

**ATTACHMENT G2  
APPENDIX G2-E  
DESIGN DRAWINGS  
SHAFT SEALING SYSTEM  
COMPLIANCE SUBMITTAL DESIGN REPORT**

SAND96-1326/2  
Unlimited Release  
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Category UC-721

**Waste Isolation Pilot Plant  
Shaft Sealing System  
Compliance Submittal Design Report**

**Volume 2 of 2:  
Appendix E**

Repository Isolation Systems Department  
Sandia National Laboratories  
Albuquerque, NM 87185

**ABSTRACT**

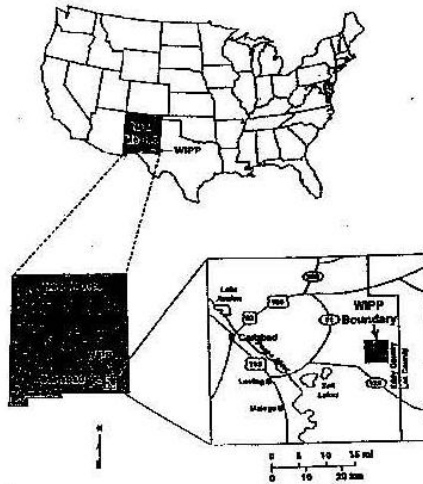
This is the second volume of a two-volume report describing a shaft sealing system design for the Waste Isolation Pilot Plant. This appendix contains detailed drawings of the shaft sealing system and its components.

WASTE ISOLATION PILOT PLANT

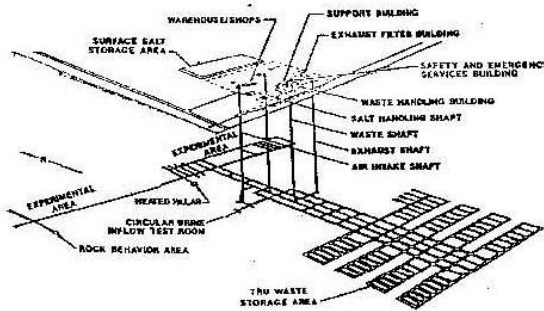
CARLSBAD, NM

SHAFT SEALING SYSTEM DESIGN

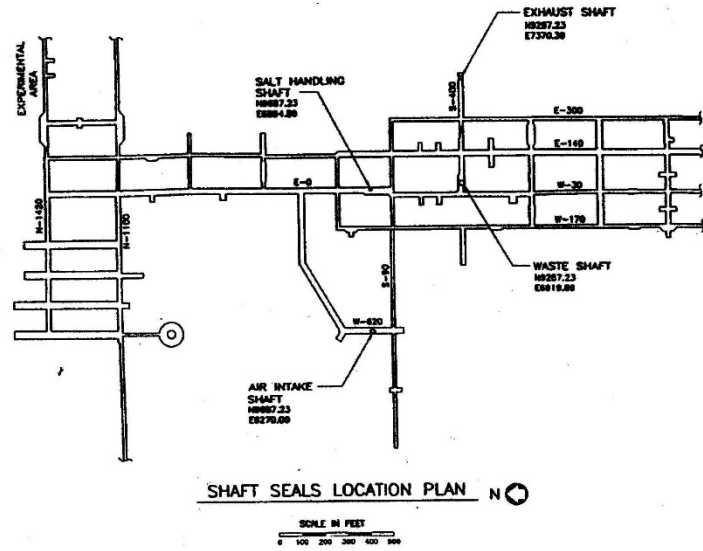
DESIGN DRAWINGS



WIPP LAYOUT



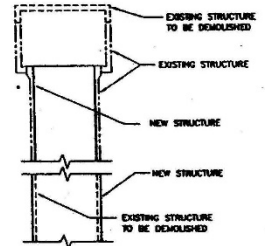
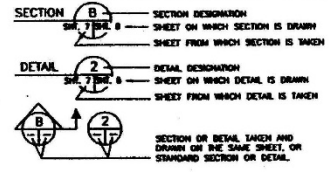
DRAWING NUMBER	TITLE	DRAWING NUMBER	TITLE	DRAWING NUMBER	TITLE
SNL-007 1 OF 28	WIPP SHAFT SEALING SYSTEM SHAFT LOCATION PLAN, ABBREVIATIONS, GENERAL NOTES AND LEGEND	SNL-007 10 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION AIR INTAKE SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE	SNL-007 19 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED SALT HANDLING SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE
SNL-007 2 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED WASTE SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 13 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED WASTE SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 20 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION SALT HANDLING SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE
SNL-007 3 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION WASTE SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 12 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED WASTE SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 21 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION SALT HANDLING SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE
SNL-007 4 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED WASTE SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE	SNL-007 13 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION EXHAUST SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 22 OF 28	WIPP SHAFT SEALING SYSTEM CONCRETE-ASPHALT WATERSTOP 7M SALADO FORMATION
SNL-007 5 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION WASTE SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE	SNL-007 14 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED EXHAUST SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE	SNL-007 23 OF 28	WIPP SHAFT SEALING SYSTEM ASPHALT COLUMN
SNL-007 6 OF 28	WIPP SHAFT SEALING SYSTEM WASTE SHAFT SHAFT STATION MONOLITH	SNL-007 15 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION EXHAUST SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE	SNL-007 24 OF 28	WIPP SHAFT SEALING SYSTEM UPPER AND LOWER SALADO COMPACTED CLAY COLLARS
SNL-007 7 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED AIR INTAKE SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 16 OF 28	WIPP SHAFT SEALING SYSTEM EXHAUST SHAFT SHAFT STATION MONOLITH	SNL-007 25 OF 28	WIPP SHAFT SEALING SYSTEM COMPACTED SALT COLUMN
SNL-007 8 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION AIR INTAKE SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 17 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED SALT HANDLING SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 26 OF 28	WIPP SHAFT SEALING SYSTEM CONCRETE PILE
SNL-007 9 OF 28	WIPP SHAFT SEALING SYSTEM NEAR-SURFACE/REINFORCED AIR INTAKE SHAFT STRATIGRAPHY & SEALING SUBSYSTEM PROFILE	SNL-007 18 OF 28	WIPP SHAFT SEALING SYSTEM SALADO FORMATION SALT HANDLING SHAFT STRATIGRAPHY & AS-BUILT ELEMENTS	SNL-007 28 OF 28	WIPP SHAFT SEALING SYSTEM COMPACTED EARTHEN FILL AND CONCRETE PILE



