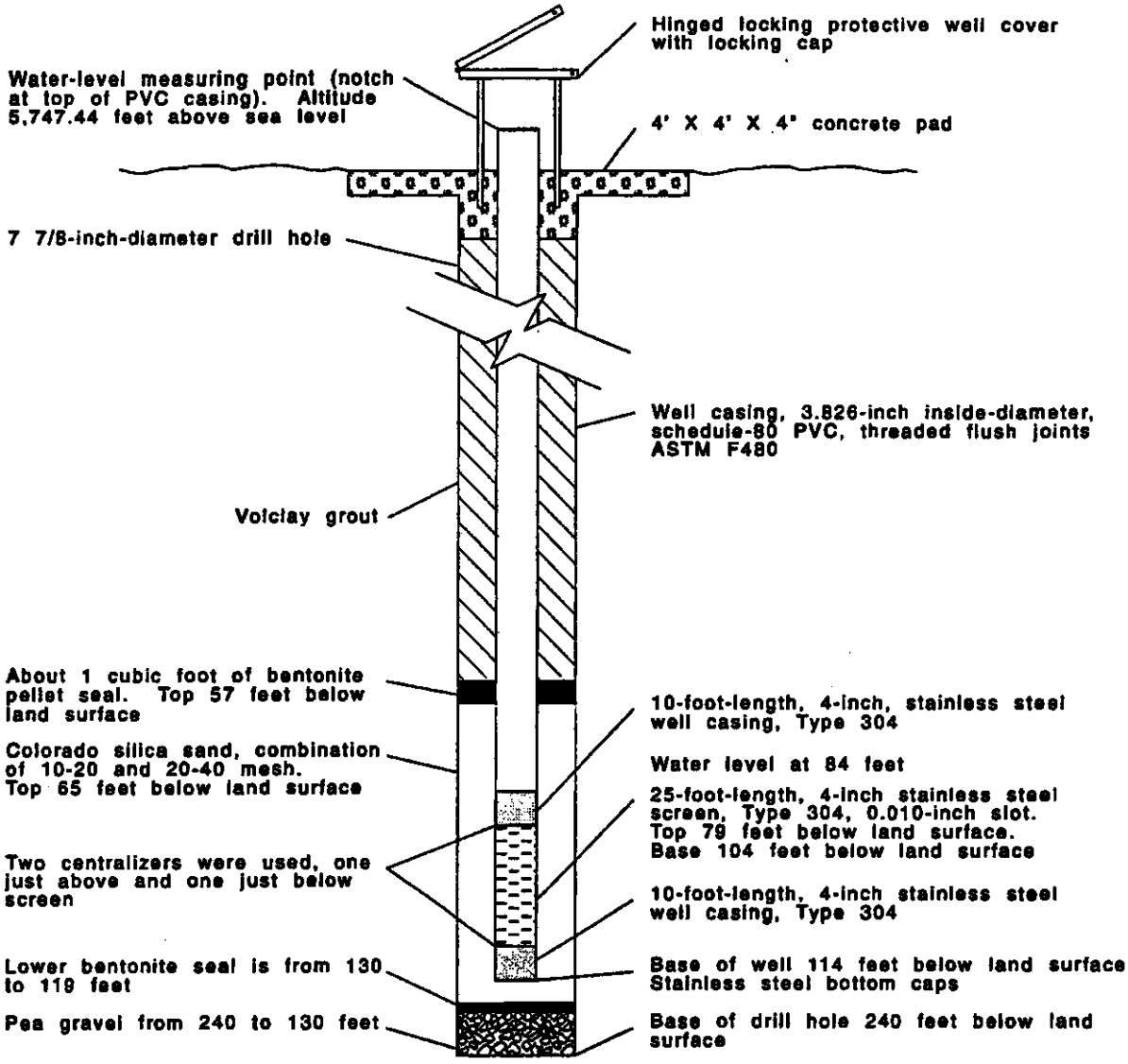
KAFB-1901 to KAFB-1904



NOT TO SCALE

Well-completion diagram for monitoring well KAFB 1901. Drilled and completed by U.S. Geological Survey, Coal Branch, Denver, Colo. Started on 06-25-92, completed on 07-01-92. Well drilled using mud rotary method with Wyoming sodium bentonite drilling fluid.

