
Bank of the Southwest National
Association, Houston
Houston, Texas

Dear Mr. Ball:

We have previously discussed with you the need of Alpha Mineral Company for additional funds for the purpose of conducting exploration for minerals in the State of Arkansas.

Alpha Mineral Company is a limited partnership organized under the laws of the State of Arkansas and is the owner of a block of leases covering lands in, and in the area of, Section 30, Township 2 South, Range 14 West in Saline County, Arkansas. We have certain geological and other data which in our opinion indicates that this lease block covers an excellent prospect for the discovery and production of magnetite (iron ore) and may well contain columbium, tantalum and other minerals common to an ultra-basic intrusion.

We have funds to the extent of $30,000.00 available for core drilling and other work to evaluate the prospect, but additional funds in the amount of $30,000.00 will be required to accomplish properly the work which we need to do. This letter therefore confirms our request for a loan in the amount of $30,000.00 to be secured by all of our leasehold interests covering this prospect.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

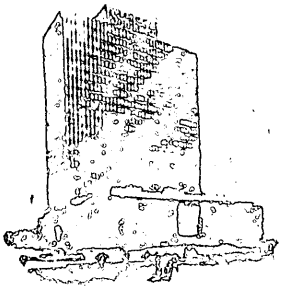
Any additional information which you may require will be furnished upon request.

ALPHA MINERAL COMPANY

By _____
L. W. Minturn,
General Partner



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS



# BANK OF THE SOUTHWEST

NATIONAL ASSOCIATION HOUSTON

HOUSTON, TEXAS

ALBERT M. BALL
VICE PRESIDENT

April 11, 1962

Mr. L. W. Minturn, General Partner
Alpha Mineral Company
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

This acknowledges your letter dated April 10, 1962, in which you apply for a loan of $30,000 for Alpha Mineral Company. The purpose of the loan is to cover part of the expense in drilling for magnetite on a lease block in Saline County, Arkansas.

Our Loan Committee has reviewed your application and it was not approved. We do not look with favor on loans based on undeveloped property. In fact, banking regulations do not permit it.

It is suggested that you check with us in the future when you think we may be of assistance.

Yours very truly,

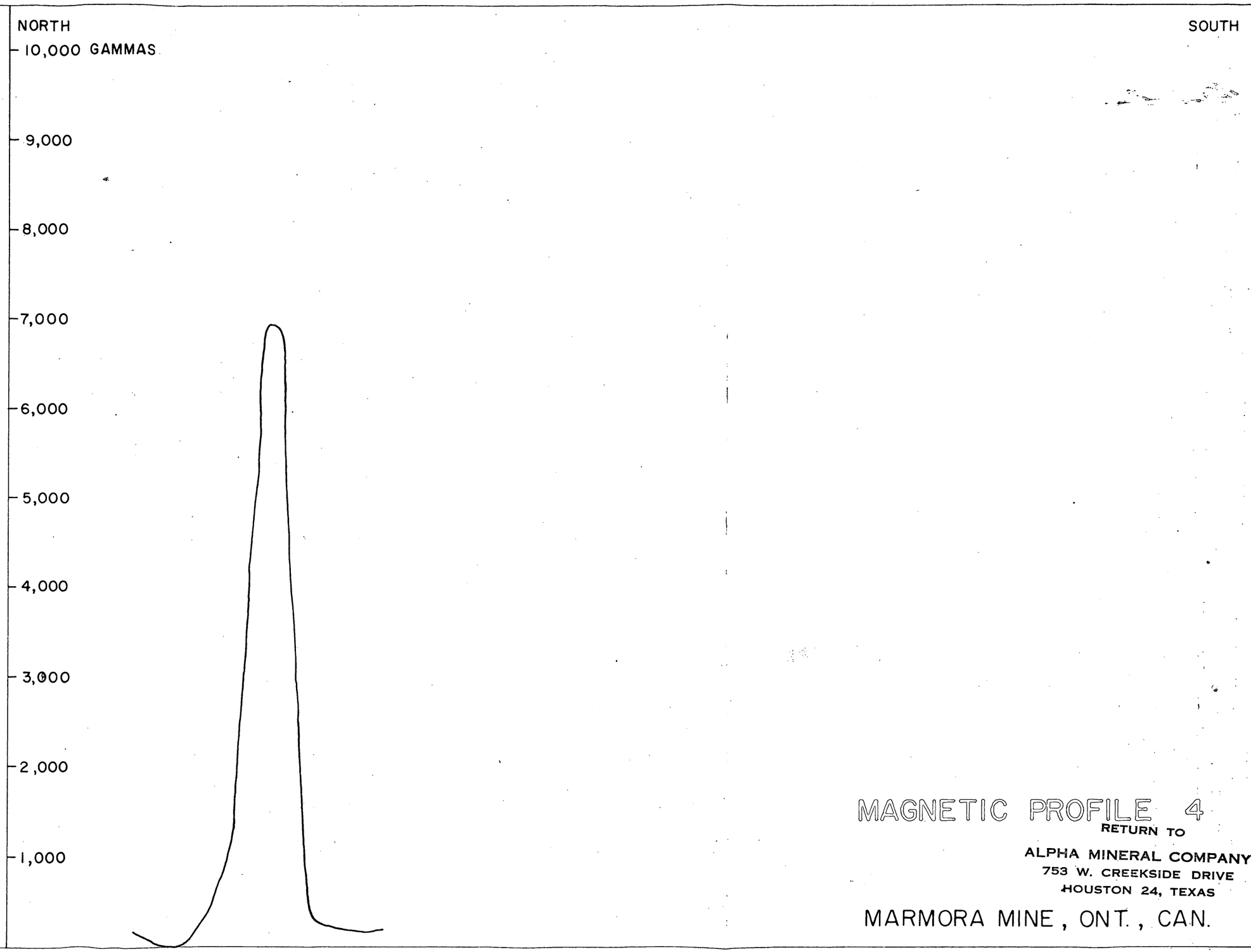
A. M. Ball

Vice President

AMB b

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

SURVEY: AIRBORNE
COMPONENT: TOTAL FIELD
DIST. ABOVE GND.: 500'
DEPTH OF ORE: 120'
RESERVES: 20 MILLION TONS
STRIKE OF ORE: N 13° W
DIP OF ORE: 70-80° SW
LENGTH OF ORE BODY: 2400'
WIDTH OF ORE BODY: 135' AV.
TENOR OF ORE: 37 % FE
ANOMALY: 7000 GAMMAS
CALC. ANOM. AT ORE: 50,000 G
TYPE DEPOSIT:



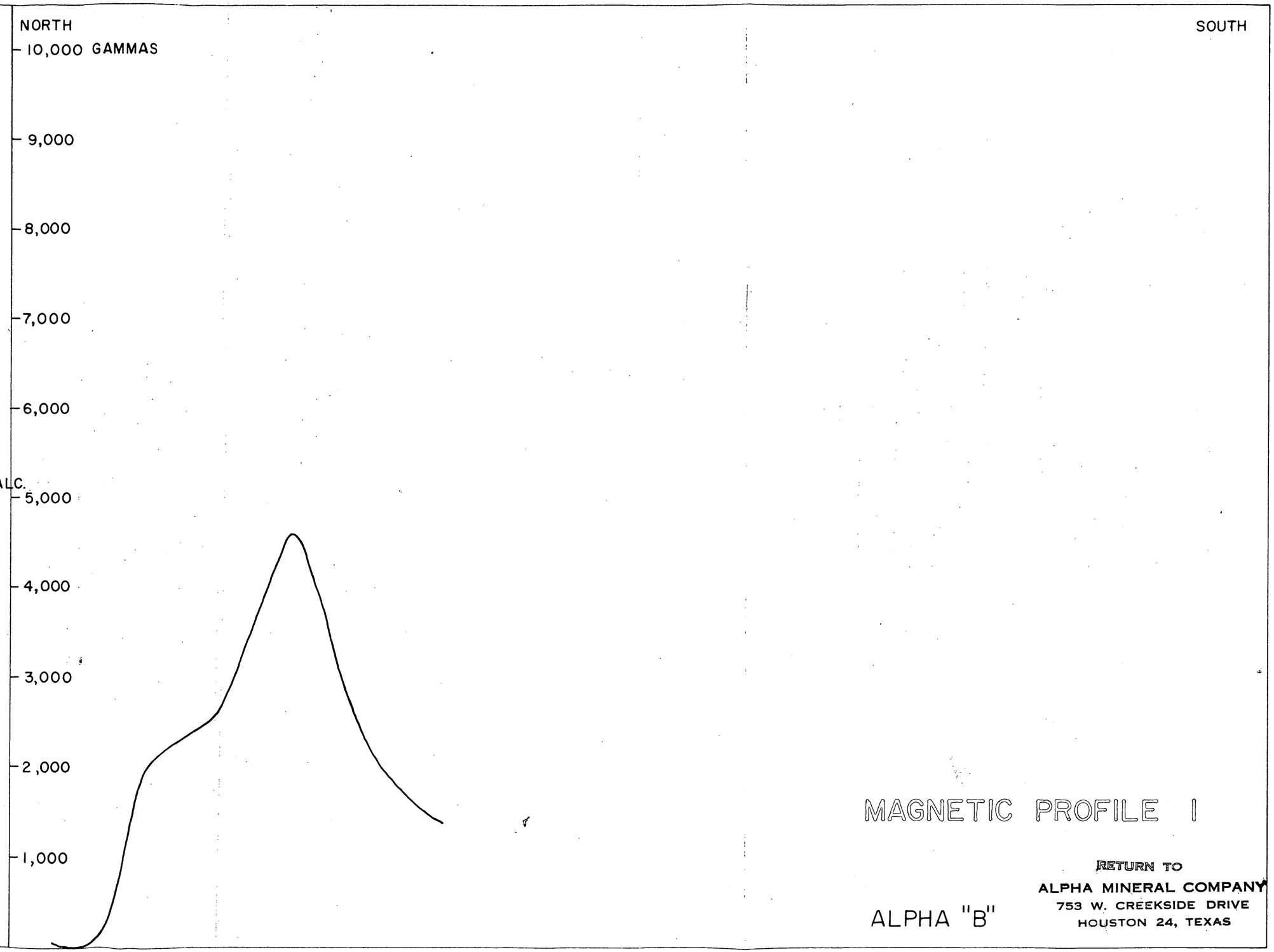

1 MILE

MAGNETIC PROFILE 4

RETURN TO
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MARMORA MINE, ONT., CAN.

SURVEY: AIRBORNE
COMPONENT: TOTAL FIELD
DIST. ABOVE GND.: 300'
DEPTH OF ORE: 600–900'
RESERVES: 40 MILLION TONS CALC.
STRIKE OF ORE:
DIP OF ORE:
LENGTH OF ORE BODY:
WIDTH OF ORE BODY:
TENOR OF ORE: 48% FE. CALC.
ANOMALY: 4600 GAMMAS
CALC. ANOM. AT ORE: 60,000 G.
TYPE DEPOSIT: DIKE OR INJ.




MAGNETIC PROFILE I

ALPHA "B"

RETURN TO
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Form 40
1958

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Budget Bureau No.
Approval expires De

# APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85–701 (72 Stat. 700; 30 U.S.C. 641)

NAME OF APPLICANT *(Full legal name and mailing address as they should appear on contract if one is executed.)*

Alpha Mineral Company
753 W. Creekside Drive
Houston 24, Texas

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER 6243

DATE RECEIVED 4-23-62

REGION IV

DIVISION CODE

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL
CORPORATION
PARTNERSHIP
OTHER *(Specify)* X

Limited Partnership

STATE IN WHICH FIRM IS ORGANIZED Ark.

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

| NAME | ADDRESS | TITLE |
|---|---|---|
| L. W. Minturn | 753 W. Creekside Dr. Houston 24, Texas | Sole General Partner |

Attached hereto is a complete list of the names and addresses of all of the Limited Partners of Alpha Mineral Company.

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE Iron ore, columbium and tantalum minerals and bauxite

ESTIMATED COST OF PROJECT $ 60,000.00

| PROPERTY NAME | LOCATION COUNTY | STATE |
|---|---|---|
| Benton Magnetite Prospect | Saline | Arkansas |

## GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

## CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

The proposed exploration is the program defined April 18, 1962 in the information attached which has an estimated cost of $60,000. See information under Para. 1(c) attached.

DATED

ALPHA MINERAL COMPANY

L. W. Minturn

BY *(Signature)*

Sole General Partner

TITLE

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

# INFORMATION REQUIRED WITH THIS APPLICATION

## 1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the exploration [redacted] cost.

## 2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

## 3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

## 4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

## 5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

(b) If an access road must be built, show the proposed location on the property map and state the length, type and construction methods proposed.

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

## 6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

## 7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration work, stating specifications and cost including labor, materials, and supervision.

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

INT.-DUP. SEC., WASH., D.C. 48740

## LIMITED PARTNERS OF ALPHA MINERAL COMPANY

Bernard Wolfman
8226 Forest Avenue
Elkins Park 17, Pennsylvania

J. Leonard Schorr
815 Church Road
Elkins Park 17, Pennsylvania

John B. Schorsch
1105 Sewell Lane
Rydal, Pennsylvania

C. C. Cohen
Box 887
Kansas City, Missouri

Aaron D. Bennett
1010 Fraser Road
Philadelphia 18, Pennsylvania

David Fields
1356 Warner Road
Meadowbrook, Pennsylvania

Donald Berkowitz
700 East Upsal Street
Philadelphia, Pennsylvania

Leonard Lieberman
100 Old York Road
Jenkintown, Pennsylvania

David P. Shulman
2001 Parkway
Philadelphia 30, Pennsylvania

Charles G. Hawes
8229 Roosevelt Boulevard
Philadelphia, Pennsylvania

Oscar C. Darach
616 East Walnut Lane
Philadelphia 28, Pennsylvania

Homer Jensen
218 Church Road
Elkins Park 17, Pennsylvania

A. C. Cramer
5315 Braeburn Drive
Bellaire, Texas

L. C. Aycock
Suite 420, Shell Building
Houston, Texas

James B. Minturn
849 Crest Drive
Prinveville, Oregon

Andrew L. Stone
4321 Sample Avenue
St. Louis 20, Missouri

INFORMATION ATTACHED TO MME FORM 40

APPLICATION OF ALPHA MINERAL COMPANY
FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

1. Financial Eligibility:

(a) Alpha Mineral Company applied for a $30,000.00 loan from two local banks. In each case the loan was denied. The banks were: (i) Bank of account - First City National Bank of Houston (copy of letter requesting the loan and copy of the bank's reply enclosed); and (ii) Bank of the Southwest, Houston, Texas (copy of letter requesting the loan and copy of the bank's reply enclosed).

(b) Not applicable.

(c) Alpha Mineral Company has $30,000.00 on hand. If this application is granted, these funds are available for the exploration program described herein. If this application is not granted, it is Applicant's present intention to employ these funds in a different and smaller exploration program to be undertaken at its sole expense.

2. Applicant's Rights in Land:

(a) Applicant is the owner of leases providing for the right to explore and prospect for and to mine and produce oil, gas and other minerals. The leases and the property covered thereby are identified as follows:

(1) J. T. Bridges, recorded in Misc. 1, page 332 by the Saline Circuit and Chancery Clerk of Saline County, Arkansas, covering the following described lands:

The South 24 acres of the Northeast 1/4 of the Northeast 1/4 of Section 31, T2S, R14W, Saline County, Arkansas, except a one-acre tract in the Southeast corner of above described 24-acre tract and more fully described as: beginning at the Southeast corner of the Northeast 1/4 of the Northeast 1/4 of Section 31, run North 132 feet, West 330 feet, South 132 feet to point of beginning, leaving a net of 23 acres covered by this lease.

(2) W. C. McClendon, recorded in Misc. 1, page 342, covering the following described land:

Part of the Northeast 1/4 of the Northwest 1/4 of Section 30, T2S, R14W, containing 13.35 acres of surface rights and 6.67 acres of mineral rights undivided under the said described property, which property is as follows:

Beginning at the Northwest corner of the Northeast 1/4 of the Northwest 1/4 of Section 30, T2S, R14W; thence East 675', South 782' to the North side of Alcoa pump road; thence Westerly 675'; thence North 782' to point of beginning and containing 13.35 acres, more or less.

Attached to the above lease is an amendment recorded in Misc. 3, page 49.

(3) Bryan W. Brooks, recorded in Misc. 1, page 352 and covering the following described land:

Undivided one-half of mineral rights in the Northeast of Northwest quarter of Section 30, T2S, R14W.

Attached to the above lease is an amendment recorded in Misc. 3, page 53.

(4) Lawrence E. Tatum, recorded in Misc. 1, page 362 covering the following described land:

North 16 acres in the Northeast of Northeast quarter of Section 31, T2S, R14W, Saline County, Arkansas.

(5) Leon H. Tatum, recorded in Misc. 1, page 372 and covering the following described land:

Part of the Northeast 1/4 of the Northeast 1/4; beginning at the Southeast corner run 132'; West 330'; South 132'; East 330' to point of beginning located in Section 31, T2S, R14W, Saline County, Arkansas.

(6) R. A. Davenport, Sr., et al, recorded in Misc. 1, page 382 and covering the following described land:

The Northwest quarter of the Northeast quarter of Section 30, T2S, R14W, Saline County, Arkansas.

Attached to the above lease are powers of attorney recorded, respectively, in Book D, page 179; Book D, page 180; Book D, page 181; Book D, page 182; Book D, page 183; Book D, page 184; Book D, page 185 and in Book D, page 186. Also attached to the above lease is an amendment recorded in Misc. 3, page 57.

(7) R. A. Davenport, Sr., recorded in Misc. 1, page 392 covering the following described land:

The Southeast 1/4 of the Southwest 1/4 of Section 29, T2S, R14W, Saline County, Arkansas.

(8) R. A. Davenport, recorded in Misc. 1, page 402 and covering the following described land:

The Northeast 1/4 of the Northwest 1/4 of Section 32, T2S, R14W, Saline County, Arkansas.

(9) Aluminum Company of America, recorded in Misc. 1, page 406 and covering the following described lands, including the amended description:

All of the East 1/2 of Northeast 1/4 of Section 25, T2S, R15W;

Also, 4 acres, more or less, off the East side of the Northwest 1/4 of Section 25, T2S, R15W, described more particularly as: beginning at the Northeast corner of the Northwest 1/4 of the Northeast 1/4; thence North 86° 08', 132 feet; thence South 4° 34' West, 1342 feet; thence South 85° 54' East, 132 feet; thence North 4° 37' East, 1342 feet to the point of beginning;

Also, that part of the Southwest 1/4 of the Northeast 1/4 of Section 25, T2S, R15W lying on the East side of Gum Slough and Holly Creek, particularly described as: beginning at the Northeast corner of the said Southwest 1/4 of the Northeast 1/4 and running West across Holly

Creek to the center of Gum Slough; thence in a Southerly course down the center of said slough to the intersection of Holly Creek; thence in a Southerly direction down the center of said creek to the North bank of the Saline River; thence in a Southeasterly direction along the North bank of said river to where the same intersects the South boundary of the said Southwest 1/4 of the Northeast 1/4; thence due East to the Southeast corner of the said Southwest 1/4 of the Northeast 1/4; thence due North to the place of beginning;

Also, the North 1/2 of the Southeast 1/4 of Section 25, T2S, R15W;

Also, all that part of the Southwest 1/4 of the Northeast 1/4 of Section 25, T2S, R15W lying West and South of the Saline River and containing 3 acres, more or less;

Also, a 4-acre tract in the Southwest 1/4 of the Southeast 1/4 of Section 25, T2S, R15W particularly described as follows: beginning at a point which is 740 feet from the Northeast corner of the Southwest 1/4 of the Southeast 1/4 of Section 25, T2S, R15W along a bearing of South 78° 32' West; thence South 7° 32' West, 398 feet; thence North 83° 32' West, 451 feet; thence North 28° 31' E, 441 feet, along the East bank of the Saline River; thence North 81° 31' East, 293 feet to the point of beginning;

Also, the Southeast 1/4 of the Northeast 1/4 and the Northeast 1/4 of the Southeast 1/4 of Section 29, T2S, R14W, containing 80 acres, more or less.

(10) International Paper Company, recorded in Misc. 3, page 157, covering the following described lands:

(Amended location)

<u>TOWNSHIP 2 SOUTH - RANGE 14 WEST</u>

| | | Acres |
|---|---|---|
| Section 30: | NE/4 of NE/4; S/2 of NE/4 | 120.00 |
| | Fractional W/2 of NW/4 | 59.50 |
| | SE/4 of NW/4 | 40.00 |

| | |
|---|---|
| Fractional SW/4 | 142.24 |
| W/2 of SE/4 | 80.00 |
| SE/4 of SE/4 West of highway | 38.05 |
| SE/4 of SE/4 East of highway | 1.95 |

TOWNSHIP 2 SOUTH - RANGE 15 WEST

| | |
|---|---|
| Section 25: SW/4 of SE/4 less and except 4.0 acres and SE/4 of SE/4 | 76.00 |
| | 557.74 |

Attached to the above lease is an amendment recorded in Misc. 3, page 154.

(11 and 12) L. M. Tatum Estate, recorded in Misc. , page covering the following described land: The North 1/2 of the Northeast of Section 36, T2S, R15W, except the Southwest of Northwest of Northeast in Saline County, Arkansas; the amount of acreage granted under this lease is 70 acres, more or less.

The West 1/2 of the Northeast 1/4 of the Southeast 1/4 of Section 30; T2S, R14W, Saline County, Arkansas and containing 20 acres, more or less.

(13) Boyd Allinson, recorded in Misc. 3, page 87 and covering the following described land:

That part of the East 1/2 of the Northeast 1/4 of the Southwest 1/4 lying West of State Highway No. 35 as now located, of Section 30, T2S, R14W, and being the same land described in deed dated June 13, 1952, from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, page 49 of the Deed Records of Saline County, Arkansas, containing 5 acres, more or less, said record and its references being hereby referred to for all purposes.

(14) May Tudor, recorded in Misc. 3, page 73, and covering the following described lands:

Part of the Northeast 1/4 of the Southwest 1/4 and part of the Northwest 1/4 of the Southwest 1/4 of Section 29, T2S, R14W, described as follows: Starting at the Northeast corner of the Southwest 1/4; then running South to the center of the Pine Bluff and Benton Road, now running through said land; thence West 124 rods with said road bed; thence North to the North line of said land; thence East to the place of beginning, containing 20 acres, more or less, and being the same land described in deed dated September 4, 1911, from J. I. Steele to G. C. Tudor and recorded in Book 1, page 173 of the Deed Records of Saline County, Arkansas, said record and its references being hereby referred to for all purposes.

Attached to the above lease is an amendment recorded in Misc. 3, page 83.

(15) Moses Kidd, recorded in Misc. 3, page 35 and covering the following described land:

That part of the Northwest 1/4 of the Southwest 1/4 lying South of what is known as the Bauxite Road in Section 29, and also the East 1/2 of the Northwest 1/4 of the Southeast 1/4 of Section 30, all in T2S, R14W, Saline County, Arkansas, and being the same land described in deed dated November 18, 1926 from Harve Kidd, et al to Moses Kidd and recorded in Book 19, page 313 of the Deed Records of Saline County, Arkansas, LESS and EXCEPT that part of the East 1/2 of the Northeast 1/4 of the Southwest 1/4 lying West of State Highway No. 35 as now located, and being the same land described in deed dated June 13, 1952 from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, page 409 of the Deed Records of Saline County, Arkansas, said records and their references being hereby referred to for all purposes.

Attached to the above lease is an amendment recorded in Misc. 3, page 45.

The above leases cover all minerals with the exceptions which follow:

(7) R. A. Davenport, covers only oil and gas.

(9) Aluminum Company of America, covers all minerals except bauxite.

(10) International Paper Company, covers only all iron ores and minerals containing columbium and tantalum.

One true copy of each of the above leases is submitted herewith, together with Map No. 1 showing the property covered by the leases and the property on which Alpha Mineral Company desires to explore as described in Paragraph 2(b). Attached to each lease is a copy of canceled check or other evidence of payment of delay rentals heretofore due under such lease.

To the best of Applicant's knowledge, the above properties are not subject to any liens, mortgages or other encumbrances.

(b) The property upon which Alpha Mineral Company desires to explore consists of the following:

Section 30, T2S, R14W, Saline County, Arkansas.

Part of the Northeast 1/4 of the Southwest 1/4 and part of the Northwest 1/4 of the Southwest 1/4 of Section 29, T2S, R14W, described as follows: Starting at the Northeast corner of the Southwest 1/4; then running South to the center of the Pine Bluff and Benton Road, now running through said land; thence West 124 rods with said road bed; thence North to the North line of said land; thence East to the place of beginning, containing 20 acres, more or less, and being the same land described in deed dated September 4, 1911, from J. I. Steele to G. C. Tudor and recorded in Book 1, page 173 of the Deed Records of Saline County, Arkansas.

That part of the Northwest 1/4 of the Southwest 1/4 lying South of what is known as the Bauxite Road in Section 29, and also the East 1/2 of the Northwest 1/4 of the Southeast 1/4 of Section 30, all in T2S, R14W, Saline County, Arkansas, and being the same land

described in deed dated November 18, 1926 from Harve Kidd, et al to Moses Kidd and recorded in Book 19, page 313 of the Deed Records of Saline County, Arkansas, LESS AND EXCEPT that part of the East 1/2 of the Northeast 1/4 of the Southwest 1/4 lying West of State Highway No. 35 as now located, and being the same land described in deed dated June 13, 1952 from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, page 409 of the Deed Records of Saline County, Arkansas.

There are no leases which should not be subject to Government royalty and liens.

This prospect is called the Alpha Mineral Prospect, the Benton Magnetic Anomaly, or the Bauxite Magnetic Anomaly.

(c) Lien and subordination agreements have been secured for the following leases:

(2) W. C. McClendon;

(3) Bryan Brooks;

(6) R. A. Davenport, Sr., et al;

(11 and 12) L. M. Tatum Estate; and

(15) Moses Kidd.

Alpha Mineral Company attempted unsuccessfully to secure lien and subordination agreements for the following leases:

(10) International Paper Company;

(13) Boyd Allinson; and

(14) May Tudor.

Letters of refusal were obtained for Leases (10), (13) and (14).

Copies in quintuplicate of the lien and subordination agreements and the letters of refusal accompany this request.

At present, it is proposed to explore in Section 30 and in the adjacent portions of Section 29. Thus, there are several leases for which we have not attempted to secure lien and subordination agreements.

3. Physical Description:

(a) No mining has been done on the leased properties. Some drilling for bauxite has been reported, but apparently no commercial ore was found. The significant exploration work is the gravity and magnetic surveys which have been made. Copies of the most important of these surveys are included in Section 3(g).

(b) The airborne magnetometer survey was made by Alpha Mineral Company.

(c) There has been no mineral production on the leased properties.

(d) There are no known ore reserves on the leased properties.

(e) Geological features:

This prospect is a buried deposit which reveals its presence and location by causing very strong localized maxima in the magnetic and gravitational fields of the earth. It is located within the large nepheline syenite intrusion of the Arkansas bauxite district. This relationship is shown on Map No. 2.

The magnetic anomaly is shown on Map No. 3. The gravitational anomaly is shown on Map No. 4 and Map No. 5, both of which were taken from Bureau of Mines RI 4251. Map No. 6 shows the relationship of the prospect to the lease block, the location of Section A-A' and the proposed exploration program. Map No. 7 is a map of Saline County, Arkansas, showing the general location. Aerial Photo No. 1 shows the area of the lease block.

Alpha Mineral Company had the magnetic data analyzed according to the methods in GSA Memoir 47 by K. N. Isaacs, geologist and geophysicist of Philadelphia, Pennsylvania, and Geophysical Associates International of Houston, Texas. Their reports are Report No. 1 and Report No. 2, respectively. Data concerning the occurrence of columbium (which applies equally to tantalum, most probably), in Arkansas were requested from the Arkansas State Geologist, Mr. N. F. Williams. His letter and attachments are Report No. 3.

Comparisons of this magnetic anomaly were made with the magnetic anomalies over the Pea Ridge Mine in Missouri, the Grace Mine in Pennsylvania and the Marmora Mine in Ontario, Canada. These profiles are Magnetic Profiles Nos. 1, 2, 3 and 4, respectively.

Section A-A' was prepared from the following data and principles:

Flight level of the airborne magnetic survey is estimated at 700'.
Surface elevation taken from topographic sheet adjusted to elevation of Drill Hole J4.
Elevation of bauxite horizon, Midway blue clay and Midway limestone taken from log of Drill Hole J4.
Slope of top of blue clay is extension of slope from Drill Hole J4 to outcrop.
Slope of limestone shown parallel to top of blue clay, although the blue clay probably thickens toward A.
From various data in Bureau of Mines RI 4251 the range of the top of the syenite is from plus 50 to minus 150 feet elevation, and the range of the Paleozoic surface is from minus 100 to minus 200 feet elevation.

From Arkansas Geological Survey Information Circular 8 we quote the log of Drill Hole J4, on the Davenport Heirs' property, as shown on Map No. 6:

"Sec. 30, T 2 S., R. 14 W., on Southwest side of road just West of small stream. Elevation 345 feet.

"T. D. 310 Ft.

| | |
|---|---|
| Depth to top of bauxite-kaolin zone | 172 ft. |
| Depth to top of blue clay (Midway) | 205 ft. |

Depth to top of limestone 300 ft.
(Eight feet of 'bauxite' were logged from 172-180 ft.)"

Ore Body C is definitely within the body of syenite, from data in RI 4251.

Extensions of data indicate that the gravity anomaly is also within the syenite body. It is considered probable that if the gravity map were sufficiently detailed, it would show a separate anomaly in the vicinity of Ore Body A instead of an elongation in that direction. The analysis of the magnetic anomaly corroborates the probability of two separate anomalies.

The simplest assumption is that all anomalies are similar in composition and lie in the same country rock, namely, nepheline syenite, although this is not certain.

The gravity anomaly shows the presence of a large concentration of heavy minerals. The specific gravity of the rocks in which the anomaly occurs are as follows:

Midway limestone - 2.4 to 2.6

Paleozoics - 2.4 to 2.9

Nepheline syenite - 2.5 to 2.7

The specific gravity required to produce the observed anomaly is thought to be on the order of 3.5 to 3.8, a differential of approximately 1. Some iron oxides and titanium minerals are in this range. Mixtures of iron oxides and ferromagnesian minerals could be in this range also. A smaller quantity of hematite could produce the observed anomaly, with a specific gravity of 2.9 to 5.3. The heaviest igneous rock is probably peridotite, with a specific gravity of 2.78 to 3.37. Presumably a peridotite containing a large percentage of magnetite could be heavy enough to fit the required conditions, but in this case we could reasonably expect the magnetite to affect the magnetic picture, and the

magnetic anomaly appears to be caused by magnetite veins surrounding the concentration of heavy minerals.

The most reasonable interpretations that we can make of the existing data are as follows:

(1) The source of the magnetic and gravity anomalies is the final phase of the cooling of the syenite mass. Most of the magnetite was deposited around the periphery of the final chamber. Possibly the mass was subjected to weathering during Cretaceous times and this produced a deposit of hematite in situ. The unexposed magnetite could have remained unaltered.

(2) The source of the anomalies is an ultramafic plug with "filter-pressed" magnetite around the boundary and in nearby fault planes (Ore Bodies A and C). We do not regard this situation to be as probable as No. 1, because of the coincidence of having an intrusion pierce an intrusion, of the difficulty in accounting for an opening available for the injection of the magnetite, and of having ultramafic material heavy enough without appreciable magnetite.

Ore Minerals

We expect to find magnetite and other oxides of iron and columbium and tantalum-bearing titanium minerals such as rutile, ilmenite, perovskite and sphene. If the gravity anomaly is caused by an ultramafic intrusion, other ore minerals which may be found are industrial diamonds, asbestos, chromite, platinum and nickel minerals. Also, bauxite, a mixture, may be found.

Geological Formations

The surface formation on part of the prospect is probably a thin veneer of Quaternary alluvium. The sands, clays and lignites of the Tertiary Wilcox formation extend to a depth of approximately 200 feet. This formation is followed

by 100 feet of Tertiary Midway clay and 100 feet, more or less, of Midway lime. No Cretaceous sediments are known in the immediate area. The prospect should lie beneath the Midway in a country rock of nepheline syenite. A thin mantle of Paleozoics may be present over the deeper portions of the deposit.

Type of Deposit

We expect the magnetite to occur in veins at the contact of the heavy minerals which cause the gravity anomaly with the country rock. The columbium and tantalum values may accompany the magnetite and/or be on the body of the heavy minerals. Bauxite derived from the adjacent syenite may be present in a bedded deposit.

(f) Reasons for Expecting to Find Ore-Magnetite

The studies made and described in Report No. 1 indicate that magnetite is present in commercial concentrations. Magnetic Profiles Nos. 1 through 4 show the similarity and comparability of this prospect to known mines. From these studies we conclude that a large amount of magnetite is present. The calculated depth to the theoretical poles is from 600 to 900 feet. We expect the upper surface of the prospect to coincide with the Syenite Surface.

We have no way of knowing at this time the grade and purity of the magnetite. If it is associated intimately with titanium minerals, it may be economical to do an unusual amount of beneficiation, if the titanium minerals can be separated and carry commercial amounts of columbium and tantalum. It is possible that the magnetite could be mined as direct shipping ore, as titaniferous magnetite is more commonly associated with anorthosites and gabbros, magnetite with syenite.

The location of this prospect is ideal with respect to availability, transportation and other industrial considerations. We consider the erection of a steel-making plant on this site to be entirely feasible, particularly a direct reduction process.

There is an annual market in the United States for approximately one million tons of oil well drilling fluid weighting material. It is possible that finely ground magnetite could secure a portion of this market if it could be produced at this site for less than $12 per short ton. In the event that the magnetite did not meet metal ore grade, this is a potential market.

The announced construction of two Strategic-Udy plants in Texas might supply a market for titaniferous magnetite, as well as metal grade magnetite. The various steel plants in Texas and Alabama are potential markets for metal grade magnetite. There is a possibility that magnetite could be moved to the eastern markets by water, particularly when the Arkansas River becomes navigable, reportedly in the not distant future.

Reasons for Expecting to Find Ore - Hematite

The most reasonable explanation of the gravity anomaly is that it is caused by a residual deposit of hematite, derived from the weathering of ferromagnesian minerals. It is believed that such a deposit could be of the size, depth and configuration to produce the observed anomaly.

Reasons for Expecting to Find Ore - Columbium and Tantalum

The widespread occurrence of columbium in the alkalic rocks of Arkansas is pointed out by Mr. Williams in Report No. 3. In the excerpt from USGS Circular 225 it is stated that columbium is largely concentrated in such titanium minerals as rutile, ilmenite, perovskite and sphene. Titanium minerals have a widespread occurrence in the nearby Magnet Cove complex in considerable quantities, rutile having been mined commercially. Rutile, brookite and perovskite from Magnet Cove contain columbium up to a reported maximum of 5.6% Nb.

Magnetite, titanium minerals and columbium occur in the adjacent syenite as accessory minerals. If the prospect is

the end result of a magmatic segregation of the heavy minerals, it is reasonable to expect a substantial concentration of titanium minerals along with the magnetite, and no doubt the columbium and tantalum would accompany the titanium.

Exploitation of the columbium-bearing minerals should be aided by the presence of commercial magnetite, and vice versa. This location would be an excellent site for a plant to produce columbium and tantalum metals.

Reasons for Expecting to Find Ore - Other Minerals

In Report No. 3, Mr. Williams points out that diamonds and nickel might be found because they are present elsewhere in the same province, although not in commercial concentrations.

If the intrusion is serpentinized in part, and serpentine is present in the area, asbestos is a possibility, although it has not been reported in Arkansas. Talc, which is mined nearby, could also be present.

There is probably some bauxite at the Midway-Wilcox contact, as indicated by Core Hole J4 on the Davenport Estate property.

Apatite may accompany the magnetite as at the Pea Ridge Mine in Missouri.

We could engage in considerable speculation as to the minerals which might occur in this deposit, starting with the theory that it consists of the magmatic segregation from the adjacent nepheline syenite mass of a suite of minerals similar to the unusual minerals of the Magnet Cove complex, concentrated into a relatively small mass. This would be idle, but the fact remains that a careful exploration of this body could result in some extremely interesting and valuable mineral discoveries.

4. Accessibility of Property:

(a) Mr. N. F. Williams, Arkansas State Geologist, will be available to show the area to the OME representative. His address is:

Mr. N. F. Williams, Geologist-Director
Arkansas Geological and Conservation Commission
State Capitol
Little Rock, Arkansas.
Tel. Franklin 5-4646

The property is accessible by roads, as will be noted on the aerial photo and the county maps. An extra copy of the county map is included in the envelope containing Maps Nos. 2, 5 and 7, Section A-A', Set 1, for the convenience of the OME representative.

(b) Benton is the closest shipping and supply point. It is approximately three miles.

5. Exploration Work:

(a) There are three objectives in the proposed exploration program:

First, we must find, sample and measure the magnetite veins. The proposed Exploration Profiles are shown on Map No. 6. We hope to find the veins with a maximum of four probing holes on each profile and core them for a depth of 400 feet in three holes. We expect to move the holes along the lines of the profiles as probing indicates advisable. We propose to drill out Exploration Profiles 1 and 2, shifting to Exploration Profile 3 only if necessary.

Second, we must find, sample and measure the heavy minerals which are the cause of the gravitational anomaly. We propose to drill Heavy Mineral Test 1 in the center of the anomaly, probing to the top of the mineral body and then coring for 400' more or less. Tentative locations for HM 2 and HM 3 are also shown on Map No. 6, although we plan on drilling only HM 1 and HM 2, changing to HM 3 if necessary. If it appears suitable, we might deepen Holes EP1-6, EP2-6 or EP3-7, thereby saving probing costs.

Third, on those leases where we have bauxite rights (which are all except Leases (8), (9) and (10)), we will attempt to core the bauxite horizon in each hole where hard material is encountered.

We will take size NX cores. A detailed analysis of each proposed hole showing depths and costs in included in Part 7(a).

(b) The property is relatively flat and is easily accessible for the drill rigs. We have no plans for road construction, but have included six (6) daysof bulldozer work.

(c) If an OME contract is signed, the drilling will commence as soon as the contractor can get a drill crew into the area. The proposed exploration program will require approximately ninety (90) days for completion. Drilling will be done on a 7-day, 2-shift basis.