**GENERAL NOTES:**

1. THE GRID NUMBERING SYSTEM (E-300, S-400, ETC.) IS BASED ON THE DIRECTION AND NOMINAL DISTANCE IN FEET THE SHAFT IS FROM THE SALT HANDLING SHAFTS. COORDINATED COORDINATE LOCATION OF E-300, E-400, THE WPP PLANT COORDINATE SYSTEM COORDINATE LOCATION FOR THE SALT HANDLING SHAFT IS H0827.23, AND E0818.00. THE PLANT COORDINATE SYSTEM IS DESCRIBED IN WESTINGHOUSE DRAWING NO. 51-W-100-01, UNDERGROUND ENCLOSURES, DATED 5/15/92.
2. THE AS-BUILT DIMENSIONS AND DEPTHS AND/OR ELEVATIONS SHOWN IN THESE DRAWINGS ARE NOMINAL. IN THIS DRAWING MAY CHANGE DUE TO LOCAL VARIANCE OF THE SUBSTRUCTURE, OPERATIONAL MODIFICATIONS MADE TO SUIT THE CREEP CLOSURE OF THE SHAFT, AND OTHER OPERATIONAL REQUIREMENTS. THEREFORE THE AS-BUILT DIMENSIONS AND THE PORTWELL ELEVATIONS FOR SETTING THE SEALING SYSTEM SHALL BE VERIFIED BY FIELD SURVEYING AND EXPLORATORY CORE DRILLING DURING SITE PREPARATION FOR THE FINAL CONSTRUCTION.
3. DRAWING NUMBERS:  
 FOR CLARITY ON DETAIL AND SECTION DESIGNATIONS, AND NOTES, ONLY THE SHEET NUMBER IS SHOWN.

**LEGEND FOR PROPOSED SHAFT SEALING SYSTEM:**



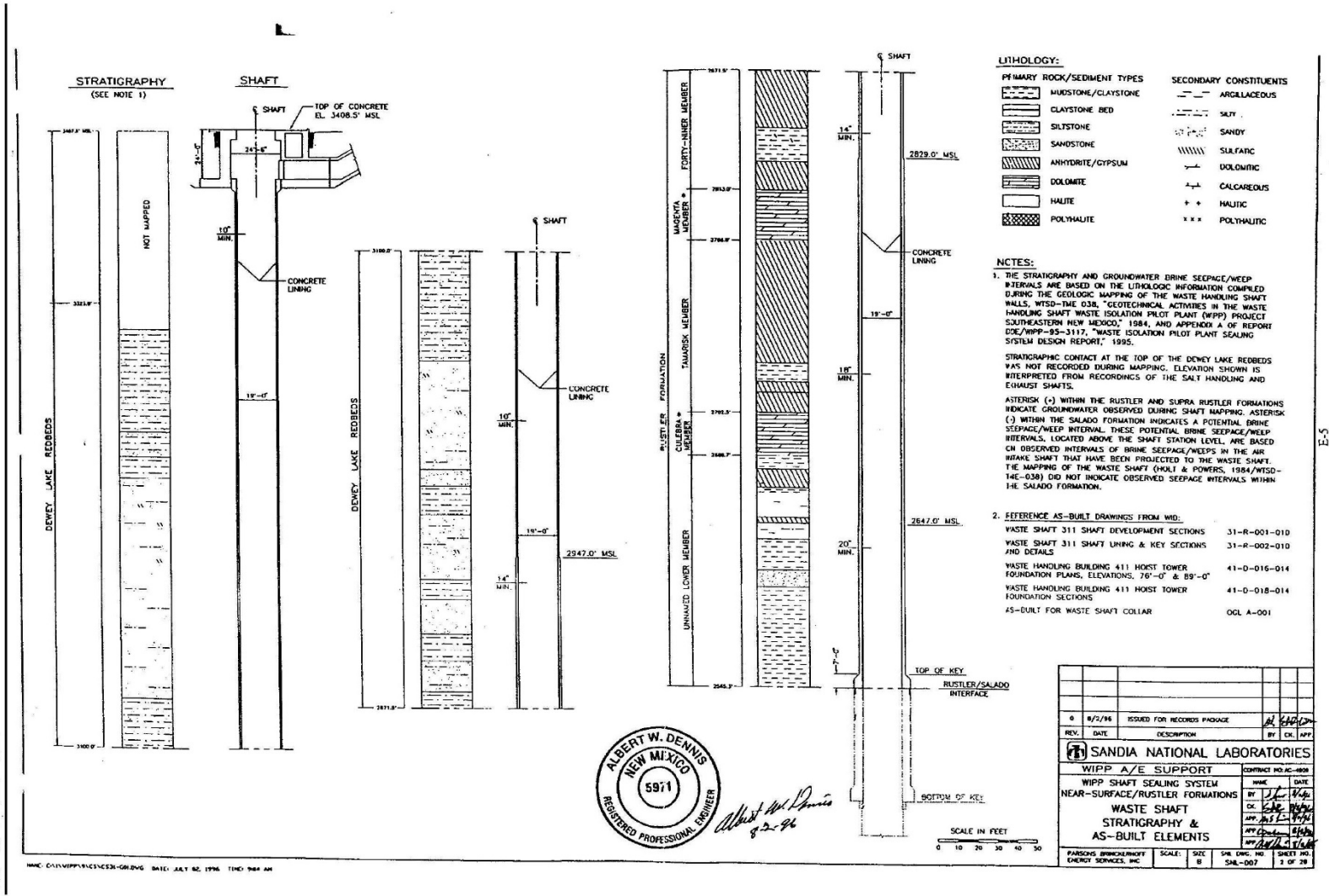
**ABBREVIATIONS:**

- E. CENTERLINE
- APP. APPROXIMATE
- CMP CORRUGATED METAL PLATE
- CONC. CONCRETE
- DOE DEPARTMENT OF ENERGY
- DRG. DRAWING
- E. EAST
- EL. ELEVATION
- EXIST. EXISTING
- FT. FOOT, FEET
- HT. HEIGHT
- I.D. INSIDE DIAMETER
- IN. INCHES
- MB. MARKER BED
- MIR. MIRROR
- M.S.L. MEAN SEA LEVEL
- N. NORTH
- NO. NUMBER
- R. RADII
- S. SOUTH
- SHT. SHEET NUMBER
- S.M.C. SALADO MASS CONCRETE
- TYP. TYPICAL
- USGS UNITED STATES GEOLOGICAL SURVEY
- W. WEST
- WU WESTINGHOUSE WASTE ISOLATION DIVISION
- WPP WASTE ISOLATION PILOT PLANT

