U.S. BRUEAU OF RECLAMATION #1 LUKE-CAP 7-15
Sec. 32-T3N-R1W MARICOPA COUNTY

16

County Maricopa

Area Litchfield Park

Lease No.

Well Name U. S. Bureau of Reclamation #1 Luke - Central Arizona Project Hole #(B-3-1)

Location SE SE Sec 32 Twp 3N Range 1W Footage est. 1260 fsl 330 fel

Elev 1115'+Gr KB Spud Date 3-2-66 Completed ~~Abandon~~ 3-18-66 Total Depth 2003'

Contractor

Drilled by Rotary
Cable Tool

Casing Size	Depth	Cement

Production Horizon

Initial Production

REMARKS Ground Water Test Hole;

Elec Logs Condensed Graphic Log; Electrical Log;

Applic. to Plug Plugging Record Completion Report

Sample Log
Sample Descript.
Sample Set n/a
Core Analysis
DSTs

Water well accepted by

Bond Co. & No.

Bond Am't $ Cancelled Date Organization Report

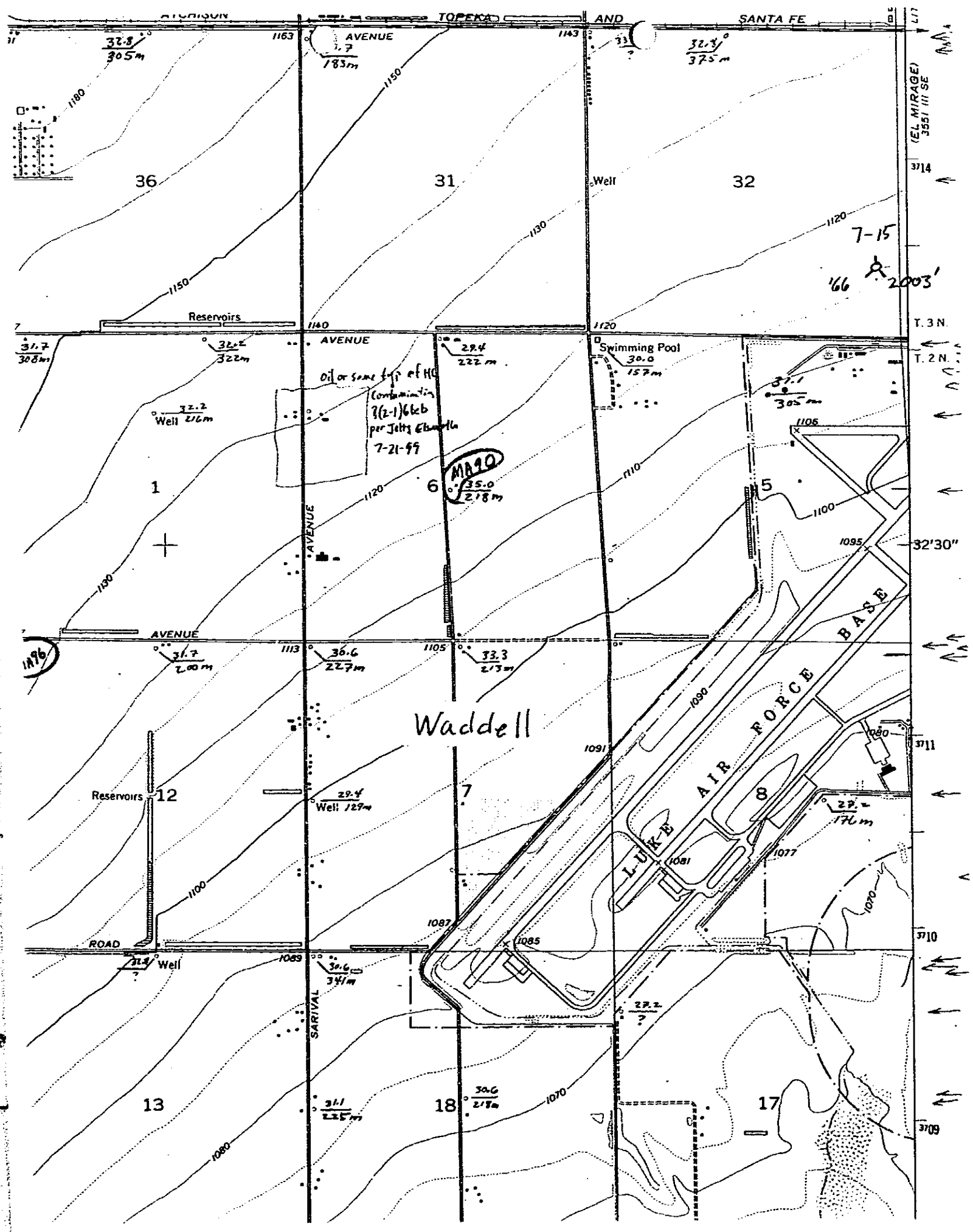
Filing Receipt Dated Well Book Plat Book