6. Experience:

Alpha Mineral Company is represented by L. W. Minturn, General Partner, who will have over-all supervision of the project. The field work will be supervised by Mr. Howard G. Schoenike. The respective qualifications of these individuals are as follows:

(a) Mr. Minturn was graduated from the Colorado School of Mines in 1937 as a Geological Engineer. Immediately after graduation, he worked in the oil business as a geologist and in gravity meter exploration. During the War he worked as an Industrial Engineer, mostly for the Aluminum Company of America. After the War he was transferred to the Raw Materials group of Alcoa and worked there with industrial raw materials and oil and gas until 1958 when he entered the consulting field. Since then, he has consulted with Alcoa, directed several exploration programs and has engaged in the development of mineral prospects for his own account.

(b) Mr. Schoenike is an Economic Mining Geologist, forty-three years of age, with a PHB and MS degree in geology from the University of Wisconsin. In 1942, after completion of his undergraduate studies, he joined the United States Navy and served four years as a Naval Aviator. He returned to the University in 1946 for his advanced degree.

Since that time, he has had fifteen (15) years of domestic and international experience in examination, evaluation and

exploration of metallic and non-metallic mineral deposits.

After leaving graduate school, he was first engaged as Geologist for the Butler Brothers Mining Company of St. Paul, Minnesota and worked on iron, gold, copper, lead, manganese, mercury and coal deposits throughout the United States and Canada. In 1948 he joined the Geological Department of the M. A. Hanna Company of Cleveland, Ohio as Exploration Geologist and was active on iron, nickel, gold, fluorite, chromium, tungsten, manganese and uranium deposits both domestically and in Canada. In 1951 he was Geologist-in-Charge of the nickel exploration program at Riddle, Oregon. This project has subsequently developed into a multi-million dollar mining and smelting operation.

In 1952, he joined the Baroid Division of the National Lead Company as Production Geologist. For this organization he did examination, evaluation and exploration throughout the United States, Canada, Mexico, Europe and Africa on barite, bentonite, mica, lignite, tungsten, lead and uranium deposits and mines.

In June, 1957 he became an independent consulting mining geologist. Since that time he has examined and evaluated deposits of barite, mercury, phosphate, quartz, iron, manganese, uranium, thorium, vermiculite, copper, lead, gilsonite, chromium, tripoli, tatanium, fluorite, clay, sand, gravel, kaolin, lignite, zinc, aluminum, placer gold and gypsum.

He has a working knowledge of Spanish and German and basic knowledge of French. He holds a commercial pilot's license for land and sea aircraft and is experienced in photo interpretation.

He is an active member of the American Institute of Mining and Metallurgical Engineers, the Houston Geological Society and the Society of Economic Geologists.

7. Estimate of Costs:

(a) Bids from three drilling contractors and three laboratories were secured. Copies accompany this application. The best bid for drilling was made by the Joy Manufacturing Company, and the best bid for the laboratory work was made by Bruce Williams Laboratories. Their bids were used in the Work and Cost Detail of Proposed Exploration, which tabulation accompanies this application.

The contract with Joy Manufacturing Company would be for the following:

| | |
|---|---|
| 9,070 feet of probing @ $2.50 per foot | $22,675.00 |
| 1,450 feet of coring above 600' @ $4.75 per foot | 6,887.50 |
| 2,190 feet of coring below 600' @ $5.25 per foot | 11,497.50 |
| Reaming, casing, cement | 1,000.00 |
| Moving in and out | 700.00 |
| | $42,760.00 |

The contract with Bruce Williams Laboratories is estimated to be the following:

| | |
|---|---|
| 250 samples @ $21.00 | $ 5,250.00 |

Bulldozer contract is estimated at the following:

| | |
|---|---|
| Six days @ $105.00 per day | $ 630.00 |

(b) Personal Services

The fee schedule submitted by Mr. Schoenike is included.

The estimated compensation for Mr. Schoenike is $6,975.00 for ninety (90) days. Expenses and transportation for Mr. Schoenike are estimated at $1,500.00.

It is estimated that a local laborer to be hired at $10.00 per day for a total of forty-five (45) days will be required for assistance in surveying, core splitting and miscellaneous work. This total would be $450.00.

(c) Operating Material and Supplies

It is estimated that $150.00 will be required for waterproof core boxes and $50.00 for core and sludge bags.

(d) It will be necessary to purchase an Acker Drilling Equipment Company core splitter for $167.50.

(e) There will be no initial rehabilitation and repairs.

(f) There will be no new buildings, fixtures or installations.

(g) Miscellaneous

The budget of $60,000.00 provides $2,067.50 for miscellaneous expenses, such as traveling and living expenses other than those extra assays, tags, postage on samples, extra help, hauling, drilling mud, etc. Any money not required for these items as well as any left-over from other estimates will be put in coring at least one hole deeper.

## WORK AND COST DETAIL OF PROPOSED EXPLORATION

| ITEM | Total Cost | Amt. of Probing | Cost @ 2.50/ ft. | Amt. of Bauxite Coring | Cost @ 4.75/ ft. | Amt. of Coring Above 600' | Cost @ 4.75/ ft. | Amt. of Coring Below 600' | Cost @ 5.25/ ft. |
|---|---|---|---|---|---|---|---|---|---|
| 7(a) Exploration Profile 1 | | | | | | | | | |
| Hole 1 | 3,345. | 480 | 1,200. | 20 | 95. | 100 | 475. | 300 | 1,575. |
| 2 | 3,345. | 480 | 1,200. | 20 | 95. | 100 | 475. | 300 | 1,575. |
| 3 | 3,345. | 480 | 1,200. | 20 | 95. | 100 | 475. | 300 | 1,575. |
| 4 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 5 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 6 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 7 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| Exploration Profile 2 | | | | | | | | | |
| Hole 1 | 3,300. | 500 | 1,250. | - | - | 100 | 475. | 300 | 1,575. |
| 2 | 3,300. | 500 | 1,250. | - | - | 100 | 475. | 300 | 1,575. |
| 3 | 3,300. | 500 | 1,250. | - | - | 100 | 475. | 300 | 1,575. |
| 4 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 5 | 1,345. | 500 | 1,250. | - | - | 20 | 95. | - | - |
| 6 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 7 | 1,345. | 500 | 1,250. | - | - | 20 | 95. | - | - |
| Heavy Mineral Tests | | | | | | | | | |
| Hole 1 | 3,105. | 400 | 1,000. | 20 | 95. | 180 | 855. | 220 | 1,155. |
| 2 | 2,955. | 350 | 875. | 20 | 95. | 230 | 1,092.50 | 170 | 892.50 |
| Reaming, Casing, Cement, etc. | 1,000. | | | | | | | | |
| Moving In and Out | 700. | | | | | | | | |
| Contingency Holes (3) | 4,035. | 1,500 | 3,750. | - | - | 60 | 285. | - | - |
| TOTAL JOY MFG. CO. | 42,760. | 9,070 | 22,675. | 220 | 1,045. | 1,230 | 5,842.50 | 2,190 | 11,497.50 |

| | | |
|---|---|---|
| Assaying-Bruce Williams Labs. | 5,250. | - 250 samples @ $21.00 |
| Bulldozer | 630. | - 6 days @ $105/day |
| 7(b) Supervision & Report | 6,975. | - Howard G. Schoenike. 90 days. Fee Schedule Enclosed. |
| Expenses & Transportation | 1,500. | - H. G. Schoenike |
| Helper | 450. | - 45 days @ $10.00 per day |
| 7(c) Core Boxes | 150. | - Cardboard |
| Sludge Bags | 50. | - 200 @ 25¢ |
| 7(d) Core Splitter | 167.50 | - Acker Drilling Equipment Co. |
| 7(g) Misc. | 2,067.50 | |
| TOTAL | 60,000. | - ESTIMATED COST OF PROPOSED EXPLORATION |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Exploration Profile 3 | | | | | | | | | |
| Hole 1 | 2,850. | 350 | 875. | - | - | 250 | 1,187.50 | 150 | 787.50 |
| 2 | 2,850. | 350 | 875. | - | - | 250 | 1,187.50 | 150 | 787.50 |
| 3 | 2,850. | 350 | 875. | - | - | 250 | 1,187.50 | 150 | 787.50 |
| 4 | 970. | 350 | 875. | - | - | 20 | 95. | - | - |
| 5 | 970. | 350 | 875. | - | - | 20 | 95. | - | - |
| 6 | 970. | 350 | 875. | - | - | 20 | 95. | - | - |
| 7 | 970. | 350 | 875. | - | - | 20 | 95. | - | - |
| | 12,430. | 2,450 | 6,125. | - | - | 830 | 3,942.50 | 450 | 2,362.50 |

Form 40
1958

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Budget Bureau No. 42-R1368
Approval expires Dec. 31, 1963

# APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85-701 (72 Stat. 700; 30 U.S.C. 641)

NAME OF APPLICANT *(Full legal name and mailing address as they should appear on contract if one is executed.)*

Alpha Mineral Company
753 W. Creekside Drive
Houston 24, Texas

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER 6243

DATE RECEIVED 4-23-62

REGION IV

DIVISION CODE

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL
CORPORATION
PARTNERSHIP
OTHER *(Specify)* X

Limited Partnership

STATE IN WHICH FIRM IS ORGANIZED Ark.

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

| NAME | ADDRESS | TITLE |
|---|---|---|
| L. W. Hinton | 753 W. Creekside Dr. Houston 24, Texas | Sole General Partner |

Attached hereto is a complete list of the names and addresses of all of the Limited Partners of Alpha Mineral Company.

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE Iron ore, columbium and tantalum minerals and bauxite

ESTIMATED COST OF PROJECT $60,000.00

| PROPERTY NAME | LOCATION COUNTY | STATE |
|---|---|---|
| Benton Magnetite Prospect | Saline | Arkansas |

## GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

## CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

The proposed exploration is the program defined April 18, 1962 (DATED) in the information attached which has an estimated cost of $60,000. See information under Para. 1(c) attached.

ALPHA MINERAL COMPANY
L. W. Hinton
BY *(Signature)*
Sole General Partner
TITLE

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

# INFORMATION REQUIRED WITH THIS APPLICATION

## 1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the exploration [redacted] cost.

## 2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

## 3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

## 4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

## 5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

(b) If an access road must be built, show the proposed location on the property map and state the length, type and construction methods proposed.

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

## 6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

## 7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration work, stating specifications and cost including labor, materials, and supervision.

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

INT.-DUP. SEC., WASH., D.C. 48740

## LIMITED PARTNERS OF ALPHA MINERAL COMPANY

Bernard Wolfman
8226 Forest Avenue
Elkins Park 17, Pennsylvania

J. Leonard Schorr
815 Church Road
Elkins Park 17, Pennsylvania

John B. Schorsch
1105 Sewell Lane
Rydal, Pennsylvania

C. C. Cohen
Box 887
Kansas City, Missouri

Aaron D. Bennett
1010 Fraser Road
Philadelphia 18, Pennsylvania

David Fields
1356 Warner Road
Meadowbrook, Pennsylvania

Donald Berkowitz
700 East Upsal Street
Philadelphia, Pennsylvania

Leonard Lieberman
100 Old York Road
Jenkintown, Pennsylvania

David P. Shulman
2001 Parkway
Philadelphia 30, Pennsylvania

Charles G. Hawes
8229 Roosevelt Boulevard
Philadelphia, Pennsylvania

Oscar C. Darach
616 East Walnut Lane
Philadelphia 28, Pennsylvania

Homer Jensen
218 Church Road
Elkins Park 17, Pennsylvania

A. C. Cramer
5315 Braeburn Drive
Bellaire, Texas

L. C. Aycock
Suite 420, Shell Building
Houston, Texas

James B. Minturn
849 Crest Drive
Prinveville, Oregon

Andrew L. Stone
4321 Semple Avenue
St. Louis 20, Missouri

INFORMATION ATTACHED TO MME FORM 40

APPLICATION OF ALPHA MINERAL COMPANY
FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

1. Financial Eligibility:

(a) Alpha Mineral Company applied for a $30,000.00 loan from two local banks. In each case the loan was denied. The banks were: (i) Bank of account - First City National Bank of Houston (copy of letter requesting the loan and copy of the bank's reply enclosed); and (ii) Bank of the Southwest, Houston, Texas (copy of letter requesting the loan and copy of the bank's reply enclosed).

(b) Not applicable.

(c) Alpha Mineral Company has $30,000.00 on hand. If this application is granted, these funds are available for the exploration program described herein. If this application is not granted, it is Applicant's present intention to employ these funds in a different and smaller exploration program to be undertaken at its sole expense.

2. Applicant's Rights in Land:

(a) Applicant is the owner of leases providing for the right to explore and prospect for and to mine and produce oil, gas and other minerals. The leases and the property covered thereby are identified as follows:

(1) J. T. Bridges, recorded in Misc. 1, page 332 by the Saline Circuit and Chancery Clerk of Saline County, Arkansas, covering the following described lands:

The South 24 acres of the Northeast 1/4 of the Northeast 1/4 of Section 31, T2S, R14W, Saline County, Arkansas, except a one-acre tract in the Southeast corner of above described 24-acre tract and more fully described as: beginning at the Southeast corner of the Northeast 1/4 of the Northeast 1/4 of Section 31, run North 132 feet, West 330 feet, South 132 feet to point of beginning, leaving a net of 23 acres covered by this lease.

(2) W. C. McClendon, recorded in Misc. 1, page 342, covering the following described land:

Part of the Northeast 1/4 of the Northwest 1/4 of Section 30, T2S, R14W, containing 13.35 acres of surface rights and 6.67 acres of mineral rights undivided under the said described property, which property is as follows:

Beginning at the Northwest corner of the Northeast 1/4 of the Northwest 1/4 of Section 30, T2S, R14W; thence East 675', South 782' to the North side of Alcoa pump road; thence Westerly 675'; thence North 782' to point of beginning and containing 13.35 acres, more or less.

Attached to the above lease is an amendment recorded in Misc. 3, page 49.

(3) Bryan W. Brooks, recorded in Misc. 1, page 352 and covering the following described land:

Undivided one-half of mineral rights in the Northeast of Northwest quarter of Section 30, T2S, R14W.

Attached to the above lease is an amendment recorded in Misc. 3, page 53.

(4) Lawrence E. Tatum, recorded in Misc. 1, page 362 covering the following described land:

North 16 acres in the Northeast of Northeast quarter of Section 31, T2S, R14W, Saline County, Arkansas.

(5) Leon H. Tatum, recorded in Misc. 1, page 372 and covering the following described land:

Part of the Northeast 1/4 of the Northeast 1/4; beginning at the Southeast corner run 132'; West 330'; South 132'; East 330' to point of beginning located in Section 31, T2S, R14W, Saline County, Arkansas.

(6) R. A. Davenport, Sr., et al, recorded in Misc. 1, page 382 and covering the following described land:

The Northwest quarter of the Northeast quarter of Section 30, T2S, R14W, Saline County, Arkansas.

Attached to the above lease are powers of attorney recorded, respectively, in Book D, page 179; Book D, page 180; Book D, page 181; Book D, page 182; Book D, page 183; Book D, page 184; Book D, page 185 and in Book D, page 186. Also attached to the above lease is an amendment recorded in Misc. 3, page 57.

(7) R. A. Davenport, Sr., recorded in Misc. 1, page 392 covering the following described land:

The Southeast 1/4 of the Southwest 1/4 of Section 29, T2S, R14W, Saline County, Arkansas.

(8) R. A. Davenport, recorded in Misc. 1, page 402 and covering the following described land:

The Northeast 1/4 of the Northwest 1/4 of Section 32, T2S, R14W, Saline County, Arkansas.

(9) Aluminum Company of America, recorded in Misc. 1, page 406 and covering the following described lands, including the amended description:

All of the East 1/2 of Northeast 1/4 of Section 25, T2S, R15W;

Also, 4 acres, more or less, off the East side of the Northwest 1/4 of Section 25, T2S, R15W, described more particularly as: beginning at the Northeast corner of the Northwest 1/4 of the Northeast 1/4; thence North 86° 08', 132 feet; thence South 4° 34' West, 1342 feet; thence South 85° 54' East, 132 feet; thence North 4° 37' East, 1342 feet to the point of beginning;

Also, that part of the Southwest 1/4 of the Northeast 1/4 of Section 25, T2S, R15W lying on the East side of Gum Slough and Holly Creek, particularly described as: beginning at the Northeast corner of the said Southwest 1/4 of the Northeast 1/4 and running West across Holly

Creek to the center of Gum Slough; thence in a Southerly course down the center of said slough to the intersection of Holly Creek; thence in a Southerly direction down the center of said creek to the North bank of the Saline River; thence in a Southeasterly direction along the North bank of said river to where the same intersects the South boundary of the said Southwest 1/4 of the Northeast 1/4; thence due East to the Southeast corner of the said Southwest 1/4 of the Northeast 1/4; thence due North to the place of beginning;

Also, the North 1/2 of the Southeast 1/4 of Section 25, T2S, R15W;

Also, all that part of the Southwest 1/4 of the Northeast 1/4 of Section 25, T2S, R15W lying West and South of the Saline River and containing 3 acres, more or less;

Also, a 4-acre tract in the Southwest 1/4 of the Southeast 1/4 of Section 25, T2S, R15W particularly described as follows: beginning at a point which is 740 feet from the Northeast corner of the Southwest 1/4 of the Southeast 1/4 of Section 25, T2S, R15W along a bearing of South 78° 32' West; thence South 7° 32' West, 398 feet; thence North 83° 32' West, 451 feet; thence North 28° 31' E, 441 feet, along the East bank of the Saline River; thence North 81° 31' East, 293 feet to the point of beginning;

Also, the Southeast 1/4 of the Northeast 1/4 and the Northeast 1/4 of the Southeast 1/4 of Section 29, T2S, R14W, containing 80 acres, more or less.

(10) International Paper Company, recorded in Misc. 3, page 157, covering the following described lands:

(Amended location)

<u>TOWNSHIP 2 SOUTH - RANGE 14 WEST</u>

| | | Acres |
|---|---|---|
| Section 30: | NE/4 of NE/4; S/2 of NE/4 | 120.00 |
| | Fractional W/2 of NW/4 | 59.50 |
| | SE/4 of NW/4 | 40.00 |

| | |
|---|---|
| Fractional SW/4 | 142.24 |
| W/2 of SE/4 | 80.00 |
| SE/4 of SE/4 West of highway | 38.05 |
| SE/4 of SE/4 East of highway | 1.95 |

TOWNSHIP 2 SOUTH - RANGE 15 WEST

| | | |
|---|---|---|
| Section 25: | SW/4 of SE/4 less and except 4.0 acres and SE/4 of SE/4 | 76.00 |
| | | 557.74 |

Attached to the above lease is an amendment recorded in Misc. 3, page 154.

(11 and 12) L. M. Tatum Estate, recorded in Misc. , page covering the following described land: The North 1/2 of the Northeast of Section 36, T2S, R15W, except the Southwest of Northwest of Northeast in Saline County, Arkansas; the amount of acreage granted under this lease is 70 acres, more or less.

The West 1/2 of the Northeast 1/4 of the Southeast 1/4 of Section 30; T2S, R14W, Saline County, Arkansas and containing 20 acres, more or less.

(13) Boyd Allinson, recorded in Misc. 3, page 87 and covering the following described land:

That part of the East 1/2 of the Northeast 1/4 of the Southwest 1/4 lying West of State Highway No. 35 as now located, of Section 30, T2S, R14W, and being the same land described in deed dated June 13, 1952, from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, page 49 of the Deed Records of Saline County, Arkansas, containing 5 acres, more or less, said record and its references being hereby referred to for all purposes.

(14) May Tudor, recorded in Misc. 3, page 73, and covering the following described lands:

Part of the Northeast 1/4 of the Southwest 1/4 and part of the Northwest 1/4 of the Southwest 1/4 of Section 29, T2S, R14W, described as follows: Starting at the Northeast corner of the Southwest 1/4; then running South to the center of the Pine Bluff and Benton Road, now running through said land; thence West 124 rods with said road bed; thence North to the North line of said land; thence East to the place of beginning, containing 20 acres, more or less, and being the same land described in deed dated September 4, 1911, from J. I. Steele to G. C. Tudor and recorded in Book 1, page 173 of the Deed Records of Saline County, Arkansas, said record and its references being hereby referred to for all purposes.

Attached to the above lease is an amendment recorded in Misc. 3, page 83.

(15) Moses Kidd, recorded in Misc. 3, page 35 and covering the following described land:

That part of the Northwest 1/4 of the Southwest 1/4 lying South of what is known as the Bauxite Road in Section 29, and also the East 1/2 of the Northwest 1/4 of the Southeast 1/4 of Section 30, all in T2S, R14W, Saline County, Arkansas, and being the same land described in deed dated November 18, 1926 from Harve Kidd, et al to Moses Kidd and recorded in Book 19, page 313 of the Deed Records of Saline County, Arkansas, LESS and EXCEPT that part of the East 1/2 of the Northeast 1/4 of the Southwest 1/4 lying West of State Highway No. 35 as now located, and being the same land described in deed dated June 13, 1952 from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, page 409 of the Deed Records of Saline County, Arkansas, said records and their references being hereby referred to for all purposes.

Attached to the above lease is an amendment recorded in Misc. 3, page 45.

The above leases cover all minerals with the exceptions which follow:

(7) R. A. Davenport, covers only oil and gas.

(9) Aluminum Company of America, covers all minerals except bauxite.

(10) International Paper Company, covers only all iron ores and minerals containing columbium and tantalum.

One true copy of each of the above leases is submitted herewith, together with Map No. 1 showing the property covered by the leases and the property on which Alpha Mineral Company desires to explore as described in Paragraph 2(b). Attached to each lease is a copy of canceled check or other evidence of payment of delay rentals heretofore due under such lease.

To the best of Applicant's knowledge, the above properties are not subject to any liens, mortgages or other encumbrances.

(b) The property upon which Alpha Mineral Company desires to explore consists of the following:

Section 30, T2S, R14W, Saline County, Arkansas.

Part of the Northeast 1/4 of the Southwest 1/4 and part of the Northwest 1/4 of the Southwest 1/4 of Section 29, T2S, R14W, described as follows: Starting at the Northeast corner of the Southwest 1/4; then running South to the center of the Pine Bluff and Benton Road, now running through said land; thence West 12¼ rods with said road bed; thence North to the North line of said land; thence East to the place of beginning, containing 20 acres, more or less, and being the same land described in deed dated September 4, 1911, from J. I. Steele to G. C. Tudor and recorded in Book 1, page 173 of the Deed Records of Saline County, Arkansas.

That part of the Northwest 1/4 of the Southwest 1/4 lying South of what is known as the Bauxite Road in Section 29, and also the East 1/2 of the Northwest 1/4 of the Southeast 1/4 of Section 30, all in T2S, R14W, Saline County, Arkansas, and being the same land

described in deed dated November 18, 1926 from Harve Kidd, et al to Moses Kidd and recorded in Book 19, page 313 of the Deed Records of Saline County, Arkansas, LESS AND EXCEPT that part of the East 1/2 of the Northeast 1/4 of the Southwest 1/4 lying West of State Highway No. 35 as now located, and being the same land described in deed dated June 13, 1952 from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, page 409 of the Deed Records of Saline County, Arkansas.

There are no leases which should not be subject to Government royalty and liens.

This prospect is called the Alpha Mineral Prospect, the Benton Magnetic Anomaly, or the Bauxite Magnetic Anomaly.

(c) Lien and subordination agreements have been secured for the following leases:

(2) W. C. McClendon;

(3) Bryan Brooks;

(6) R. A. Davenport, Sr., et al;

(11 and 12) L. M. Tatum Estate; and

(15) Moses Kidd.

Alpha Mineral Company attempted unsuccessfully to secure lien and subordination agreements for the following leases:

(10) International Paper Company;

(13) Boyd Allinson; and

(14) May Tudor.

Letters of refusal were obtained for Leases (10), (13) and (14).

Copies in quintuplicate of the lien and subordination agreements and the letters of refusal accompany this request.

At present, it is proposed to explore in Section 30 and in the adjacent portions of Section 29. Thus, there are several leases for which we have not attempted to secure lien and subordination agreements.

3. Physical Description:

(a) No mining has been done on the leased properties. Some drilling for bauxite has been reported, but apparently no commercial ore was found. The significant exploration work is the gravity and magnetic surveys which have been made. Copies of the most important of these surveys are included in Section 3(g).

(b) The airborne magnetometer survey was made by Alpha Mineral Company.

(c) There has been no mineral production on the leased properties.

(d) There are no known ore reserves on the leased properties.

(e) Geological features:

This prospect is a buried deposit which reveals its presence and location by causing very strong localized maxima in the magnetic and gravitational fields of the earth. It is located within the large nepheline syenite intrusion of the Arkansas bauxite district. This relationship is shown on Map No. 2.

The magnetic anomaly is shown on Map No. 3. The gravitational anomaly is shown on Map No. 4 and Map No. 5, both of which were taken from Bureau of Mines RI 4251. Map No. 6 shows the relationship of the prospect to the lease block, the location of Section A-A'and the proposed exploration program. Map No. 7 is a map of Saline County, Arkansas, showing the general location. Aerial Photo No. 1 shows the area of the lease block.

Alpha Mineral Company had the magnetic data analyzed according to the methods in GSA Memoir 47 by K. N. Isaacs, geologist and geophysicist of Philadelphia, Pennsylvania, and Geophysical Associates International of Houston, Texas. Their reports are Report No. 1 and Report No. 2, respectively. Data concerning the occurrence of columbium (which applies equally to tantalum, most probably), in Arkansas were requested from the Arkansas State Geologist, Mr. N. F. Williams. His letter and attachments are Report No. 3.

Comparisons of this magnetic anomaly were made with the magnetic anomalies over the Pea Ridge Mine in Missouri, the Grace Mine in Pennsylvania and the Marmora Mine in Ontario, Canada. These profiles are Magnetic Profiles Nos. 1, 2, 3 and 4, respectively.

Section A-A' was prepared from the following data and principles:

Flight level of the airborne magnetic survey is estimated at 700'.
Surface elevation taken from topographic sheet adjusted to elevation of Drill Hole J4.
Elevation of bauxite horizon, Midway blue clay and Midway limestone taken from log of Drill Hole J4.
Slope of top of blue clay is extension of slope from Drill Hole J4 to outcrop.
Slope of limestone shown parallel to top of blue clay, although the blue clay probably thickens toward A.
From various data in Bureau of Mines RI 4251 the range of the top of the syenite is from plus 50 to minus 150 feet elevation, and the range of the Paleozoic surface is from minus 100 to minus 200 feet elevation.

From Arkansas Geological Survey Information Circular 8 we quote the log of Drill Hole J4, on the Davenport Heirs' property, as shown on Map No. 6:

"Sec. 30, T 2 S., R. 14 W., on Southwest side of road just West of small stream. Elevation 345 feet.

"T. D. 310 Ft.

| | |
|---|---|
| Depth to top of bauxite-kaolin zone | 172 ft. |
| Depth to top of blue clay (Midway) | 205 ft. |

Depth to top of limestone 300 ft.
(Eight feet of 'bauxite' were logged from 172-180 ft.)"

Ore Body C is definitely within the body of syenite, from data in RI 4251.

Extensions of data indicate that the gravity anomaly is also within the syenite body. It is considered probable that if the gravity map were sufficiently detailed, it would show a separate anomaly in the vicinity of Ore Body A instead of an elongation in that direction. The analysis of the magnetic anomaly corroborates the probability of two separate anomalies.

The simplest assumption is that all anomalies are similar in composition and lie in the same country rock, namely, nepheline syenite, although this is not certain.

The gravity anomaly shows the presence of a large concentration of heavy minerals. The specific gravity of the rocks in which the anomaly occurs are as follows:

Midway limestone - 2.4 to 2.6

Paleozoics - 2.4 to 2.9

Nepheline syenite - 2.5 to 2.7

The specific gravity required to produce the observed anomaly is thought to be on the order of 3.5 to 3.8, a differential of approximately 1. Some iron oxides and titanium minerals are in this range. Mixtures of iron oxides and ferromagnesian minerals could be in this range also. A smaller quantity of hematite could produce the observed anomaly, with a specific gravity of 2.9 to 5.3. The heaviest igneous rock is probably peridotite, with a specific gravity of 2.78 to 3.37. Presumably a peridotite containing a large percentage of magnetite could be heavy enough to fit the required conditions, but in this case we could reasonably expect the magnetite to affect the magnetic picture, and the

magnetic anomaly appears to be caused by magnetite veins surrounding the concentration of heavy minerals.

The most reasonable interpretations that we can make of the existing data are as follows:

(1) The source of the magnetic and gravity anomalies is the final phase of the cooling of the syenite mass. Most of the magnetite was deposited around the periphery of the final chamber. Possibly the mass was subjected to weathering during Cretaceous times and this produced a deposit of hematite in situ. The unexposed magnetite could have remained unaltered.

(2) The source of the anomalies is an ultramafic plug with "filter-pressed" magnetite around the boundary and in nearby fault planes (Ore Bodies A and C). We do not regard this situation to be as probable as No. 1, because of the coincidence of having an intrusion pierce an intrusion, of the difficulty in accounting for an opening available for the injection of the magnetite, and of having ultramafic material heavy enough without appreciable magnetite.

Ore Minerals

We expect to find magnetite and other oxides of iron and columbium and tantalum-bearing titanium minerals such as rutile, ilmenite, perovskite and sphene. If the gravity anomaly is caused by an ultramafic intrusion, other ore minerals which may be found are industrial diamonds, asbestos, chromite, platinum and nickel minerals. Also, bauxite, a mixture, may be found.

Geological Formations

The surface formation on part of the prospect is probably a thin veneer of Quaternary alluvium. The sands, clays and lignites of the Tertiary Wilcox formation extend to a depth of approximately 200 feet. This formation is followed

by 100 feet of Tertiary Midway clay and 100 feet, more or less, of Midway lime. No Cretaceous sediments are known in the immediate area. The prospect should lie beneath the Midway in a country rock of nepheline syenite. A thin mantle of Paleozoics may be present over the deeper portions of the deposit.

Type of Deposit

We expect the magnetite to occur in veins at the contact of the heavy minerals which cause the gravity anomaly with the country rock. The columbium and tantalum values may accompany the magnetite and/or be on the body of the heavy minerals. Bauxite derived from the adjacent syenite may be present in a bedded deposit.

(f) Reasons for Expecting to Find Ore-Magnetite

The studies made and described in Report No. 1 indicate that magnetite is present in commercial concentrations. Magnetic Profiles Nos. 1 through 4 show the similarity and comparability of this prospect to known mines. From these studies we conclude that a large amount of magnetite is present. The calculated depth to the theoretical poles is from 600 to 900 feet. We expect the upper surface of the prospect to coincide with the Syenite Surface.

We have no way of knowing at this time the grade and purity of the magnetite. If it is associated intimately with titanium minerals, it may be economical to do an unusual amount of beneficiation, if the titanium minerals can be separated and carry commercial amounts of columbium and tantalum. It is possible that the magnetite could be mined as direct shipping ore, as titaniferous magnetite is more commonly associated with anorthosites and gabbros, magnetite with syenite.

The location of this prospect is ideal with respect to availability, transportation and other industrial considerations. We consider the erection of a steel-making plant on this site to be entirely feasible, particularly a direct reduction process.

There is an annual market in the United States for approximately one million tons of oil well drilling fluid weighting material. It is possible that finely ground magnetite could secure a portion of this market if it could be produced at this site for less than $12 per short ton. In the event that the magnetite did not meet metal ore grade, this is a potential market.

The announced construction of two Strategic-Udy plants in Texas might supply a market for titaniferous magnetite, as well as metal grade magnetite. The various steel plants in Texas and Alabama are potential markets for metal grade magnetite. There is a possibility that magnetite could be moved to the eastern markets by water, particularly when the Arkansas River becomes navigable, reportedly in the not distant future.

Reasons for Expecting to Find Ore - Hematite

The most reasonable explanation of the gravity anomaly is that it is caused by a residual deposit of hematite, derived from the weathering of ferromagnesian minerals. It is believed that such a deposit could be of the size, depth and configuration to produce the observed anomaly.

Reasons for Expecting to Find Ore - Columbium and Tantalum

The widespread occurrence of columbium in the alkalic rocks of Arkansas is pointed out by Mr. Williams in Report No. 3. In the excerpt from USGS Circular 225 it is stated that columbium is largely concentrated in such titanium minerals as rutile, ilmenite, perovskite and sphene. Titanium minerals have a widespread occurrence in the nearby Magnet Cove complex in considerable quantities, rutile having been mined commercially. Rutile, brookite and perovskite from Magnet Cove contain columbium up to a reported maximum of 5.6% Nb.

Magnetite, titanium minerals and columbium occur in the adjacent syenite as accessory minerals. If the prospect is

the end result of a magmatic segregation of the heavy minerals, it is reasonable to expect a substantial concentration of titanium minerals along with the magnetite, and no doubt the columbium and tantalum would accompany the titanium.

Exploitation of the columbium-bearing minerals should be aided by the presence of commercial magnetite, and vice versa. This location would be an excellent site for a plant to produce columbium and tantalum metals.

Reasons for Expecting to Find Ore - Other Minerals

In Report No. 3, Mr. Williams points out that diamonds and nickel might be found because they are present elsewhere in the same province, although not in commercial concentrations.

If the intrusion is serpentinized in part, and serpentine is present in the area, asbestos is a possibility, although it has not been reported in Arkansas. Talc, which is mined nearby, could also be present.

There is probably some bauxite at the Midway-Wilcox contact, as indicated by Core Hole J4 on the Davenport Estate property.

Apatite may accompany the magnetite as at the Pea Ridge Mine in Missouri.

We could engage in considerable speculation as to the minerals which might occur in this deposit, starting with the theory that it consists of the magmatic segregation from the adjacent nepheline syenite mass of a suite of minerals similar to the unusual minerals of the Magnet Cove complex, concentrated into a relatively small mass. This would be idle, but the fact remains that a careful exploration of this body could result in some extremely interesting and valuable mineral discoveries.

4. Accessibility of Property:

(a) Mr. N. F. Williams, Arkansas State Geologist, will be available to show the area to the OME representative. His address is:

Mr. N. F. Williams, Geologist-Director
Arkansas Geological and Conservation Commission
State Capitol
Little Rock, Arkansas.
Tel. Franklin 5-4646

The property is accessible by roads, as will be noted on the aerial photo and the county maps. An extra copy of the county map is included in the envelope containing Maps Nos. 1, 2, 5 and 7, Section A-A', Set 1, for the convenience of the OME representative.

(b) Benton is the closest shipping and supply point. It is approximately three miles.

5. Exploration Work:

(a) There are three objectives in the proposed exploration program:

First, we must find, sample and measure the magnetite veins. The proposed Exploration Profiles are shown on Map No. 6. We hope to find the veins with a maximum of four probing holes on each profile and core them for a depth of 400 feet in three holes. We expect to move the holes along the lines of the profiles as probing indicates advisable. We propose to drill out Exploration Profiles 1 and 2, shifting to Exploration Profile 3 only if necessary.

Second, we must find, sample and measure the heavy minerals which are the cause of the gravitational anomaly. We propose to drill Heavy Mineral Test 1 in the center of the anomaly, probing to the top of the mineral body and then coring for 400' more or less. Tentative locations for HM 2 and HM 3 are also shown on Map No. 6, although we plan on drilling only HM 1 and HM 2, changing to HM 3 if necessary. If it appears suitable, we might deepen Holes EP1-6, EP2-6 or EP3-7, thereby saving probing costs.

Third, on those leases where we have bauxite rights (which are all except Leases (8), (9) and (10)), we will attempt to core the bauxite horizon in each hole where hard material is encountered.

We will take size NX cores. A detailed analysis of each proposed hole showing depths and costs in included in Part 7(a).

(b) The property is relatively flat and is easily accessible for the drill rigs. We have no plans for road construction, but have included six (6) days of bulldozer work.

(c) If an OME contract is signed, the drilling will commence as soon as the contractor can get a drill crew into the area. The proposed exploration program will require approximately ninety (90) days for completion. Drilling will be done on a 7-day, 2-shift basis.

6. Experience:

Alpha Mineral Company is represented by L. W. Minturn, General Partner, who will have over-all supervision of the project. The field work will be supervised by Mr. Howard G. Schoenike. The respective qualifications of these individuals are as follows:

(a) Mr. Minturn was graduated from the Colorado School of Mines in 1937 as a Geological Engineer. Immediately after graduation, he worked in the oil business as a geologist and in gravity meter exploration. During the War he worked as an Industrial Engineer, mostly for the Aluminum Company of America. After the War he was transferred to the Raw Materials group of Alcoa and worked there with industrial raw materials and oil and gas until 1958 when he entered the consulting field. Since then, he has consulted with Alcoa, directed several exploration programs and has engaged in the development of mineral prospects for his own account.

(b) Mr. Schoenike is an Economic Mining Geologist, forty-three years of age, with a PHB and MS degree in geology from the University of Wisconsin. In 1942, after completion of his undergraduate studies, he joined the United States Navy and served four years as a Naval Aviator. He returned to the University in 1946 for his advanced degree.

Since that time, he has had fifteen (15) years of domestic and international experience in examination, evaluation and

exploration of metallic and non-metallic mineral deposits.

After leaving graduate school, he was first engaged as Geologist for the Butler Brothers Mining Company of St. Paul, Minnesota and worked on iron, gold, copper, lead, manganese, mercury and coal deposits throughout the United States and Canada. In 1948 he joined the Geological Department of the M. A. Hanna Company of Cleveland, Ohio as Exploration Geologist and was active on iron, nickel, gold, fluorite, chromium, tungsten, manganese and uranium deposits both domestically and in Canada. In 1951 he was Geologist-in-Charge of the nickel exploration program at Riddle, Oregon. This project has subsequently developed into a multi-million dollar mining and smelting operatinn.

In 1952, he joined the Baroid Division of the National Lead Company as Production Geologist. For this organization he did examination, evaluation and exploration throughout the United States, Canada, Mexico, Europe and Africa on barite, bentonite, mica, lignite, tungsten, lead and uranium deposits and mines.

In June, 1957 he became an independent consulting mining geologist. Since that time he has examined and evaluated deposits of barite, mercury, phosphate, quartz, iron, manganese, uranium, thorium, vermiculite, copper, lead, gilsonite, chromium, tripoli, tatanium, fluorite,clay, sand, gravel, kaolin, lignite, zinc, aluminum, placer gold and gypsum.

He has a working knowledge of Spanish and German and basic knowledge of French. He holds a commercial pilot's license for land and sea aircraft and is experienced in photo interpretation.

He is an active member of the American Institute of Mining and Metallurgical Engineers, the Houston Geological Society and the Society of Economic Geologists.

7. Estimate of Costs:

(a) Bids from three drilling contractors and three laboratories were secured. Copies accompany this application. The best bid for drilling was made by the Joy Manufacturing Company, and the best bid for the laboratory work was made by Bruce Williams Laboratories. Their bids were used in the Work and Cost Detail of Proposed Exploration, which tabulation accompanies this application.

