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Richardson Operating Company
1700 Lincoln St.
Suite #1700
Denver, Co. 80302
Attn: Mr. David B. Richardson

July 9, 1996

RE: W. Gallegos Area
E/2 Sec. 15, T29N, R13W
San Juan Co., New Mexico

Dear Mr. Richardson,

I have completed the geological evaluation of the above referenced area. The basal coal of the Cretaceous Fruitland Formation and the underlying sandstone of the Cretaceous Pictured Cliffs Formation, were the subjects of this investigation. Both of these formations are found at shallow depths of approximately 1,200 feet, and are gas productive in the immediate area. The Upper Pictured Cliffs Sandstone is approximately 40 feet thick in the east half of Section 15, and the overlying Basal Fruitland Coal bed is up to 20 feet thick.

The following is a summary of my findings:

1. **Exhibit A**. This is a stratigraphic cross-section through Section 15, T29N, R13W. As can be seen, the Basal Fruitland Coal and the Upper Pictured Cliffs Sandstone are present in this area. The Coal thins from a thickness of 14 feet in the Farmington Unit B-1 well (east) to a thickness of 6 feet in the Farmington Unit C-1 well (west). The Pictured Cliff Sandstone, on the otherhand, has a relatively uniform thickness of approximately 40 feet. Both of these potential gas reservoirs are less than 1,200 feet in depth.

2. **Exhibit B.** This exhibit is an isopach map of the Basal Fruitland Coal. As can be seen, the coal thins from approximately 20 feet on the east side of Section 15, to 5 feet the west side. Similar thickness variations are observed in the immediate area where coal gas production is already established.

3. **Exhibit C.** This is an isopach map of the Upper Pictured Cliffs Sandstone in Section 15. As can be seen, the sandstone ranges between 30 and 50 feet in thickness, and in both wells in the cross-section, the thickness is greater than 40 feet. Pictured Cliffs gas wells in the immediate area have similar sand thickness.

'64 Kd (5687-5854)
IPF (SI GW)?

'62 kd-Kg (5732'-5925')
IPF 2,044 mcfgpd

A (SW)

A' (NE)

FRUITLAND FM. (Kf)

BASAL Kf

COAL *

PICTURED CLIFFS FORMATION (Kpc)

UPPER *

LOWER

LEWIS SHALE

SCHLUMBERGER INDUCTION-ELECTRICAL LOG
SCHLUMBERGER WELL SURVEYING CORPORATION
Houston Texas

COUNTY SAN JUAN N.M.
FIELD or LOCATION BASIN DAKOTA
WELL FARMINGTON "C" UNIT #1
COMPANY PIONEER PROD. CORP.

COMPANY PIONEER PRODUCTION CORPORATION
WELL FARMINGTON "C" UNIT #1
FIELD BASIN DAKOTA
COUNTY SAN JUAN STATE NEW MEXICO
LOCATION 1625 FSL & 1250 FWL OF NW ¼
Sec. 15 Twp. 29N Rge. 13W
Other Services: SGR
Permanent Datum: GL Elev. 5286
Log Measured From KB 12 Ft. Above Perm. Datum
Drilling Measured From KB
Elev.: K.B. 5298' D.F. 5297' G.L. 5286'
Date 11-15-64