API No. 02-013-05046 Loc. Plat Dedication

Permit Number None Date Issued

7-15

7-15


ATCHISON
TOPEKA
AND
SANTA FE
AVENUE
(EL MIRAGE)
3551 III SE
36
31
32
Well
Reservoirs
7-15
'66
2003'
T. 3 N.
T. 2 N.
Swimming Pool
Oil or some type of HC contamination
7-21-99
1
6
5
32'30"
AVENUE
Waddell
AIR FORCE BASE
LUKE
12
7
8
Reservoirs
Well
ROAD
SARIVAL
13
18
17

FORM A-3

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF WATER DATA COORDINATION
INVENTORY OF HYDROLOGIC DATA STATIONS
GROUND WATER

#7-15 -16?

1. AGENCY CODE	2. TYPE	3. LATITUDE	4. LONGITUDE	5.
BR	G	33° 33' 15"N	112° 22' 30"W	

6. AGENCY STATION NUMBER AND NAME

(B-3-1) 32 dda Luke Field

7. DRAINAGE BASIN CODE No.	Letter	8. STATE CODE	9. COUNTY CODE	10. COUNTY NAME
69	S	002	013	Maricopa

11. PERIOD OF RECORD (YEAR)
Began 1966 Discontinued Y☐ Interruption Excess 1 Year

12. ALTITUDE AT STATION DETERMINED BY
☐1 Spirit Level or Transit ☒3 Topographic Map
☐2 Altimeter or Hand Level ☐4 Not Determined

13. TYPE OF STATION
☒105 Well ☐107 Spring

14a. MEASUREMENT OF WATER LEVEL OR PRESSURE HEAD
☒381 Nonpumping ☐382 Pumping

b. MEASUREMENT OF DISCHARGE OR RECHARGE
☐425 Natural Flow
☐426 Pumpage
☐427 Recharge

15. FREQUENCY
☐432 Continuous Recorder ☐437 Quarterly
☐433 Telemetered ☐438 Semiannual
☐434 Daily ☐439 Annual
☐435 Weekly ☐440 Other Periodic
☒436 Monthly

16. DOES MEASUREMENT CHECKED IN BLOCK 14 REFLECT OUTSIDE, SHORT-TERM, CYCLIC OR INTERMITTENT WITHDRAWAL OR RECHARGE
☒445 Yes ☐446 No

17. SUPPLEMENTARY DATA AVAILABLE FOR STATION
☐451 Total Annual Pumpage or Flow
☐452 Specific Capacity
☐453 Water Quality, Recurring Measurement
☒454 Water Quality, Non-Recurring Measurement
☒455 Depth of Well
☒456 Casing Record
☒457 Screen Record
☒458 Driller's Log
☒459 Geologic Log
☒460 Instrument Log
☐461 Coef. of Permeability, Transmissibility or Storage (By Field Methods)

☐462 Nonpumping Water Level or Pressure Head Measurement (Leave blank if 381 checked)
☒463 Pumping Water Level or Pressure Head Measurement (Leave blank if 382 checked)
☐464 Natural Flow or Pumpage Measurement (Leave blank if 425 or 426 checked)
☐465 Recharge Measurement (Leave blank if 427 checked)

18. STORAGE OF DATA (REFERS TO ITEM 14)
☐501 Published ☐503 Data on Punchcard ☐505 Other
☒502 Not Published ☐504 Data on Magnetic Tape