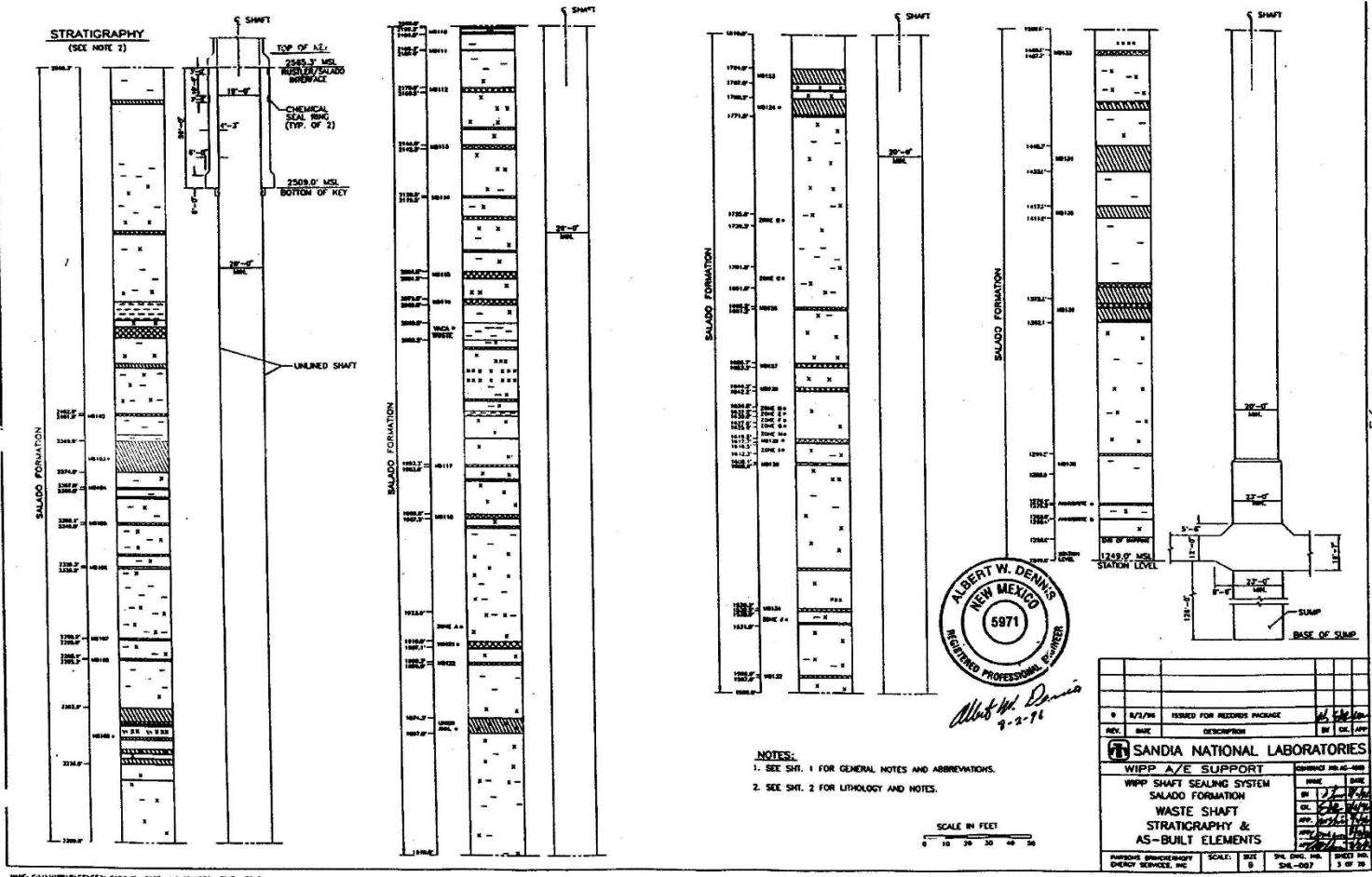


*Albert W. Dennis*  
 9-2-96

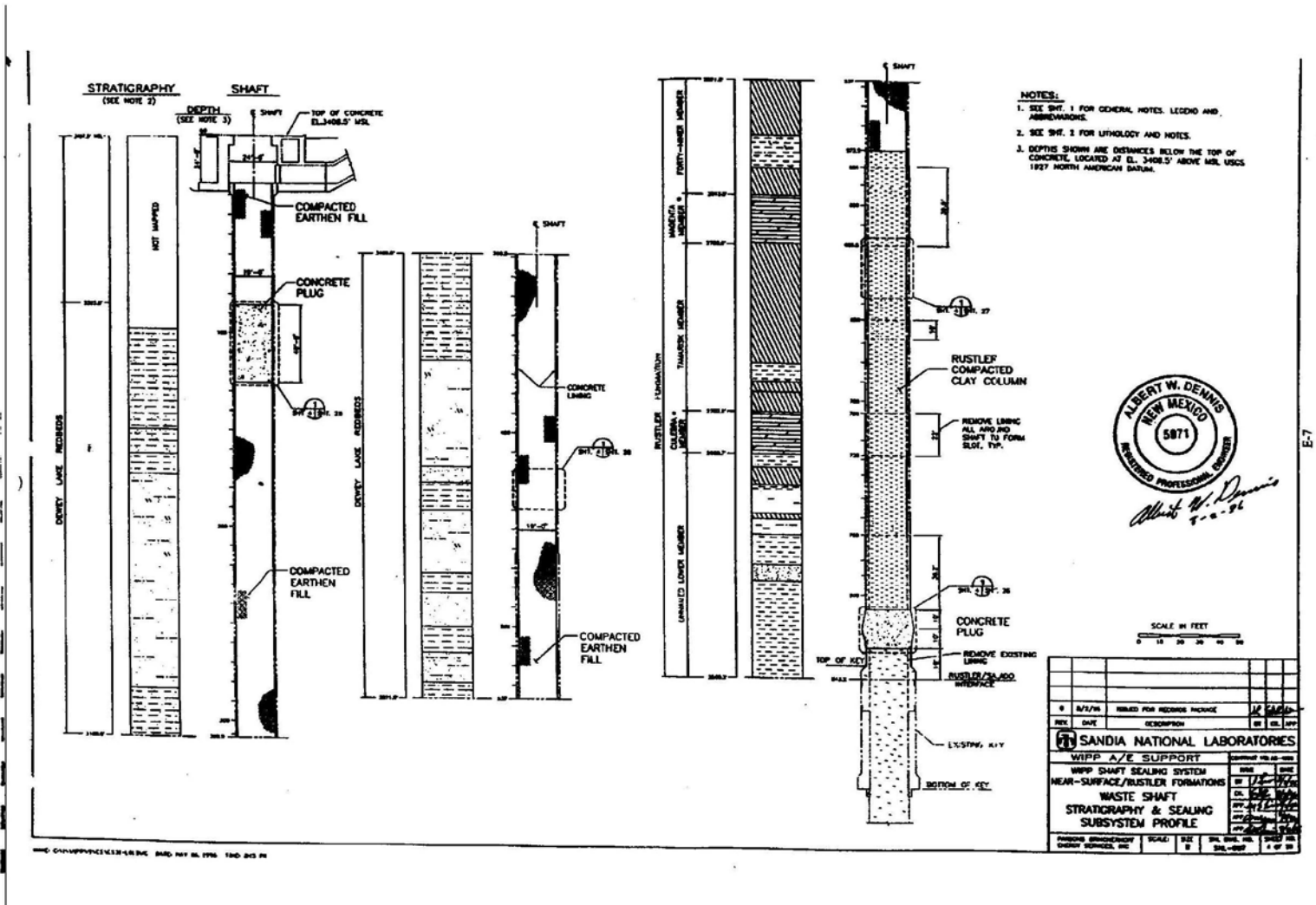
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<b>SANDIA NATIONAL LABORATORIES</b>				
WPP A/E SUPPORT				
WPP SHAFT SEALING SYSTEM			DATE	CHK.
SHAFT LOCATION PLAN,			BY	CHK.
ABBREVIATIONS, GENERAL			DATE	CHK.
NOTES AND LEGEND			BY	CHK.
PROJECT: WPP SHAFT SEALING SYSTEM			SCALE: 1/8" = 1'-0"	SHEET NO. 1 OF 28
DESIGNED BY: CHERRY ENGINEERS, INC.			DATE: 8/2/96	