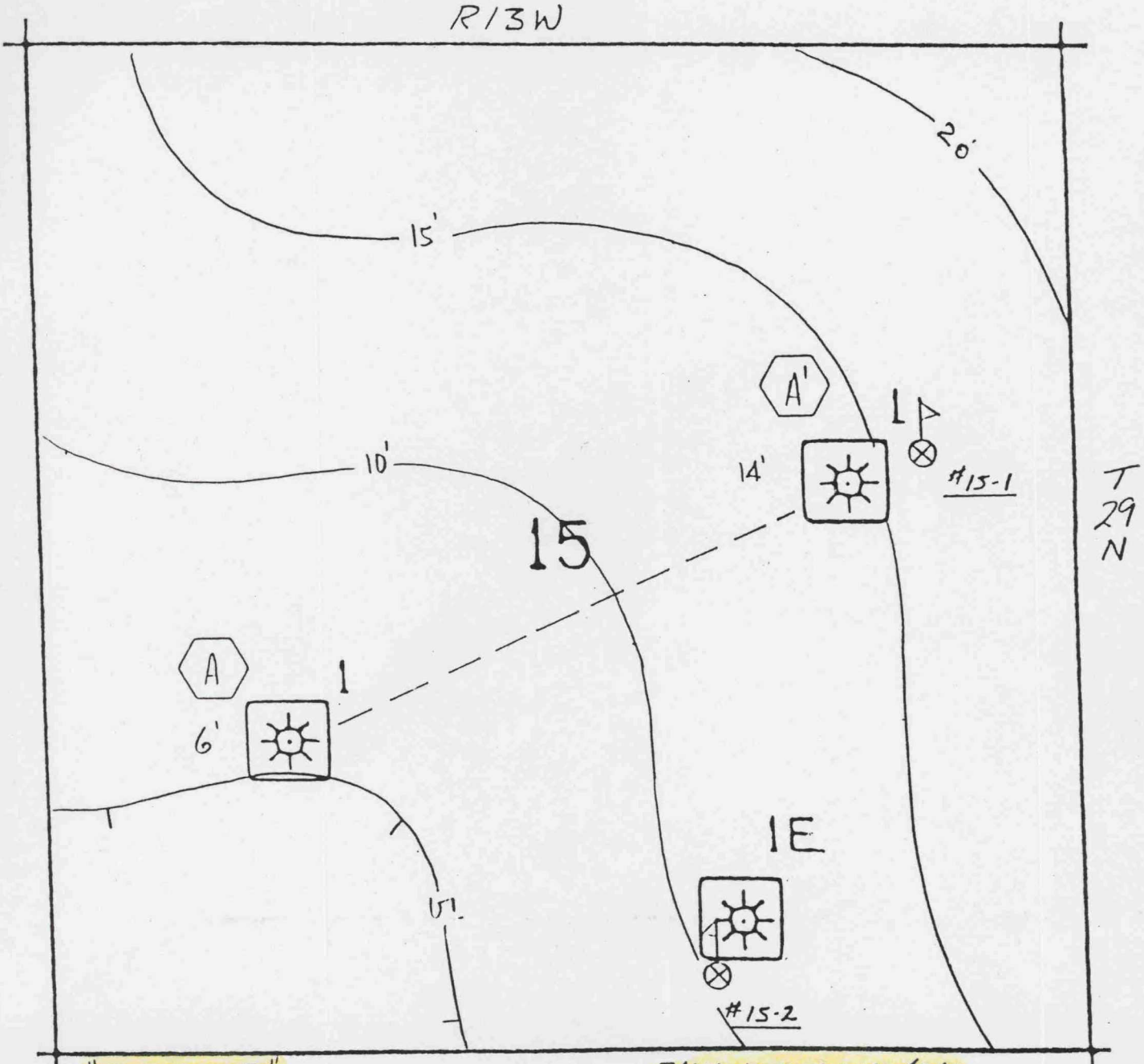
SCHLUMBERGER INDUCTION-ELECTRICAL LOG

COUNTY SAN JUAN N.M.
FIELD or LOCATION BASIN DAKOTA
WELL FARMINGTON UNIT # B-1
COMPANY REDFERN & HERD INCORPORATED

COMPANY REDFERN & HERD INCORPORATED
WELL FARMINGTON UNIT # B-1
FIELD BASIN DAKOTA
LOCATION SEC. 15-29N-13W
COUNTY SAN JUAN
STATE NEW MEXICO
Other Surveys: S-GR
Location of Well: 2300' FNL 1150' FEL SW-SE-NE
SEC. 15-29N-13W
Elevation: D.F. ____ K.B. 5312' or G.L. 5300'
FILING No.
RUN No. ONE
Date 7-25-62