19a. INQUIRIES ABOUT DATA SHOULD BE SENT TO:
Office U.S. Bureau of Reclamation, Phoenix Development Office
Street No. 135 North Second Avenue, Room 524
City, State, Zip Phoenix, Arizona 85003 City Code

b. DATA ARE AVAILABLE TO PUBLIC ON REQUEST ☒Yes ☐No

20. OFFICE COMPLETING FORM
Same

21. COMPILER'S NAME
Chief, Geology Division

22. DATE Month 10 Year 1967

(B-3-1) 32daa

Form No. PHD-20-Rev.
July 1964, March 1965

BUREAU OF RECLAMATION
SOILS LABORATORY
PHOENIX, ARIZONA
REPORT OF WATER ANALYSIS

Date 4/11/66
Analyzed by DS
Checked by HEB

LAB NO.	COLLECTORS NAME	SAMPLE DATE	TEMP. °F	ANALYSIS DATE	SOURCE	LOCATION
61	USBR RKG-CIG	3/8/66	58	3/30/66		PR-1 Outlet Painted Rock Dam @ 0930 hr. $K \times 10^6$ = 1000
62	↓	↓	60	↓		PR-2 Painted Rock Reservoir @ 1000 hr ↓ = 1010
63	↓	↓	58	↓		PR-3 @ 1030 hr ↓ = 1120
82	Getmans	3/25/66	84		Well	(B-3-1) 32daa $K \times 10^6$ = 550 @ 1130 #1
83		↓	80	↓	Well	↓ ↓ ↓ 860 @ 1130 #2
84		↓	64	↓	Drill Well	(B-3-1) 32cbb (B-3-1) 32daa ↓ 700 @ 0945

Temp.	Lab. No.	EC x 10⁶ at 25°C	pH	Total solids ppm	Na%	SAR	Concen.	CATIONS Na	Ca	Mg	K	ANIONS CO_3	HCO_3	SO_4	Cl	NO_3	B	F	TOTAL Cations me/L	Anions me/L
75°F	61	1040	8.3	553	60	4.3	me	5.87	2.52	1.22	0.12	0.0	2.65	1.35	5.75	—	—	—	9.73	9.75
							ppm	135	50.4	14.8	4.7		162	64.8	204		0.10	0.75		
	62	1030	8.3	542	61	4.4	me	5.76	2.66	0.86	0.12	0.0	2.65	1.30	5.65	—	—	—	9.40	9.60
							ppm	132	53.2	10.5	4.7		162	62.4	200		0.10	0.75		
	63	1110	8.3	587	61	4.4	me	6.10	3.16	0.66	0.13	0.0	2.62	1.49	6.20	—	—	—	10.05	10.32
							ppm	140	63.2	8.03	5.1		160	71.6	220		0.24	0.75		
	82	540	8.4	330	81	6.5	me	4.68	0.44	0.60	0.06	0.30	2.38	1.68	1.20	—	—	—	5.78	5.56
							ppm	108	8.8	7.30	2.4	9.0	145	80.7	42.5		0.90	3.65		
	83	870	8.0	440	47	2.6	me	3.68	3.80	0.12	0.18	0.0	0.80	1.23	5.30	—	—	—	7.78	7.33
							ppm	84.6	76.0	1.46	7.0		48.8	59.1	188		0.60	1.00		
	84	690	8.2	436	43	2.2	me	3.00	3.76	0.04	0.15	0.25	2.10	3.30	1.60	—	—	—	6.95	7.25
							ppm	69.0	75.2	0.49	5.9	7.5	128	158	56.7		0.72	2.30		