The contract with Joy Manufacturing Company would be for the following:

| | |
|---|---|
| 9,070 feet of probing @ $2.50 per foot | $22,675.00 |
| 1,450 feet of coring above 600' @ $4.75 per foot | 6,887.50 |
| 2,190 feet of coring below 600' @ $5.25 per foot | 11,497.50 |
| Reaming, casing, cement | 1,000.00 |
| Moving in and out | 700.00 |
| | $42,760.00 |

The contract with Bruce Williams Laboratories is estimated to be the following:

| | |
|---|---|
| 250 samples @ $21.00 | $ 5,250.00 |

Bulldozer contract is estimated at the following:

| | |
|---|---|
| Six days @ $105.00 per day | $ 630.00 |

(b) Personal Services

The fee schedule submitted by Mr. Schoenike is included.

The estimated compensation for Mr. Schoenike is $6,975.00 for ninety (90) days. Expenses and transportation for Mr. Schoenike are estimated at $1,500.00.

It is estimated that a local laborer to be hired at $10.00 per day for a total of forty-five (45) days will be required for assistance in surveying, core splitting and miscellaneous work. This total would be $450.00.

(c) Operating Material and Supplies

It is estimated that $150.00 will be required for waterproof core boxes and $50.00 for core and sludge bags.

(d) It will be necessary to purchase an Acker Drilling Equipment Company core splitter for $167.50.

(e) There will be no initial rehabilitation and repairs.

(f) There will be no new buildings, fixtures or installations.

(g) Miscellaneous

The budget of $60,000.00 provides $2,067.50 for miscellaneous expenses, such as traveling and living expenses other than those extra assays, tags, postage on samples, extra help, hauling, drilling mud, etc. Any money not required for these items as well as any left-over from other estimates will be put in coring at least one hole deeper.

## WORK AND COST DETAIL OF PROPOSED EXPLORATION

| ITEM | Total Cost | Amt. of Probing | Cost @ 2.50/ ft. | Amt. of Bauxite Coring | Cost @ 4.75/ ft. | Amt. of Coring Above 600' | Cost @ 4.75/ ft. | Amt. of Coring Below 600' | Cost @ 5.25/ ft. |
|---|---|---|---|---|---|---|---|---|---|
| 7(a) Exploration Profile 1 | | | | | | | | | |
| Hole 1 | 3,345. | 480 | 1,200. | 20 | 95. | 100 | 475. | 300 | 1,575. |
| 2 | 3,345. | 480 | 1,200. | 20 | 95. | 100 | 475. | 300 | 1,575. |
| 3 | 3,345. | 480 | 1,200. | 20 | 95. | 100 | 475. | 300 | 1,575. |
| 4 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 5 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 6 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 7 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| Exploration Profile 2 | | | | | | | | | |
| Hole 1 | 3,300. | 500 | 1,250. | - | - | 100 | 475. | 300 | 1,575. |
| 2 | 3,300. | 500 | 1,250. | - | - | 100 | 475. | 300 | 1,575. |
| 3 | 3,300. | 500 | 1,250. | - | - | 100 | 475. | 300 | 1,575. |
| 4 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 5 | 1,345. | 500 | 1,250. | - | - | 20 | 95. | - | - |
| 6 | 1,390. | 480 | 1,200. | 20 | 95. | 20 | 95. | - | - |
| 7 | 1,345. | 500 | 1,250. | - | - | 20 | 95. | - | - |
| Heavy Mineral Tests | | | | | | | | | |
| Hole 1 | 3,105. | 400 | 1,000. | 20 | 95. | 180 | 855. | 220 | 1,155. |
| 2 | 2,955. | 350 | 875. | 20 | 95. | 230 | 1,092.50 | 170 | 892.50 |
| Reaming, Casing, Cement, etc. | 1,000. | | | | | | | | |
| Moving In and Out | 700. | | | | | | | | |
| Contingency Holes (3) | 4,035. | 1,500 | 3,750. | - | - | 60 | 285. | - | - |
| TOTAL JOY MFG. CO. | 42,760. | 9,070 | 22,675. | 220 | 1,045. | 1,230 | 5,842.50 | 2,190 | 11,497.50 |

| | | |
|---|---|---|
| Assaying-Bruce Williams Labs. | 5,250. | - 250 samples @ $21.00 |
| Bulldozer | 630. | - 6 days @ $105/day |
| 7(b) Supervision & Report | 6,975. | - Howard G. Schoenike. 90 days. Fee Schedule Enclosed. |
| Expenses & Transportation | 1,500. | - H. G. Schoenike |
| Helper | 450. | - 45 days @ $10.00 per day |
| 7(c) Core Boxes | 150. | - Cardboard |
| Sludge Bags | 50. | - 200 @ 25¢ |
| 7(d) Core Splitter | 167.50 | - Acker Drilling Equipment Co. |
| 7(g) Misc. | 2,067.50 | |
| TOTAL | 60,000. | - ESTIMATED COST OF PROPOSED EXPLORATION |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Exploration Profile 3 | | | | | | | | | |
| Hole 1 | 2,850. | 350 | 875. | - | - | 250 | 1,187.50 | 150 | 787.50 |
| 2 | 2,850. | 350 | 875. | - | - | 250 | 1,187.50 | 150 | 787.50 |
| 3 | 2,850. | 350 | 875. | - | - | 250 | 1,187.50 | 150 | 787.50 |
| 4 | 970. | 350 | 875. | - | - | 20 | 95. | - | - |
| 5 | 970. | 350 | 875. | - | - | 20 | 95. | - | - |
| 6 | 970. | 350 | 875. | - | - | 20 | 95. | - | - |
| 7 | 970. | 350 | 875. | - | - | 20 | 95. | - | - |
| | 12,430. | 2,450 | 6,125. | - | - | 830 | 3,942.50 | 450 | 2,362.50 |

JOY MANUFACTURING COMPANY
900 WOODLAND AVENUE
MICHIGAN CITY, INDIANA

December 5, 1961

EXECUTIVE OFFICES
HENRY W. OLIVER BUILDING
PITTSBURGH 22, PA.

Recd 12/5/61
10 A.M.

AIR MAIL

Mr. Howard G. Schoenike
4039 Turnberry Circle
Houston 25, Texas

Dear Mr. Schoenike:

This will acknowledge receipt of your letter dated November 30th in which you suggest that we contact Mr. Norman F. Williams, State Geologist for the State of Arkansas, who is familiar with the area and geology and geography of same so that firm prices can be quoted on the proposed drilling near Bauxite, Arkansas.

We have followed out your suggestion and based on the information furnished by Mr. Williams, we set forth below firm prices and conditions covering the proposed drilling:

| | |
|---|---|
| Mobilization - Drilling Equipment | @ $350.00 |
| Demobilization - Drilling Equipment | @ $350.00 |
| Non-Core- Rock Bit or Fishtail Drilling - Overburden, clays and shales | |
| From 0 to 600 feet | @ $2.50 ft. |
| From 600 to 1200 feet | @ $3.00 ft. |

Core Drilling - Limestone and other hard rock

| | NX | BX | AX | EX |
|---|---|---|---|---|
| From 0 to 600 feet | @$4.75 ft. | $4.25 ft. | $3.75 ft. | $3.50 ft. |
| From 600 to 1200 feet | @$5.25 ft. | $4.75 ft. | $4.25 ft. | $4.00 ft. |

| | |
|---|---|
| Cementing holes, if necessary | @ $10.00 per hr. |
| Reaming of holes, if necessary | @ $15.00 per hr. |
| Casing lost or ordered in place | At Cost |
| Acid Surveys | @ $10.00 per hr. |

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Standby @ $8.00 per hr.

Owner to furnish core boxes.

Owner to furnish access roads.

Joy will pump or haul water for drilling purposes provided that the source is not more than three miles from the drill holes.

Since the holes will be drilled in a vertical direction and roads will be accessible, we can furnish a truck-mounted gasoline-driven core drill for this proposed drilling.

We will conduct the drilling operations on the basis of two 8-hour shifts per day and not less than six days per week. We have the necessary equipment and operators available, and can start the work to suit your convenience.

We appreciate the opportunity of quoting on your requirements, and hope that the proposition as set forth above will receive favorable consideration.

Yours very truly,

JOY MANUFACTURING COMPANY

W. J. Pilarski, Manager
Contract Drill Division

WJP/et

# Burks *Core Drilling* Company

## *Diamond Core Drilling Contractors*

PHONE ~~SUX 2-6978~~ MIssion 6-3211

P. O. Box 238 1111 South Quincy

FORT SMITH, ARKANSAS

2 December 61

Received Dec 4, 1961
10 PM

Mr. Howard Schoenike
4039 Turnberry Circle
Houston 25, Texas

Dear Mr. Schoenike:

I have visited the proposed location where you plan on drilling South-east of Benton, Arkansas. The following prices are based on drilling to final depth using NX Size Only. We plan, if low bidder, to drill to the Syenite using rock bit or fishtail. We will core the Syenite using Diamond Bits of NX size or larger. From our experience the Syenite will core very well and good recovery of core should not be too difficult.

| | | |
|---|---|---|
| Item 1 | - Non Core - To Syenite | $ 3.90 per ft |
| Item 2 | - NX Coreing in Formation Above Syenite | $ 8.60 per ft |
| Item 3 | - NX Core In Syenite | $15.45 per ft |
| Item 4 | - Stand-by Time | $15.00 per hr |
| Item 5 | - Mobilization & DeMobilization - Lump Sum | $450.00 |

Should the above prices meet with your approval please notify us by phone so we may schedule a rig for this job.

Very truly yours,

BURKS CORE DRILLING COMPANY

A. T. Burks

A. T. Burks

ATB/cb

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

BLAIR A. MOTT
Vice President

B. H. MOTT
Pres. & Treas.

W. J. MOTT
Vice President

# MOTT CORE DRILLING COMPANY

AIR, ELECTRIC, GASOLINE
LARGE DIAMOND CORED HOLES
HIGH PRESSURE GROUTING
CABLE AND CORED
DRAINAGE HOLES

CABLE ADDRESS
"MOTTDRILL"

DIAMOND CORE DRILLING CONTRACTORS
TESTING COAL, CLAYS, MINERALS, FOUNDATIONS

MAIN OFFICE AND SHOPS
826 TO 846 EIGHTH AVE.
HUNTINGTON, W. VA.
PHONE JA 9-7121

MANUFACTURERS
DIAMOND CORE DRILLS
SHOT DRILLS, SUPPLIES

HUNTINGTON 17, W. VA.

November 28,1961

Mr. Howard G. Schoenike
Consulting Mining Geologist
4039 Turnberry Circle
Houston 25, Texas

Dear Mr. Schoenike: Re: Your letter Nov.16,1961

We are offering the following as tentative prices for the proposed iron ore drilling in Central Arkansas, in the Little Rock area:

| | | |
|---|---|---|
| Diamond Core Drilling: | NX Core | $5.10 l.f. |
| | BX Core | 4.10 l.f. |
| | AX Core | 3.50 l.f. |
| Non-coring, Fishtailing or Rotary: | NX hole | $3.25 l.f. |
| | BX hole | 2.75 l.f. |
| | AX hole | 2.50 l.f. |
| Standby time while testing hole | | $18.75 per hour |
| Mobilization and transportation | | $1000.00 lump sum |
| Reaming, if necessary: | BX to NX | $2.55 l.f. |
| | AX to BX | $2.05 l.f. |
| Set Casing, if necessary (Casing left in hole and not recovered) | | $18.75 per hour Cost |
| Water Hauling, if required | | $40.00 per day |

The above prices are for estimating purposes only. Before submitting a definite quotation on this project, we would appreciate a visual inspection to ascertain certain factors which would govern our cost.

We thank you for your inquiry and hope to have the pleasure of working with you on this anticipated program.

Very truly yours,

MOTT CORE DRILLING COMPANY

W J Mott

W. J. Mott, Vice President

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

WJM:am

The Bruce Williams Laboratories

ENGINEERING
FOUNDATIONS
INSPECTIONS
ANALYSES
SAMPLING
CONSULTING
RESEARCH

MAIN OFFICE AND LABORATORIES 618-624 JOPLIN STREET TELEPHONE MAYFAIR 3-1556

ESTABLISHED 1898

Joplin, Missouri

November 20, 1961

Howard G. Schoenike
4039 Turnberry Circle
Houston 25, Texas

Re: Iron Ore Exploration Program

Dear Mr.Schoenike:

We are pleased to have your inquiry concerning our prices for assaying a considerable number of iron ore samples.

Herewith are our regular prices for those determinations when sent in by a single sample or a few number of samples now and then and not on a contract or specific agreement:

| | | |
|---|---|---|
| Iron | $2.50 | |
| Sulphur | 3.00 | |
| Phosphorus | 3.00 | |
| Silica | 3.50 | |
| Titanium Oxide | 3.00 | |
| Columbium | 10.00) | 15.00 |
| Tantalum | 10.00) | |
| | 30.00 | |

When Columbium and Tantalum are both ordered at the same time, the charge is $15.00.

These are our regular prices on iron ores or iron concentrates and not specifically applicable to any other type of sample.

We suggest a price to you for this work, based upon the approximate number you outlined in your letter of a total of $21.00 for the seven (7) determinations instead of $30.00 shown above.

In addition to the discount price of $21.00, we will allow the discount outlined below.

The first $500.00 would be net.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

P.S. *This is a personal invitation for you to visit our main laboratories in Joplin, Mo., and see for yourself.*

The second $500.00 would take a 10% discount.

The third $500.00 would take a 15% discount.

All over $1500.00 would take a 20% discount.

You will note that the charge for Columbium and Tantalum are the costly assays. However we are very familiar with those elements as well as germanium, beryllium and many unusual assays.

All prices are based on pulps being furnished to us. If the samples sent us are not pulped, there will be an actual preparation charge based on the actual number of hours used, which includes labor, the use of the machinery, power, etc. This price is based at the rate of $3.50 an hour.

Preparation charges ordinarily amount to not over $0.25 a sample, unless samples were extra ordinarily large in weight and the sizes sent would be very large.

We would be pleased to do this work for you. We are very familiar with the work, and can guarantee prompt service.

If there are additional questions, we would be pleased to answer promptly to any inquiry.

I trust that we may be privileged to do this work for you.

Very truly yours,

THE BRUCE WILLIAMS LABORATORIES

Bruce Williams

Bruce Williams

BW/msp

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

OFFICES: NEW ORLEANS · HOUSTON · BATON ROUGE · CORPUS CHRISTI

Shilstone

TESTING LABORATORY

PHONE CA 4-2047 - 1714 W. CAPITOL AVE. - P. O. BOX 13163

HOUSTON 10, TEXAS

November 24, 1961

Mr. Howard G. Schoenike
Consulting Mining Geologist
4039 Turnberry Circle
Houston 25, Texas

Dear Mr. Schoenike:

With reference to your inquiry concerning chemical analyses of iron ores, we offer the following quotation for each sample. We understand that there will be a total of approximately 100 to 150 samples.

| | | |
|---|---|---|
| Iron | - | $3.50 |
| Sulphur | - | $3.00 |
| Phosphorus | - | $3.50 |
| Silica | - | $3.50 |
| Titanium | - | $3.50 |
| Columbium | - | $10.00 |
| Tantalum | - | $10.00 |

Total ---------- $37.00 per sample.

Yours very truly,

SHILSTONE TESTING LABORATORY

B. L. McClellan

BLMc/bfc

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

SHILSTONE TESTING LABORATORY 60th ANNIVERSARY 1901

INSPECTING AND CONSULTING
CHEMISTS AND ENGINEERS
CARGO SURVEYORS

- LERCH BROTHERS INCORPORATED -

Schedule of Rates & Terms
Iron and Manganese Ores

Effective October 1, 1961

INVOICE RATES
(See Quantity Discount Schedule)

Sample Charge

| | |
|---|---|
| Crushing, Preparing & Processing Regular Sample | $1.770 |
| or | |
| Processing Prepared Sample or Composite (See Notes 1 and 2) | .647 |

Determination Charges (In addition to applicable sample charge)

Determinations handled in Lerch Brothers Incorporated usual routine manner:

| | |
|---|---|
| Iron | .767 |
| Phosphorous | 1.506 |
| Manganese | .844 |
| Silica | 1.122 |
| Moisture | .659 |
| Alumina | 1.852 |
| Loss or Gain | .659 |
| Sulfur | .978 |
| Total Iron | 1.122 |
| Total Phosphorous | 1.770 |
| H. F. Silica or Fusion Silica | 1.585 |
| Fusion Alumina | 2.642 |
| Fusion Manganese | 1.402 |
| Lime | 2.881 |
| Magnesia | 2.881 |

Price of other determinations on request.

Increases or decreases in Lerch Brothers Incorporated direct or indirect labor costs or payroll taxes will result in the same percentage change in the "Invoice Rates". Rates will be calculated to the closest tenth of a cent.

Note 1: A prepared sample is one that is crushed, pulverized, dried to a constant weight at 105° C., mixed, and sent to the laboratory in a tightly stoppered bottle ready for analyses.

Note 2: If additional determinations are requested on a sample previously run, it will be re-entered and charged for as a prepared sample.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

September 29, 1961

LERCH BROTHERS INCORPORATED
SPECIAL DETERMINATION SCHEDULE
EFFECTIVE OCTOBER 1, 1961

1. Charges for preparation of sample will be the same as those listed on the Schedule of Rates & Terms.

2. The following determinations will be run at Lerch Brothers Incorporated Special Laboratory at Hibbing; however, Lerch Brothers Incorporated reserves the right to send small quantities to outside chemists:

| Determination | Price |
|---|---|
| Arsenic | $7.00 |
| Barium | 5.50 |
| Carbon (In Iron Ores) | 3.00 |
| Carbon Dioxide ($CO_2$) | 5.50 |
| Chromium | 4.50 |
| Cobalt | 6.50 |
| Copper | 5.00 |
| Ferrous Iron | 2.00 |
| Iron (Metallic) | 3.50 |
| Lead | 5.50 |
| Lime (Calcium Oxide) Fusion | 4.00 |
| Special Ignition Loss | 2.00 |
| Magnesia (Magnesium Oxide) Fusion | 4.50 |
| Lime & Magnesia (Fusions) | 6.50 |
| Nickel | 4.50 |
| $R_2O_3$ (Oxides of Fe & Al) | 2.50 |
| Fusion H. F. Silica | 3.00 |
| Sulfur (Wet Method) | 4.50 |
| Titania (Titanium Oxide) | 5.50 |
| Zinc | 7.50 |

Prices on other determinations on request.

Note 1: Ten percent handling over cost will be charged on work sent to outside chemists with a minimum charge of $1.00.

Note 2: Requests for checks on analyses will be charged for at the scheduled rate if the original reported results are correct within reasonable limits.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

DOMESTIC - FOREIGN
METALLIC MINERALS
NON-METALLIC MINERALS

HOWARD G. SCHOENIKE
CONSULTING MINING GEOLOGIST
MEMBER A.I.M.E.
4039 TURNBERRY CIRCLE
HOUSTON 25, TEXAS
PHONE MO 5-7079

EXAMINATION
EVALUATION
EXPLORATION

November 16, 1961

Mr. Louis Minturn
753 Creekside Drive
Houston, Texas

Dear Mr. Minturn:

Relative to our conversation yesterday, below is my fee schedule for directing your proposed iron ore exploration. I am also enclosing my announcement- brochure for your information and file.

My standard fees for deposit and mine examination, evaluation and exploration are $ 125.00/ day, plus expenses, for the initial 6 days and $ 100.00/ day, plus expenses for any subsequent days. For jobs that require more than 3-weeks work, the fees beyond that period are subject to negotiation.

On this particular project, which I feel will run beyond three weeks, the following schedule will apply:

Stage I ( Consisting of contacting drill contractors and assay laboratories, studying contracts and making recommendations as to the preferable bid )

Approximate time - 3 to 4 days @ $ 100.00/ day

Stage II ( Supervising and directing iron ore exploration program, checking core recovery, logging core, mapping and plotting results, and preparing report if requested )

| | |
|---|---|
| Initial three weeks of program ( 21 days ) | - $ 100.00/ day, plus expenses |
| Subsequent time on program | - $ 75.00/ " " " |

As to current availability, I would be able to start on Stage I of the program immediately.

I would appreciate the opportunity of working with you on this project.

Very sincerely,

Howard G. Schoenike

Howard G. Schoenike

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

HGS/bvc
Enc.

JOY MANUFACTURING COMPANY
900 WOODLAND AVENUE
MICHIGAN CITY, INDIANA

December 5, 1961

EXECUTIVE OFFICES
HENRY W. OLIVER BUILDING
PITTSBURGH 22, PA.

Recd 12/5/61
10 A.M.

AIR MAIL

Mr. Howard G. Schoenike
4039 Turnberry Circle
Houston 25, Texas

Dear Mr. Schoenike:

This will acknowledge receipt of your letter dated November 30th in which you suggest that we contact Mr. Norman F. Williams, State Geologist for the State of Arkansas, who is familiar with the area and geology and geography of same so that firm prices can be quoted on the proposed drilling near Bauxite, Arkansas.

We have followed out your suggestion and based on the information furnished by Mr. Williams, we set forth below firm prices and conditions covering the proposed drilling:

| | |
|---|---|
| Mobilization - Drilling Equipment | @ $350.00 |
| Demobilization - Drilling Equipment | @ $350.00 |
| Non-Core- Rock Bit or Fishtail Drilling - Overburden, clays and shales | |
| From 0 to 600 feet | @ $2.50 ft. |
| From 600 to 1200 feet | @ $3.00 ft. |

Core Drilling - Limestone and other hard rock

| | NX | BX | AX | EX |
|---|---|---|---|---|
| From 0 to 600 feet | @$4.75 ft. | $4.25 ft. | $3.75 ft. | $3.50 ft. |
| From 600 to 1200 feet | @$5.25 ft. | $4.75 ft. | $4.25 ft. | $4.00 ft. |

| | |
|---|---|
| Cementing holes, if necessary | @ $10.00 per hr. |
| Reaming of holes, if necessary | @ $15.00 per hr. |
| Casing lost or ordered in place | At Cost |
| Acid Surveys | @ $10.00 per hr. |

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Standby @ $8.00 per hr.

Owner to furnish core boxes.

Owner to furnish access roads.

Joy will pump or haul water for drilling purposes provided that the source is not more than three miles from the drill holes.

Since the holes will be drilled in a vertical direction and roads will be accessible, we can furnish a truck-mounted gasoline-driven core drill for this proposed drilling.

We will conduct the drilling operations on the basis of two 8-hour shifts per day and not less than six days per week. We have the necessary equipment and operators available, and can start the work to suit your convenience.

We appreciate the opportunity of quoting on your requirements, and hope that the proposition as set forth above will receive favorable consideration.

Yours very truly,

JOY MANUFACTURING COMPANY

W. J. Pilarski, Manager
Contract Drill Division

WJP/et

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# Burks *Core Drilling* Company

## *Diamond Core Drilling Contractors*

PHONE ~~SUX 2-6978~~ MIssion 6-3211

P. O. Box 238 1111 South Quincy

FORT SMITH, ARKANSAS

2 December 61

Received Dec 4, 1961
10 PM

Mr. Howard Schoenike
4039 Turnberry Circle
Houston 25, Texas

Dear Mr. Schoenike:

I have visited the proposed location where you plan on drilling Southeast of Benton, Arkansas. The following prices are based on drilling to final depth using NX Size Only. We plan, if low bidder, to drill to the Syenite using rock bit or fishtail. We will core the Syenite using Diamond Bits of NX size or larger. From our experience the Syenite will core very well and good recovery of core should not be too difficult.

| | | |
|---|---|---|
| Item 1 | - Non Core - To Syenite | $ 3.90 per ft |
| Item 2 | - NX Coreing in Formation Above Syenite | $ 8.60 per ft |
| Item 3 | - NX Core In Syenite | $15.45 per ft |
| Item 4 | - Stand-by Time | $15.00 per hr |
| Item 5 | - Mobilization & DeMobilization - Lump Sum | $450.00 |

Should the above prices meet with your approval please notify us by phone so we may schedule a rig for this job.

Very truly yours,

BURKS CORE DRILLING COMPANY

A. T. Burks

A. T. Burks

ATB/cb

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

BLAIR A. MOTT
Vice President

B. H. MOTT
Pres. & Treas.

W. J. MOTT
Vice President

# MOTT CORE DRILLING COMPANY

AIR, ELECTRIC, GASOLINE
LARGE DIAMOND CORED HOLES
HIGH PRESSURE GROUTING
CABLE AND CORED
DRAINAGE HOLES

CABLE ADDRESS
"MOTTDRILL"

DIAMOND CORE DRILLING CONTRACTORS
TESTING COAL, CLAYS, MINERALS, FOUNDATIONS

MAIN OFFICE AND SHOPS
826 TO 846 EIGHTH AVE.
HUNTINGTON, W. VA.
PHONE JA 9-7121

MANUFACTURERS
DIAMOND CORE DRILLS
SHOT DRILLS, SUPPLIES

HUNTINGTON 17, W. VA.

November 28,1961

Mr. Howard G. Schoenike
Consulting Mining Geologist
4039 Turnberry Circle
Houston 25, Texas

Dear Mr. Schoenike: Re: Your letter Nov.16,1961

We are offering the following as tentative prices for the proposed iron ore drilling in Central Arkansas, in the Little Rock area:

| | | |
|---|---|---|
| Diamond Core Drilling: | NX Core | $5.10 l.f. |
| | BX Core | 4.10 l.f. |
| | AX Core | 3.50 l.f. |
| Non-coring, Fishtailing or Rotary: | NX hole | $3.25 l.f. |
| | BX hole | 2.75 l.f. |
| | AX hole | 2.50 l.f. |
| Standby time while testing hole | | $18.75 per hour |
| Mobilization and transportation | | $1000.00 lump sum |
| Reaming, if necessary: | BX to NX | $2.55 l.f. |
| | AX to BX | $2.05 l.f. |
| Set Casing, if necessary | | $18.75 per hour |
| (Casing left in hole and not recovered) | | Cost |
| Water Hauling, if required | | $40.00 per day |

The above prices are for estimating purposes only. Before submitting a definite quotation on this project, we would appreciate a visual inspection to ascertain certain factors which would govern our cost.

We thank you for your inquiry and hope to have the pleasure of working with you on this anticipated program.

Very truly yours,

MOTT CORE DRILLING COMPANY

W J Mott

W. J. Mott, Vice President

WJM:am

The Bruce Williams Laboratories

ENGINEERING
FOUNDATIONS
INSPECTIONS
ANALYSES
SAMPLING
CONSULTING
RESEARCH

MAIN OFFICE AND LABORATORIES 618-624 JOPLIN STREET TELEPHONE MAYFAIR 3-1556

ESTABLISHED 1898

Joplin, Missouri

November 20, 1961

Howard G. Schoenike
4039 Turnberry Circle
Houston 25, Texas

Re: Iron Ore Exploration Program

Dear Mr.Schoenike:

We are pleased to have your inquiry concerning our prices for assaying a considerable number of iron ore samples.

Herewith are our regular prices for those determinations when sent in by a single sample or a few number of samples now and then and not on a contract or specific agreement:

| | | |
|---|---|---|
| Iron | $2.50 | |
| Sulphur | 3.00 | |
| Phosphorus | 3.00 | |
| Silica | 3.50 | |
| Titanium Oxide | 3.00 | |
| Columbium | 10.00) | 15.00 |
| Tantalum | 10.00) | |
| | 30.00 | |

When Columbium and Tantalum are both ordered at the same time, the charge is $15.00.

These are our regular prices on iron ores or iron concentrates and not specifically applicable to any other type of sample.

We suggest a price to you for this work, based upon the approximate number you outlined in your letter of a total of $21.00 for the seven (7) determinations instead of $30.00 shown above.

In addition to the discount price of $21.00, we will allow the discount outlined below.

The first $500.00 would be net.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

P.S. *This is a personal invitation for you to visit our main laboratories in Joplin, Mo., and see for yourself.*

The second $500.00 would take a 10% discount.

The third $500.00 would take a 15% discount.

All over $1500.00 would take a 20% discount.

You will note that the charge for Columbium and Tantalum are the costly assays. However we are very familiar with those elements as well as germanium, beryllium and many unusual assays.

All prices are based on pulps being furnished to us. If the samples sent us are not pulped, there will be an actual preparation charge based on the actual number of hours used, which includes labor, the use of the machinery, power, etc. This price is based at the rate of $3.50 an hour.

Preparation charges ordinarily amount to not over $0.25 a sample, unless samples were extra ordinarily large in weight and the sizes sent would be very large.

We would be pleased to do this work for you. We are very familiar with the work, and can guarantee prompt service.

If there are additional questions, we would be pleased to answer promptly to any inquiry.

I trust that we may be privileged to do this work for you.

Very truly yours,

THE BRUCE WILLIAMS LABORATORIES

Bruce Williams

Bruce Williams

BW/msp

**ALPHA MINERAL COMPANY**
**753 W. CREEKSIDE DRIVE**
**HOUSTON 24, TEXAS**

OFFICES: NEW ORLEANS · HOUSTON · BATON ROUGE · CORPUS CHRISTI

Shilstone

TESTING LABORATORY

PHONE CA 4-2047 - 1714 W. CAPITOL AVE. - P. O. BOX 13163

HOUSTON 10, TEXAS

November 24, 1961

Mr. Howard G. Schoenike
Consulting Mining Geologist
4039 Turnberry Circle
Houston 25, Texas

Dear Mr. Schoenike:

With reference to your inquiry concerning chemical analyses of iron ores, we offer the following quotation for each sample. We understand that there will be a total of approximately 100 to 150 samples.

| | | |
|---|---|---|
| Iron | - | $3.50 |
| Sulphur | - | $3.00 |
| Phosphorus | - | $3.50 |
| Silica | - | $3.50 |
| Titanium | - | $3.50 |
| Columbium | - | $10.00 |
| Tantalum | - | $10.00 |

Total ---------- $37.00 per sample.

Yours very truly,

SHILSTONE TESTING LABORATORY

B. L. McClellan

B. L. McClellan

BLMc/bfc

SHILSTONE TESTING LABORATORY 60th ANNIVERSARY 1901

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

INSPECTING AND CONSULTING
CHEMISTS AND ENGINEERS
CARGO SURVEYORS

- LERCH BROTHERS INCORPORATED -

Schedule of Rates & Terms
Iron and Manganese Ores

Effective October 1, 1961

INVOICE RATES
(See Quantity Discount Schedule)

Sample Charge

| | |
|---|---|
| Crushing, Preparing & Processing Regular Sample | $1.770 |
| or | |
| Processing Prepared Sample or Composite (See Notes 1 and 2) | .647 |

Determination Charges (In addition to applicable sample charge)

Determinations handled in Lerch Brothers Incorporated usual routine manner:

| | |
|---|---|
| Iron | .767 |
| Phosphorous | 1.506 |
| Manganese | .844 |
| Silica | 1.122 |
| Moisture | .659 |
| Alumina | 1.852 |
| Loss or Gain | .659 |
| Sulfur | .978 |
| Total Iron | 1.122 |
| Total Phosphorous | 1.770 |
| H. F. Silica or Fusion Silica | 1.585 |
| Fusion Alumina | 2.642 |
| Fusion Manganese | 1.402 |
| Lime | 2.881 |
| Magnesia | 2.881 |

Price of other determinations on request.

Increases or decreases in Lerch Brothers Incorporated direct or indirect labor costs or payroll taxes will result in the same percentage change in the "Invoice Rates". Rates will be calculated to the closest tenth of a cent.

Note 1: A prepared sample is one that is crushed, pulverized, dried to a constant weight at 105° C., mixed, and sent to the laboratory in a tightly stoppered bottle ready for analyses.

Note 2: If additional determinations are requested on a sample previously run, it will be re-entered and charged for as a prepared sample.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

September 29, 1961

LERCH BROTHERS INCORPORATED
SPECIAL DETERMINATION SCHEDULE
EFFECTIVE OCTOBER 1, 1961

1. Charges for preparation of sample will be the same as those listed on the Schedule of Rates & Terms.

2. The following determinations will be run at Lerch Brothers Incorporated Special Laboratory at Hibbing; however, Lerch Brothers Incorporated reserves the right to send small quantities to outside chemists:

| Determination | Price |
|---|---|
| Arsenic | $7.00 |
| Barium | 5.50 |
| Carbon (In Iron Ores) | 3.00 |
| Carbon Dioxide ($CO_2$) | 5.50 |
| Chromium | 4.50 |
| Cobalt | 6.50 |
| Copper | 5.00 |
| Ferrous Iron | 2.00 |
| Iron (Metallic) | 3.50 |
| Lead | 5.50 |
| Lime (Calcium Oxide) Fusion | 4.00 |
| Special Ignition Loss | 2.00 |
| Magnesia (Magnesium Oxide) Fusion | 4.50 |
| Lime & Magnesia (Fusions) | 6.50 |
| Nickel | 4.50 |
| $R_2O_3$ (Oxides of Fe & Al) | 2.50 |
| Fusion H. F. Silica | 3.00 |
| Sulfur (Wet Method) | 4.50 |
| Titania (Titanium Oxide) | 5.50 |
| Zinc | 7.50 |

Prices on other determinations on request.

Note 1: Ten percent handling over cost will be charged on work sent to outside chemists with a minimum charge of $1.00.

Note 2: Requests for checks on analyses will be charged for at the scheduled rate if the original reported results are correct within reasonable limits.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

DOMESTIC - FOREIGN
METALLIC MINERALS
NON-METALLIC MINERALS

HOWARD G. SCHOENIKE
CONSULTING MINING GEOLOGIST
MEMBER A.I.M.E.
4039 TURNBERRY CIRCLE
HOUSTON 25, TEXAS
PHONE MO 5-7079

EXAMINATION
EVALUATION
EXPLORATION

November 16, 1961

Mr. Louis Minturn
753 Creekside Drive
Houston, Texas

Dear Mr. Minturn:

Relative to our conversation yesterday, below is my fee schedule for directing your proposed iron ore exploration. I am also enclosing my announcement- brochure for your information and file.

My standard fees for deposit and mine examination, evaluation and exploration are $ 125.00/ day, plus expenses, for the initial 6 days and $ 100.00/ day, plus expenses for any subsequent days. For jobs that require more than 3-weeks work, the fees beyond that period are subject to negotiation.

On this particular project, which I feel will run beyond three weeks, the following schedule will apply:

Stage I ( Consisting of contacting drill contractors and assay laboratories, studying contracts and making recommendations as to the preferable bid )

Approximate time - 3 to 4 days @ $ 100.00/ day

Stage II ( Supervising and directing iron ore exploration program, checking core recovery, logging core, mapping and plotting results, and preparing report if requested )

| | | |
|---|---|---|
| Initial three weeks of program ( 21 days ) | - $ 100.00/ | day, plus expenses |
| Subsequent time on program | - $ 75.00/ | " " " |

As to current availability, I would be able to start on Stage I of the program immediately.

I would appreciate the opportunity of working with you on this project.

Very sincerely,

Howard G. Schoenike

Howard G. Schoenike

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

HGS/bvc
Enc.

FILED
SALINE CIRCUIT &
CHANCERY CLERK
8:21 AM 13 JAN '62
BY Edna Crouch

ASSIGNMENT OF OIL, GAS AND MINERAL LEASES

THE STATE OF ARKANSAS )
) KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF SALINE )

That L. W. MINTURN, of Houston, Harris County, Texas, in consideration of Ten Dollars ($10.00) and other good and valuable considerations cash in hand paid by ALPHA MINERAL COMPANY, a limited partnership organized under the laws of the State of Arkansas, the receipt of which is hereby acknowledged, does hereby TRANSFER, ASSIGN and CONVEY unto the said ALPHA MINERAL COMPANY the following oil, gas and mineral leases and the leasehold estates created thereby covering lands situated in the County of Saline, State of Arkansas, to wit:

1. Oil, gas and mineral lease dated August 1, 1960 and recorded in Misc. Book _____, page _____ of the Records of Saline County, Arkansas, from Lawrence E. Tatum and wife, Pearl Tatum; Fred M. Ramsey and wife, Vera Ramsey; Leon H. Tatum and wife, Ercel Tatum; Lissie Tatum Chambers (in her own right) and husband, Leven L. Chambers; and Fred Ramsey as Attorney-in-Fact for Eric Ramsey and wife, Joyce Ramsey, as Lessor, to L. W. Minturn, as Lessee, covering the following described land:

   The N/2 of the NE of Sec. 36, T2S, R15W, except the SW of NW of NE in Saline County, Arkansas, containing 70 acres, more or less;

2. Oil, gas and mineral lease dated August 1, 1960 and recorded in Misc. Book _____, page _____ of the Records of Saline County, Arkansas from Lawrence E. Tatum and wife, Pearl Tatum; Fred M. Ramsey and wife, Vera Ramsey; Leon H. Tatum and wife, Ercel Tatum; Lissie Tatum Chambers (in her own right) and husband, Leven L. Chambers; and Fred Ramsey as Attorney-in-Fact for Eric Ramsey and

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

wife, Joyce Ramsey, as Lessor, to L. W. Minturn, as Lessee, covering the following described land:

The W/2 of the NE/4 of the SE/4 of Sec. 30, T2S, R14W, Saline County, Arkansas and containing 20 acres, more or less;

3. Oil, gas and mineral lease dated April 17, 1961 and recorded in Misc. Book 3, page 87 of the Records of Saline County, Arkansas from Boyd Allinson and wife, Mary Jane Allinson, as Lessor, to L. W. Minturn, as Lessee, covering the following described land: 13

That part of the E/2 of the NE/4 of the SW/4 lying W of State Highway No. 35 as now located, of Sec. 30, T2S, R14W, containing 5 acres, more or less;

4. Oil, gas and mineral lease dated April 22, 1961 and recorded in Misc. Book 3, page 73 of the Records of Saline County, Arkansas from May Tudor, a widow; Harold Beaty and wife, Lexie Edith Beaty; and W. G. Tudor and wife, Rosemarie Tudor, as Lessor, to L. W. Minturn, as Lessee, as amended by instrument recorded in Misc. Book 3, page 83 of said records covering the following described land: 14

Part of the NE/4 of the SW/4 and part of the NW/4 of the SW/4 of Sec. 29, T2S, R14W, described as follows:

Starting at the NE corner of the SW/4; then running S to the center of the Pine Bluff and Benton Road now running through said land; thence W 124 rods with said road bed; thence N to the N line of said land; thence E to the place of beginning, containing 20 acres, more or less; and

5. Oil, gas and mineral lease dated April 17, 1961 and recorded in Misc. Book 3, page 35 of the Records of Saline County, Arkansas from Moses Kidd and wife, Annie Kidd, as Lessor, to L. W. Minturn, as Lessee, as amended by instrument recorded in Misc. Book 3, page 45 of said records covering the following described land: 15

That part of the NW/4 of the SW/4 of Bauxite Road in Sec. 29 and the E/2 of the NW/4 of the SE/4 of Sec. 30, all in T2S, R14W, less and except that part of the E/2 of the NE/4 of the SW/4 of Sec. 29 lying West of State Highway No. 35.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

TO HAVE AND TO HOLD the above described leases together with all and singular the rights, privileges and appurtenances thereto in anywise belonging unto the said Alpha Mineral Company, its successors and assigns forever.