KAFB-1901

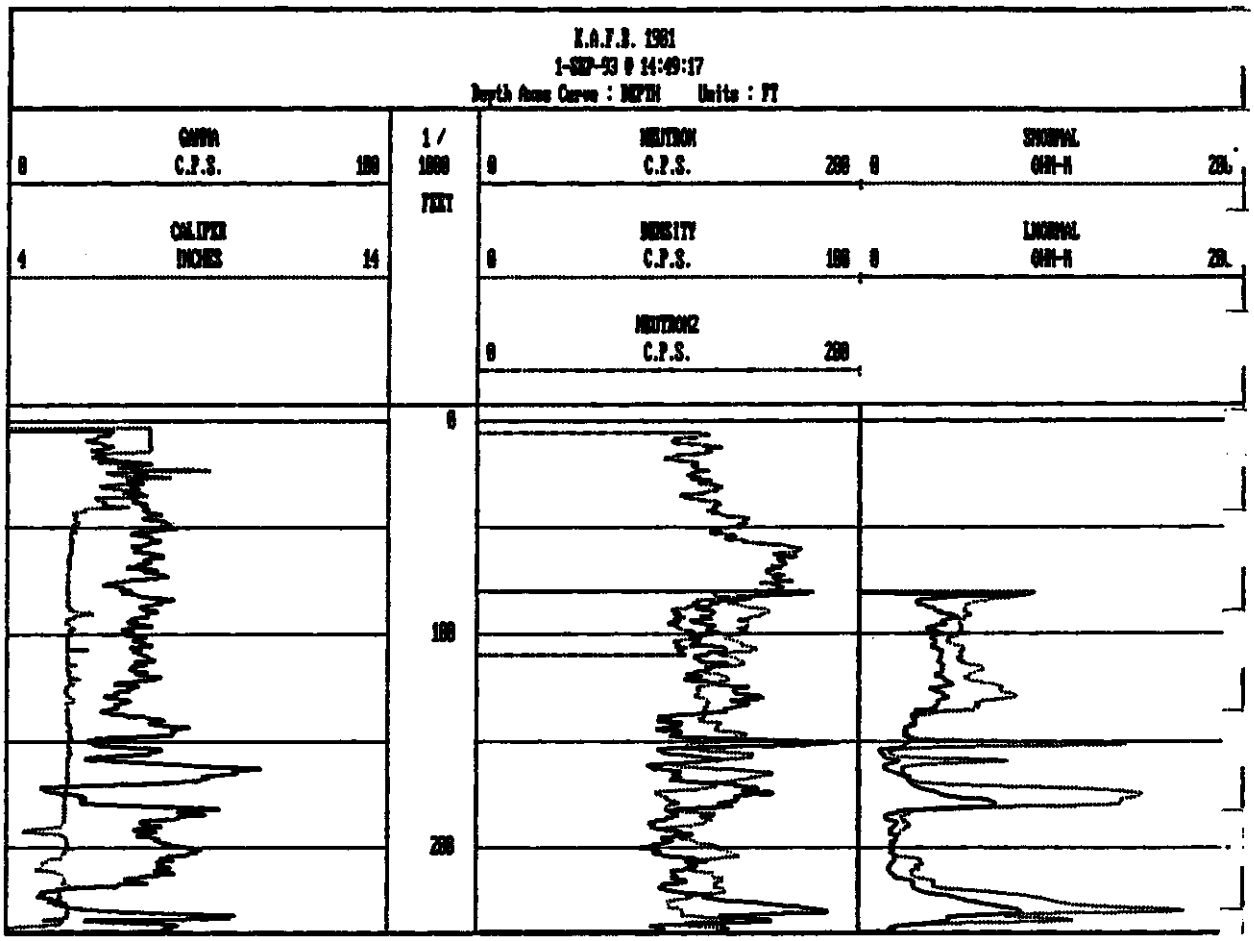
AR 1710

Borehole Log
KAFB1901

6/27/92 - Drilling crew: Dan Sweeney, Todd Hunter, Dean Bohn.
USGS Crew: Fred Gebhardt, Gary Roybal.