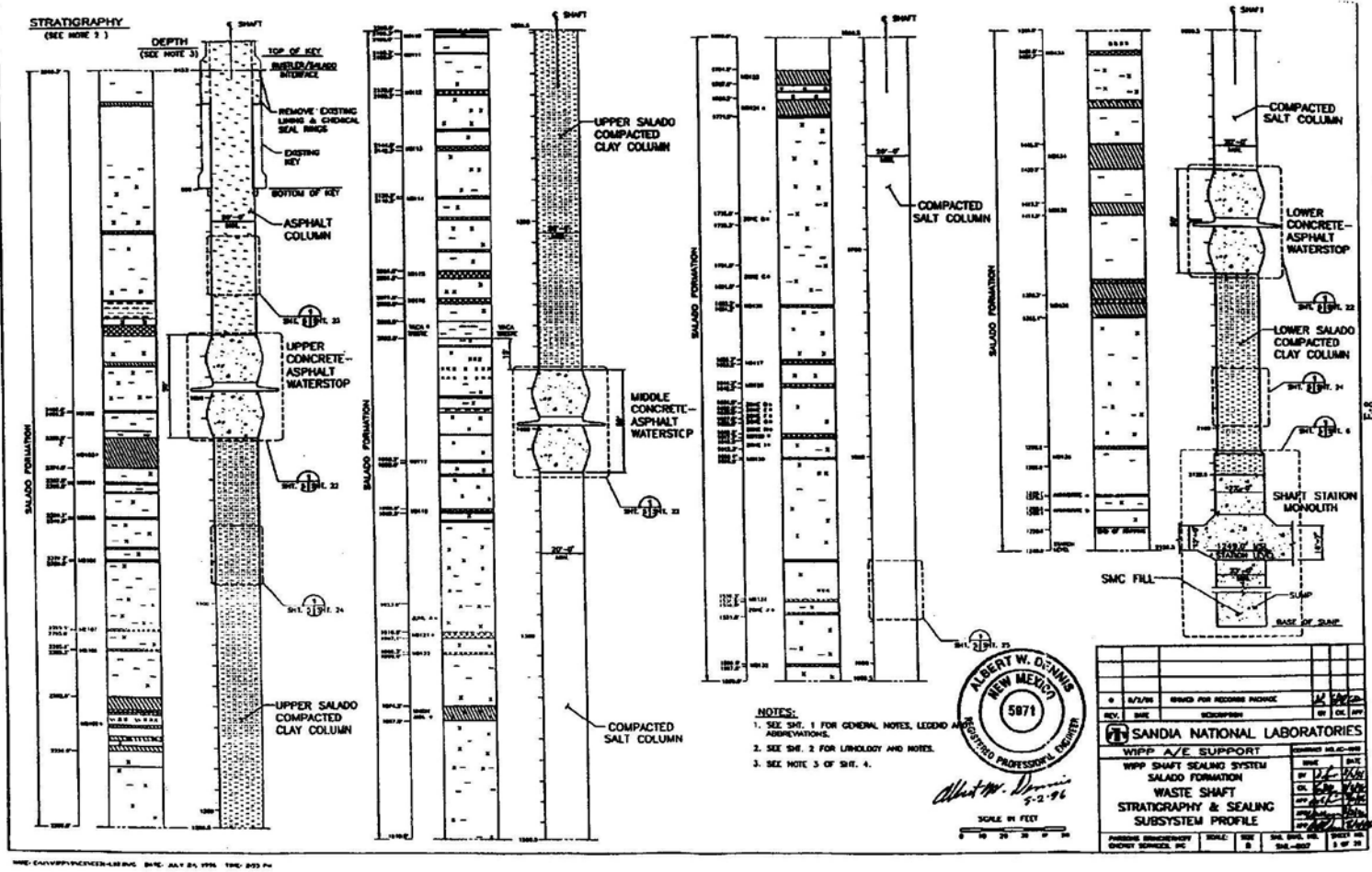
Near-Surface/Rustler Formations Waste Shaft Stratigraphy and AS-Built Elements