Theo Marsh Minturn, wife of the said L. W. Minturn, for the consideration above recited, joins in the execution hereof for the purpose of releasing and relinquishing and she does hereby release and relinquish her right of dower in and to the above described leases.

WITNESS the execution hereof this 11 day of January, 1962.

L. W. Minturn
L. W. MINTURN

Theo Marsh Minturn
THEO MARSH MINTURN

THE STATE OF TEXAS ()
COUNTY OF HARRIS ()

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, L. W. Minturn, to me well known to be the person whose name appears as Grantor in the foregoing instrument, and stated that he executed the same for the consideration, uses, and purposes therein mentioned and set forth.

And on the same day also voluntarily appeared before me in person the said Theo Marsh Minturn, wife of the said L. W. Minturn, to me well known, and, in the absence of her husband, declared that she had, of her own free will, executed the foregoing instrument for the purposes and consideration therein contained and set forth, without compulsion or undue influence of her said husband.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this 11th day of January, 1962.

Lana J. McCain
Notary Public in and for
Harris County, Texas

FILED FOR RECORD ON THIS THE 13TH DAY OF JANUARY, 1962, AT 8:21 A. M., AND SAME IS DULY RECORDED IN MISC., BOOK 3, AT PAGE 253.
MARSHALL GIBSON, CIRCUIT CLERK & RECORDER
BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Vinson, Elkins, Weems & Searls
Attorneys at Law
First City National Bank Bldg.
Houston 2, Texas

325

Lease #1

MISC: 1 PAGE 332

FILED
SALINE CIRCUIT & CHANCERY CLERK
2:55 PM 17 FEB '61
By Edna Crouch

# OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
COUNTY OF Saline )

This agreement made this 29th day of July, 1960, between J.T. Bridges and Hazel Bridges (his wife), (hereinafter called "Lessor" whether one or more), whose address is Route #4; Box 168; Benton, Arkansas and L.W. Mimturn, as Lessee, whose address is 753 West Creekside Drive Houston 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ Twenty-three — cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ten (10) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of Twenty-five Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise 23 acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the Route #4; Box 168 ~~Bank~~ at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

Should any one or more of the parties named above as Lessors fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

J. T. Bridges

Hazel Bridges

LESSORS

L. W. Mirturn

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas : On this day came before me, a
COUNTY OF Pulaski : Notary Public duly commissioned and acting within and for said county and state, T. T. Bridges to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Hazel Bridges, wife of T. T. Bridges, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 29th day of July, 1960.

Fred McGulloch
Notary Public in and for
_____ County,
_____

FRED McGULLOCH NOTARY PUBLIC PULASKI COUNTY, ARK.

STATE OF _____ : On this day came before me, a
COUNTY OF _____ : Notary Public duly commissioned and acting within and for said county and state, _____, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

STATE OF _____ : On this day before me, a Notary
COUNTY OF _____ : Public duly commissioned and acting within said county and state, appeared in person _____, to me personally well known, who stated that he is the _____ President of _____, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MISC. 1 PAGE 341

Exhibit "A"

The South Twenty-four acres of the Northeast 1/4 of the Northeast 1/4 of Section 31; Twp 2 South; Range 14 West; Saline County, Arkansas; except a One acre tract in the S.E. corner of above described 24 acre tract and more fully described as; beginning at the S.E. corner of the N.E. 1/4 of the N.E. 1/4 of Section 31; run North 132 feet; West 330 feet; South 132 feet; East 330 feet to point of beginning; leaving a net of 23 acres covered by this lease.

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:55 P. M., AND SAME IS DULY RECORDED IN MISC. BOOK 1, AT PAGE 332.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

Alpha Co. Land
J. Marshall Gipson
Saline Co.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

$10.00 Chgd

O. Wendell Hall, Jr.
Benton, Ark.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL CO.
753 WEST CREEKSIDE DR.
Houston 24, Texas

HOUSTON, TEXAS July 15, 1961 No. 30

FIRST CITY NATIONAL BANK
OF HOUSTON

35-1
1130

PAY TO THE ORDER OF J. T. Bridges and wife, Hazel Bridges $ 23.00

Twenty-three Dollars and no/100 DOLLARS

Payment of annual rental on lease
from J. T. Bridges, et ux, to
L. W. Minturn, dated July 29, 1960
and recorded in Misc. 1 page 332,
Saline County, Arkansas.

ALPHA MINERAL CO.

By L. W. Minturn - General Partner

AUG 2 1961
FIRST NATIONAL BANK
HOUSTON, TEXAS
35-1

J. T. Bridges
Hazel Bridges

AUG 1 1961

#2

FILED
SALINE CIRCUIT &
CHANCERY CLERK
2:57 PM 17 FEB '61
BY Ruth Gipson

MISC. 1 PAGE 342

OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
COUNTY OF Saline. )

This agreement made this 27th day of July, 1960, between W.C. McClendon and Nannie McClendon (his wife), (hereinafter called "Lessor" whether one or more), whose address is _____, and L.W. Minturn, as Lessee, whose address is 753 West Creekside Drive Houston 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ 13.35 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ten (10) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of $25.00 Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise 6.67 mineral acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the 1006 West Hazel ~~Bank~~ at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

L. W. MINTURN
Petroleum Exploration Consultant
753 West Creekside Drive
Houston 24, Texas

July 15, 1961

Mr. and Mrs. W. C. McClendon
1006 West Hazel
Benton, Arkansas

Dear Mr. and Mrs. McClendon:

Enclosed herewith is the check of Alpha Mineral Co., in payment of annual rental on the Oil, Gas and Mineral Lease, dated July 29, 1960, which is recorded in Misc. 1 page 342, Saline County, Arkansas.

Yours very truly,

L. W. Minturn

LWM:cm
Enclosure

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

Should any one or more of the parties named above as Lessors fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

W C McC Clendon

Nannie McClendon

LESSORS

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas : On this day came before me, a
COUNTY OF Pulaski : Notary Public duly commissioned and acting within and for said county and state, W. C. McClendon to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Nannie McClendon, wife of W. C. McClendon, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 27th day of July, 1960.

Fred M. Bulloch
Notary Public in and for
_____ County,
_____

STATE OF _____ : On this day came before me, a
COUNTY OF _____ : Notary Public duly commissioned and acting within and for said county and state, _____, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

STATE OF _____ : On this day before me, a Notary
COUNTY OF _____ : Public duly commissioned and acting within said county and state, appeared in person _____, to me personally well known, who stated that he is the _____ President of _____, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# Exhibit "A"

Part of the N.E. 1/4 of the N.W. 1/4 of Section 30; Twp 2 South; Range 14 West; containing 13.35 acres of surface rights and 6.67 acres of Mineral Right undivided under the said described property, which property is as follows: Beginning at the N.W. corner of the N.E. 1/4 of the N.W. 1/4 of Section 30; Twp 2 South; Range 14 West; Thence East 675'; South 782' to the North side of Alcoa Pump Road; thence westerly 675'; Thence North 782' to point of beginning and containing 13.35 acres more or less.

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:57 P. M., AND SAME IS DULY RECORDED IN MISC. BOOK 1, AT PAGE 342.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

$10.00 Chgd

O. Wendell Hall, Jr.
Benton, Ark.

Lease #21

FILED
SALINE CIRCUIT &
CHANCERY CLERK

MISC. 3 PAGE 49

9:25 A M 21 NOV '61
BY Edna Crouch

AMENDMENT OF OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
)
COUNTY OF SALINE )

WHEREAS, under date of July 27, 1960 an oil, gas and mineral lease was executed by W. C. McClendon and wife, Nannie McClendon, called "Lessor", in favor of L. W. MINTURN, called "Lessee", covering the following described land in Saline County, Arkansas:

Part of the Northeast 1/4 of the Northwest 1/4 of Section 30, Township 2 South, Range 14 West, containing 13.35 acres of surface rights and 6.67 acres of Mineral Rights undivided under the said described property, which property is as follows:

Beginning at the Northwest corner of the Northeast 1/4 of the Northwest 1/4 of Section 30, Township 2 South, Range 14 West;
Thence East 675', South 782' to the North side of Alcoa Pump Road;
Thence westerly 675';
Thence North 782' to point of beginning and containing 13.35 acres, more or less.

WHEREAS, the parties to said lease have agreed that the same shall be amended as hereinafter provided;

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That said Lessor and Lessee, in consideration of the mutual covenants and agreements herein contained and other good and valuable considerations, do hereby agree that the above described lease shall be and the same is hereby amended as follows:

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

1. The royalty on magnetite or iron ore aggregate shall be five mills ($0.005) per iron unit (22.4 pounds of iron) rather than and in lieu of the royalty of 25¢ per ton as provided in Paragraph 2(c)(iii) of said lease.

2. The rates prescribed for the payment of royalties on sulphur, bauxite, magnetite and iron ore aggregate shall remain unchanged through the calendar year 1965 but at the beginning of the calendar year 1966 and at the beginning of each calendar year thereafter, a fraction shall be determined, the numerator of which shall be the average of the twelve (12) next preceding monthly publications of the Wholesale Commodity Price Index (all commodities), published by the Federal Reserve System, and the denominator of which shall be the average of the twelve (12) monthly publications of the Wholesale Commodity Price Index (all commodities) of the calendar year 1960; the rates provided for royalties on sulphur, bauxite and magnetite or iron ore aggregate shall be multiplied by this fraction and the result shall be adjusted to the nearest one cent (1¢) for sulphur and bauxite and to the nearest whole mill for magnetite or iron ore aggregate; such new rates shall be used for all payments due during the ensuing calendar year; the indexes referred to herein are those computed on a basis of an index of 100 for the average of the three years, 1947, 1948 and 1949.

3. Lessee is hereby granted the right, power and authority at the option of Lessee, at any time or times to pool, combine and unitize the land (hereinafter called the Leased Premises) covered by the above described lease (hereinafter called said Lease) or any portion thereof with any other land, lease or leases in the vicinity thereof, when in Lessee's judgment it is necessary or advisable so to do, for the purpose of developing and operating the Leased Premises and producing, mining and removing therefrom oil, gas or other minerals in accordance with the terms of said Lease. Such pooling may in any instance include all oil, gas and other minerals or may be limited to any one or more of such substances. Likewise, any such pooling may extend to and cover the production of the substance or substances committed to such pooled unit from any depth or may be limited to one or more zones, veins, depths, horizons or formations. Any pooled unit created hereunder shall not exceed 40 acres in surface area for oil, or 640 acres in surface area for gas, or 640 acres in surface area for any or all other minerals. The pooling by Lessee in any one or more instances shall not exhaust the right of Lessee to pool any remaining unpooled portion of the Leased Premises or any mineral not theretofore pooled into other units. Lessee shall file for record in the appropriate records of the county in which the Leased Premises are situated an instrument describing and designating the pooled acreage as a pooled unit, setting forth the effective date thereof and describing the acreage, zones, formations and substances pooled. The right, power and authority hereby given to Lessee for the formation of pooled units may be

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

exercised either before or after a well or mine has been drilled or opened or before or after the substance or substances committed to such pooled unit may have been found to exist in commercial quantities in, on or under the Leased Premises. The mining, drilling for, or production of the substance or substances committed to the pooled unit, and all operations conducted by Lessee in connection therewith on or within any such pooled unit shall be treated as if such mining, drilling, or production or operations in connection therewith were conducted on the Leased Premises. For the purpose of computing the royalties to which the Lessor or other owners of royalties on the production from the Leased Premises of the substance or substances committed to the pooled unit shall be entitled, there shall be allocated to said Lease the proportion of such production from any such unit (whether or not from the land covered by said Lease) that the number of surface acres covered by said Lease and included in the unit bears to the total number of surface acres in such unit; royalties shall be paid hereunder only on that portion of such production so allocated to said Lease, which shall be in lieu of any other royalties.

The above described lease, as hereby amended, is declared to be in full force and effect and the undersigned Lessors hereby grant, lease and let the above described premises unto said Lessee in accordance with and subject to the terms and provisions of said lease as amended by the terms and provisions of this instrument.

This instrument of amendment may be executed in any number of counterparts, each of which shall be deemed to be an original and shall be binding upon the party or parties executing the same whether or not a counterpart hereof shall be executed by each Lessor named in said lease.

WITNESS THE EXECUTION HEREOF this 15 day of November 1961.

W C McClendon

Nannie McClendon

L. W. Muntum Lessee

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF _____ )
)
COUNTY OF _____ )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

_____,
to me well known as the Lessor in the foregoing instrument, and stated that _he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and official seal on this ___ day of _____, 196__.

_____
Notary Public in and for
_____ County, _____

STATE OF Arkansas )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

N. C. McClendon
to me well known as the Lessor_ in the foregoing instrument, and stated that _he_ had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Nannie McClendon, wife (wives)
of N. C. McClendon,
to me well known, and in the absence of her (their) husband(s) declared that she (they) had of her (their) own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her (their) said husband(s).

WITNESS my hand and official seal on this 15th day of November, 1961.

U.S. NOTARY PUBLIC SALINE CO.

Comm. Expires 9-1-65

M. A. Hogue
Notary Public in and for
Saline County, Ark

## CERTIFICATE OF RECORD

STATE OF ARKANSAS }
COUNTY OF SALINE } SS

I, MARSHALL GIPSON, Circuit Clerk and Ex-Officio Recorder for the County aforesaid, do hereby certify that the annexed and foregoing instrument of writing was filed for record in my office on the 21st day of November A. D., 1961 at 9:25 o'clock A M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in MISC. Book 3 Page 49

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court, this 21st day of November 1961

Marshall Gipson
CIRCUIT CLERK AND EX-OFFICIO RECORDER

_____ D. C.

SEAL OF CIRCUIT COURT SALINE COUNTY, ARK.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL CO.
753 WEST CREEKSIDE DR.
Houston 24, Texas

HOUSTON, TEXAS July 15 1961 No. 31

PAID

FIRST CITY NATIONAL BANK
OF HOUSTON

35-1
1130

AUG 8 1961

PAY TO THE ORDER OF W. C. McClendon and wife, Nannie McClendon $ 13.35

FIRST CITY NATIONAL BANK
HOUSTON
TEXAS 35-1

Thirteen Dollars and 35/100 DOLLARS

Payment of annual rental on lease from W. C. McClendon, et ux, to L. W. Minturn, dated July 27, 1960, and recorded in Misc. 1 page 342, Saline County, Arkansas.

ALPHA MINERAL CO.

By L. W. Minturn

L. W. Minturn - General Partner

2

W. C. McClendon
Nannie McClendon

5

35
8
L. W. Minturn
753 West Creekside Drive
Houston 24, Texas
2
91

FILED #3
SALINE CIRCUIT &
CHANCERY CLERK

MISC. 1 PAGE 352 2:58 PM 17 FEB '61
BY Ruth Gipson

OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
)
COUNTY OF Saline )

This agreement made this 16th day of July, 1960, between Bryan W. Brooks and Anna Brooks (his wife), (hereinafter called "Lessor" whether one or more), whose address is 1005 Jackson Street, Benton, Ark. and L. W. Minturn, as Lessee, whose address is 753 West Creekside Drive Houston 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ Twenty-one and no/100 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ten (10) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of _____ Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise 21 acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the 1005 Jackson Street ~~Bank~~ at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

Should any one or more of the parties named above as Lessors fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

Bryon W Brooks

Gossa Brooks

LESSORS

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas : On this day came before me, a
COUNTY OF Pulaski : Notary Public duly commissioned and acting within and for said county and state, Bryan W. Brooks to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Anna Brooks, wife of Bryan W. Brooks, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 16TH day of July, 1960.

FRED McCULLOCH NOTARY PUBLIC PULASKI COUNTY, ARK.

Fred McCulloch
Notary Public in and for
Pulaski County,
State of Arkansas

STATE OF _____ : On this day came before me, a
COUNTY OF _____ : Notary Public duly commissioned and acting within and for said county and state, _____, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

STATE OF _____ : On this day before me, a Notary
COUNTY OF _____ : Public duly commissioned and acting within said county and state, appeared in person _____, to me personally well known, who stated that he is the _____ President of _____, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Exhibit "A"

Undivided one half of Mineral Rights in the Northeast of Northwest Quarter of Section 30; Twp 2 South; Range 14 West.

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:58 P. M., AND SAME IS DULY RECORDED IN MISC. 1 AT PAGE 352.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

10
3

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

10.00 Chgd

O. Wendell Hall, Jr.
Benton, Ark.

Lease #3

FILED
SALINE CIRCUIT &
CHANCERY CLERK
9:26 A M 21 NOV '61
BY Edna Crouch

BOOK 3 PAGE 53

AMENDMENT OF OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
)
COUNTY OF SALINE )

WHEREAS, under date of July 16, 1960 an oil, gas and mineral lease was executed by Bryan W. Brooks and wife, Anna Brooks, called "Lessor", in favor of L. W. MINTURN, called "Lessee", covering the following described land in Saline County, Arkansas:

Undivided one-half of mineral rights in the Northeast of Northwest Quarter of Section 30, Township 2 South, Range 14 West.

WHEREAS, the parties to said lease have agreed that the same shall be amended as hereinafter provided;

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That said Lessor and Lessee, in consideration of the mutual covenants and agreements herein contained and other good and valuable considerations, do hereby agree that the above described lease shall be and the same is hereby amended as follows:

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

1. The royalty on magnetite or iron ore aggregate shall be five mills ($0.005) per iron unit (22.4 pounds of iron) rather than and in lieu of the royalty of 25¢ per ton as provided in Paragraph 2(c)(iii) of said lease.

2. The rates prescribed for the payment of royalties on sulphur, bauxite, magnetite and iron ore aggregate shall remain unchanged through the calendar year 1965 but at the beginning of the calendar year 1966 and at the beginning of each calendar year thereafter, a fraction shall be determined, the numerator of which shall be the average of the twelve (12) next preceding monthly publications of the Wholesale Commodity Price Index (all commodities), published by the Federal Reserve System, and the denominator of which shall be the average of the twelve (12) monthly publications of the Wholesale Commodity Price Index (all commodities) of the calendar year 1960; the rates provided for royalties on sulphur, bauxite and magnetite or iron ore aggregate shall be multiplied by this fraction and the result shall be adjusted to the nearest one cent (1¢) for sulphur and bauxite and to the nearest whole mill for magnetite or iron ore aggregate; such new rates shall be used for all payments due during the ensuing calendar year; the indexes referred to herein are those computed on a basis of an index of 100 for the average of the three years, 1947, 1948 and 1949.

3. Lessee is hereby granted the right, power and authority at the option of Lessee, at any time or times to pool, combine and unitize the land (hereinafter called the Leased Premises) covered by the above described lease (hereinafter called said Lease) or any portion thereof with any other land, lease or leases in the vicinity thereof, when in Lessee's judgment it is necessary or advisable so to do, for the purpose of developing and operating the Leased Premises and producing, mining and removing therefrom oil, gas or other minerals in accordance with the terms of said Lease. Such pooling may in any instance include all oil, gas and other minerals or may be limited to any one or more of such substances. Likewise, any such pooling may extend to and cover the production of the substance or substances committed to such pooled unit from any depth or may be limited to one or more zones, veins, depths, horizons or formations. Any pooled unit created hereunder shall not exceed 40 acres in surface area for oil, or 640 acres in surface area for gas, or 640 acres in surface area for any or all other minerals. The pooling by Lessee in any one or more instances shall not exhaust the right of Lessee to pool any remaining unpooled portion of the Leased Premises or any mineral not theretofore pooled into other units. Lessee shall file for record in the appropriate records of the county in which the Leased Premises are situated an instrument describing and designating the pooled acreage as a pooled unit, setting forth the effective date thereof and describing the acreage, zones, formations and substances pooled. The right, power and authority hereby given to Lessee for the formation of pooled units may be

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

exercised either before or after a well or mine has been drilled or opened or before or after the substance or substances committed to such pooled unit may have been found to exist in commercial quantities in, on or under the Leased Premises. The mining, drilling for, or production of the substance or substances committed to the pooled unit, and all operations conducted by Lessee in connection therewith on or within any such pooled unit shall be treated as if such mining, drilling, or production or operations in connection therewith were conducted on the Leased Premises. For the purpose of computing the royalties to which the Lessor or other owners of royalties on the production from the Leased Premises of the substance or substances committed to the pooled unit shall be entitled, there shall be allocated to said Lease the proportion of such production from any such unit (whether or not from the land covered by said Lease) that the number of surface acres covered by said Lease and included in the unit bears to the total number of surface acres in such unit; royalties shall be paid hereunder only on that portion of such production so allocated to said Lease, which shall be in lieu of any other royalties.

The above described lease, as hereby amended, is declared to be in full force and effect and the undersigned Lessors hereby grant, lease and let the above described premises unto said Lessee in accordance with and subject to the terms and provisions of said lease as amended by the terms and provisions of this instrument.

This instrument of amendment may be executed in any number of counterparts, each of which shall be deemed to be an original and shall be binding upon the party or parties executing the same whether or not a counterpart hereof shall be executed by each Lessor named in said lease.

WITNESS THE EXECUTION HEREOF this 20th day of NOVEMBER, 1961.

Bryan W. Brooks

Emma Brooks

L. W. Smuttum, Trustee

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF _____ )
)
COUNTY OF _____ )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

_____,
to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and official seal on this ___ day of _____, 196__.

_____
Notary Public in and for
_____ County, _____

STATE OF Arkansas )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Bryan W. Brooks
to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Anna Brooks, wife (wives)

of Bryan W. Brooks,
to me well known, and in the absence of her (their) husband(s) declared that she (they) had of her (their) own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her (their) said husband(s).

WITNESS my hand and official seal on this 20 day of November, 1961.

U.S. FOR NOTARY PUBLIC SALINE COUNTY

Com Expires 9-1-65

Notary Public in and for
Saline County, Arkansas

## CERTIFICATE OF RECORD

STATE OF ARKANSAS }
COUNTY OF SALINE } SS

I, MARSHALL GIPSON, Circuit Clerk and Ex-Officio Recorder for the County aforesaid, do hereby certify that the annexed and foregoing Instrument of writing was filed for record in my office on the 21st day of November A. D., 1961 at 9:26 o'clock A M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in MISC Book 3 Page 53

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court, this 21st day of November 1961

Marshall Gipson
CIRCUIT CLERK AND EX-OFFICIO RECORDER

_____ D. C.

SEAL OF CIRCUIT COURT SALINE COUNTY, ARK.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

3.50
8 2

L. W. Minturn
753 West Creekside Drive
Houston 24, Texas

ALPHA MINERAL CO.
753 WEST CREEKSIDE DR.
Houston 24, Texas

HOUSTON, TEXAS Jul 15, 1961 No. 32

FIRST CITY NATIONAL BANK OF HOUSTON 35-1 / 1130

PAID AUG 1961 FIRST CITY NATIONAL BANK

PAY TO THE ORDER OF Bryan W. Brooks and wife, Anna Brooks $ 21.00

Twenty-one Dollars and no/100 DOLLARS

Payment of annual rental on lease from Bryan W. Brooks, et ux, to L. W. Minturn, dated July 16, 1960, and recorded in Misc. 1 page 352, Saline County, Arkansas.

ALPHA MINERAL CO.

By L. W. Minturn

L. W. Minturn - General Partner

3

Bryan W. Brooks
Anna Brooks

GINGLES STORES
LITTLE ROCK

PAY TO THE ORDER OF ANY BANK, BANKER OR TRUST CO.
ALL PRIOR ENDORSEMENTS GUARANTEED
PAY ANY BANK, P.E.G.
AUG 3 '61
AUG 4 1961
COMMERCIAL NATIONAL BANK
LITTLE ROCK ARKANSAS

Lease #4

FILED
SALINE CIRCUIT & CHANCERY CLK
2:58 PM 17 FEB '61
BY Ruth Gibson

MISC. 1 PAGE 362

OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
)
COUNTY OF Saline )

This agreement made this 15th day of July, 1960, between Lawrence E. Tatum and Pearl Tatum (his wife), (hereinafter called "Lessor" whether one or more), whose address is Route 4, Box 166; Benton, Arkansas and L. W. Mimturn, as Lessee, whose address is 753 West Creekside Drive Houston 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ Sixteen and no/100 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ten (10) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of _____ Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise 16 acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the Route 4; Box 166 ~~Bank~~ at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

Should any one or more of the parties named above as Lessors fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

Lawrence E Tatum

Pearl Tatum

LESSORS

L. W. Minturn

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas : On this day came before me, a
COUNTY OF Pulaski : Notary Public duly commissioned and acting within and for said county and state, Lawrence E. Tatum to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Pearl Tatum, wife of _____, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 15th day of July, 1960.

Fred McCulloch
Notary Public in and for
Pulaski County,

FRED McCULLOCH NOTARY PUBLIC PULASKI COUNTY, ARK.

STATE OF _____ : On this day came before me, a
COUNTY OF _____ : Notary Public duly commissioned and acting within and for said county and state, _____, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

STATE OF _____ : On this day before me, a Notary
COUNTY OF _____ : Public duly commissioned and acting within said county and state, appeared in person _____, to me personally well known, who stated that he is the _____ President of _____, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MISC. 1 PAGE 371

Exhibit "A"
North 16 acres in the
Northeast of Northeast
Quarter of Section 31;
Twp 2 South; Range 14 West
Saline County, Arkansas
P.I.
L.J.
H.F.M.

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:58 P. M., AND SAME IS DULY RECORDED IN MISC. 1, AT PAGE 362.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER
BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

10
4

O. Marbell Hall Jr.
Benton, Ark.

10.00 Chg

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL CO.
753 WEST CREEKSIDE DR.
Houston 24, Texas

HOUSTON, TEXAS July 15, 1961 No. 33

FIRST CITY NATIONAL BANK OF HOUSTON 35-1 / 1130

PAY TO THE ORDER OF Lawrence E. Tatum and wife, Pearl Tatum $ 16.00

Sixteen Dollars and no/100 DOLLARS

Payment of annual rental on lease from Lawrence E. Tatum, et ux, to L. W. Minturn, dated July 29, 1960, and recorded in Misc. 1 page 362, Saline County, Arkansas.

35-1

ALPHA MINERAL CO.

By L. W. Minturn

L. W. Minturn - General Partner

4

4

REERLAUS GROCERY, MARKET & STATION
BENTON, ARK.

AUG 81-25

PAY TO THE ORDER OF PAYTAMY BANK P.E.G.
AUG 3 61 3 2000
AUG 2 1961
COMMERCIAL NATIONAL BANK
LITTLE ROCK, ARKANSAS
BENTON, ARK.

81-25

FILED Lease #5
SALINE CIRCUIT &
CHANCERY CLERK

MISC. 1 PAGE 372 2:58 PM 17 FEB '61
BY Ruth Gibson

OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
COUNTY OF Saline )

This agreement made this 21st day of July, 1960, between Leon H. Tatum and Ercel Tatum (his wife), (hereinafter called "Lessor" whether one or more), whose address is Route 4, Benton, Arkansas, and L. W. Minturn, as Lessee, whose address is 753 West Creekside Drive Houston 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ One and — no/100 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ten (10) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of _____ Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 2.5 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise 1 acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the Route #4 ~~Bank~~ at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

Should any one or more of the parties named above as Lessors fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

Leon H Tatum

Ercel Tatum

LESSORS

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas : On this day came before me, a
COUNTY OF Pulaski : Notary Public duly commissioned and acting within and for said county and state, Leon H. Tatum to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Ercel Tatum, wife of Leon H. Tatum, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 21st day of July, 1960.

FRED McCULLOCH NOTARY PUBLIC PULASKI COUNTY, ARK.

Fred McCulloch
Notary Public in and for
Pulaski County,

STATE OF _____ : On this day came before me, a
COUNTY OF _____ : Notary Public duly commissioned and acting within and for said county and state, _____, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

Notary Public in and for
_____ County,

STATE OF _____ : On this day before me, a Notary
COUNTY OF _____ : Public duly commissioned and acting within said county and state, appeared in person _____, to me personally well known, who stated that he is the _____ President of _____, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

Notary Public in and for
_____ County,

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MISC. 1 PAGE 381

Exhibit "A"

Part. of N.E.1/4 of N.E.1/4; beginning at S.E. corner run N-132'; W.330'; S.132'; E-330 (of) To point of beginning located in Saline County in Section 31; Twp 2 South; Range 14 West State of Arkansas.

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:58 P. M., AND SAME IS DULY RECORDED IN MISC. BOOK 1, AT PAGE 372.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

SALINE COUNTY

ALPHA MINERAL COMPANY
759 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

RICHARDS & RICHARDS
820 Wilson Arcade
Benton, Arkansas
Phone

PAID
NOV
FIRST CITY NATIONAL BANK
HOUSTON
TEXAS
35-1

STALE DATE

HOUSTON TEXAS July 5, 1961 No. 34

FIRST CITY NATIONAL BANK
OF HOUSTON
35-1
1130

ALPHA MINERAL CO.
753 WEST CREEKSIDE DR.
Houston 24, Texas

PAY TO THE ORDER OF Leon H. Tatum and wife, Ercel Tatum $ 1.00

One Dollar and no/100 DOLLARS

Payment of annual rental on lease
from Leon H. Tatum, et ux, to
L. W. Minturn, dated July 21, 1960,
and recorded in Misc. 1 page 372,
Saline County, Arkansas

ALPHA MINERAL CO.
By L. W. Minturn
L. W. Minturn - General Partner

$1.00 Chg'd
O. Wendell Hall, Jr.
Benton, Ark.

ASSIGNMENT OF OIL, GAS AND MINERAL LEASES

THE STATE OF ARKANSAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF SALINE §

That L. W. MINTURN, of Houston, Harris County, Texas, in consideration of Ten Dollars ($10.00) and other good and valuable considerations cash in hand paid by ALPHA MINERAL COMPANY, a limited partnership organized under the laws of Arkansas, the receipt of which is hereby acknowledged, does hereby transfer, assign and convey unto the said Alpha Mineral Company the following oil, gas and mineral leases and the leasehold estates created thereby covering lands situated in the County of Saline, State of Arkansas, to wit:

1. Oil, gas and mineral lease dated July 29, 1960, from J. T. Bridges and wife, Hazel Bridges, as lessor, to L. W. Minturn as lessee, recorded in Misc. Book 1, at page 332 of the Records of Saline County, Arkansas, covering the following described land:

   The South 24 acres of the NE/4 of the NE/4 of Section 31, Township 2 South, Range 14 West, Saline County, Arkansas, except a one acre tract in the Southeast corner of the above described 24 acre tract and more fully described as beginning at the Southeast corner of the NE/4 of the NE/4 of Section 31; run North 132 feet; West 330 feet; South 132 feet; East 330 feet to a point of beginning, leaving a net of 23 acres covered by this lease.

2. Oil, gas and mineral lease dated July 27, 1960, from W. C. McClendon and wife, Nannie McClendon, as lessor, to L. W. Minturn, as lessee, recorded in Misc. Book 1, at page 342 of the Records of Saline County, Arkansas, covering the following described land:

   Part of the NE/4 of the NW/4 of Section 30, Township 2 South, Range 14 West, containing 13.35 acres of surface rights and 6.67 acres of mineral right undivided under the said

FILED
SALINE CIRCUIT & CHANCERY CLERK
1962 JAN -2 AM 10:45
BY Marshall Gipson

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

described property, which property is as follows: Beginning at the Northwest corner of the NE/4 of the NW/4 of Section 30, Township 2 South, Range 14 West; thence East 675 feet South 782 feet to the North side of Alcoa Pump Road; thence Westerly 675 feet; thence North 782 feet to point of beginning and containing 13.35 acres, more or less.

3. Oil, gas and mineral lease dated July 16, 1960, from Bryan W. Brooks and Anna Brooks, his wife, as lessor, to L. W. Minturn, as lessee, recorded in Misc. Book 1, at page 352 of the Records of Saline County, Arkansas, covering the following described land: 3

   Undivided one-half of mineral rights in the NE/4 of NW/4 of Section 30, Township 2 South, Range 14 West.

4. Oil, gas and mineral lease dated July 15, 1960, from Lawrence E. Tatum and Pearl Tatum, his wife, as lessor, to L. W. Minturn, as lessee, recorded in Misc. Book 1, at page 362 of the Records of Saline County, Arkansas, covering the following described land: 4

   North 16 acres in the NE/4 of NE/4 of Section 31, Township 2 South, Range 14 West, Saline County, Arkansas.

5. Oil, gas and mineral lease dated July 21, 1960, from Leon H. Tatum and Ercel Tatum, his wife, as lessor, to L. W. Minturn, as lessee, recorded in Misc. Book 1, at page 372, of the Records of Saline County, Arkansas, covering the following described land: 5

   Partof NE/4 of NE/4, beginning at Southeast corner run North 132 feet, West 330 feet, South 132 feet, East 330 feet to point of beginning located in Saline County, in Section 31, Township 2 South, Range 14 West, State of Arkansas.

6. Oil, gas and mineral lease dated September 20, 1960, from R. A. Davenport, Sr. and Essie Davenport, his wife, and R. A. Davenport, Sr. as attorney-in-fact for the following parties: (1) Irva Young (in her own right); (2) Coye Davenport and Margurett Davenport (his wife); (3) J. H. Davenport and Elizabeth Davenport (his wife); (4) Hattie Young (in her own right); (5) Halbert Davenport and Margaret Davenport (his wife); (6) Sam Davenport and Anna Davenport (his wife); (7) Anna Mae West (in her own right); (8) Doris Baker (in her own right) as lessor, to L. W. Minturn, as 6



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

lessee, recorded in Misc. Book 1, at page 382 of the Records of Saline County, Arkansas, covering the following described land:

The NW/4 of the NE/4 of Section 30, Township 2 South, Range 14 West, Saline County, Arkansas.

7. Oil, gas and mineral lease dated July 21, 1960, from R. A. Davenport, Sr. and Essie Davenport, his wife, as lessor, to L. W. Minturn, as lessee, recorded in Misc. Book 1, at page 392 of the Records of Saline County, Arkansas, covering the following described land: 7

The SE/4 of the SW/4 of Section 29, Township 2 South, Range 14 West, Saline County, Arkansas.

8. Oil and Gas Lease dated July 21, 1960, from R. A. Davenport and Essie Davenport, his wife, as lessor, to L. W. Minturn, as lessee, recorded in Misc. Book 1, at page 402 of the Records of Saline County, Arkansas, covering the following described land: 8

The NE/4 of the NW/4 of Section 32, Township 2 South, Range 14 West, Saline County, Arkansas.

TO HAVE AND TO HOLD the above described leases together with all and singular the rights, privileges and appurtenances thereto in anywise belonging unto the said Alpha Mineral Company, its successors and assigns forever.

Theo Marsh Minturn, wife of the said L. W. Minturn, for the consideration above recited joins in the execution hereof for the purpose of releasing and relinquishing and she does hereby release and relinquish her right of dower in and to the above described leases.

WITNESS the execution hereof this 15 day of March, 1961.

L. W. Minturn

L. W. Minturn

Theo Marsh Minturn

Theo Marsh Minturn



21

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, L. W. MINTURN, to me well known to be the person whose name appears as Grantor in the foregoing instrument, and stated that he executed the same for the consideration, uses, and purposes therein mentioned and set forth.

And on the same day also voluntarily appeared before me in person the said THEO MARSH MINTURN, wife of the said L. W. Minturn, to me well known, and, in the absence of her husband, declared that she had, of her own free will, executed the foregoing instrument for the purposes and consideration therein contained and set forth, without compulsion or undue influence of her said husband.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this 15 day of March, 1961.

Geraldine Jones
Notary Public in and for
Harris County, Texas

GERALDINE JONES
Notary Public, in and for Harris County, Texas
My Commission Expires June 1, 1961

Filed for record on this the 2nd day of January, 1962, at 10:45 A.M., and same is duly recorded in Misc. Record Book 3, at page 167.

Marshall Gipson
Circuit Clerk & Recorder

By Ruth Gipson D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

4
2

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, L. W. MINTURN, to me well known to be the person whose name appears as Grantor in the foregoing instrument, and stated that he executed the same for the consideration, uses, and purposes therein mentioned and set forth.

And on the same day also voluntarily appeared before me in person the said THEO MAHON MINTURN, wife of the said L. W. Minturn, to me well known, and, in the absence of her husband, declared that she had, of her own free will, executed the foregoing instrument for the purposes and consideration therein contained and set forth, without compulsion or undue influence of her said husband.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this __ day of March, 1961.

_____
Notary Public in and for
Harris County, Texas

Filed for record on this the 2nd day of January, 1962, at 10:45 A.M., and same is duly recorded in Miss. Record Book 3, page 167.

Marshall Dupon
Circuit Clerk & Recorder

BY _____

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Vinson, Elkins, Weems + Searls, attys
[illegible] City National Bank Bldg.
[illegible]ston 2 - Texas
4 00 chgd.

FILED.
SALINE CIRCUIT &
CHANCERY CLERK

8:22 AM 13 JAN '62
BY Edna Crouch

THE STATE OF ARKANSAS )
)
COUNTY OF SALINE )

WHEREAS, L. W. Minturn, the original Lessee in the following described oil, gas and mineral leases has heretofore assigned said leases to Alpha Mineral Company, a limited partnership organized under the laws of the State of Arkansas:

1. Oil, gas and mineral lease dated July 27, 1960, from W. C. McClendon and wife, Nannie McClendon, as Lessor, to L. W. Minturn, as Lessee, recorded in Misc. Book 1, at page 342 of the Records of Saline County, Arkansas, covering the following described land:

   Part of the NE/4 of the NW/4 of Section 30, Township 2 South, Range 14 West, containing 13.35 acres of surface rights and 6.67 acres of mineral right undivided under the said described property, which property is as follows: Beginning at the Northwest corner of the NE/4 of the NW/4 of Section 30, Township 2 South, Range 14 West; thence East 675 feet South 782 feet to the North side of Alcoa Pump Road; thence Westerly 675 feet; thence North 782 feet to point of beginning and containing 13.35 acres, more or less;

2. Oil, gas and mineral lease dated July 16, 1960, from Bryan W. Brooks and Anna Brooks, his wife, as Lessor, to L. W. Minturn, as Lessee, recorded in Misc. Book 1, at page 352 of the Records of Saline County, Arkansas, covering the following described land:

   Undivided one-half of mineral rights in the NE/4 of NW/4 of Section 30, Township 2 South, Range 14 West; and

3. Oil, gas and mineral lease dated September 20, 1960, from R. A. Davenport, Sr. and Essie Davenport, his wife, and R. A. Davenport, Sr. as attorney-in-fact for the following parties:

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

(1) Irva Young (in her own right); (2) Coye Davenport and Margurett Davenport (his wife); (3) J. H. Davenport and Elizabeth Davenport (his wife); (4) Hattie Young (in her own right); (5) Halbert Davenport and Margaret Davenport (his wife); (6) Sam Davenport and Anna Davenport (his wife); (7) Anna Mae West (in her own right); (8) Doris Baker (in her own right) as Lessor, to L. W. Minturn, as Lessee, recorded in Misc. Book 1, at page 382 of the Records of Saline County, Arkansas, covering the following described land:

The NW/4 of the NE/4 of Section 30, Township 2 South, Range 14 West, Saline County, Arkansas.