Form No. PHD-22
July 1963

Oil #7-15

5

CONDENSED GRAPHIC LOG OF GROUND WATER TEST HOLE

PROJECT CENTRAL ARIZONA PROJECT STATE ARIZONA

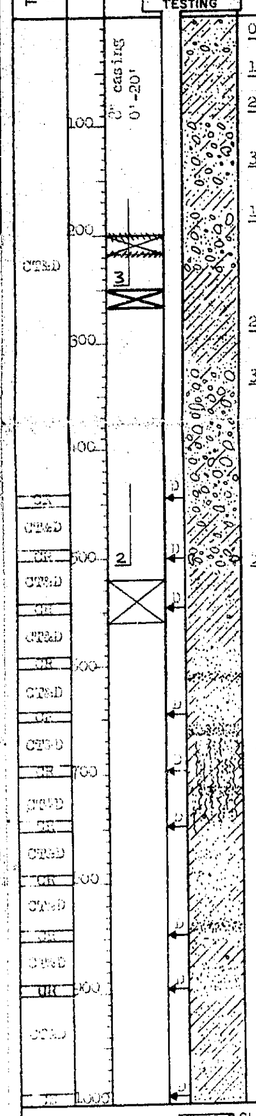
HOLE NO (B-3-1) 32 dda GROUND ELEVATION 1,115'

BEGUN March 2, 1966 FINISHED March 18, 1966 TOTAL DEPTH 2,003'

DEPTH OR ELEVATION OF WATER TABLE Depth 312' - March 18, 1966 HOLE LOGGED BY L. D. Hampton

TYPE OF SAMPLE	DEPTH	PIEZOMETER DATA	LOG	CLASSIFICATION AND PHYSICAL CONDITION

SAMPLES FOR TESTING



0'-10': Clayey silt--reddish brown, loose, clayey silt with about 20% fine to coarse predominantly granitic sand and few gravels, mild acid reaction.

10'-20': Silty sand--reddish brown, loose, medium to coarse silty sand, about 50% andesitic and basaltic, 50% granitic, slight acid reaction.

20'-35': Silty sand and gravel--reddish brown, loose, poorly sorted coarse silty sand and well rounded to subangular fine gravel to 3/8", about 60% andesitic and basaltic, 40% granitic, mild acid reaction.

35'-100': Sandy silt--reddish brown, generally loose sandy silt with thin calcareous cemented zones, sand is fine to coarse, subrounded to subangular, mostly granitic with few fine gravels, mild to strong acid reaction.

100'-230': Silty sand and gravel--reddish brown to purple, loose, fine to coarse, rounded to subangular, silty sand with up to 40% rounded fine gravel, 162'-174' - clayey silt lense, mild to strong acid reaction.
100'-140'--about 60% andesitic and basaltic, 40% granitic.
140'-174'--80%-80% granitic, 20%-40% andesitic and basaltic.
174'-230'--about 70% andesitic and basaltic, 30% granitic.

230'-320': Sandy silt--reddish brown, loose to firm, silt with fine to coarse, subrounded to angular sand, about 60% granitic, 40% andesitic and basaltic, 290'-320' strong traces of calcareous cement, moderate to strong acid reaction.

320'-507': Silty and clayey sand and gravel--reddish brown to multicolored (red, gray, and green), loose, fine to coarse, rounded to subangular sand and gravel to 3" with lenses of silt and clay, sand is predominantly quartzose, gravel is 70%-80% andesitic and basaltic, 20%-30% granitic, [illegible] strong acid reaction. Apparent average specific gravity - 2.0[illegible].

507'-1257': Sand and clayey silt--reddish brown, generally loose, lenses of fine to coarse, angular to subrounded, predominantly quartzose sand, alternating with lenses of silt with varying amounts of brown or bottled, plastic clay, calcareous cemented zones less than 1' thick spaced 3' to 10' apart, occasional rounded, fine andesitic or basaltic gravel, [illegible]-750' tuffaceous, mild to strong acid reaction. Apparent average specific gravity - 2.04.

CR = CORE
CT = CUTTINGS
D = DRILLERS LOG

CLAY & CEMENT PACKER
BOTTOM OF PIEZOMETER TUBE & SUFFIX NUMBER 2

D DENSITY SAMPLE
P PERMEABILITY SAMPLE
M MOISTURE SAMPLE

Gravel
Sand
Silt
Clay
Tuff

HOLE NO (B-3-1) 32 dda

Sec. 32-T3N-R1W MARICOPA CO
... OF RECLAMATION

Form No. PHD-22
July 1963

CONDENSED GRAPHIC LOG OF GROUND WATER TEST HOLE

PROJECT: CENTRAL ARIZONA PROJECT — STATE: ARIZONA
HOLE NO.: (S-3-1) 32 dda — GROUND ELEVATION: 1,115 ±
BEGUN: March 2, 1966 — FINISHED: March 10, 1966 — TOTAL DEPTH: 2,003'
DEPTH OR ELEVATION OF WATER TABLE: Depth 312' - March 10, 1966 — HOLE LOGGED BY: L. D. Hampton