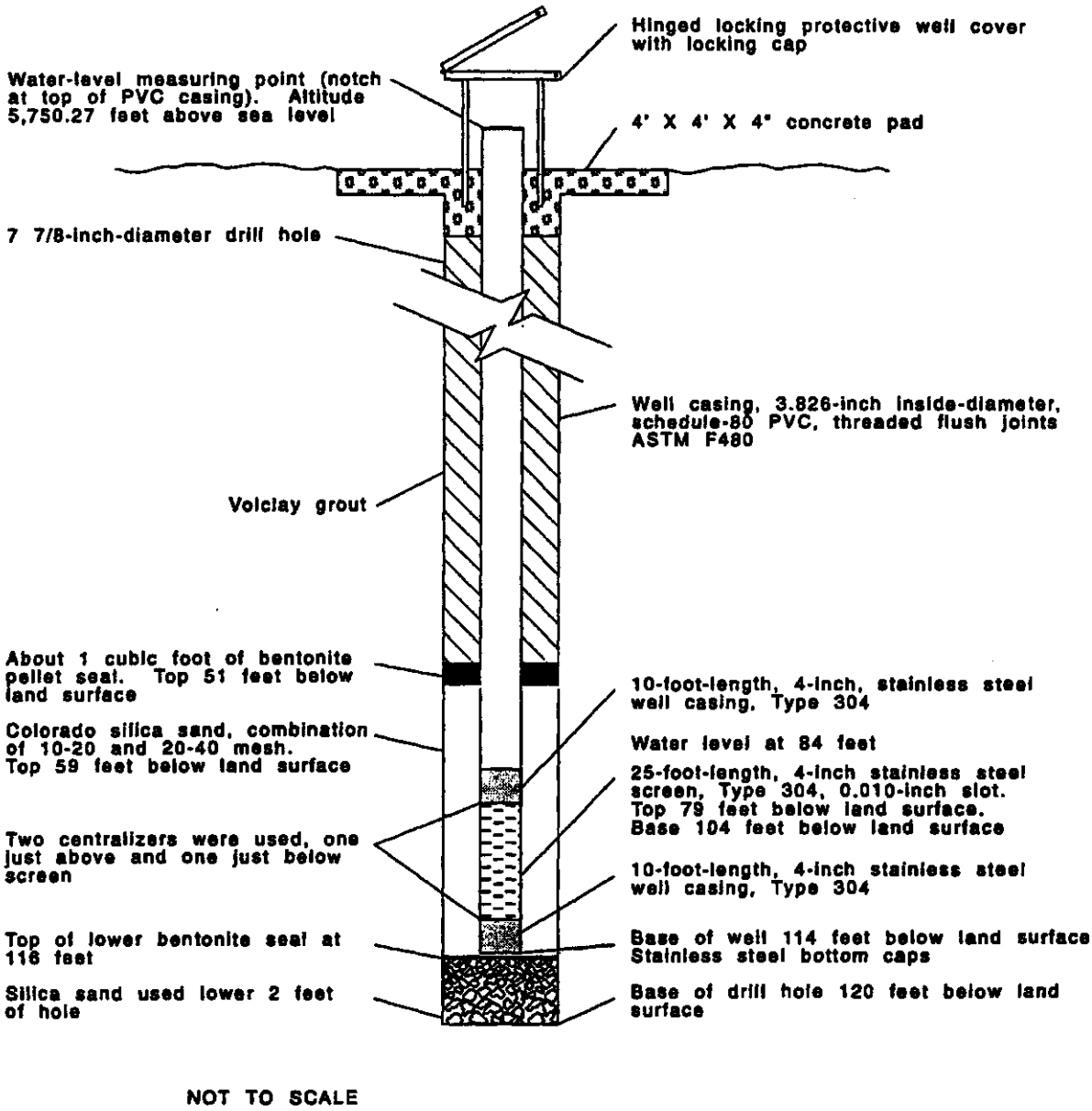
Date	Time	Depth(ft)	Drilling Speed (Min/ft)	Lithology and Remarks
6/27/92		0-50		No samples taken (due to problems with caving near surface)
		50-140		About 60-70% granules, 10-20% brown clay, 10-20% small (≤15 mm diam.) gravel. Small amount of slightly larger gravel, and of coarse sand. NOTE - relative proportions of these components changed slightly from sample to sample, but not significantly. Virtually all particles were subangular to very angular.
		140-150		Soft reddish brown clay. (Imparted dramatic color change to mud flowing out of hole)
		150-160		Limestone.
		160-170		Dark grey clay.
		170-180		Yellow friable sandstone - appears to have small amount of yellow clay intermixed.
		180-190		Brown clay.
		190-220		Brown/reddish brown clay with small amount of angular limestone chips and traces of friable sandstone pieces in some of the samples.
		220-230		Granules, coarse - v. coarse sand. Large amount of yellow clay. - Also some darker clay in lower part of sample.
		230 - TD		Clay (3 different colors: light brown, light grey, and dark grey.)

AR 1710



KAFB-1901

AR1710



Well-completion diagram for monitoring well KAFB 1902. Drilled and completed by U.S. Geological Survey, Coal Branch, Denver, Colo. Started on 07-02-92, completed on 07-10-92. Well drilled using mud rotary method with Wyoming sodium bentonite drilling fluid.

KAFB-1902

AR 1710

Borehole Log

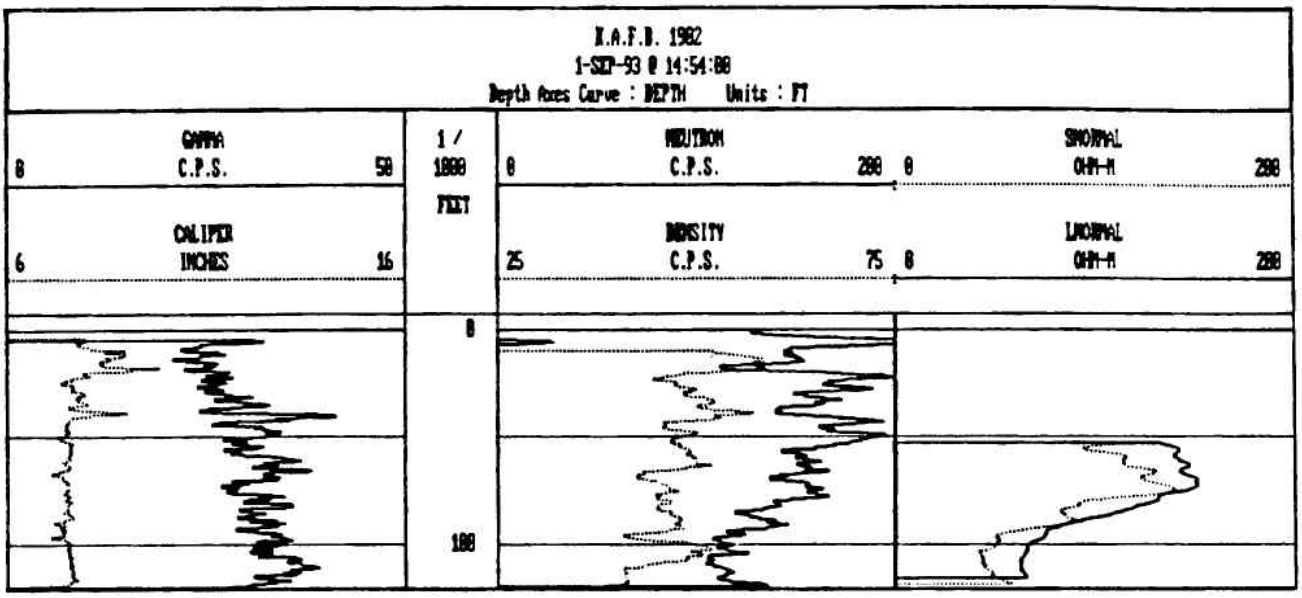
Project name: Kirtland Air Force Base - Phase II, Stage 2A — Sheet 1 of 1
Project number: 63536001 — Site: KAFB1902
Borehole number: — Location: KIRTLAND AFB — Elevation:
Drilling Company: USGS — Drilling crew: [illegible] Clark, Dan Sweney
Date started: 29 JAN 92 — Date completed: — Total Depth:
Drilling method: Hollow stem augering/Mud rotary — Drilling Fluid: Bentonite
Borehole diameter: 7 7/8"
Drilling equipment: Gardner-Denver [illegible]
Logged by: F. Gebhardt — Sample type:

DRILLING LOG

Date	Time	Depth	Drilling Speed (Min/ft)	Lithology and Remarks
29 JAN 92		3'-7'	RECOVERY 2.5' SAMPLE COLLECTED AT 5 FEET	Upper .8' silt light brown 5 YR 5/6. The next .5' is silt mixed with pieces of caliche, light brown 5 YR 6/4. The following .4' is a caliche layer. Below this is another section of silt very similar in color to the top of sample. Well sorted.
		10'		Into large limestone gravel ≥ 5 cm.
		24-27	3.0' SAMPLE COLLECTED AT 25 FEET	Upper 1.2' silty-sand medium grains. 5 YR 6/4 subangular-subrounded poorly sorted. Mixed with gravel ≥ 4 mm, some pieces are greater than 5 cm. Next .5 feet is large layer of fragmented limestone and a little felspar. Lower part of sample hard packed silt 5 YR 5/6, with gravel ≤ 15 mm. Felspar + limestone
		49-50	1.3 SAMPLE COLLECTED AT 49.5 FEET	Upper .5' is silty-sand 5 YR 5/6 mixed with gravel ≤ 10 mm. Lower part of sample cemented med. coarse sand and gravel ≤ 10 mm, mixed with caliche, very hard well packed.

KAFB-1902

AR 1710



KAFB-1902

AR 1710'

WELL DATABASE SUMMARY SHEET

Project Name:	CENTRAL COYOTE TEST	**Geo Location:**	LAKE CHRISTIAN WATER SUPPLY
ER ADS #:	1334	**Well Completion Date:**	
Well Name:	KAFB-1903	**Completion Zone:**	SANDSTONE
Owner Name:	KAFB	**Formation of Completion:**	ALLUVIUM/PALEOZOIC SANDSTONE
Date Drilling Started:		**Well Comment:**	ALTERNATE NAME=LAKE CHRISTIAN WEST AND BLAST AREA WELL. CASING IS BELOW GROUND SURFACE.
Drilling Contractor:			
Drilling Method:			WATER LEVEL REFERENCE POINT IS PROTECTIVE CASING.
Borehole Depth:	72		
Casing Depth:	73.7		

Survey Data

Survey Date: 01-JAN-1997

Surveyed By: HALL ENGINEERING COMPANY

State Plane Coordinates

(X) Easting: 427769.7

(Y) Northing: 1442615.52

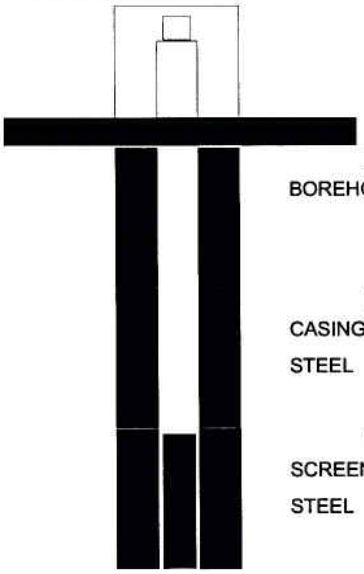
Surveyed Elevations (FAMSL)

Protective Casing:

Top of Inner Well Casing: 5713.94

Concrete Pad: 5709.76

Ground Surface: 5714.76



Completion Data Measured Depths (FBGS)

Casing Stickup:

Interval	Start	Stop
BOREHOLE	0'	72'

Interval	Start	Stop
CASING	0'	73.7'
STEEL	O.D.	6"

Interval	Start	Stop
SCREEN	60'	72'
STEEL		

Calculated Depths and Elevations

Initial Water Elevation: (FAMSL) 5656.85

Initial Depth To Water: (FBGS) 55.91

Last measured water level was 5658.98 **FASL**
measured on 28-JUN-2004

Date Updated: 14-MAR-00

Date Printed: 14-NOV-2008

Post-It™ brand fax transmittal memo 7671 | # of pages ▸

To MARK HOLMES	From F. LAUFFER
Co. KAFB-ER	Co.
Dept.	Phone # 845-7697
Fax # 853-0540	Fax #