WHEREAS, the said L. W. Minturn, as Trustee, acting for and on behalf of Alpha Mineral Company, of which he is the General Partner, has secured certain amendments of the above described leases which have been placed of record in Saline County, Arkansas; and

WHEREAS, all rights, privileges and benefits accruing to the Lessee under and by virtue of said amendments were acquired for the benefit of Alpha Mineral Company and it is the desire of the parties that such right and title be made a matter of public record.

KNOW ALL MEN BY THESE PRESENTS: That L. W. Minturn, individually and as Trustee, does hereby TRANSFER, ASSIGN and CONVEY unto Alpha Mineral Company all rights, titles, interests, benefits and privileges created by the following amendments of the above described leases:

a. Amendment of oil, gas and mineral lease dated November 15, 1961 executed by W. C. McClendon and wife, Nannie McClendon, which is recorded in Misc. Book 3, page 49 of the Records of Saline County, Arkansas;

b. Amendment of oil, gas and mineral lease dated November 20, 1961 executed by Bryan W. Brooks and wife, Anna Brooks, which is recorded in Misc. Book 3, page 53 of the Records of Saline County, Arkansas; and



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

c. Amendment of oil, gas and mineral lease dated November 14, 1961 executed by R. A. Davenport, Sr., et ux, et al, which is recorded in Misc. Book 3, page 57 of the Records of Saline County, Arkansas.

Theo Marsh Minturn, wife of the said L. W. Minturn, for the consideration above recited, joins in the execution hereof for the purpose of releasing and relinquishing and she does hereby release and relinquish her right of dower in and to the above described leases.

WITNESS THE EXECUTION HEREOF this 11 day of January, 1962.

L. W. Minturn

L. W. MINTURN, Individually and as Trustee

Theo Marsh Minturn

THEO MARSH MINTURN

ASSIGNOR

ALPHA MINERAL COMPANY

By L. W. Minturn

L. W. Minturn, General Partner

ASSIGNEE

THE STATE OF TEXAS )
COUNTY OF HARRIS )

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, L. W. MINTURN, to me well known to be the person whose name appears as Assignor in the foregoing instrument and who also executed the same on behalf of the Assignee, and stated that he executed the same for the consideration, uses and purposes therein mentioned and in the capacity therein set forth.

And on the same day also voluntarily appeared before me in person the said THEO MARSH MINTURN, wife of the said L. W. MINTURN, to me well known, and, in the absence of her husband, declared that she had, of her own free will, executed the

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

foregoing instrument for the purposes and consideration therein contained and set forth, without compulsion or undue influence of her said husband.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this 11th day of January, 1962.

Laura McCain
Notary Public in and for
Harris County, T e x a s

FILED FOR RECORD ON THIS THE 13TH DAY OF JANUARY, 1962, AT 8:22 A. M., AND SAME IS DULY RECORDED IN MISC. BOOK 3, AT PAGE 256.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Vinson, Elkins, Weems & Searls
Attorneys at Law
First City National Bank Bldg.
Houston 2, Texas

$3.50

ALPHA MINERAL COMPANY
[illegible] CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MISC. 1 PAGE 382

FILED
SALINE CIRCUIT & CHANCERY CLERK Lease #6
2:58 P.M. 17 FEB '61
BY Edna Crouch

OIL, GAS AND MINERAL LEASE

STATE OF ARKANSAS

COUNTY OF Saline

This agreement made this 20th day of September, 1960, between R. A. Davenport, Sr. and Essie Davenport, his wife; and R. A. Davenport, Sr. as "ATTORNEY IN FACT" for the following parties: (1) Irva Young(in her own right);(2) Coye Davenport and Margurett Davenport (his wife);(3) J. H. Davenport and Elizabeth Davenport (his wife);(4) Hattie Young(in her own right); (5) Halbert Davenport and Margaret Davenport (his wife);(6) Sam Davenport and Anna Davenport (his wife);(7) Anna Mae West (in her own right);(8) Doris Baker (in her own right)

(hereinafter called "Lessor" whether one or more), whose address is Route #4, Box 165A, Benton, Arkansas,

AND L. W. Minturn,

as Lessee, whose address is 753 West Creekside Drive, Houston 24, Texas.

W I T N E S S E T H

Lessor in consideration of $ Forty-five and no/100 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ten (10) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of Twenty-five Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise forty acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the Union Bank at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

Should any one or more of the parties named above as Lessors fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

R A Davenport Sr
Erie Davenport
R A Davenport Sr
"Attorney in Fact"

LESSORS

L. W. Minturn

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF ARKANSAS : On this day came before me, a Notary Public duly commissioned

COUNTY OF PULASKI : and acting within and for said

County and State, R. A. Davenport, Sr. and R. A. Davenport, Sr. as

"ATTORNEY IN FACT"

to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purpose therein mentioned and set forth. And on the same day also voluntarily appeared before me, Essie Davenport

wife of R. A. Davenport, Sr.

to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 20th day of September, 1960.

Fred McCulloch
Notary Public in and for

Pulaski County

My commission expires 7-12-1964

FRED McCULLOCH NOTARY PUBLIC PULASKI COUNTY, ARK.

STATE OF _____ : On this day came before me, a Notary Public duly commissioned and acting within and for

said County and State, _____,

to me well known as the Lessor in the foregoing instrument, and stated that ____ had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and seal on this _____ day of _____, 1960.

Notary Public in and for

_____ County,

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MISC. 1 PAGE 391

"EXHIBIT "A"

The Northwest Quarter of the Northeast Quarter of Section 30; Township -2- South; Range -14- West; Saline County, State of Arkansas

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:58 P. M., AND SAME IS DULY RECORDED IN MISC. BOOK 1, AT PAGE 382.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

10
6.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Lease #6

Book "D" Page 179

PIONEER DEMOCRAT P. & L. CO., LITTLE ROCK

FORM No. 872
CLASS 2

FILED
SALINE CIRCUIT & CHANCERY

2:56 PM 17 FEB '61

# POWER OF ATTORNEY. Edna Crouch

*Know all Men by These Presents:*

THAT I, Irva Young (in my owen Right) of 710 West South Street of Benton in the State of Arkansas do hereby appoint R.A.Davenport,Sr. of Route # 4; Box 165 A of Benton in the State of Arkansas as agent and attorney in fact for me and in my name to sign an Oil,Gas and Mineral Lease on the following described property,towit: the Northwest Quarter of the Northeast Quarter of Section 30; Twp-2-South; Range 14 West; Saline County,Arkansas; in which I owen an undivided interest

and to do and perform all such other matters as may be necessary and expedient for the purpose of carrying out the objects above mentioned; and hereby ratify and confirm all that said agent may do in said premises.

WITNESS my hand and seal on this 12 day of Sept, 1960.

x Irva Young [SEAL.]

[SEAL.]

## ACKNOWLEDGMENT.

STATE OF ARKANSAS, County of Saline } ss.

BE IT REMEMBERED, That on this day came before me, the undersigned, a notary public within and for the County aforesaid, duly commissioned and acting Irva Young to me well known as the grantor in the foregoing instrument of writing, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as such notary public on this 12 day of Sept, 1960

[signature]

My Com expires Jan 30, 1964.

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:56 P. M., AND SAME IS DULY RECORDED IN BOOK "D", PAGE 179. POWER OF ATTORNEY

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER
BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

12

# POWER OF ATTORNEY.

.....

TO

.....

.....

....., 19 ...

FORM NO. 872 CLASS 2

ALPHA MINERALS COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

13.

Lease # 6

Book "D" Page 180

DEMOCRAT P. & L. CO., LITTLE ROCK

FORM No. 872
CLASS 2

FILED
SALINE CIRCUIT
CHANCERY CLERK
2:56 P M 17 FEB '61
BY Edna Crouch

# POWER OF ATTORNEY.

*Know all Men by These Presents:*

THAT Coye Davenport and Margurett Davenport (his wife)
of Benton in the State of Arkansas do hereby
appoint R.A.Davenport,Sr. of Route #4; Box 165 A
of Benton in the State of Arkansas
as agent and attorney in fact for us and in our name to sign
an Oil,Gas and Mineral Lease on the following described property,towit:
The Northwest Quarter of the Northeast Quarter of Section 30; Twp-2-South;
Range 14 West; Saline County,Arkansas;in which I owen an undivided interest

and to do and perform all such other matters as may be necessary and expedient for the purpose of carrying out the objects above mentioned; and hereby ratify and confirm all that said agent may do in said premises.

WITNESS our hand and seal on this 31st day of August, 19 60

x Coye Davenport [SEAL.]
x Margurett Davenport [SEAL.]

## ACKNOWLEDGMENT.

STATE OF ARKANSAS, } ss. County of ..... } ss.

BE IT REMEMBERED, That on this day came before me, the undersigned, a notary public within and for the County aforesaid, duly commissioned and acting Coye Davenport and Margurett Davenport (his wife) to me well known as the grantor in the foregoing instrument of writing, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as such notary public
on this 31st day of August, 19 60

John L. Vaughn

My Comm. Exp. 7/31/63

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:56 P. M., AND SAME IS DULY RECORDED IN POWER OF ATTORNEY BOOK "D", PAGE 180.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER
BY Edna Crouch D.C.

14
6

ALPHA MINERAL COMPANY
753 W. GREEKSIDE DRIVE
HOUSTON 24, TEXAS

# POWER OF ATTORNEY.

.....

TO

.....

.....

....., 19 ...

FORM NO. 872 CLASS 2

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Lease

Book "D" Page 181

Lease #6:

FILED
SALINE CIRCUIT &
CHANCERY

DEMOCRAT P. & L. CO., LITTLE ROCK

FORM No. 872
CLASS 2

2:56 PM 17 FEB '61

# POWER OF ATTORNEY. Edna Crouch

*Know all Men by These Presents:*

THAT J.H. Davenport and Elizabeth Davenport (his wife) of Jackson in the State of Tennesse do hereby appoint R.A. Davenport, Sr. of Route #4; Box 165 A of Benton in the State of Arkansas as agent and attorney in fact for us and in our name to sign an Oil, Gas and Mineral Lease on the following described property, towit: The Northwest Quarter of the Norteast Quarter of Section 30; Twp-2- South; Range 14 West; Saline County, Arkansas; in which I owen an undivided interest.

and to do and perform all such other matters as may be necessary and expedient for the purpose of carrying out the objects above mentioned; and hereby ratify and confirm all that the said agent may do in said premises.

WITNESS our hand and seal on this 31st day of August, 19 60

X J. H. Davenport [SEAL.]

X Elizabeth Davenport [SEAL.]

## ACKNOWLEDGMENT.

~~STATE OF ARKANSAS~~, ~~County of~~ } ss.

State of Tennesse, County of Madison } ss.

BE IT REMEMBERED, That on this day came before me, the undersigned, a notary public within and for the County aforesaid, duly commissioned and acting. J.H. Davenport and Elizabeth Davenport to me well known as the grantors in the foregoing instrument of writing, and stated that they had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as such notary public on this 31st day of August, 19 60

Notary Public, Jackson, Tennessee
My commission expires May 15, 1963.

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:56 P. M. AND SAME IS DULY RECORDED IN POWER OF ATTORNEY BOOK "D", PAGE 181.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# POWER OF ATTORNEY.

.....

TO

.....

.....

....., 19 ...

FORM NO. 872 CLASS 2

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Mineral
Leg

Book "D" Page 182

Lease # 6

FILED
SALINE CIRCUIT & CHANCERY CT.

PIONEER DEMOCRAT P. & L. CO., LITTLE ROCK

FORM No. 872
CLASS 2

2:56 P.M. 17 FEB '61

# POWER OF ATTORNEY. Edna Crouch

*Know all Men by These Presents:*

THAT I, Hattie Young (in my owen right)

of Monroe in the State of Louisiana do hereby

appoint R.A. Davenport, Sr. of Route # 4; Box 165 A

of Benton in the State of Arkansas

as agent and attorney in fact for me and in my name to sign

an Oil, Gas and Mineral Lease on the following described property, towit:

The Northwest Quarter of the Northeast Quarter of Section 30; Twp-2- South;

Range 14 West; Saline County, Arkansas in which I owen an undivided interest

and to do and perform all such other matters as may be necessary and expedient for the purpose of carrying out the objects above mentioned; and hereby ratify and confirm all that said agent may do in said premises.

WITNESS my hand and seal on this ..... day of ....., 1960

x Hattie Young [SEAL.]

..... [SEAL.]

## ACKNOWLEDGMENT.

STATE OF ~~ARKANSAS~~ LOUISIANA, County of ..... } ss.

Louisiana Parish of Ouachita XXXXXXXX } ss.

BE IT REMEMBERED, That on this day came before me, the undersigned, a notary public within and for the County aforesaid, duly commissioned and acting Hattie Young to me well known as the grantor in the foregoing instrument of writing, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as such notary public

on this 30th day of August, 1960

Janice Monerief

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961 AT 2:56 P. M., AND SAME IS DULY RECORDED IN POWER OF ATTORNEY BOOK "D", AT PAGE 182.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

By Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

18
6

# POWER OF ATTORNEY.

.....

TO

.....

.....

....., 19 ...

FORM NO. 872 CLASS 2

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Alpha Mineral Co.

Book "D" Page 18.

Lease #6

FILED
SALINE CIRCUIT &
COUNTY CLERK

DEMOCRAT P. & L. CO., LITTLE ROCK

FORM No. 872
CLASS 2

2:57 P.M. 17 FEB '61

# POWER OF ATTORNEY.

Edna Crouch

*Know all Men by These Presents:*

THAT Halbert Davenport and Margaret Davenport (his wife)
of Saginaw in the State of Michigan do hereby
appoint R.A. Davenport, Sr. of Route # 4; Box 165 A
of Benton in the State of Arkansas
as agent and attorney in fact for us and in our name to sign
an Oil, Gas and Mineral Lease on the following described property; towit:
The Northwest Quarter of the Northeast Quarter of Section 30; Twp-2-South;
Range 14 West; Saline County, Arkansas; in which I have an undivided interest

and to do and perform all such other matters as may be necessary and expedient for the purpose of carrying out the objects above mentioned; and hereby ratify and confirm all that said agent may do in said premises.

WITNESS our hand and seal on this 12th day of September, 1960

X Halbert Davenport [SEAL.]
X Margaret Davenport [SEAL.]

## ACKNOWLEDGMENT.

STATE OF ~~ARKANSAS~~ Michigan, } ss.
County of Saginaw

State of Michigan } ss.
County of Saginaw

BE IT REMEMBERED, That on this day came before me, the undersigned, a notary public within and for the County aforesaid, duly commissioned and acting Halbert Davenport and Margaret Davenport (his wife) to me well known as the grantor in the foregoing instrument of writing, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as such notary public
on this 12th day of September, 1960.

Donald R. Webber

DONALD R. WEBBER
Notary Public, Saginaw County, Mich.
My Commission Expires Mar. 16, 1963

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:57 P. M., AND SAME IS DULY RECORDED IN POWER OF ATTORNEY BOOK "D", AT PAGE 183.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

20
6

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# POWER OF ATTORNEY.

.....

TO

.....

.....

.....

....., 19 ...

FORM NO. 872 CLASS 2

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Jo. Cl 9
Wendell

Lease #6

Book "D" Page 184

FILED
SALINE CIRCUIT & CHANCERY CLERK

DEMOCRAT, P. & L. CO., LITTLE ROCK

FORM No. 872
CLASS 2

2:57 P.M. 17 FEB '61

Edna Crouch

# POWER OF ATTORNEY.

*Know all Men by These Presents:*

THAT ...Sam Davenport and Anna Davenport (his wife)...

of .....Saginaw.....in the State of..Michigan.....do hereby

appoint R.A.Davenport,Sr. of Route #4;Box 165 A

of .....Benton.....in the State of.....Arkansas

.....as...agent and attorney in fact for....us....and in.our.....name..to.sign

An Oil,Gas and Mineral Lease on the following described property;towit

The Northwest Quarter of the Northeast Quarter of Section 30; Twp-2-South;

Range 14 West; Saline County,Arkansas,in which I have an undivided interest.

and to do and perform all such other matters as may be necessary and expedient for the purpose of carrying out the objects above mentioned; and hereby ratify and confirm all that..... said agent may do in said premises.

WITNESS..our.hand.. and seal.. on this.....day of.....,19 60

Sam Davenport [SEAL.]

Anna Davenport [SEAL.]

## ACKNOWLEDGMENT.

STATE OF ~~ARKANSAS~~ Michigan, } ss.
County of Saginaw

State of Michigan } ss.
County of Saginaw

BE IT REMEMBERED, That on this day came before me, the undersigned, a .....notary public.....within and for the County aforesaid, duly commissioned and acting. Sam Davenport and Anna Davenport (his wife) to me well known as the grantor in the foregoing instrument of writing, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as such ....notary public.....

on this....12.....day of....September.....,1960..

Ruth Hartley

Ruth Hartley Notary Public
Saginaw County, Mich.
My comm. expires 6/26/64

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:57 P. M., AND SAME IS DULY RECORDED IN POWER OF ATTORNEY BOOK "D" AT PAGE 184.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER

BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# POWER OF ATTORNEY.

.....

TO

.....

.....

.....

....., 19 ...

FORM NO. 872 CLASS 2

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Wendell

Book "D" Page 185

Lease #6

FILED
SALINE CIRCUIT &
CLERK

PIONEER DEMOCRAT P. & L. CO., LITTLE ROCK

FORM No. 872
CLASS 2

2:57 P M 17 FEB '61

# POWER OF ATTORNEY.

Edna Crouch

*Know all Men by These Presents:*

THAT I, Anna Mae West (in my owen right) of Monroe in the State of Louisiana do hereby appoint R.A.Davenport,Sr. of Route # 4, Box 165 A of Benton in the State of Arkansas as agent and attorney in fact for me and in my name to sign an Oil,Gas and Mineral Lease on the following described property;towit The Northwest Quarter of the Northeast Quarter of Section 30; Twp-2-South; Range 14 West;Saline County,Arkansas;in which I owen an undivided interest.

and to do and perform all such other matters as may be necessary and expedient for the purpose of carrying out the objects above mentioned; and hereby ratify and confirm all that said agent may do in said premises.

WITNESS my hand and seal on this 30th day of August, 19 60

x Anna Mae West [SEAL.]

[SEAL.]

## ACKNOWLEDGMENT.

STATE OF ~~ARKANSAS~~ LOUISIANA, County of ss.

State of Louisiana, Parish of Ouachita XXXXXXXXXX ss.

BE IT REMEMBERED, That on this day came before me, the undersigned, a notary public within and for the County aforesaid, duly commissioned and acting Anna Mae West to me well known as the [illegible] or in the foregoing instrument of writing, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as such notary public on this 30th day of August, 19 60

James Monroe

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:57 P. M., AND SAME IS DULY RECORDED IN POWER OF ATTORNEY BOOK "D", AT PAGE 185.

MARSHALL GIPSON
CIRCUIT CLERK & RECORDER

BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

# POWER OF ATTORNEY.

.....

TO

.....

.....

....., 19 ...

FORM NO. 872 CLASS 2

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Mr. Chg
Wimbell

Book "D" Page 186

Lease #6

FILED

DEMOCRAT P. & L. CO., LITTLE ROCK

FORM No. 872
CLASS 2

2:57 PM 17 FEB '61

# POWER OF ATTORNEY. Edna Crouch

*Know all Men by These Presents:*

THAT I, Doris Baker (in my owen right)

of Jackson in the State of Mississippi do hereby

appoint R.A.Davenport,Sr. of Route # 4; Box 165 A

of Benton in the State of Arkansas

as agent and attorney in fact for me and in my name to sign

an Oil,Gas and Mineral Lease on the following described property,towit

The Northwest Quarter of the Northeast Quarter of Section 30; Twp-2-South;

Range 14 West,Saline County,Arkansas,in which I owen an undivided interest

and to do and perform all such other matters as may be necessary and expedient for the purpose of carrying out the objects above mentioned; and hereby ratify and confirm all that said agent may do in said premises.

WITNESS my hand and seal on this day of , 1960

Doris Baker [SEAL.]

[SEAL.]

## ACKNOWLEDGMENT.

STATE OF ~~ARKANSAS~~ MISSISSIPPI, County of Hinds } ss.

State of Mississippi, County of } ss.

BE IT REMEMBERED, That on this day came before me, the undersigned, a notary public within and for the County aforesaid, duly commissioned and acting. Doris Baker to me well known as the grantor in the foregoing instrument of writing, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as such notary public on this 6 day of Sept, 1960

Doris Baker

My Commission Expires Jan. 23, 1963

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:57 P. M., AND SAME IS DULY RECORDED IN POWER OF ATTORNEY BOOK "D", AT PAGE 186.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER
BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

26

# POWER OF ATTORNEY.

.....

TO

.....

.....

....., 19 ...

FORM NO. 872 CLASS 2

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Chg
Wendell

Lease #6

FILED
SALINE CIRCUIT &
CHANCERY CLERK

9:27 A.M. 21 NOV '61
BY Edna Crouch

BISC. 3 PAGE 57

AMENDMENT OF OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS ◊
◊
COUNTY OF SALINE ◊

WHEREAS, under date of September 20, 1960 an oil, gas and mineral lease was executed by R. A. Davenport, Sr. and wife, Essie Davenport, and R. A. Davenport, Sr. as Attorney-in-Fact for the following parties: Irva Young (in her own right); Coye Davenport and wife, Margurett Davenport; J. H. Davenport and wife, Elizabeth Davenport; Hattie Young (in her own right); Halbert Davenport and wife, Margaret Davenport; Sam Davenport and wife, Anna Davenport; Anna Mae West (in her own right); and Doris Baker (in her own right), called "Lessor", in favor of L. W. MINTURN, called "Lessee", covering the following described land in Saline County, Arkansas:

The Northwest Quarter of the Northeast Quarter of Section 30; Township -2- South; Range -14- West; Saline County, State of Arkansas.

WHEREAS, the parties to said lease have agreed that the same shall be amended as hereinafter provided;

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That said Lessor and Lessee, in consideration of the mutual covenants and agreements herein contained and other good and valuable considerations, do hereby agree that the above described lease shall be and the same is hereby amended as follows:

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

28
6

1. The royalty on magnetite or iron ore aggregate shall be five mills ($0.005) per iron unit (22.4 pounds of iron) rather than and in lieu of the royalty of 25¢ per ton as provided in Paragraph 2(c)(iii) of said lease.

2. The rates prescribed for the payment of royalties on sulphur, bauxite, magnetite and iron ore aggregate shall remain unchanged through the calendar year 1965 but at the beginning of the calendar year 1966 and at the beginning of each calendar year thereafter, a fraction shall be determined, the numerator of which shall be the average of the twelve (12) next preceding monthly publications of the Wholesale Commodity Price Index (all commodities), published by the Federal Reserve System, and the denominator of which shall be the average of the twelve (12) monthly publications of the Wholesale Commodity Price Index (all commodities) of the calendar year 1960; the rates provided for royalties on sulphur, bauxite and magnetite or iron ore aggregate shall be multiplied by this fraction and the result shall be adjusted to the nearest one cent (1¢) for sulphur and bauxite and to the nearest whole mill for magnetite or iron ore aggregate; such new rates shall be used for all payments due during the ensuing calendar year; the indexes referred to herein are those computed on a basis of an index of 100 for the average of the three years, 1947, 1948 and 1949.

3. Lessee is hereby granted the right, power and authority at the option of Lessee, at any time or times to pool, combine and unitize the land (hereinafter called the Leased Premises) covered by the above described lease (hereinafter called said Lease) or any portion thereof with any other land, lease or leases in the vicinity thereof, when in Lessee's judgment it is necessary or advisable so to do, for the purpose of developing and operating the Leased Premises and producing, mining and removing therefrom oil, gas or other minerals in accordance with the terms of said Lease. Such pooling may in any instance include all oil, gas and other minerals or may be limited to any one or more of such substances. Likewise, any such pooling may extend to and cover the production of the substance or substances committed to such pooled unit from any depth or may be limited to one or more zones, veins, depths, horizons or formations. Any pooled unit created hereunder shall not exceed 40 acres in surface area for oil, or 640 acres in surface area for gas, or 640 acres in surface area for any or all other minerals. The pooling by Lessee in any one or more instances shall not exhaust the right of Lessee to pool any remaining unpooled portion of the Leased Premises or any mineral not theretofore pooled into other units. Lessee shall file for record in the appropriate records of the county in which the Leased Premises are situated an instrument describing and designating the pooled acreage as a pooled unit, setting forth the effective date thereof and describing the acreage, zones, formations and substances pooled. The right, power and authority hereby given to Lessee for the formation of pooled units may be

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

exercised either before or after a well or mine has been drilled or opened or before or after the substance or substances committed to such pooled unit may have been found to exist in commercial quantities in, on or under the Leased Premises. The mining, drilling for, or production of the substance or substances committed to the pooled unit, and all operations conducted by Lessee in connection therewith on or within any such pooled unit shall be treated as if such mining, drilling, or production or operations in connection therewith were conducted on the Leased Premises. For the purpose of computing the royalties to which the Lessor or other owners of royalties on the production from the Leased Premises of the substance or substances committed to the pooled unit shall be entitled, there shall be allocated to said Lease the proportion of such production from any such unit (whether or not from the land covered by said Lease) that the number of surface acres covered by said Lease and included in the unit bears to the total number of surface acres in such unit; royalties shall be paid hereunder only on that portion of such production so allocated to said Lease, which shall be in lieu of any other royalties.

The above described lease, as hereby amended, is declared to be in full force and effect and the undersigned Lessors hereby grant, lease and let the above described premises unto said Lessee in accordance with and subject to the terms and provisions of said lease as amended by the terms and provisions of this instrument.

This instrument of amendment may be executed in any number of counterparts, each of which shall be deemed to be an original and shall be binding upon the party or parties executing the same whether or not a counterpart hereof shall be executed by each Lessor named in said lease.

WITNESS THE EXECUTION HEREOF this 14th day of November, 1961.

R A Davenport Sr

Essie Davenport

R A Davenport Sr

L W Martin, Trustee

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MISC. 3 PAGE 60

STATE OF Arkansas )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

R. A. Davenport, Sr., Attorney-in-Fact for those persons stated herein, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth, and in the capacity therein stated.

WITNESS my hand and official seal on this 14th day of November, 1961.

MARSHALL GIPSON NOTARY PUBLIC SALINE COUNTY, ARK.

My commission EXPIRES: April 1, 1962

Lessie M. Gray
Notary Public in and for
Saline County, Arkansas

STATE OF Arkansas )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

R. A. Davenport, Sr.

to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Essie Davenport, wife (wives)

of R. A. Davenport, Sr.,

to me well known, and in the absence of her (their) husband(s) declared that she (they) had of her (their) own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her (their) said husband(s).

WITNESS my hand and official seal on this 14th day of November, 1961.

MARSHALL GIPSON NOTARY PUBLIC SALINE COUNTY, ARK.

My commission EXPIRES: April 1, 1962.

Lessie M. Gray
Notary Public in and for
Saline County, Arkansas

## CERTIFICATE OF RECORD

STATE OF ARKANSAS }
COUNTY OF SALINE } SS

I, MARSHALL GIPSON, Circuit Clerk and Ex-Officio Recorder for the County aforesaid, do hereby certify that the annexed and foregoing instrument of writing was filed for record in my office on the 21st day of November A. D., 1961 at 9:27 o'clock A M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in MISC. Book 3 Page 57

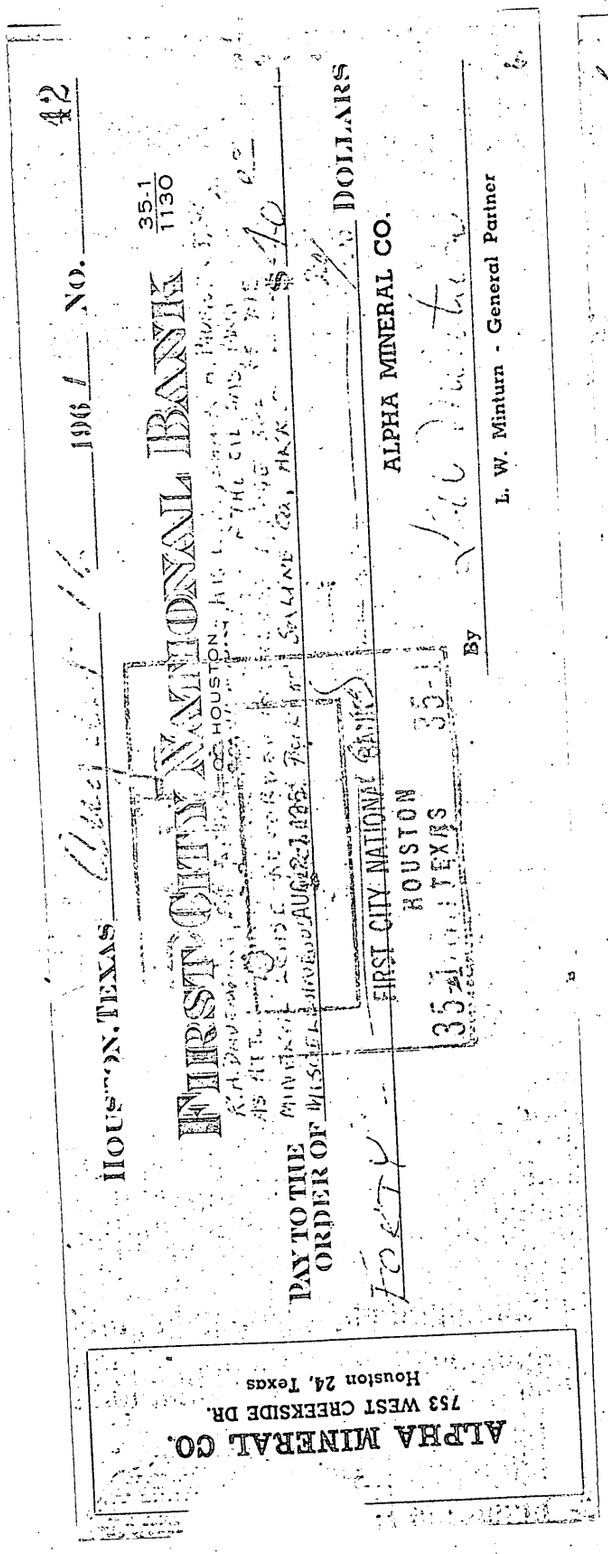
IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court, this 21st day of November 1961

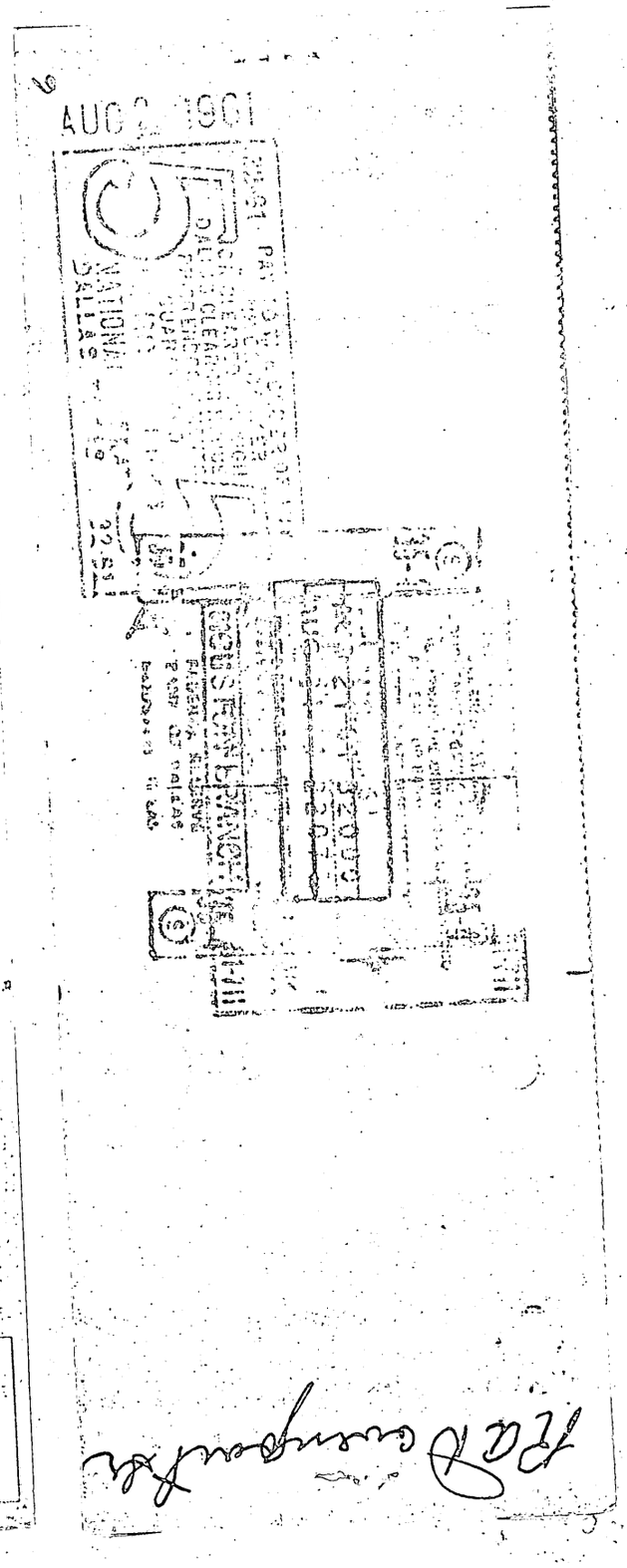
Marshall Gipson
CIRCUIT CLERK AND EX-OFFICIO RECORDER

_____ D. C.

SEAL OF CIRCUIT COURT SALINE COUNTY, ARK.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS




ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

35¢ L. W. Minturn
PD 753 West Creekside Drive
Houston 24, Texas

Lease #7

FILED
S... CIRCUIT C...
CLERK

2:50 PM 17 FEB '81
BY Ruth Gipson

MISC. 1 PAGE 392

OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
COUNTY OF Saline )

This agreement made this 21st day of July, 1960, between R.A. Davenport, Sr. and Essie Davenport (his wife), (hereinafter called "Lessor" whether one or more), whose address is Route #4; Box 165A; Benton, Arkansas and L.W. Minturn, as Lessee, whose address is 753 West Creekside Drive Houston 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ Forty and — 00/100 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ten (10) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of _____ Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise 40 acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the Route #4; Box 165A Bank at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

Should any one or more of the parties named above as Lessors fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

R A Davenport Sr

Pearl Davenport

LESSORS

L. W. Minture

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas : On this day came before me, a
COUNTY OF Pulaski : Notary Public duly commissioned and acting within and for said county and state, R.A. Davenport to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Essie Davenport, wife of _____, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 21st day of July, 1960.

FRED McCULLOCH NOTARY PUBLIC PULASKI COUNTY, ARK.

Fred McCulloch
Notary Public in and for
Pulaski County,
_____

STATE OF _____ : On this day came before me, a
COUNTY OF _____ : Notary Public duly commissioned and acting within and for said county and state, _____, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

STATE OF _____ : On this day before me, a Notary
COUNTY OF _____ : Public duly commissioned and acting within said county and state, appeared in person _____, to me personally well known, who stated that he is the _____ President of _____, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Exhibit "A"

The Southeast 1/4 of the Southwest 1/4 of Section 29, Twp 2 South; Range 14 West Saline County, Arkansas

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:59 P. M., AND SAME IS DULY RECORDED IN MISC. BOOK 1, AT PAGE 392.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER
BY Edna Crouch D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

O. Wendell Hall, Jr.
Benton, Ark.

10.00 Chgd

ALPHA MINERAL CO.
753 WEST CREEKSIDE DR.
Houston 24, Texas

HOUSTON, TEXAS July 15, 1961 No. 37

FIRST CITY NATIONAL BANK OF HOUSTON 35-1 / 1130

JUL 31 1961

PAY TO THE ORDER OF R. A. Davenport, Sr. and wife, Essie Davenport $ 40.00

FIRST CITY NATIONAL BANK DOLLARS

Forty Dollars and no/100

Payment of annual rental on lease from R. A. Davenport, Sr., et ux, to L. W. Minturn, dated July 21, 1960, and recorded in Misc. 1 page 392, Saline County, Arkansas.

35-1

ALPHA MINERAL CO.

By L. W. Minturn

L. W. Minturn - General Partner

7

R. A. Davenport Sr
Essie Davenport

PAY TO THE ORDER OF ANY BANK, BANKER OR TRUST CO.
ALL PRIOR ENDORSEMENTS GUARANTEED
JUL 27 1961
THE UNION BANK & TRUST CO.
BENTON, ARK.

PAY TO THE ORDER OF ANY BANK, BANKER OR TRUST CO.
ALL PRIOR ENDORSEMENTS GUARANTEED
JUL 28 1961
FIRST NATIONAL BANK
HOUSTON, TEXAS

PAY TO THE ORDER OF ANY BANK, BANKER OR TRUST CO.
ALL PRIOR ENDORSEMENTS GUARANTEED
JUL 28 1961
COMMERCIAL NATIONAL BANK
LITTLE ROCK, ARK.

Lease #8

DEMOCRAT P. & L. CO., LITTLE ROCK

MISC. 1 PAGE 402

FORM 88½—Revised
CLASS 1

# FORM 88½ OIL AND GAS LEASE (⅛ GAS)

WITH RELINQUISHMENT OF DOWER AND UNITIZATION AGREEMENT

This AGREEMENT, Made and entered into on this the 21st day of July, 1969, by and between R. A. Davenport and Essie Davenport (his wife)

party of the first part, hereinafter called lessor (whether one or more) and L. W. Mintum 753 West Creekside Drive

of Houston, Texas party of the second part, hereinafter called lessee.