DATUM-Top Kpc

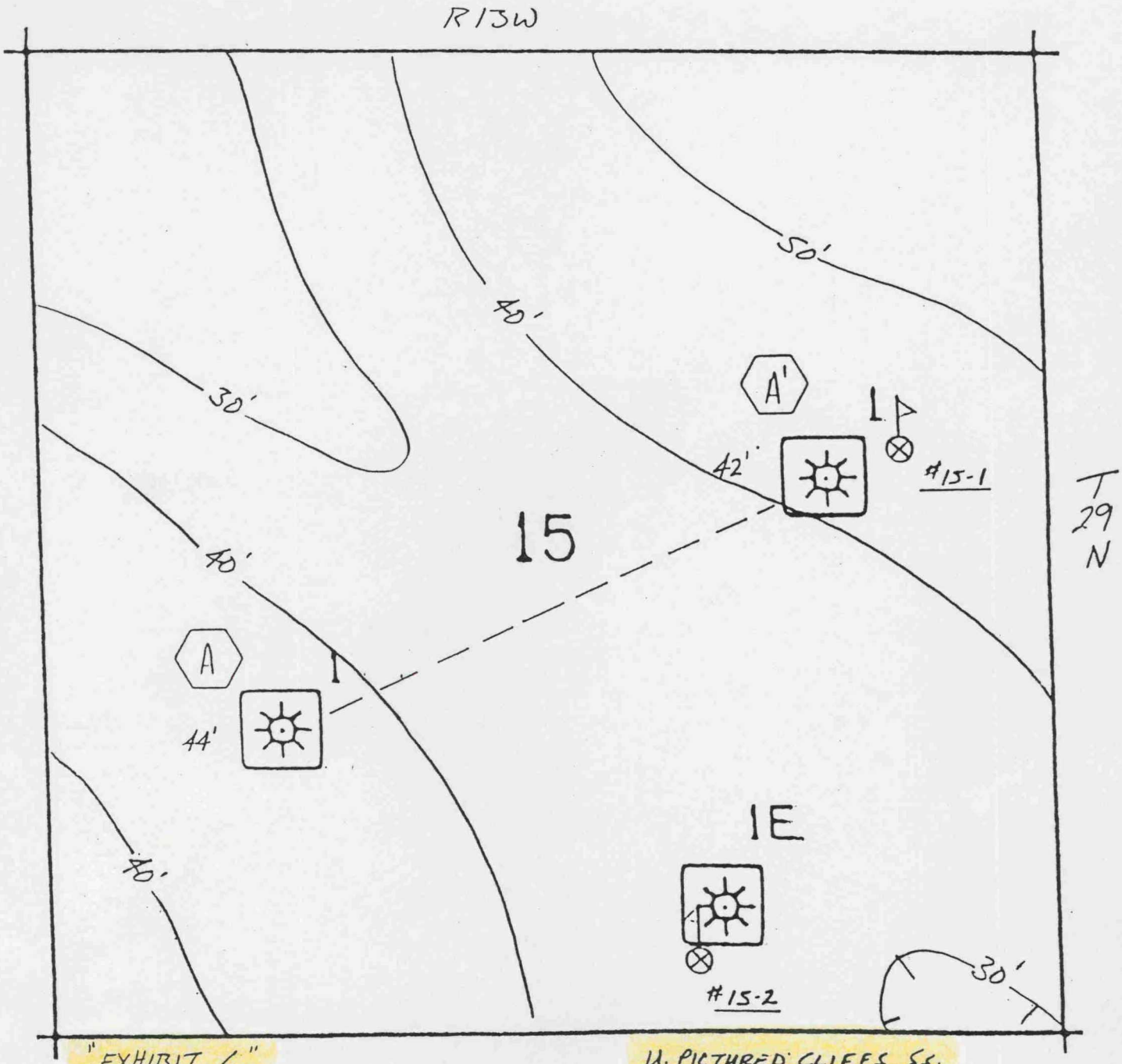
W. GALLEGOS AREA
"EXHIBIT A"
(R. MILLER 7-96)



"EXHIBIT B"
W. GALLEGOS AREA
SAN JUAN Co., N.M.

BASAL FRUITLAND COAL
ISOPACH MAP
Ci = 5'

(R.V. MILLER '91)



"EXHIBIT C"

W. GALLEGOS AREA
SAN JUAN Co., N.M.

U. PICTURED CLIFFS Ss.
ISOPACH MAP
(NET Sd-Sp)
CI = 10 Ft.

(R.Y. MILLER 7-96)