TYPE OF SAMPLE	DEPTH	PIEZOMETER DATA	SAMPLES FOR TESTING	LOG	CLASSIFICATION AND PHYSICAL CONDITION
CT&D					
CR	1100		D		
CT&D					
CR	1200		D		
CT&D					1257'-1965': Sandy and clayey silt--reddish brown, loose, micaceous, sandy and clayey silt with occasional lenses of fine to medium, angular to subrounded, quartzose sand, scattered calcareous cemented zones less than 1' thick, 1470'-1550' silt and clay contains small plant stems, 1790'-1908' numerous thin (1/8") dark partings with apparent dip of 0°-15°, mild to strong acid reaction. Apparent average specific gravity - 2.33.
CR	1300		D		
CT&D					
CR	1400		D		
CT&D					
CR			D		
CT&D	1500				
CR					
CT&D					
CR	1600		D		
CT&D			D		
CR					
CT&D					
CR	1700				
CT&D			D		
CR					
CT&D					
CR	1800				
CT&D			D		
CR	1900				1965'-2003': Silty and sandy clay--reddish brown, plastic clay with silt and fine to medium, angular to subrounded, quartzose and micaceous sand, calcareous cemented zones less than 1' thick, numerous thin (1/8") dark partings with apparent dip 20°-45°, usually associated with reddish clay seams, mild to strong acid reaction. Apparent average specific gravity - 2.[illegible]
CT&D		T.D. 2003'			
CR	2000		D		

CR = CORE
CT = CUTTINGS
D = DRILLERS LOG

CLAY & CEMENT PACKER
BOTTOM OF PIEZOMETER TUBE & SUFFIX NUMBER (2)

D DENSITY SAMPLE
P PERMEABILITY SAMPLE
M MOISTURE SAMPLE

Gravel
Sand
Silt
Clay
Tuff

HOLE NO. (S-3-1) 32 dda

E(1-2)19 bad

Oil #7-15

OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013
PHONE: (602) 271-5161

June 19, 1973

Dr. H. Wesley Peirce
Arizona Bureau of Mines
University of Arizona
Tucson, Arizona 85721

Dear Wes:

I received and read your salt paper this past Thursday. I think that you have done an excellent job of presenting and discussing the problems. The paper deserves a wider "audience" than it's apt to get in the Transactions of the Salt Symposium in Houston.

I object mildly to your use of the name "Gila" for the low area in south-central Arizona, as it is a preempted name, as far as the Commission is concerned. When I identified tentatively this feature back in 1971 I labeled it the "Phoenix Low", as it lies within Cooley's Phoenix basin (Figures 7 and 8, Arizona Geological Society's geologic map). I used the term "Gila" for the elongate low area east of the Colorado River (see enclosed gravity map). Metzger in his paper on the Bouse Formation, USGS Research, 1968, stated that there was a possibility that the 600 feet of clay reported in well logs in the area west of Phoenix in the Salt River Valley might be contemporaneous with the Bouse Formation. I surmised that if this was so that the gravity minimum, although poorly controlled, might be reflecting an old eastward arm of the Pliocene Bouse embayment. At the time of naming the Gila and Phoenix Lows we did not have the logs of the wells Metzger vaguely referred to. We do now, and last Friday I looked at some of them. I agree with Metzger. (See enclosed correlation section.)

I have some "half-baked" ideas about where some of the salt at Luke came from, and one of these days maybe I can get them on paper for your critical eye.