WITNESSETH, That the said lessor for and in consideration of Forty and —/100

DOLLARS, cash in hand paid, the receipt of which is hereby acknowledged, and of the covenants and agreements hereinafter contained on the part of the lessee to be paid, kept and performed, has granted, conveyed, demised, leased and let, and by these presents do hereby grant, convey, demise, lease and let unto said lessee, for the sole and only purpose of mining and operating for oil and gas and laying of pipe lines, and of building tanks, power stations, and structures thereon to produce, save and take care of said products, all that certain tract of land situated in the County of Saline State of Arkansas, to-wit:

The Northeast ¼ of the Northwest ¼ of Section 32; Twp 2 South; Range 14 West Saline County, Arkansas

FILED
SEP 17 1969
Nell Hall

and containing 40 acres, more or less.

It is agreed that this lease shall remain in force for a term of ten years from this date, and as long thereafter as oil or gas, or either of them, is produced from said land by the lessee.

In consideration of the premises the said lessee covenants and agrees:

FIRST. To deliver to the credit of lessor, free of cost in tanks or pipe line to which lessee may connect said wells, the equal one-eighth part of all oil produced and saved from the leased premises.

SECOND. To pay lessor for gas from each well where gas only is found, the equal one-eighth (⅛) of the gross proceeds at the prevailing market rate, for all gas used off the premises, and lessor to have gas free of cost from any such well for all stoves and all inside lights in the principal dwelling house on said land during the same time by making his own connections with the well at his own risk and expense.

THIRD. To pay lessor for gas produced from any oil well and used off the premises or for the manufacture of casinghead gas, one-eighth (⅛) of the gross proceeds at the prevailing market rate for the gas so used, for the time during which such gas shall be used.

If no well be commenced on said land on or before one year from this date, this lease shall terminate as to both parties, unless the lessee, on or before one year from this date, shall pay or tender to the lessor, or to the lessor's credit in the Route #4; Box 165A Bank, of Benton, Arkansas, or its successors, which shall continue as the depository regardless of changes in the ownership of said land, the sum of Forty and —/100 DOLLARS, which shall operate as a rental and cover the privilege of deferring the commencement of a well for twelve months from said date. In like manner and upon like payments or tenders the commencement of a well may be further deferred for like periods in the same number of months successively. And it is understood and agreed that the consideration first recited herein, the down payment, covers not only the privileges granted to the date when said first rental is payable as aforesaid, but also the lessee's option of extending that period as aforesaid, and any and all other rights conferred.

Should the first well drilled on the above described land be a dry hole, then, in that event, if a second well is not commenced on said land within twelve months from the expiration of the last rental period for which rental has been paid, this lease shall terminate as to both parties, unless the lessee on or before the expiration of said twelve months shall resume the payment of rentals in the same amount and in the same manner as hereinbefore provided. And it is agreed that upon the resumption of the payment of rentals, as above provided, that the last preceding paragraph hereof, governing the payment of rentals and the effect thereof, shall continue in force just as though there had been no interruption in the rental payments.

If said lessor owns a less interest in the above described land than the entire and undivided fee simple estate therein, then the royalties and rentals herein provided shall be paid the lessor only in proportion which their interest bears to the whole and undivided fee.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Lessee shall have the right to use, free of cost, gas, oil and water produced on said land for its operation thereon except water from wells of lessor.

When requested by lessor, lessee shall bury its pipe line below plow depth.

No well shall be drilled nearer than 200 feet to the house or barn now on said premises, without written consent of the owners.

Lessee shall pay for damages caused by its operations to growing crops on said land.

Lessee shall have the right at any time to remove all machinery and fixtures placed on said premises, including the right to draw and remove casing.

If the estate of either party hereto is assigned, and the privilege of assigning in whole or in part is expressly allowed, the covenants hereof shall extend to their heirs, executors, administrators, successors or assigns, but no change in the ownership of the land or assignment of rentals or royalties shall be binding on the lessee until after the lessee has been furnished with a written transfer or assignment or a true copy thereof, and it is hereby agreed that in the event this lease shall be assigned as to a part or as to parts of the above described land, and the assignee or assignees of such part or parts shall fail or make default in the payment of the proportionate part of the rents due from him or them, such default shall not operate to defeat or affect this lease in so far as it covers a part or parts of said lands upon which the said lessee or assignee thereof shall make due payments of said rentals.

Lessor hereby warrants and agrees to defend the title to the lands herein described, and agrees that the lessee shall have the right at any time to redeem for lessor, by payment, any mortgages, taxes or other liens on the above described lands, in the event of default of payment by lessor, and be subrogated to the rights of the holder thereof.

Notwithstanding anything in this lease contained to the contrary, it is expressly agreed and covenanted that if the lessee, his heirs, successors or assigns, shall commence drilling operations at any time while this lease is in force, this lease shall remain in force and effect, and the term and life shall continue as to the entire acreage described herein, so long as such operations are prosecuted, and if production results from such operations, then as long thereafter as such production continues.

It is especially agreed by the lessor that if the tract or tracts of land covered by this lease embrace an area smaller than the area prescribed by any rule or regulation of the Oil and Gas Commission of the State of Arkansas or any other regulatory body, for the location of a well, then the tract or tracts herein described may be unitized or merged with adjoining tract or tracts sufficient in size to constitute a drilling unit for the locating of a well under such rule or regulation; and in that event, the lessor shall share rateably in the royalty applicable to the entire drilling unit in the proportion which the acreage in the tract or tracts herein conveyed bears to the entire acreage contained in the drilling unit; and that this agreement is and shall be regarded as a covenant running with the land binding not only the lessor, but also his heirs and assigns, and any conveyance of any interest in said minerals and/or royalty hereinafter made shall be subject to this agreement.

This lease shall be subject to all federal and state laws, executive orders, rules or regulations, and to all orders, rules, regulations or recommendations of all federal or state officers, agencies, boards, commissions or committees which in any way directly or indirectly, relate to or affect performance of any of the express or implied covenants of this lease, and this lease shall not be forfeited or terminated in whole or in part, nor shall lessee be liable in damages, for failure to comply with any of the express or implied covenants of this lease, if such compliance is prevented by, or if such failure results from compliance with, any such law, order, rule, regulation or recommendation.

And Essie Davenport

wife of the said R. A. Davenport

for and in consideration of the said sum of money and the covenants and agreements above mentioned, do hereby release and relinquish unto the said lessee all her right of dower and homestead in and to the said lands for the purpose aforesaid.

Witness our hands and seals on this 21st day of July, 1960

WITNESS:

R A Davenport Jr L. S.

Essie Davenport L. S.

L. S.

L. S.

L. S.

L. S.

L. S.

L. S.

L. S.

L. S.

L. S.

L. S.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MISC. 1 PAGE 404

# ACKNOWLEDGMENTS

## (UNMARRIED PERSON)

STATE OF ARKANSAS
COUNTY OF _____ } ss.

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, _____

_____

to me well known to be the person__ whose name__ appear as grantor__ in the foregoing instrument, and stated that __he__ had executed the same for the consideration, uses, and purposes therein mentioned and set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this _____ day of _____, 19____.

My Commission Expires:

_____ _____ Notary Public.

(SEAL)

## (HUSBAND AND WIFE)

STATE OF ARKANSAS
COUNTY OF Pulaski } ss.

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, R. A. Davenport

_____

to me well known to be the persons whose names appear as grantors in the foregoing instrument, and stated that they had executed the same for the consideration, uses, and purposes therein mentioned and set forth.

And on the same day also voluntarily appeared before me in person the said Essie Davenport

_____, wife of the said R. A. Davenport

to me well known, and, in the absence of her said husband, declared that she had, of her own free will, executed the foregoing instrument and signed and sealed the relinquishment of dower and homestead therein expressed, for the purposes and consideration therein contained and set forth, without compulsion or undue influence of her said husband.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this 21st day of July, 1960

My Commission Expires: 7-12-1964

Fred McCullock
Notary Public.

(SEAL)

## (CORPORATION)

STATE OF ARKANSAS
COUNTY OF _____ } ss.

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, the within named _____ and _____, being the _____ and _____, respectively, of _____, a corporation, and who had been designated by said corporation to execute the above instrument, to me personally well known, who stated they were the _____ and _____ of said corporation, and were duly authorized in their respective capacities to execute the foregoing instrument for and in the name and behalf of said corporation, and further stated and acknowledged that they had so signed, executed, and delivered said foregoing instrument for the consideration, uses, and purposes therein mentioned and set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this _____ day of _____, 19____.

My Commission Expires:

_____ _____ Notary Public.

(SEAL)

3
12

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MISC. 1 PAGE 405

STATE OF ARKANSAS,
County of SALINE } ss.

## CERTIFICATE OF RECORD

I, MARSHALL GIPSON, Circuit Clerk and Ex-Officio Recorder for the county aforesaid, do hereby certify that the annexed and foregoing Oil and Gas Lease was filed for record in my office on the 17TH day of FEBRUARY A. D., 19 61, at 2:59 o'clock P. M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in "Record Book MISC. SEW," Page 402.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said court, this 17TH day of FEBRUARY, 19 61.

MARSHALL GIPSON
Circuit Clerk and Ex-Officio Recorder.

By Edna Crouch, D. C.

OIL AND GAS LEASE

TO

STATE OF ARKANSAS,
County of } ss.

This instrument was filed for record on the ..... day of ....., A. D., 19....., at ..... o'clock ..... M., and duly recorded in Book ....., on Page .....

Circuit Clerk and Recorder.

By ..... Deputy Clerk.

Democrat Printing & Litho. Co., Little Rock

D. Wendell Hall, Jr. 350 Ch 9

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Lease #9

FILED
SALINE CIRCUIT &
COUNTY CLERK

MISC. 1 PAGE 406

2:59 P.M. 17 FEB '61

Ruth Gipson

OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS)
)
COUNTY OF SALINE )

THIS AGREEMENT made this 16th day of January, 1961, between ALUMINUM COMPANY OF AMERICA, a Pennsylvania corporation (hereinafter called "Lessor"), and ALPHA MINERAL COMPANY, a limited partnership organized under the laws of the State of Arkansas (hereinafter called "Lessee");

WITNESSETH:

Lessor, in consideration of Two Hundred Sixty-Six Dollars ($266.00) cash in hand paid by Lessee, the receipt of which is hereby acknowledged, and in consideration of the rentals and royalties herein provided for, but subject to all the conditions, covenants, and limitations contained herein, does hereby GRANT, LEASE and LET exclusively unto Lessee the following described land in Saline County, Arkansas, containing in all about 266 acres:

> The East half (E 1/2) of the Northeast quarter (NE 1/4), the North half (N 1/2) of the Southeast quarter (SE 1/4), all that part of the Southwest quarter (SW 1/4) of the Northeast quarter (NE 1/4), lying West of Saline River, and four (4) acres on the East side of the Saline River in the Southwest quarter (SW 1/4) of the Southeast quarter (SE 1/4), all of the above described land situate in Section 25, T2S, R15W.
>
> Also, all that part of the Southwest Quarter (SW 1/4) of the Northeast Quarter (NE 1/4), Section Twenty-five (25), Township Two (2) South, Range Fifteen (15) West, lying on the east side of Gum Slough and Holly Creek, described thusly by metes and bounds: BEGINNING at the Northeast corner of said tract and running West across Holly Creek to the center of Gum Slough; thence in a southerly course down the center of said slough to the intersection of Holly Creek; thence in a southerly direction down the center of said creek to the North bank of Saline River, thence in a southeasterly direction along the North bank of said river to where same intersects the South boundary line of said forty-acre tract; thence due East to the southeast corner of said forty-acre tract; thence due North to place of beginning, containing twenty (20) acres, more or less.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

1-13

ALPHA MINERAL CO.
753 WEST CREEKSIDE DR.
Houston 24, Texas

HOUSTON, TEXAS July 15, 1961 No. 36

FIRST CITY NATIONAL BANK
OF HOUSTON

35-1
1130

PAY TO THE ORDER OF R. A. Davenport, Sr. and wife, Essie Davenport $ 40.00

Forty Dollars and no/100 DOLLARS

Payment of annual rental on lease from R. A. Davenport, Sr., et ux, to L. W. Minturn, dated July 21, 1960, and recorded in Misc. 1 page 402, Saline County, Arkansas.

ALPHA MINERAL CO.

By L. W. Minturn

L. W. Minturn - General Partner

12

R A Davenport Sr
Essie Davenport

12

PAY TO THE ORDER OF ANY BANK, BANKER OR TRUST CO. P.E.O.
ALL PRIOR ENDORSEMENTS GUARANTEED
JUL 28 1961
JUL 27
THE UNION NATIONAL BANK OF LITTLE ROCK
01-774 BENTON, ARKANSAS
COMMERCIAL NATIONAL BANK
ARKANSAS

Also, the Southeast Quarter (SE 1/4) of the Northeast Quarter (NE 1/4), and the Northeast Quarter (NE 1/4) of the Southeast Quarter (SE 1/4) of Section Twenty-nine (29), Township Two (2) South, Range Fourteen (14) West, containing 80 acres, more or less.

for the purpose of investigating, exploring, prospecting, drilling, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, sulphur, magnetite and all other minerals except bauxite and other aluminous ores and kaolinitic clay. Subject to all of the provisions of this instrument, Lessee shall have the right of ingress and egress to and from the Leased Premises of existing roads and ways or routes designated by Lessor and shall have the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

I.

Lessor specifically excepts from this lease and reserves unto itself all bauxite and other aluminous ores and kaolinitic clay, together with the free and unrestricted right of Lessor at any and all times to enter upon said Leased Premises for the mining, removal, storage and benefication of said minerals and the transportation thereof from the Leased Premises. Lessee shall not have the right to conduct drilling or mining operations on the Leased Premises nor to sink any shaft or slope thereon nor to construct or maintain thereon any road, building, machinery, facility or equipment whatever which would cause any waste of or damage to the minerals reserved by Lessor or which would in any way interfere with, hinder or impede the rights reserved by Lessor in connection with mining, treating, storing and transporting such minerals from the property. Lessee shall secure the prior approval of Lessor as to the location of and plans for any mining operations to be conducted on the Leased Premises.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

2.

This lease shall be for a term of ten (10) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged, with no cessation of more than ninety (90) consecutive days, in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

3.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale. While there is a gas well on the above described land or on acreage pooled therewith but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in, and thereafter at monthly intervals, the sum of $29.30; and, while such payments are duly made or tendered, it will be deemed that gas is being produced from the above described land in paying quantities to the effect that the lease will not terminate for lack of production of minerals;



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

(c) on all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur $1.00 per ton; (ii) on magnetite or iron ore aggregate $0.005 (five mills) per iron unit (22.4 pounds of iron); (iii) on fissionable minerals 10% of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (iv) on all other minerals 10% of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (v) the word "ton" in all instances shall mean a long dry ton of 2240 pounds; (vi) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges; (vii) the rates of all the payments provided for above shall remain unchanged for a period of five (5) years from the date of this instrument, but thereafter all payments becoming due under (i) and (ii) above shall increase or decrease as follows: at the beginning of each calendar year after 1965, a fraction shall be determined, the numerator of which shall be the average of the twelve (12) next preceding monthly publications of the Wholesale Commodity Price Index (all commodities), published by the Federal Reserve System, and the denominator of which shall be the average of the twelve (12) monthly publications of the Wholesale Commodity Price Index (all commodities) of the calendar year 1960; the rates



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

fixed in (i) and (ii) above shall be multiplied by this fraction and the result shall be adjusted to the nearest one (1) cent for (i) and the nearest whole mill for (ii); such new rates shall be used for all payments due during the ensuing calendar year; the indexes referred to herein are those computed on a basis of an index of 100 for the average of the three years, 1947, 1948, and 1949.

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

4.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the Leased Premises, which, for the purpose of calculating such rental are estimated to comprise 266 acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown below unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the Union National Bank at Little Rock, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

5.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production of mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

6.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee in the manner and at the time herein specified, unless excused by force majeure as defined in Article 8 or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

7.

Notices required or permitted hereunder shall be in writing and sent by registered United States mail, postage prepaid, to the respective parties at the addresses set forth below unless and until either party shall notify the other of a change of address:

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

LESSOR: Aluminum Company of America
1501 Alcoa Building
Pittsburgh 19, Pennsylvania

LESSEE: Alpha Mineral Company
753 West Creekside Drive
Houston 24, Texas.

8.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure, this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

9.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations not in violation of Article I above and which are reasonably necessary in exercising the rights hereby granted to Lessee.

10.

Lessee shall make and keep an accurate record and account of geological samples and drill core logs and of all ores, oil, gas, and other



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

minerals mined, produced, and removed from the Leased Premises and the amounts received from the sale therof. All such records and accounts shall be made available for the examination by Lessor or its representative at the offices of Lessee at any reasonable time. Lessor shall have the right at its sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

11.

All taxes in the nature of severance or production taxes imposed upon any or all of the minerals included in this lease shall be paid by Lessee, and the amount of such taxes paid by Lessee shall be deducted from the value of the minerals upon which they were imposed before calculating the royalties payable thereon.

12.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

13.

This lease and the rights of either party hereunder may be assigned in whole or in part; provided, that Lessee may not assign its rights, either in whole or in part, without first obtaining the written consent of the Lessor. Upon assignment, the provisions hereof shall extend to the successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail, together with a certified copy of the recorded instrument or instruments evidencing the same. In event of assignment in whole or in part in accordance with the provisions



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

hereof, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

14.

Lessor hereby covenants that it has not caused or suffered any encumbrance, lien, or other defect on or against the title to the above described land. Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the above stated special warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that its interest bear to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

ALUMINUM COMPANY OF AMERICA

By _____
Vice President

LESSOR

ATTEST:

_____
Asst. Secretary

ALPHA MINERAL COMPANY

By _____
L. W. Minturn
General Partner

LESSEE

-9-13

ALPHA MINERAL CO
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

COMMONWEALTH OF PENNSYLVANIA)
)
COUNTY OF ALLEGHENY )

On this day before me, a Notary Public duly commissioned and acting within said county and state, appeared in person Geo. W. Strachey, to me personally well known, who stated that he is Vice President of ALUMINUM COMPANY OF AMERICA, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth.

WITNESS my hand and official seal on this 17th day of January, 1961.

Frances M. Parsons, Notary Public
Pittsburgh, Allegheny County
My Commission Expires October 30, 1963

Frances M. Parsons
Notary Public in and for
Allegheny County, Pennsylvania

THE STATE OF TEXAS)
)
COUNTY OF HARRIS )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state, L. W. Minturn, to me well known and stated that he had executed the same for the consideration and purposes therein mentioned and set forth and as General Partner of ALPHA MINERAL COMPANY, Lessee in the foregoing instrument.

WITNESS my hand and official seal on this 9th day of February, 1961.

A. G. Stokes
Notary Public in and for
Harris County, Texas.
A. G. STOKES
Notary Public, in and for Harris County, Texas

FILED FOR RECORD ON THIS THE 17TH DAY OF FEBRUARY, 1961, AT 2:59 P. M., AND SAME IS DULY RECORDED IN MISC. BOOK 1, AT PAGE 406.

MARSHALL GIPSON
CIRCUIT CLERK AND RECORDER
BY Edna Crouch D.C.

-10-13

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

pooled

O. Wendell Hall, Jr.
Benton, Ark.

Lease #9 MISC. 3 PAGE 292

FILED
SALINE CIRCUIT &
CHANCERY CLERK
8:26 AM 24 JAN '62
BY Edna Crouch

AMENDMENT TO OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS)
)
COUNTY OF SALINE )

WHEREAS ALUMINUM COMPANY OF AMERICA, a Pennsylvania corporation, hereinafter called "Lessor", and ALPHA MINERAL COMPANY, a limited partnership organized under the laws of the State of Arkansas, hereinafter called "Lessee", made an agreement on the 16th day of January, 1961, entitled Oil, Gas and Mineral Lease (hereinafter called "Lease"), which said Lease pertained to certain lands owned by Lessor in Section 25, T2S, R15W and Section 29, T2S, R14W, Saline County, Arkansas; and

WHEREAS the parties desire to correct the matters of description contained in the said Lease;

NOW THEREFORE, in consideration of $1.00 in hand paid by Lessor to Lessee the receipt of which is hereby acknowledged and in consideration of the premises and in further consideration of the mutual ratification of the said Lease, the parties do hereby amend the said Lease in the following particulars:

1. The figure "266" contained in the 12th line of page 1, and in the 4th line of Paragraph 4 on page 5, of the said Lease is hereby deleted and in its stead in each place is substituted the figure "265".

2. The two paragraphs of description at the bottom of page 1 of the said Lease are hereby deleted and in their stead is substituted the following descriptions:

All of the East Half of the Northeast Quarter of Section 25, T2S, R15W;

Also, four acres more or less off the East Side of the Northwest Quarter of the Northeast Quarter of Section 25, T2S, R15W, described more particularly as: beginning at the Northeast Corner of the Northwest Quarter of the Northeast Quarter; thence N86° 08'W, 132 feet; thence S4°34'W, 1342 feet; thence S85°54'E, 132 feet; thence N4°37'E, 1342 feet to the point of beginning;

Also, that part of the Southwest Quarter of the Northeast Quarter of Section 25, T2S, R15W lying on the East Side of Gum Slough and Holly Creek, particularly described as: beginning at the

753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

-12-13

Northeast Corner of the said Southwest Quarter of the Northeast quarter and running West across Holly Creek to the center of Gum Slough; thence in a Southerly course down the center of said Slough to the intersection of Holly Creek; thence in a Southerly direction down the center of said Creek to the North Bank of the Saline River; thence in a Southeasterly direction along the North Bank of said River to where the same intersects the South Boundary of the said Southwest Quarter of the Northeast Quarter; thence due East to the Southeast Corner of the said Southwest Quarter of the Northeast Quarter; thence due North to the place of beginning;

Also, the North Half of the Southeast Quarter of Section 25, T2S, R15W;

Also, all that part of the Southwest Quarter of the Northeast Quarter of Section 25, T2S, R15W lying West and South of the Saline River and containing 3 acres more or less;

Also, a 4-acre tract in the Southwest Quarter of the Southeast Quarter of Section 25, T2S, R15W particularly described as follows: beginning at a point which is 740 feet from the Northeast Corner of the Southwest Quarter of the Southeast Quarter of Section 25, T2S, R15W along a bearing of S78° 32'W; thence S7° 32'W, 398 feet; thence N83° 32'W, 451 feet; thence N28° 31'E, 441 feet, along the East Bank of the Saline River; thence N81° 31'E, 293 feet to the point of beginning.

3. In all other particulars, the said Lease is hereby confirmed and ratified and remains in full force and effect.

IN WITNESS WHEREOF, this instrument is executed as of the 21st day of February, 1961.

ALUMINUM COMPANY OF AMERICA

By George Cheeper
Vice President

LESSOR

ATTEST:

E. J. Thomas
Assistant Secretary

ALPHA MINERAL COMPANY

By L. W. Minturn
L. W. Minturn
General Partner

LESSEE



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

13-13

MISC. 3 PAGE 294

COMMONWEALTH OF PENNSYLVANIA)
)
COUNTY OF ALLEGHENY )

On this day before me, a Notary Public duly commissioned and acting within said county and state, appeared in person Geo. W. Stookey to me personally well known, who stated that he is Vice President of ALUMINUM COMPANY OF AMERICA, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth.

WITNESS my hand and official seal on this 23rd day of February, 1961.

Frances M. Persons, Notary Public
Pittsburgh, Allegheny County
My Commission Expires October 30, 1963

Frances M. Persons
Notary Public in and for
Allegheny County, Pennsylvania

THE STATE OF TEXAS)
)
COUNTY OF HARRIS )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state, L. W. Minturn, to me well known and stated that he had executed the same for the consideration and purposes therein mentioned and set forth and as General Partner of ALPHA MINERAL COMPANY, Lessee in the foregoing instrument.

WITNESS my hand and official seal on this 8th day of March, 1961.

Geraldine Jones
Notary Public in and for
Harris County, Texas.

CERTIFICATE OF RECORD

STATE OF ARKANSAS
COUNTY OF SALINE } SS

I, MARSHALL GIPSON, Circuit Clerk and Ex-Officio Recorder for the County aforesaid, do hereby certify that the annexed and foregoing instrument of writing was filed for record in my office on the 24th day of January A. D., 1962 at 8:26 o'clock A M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in MISC. Book 3 Page 292

-3-

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court, this 24th day of January 1962.

Marshall Gipson
CIRCUIT CLERK AND EX-OFFICIO RECORDER

D. C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

14-13

3.00 ~~Ply~~ Paid
Vinson, Elkins, Weems & Searls
attorneys at Law
First City National Bank Bldg.
Houston 2, Texas

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
7[illegible] SAWYER CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STANDARD FORM NO. 156—POUND PRINTING CO., HOUSTON, TEXAS

Alpha Mineral Company

NAME OF COMPANY

Check No. 61 Date January 3 19 62

Alpha Mineral Company has this day deposited in Union National Bank the sum of Two Hundred Sixty-five ($265.00) -------- Dollars, for the credit of persons named below in amounts stated in payment of annual rental, under oil and gas lease dated 16th day of January 19 61 and recorded in Vol. 1, Page 406, Misc. Records of Saline County ~~or Parish~~ and State of Arkansas from Aluminum Company of America to Alpha Mineral Company covering 265 acres of land as described in said lease, as amended.

| LEASE NO. | FOR CREDIT OF | AMOUNT | COUNTY | ACRES |
|---|---|---|---|---|
| 9 | Aluminum Company of America | $265.00 | Saline County, Arkansas | 265 |

UNION NATIONAL BANK,
LITTLE ROCK, ARK.

Please Sign and Return to Sender

Sign here

By Asst. Cashier

Date Received JAN 10 1962

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

13

Lease #10

MINERAL LEASE, MAGNETITE AND RELATED FERROUS MINERALS

THIS AGREEMENT made this 3rd day of November, 1961, between INTERNATIONAL PAPER COMPANY, a New York corporation, and THE LONG-BELL PETROLEUM COMPANY, INC., a Louisiana corporation, (hereinafter called Lessor), and ALPHA MINERAL COMPANY, a limited partnership organized under the laws of the State of Arkansas, herein represented by L. W. Minturn, general partner (hereinafter called Lessee), WITNESSETH:

Lessor, in consideration of Ten Dollars ($10.00) and other valuable consideration, cash in hand paid by Lessee, the receipt of which is hereby acknowledged, and in consideration of the rentals and royalties herein provided for, but subject to all the conditions, covenants, and limitations contained herein, does hereby grant, lease and let unto Lessee the following described lands in Saline County, Arkansas, containing in all about 557.74 acres:

| | | Acres |
|---|---|---|
| | TOWNSHIP 2 NORTH - RANGE 14 WEST | |
| Section 30: | NE¼ of NE¼; S½ of NE¼ | 120.00 |
| | Fractional W½ of NW¼ | 59.50 |
| | SE¼ of NW¼ | 40.00 |
| | Fractional SW¼ | 142.24 |
| | W½ of SE¼ | 80.00 |
| | SE¼ of SE¼ West of H ighway | 38.05 |
| | SE¼ of SE¼ East of Highway | 1.95 |
| | TOWNSHIP 2 NORTH - RANGE 15 WEST | |
| Section 25: | SW¼ of SE¼ less and except 4.0 acres; SE¼ of SE¼ | 76.00 |
| | | 557.74 |

FILED
SALINE CIRCUIT & CHANCERY CLERK
1962 JAN -2 AM 10:47
BY Marshall Higgins

for the sole and exclusive purpose of investigating, exploring, prospecting, drilling, mining for, producing, treating, storing, handling, transporting and carrying away magnetite, columbium, tantalum, and related ferrous minerals. Subject to all of the provisions of this instrument, Lessee shall have the right of ingress and egress to and from the leased premises by existing roads and ways or routes designated by Lessor and shall have the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

equipment for the production, removal or beneficiation of minerals or ores which may be found in, on or under the Leased Premises, and to dispose of, spoil or waste, subject to the limitations hereinafter provided in Paragraph 9.

1.

Lessor specifically excepts from this lease and reserves unto itself all minerals, ores and products in, on and under the lands above described other than those specifically subject to the terms of this lease, together with the free and unrestricted right at any and all times to enter upon said leased premises for the mining, removal, storage and beneficiation of said minerals, ore and products so reserved and the transportation thereof from the leased premises. Lessee shall not have the right to conduct drilling or mining operations on the leased premises nor to sink any shaft or slope thereon nor to construct or maintain thereon any road, building, machinery, facility or equipment whatsoever which would cause any waste of or damage to the minerals, ores or products reserved by Lessor or which would in any way interfere with, hinder or impede the rights reserved by Lessor in connection with mining, treating, storing and transporting the same from the land.

Anything herein contained to the contrary notwithstanding, prior to the commencement of any mining operations by Lessee on the premises hereby leased, Lessee shall first notify Lessor, and obtain Lessor's approval, of the specific tract or tracts of such leased premises upon which it proposes to conduct such operations, precisely identifying and describing the tract or tracts to be so utilized. Lessor shall then have an option:

(a) to remove within sixty (60) days thereafter from any such tract or tracts all timber, trees or other forest products that it shall desire, the remainder not so removed being thereafter vested in Lessee; or,

(b) to exchange the aforesaid tract or tracts so selected by Lessee for one or more tract or tracts of land to be provided by Lessee and acceptable to Lessor of substantially equal timber value and located

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

in Saline County, Arkansas (or in some county adjoining thereto); provided, however, that (i) there shall be excepted from any such conveyance from Lessor to Lessee and reserved unto Lessor all minerals of any and every kind; and (ii) said conveyance shall be expressly subject to the limitations of covenant and warranty of title as set forth and provided in Paragraph 15 hereof. Any such conveyance from Lessee to Lessor of the tract or tracts aforesaid shall be by full warranty deed in form acceptable to Lessor.

2.

This lease shall be for a term of five (5) years from the date hereof (called "Primary Term") and as long thereafter as any mineral, which is the subject of this lease, is produced from the leased premises or Lessee is engaged, with no cessation of more than ninety (90) consecutive days, in exploratory or mining operations on the leased premises for the discovery or production of such minerals.

3.

Royalty on magnetite mined or produced from the leased premises and removed from said leased premises or used by Lessee shall be paid by Lessee to Lessor at the rate of $0.005 (five mills) per iron unit (22.4 pounds of iron). The rate provided for above shall remain unchanged for a period of five (5) years from the date of this instrument, but thereafter all payments becoming due shall increase or decrease as follows: At the beginning of each calendar year after 1966, a fraction shall be determined, the numerator of which shall be the average of the twelve (12) next preceding monthly publications of the Wholesale Commodity Price Index (all commodities) published by the Federal Reserve System, and the denominator of which shall be the average of the twelve (12) monthly publications of the Wholesale Commodity Price Index (all commodities) of the calendar year 1960; the rate fixed above shall be multiplied by this fraction and the result shall be adjusted to the nearest whole mill; such new rate shall be used for payment during the ensuing calendar year; the indexes referred to herein are those computed on the basis of an index of 100 for an average of three years, 1947, 1948 and 1949.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Royalty on columbium, tantalum, and related ferrous minerals produced from the leased premises and removed from said leased premises or used by Lessee shall be ten percent (10%) of the market value of the ore.

All ores mined from the leased premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

4.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of One Dollar ($1.00) per acre for the leased premises, which, for the purpose of calculating such rental, are estimated to comprise 557.74 acres. Said rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve (12) months next succeeding the date of payment. Such rental and any other payments hereunder due Lessor may be paid by check or draft of Lessee mailed or delivered to Lessor at Mobile, Alabama, attention Woodlands Department, or by depositing such check or draft to the credit of Lessor in the Merchants National Bank of Mobile, at Mobile, Alabama, or its successor, which is Lessor's agent, and shall be the depository for all payments hereunder regardless of changes in ownership of the leased premises. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the leased premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

5.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate the presence of any mineral covered by this lease, or if any mineral covered by this lease shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any such mineral is mined and produced from the leased premises and the production of mining thereof shall cease after the Primary Term, this lease shall not terminate

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

if Lessee resumes mining operations or commences operations for re-working any existing mine within ninety (90) days after such cessation of production.

6.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee in the manner and at the time herein specified, unless excused by force majeure as defined in Article 8 or some other provision of this lease, shall constitute a default which shall, at the option of the Lessor, be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

7.

Notices required or permitted hereunder shall be in writing and sent by registered United States mail, postage prepaid, to the respective parties at the addresses set forth below unless and until either party shall notify the other of a change of address:

LESSOR: International Paper Company
Woodlands Department
Mobile 9, Alabama

LESSEE: Alpha Mineral Company
753 West Creekside Drive
Houston 24, Texas

8.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure, this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding; except that the lease may not be continued in effect after the Primary Term under the provision of this paragraph if there shall be a lack of production or exploration or mining operations for a continuous period of one (1) year or for a succession of periods of inactivity aggregating one (1) year.

9.

Lessee recognizes that the lands covered by this lease are held by Lessor for the primary purpose of growing timber thereon, and cutting removing and otherwise utilizing the same from time to time. Lessee will so conduct its operations hereunder as not to interfere unreasonably with Lessor in the operation of its business, and Lessee will build and use only such roads as are reasonably necessary to conduct operations under this lease, such roads to be built and used in such manner as to avoid, insofar as possible, disturbance of Lessor's growing timber and operations; provided further, the Lessee agrees that, by no later than thirty (30) days prior to the construction of any such road, or the commencement of its operations in or about any drilling site, it will furnish to Lessor a map or plat showing the proposed location thereof. Lessee will provide at Lessee's expense all necessary protective measures to prevent any loss or damage to the property of Lessee on account of any operations by Lessor including protection for pipe lines and telephone lines. Unless first consented to in writing by Lessor no well shall be drilled nearer than two hundred (200) feet to any structure now, or hereafter, placed on the leased premises. When requested by Lessor, Lessee will bury pipe lines to below ordinary plow depth, or to such greater depth as Lessor deems necessary for its operations. Lessee will pay for all damage to Lessor's timber, pulpwood, sawlogs, trees, forest growth (standing, cut or fallen), or other properties of any kind, caused by, or arising out of, operations under this lease, including, but not by way of limitation, damage by forest fires originating on the leased or any adjacent

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or contiguous premises under the control of, or being operated by, Lessee. Lessee will promptly notify Lessor's nearest fire crew of, and will use its best efforts to extinguish, any fire which may result from Lessee's operations hereunder. Pits and excavations made during drilling operations will be filled by Lessee and the surface restored, as nearly as reasonably possible, to its original condition; and if Lessee shall fail to do so the cost to Lessor of such filling and restoration shall be paid to Lessor by Lessee.

10.

Lessee shall make and keep an accurate record and account of geological samples and drill core logs and of all ores and minerals mined, produced and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or its representative at the offices of Lessee at any reasonable time. Lessor shall have the right at its sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the leased premises.

11.

Lessor and Lessee shall bear, in proportion to their respective participations in the production hereunder, all taxes levied on minerals covered hereby or any part thereof, or on the severance or production thereof, and all increases in taxes on the leased premises or any part thereof by reason of actual or assumed existence of, or the discovery of, a mineral thereon or thereunder. Lessee may pay such taxes and deduct the part thereof due by Lessor from amounts payable to Lessor hereunder, and shall furnish a statement of all taxes so paid and deducted at the time of payments to Lessor. Any and all taxes, license fees and other governmental charges assessed against the works, machinery, structures, and other things constructed or used by Lessee in connection with its operations hereunder shall be borne and paid by Lessee alone.

12.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the leased premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

time during the term of this lease or within six (6) months after termination hereof, and if demand is made on the Lessee in writing by Lessor to remove such building, machinery or equipment upon the termination or expiration of this lease, the Lessee shall cause such structures to be removed within six (6) months after termination hereof.

13.

This lease and the rights of either party hereunder may be assigned in whole or in part; provided, that Lessee may not assign its rights either in whole or in part, without first obtaining the written consent of the Lessor. Upon assignment, the provisions hereof shall extend to the successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail, together with a certified copy of the recorded instrument or instruments evidencing the same. In event of assignment in whole or in part in accordance with the provisions hereof, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

14.

Lessee assumes all risks and liability of any kind and nature incident to, occasioned by, or resulting in any manner, directly or indirectly, from Lessee's operations hereunder; agrees to keep the lands duly and fully protected against liens of every character arising in connection with, or resulting from, said operations; and agrees to, and does hereby, indemnify and hold harmless Lessor against any and all liens and claims of any kind for damages occasioned by, or on account of, said operations and against any and all claims for property damage, personal injury or death sustained by any person or persons whomsoever, natural or corporate, in connection with, or resulting from Lessee's operations hereunder.

15.

This lease is made and accepted without any covenant of title or warranty of any kind whatsoever and without recourse on the Lessor, but in the event that suit shall be successfully prosecuted against Lessee



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

and recovery had against Lessee for minerals taken from any of said lands, Lessor's only obligation shall be to return to Lessee all sums received as royalties or rentals from such tract the title to which shall have failed, or for a pro rata of such royalties or rentals in case of loss of an undivided interest in proportion to the interest so lost, less in either case, an amount equal to any taxes theretofore paid by Lessor in excess of its obligations under Paragraph 5; provided, however, that in no event shall Lessor be obligated to refund to Lessee any amount in excess of the loss sustained by Lessee as a result of such failure of title. The refund provided for hereunder shall discharge all liability of Lessor to Lessee on account of such failure of title. Lessee shall have the right to purchase, pay or redeem any mortgage, tax or other lien on the leased premises and be subrogated to the rights of the holder thereof. Without impairment of Lessee's rights under the above stated special warranty in event of failure of title, it is agreed that if Lessor owns an interest in the minerals covered by this lease in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that its interest bear to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

APPROVED as to FORM By ____ Date 11/3/61 LEGAL DEPT. SO. KRAFT DIV. IPCo.

INTERNATIONAL PAPER COMPANY

ATTEST: T. H. Galloway
Assistant Secretary

By J. E. McCaffrey
Vice President

APPROVED

THE LONG-BELL PETROLEUM COMPANY, INC.

ATTEST: R. L. Allen, Jr.
Assistant Secretary

By John W. Williams, Jr.
Vice President

ALPHA MINERAL COMPANY

By L. W. Minturn
L. W. Minturn, General Partner

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF ALABAMA :
COUNTY OF MOBILE :

On this the 3rd day of November, 1961, before me, a Notary Public, duly commissioned, qualified and acting, within and for the County and State aforesaid, appeared in person the within named J. E. McCAFFREY and R. H. ALLEN, JR, to me personally well known, who stated that they were the Vice President and Assistant Secretary of the International Paper Company, a corporation, and were duly authorized in their respective capacities to execute the annexed and foregoing instrument for the consideration, uses and purposes therein mentioned and set forth.