NITOR WELL DATA SHEET

KAFB-1903

WELL NUMBER: LAKE CHRISTIAN WEST
LOCATION: LAKE CHRISTIAN, SOUTH OF BLDG.
DATE INSTALLATION COMPLETED
DATE OF DEVELOPMENT

ELEV. "B"
ELEV. "C"
GS SW CORNER ELEV. "E"
GS SE CORNER ELEV. "D"

PROTECTIVE COVER: LOCKING STEEL CAP

TOP OF CONCRETE PAD

RISER ELEVATION "A":
(DATUM) FASL

CONCRETE PAD

SURVEY POINTS

WELL NO.	
ELEV. "A"	
ELEV. "B"	
ELEV. "C"	
ELEV. "D"	
ELEV. "C"	

ELEV. = FASL
SURVEY DATE:
REMARKS:

RISER TYPE: STEEL
DIAMETER: ____ IN (OD) 6 IN (ID)
LENGTH: 72 FT
BACKFILL: UNKNOWN
SEAL: UNKNOWN
SAND: UNKNOWN
SCREEN DIA: ____ IN (OD) 6 IN (ID)
LENGTH: ____ FT
TYPE: TORCH-CUT SLOTS
SLOT SIZE: VARIABLE IN START AT 60 FBGS
BOREHOLE DIA: — IN
DRILL METHOD: UNKNOWN
SUMP LENGTH: NO SUMP

ELEV FASL	ELEV FBGS	
		TOP OF SEAL
		TOP OF SAND
		TOP OF SCREEN
		BOTTOM OF SCREEN
		BOTTOM OF SUMP
	72	BOTTOM OF HOLE

STATE PLANER: X ____ FT
Y ____ FT
GEOGRAPHIC: LATITUDE ____
LONGITUDE ____

GENERAL COMMENTS: VIDEOED ON 11/20/90 : OPEN BOTTOM (SANDY).
SERIOUS CORROSION AT 58 FBGS & 69 FBGS.

THIS IS A KAFB WELL.
* SEE ATTACHED MEMO.

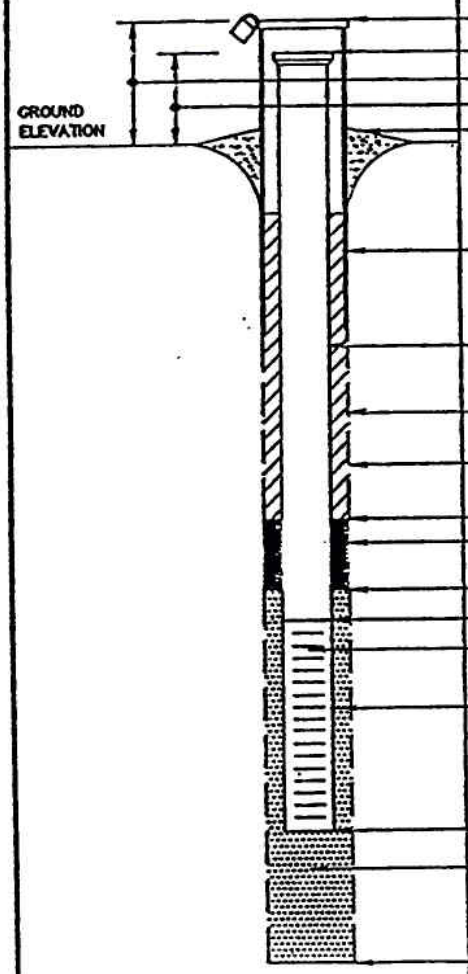
KEY:
GS = GROUND SURFACE
FBGS = FEET BELOW GROUND SURFACE
FASL = FEET ABOVE MEAN SEA LEVEL

OVERBURDEN
MONITORING WELL SHEET

WELL NO. 1904

PROJECT Kirtland AFB, Appendix I Phase 2 RFI
PROJECT NO. 87220007 BORING NO. 1007
ELEVATION 5749.62 DATE 08/29/96
FIELD GEOLOGIST Eric Tow

DRILLER Layne Drilling
DRILLING METHOD Hollow Stem Auger
DEVELOPMENT METHOD Purge



ELEVATION OF TOP OF SURFACE CASING: —
ELEVATION OF TOP OF RISER PIPE: 5749.62
STICK-UP TOP OF SURFACE CASING: —
STICK-UP RISER PIPE: carbon steel
TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6-inches
TYPE OF SURFACE CASING: carbon steel

RISER PIPE I.D. 4-inches
TYPE OF RISER PIPE: Type 304 stainless steel

BOREHOLE DIAMETER: 10 inch

TYPE OF BACKFILL: Type I-II Portland Cement

DEPTH TOP OF SEAL: 77'
TYPE OF SEAL: Bentonite

DEPTH TOP OF SAND PACK: 78.8'
DEPTH TOP OF SCREEN: 81.8'
TYPE OF SCREEN: prepack stainless steel
SLOT SIZE X LENGTH: 10 slot x 20 feet
TYPE OF SAND PACK: 10-20 silica sand

DEPTH BOTTOM OF SCREEN: 101.8'
DEPTH BOTTOM OF SAND PACK: 105'
TYPE OF BACKFILL BELOW OBSERVATION WELL: 10-20 silica sand

DEPTH OF HOLE 105'