Cordially yours,

Jack

Jack Conley

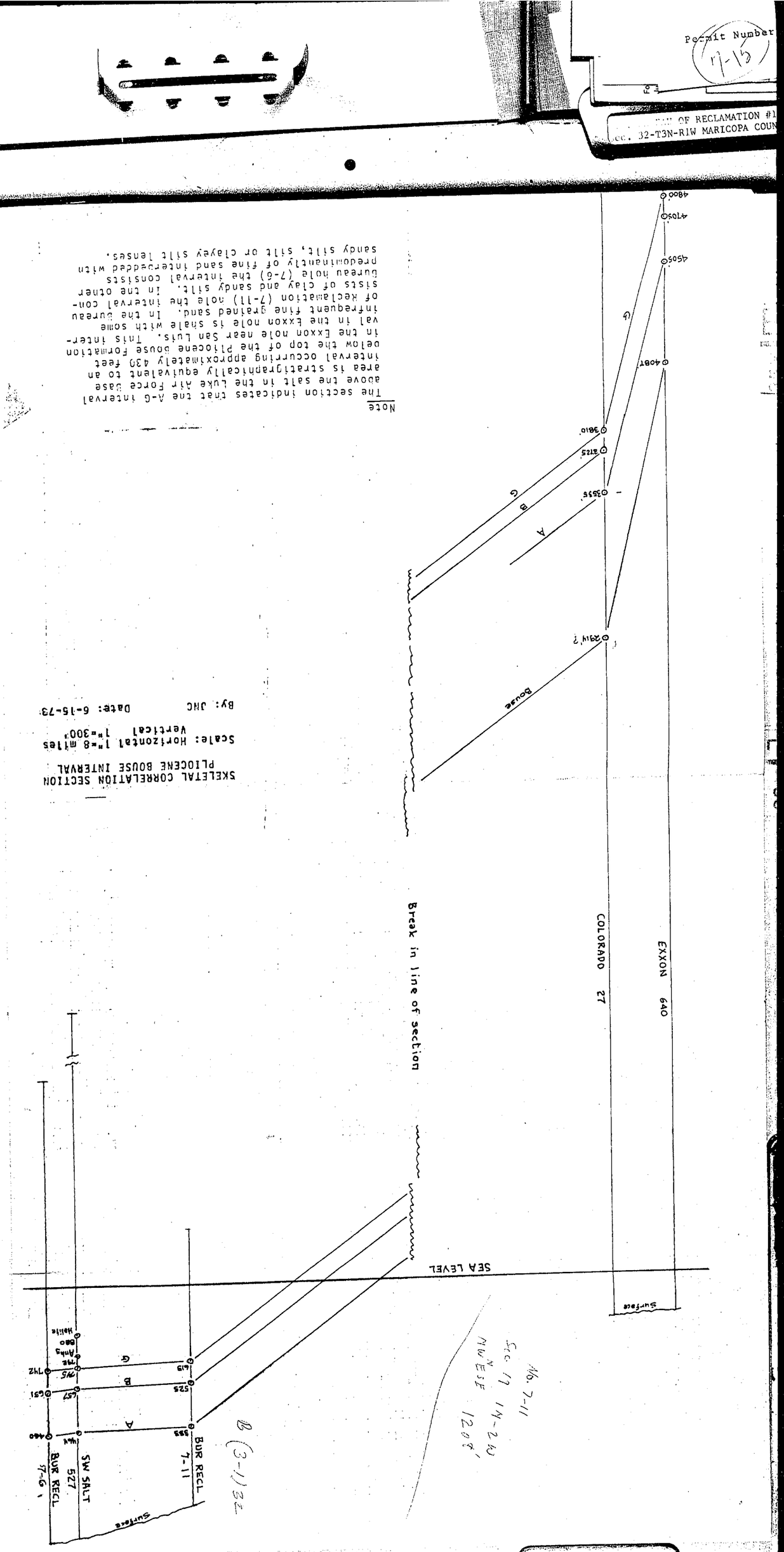
P.S. The Bouguer gravity map of Arizona, prepared by West and Sumner, will be printed (hopefully) in the near future. The enclosed gravity anomaly map obviously was contoured in parts of the State from very widely scattered stations. The green colored areas I've added are minima from Peterson's Map GP-615.

Please return the enclosed gravity map at your convenience.

J.N.C.