Salado Formation Waste Shaft Stratigraphy and AS-Built Elements

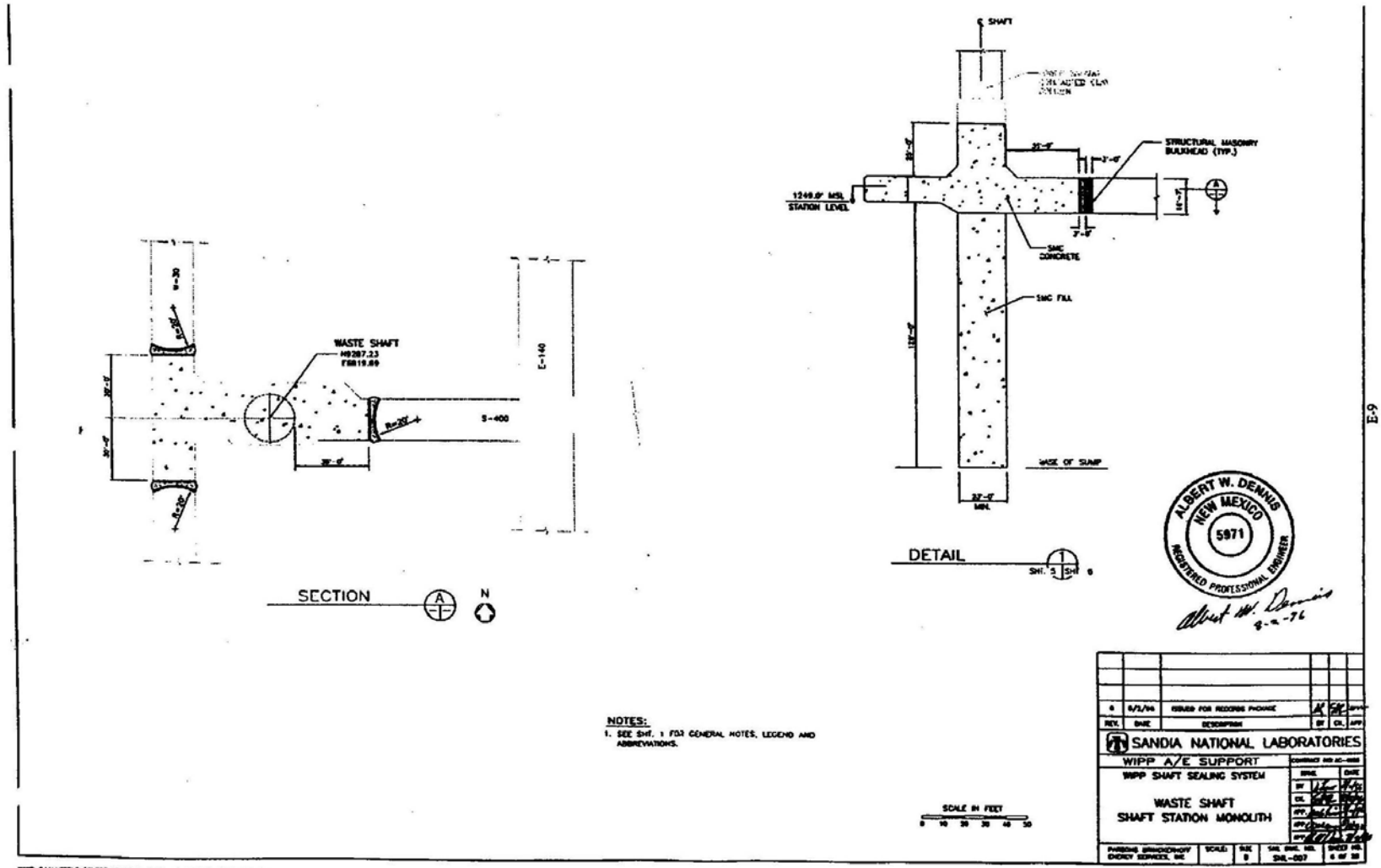


Near-Surface/Rustler Formations Waste Shaft Stratigraphy and Sealing Subsystem Profile