NOT TO SCALE

Figure A1.8-1

Overburden Monitoring Well Construction Diagram

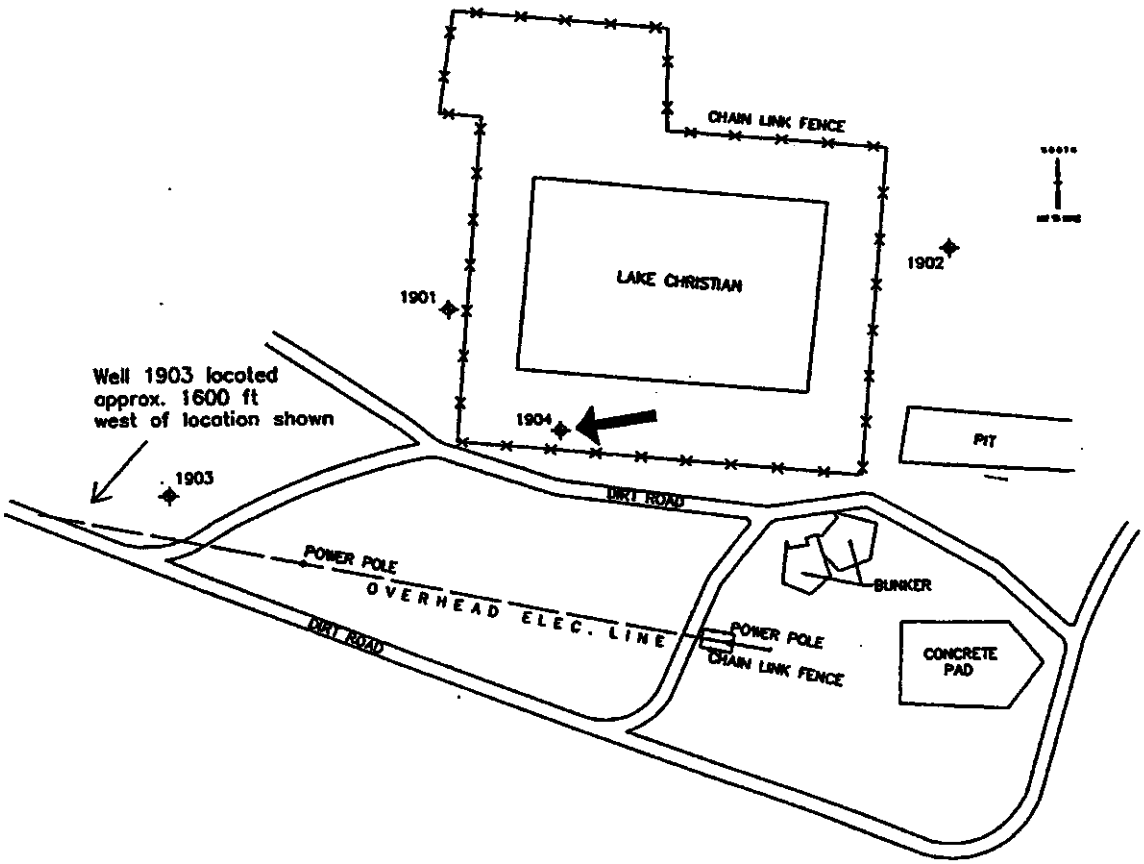
HTRW DRILLING LOG

DISTRICT: OMAHA TERC		HOLE NO.: OT46-1904
1. COMPANY NAME: Foster Wheeler Environmental	2. DRILLING SUBCONTRACTOR: Layne Environmental	SHEET 1 OF 7 SHEETS
3. SITE: Kirtland AFB Phase 2 RFI	4. LOCATION: OT46-1904	
5. NAME OF DRILLER: Jason Proffer	6. MANUFACTURERS DESIGNATION OF DRILL: Failing F-10 HSA/Schramm 60/dual wall	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Failing F-10 HSA for 60 feet; Schramm for 60 to 105 feet	8. HOLE LOCATION: 1442756.89N, 429392.67E	
	9. SURFACE ELEVATION: 5749.62 ft. MSL	
	10. DATE STARTED: 08/20/96	11. DATE COMPLETED: 08/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NONE	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 87/3 hrs	
14. TOTAL DEPTH OF HOLE: 105 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): ~86.18 after 14 days	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
N			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHERS (SPECIFY)	OTHERS (SPECIFY)	OTHERS (SPECIFY)	21. TOTAL CORE REC.
N	0	0				%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHERS (SPECIFY)	23. SIGNATURE OF INSPECTOR
Well Installed				Molesworth/Tow



ENG FORM 5056-R, AUG 84 by Fluor Daniel GTI	PROJECT #: 872200070320 SITE NAME: Kirtland AFB Phase 2 RFI	HOLE NO.: OT46-1904

AR 220

HTRW DRILLING LOG

DISTRICT	HOLE NO.
OMAHA TERC	OT46-1904

1. PROJECT #	2. INSPECTOR	SHEET 2
872200070320	Molesworth/Tow	OF 7 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	COMMENTS h
5748	2	(GM) Silt, sand, gravel mixture, 7.5YR 5/4 brown, dry to slightly moist.					
							Time: 0730 Moved off rig to check for UXO
5746	4						
5744	6						
5742	8						
5740	10						Moved off rig to check for UXO
5738	12						
5736	14						
							Moved off rig to check for UXO
5734	16						
5732	18						