JNC:st

Enclosures



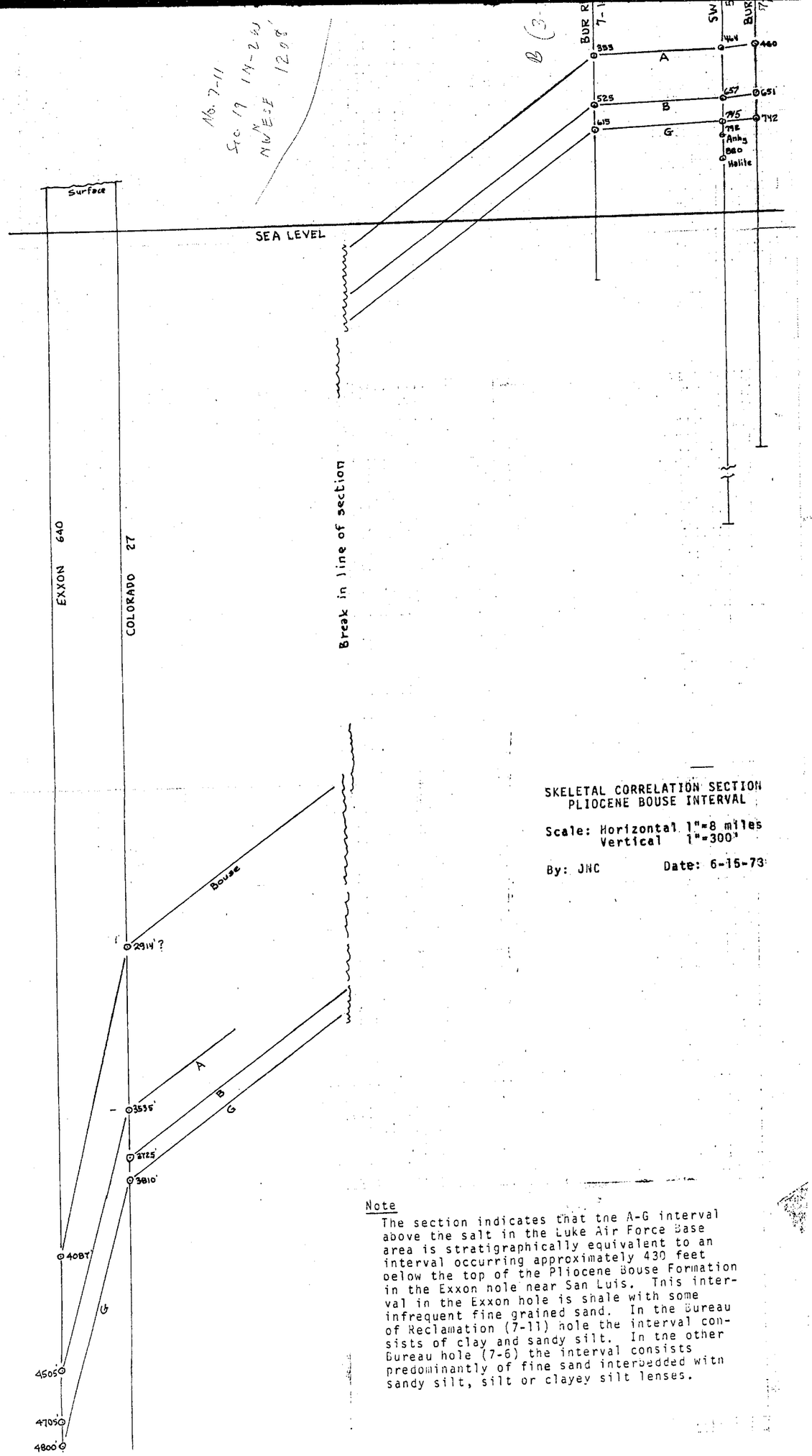
SKELETAL CORRELATION SECTION
PLIOCENE BOUSE INTERVAL

Scale: Horizontal 1"=8 miles
Vertical 1"=300'

By: JMC Date: 6-15-73

Note
The section indicates that the A-G interval above the salt in the Luke Air Force Base area is stratigraphically equivalent to an interval occurring approximately 430 feet below the top of the Pliocene Bouse Formation in the Exxon hole near San Luis. This interval in the Exxon hole is shale with some infrequent fine grained sand. In the Bureau of Reclamation (7-11) hole the interval consists of clay and sandy silt. In the other Bureau hole (7-6) the interval consists predominantly of fine sand interbedded with sandy silt, silt or clayey silt lenses.

OF RECLAMATION #1
32-T3N-R1W MARICOPA COUN
Permit Number
17-13



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