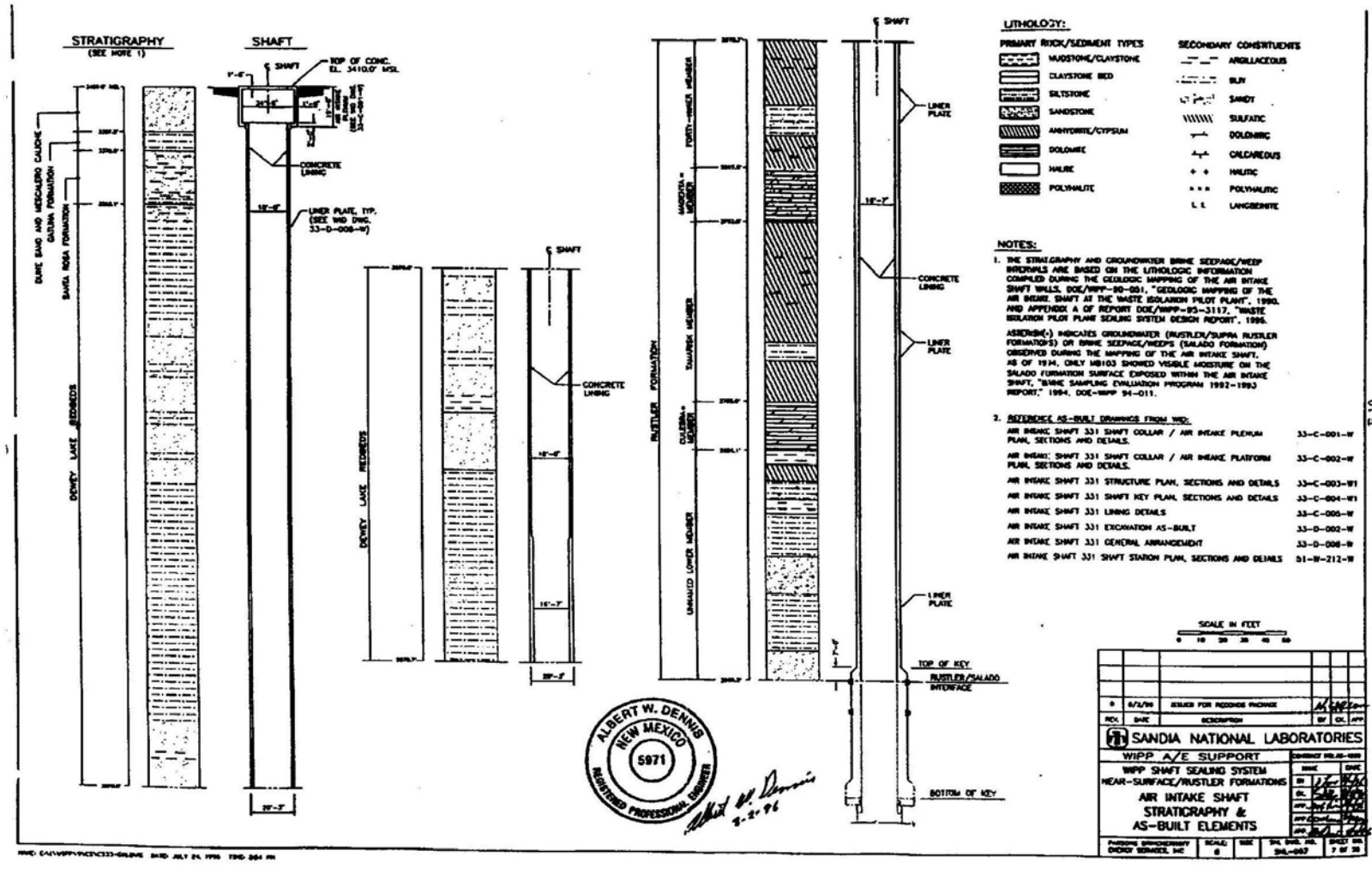


Salado Formation Waste Shaft Stratigraphy and Sealing Subsystem Profile

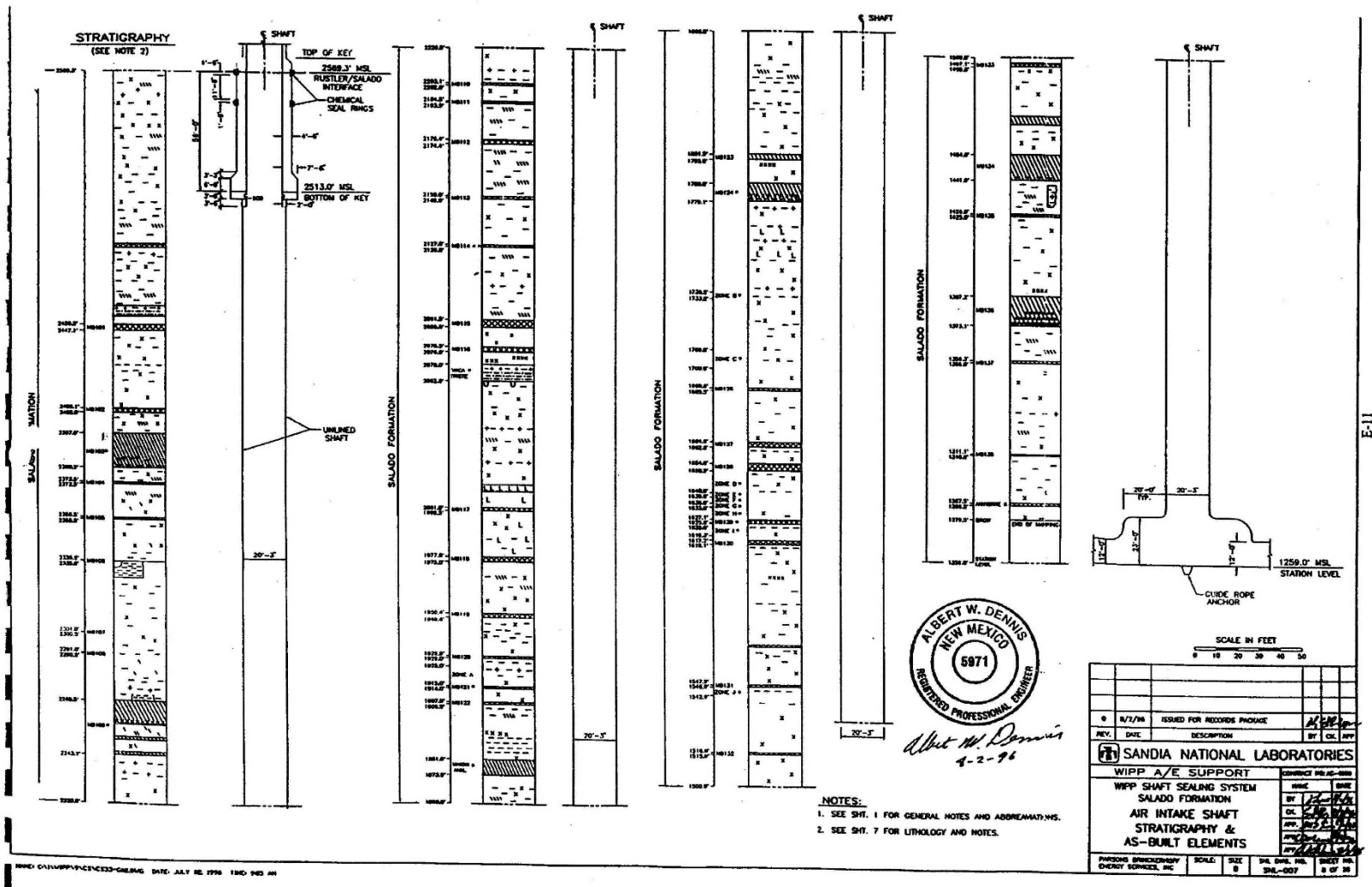




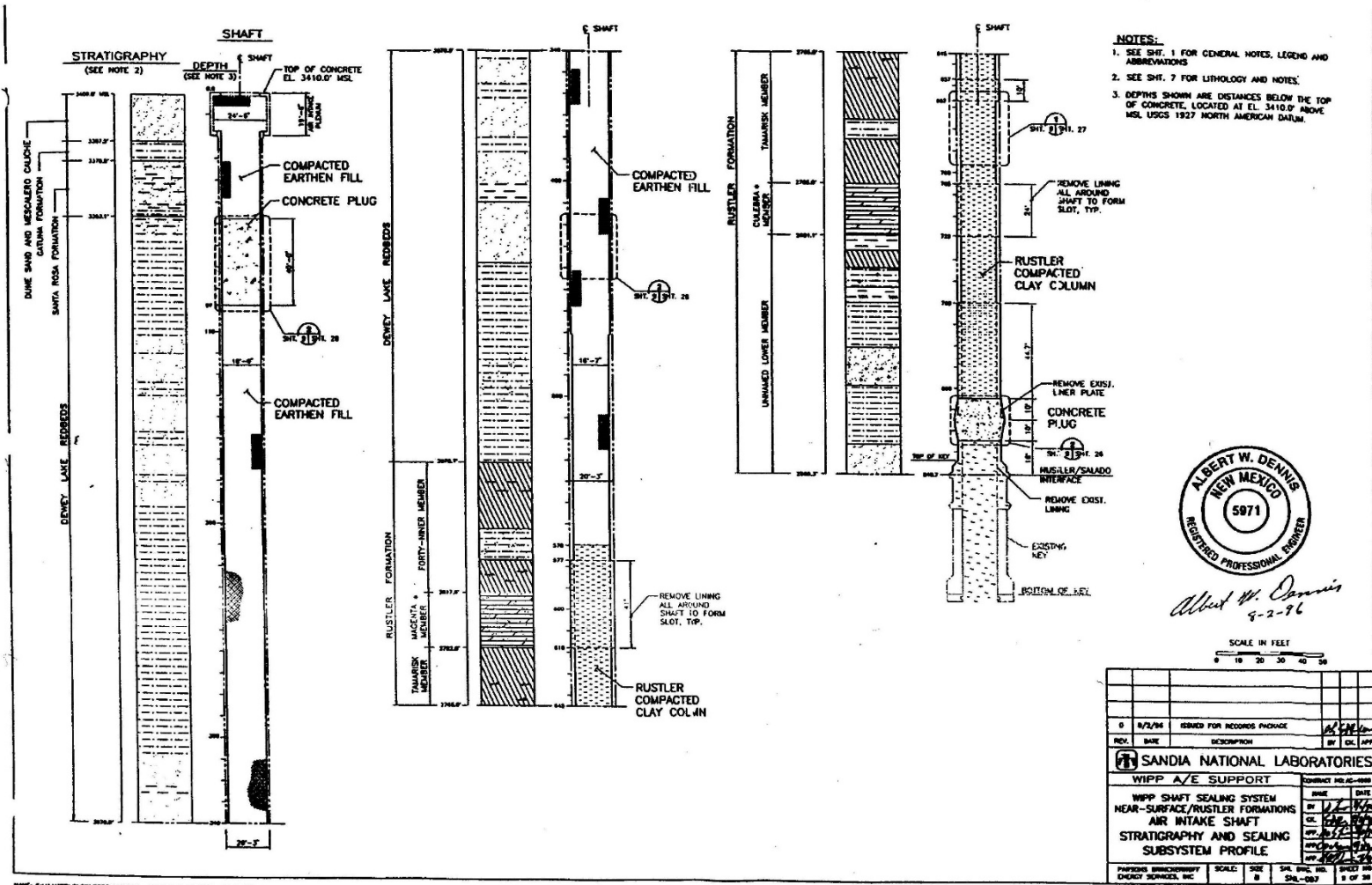
Waste Shaft Station Monolith



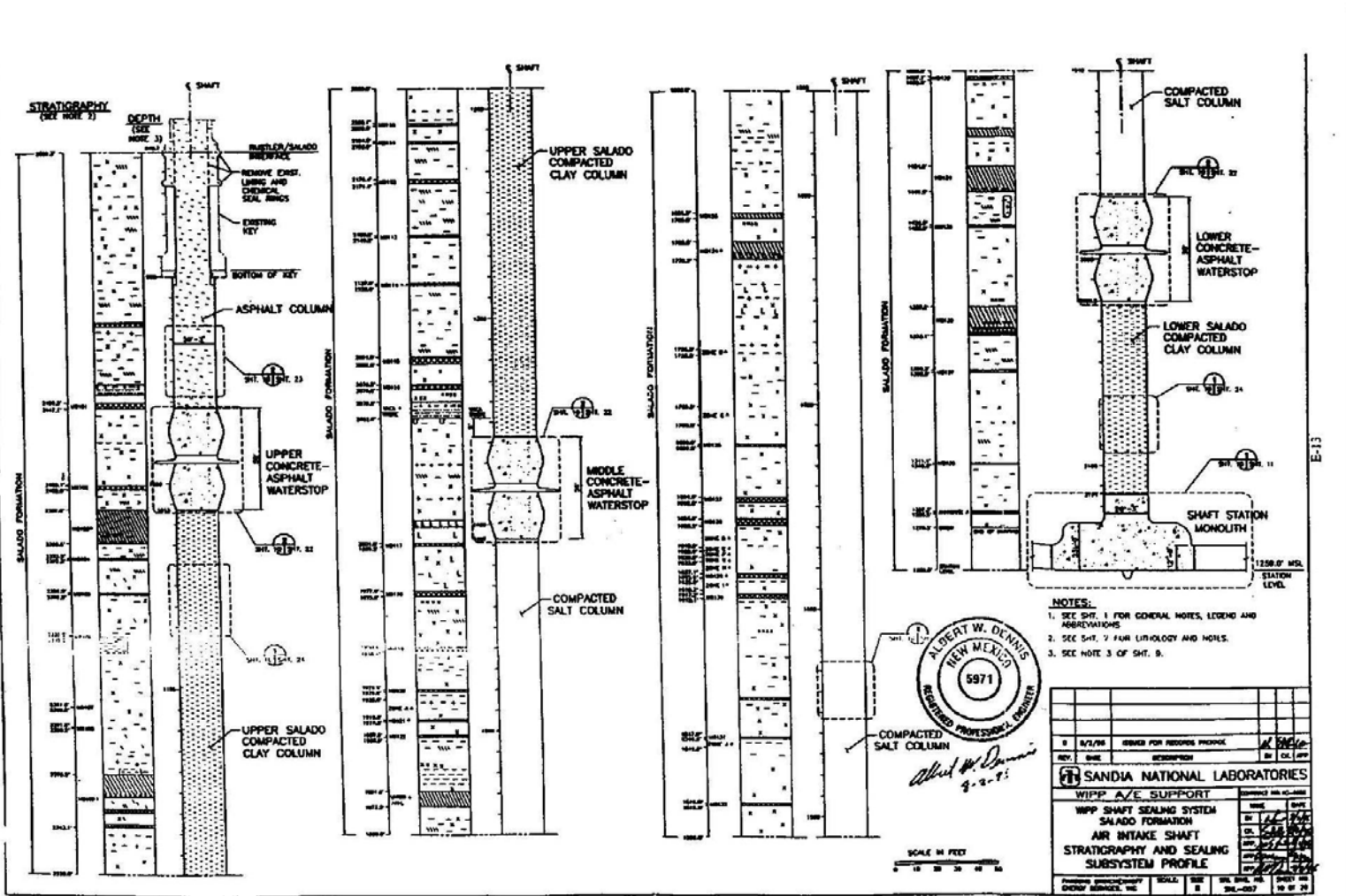
Near-Surface / Rustler Formations Air Intake Shaft Stratigraphy and AS-Built Elements



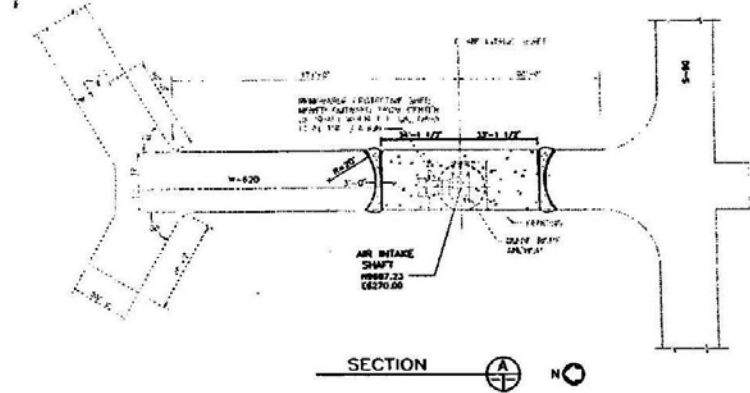
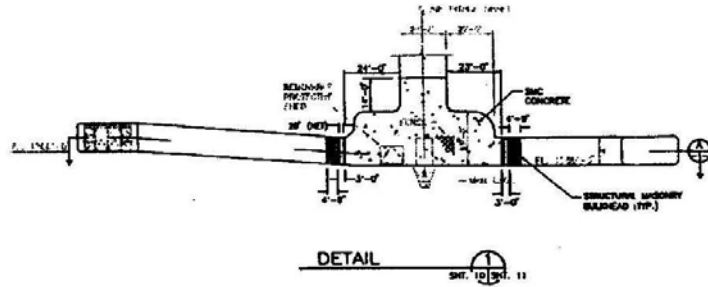
Salado Formation Air Intake Shaft Stratigraphy and AS-Built Elements



Near-Surface / Rustler Formations Air Intake Shaft Stratigraphy and Sealing Subsystem Profile



Salado Formation Air Intake Shaft Stratigraphy and Sealing Subsystem Profile



NOTES:  
 1. SEE SHEET 1 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.