ENG FORM 5056-R, AUG 94 by Fluor Daniel GTI	PROJECT #: 872200070320	HOLE NO.: OT46-1904
	SITE NAME Kirtland AFB Phase 2 RFI	

HTRW DRILLING LOG

DISTRICT	HOLE NO.
OMAHA TERC	OT46-1904

1. PROJECT #	2. INSPECTOR	SHEET 3
872200070320	Molesworth/Tow	OF 7 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	COMMENTS h
5730	20	(GM) Silt, sand, gravel mixture, 7.5YR brown, dry to slightly moist.					Moved off rig to check for UXO
5728	22						
5726	24						
5724	26						
5722	28						
5720	30						
5718	32						
5716	34						
5714	36						

ENG FORM 5056-R, AUG 94 by Fluor Daniel GTI

PROJECT #: 872200070320
SITE NAME Kirtland AFB Phase 2 RFI

HOLE NO.: OT46-1904

HTRW DRILLING LOG

DISTRICT	HOLE NO.
OMAHA TERC	OT46-1904

1. PROJECT #	2. INSPECTOR	SHEET 4
872200070320	Molesworth/Tow	OF 7 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	COMMENTS h
							Time: 0950
5712	38						
5710	40	(GM) Silt, sand, gravel mixture, 7.5YR brown, dry to slightly moist.					Time: 0955
5708	42						
5706	44						Time: 1010
5704	46						
5702	48						
							Time: 1017
5700	50						
5698	52						
5696	54						

ENG FORM 5056-R, AUG 94 by Fluor Daniel GTI

PROJECT #: 872200070320
SITE NAME Kirtland AFB Phase 2 RFI

HOLE NO.: OT46-1904

HTRW DRILLING LOG

DISTRICT	HOLE NO.
OMAHA TERC	OT46-1904

1. PROJECT #	2. INSPECTOR	SHEET 5
872200070320	Molesworth/Tow	OF 7 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	COMMENTS h
5694	56						
5692	58						
5690	60	(GM) Same as above, but increased in hardness, possible cementation					4" stainless steel well casing from 0 to 82 ft
5688	62	8/29/96 E. Tow begins logging with Schramm Air Rotary where auger rig hit refusal at 63' on 8/20/96. Possible cobbles indicated by rock fragments 64-81'.					Cement grout from 0 to 80 ft
5686	64	(GM) Coarse to fine sand, little medium to fine, angular to subrounded gravel, little silt. 5YR 5/4 reddish brown, slightly moist, non-cemented.					
5684	66						
5682	68						
5680	70						
5678	72						

ENG FORM 5056-R, AUG 94 by Fluor Daniel GTI

PROJECT #: 872200070320
SITE NAME Kirtland AFB Phase 2 RFI

HOLE NO.: OT46-1904

HTRW DRILLING LOG

DISTRICT	HOLE NO.
OMAHA TERC	OT46-1904

1. PROJECT #	2. INSPECTOR	SHEET 6
872200070320	Molesworth/Tow	OF 7 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	COMMENTS h
							72
5876	74						74
							Bentonite seal 78 ft to 80 ft
5874	76						76
5872	78						Top of sand 78 ft 78
5870	80						80
		(SP) Coarse to fine sand, little coarse to fine subangular to subrounded gravel, little silt, 5YR 5/4 reddish brown, non-plastic, non-cemented, wet.					
5868	82						Top of screen 82 ft 82
5866	84						84
5864	86						86
5862	88						88
5860	90						90

ENG FORM 5056-R, AUG 94 by Fluor Daniel GTI	PROJECT #: 872200070320	HOLE NO.: OT46-1904
	SITE NAME Kirtland AFB Phase 2 RFI	

HTRW DRILLING LOG

DISTRICT	HOLE NO.
OMAHA TERC	OT46-1904

1. PROJECT #	2. INSPECTOR	SHEET 7
872200070320	Molesworth/Tow	OF 7 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	COMMENTS h
5658	92						
5656	94						
5654	96						
5652	98						Screen 0.010 stainless prepacked 82 to 102 ft
5650	100						
		Same as above					
5648	102						Bottom of screen at 102 ft
5646	104						
		Bottom of boring at 105 ft. Monitoring well installed					
5644	106						
5642	108						

ENG FORM 5056-R, AUG 94 by Fluor Daniel GTI

PROJECT #: 872200070320

SITE NAME Kirtland AFB Phase 2 RFI

HOLE NO.: OT46-1904

Southwest Geophysical Services, Inc.