IN TESTIMONY WHEREOF I have hereunto set my hand and official seal on this the 3rd day of November, 1961.

Gladys Dulaney
Notary Public

MY COMMISSION EXPIRES NOV. 6, 1961

GLADYS DULANEY NOTARY PUBLIC MOBILE COUNTY, ALABAMA

STATE OF ALABAMA :
COUNTY OF MOBILE :

On this 3rd day of November, 1961, before me appeared James W. Williams Jr., to me personally known, who, being by me duly sworn, did say that he is the Vice President of The Long-Bell Petroleum Company, Inc., and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and the said James W. Williams Jr. acknowledged said instrument to be the free act and deed of said corporation.

Gladys Dulaney
Notary Public

MY COMMISSION EXPIRES NOV. 6, 1961

GLADYS DULANEY NOTARY PUBLIC MOBILE COUNTY, ALABAMA

STATE OF TEXAS :
COUNTY OF HARRIS :

On this day came before me, a Notary Public duly commissioned and acting within and for the said county and state, L. W. Minturn, to me well known and stated that he had executed the same for the consideration and purposes therein mentioned and set forth and as General Partner of Alpha Mineral Company, Lessee in the foregoing instrument.

Witness my hand and official seal on this 6 day of November, 1961.

Filed for record on this the 2nd day of January, 1962, at 10:47 A.M., and same is duly recorded in Misc. Record Book 3, at page 157.

Marshall Gipson
Circuit Clerk & Recorder

A. G. Stokes
Notary Public
A. G. STOKES
Notary Public, in and for Harris County, Texas

By Ruth Gipson D.C.

SEAL OF CIRCUIT COURT SALINE COUNTY, ARK.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Vinson, Elkins, Weems, & Searls, attys
First City National Bank Bldg.
Houston 2, Texas

$8.00 Chgd

AUSTIN STATE HOSPITAL
4630 W. GREEN OAKS DR. DRIVE
HOUSTON, 24, TEXAS

Lease #10

FILED
SALINE CIRCUIT &
CHANCERY CLERK
1962 JAN -2 AM 10:46
BY Mrs. Hallie Gipson

AMENDMENT OF MINERAL LEASE,
MAGNETITE AND RELATED FERROUS MINERALS

Under date of November 3, 1961 a lease was executed and delivered by INTERNATIONAL PAPER COMPANY, a New York corporation, and THE LONG-BELL PETROLEUM COMPANY, INC., a Louisiana corporation, therein and herein called "Lessor", and ALPHA MINERAL COMPANY, a limited partnership organized under the laws of the State of Arkansas, represented by L. W. Minturn, general partner, therein and herein called "Lessee", covering 557.74 acres of land, more or less, in Saline County, Arkansas.

The lease states that said lands are located in Township 2 North, whereas the lands are actually located in Township 2 South and the parties desire to execute this instrument for the purpose of correcting the error in the description of the property intended to be covered by the said lease.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That the parties above designated as Lessor, in consideration of the premises and a valuable consideration paid to them in cash by the party designated as Lessee do hereby agree that the description of the lands covered by said lease shall be amended to read as set forth hereinbelow and said parties Lessor do hereby grant, lease and let unto said Lessee the following described lands in Saline County, Arkansas containing in all about 557.74 acres:

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

TOWNSHIP 2 SOUTH - RANGE 14 WEST

| | | Acres |
|---|---|---|
| Section 30: | NE/4 of NE/4; S/2 of NE/4 | 120.00 |
| | Fractional W/2 of NW/4 | 59.50 |
| | SE/4 of NW/4 | 40.00 |
| | Fractional SW/4 | 142.24 |
| | W/2 of SE/4 | 80.00 |
| | SE/4 of SE/4 West of Highway | 38.05 |
| | SE/4 of SE/4 East of Highway | 1.95 |

TOWNSHIP 2 SOUTH - RANGE 15 WEST

| | | |
|---|---|---|
| Section 25: | SW/4 of SE/4 less and except 4.0 acres; SE/4 of SE/4 | 76.00 |
| | | 557.74 |

upon and subject to all of the royalties, terms, provisions and conditions as set forth in the above described lease as originally executed, which, except as hereby amended, shall continue in full force and effect as written.

IN WITNESS WHEREOF this instrument is executed this 4th day of December, 1961, but effective for all purposes as of November 3, 1961.

INTERNATIONAL PAPER COMPANY

ATTEST:

Assistant Secretary

By J. E. McCaffrey
Vice President

THE LONG-BELL PETROLEUM COMPANY, INC.

ATTEST:

Assistant Secretary

By John W. Williams Jr.
Vice President

ALPHA MINERAL COMPANY

By L. W. Minturn
L. W. Minturn, General Partner

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF ALABAMA )
COUNTY OF MOBILE )

On this the 7 day of December, 1961, before me, a Notary Public, duly commissioned, qualified and acting, within and for the County and State aforesaid, appeared in person the within named R. E. McCAFFERTY and H. S. GALLOWAY, to me personally well known, who stated that they were the Vice President and Assistant Secretary of the International Paper Company, a corporation, and were duly authorized in their respective capacities to execute the annexed and foregoing instrument for the consideration, uses and purposes therein mentioned and set forth.

IN TESTIMONY WHEREOF I have hereunto set my hand and official seal on this the 7 day of December, 1961.

Gladys Dulaney
Notary Public

My Commission Expires October 30, 1963

STATE OF ALABAMA )
COUNTY OF MOBILE )

On this 7 day of December, 1961, before me appeared James W. Williams Jr., to me personally known, who, being by me duly sworn, did say that he is the Vice President of The Long-Bell Petroleum Company, Inc., and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and the said James W. Williams Jr. acknowledged said instrument to be the free act and deed of said corporation.

Gladys Dulaney
Notary Public

My Commission Expires October 30, 1963

THE STATE OF TEXAS )
COUNTY OF HARRIS )

On this day came before me, a Notary Public duly commissioned and acting within and for the said county and state, L. W. Minturn, to me well known and stated that he had executed the same for the consideration and purposes therein mentioned and set forth and as General Partner of Alpha Mineral Company, Lessee in the foregoing instrument.

Witness my hand and official seal on this 4th day of December, 1961.

Laura M. Cain
Notary Public

ALPHA MINERAL COMPANY
759 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Filed for record on this the 2nd day of January, 1962 at 10:46 A.M., and same is duly recorded in Misc. Record Book 3, at page 154.

Marshall Gipson
Circuit Clerk & Recorder

By Ruth Gipson D.C.



3
15

Vinson, Elkins, Weems + Searls, attys
First City Nat. Bank Bldg.
Houston 2, Texas 3.00 Chgd.

51
11

ALPHA MINERAL COMPAN
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL
733 W. CREE
HOUSTON 24

#11812

FILED
SALINE CIRCUIT &
CHANCERY CLERK
1962 MAR 15 AM 8:25
BY Mrs. Hallie Gipson

# OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
)
COUNTY OF SALINE )

This agreement made this 2nd day of February, 1962 between Lawrence E. Tatum and wife, Pearl Tatum; Fred M. Ramsey and wife, Vera Ramsey; Leon H. Tatum and wife, Ercel Tatum; Lissie Tatum Chambers (in her own right) and husband, Leven L. Chambers; Fred Ramsey, as Attorney-in-Fact for Eric Ramsey and wife, Joyce Ramsey; Lexie Robbins and husband, Manley E. Robbins; and Mary Lorice Lane Matthews and husband, Bob Matthews

(hereinafter called "Lessor" whether one or more), whose address is Benton, Arkansas, and ALPHA MINERAL COMPANY, a limited partnership organized under the laws of the State of Arkansas, as Lessee, whose address is 753 West Creekside Drive, Houston, Texas,

W I T N E S S E T H:

Lessor, in consideration of $ 10.00 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof (hereinafter called the "Leased Premises"), for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads,

pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ~~ten (10)~~ eight years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eight (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipe line to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eight (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be

one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled therewith, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of $25.00 and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) on all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur, $1.00 per ton; (ii) on bauxite, 75¢ per ton; (iii) on magnetite or iron ore aggregate, five mills ($0.005) per iron unit (22.4 pounds of iron); (iv) on fissionable minerals, 10% of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals, 10% of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling

and smelting charges.

(d) The rates prescribed for the payment of royalties on sulphur, bauxite, magnetite and iron ore aggregate shall remain unchanged through the calendar year 1965 but at the beginning of the calendar year 1966 and at the beginning of each calendar year thereafter, a fraction shall be determined, the numerator of which shall be the average of the twelve (12) next preceding monthly publications of the Wholesale Commodity Price Index (all commodities), published by the Federal Reserve System, and the denominator of which shall be the average of the twelve (12) monthly publications of the Wholesale Commodity Price Index (all commodities) of the calendar year 1960; the rates provided for royalties on sulphur, bauxite and magnetite or iron ore aggregate shall be multiplied by this fraction and the result shall be adjusted to the nearest one cent (1¢) for sulphur and bauxite and to the nearest whole mill for magnetite or iron ore aggregate; such new rates shall be used for all payments due during the ensuing calendar year; the indexes referred to herein are those computed on a basis of an index of 100 for the average of the three years, 1947, 1948 and 1949.

All ores mined from the Leased Premises, but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount

of One Dollar ($1.00) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise ninety (90) acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the UNION Bank at BENTON, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

Lessee is hereby granted the right, power and authority at the option of Lessee, at any time or times, to pool, combine and unitize the land (hereinafter called the "Leased Premises") covered by the above described lease (hereinafter called "said Lease") or any portion thereof with any other land, lease or leases in the vicinity thereof, when in Lessee's judgment it is necessary or advisable so to do, for the purpose of developing and operating the Leased Premises and producing, mining and removing therefrom oil, gas or other minerals in accordance with the terms of said Lease. Such

pooling may in any instance include all oil, gas and other minerals or may be limited to any one or more of such substances. Likewise, any such pooling may extend to and cover the production of the substance or substances committed to such pooled unit from any depth or may be limited to one or more zones, veins, depths, horizons or formations. Any pooled unit created hereunder shall not exceed 40 acres in surface area for oil, or 640 acres in surface area for gas, or 640 acres in surface area for any or all other minerals. The pooling by Lessee in any one or more instances shall not exhaust the right of Lessee to pool any remaining unpooled portion of the Leased Premises or any mineral not theretofore pooled into other units. Lessee shall file for record in the appropriate records of the county in which the Leased Premises are situated an instrument describing and designating the pooled acreage as a pooled unit, setting forth the effective date thereof and describing the acreage, zones, formations and substances pooled. The right, power and authority hereby given to Lessee for the formation of pooled units may be exercised either before or after a well or mine has been drilled or opened or before or after the substance or substances committed to such pooled unit may have been found to exist in commercial quantities in, on or under the Leased Premises. The mining, drilling for or production of the substance or substances committed to the pooled unit, and all operations conducted by Lessee in connection therewith on or within any such pooled unit shall be treated as if such mining, drilling or production or operations in connection therewith were conducted on the Leased Premises. For the

purpose of computing the royalties to which the Lessor or other owners of royalties on the production from the Leased Premises of the substance or substances committed to the pooled unit shall be entitled, there shall be allocated to said Lease the proportion of such production from any such unit (whether or not from the land covered by said Lease) that the number of surface acres covered by said Lease and included in the unit bears to the total number of surface acres in such unit; royalties shall be paid hereunder only on that portion of such production so allocated to said Lease, which shall be in lieu of any other royalties.

5.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

6.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force

majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

7.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.

8.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless

of any provision herein contained to the contrary notwithstanding.

9.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

10.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

11.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

12.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this

lease or within six (6) months after termination hereof.

13.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

14.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance

with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

In consideration of the premises, each married woman joining her husband in the execution of this instrument hereby releases and relinquishes unto Lessee all her right or possibility of dower and homestead in and to the Leased Premises, but only to the extent of the terms and provisions of this instrument. Should any one or more of the parties named above as Lessor fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

Lawrence E. Tatum
Leven L. Chambers
Pearl Tatum
Fred Ramsey
Fred M. Ramsey
Lexie Roberts
Vera Ramsey
Manley E. Roberts
Leon H. Tatum
Mary Lurice Matthews
Ercel Tatum
Bob Matthews
Lissie Tatum Chambers

LESSORS

Fred M. Ramsey executes this lease as Agent & Attorney in Fact for Eric Ramsey and wife, Joyce Ramsey - also Individually.

ALPHA MINERAL COMPANY,

By L. W. Miniton

LESSEE

EXHIBIT "A"

The W/2 of the NE/4 of the SE/4 of Sec. 30, T2S, R14W, containing 20 acres of land, more or less, and the N/2 of the NE/4 of Sec. 36, T2S, R15W except the SW/4 of the NW/4 of the NE/4 of said Sec. 36, containing 70 acres of land, more or less, all in Saline County, Arkansas.

STATE OF ARKANSAS )
COUNTY OF ~~PULASKI~~ SALINE )

MISC. 3 PAGE 475

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Lawrence E. Tatum,

to me well known as the Lessor in the foregoing instrument, and stated the he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Pearl Tatum, wife ~~xxxxxx~~ of

Lawrence E. Tatum,

to me well known, and in the absence of her ~~xxxxxx~~ husband(~~x~~) declared that she ~~xxxx~~ had of her ~~xxxxxx~~ own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her ~~xxxxxx~~ said husband(~~x~~).

WITNESS my hand and official seal on this 24 day of February, 1962.

Notary Public in and for
~~Pulaski~~ Saline County, Arkansas

My Commission Expires: 9/15/62.

STATE OF ARKANSAS )
COUNTY OF PULASKI )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Lissie Tatum Chambers,

to me well known as the Lessor in the foregoing instrument, and stated that she had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and official seal on this 9th day of ~~February~~ MARCH, 1962.

Notary Public in and for
PULASKI County, ARKANSAS

EDWARD S. MORRIS
COM. EXP.
NOTARY
PUBLIC
SEP. 27, 1963
PULASKI COUNTY, ARK.

STATE OF ARKANSAS )
COUNTY OF PULASKI )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Leven L. Chambers,

to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and official seal on this 9th day of ~~February~~ MARCH, 1962.

Notary Public in and for
PULASKI County, ARKANSAS

EDWARD S. MORRIS
COM. EXP.
NOTARY
PUBLIC
SEP. 27, 1963
PULASKI COUNTY, ARK.

STATE OF ARKANSAS )
)
COUNTY OF Saline )

MISC. 3 PAGE 476

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Fred Ramsey,

to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth, and in the capacity therein stated.

WITNESS my hand and official seal on this 24 day of February, 1962.

Notary Public in and for Saline County, ARKANSAS

STATE OF ARKANSAS )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

~~Manley E. Robbins~~ Manley E. Roberts,

to me well known as the Lessor in the foregoing instrument, and stated the he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

~~Lexie Robbins~~ Lexie Roberts, wife ~~(wife)~~ of

~~Manley E. Robbins~~ Manley E. Roberts,

to me well known, and in the absence of her ~~(their)~~ husband(s) declared that she ~~(they)~~ had of her ~~(their)~~ own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her ~~(their)~~ said husband(s).

WITNESS my hand and official seal on this 24 day of February, 1962.

Notary Public in and for Saline County, ARKANSAS

My Commission Expires: 9/15/62.

STATE OF ARKANSAS - COUNTY OF SALINE

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Fred M. Ramsey, Agent & Atty in Fact for Eric Ramsey & wife, Joyce Ramsey and Individually

to me well known as the Lessor in the foregoing instrument, and stated the he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Vera Ramsey, wife ~~(wife)~~ of

Fred M. Ramsey,

to me well known, and in the absence of her ~~(their)~~ husband(s) declared that she ~~(they)~~ had of her ~~(their)~~ own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her ~~(their)~~ said husband(s).

WITNESS my hand and official seal on this 24 day of February, 1962.

Notary Public in and for Saline County, ARKANSAS

My Commission Expires: 9/15/62

STATE OF ARKANSAS )
)
COUNTY OF _____ )

MISC. 3 PAGE 477

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Leon H. Tatum

to me well known as the Lessor_ in the foregoing instrument, and stated the _he_ had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Ercel Tatum, wife ~~(wife)~~ of

Leon H. Tatum

to me well known, and in the absence of her ~~(their)~~ husband(s) declared that she ~~(they)~~ had of her ~~(their)~~ own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her ~~(their)~~ said husband(s).

WITNESS my hand and official seal on this 21 day of February, 1962.

My Comm. Expires: 9/15/62

Norman Nelson
Notary Public in and for
Saline County, ARKANSAS

STATE OF ARKANSAS )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

~~Bob Matthews~~ Bob Mathews

to me well known as the Lessor_ in the foregoing instrument, and stated the _he_ had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Mary Lurice Mathews
~~Mary Lane Mathews~~

, wife ~~(wife)~~ of

~~Bob Matthews~~ Bob Mathews

to me well known, and in the absence of her ~~(their)~~ husband(s) declared that she ~~(they)~~ had of her ~~(their)~~ own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her ~~(their)~~ said husband(s).

WITNESS my hand and official seal on this 19 day of February, 1962.

My Comm. Expires: 9/15/62.

Norman Nelson
Notary Public in and for
Saline County, ARKANSAS

STATE OF TEXAS )
)
COUNTY OF HARRIS )

MISC. 3 PAGE 478

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state, L. W. MINTURN, General Partner of ALPHA MINERAL COMPANY, a corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN under my hand and seal of office this 12th day of March, 1962.

Laura McCain
Notary Public in and for
Harris County, Texas

Filed for record on this the 15th day of March, 1962 at 8:25 A.M., and same is duly recorded in Misc. Record Book 3, at page 463.

Marshall Gipson
Circuit Clerk & Recorder

By Ruth Gipson D.C.

STATE OF TEXAS )
)
COUNTY OF HARRIS )

MISC. 3 PAGE 478

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state, H. W. MEYERS, General Partner of ALPHA MINERAL COMPANY, a corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN under my hand and seal of office this 1 day of March, 1962.

MISC. 3 PAGE 479

Notary Public in and for
Harris County, Texas

Filed for record on this the 15th day of March, 1962 at 8:25 A.M., and duly recorded in Misc. Record Book 3, on page 469.

Marshall Dixon
Clerk of the Circuit Court

By _____ Deputy.

12 Ckg -

Vinson, Elkins, Weems & Searls
Attorneys at Law
First City Nat. Bank Bldg
Houston 2, Texas
Attn: Gordon Stokes

Lease #13

FILED (4)
SALINE CIRCUIT &
CHANCERY CLERK
11:15 A M 27 NOV '61
BY Ruth Gipson

BOOK 3 PAGE 87

OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
COUNTY OF SALINE )

This agreement made this 17th day of April, 1961, ~~1960~~, between Boyd Allinson and Mary Jane Allinson, his wife, (hereinafter called "Lessor" whether one or more), whose address is 11 Winchester Drive, WAkefield Village, Little Rock, Ark., and L. W. Minturn, as Lessee, whose address is 753 West Creekside Drive, Houston, 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ 10.00 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ~~ten (10)~~ Two years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of Twenty Five Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of Ten Dollars ($10.00) ~~One Dollar ($1.00)~~ per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise five (5) acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the First National Bank at Little Rock, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

In consideration of the premises, each married woman joining her husband in the execution of this instrument, hereby releases and relinquishes unto Lessee all her right or possibility of dower and homestead in and to the Leased Premises, but only to the extent of the terms and provisions of this instrument. Should any one or more of the parties named above as Lessor fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

Boyd Allinson

Mary Jane Allinson

LESSORS

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

EXHIBIT "A"

Attached to and made a part of oil, gas and mineral lease dated April 17, 1961, from Boyd Allinson and Mary Jane Allinson, his wife, to L. W. Minturn.

Description:

That part of the East Half of the Northeast Quarter of the Southwest Quarter (E½ of NE¼ of SW¼) lying west of State Highway No. 35 as now located, of Section 30, Township 2 South, Range 14 West, and being the same land described in deed dated June 13, 1952, from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, Page 409 of the Deed Records of Saline County, Arkansas, containing five acres, more or less, said record and its references being hereby referred to for all purposes.

Boyd Allinson
Boyd Allinson

Mary Jane Allinson
Mary Jane Allinson
(Signed for Identification)

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

8A
16

STATE OF ARKANSAS : On this day came before me, a
COUNTY OF PULASKI : Notary Public duly commissioned and acting within and for said county and state, Boyd Allinson to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Mary Jane Allinson, wife of Boyd Allinson, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 17th day of April, 1961.

Frank K Hayner
Notary Public in and for
Pulaski County,
Arkansas

STATE OF _____ : On this day came before me, a
COUNTY OF _____ : Notary Public duly commissioned and acting within and for said county and state, _____, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

Notary Public in and for
_____ County,

STATE OF _____ : On this day before me, a Notary
COUNTY OF _____ : Public duly commissioned and acting within said county and state, appeared in person _____, to me personally well known, who stated that he is the _____ President of _____, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

Notary Public in and for
_____ County,

Filed for record on this the 27th day of November, 1961 at 11:15 A.M., and same is duly recorded in Misc. Record Book 3, at page 87.

Marshall Gipson
Circuit Clerk & Recorder

By Ruth Gipson D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

8.00 pd.

PLS RETURN TO:

L.W. MINTURN
753 WEST CREEKSIDE DRIVE
HOUSTON 24 TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

91
91

STANDARD FORM NO. 156—POUND PRINTING CO., HOUSTON, TEXAS

Alpha Mineral Company

NAME OF COMPANY

Check No. 69 Date March 22 1962

Alpha Mineral Company has this day deposited in First National Bank, Little Rock, Arkansas, the sum of Fifty ($50.00) ---------- Dollars, for the credit of persons named below in amounts stated in payment of annual rental, under oil and gas lease dated 17th day of April 1961 and recorded in Vol. 3, Page 87, Misc. Records of Saline County, ~~Parish~~ and State of Arkansas from Boyd Allinson, et ux to L.W. Minturn covering five (5) acres of land as described in said lease.

| LEASE NO. | FOR CREDIT OF | AMOUNT | COUNTY | ACRES |
|---|---|---|---|---|
| 13 | Boyd Allinson and wife, Mary Jane Allinson | $50.00 | Saline County, Arkansas | 5 |

Please Sign and Return to Sender

Sign here

By

Date Received

THE FIRST NATIONAL BANK IN LITTLE ROCK, ARK.

By G. M. Lamonich

ASST. CASHIER

MAR 26 1962

Lease #14

FILED
SALINE CIRCUIT &
CHANCERY CLERK
11:13 A.M. 27 NOV '61
BY Ruth Gipson

MISC. 3 PAGE 73

# OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
COUNTY OF SALINE )

This agreement made this 22nd day of April, 1961, ~~1960~~, between May Tudor, a widow; Harold Beaty and Lexie Edith Beaty, his wife; and W. G. Tudor and Rosemarie Tudor, his wife, (hereinafter called "Lessor" whether one or more), whose address is Benton, Arkansas, and L. W. Minturn, as Lessee, whose address is 753 West Creekside Drive, Houston, 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ 10.00 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ~~ten (10~~ Two) years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of Twenty Five Dollars and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of Ten Dollars ~~One Dollar ($1.00~~) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise 20 acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the Benton State Bank at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

In consideration of the premises, each married woman joining her husband in the execution of this instrument, hereby releases and relinquishes unto Lessee all her right or possibility of dower and homestead in and to the Leased Premises, but only to the extent of the terms and provisions of this instrument. Should any one or more of the parties named above as Lessor fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

May Tudor
W. G. Tudor
Rosemarie Tudor
Harold Beaty
Lewis Edith Beaty
LESSORS

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

EXHIBIT "A"

Attached to and made a part of oil, gas and mineral lease dated April 22, 1961, between Mae Tudor, a widow, Harold Beatty and Lexie Edith Beatty, his wife, and W. G. Tudor and Rosemarie Tudor, his wife, and L. W. Minturn.

DESCRIPTION:

Part of the Northeast Quarter of the Southwest Quarter (NE¼ of SW¼) and part of the Northwest Quarter of the Southwest Quarter (NW¼ of SW¼), of Section 29, Township 2 South, Range 14 West, described as follows:

Starting at the northeast corner of the Southwest Quarter; than running South to the center of the Pine Bluff and Benton road now running through said land; thence West 124 rods with said road bed; Thence north to the north line of said land; thence east to the place of beginning, containing 20 acres, more or less, and being the same land described in deed dated September 4, 1911, from J. I. Steele to G. C. Tudor, and recorded in Book 1, Page 173 of the Deed Records of Saline County, Arkansas, said record and its references being hereby referred to for all purposes.

Mae Tudor
Mae Tudor

W. G. Tudor
W. G. Tudor

Rosemarie Tudor
Rosemarie Tudor

Harold Beatty
Harold Beatty

Lexie Edith Beatty
Lexie Edith Beatty

(Signed for Identification)

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF ARKANSAS : On this day came before me, a Justice of the Peace
COUNTY OF SALINE : ~~Notary Public~~ duly commissioned and acting within and for said county and state, APPEARED W. G. Tudor to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Rosemarie Tudor, wife of W. G. Tudor, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 12 day of April, 1961.

Justice of the Peace
Commn Exp
Dec 31 - 1962

A. B. Hester
~~Notary Public~~ in and for Saline County, Arkansas

STATE OF ARKANSAS : On this day came before me, a Justice of the Peace
COUNTY OF SALINE : ~~Notary Public~~ duly commissioned and acting within and for said county and state, appeared Mae Tudor, a widow, to me well known as the Lessor in the foregoing instrument, and stated that she had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this 12 day of April, 1961.

Justice of the Peace
Commn Exp
Dec 31, 1962

A. B. Hester
~~Notary Public~~ in and for Saline County, Arkansas

STATE OF ARKANSAS ;
COUNTY OF SALINE ;

Justice of the Peace

On this day came before me, a ~~Notary Public~~ duly commissioned and acting within and for said county and state, appeared Harold Beatty to me well known as the lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Lexie Edith Beatty, wife of Harold Beatty, to me well known, and in the absence of her husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said hustand. WITNESS MY hand and official seal on this 12 day of April, 1961.

Justice of the Peace
Commission Exp
Dec 31, 1962

A. B. Hester
~~Notary Public~~ in and for Saline County, Arkansas.

Filed for record on this the 27th day of November, 1961 at 11:13 A.M., and same is duly recorded in Misc. Record Book 3, at page 73.

Marshall Gipson
Circuit Clerk & Recorder

By Ruth Gipson D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

8.00
pd

PLS RETURN TO:

L. W. MINTURN
753 WEST CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Lease #14

FILED
SALINE CIRCUIT &
CHANCERY CLERK

BOOK 3 PAGE 83

11:14 AM 27 NOV '61
BY Ruth Gipson

AMENDMENT OF OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS ()
()
COUNTY OF SALINE ()

WHEREAS, under date of April 22, 1961 an oil, gas and mineral lease was executed by May Tudor, a widow; Harold Beaty and wife, Lexie Edith Beaty; and W. G. Tudor and wife, Rosemarie Tudor, called "Lessor", in favor of L. W. MINTURN, called "Lessee", covering the following described land in Saline County, Arkansas:

Part of the Northeast Quarter of the Southwest Quarter (NE/4 of SW/4) and part of the Northwest Quarter of the Southwest Quarter (NW/4 of SW/4) of Section 29, Township 2 South, Range 14 West, described as follows: Starting at the Northeast corner of the Southwest Quarter; then running South to the center of the Pine Bluff and Benton Road, now running through said land; thence West 124 rods with said road bed; thence North to the North line of said land; thence East to the place of beginning, containing 20 acres, more or less, and being the same land described in deed dated September 4, 1911 from J. I. Steele to G. C. Tudor and recorded in Book 1, page 173 of the Deed Records of Saline County, Arkansas, said record and its references being hereby referred to for all purposes.

WHEREAS, the parties to said lease have agreed that the same shall be amended as hereinafter provided;

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That said Lessor and Lessee, in consideration of the mutual covenants and agreements herein contained and other good and valuable considerations, do hereby agree that the above described lease shall be and the same is hereby amended as follows:

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

1. The royalty on magnetite or iron ore aggregate shall be five mills ($0.005) per iron unit (22.4 pounds of iron) rather than and in lieu of the royalty of 25¢ per ton as provided in Paragraph 2(c)(iii) of said lease.

2. The rates prescribed for the payment of royalties on sulphur, bauxite, magnetite and iron ore aggregate shall remain unchanged through the calendar year 1965 but at the beginning of the calendar year 1966 and at the beginning of each calendar year thereafter, a fraction shall be determined, the numerator of which shall be the average of the twelve (12) next preceding monthly publications of the Wholesale Commodity Price Index (all commodities), published by the Federal Reserve System, and the denominator of which shall be the average of the twelve (12) monthly publications of the Wholesale Commodity Price Index (all commodities) of the calendar year 1960; the rates provided for royalties on sulphur, bauxite and magnetite or iron ore aggregate shall be multiplied by this fraction and the result shall be adjusted to the nearest one cent (1¢) for sulphur and bauxite and to the nearest whole mill for magnetite or iron ore aggregate; such new rates shall be used for all payments due during the ensuing calendar year; the indexes referred to herein are those computed on a basis of an index of 100 for the average of the three years, 1947, 1948 and 1949.

3. Lessee is hereby granted the right, power and authority at the option of Lessee, at any time or times to pool, combine and unitize the land (hereinafter called the Leased Premises) covered by the above described lease (hereinafter called said Lease) or any portion thereof with any other land, lease or leases in the vicinity thereof, when in Lessee's judgment it is necessary or advisable so to do, for the purpose of developing and operating the Leased Premises and producing, mining and removing therefrom oil, gas or other minerals in accordance with the terms of said Lease. Such pooling may in any instance include all oil, gas and other minerals or may be limited to any one or more of such substances. Likewise, any such pooling may extend to and cover the production of the substance or substances committed to such pooled unit from any depth or may be limited to one or more zones, veins, depths, horizons or formations. Any pooled unit created hereunder shall not exceed 40 acres in surface area for oil, or 640 acres in surface area for gas, or 640 acres in surface area for any or all other minerals. The pooling by Lessee in any one or more instances shall not exhaust the right of Lessee to pool any remaining unpooled portion of the Leased Premises or any mineral not theretofore pooled into other units. Lessee shall file for record in the appropriate records of the county in which the Leased Premises are situated an instrument describing and designating the pooled acreage as a pooled unit, setting forth the effective date thereof and describing the acreage, zones, formations and substances pooled. The right, power and authority hereby given to Lessee for the formation of pooled units may be

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

exercised either before or after a well or mine has been drilled or opened or before or after the substance or substances committed to such pooled unit may have been found to exist in commercial quantities in, on or under the Leased Premises. The mining, drilling for, or production of the substance or substances committed to the pooled unit, and all operations conducted by Lessee in connection therewith on or within any such pooled unit shall be treated as if such mining, drilling, or production or operations in connection therewith were conducted on the Leased Premises. For the purpose of computing the royalties to which the Lessor or other owners of royalties on the production from the Leased Premises of the substance or substances committed to the pooled unit shall be entitled, there shall be allocated to said Lease the proportion of such production from any such unit (whether or not from the land covered by said Lease) that the number of surface acres covered by said Lease and included in the unit bears to the total number of surface acres in such unit; royalties shall be paid hereunder only on that portion of such production so allocated to said Lease, which shall be in lieu of any other royalties.

The above described lease, as hereby amended, is declared to be in full force and effect and the undersigned Lessors hereby grant, lease and let the above described premises unto said Lessee in accordance with and subject to the terms and provisions of said lease as amended by the terms and provisions of this instrument.

This instrument of amendment may be executed in any number of counterparts, each of which shall be deemed to be an original and shall be binding upon the party or parties executing the same whether or not a counterpart hereof shall be executed by each Lessor named in said lease.

WITNESS THE EXECUTION HEREOF this 17th day of NOVEMBER, 1961.

Lexie Edith Beaty
Harold Beaty

May Tudor
W. G. Tudor
Rosemarie Tudor
L. W. Minton, Lessee

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

May Tudor, a widow,

to me well known as the Lessor in the foregoing instrument, and stated that ~~s~~ he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and official seal on this 24th day of November, 1961.

My commission expires: 9-9-65

Hattie K. Floyd
Notary Public in and for
Saline County, Arkansas

STATE OF Arkansas )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Harold Beaty and W. G. Tudor

to me well known as the Lessor in the foregoing instrument, and stated that ~~t~~ he ~~y~~ had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Lexie Edith Beaty and Rosemarie Tudor, ~~wife~~ (wives)

of Harold Beaty and W. G. Tudor,

to me well known, and in the absence of ~~her~~ (their) husband(s) declared that ~~she~~ (they) had of ~~her~~ (their) own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of ~~her~~ (their) said husband(s).

WITNESS my hand and official seal on this 24th day of November, 1961.

My commission expires: 9-9-65

Hattie K. Floyd
Notary Public in and for
Saline County, Arkansas

Filed for record on this the 27th day of November, 1961 at 11:14 A.M., and same is duly recorded in Misc. Record Book 3, at page 83.

Marshall Gipson
Circuit Clerk & Recorder

By Ruth Gipson D.C.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

3.00
pd.

PLS RETURN TO:

L. W. MINTURN

753 WEST CREEKSIDE DRIVE

HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

81
5

STANDARD FORM NO. 156—POUND PRINTING CO., HOUSTON, TEXAS

Alpha Mineral Company

NAME OF COMPANY

Check No. 70 Date March 22 1962

Alpha Mineral Company has this day deposited in Benton State Bank, Benton, Arkansas, the sum of Two Hundred ($200.00)---------- Dollars, for the credit of persons named below in amounts stated in payment of annual rental, under oil and gas lease dated 22nd day of April 1961 and recorded in Vol. 3, Page 73, Misc. Records of Saline County ~~Parish~~ and State of Arkansas. from May Tudor, et al to L.W. Minturn covering 20 acres of land as described in said lease.

| LEASE NO. | FOR CREDIT OF | AMOUNT | COUNTY | ACRES |
|---|---|---|---|---|
| 14 | May Tudor; Harold Beaty and wife, Lexie Edith Beaty, and W. G. Tudor and wife, Rosemarie Tudor | $200.00 | Saline County, Arkansas | 20 |

Please Sign and Return to Sender

BENTON STATE BANK
BENTON, ARKANSAS

Sign here

By

Date Received MAR 26 1962

Lease #15

FILED
SALINE CIRCUIT &
CHANCERY CLERK

(2)

MISC. 3 PAGE 35

9:23 A M 21 NOV '61
BY Edna Crouch

OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
)
COUNTY OF SALINE )

This agreement made this 17th day of April, 1961, 1960, between Moses Kidd and Annie Kidd, his wife,

(hereinafter called "Lessor" whether one or more), whose address is Benton, Arkansas,

and L. W. Minturn,

as Lessee, whose address is 753 West Creekside Drive, Houston 24, Texas

W I T N E S S E T H:

Lessor in consideration of $ 100.00 cash in hand paid by Lessee, the receipt of which is hereby acknowledged and in consideration of the rentals and royalties herein provided for, does hereby GRANT, LEASE and LET exclusively unto Lessee the land described in Exhibit "A" which is attached hereto and made a part hereof, (hereinafter called the "Leased Premises") for the purpose of investigating, exploring, prospecting, drilling, excavating, mining for, producing, treating, storing, handling, transporting and carrying away oil, gas, bauxite, sulphur, magnetite and all other minerals, together with the right of ingress and egress to and from the Leased Premises and the right to bore prospect holes, sink shafts or slopes, build and construct roads, pipelines, power stations, power lines, telephone lines, tanks and to erect and maintain machinery or equipment for



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the production, removal or benefication of minerals or ores which may be found in, on or under the Leased Premises.

This lease is made, executed and delivered subject to the following terms and conditions:

1.

This lease shall be for a term of ~~ten (10)~~ Two years from the date hereof (called "Primary Term") and as long thereafter as any mineral is produced from the Leased Premises or Lessee is engaged with no cessation of more than sixty (60) consecutive days in exploratory or mining operations on the Leased Premises for the discovery or production of minerals.

2.

The royalties to be paid by Lessee are:

(a) on oil, one-eighth (1/8) of that produced and saved from said land, the same to be delivered at the wells or to the credit of Lessor into the pipeline to which the wells may be connected; Lessee may from time to time purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase;

(b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom the market value at the well of one-eighth (1/8) of the gas so sold or used, provided that on gas sold at the wells the royalty shall be one-eighth (1/8) of the amount realized from such sale; while there is a gas well on this lease or on acreage pooled there-



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

with, but gas is not being sold or used, Lessee may pay as royalty, on or before ninety (90) days after the date on which said well is shut in and thereafter at monthly intervals, the sum of Twenty Five Dollars ~~Dollars~~ and if such payment is made or tendered, this lease shall not terminate and it will be considered that gas is being produced from this lease in paying quantities;

(c) On all minerals other than oil and gas which shall be mined or produced from the Leased Premises and removed from said Leased Premises or used or sold by Lessee, the royalties shall be as follows: (i) on sulphur 100 ¢ per ton; (ii) on bauxite 75 ¢ per ton; (iii) on magnetite or iron ore aggregate 25 ¢ per ton; (iv) on fissionable minerals 10 % of the value thereof as determined or established by the Atomic Energy Commission or other governmental agency having jurisdiction; (v) on all other minerals 10 % of the value thereof at the well or mine or the same percentage of the net mill or smelter returns, whichever is greater; (vi) the word "ton" in all instances shall mean a long ton of 2240 pounds; (vii) for the purpose of calculating royalties on any mineral or ore on which the royalty is a percentage of the value and which is marketed off the Leased Premises, the cost of transportation shall be deducted and the phrase "net mill or smelter returns" shall mean the proceeds received by Lessee after deducting transportation, milling and smelting charges.



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

All ores mined from the Leased Premises but not removed therefrom within ninety (90) days following the expiration or other termination of this lease shall be the property of Lessor.

3.

Lessee shall pay to Lessor annually in advance commencing one (1) year from the date hereof a rental in the amount of Ten Dollars ~~One Dollar ($1.00~~) per acre for the Leased Premises which, for the purpose of calculating such rental are estimated to comprise 40 acres. Such rental shall be applied as a credit against royalties due to Lessor on minerals produced during the twelve months next succeeding the date of payment. Such rental may be paid to Lessor at the address shown above unless and until Lessee shall be notified of a different address or such payment may be made or tendered to Lessor in the Benton State Bank at Benton, Arkansas. Any such payment may be made by the check or draft of Lessee mailed or delivered to Lessor at said address or to said bank. Lessee may at any time or times execute and deliver to Lessor or to the bank above named or place of record a release or releases of all or any part of the Leased Premises and be relieved of all obligations as to the acreage surrendered, and thereafter the rental above provided for shall be reduced in the proportion that the acreage covered hereby is reduced by such release or releases.

4.

If during the Primary Term Lessee shall conduct core drilling or other exploratory operations which do not indicate



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

the presence of any mineral covered by this lease or if any mineral shall be discovered and produced and the production thereof shall cease during the Primary Term, this lease shall not thereby be terminated but shall continue in force during said Primary Term. If any mineral is mined and produced from the Leased Premises and the production or mining thereof shall cease after the Primary Term, this lease shall not terminate if Lessee resumes mining operations or commences operations for reworking any existing mine or well within ninety (90) days after such cessation of production.

5.

The failure of Lessee to make any payment of rental or royalty due hereunder or to keep or perform any covenant or agreement to be kept or performed by Lessee, in the manner and at the time herein specified, unless excused by force majeure or some other provision of this lease, shall constitute a default which shall at the option of Lessor be cause for termination of this lease unless such default has been remedied within sixty (60) days after Lessor has given notice in writing to Lessee specifying the facts relied upon as constituting a breach hereof or default hereunder and stating that the option to terminate this lease will be exercised if Lessee shall fail within sixty (60) days from the date of such notice to remedy such default.

6.

Notices required or permitted hereunder shall be in writing sent by registered United States mail, postage prepaid, to the address of Lessor and Lessee, respectively, as set forth above, unless and until either party shall notify the other of a change of address.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

7.

Lessee shall be excused from the performance of any drilling or mining operations or from the performance of any other obligation hereunder (except the payment of rentals and royalties) during such time as Lessee may be prevented from so doing by reason of force majeure. The term "force majeure" as used herein shall mean acts of God, fire, flood, power failure, accident or breakage to machinery or equipment, strikes, labor difficulties, arrests or restraints of government, wars, mob violence, storms, inability to obtain equipment or material, or any other cause, whether or not herein enumerated, which is not reasonably within the control of Lessee. During the continuance of any such condition of force majeure this lease shall continue in force regardless of any provision herein contained to the contrary notwithstanding.

8.

Lessee shall pay Lessor for actual damages to fences, growing crops or other property of Lessor caused by exploratory operations conducted by Lessee hereunder. In the event of actual mining operations, however, Lessee shall not be liable for any permanent damage to the land which may be caused by operations which are reasonably necessary in exercising the rights hereby granted to Lessee.

9.

Lessee shall make and keep an accurate record and account of all ores and other minerals mined and removed from the leased premises and the amounts received from the sale thereof. All such records and accounts shall be made available for the examination by Lessor or his representative at the offices of Lessee at any reasonable time. Lessor shall have the right



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

at his sole risk at all times to observe and inspect any operations or workings being conducted by Lessee on the Leased Premises.

10.

Any taxes such as severance or production taxes imposed upon any mineral covered hereby shall be borne by the parties in proportion to their respective interests, and any such tax paid by Lessee shall be deducted before calculating the value of the minerals for the purpose of paying royalties.

11.

Any buildings, machinery or equipment erected, installed or placed by Lessee on the Leased Premises shall not be deemed to be fixtures, but shall remain the property of Lessee and may be removed by Lessee at any time during the term of this lease or within six (6) months after termination hereof.

12.

This lease and the rights of either party hereunder may be assigned in whole or in part, and the provisions hereof shall extend to the heirs, successors and assigns of the respective parties; but no change or division in such ownership shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished notice thereof by registered United States mail together with a certified copy of the recorded instrument or instruments evidencing the same. In the event of assignment hereof in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease, or portion hereof, committing such breach.

13.

Lessor hereby warrants and agrees to defend the title to said land and agrees that Lessee at its option may discharge any tax, mortgage or other lien upon said land, either in whole



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

or in part; and in event Lessee does so, it shall be subrogated to such lien with right to enforce same and apply rentals and royalties accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the oil, gas or other minerals on, in or under said land less than the entire fee simple estate, whether or not this lease purports to cover the whole or a fractional interest, then the royalties and rentals to be paid Lessor shall be reduced in the proportion that his interest bears to the whole and undivided fee and in accordance with the nature of the estate of which Lessor is seized. Failure of Lessee to reduce rental paid hereunder shall not impair the right of Lessee to reduce royalties.

In consideration of the premises, each married woman joining her husband in the execution of this instrument, hereby releases and relinquishes unto Lessee all her right or possibility of dower and homestead in and to the Leased Premises, but only to the extent of the terms and provisions of this instrument. Should any one or more of the parties named above as Lessor fail to execute this lease, it shall nevertheless be binding upon the party or parties executing the same.

IN WITNESS WHEREOF this instrument is executed as of the date first above written.

Moses Kidd

Annie Kidd

LESSORS

LESSEE

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

EXHIBIT "A"

Attached to and made a part of oil, gas and mineral lease dated April 17, 1961, from Moses Kidd and Annie Kidd, his wife, to L. W. Minturn.

Description:

That part of the Northwest Quarter of the Southwest Quarter (NW¼ of SW¼) lying south of what is known as the Bauxite Road in Section 29, and also the East One Half of the Northwest Quarter of the Southeast Quarter (E½ of NW¼ of SE¼) of Section 30, all in Township 2 South, Range 14 West, Saline County, Arkansas, and being the same land described in deed dated November 18, 1926 from Harve Kidd et al to Moses Kidd and recorded in Book 19, Page 213 of the Deed Records of Saline County, Arkansas, LESS and EXCEPT That part of the East Half of the Northeast Quarter of the Southwest Quarter (E½ of NE¼ of SW¼) lying west of State Highway No. 35 as now located, and being the same land described in deed dated June 13, 1952 from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, Page 409 of the Deed Records of Saline County Arkansas, said records and their references being hereby referred to for all purposes. The first tract describeddabove contains 45 acres more or less and the second tract or Allinson tract contains 5 acres more or less.

Moses Kidd
Moses Kidd

Annie Kidd
Annie Kidd

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

L W. MINTURN
753 WEST CREEKSIDE DRIVE
HOUSTON 24 TEXAS

8 00
8 d

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas : On this day came before me, a
COUNTY OF Saline : Notary Public duly commissioned and acting within and for said county and state, Moses Kidd to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me Annie Kidd, wife of Moses Kidd, to me well known, and in the absence of her said husband declared that she had of her own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her said husband. WITNESS my hand and official seal on this 17th day of April, 1961.

JOHN L. HUGHES NOTARY PUBLIC SALINE COUNTY, ARK. My Comm. Exp. 7/1/63

John L. Hughes
Notary Public in and for
Saline County,
Arkansas

STATE OF _____ : On this day came before me, a
COUNTY OF _____ : Notary Public duly commissioned and acting within and for said county and state, _____, to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

STATE OF _____ : On this day before me, a Notary
COUNTY OF _____ : Public duly commissioned and acting within said county and state, appeared in person _____, to me personally well known, who stated that he is the _____ President of _____, a corporation, and is duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said corporation and further stated and acknowledged that he had so signed, executed and delivered said foregoing instrument for the consideration, uses and purposes therein mentioned and set forth. WITNESS my hand and official seal on this ____ day of _____, 196_.

_____
Notary Public in and for
_____ County,
_____

CERTIFICATE OF RECORD

STATE OF ARKANSAS }
COUNTY OF SALINE } SS

I, MARSHALL GIPSON, Circuit Clerk and Ex-Officio Recorder for the County aforesaid, do hereby certify that the annexed and foregoing instrument of writing was filed for record in my office on the 21st day of November A. D., 1961 at 9:23 o'clock A M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in MISC. Book 3 Page 35

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court, this 21st. day of November 1961

Marshall Gipson
CIRCUIT CLERK AND EX-OFFICIO RECORDER

_____ D. C.

SEAL OF CIRCUIT COURT SALINE COUNTY, ARK.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

Lease #15

FILED
SALINE CIRCUIT &
CHANCERY CLERK

MISC. 3 PAGE 45

9:24 A.M. 21 NOV '61
BY Edna Crouch

AMENDMENT OF OIL, GAS AND MINERAL LEASE

THE STATE OF ARKANSAS )
)
COUNTY OF SALINE )

WHEREAS, under date of April 17, 1961 an oil, gas and mineral lease was executed by Moses Kidd and wife, Annie Kidd, called "Lessor", in favor of L. W. MINTURN, called "Lessee", covering the following described land in Saline County, Arkansas:

That part of the Northwest Quarter of the Southwest Quarter (NW/4 of SW/4) lying South of what is known as the Bauxite Road in Section 29, and also the East One Half of the Northwest Quarter of the Southeast Quarter (E/2 of NW/4 of SE/4) of Section 30, all in Township 2 South, Range 14 West, Saline County, Arkansas, and being the same land described in deed dated November 18, 1926 from Harve Kidd et al to Moses Kidd and recorded in Book 19, page 213 of the Deed Records of Saline County, Arkansas, LESS and EXCEPT that part of the East Half of the Northeast Quarter of the Southwest Quarter (E/2 of NE/4 of SW/4) lying west of State Highway No. 35 as now located, and being the same land described in deed dated June 13, 1952 from Moses Kidd and Annie Kidd, his wife, to Mary Jane Allinson, and recorded in Book 65, page 409 of the Deed Records of Saline County, Arkansas, said records and their references being hereby referred to for all purposes.

WHEREAS, the parties to said lease have agreed that the same shall be amended as hereinafter provided;

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That said Lessor and Lessee, in consideration of the mutual covenants and agreements herein contained and other good and valuable considerations, do hereby agree that the above described lease shall be and the same is hereby amended as follows:

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

1. The royalty on magnetite or iron ore aggregate shall be five mills ($0.005) per iron unit (22.4 pounds of iron) rather than and in lieu of the royalty of 25¢ per ton as provided in Paragraph 2(c)(iii) of said lease.

2. The rates prescribed for the payment of royalties on sulphur, bauxite, magnetite and iron ore aggregate shall remain unchanged through the calendar year 1965 but at the beginning of the calendar year 1966 and at the beginning of each calendar year thereafter, a fraction shall be determined, the numerator of which shall be the average of the twelve (12) next preceding monthly publications of the Wholesale Commodity Price Index (all commodities), published by the Federal Reserve System, and the denominator of which shall be the average of the twelve (12) monthly publications of the Wholesale Commodity Price Index (all commodities) of the calendar year 1960; the rates provided for royalties on sulphur, bauxite and magnetite or iron ore aggregate shall be multiplied by this fraction and the result shall be adjusted to the nearest one cent (1¢) for sulphur and bauxite and to the nearest whole mill for magnetite or iron ore aggregate; such new rates shall be used for all payments due during the ensuing calendar year; the indexes referred to herein are those computed on a basis of an index of 100 for the average of the three years, 1947, 1948 and 1949.

3. Lessee is hereby granted the right, power and authority at the option of Lessee, at any time or times to pool, combine and unitize the land (hereinafter called the Leased Premises) covered by the above described lease (hereinafter called said Lease) or any portion thereof with any other land, lease or leases in the vicinity thereof, when in Lessee's judgment it is necessary or advisable so to do, for the purpose of developing and operating the Leased Premises and producing, mining and removing therefrom oil, gas or other minerals in accordance with the terms of said Lease. Such pooling may in any instance include all oil, gas and other minerals or may be limited to any one or more of such substances. Likewise, any such pooling may extend to and cover the production of the substance or substances committed to such pooled unit from any depth or may be limited to one or more zones, veins, depths, horizons or formations. Any pooled unit created hereunder shall not exceed 40 acres in surface area for oil, or 640 acres in surface area for gas, or 640 acres in surface area for any or all other minerals. The pooling by Lessee in any one or more instances shall not exhaust the right of Lessee to pool any remaining unpooled portion of the Leased Premises or any mineral not theretofore pooled into other units. Lessee shall file for record in the appropriate records of the county in which the Leased Premises are situated an instrument describing and designating the pooled acreage as a pooled unit, setting forth the effective date thereof and describing the acreage, zones, formations and substances pooled. The right, power and authority hereby given to Lessee for the formation of pooled units may be



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

exercised either before or after a well or mine has been drilled or opened or before or after the substance or substances committed to such pooled unit may have been found to exist in commercial quantities in, on or under the Leased Premises. The mining, drilling for, or production of the substance or substances committed to the pooled unit, and all operations conducted by Lessee in connection therewith on or within any such pooled unit shall be treated as if such mining, drilling, or production or operations in connection therewith were conducted on the Leased Premises. For the purpose of computing the royalties to which the Lessor or other owners of royalties on the production from the Leased Premises of the substance or substances committed to the pooled unit shall be entitled, there shall be allocated to said Lease the proportion of such production from any such unit (whether or not from the land covered by said Lease) that the number of surface acres covered by said Lease and included in the unit bears to the total number of surface acres in such unit; royalties shall be paid hereunder only on that portion of such production so allocated to said Lease, which shall be in lieu of any other royalties.

The above described lease, as hereby amended, is declared to be in full force and effect and the undersigned Lessors hereby grant, lease and let the above described premises unto said Lessee in accordance with and subject to the terms and provisions of said lease as amended by the terms and provisions of this instrument.

This instrument of amendment may be executed in any number of counterparts, each of which shall be deemed to be an original and shall be binding upon the party or parties executing the same whether or not a counterpart hereof shall be executed by each Lessor named in said lease.

WITNESS THE EXECUTION HEREOF this 15th day of November 1961.

Moses Kidd

Annie Kidd

L. W. Munton, Trustee



ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

STATE OF Arkansas )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Moses Kidd,

to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and official seal on this ___ day of _____, 196__.

_____
Notary Public in and for
_____ County, _____

STATE OF Arkansas )
)
COUNTY OF Saline )

On this day came before me, a Notary Public duly commissioned and acting within and for said county and state,

Moses Kidd

to me well known as the Lessor in the foregoing instrument, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth. And on the same day also voluntarily appeared before me

Annie Kidd, wife (wives)

of Moses Kidd,

to me well known, and in the absence of her (their) husband(s) declared that she (they) had of her (their) own free will executed said instrument for the consideration and purposes therein contained and set forth without compulsion or undue influence of her (their) said husband(s).

WITNESS my hand and official seal on this 15th day of November, 1961.

Joshua Wilson
Notary Public in and for
Saline County, Arkansas

My commission EXPIRES APRIL 1, 1962.

## CERTIFICATE OF RECORD

STATE OF ARKANSAS }
COUNTY OF SALINE } SS

I, MARSHALL GIPSON, Circuit Clerk and Ex-Officio Recorder for the County aforesaid, do hereby certify that the annexed and foregoing instrument of writing was filed for record in my office on the 21st day of November A. D., 1961 at 9:24 o'clock A M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in MISC Book 3 Page 45

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court, this 21st. day of November 1961

Marshall Gipson
CIRCUIT CLERK AND EX-OFFICIO RECORDER

_____ D. C.

SEAL OF CIRCUIT COURT SALINE COUNTY, ARK.

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

3 5¢

L. W. Minturn
753 West Creekside Drive
Houston 24, Texas

5
30

STANDARD FORM NO. 156—POUND PRINTING CO., HOUSTON, TEXAS

Alpha Mineral Company

NAME OF COMPANY

Check No. 71 Date March 22 1962

Alpha Mineral Company has this day deposited in Benton State Bank, Benton, Arkansas, the sum of Four Hundred ($400.00) ---------- Dollars, for the credit of persons named below in amounts stated in payment of annual rental, under oil and gas lease dated 17th day of April 1961 and recorded in Vol. 3, Page 35, Misc. Records of Saline County ~~or Parish~~ and State of Arkansas.

from Moses Kidd, et ux to L.W. Minturn covering 40 acres of land as described in said lease.

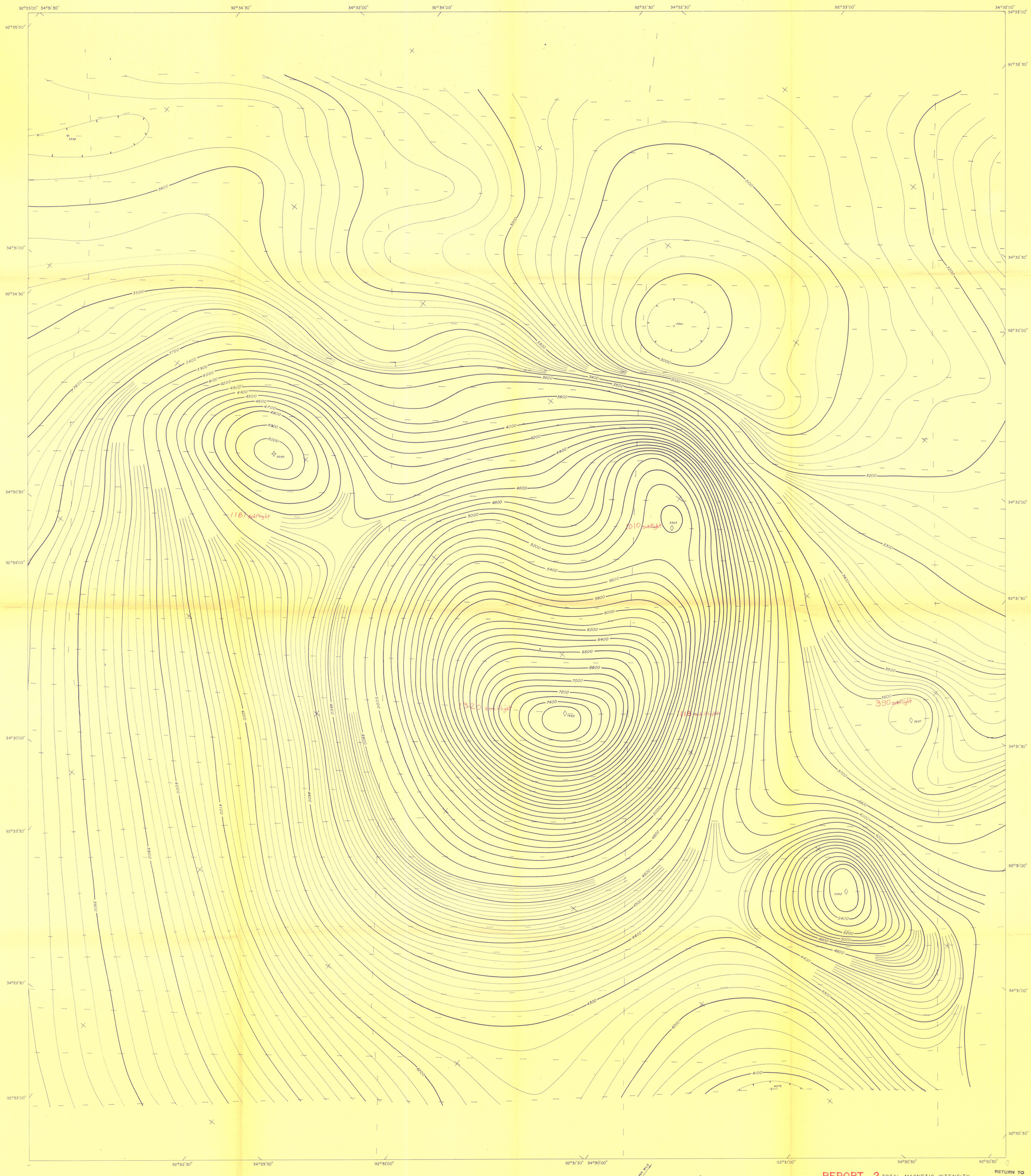
| LEASE NO. | FOR CREDIT OF | AMOUNT | COUNTY | ACRES |
|---|---|---|---|---|
| 15 | Moses Kidd and wife, Annie Kidd | $400.00 | Saline County, Arkansas | 40 |

Please Sign and Return to Sender

Sign here BENTON STATE BANK BENTON, ARKANSAS

By [signature]

Date Received MAR 26 1962




APPROXIMATE MEAN DECLINATION

NORMAL REGIONAL VARIATION NOT REMOVED

INCLINATION

REGIONAL MAGNETIC VALUES
1960

# REPORT 2 TOTAL MAGNETIC INTENSITY

## BENTON AREA
## ARKANSAS

RETURN TO
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

FLIGHT ALTITUDE 300 FEET
CONTOUR INTERVAL 20 GAMMA

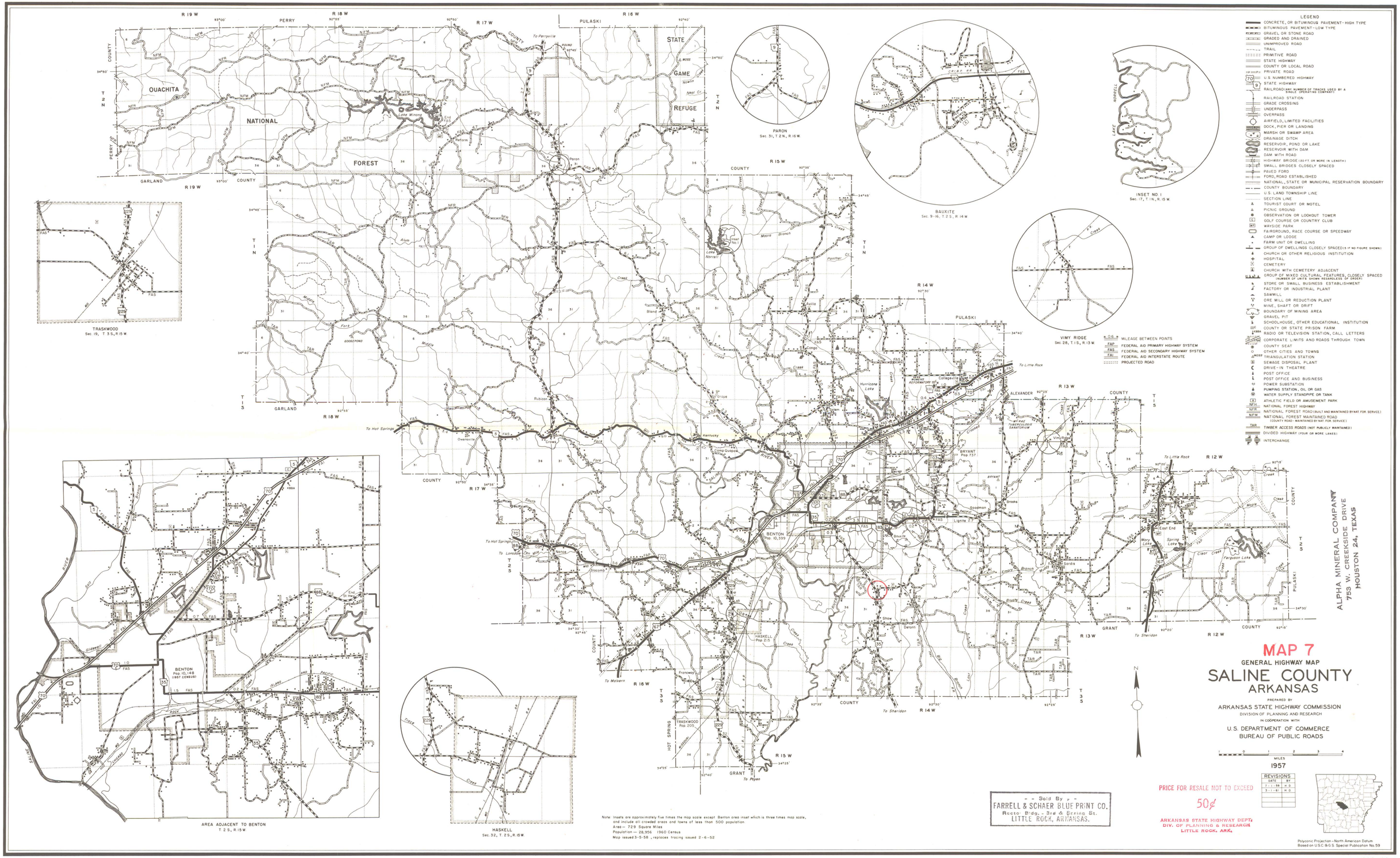
FLIGHT INTERVAL 500 FEET
BASE INTENSITY ARBITRARY

AERO SERVICE CORP., PHILA., PENNA.

SCALE 1 INCH = 500 FEET

500 0 500 1000 1500 2000 FEET

SURVEYED AND COMPILED 1960


LEGEND
CONCRETE, OR BITUMINOUS PAVEMENT-HIGH TYPE
BITUMINOUS PAVEMENT-LOW TYPE
GRAVEL OR STONE ROAD
GRADED AND DRAINED
UNIMPROVED ROAD
TRAIL
PRIMITIVE ROAD
STATE HIGHWAY
COUNTY OR LOCAL ROAD
PRIVATE ROAD
U.S. NUMBERED HIGHWAY
STATE HIGHWAY
RAILROAD (ANY NUMBER OF TRACKS USED BY A SINGLE OPERATING COMPANY)
RAILROAD STATION
GRADE CROSSING
UNDERPASS
OVERPASS
AIRFIELD, LIMITED FACILITIES
DOCK, PIER OR LANDING
MARSH OR SWAMP AREA
DRAINAGE DITCH
RESERVOIR, POND OR LAKE
RESERVOIR WITH DAM
DAM WITH ROAD
HIGHWAY BRIDGE (20 FT OR MORE IN LENGTH)
SMALL BRIDGES CLOSELY SPACED
PAVED FORD
FORD, ROAD ESTABLISHED
NATIONAL, STATE OR MUNICIPAL RESERVATION BOUNDARY
COUNTY BOUNDARY
U.S. LAND TOWNSHIP LINE
SECTION LINE
TOURIST COURT OR MOTEL
PICNIC GROUND
OBSERVATION OR LOOKOUT TOWER
GOLF COURSE OR COUNTRY CLUB
WAYSIDE PARK
FAIRGROUND, RACE COURSE OR SPEEDWAY
CAMP OR LODGE
FARM UNIT OR DWELLING
GROUP OF DWELLINGS CLOSELY SPACED (15 IF NO FIGURE SHOWN)
CHURCH OR OTHER RELIGIOUS INSTITUTION
HOSPITAL
CEMETERY
CHURCH WITH CEMETERY ADJACENT
GROUP OF MIXED CULTURAL FEATURES, CLOSELY SPACED (NUMBER OF UNITS SHOWN REGARDLESS OF ORDER)
STORE OR SMALL BUSINESS ESTABLISHMENT
FACTORY OR INDUSTRIAL PLANT
SAWMILL
ORE MILL OR REDUCTION PLANT
MINE, SHAFT OR DRIFT
BOUNDARY OF MINING AREA
GRAVEL PIT
SCHOOLHOUSE, OTHER EDUCATIONAL INSTITUTION
COUNTY OR STATE PRISON FARM
RADIO OR TELEVISION STATION, CALL LETTERS
CORPORATE LIMITS AND ROADS THROUGH TOWN
COUNTY SEAT
OTHER CITIES AND TOWNS
TRIANGULATION STATION
SEWAGE DISPOSAL PLANT
DRIVE-IN THEATRE
POST OFFICE
POST OFFICE AND BUSINESS
POWER SUBSTATION
PUMPING STATION, OIL OR GAS
WATER SUPPLY STANDPIPE OR TANK
ATHLETIC FIELD OR AMUSEMENT PARK
NATIONAL FOREST HIGHWAY
NATIONAL FOREST ROAD (BUILT AND MAINTAINED BY NAT. FOR. SERVICE)
NATIONAL FOREST MAINTAINED ROAD (COUNTY ROAD-MAINTAINED BY NAT. FOR. SERVICE)
TIMBER ACCESS ROADS (NOT PUBLICLY MAINTAINED)
DIVIDED HIGHWAY (FOUR OR MORE LANES)
INTERCHANGE
MILEAGE BETWEEN POINTS
FEDERAL AID PRIMARY HIGHWAY SYSTEM
FEDERAL AID SECONDARY HIGHWAY SYSTEM
FEDERAL AID INTERSTATE ROUTE
PROJECTED ROAD
OUACHITA NATIONAL FOREST
STATE GAME REFUGE
Lake Winona
Lake Norrell
Hurricane Lake
Camp Quapaw
Kentucky
Owensville
Bland
Paron
Reform
Rubicon
Goodspond
Pleasant Grove
Bryant
Sardis
Show
Detroit
Haskell
Traskwood
Benton
Alexander
Pulaski
Garland
Perry
Grant
Hot Spring
Saline
Little Rock
Hot Springs
Malvern
Sheridan
Prayer
To Perryville
To Little Rock
To Hot Springs
To Lonsdale
To Malvern
To Sheridan
To Prayer
R 19 W
R 18 W
R 17 W
R 16 W
R 15 W
R 14 W
R 13 W
R 12 W
T 2 N
T 1 N
T 1 S
T 2 S
T 3 S
PARON
Sec. 31, T 2 N., R 16 W.
BAUXITE
Sec. 9-16, T 2 S., R 14 W
INSET NO. 1
Sec. 17, T 1 N., R 15 W.
TRASKWOOD
Sec. 19, T 3 S., R 15 W.
VIMY RIDGE
Sec. 28, T 1 S., R 13 W.
AREA ADJACENT TO BENTON
T. 2 S., R. 15 W.
HASKELL
Sec. 32, T. 2 S., R. 15 W.
BENTON
Pop. 10,148
(1957 CENSUS)
Note: Insets are approximately five times the map scale except Benton area inset which is three times map scale, and include all crowded areas and towns of less than 500 population.
Area — 729 Square Miles
Population — 28,956 1960 Census
Map issued 3-5-58, replaces tracing issued 2-6-52
- - Sold By - -
FARRELL & SCHAER BLUE PRINT CO.
Rector Bldg. - 3rd & Spring St.
LITTLE ROCK, ARKANSAS.
PRICE FOR RESALE NOT TO EXCEED
50¢
ARKANSAS STATE HIGHWAY DEPT.
DIV. OF PLANNING & RESEARCH
LITTLE ROCK, ARK.
REVISIONS
DATE BY
7-1-59 H.D.
3-1-61 H.D.
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS
MAP 7
GENERAL HIGHWAY MAP
SALINE COUNTY
ARKANSAS
PREPARED BY
ARKANSAS STATE HIGHWAY COMMISSION
DIVISION OF PLANNING AND RESEARCH
IN COOPERATION WITH
U.S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
MILES
1957
Polyconic Projection - North American Datum
Based on U.S.C. & G.S. Special Publication No. 59

14 MMT
20% Vol.
34% wt.
10MMT
21% Vol.
36% wt.
40 MMT
33% Vol.
48% wt.
11 MMTS
22% Vol.
37% wt.
RETURN TO
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS
APPROXIMATE MEAN DECLINATION
NORMAL REGIONAL VARIATION NOT REMOVED
INCLINATION
REGIONAL MAGNETIC VALUES
1960
REPORT I
TOTAL MAGNETIC INTENSITY
BENTON AREA
ARKANSAS
FLIGHT ALTITUDE 300 FEET
FLIGHT INTERVAL 500 FEET
CONTOUR INTERVAL 20 GAMMA
BASE INTENSITY ARBITRARY
AERO SERVICE CORP., PHILA., PENNA.
SCALE 1 INCH = 500 FEET
500 0 500 1000 1500 2000 FEET
SURVEYED AND COMPILED 1960

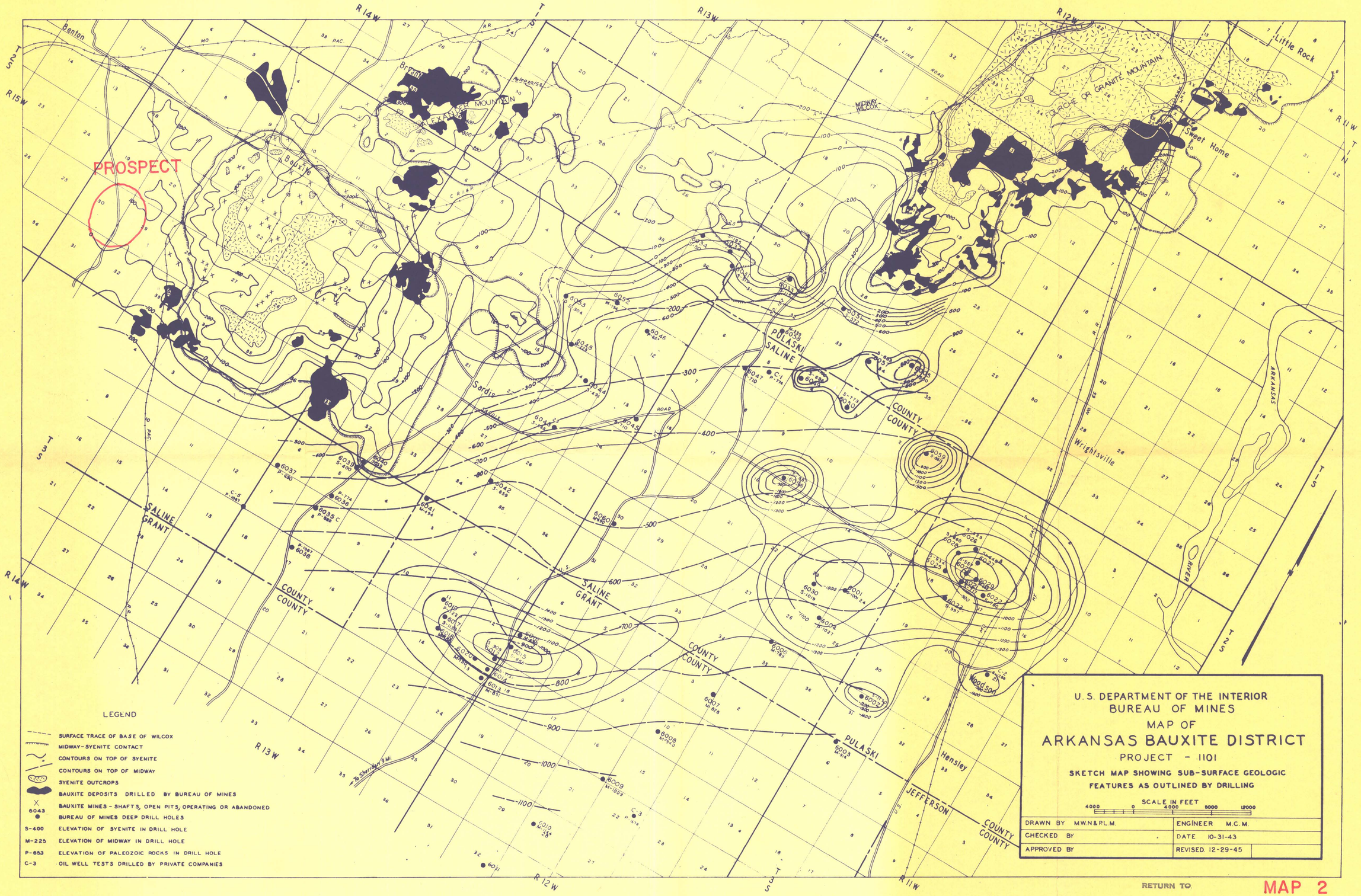



FIGURE 16

RETURN TO

ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS

MAP 2

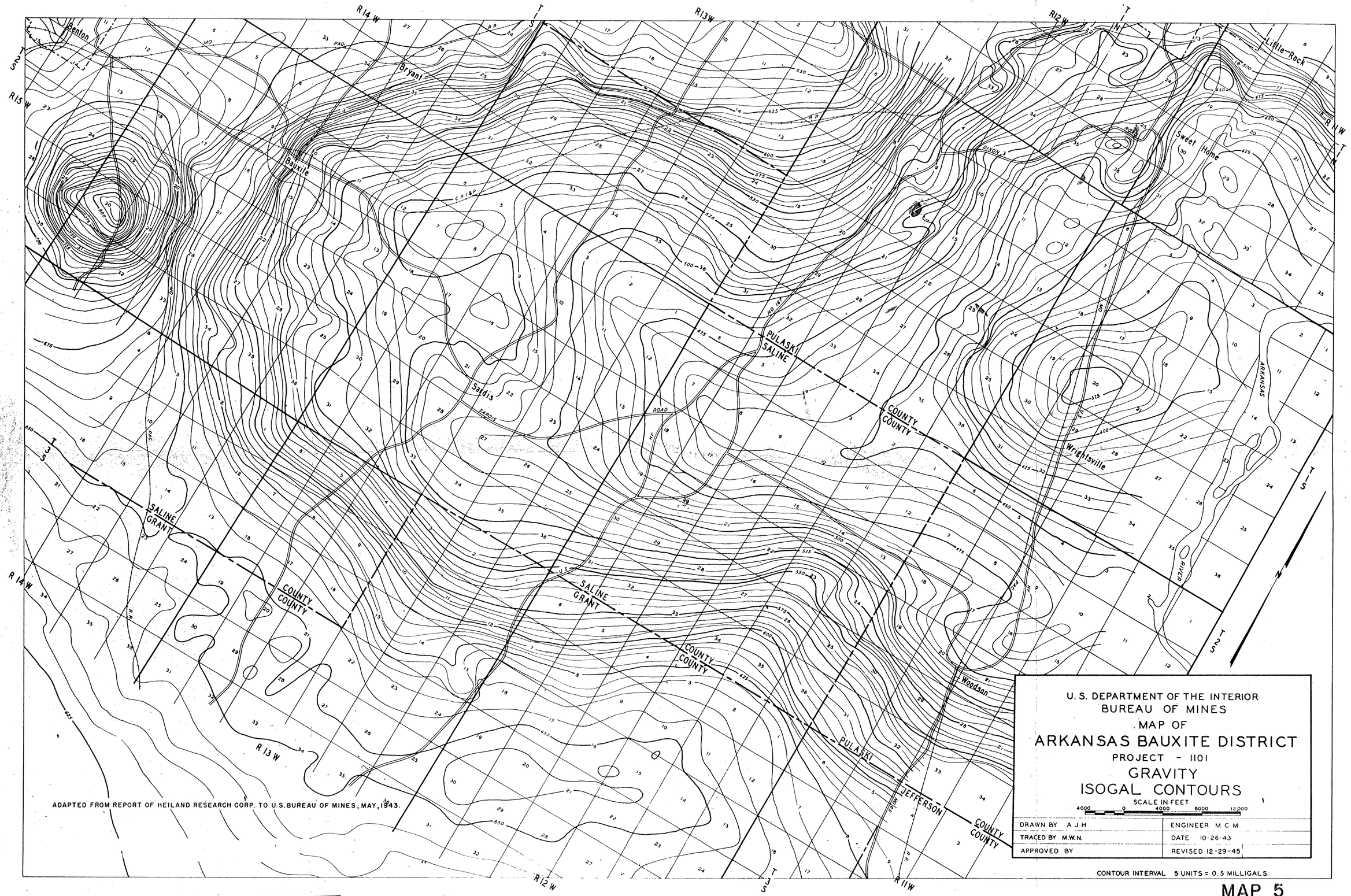



FIGURE 14

MAP 5

RETURN TO
ALPHA MINERAL COMPANY
753 W. CREEKSIDE DRIVE
HOUSTON 24, TEXAS