GEOPHYSICAL WELL LOG:	PERM. DATUM: GROUND LEVEL	OTHER SERVICES:
NATURAL GAMMA RAY NEUTRON	LOG MEASURED FROM: G.L. ELEVATION: 5256.13 ft. MSL	NONE

COMPANY: FLUOR DANIEL / GTI
PROJECT/FIELD: Kirtland AFB
WELL: 1904
LOCATION: SEC: T: R:
NORTH= 1439799.0644' EAST= 399638.9077'
COUNTY: BERNALILLO STATE: NEW MEXICO

ELEVATION KB:
DF:
GL: 5256 ft

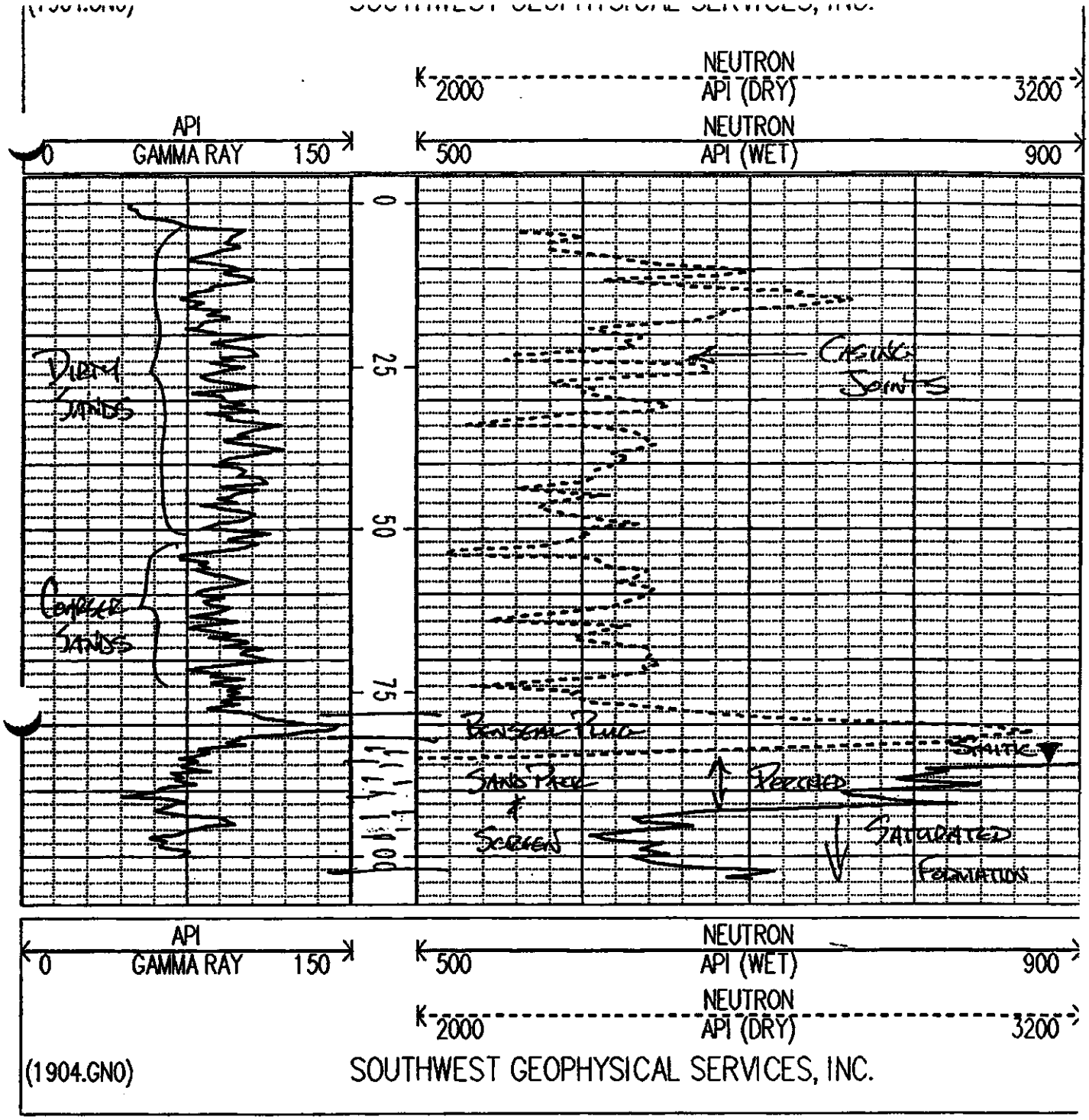
	RUN NO. 1		RUN NO. 1
DATE	9/19/96	FLUID LEVEL	85 ft.
DEPTH DRILLER	105 ft.	FLUID NATURE	WATER
DEPTH LOGGER	105 ft.	FLUID VISCOSITY	
BOTTOM LOGGED	103 ft.	FL. RESISTIVITY	
TOP LOGGED INT.	SURFACE	FL. RES. @ B.H.T.	
CASING LEVEL	ALL	CIRCULATION TEMP.	
CASING SIZE	4 in.	BOT HOLE TEMP.	
CASING SIZE	Stainless Steel	TOOL #	GN450
BIT SIZE	8 in.	LOGGED BY:	M.Peterson
BIT SIZE		WITNESSED BY:	Eric Tow

REMARKS:

FLUID LEVEL (NEUT) = 85 FT.

THANK YOU

COMPANY: FLUOR-DANIEL / GTI
WELL: 1904


NEUTRON
2000
API (DRY)
3200
API
0
GAMMA RAY
150
NEUTRON
500
API (WET)
900
0
25
50
75
100
Dirty Sands
Coarser Sands
Casing Joints
Bensal Plug
Sand Pack & Screen
Perched
Saturated Formation
Static
API
0
GAMMA RAY
150
NEUTRON
500
API (WET)
900
NEUTRON
2000
API (DRY)
3200
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SOUTHWEST GEOPHYSICAL SERVICES, INC.