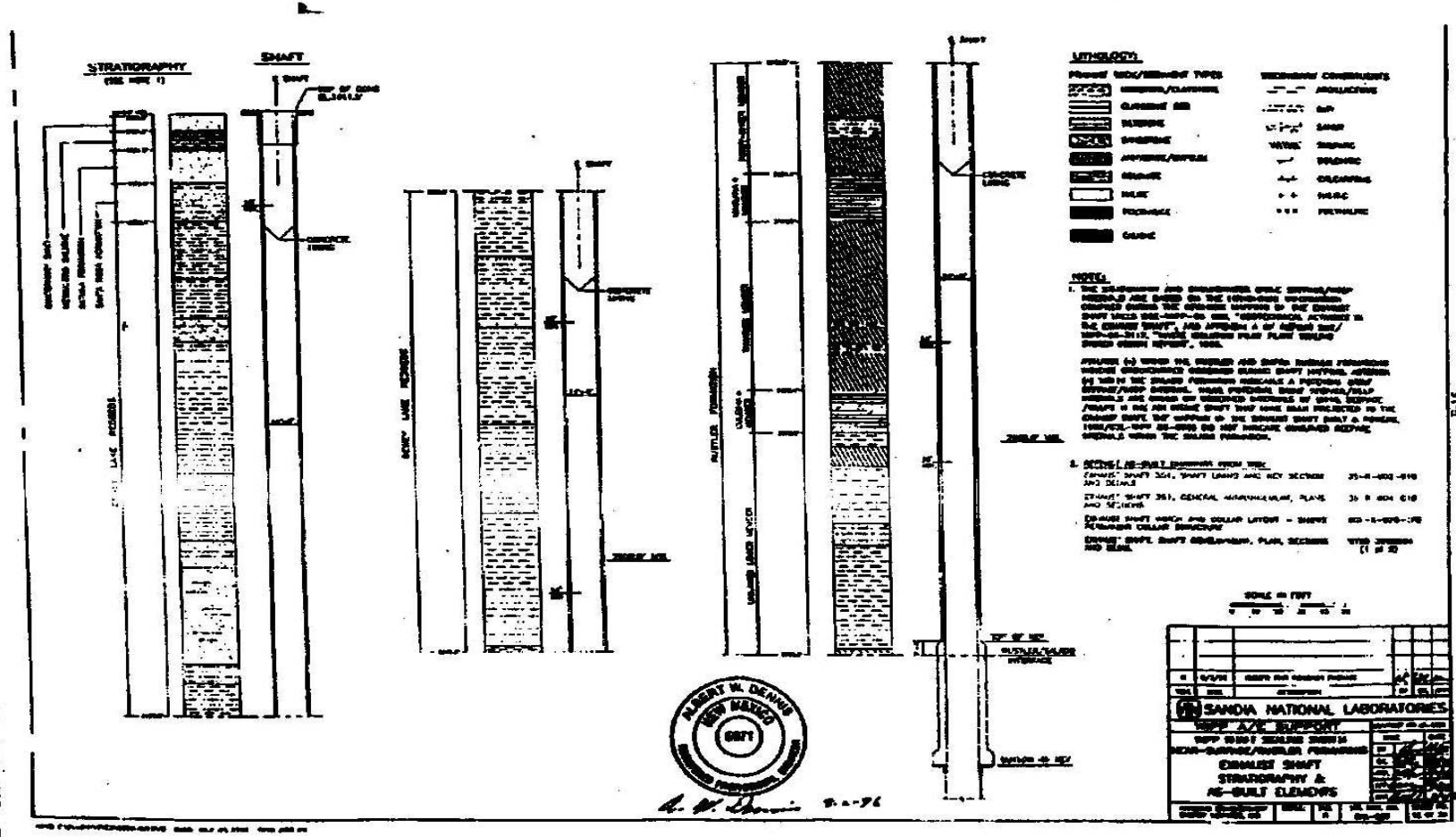
*Albert W. Dennis*  
 9-2-96



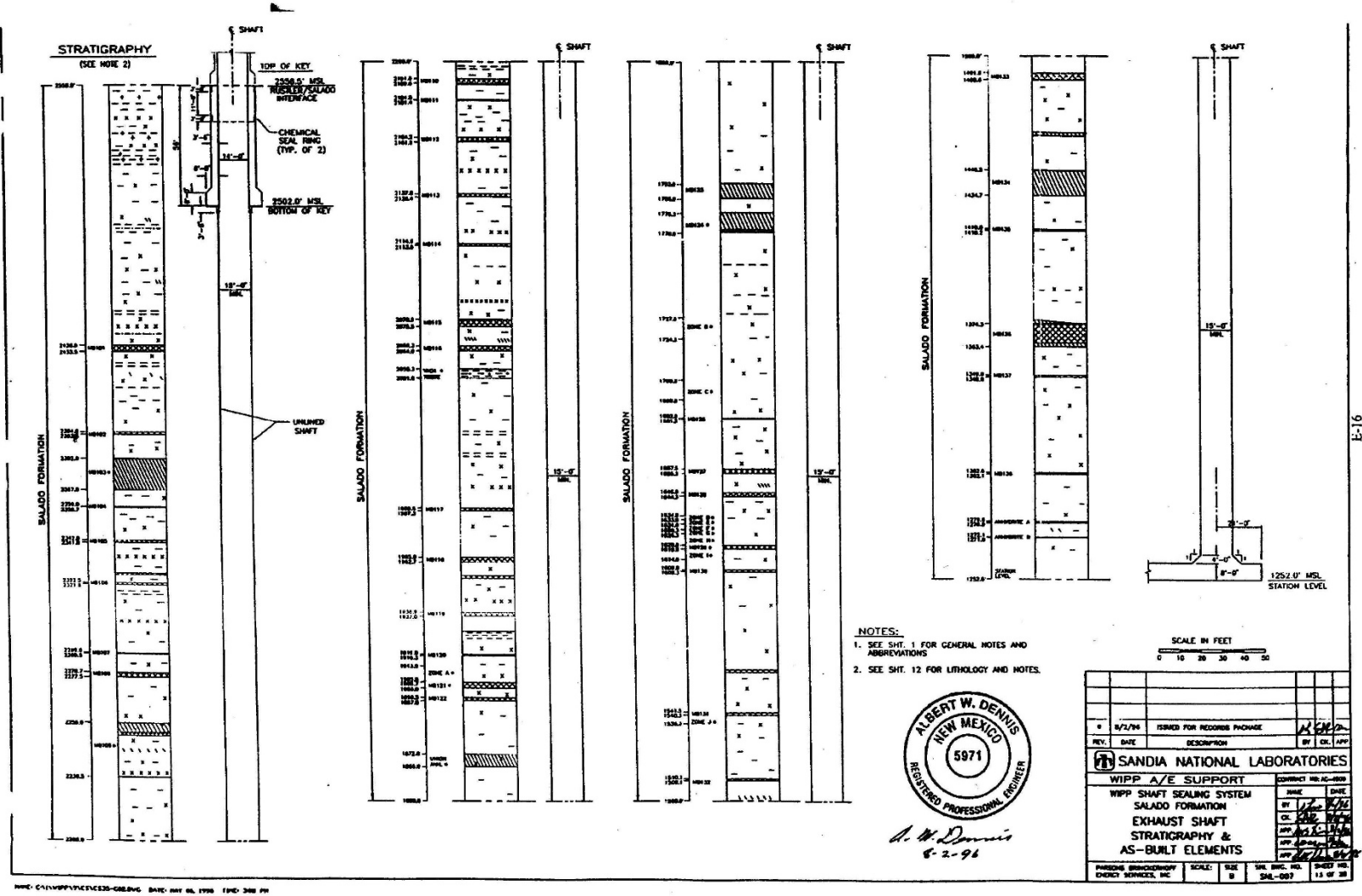
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PROJECT NO. W-620 SHEET NO. 11 OF 24						DATE 9-2-96

Air Intake Shaft Station Monolith

Sheet 11 of 28



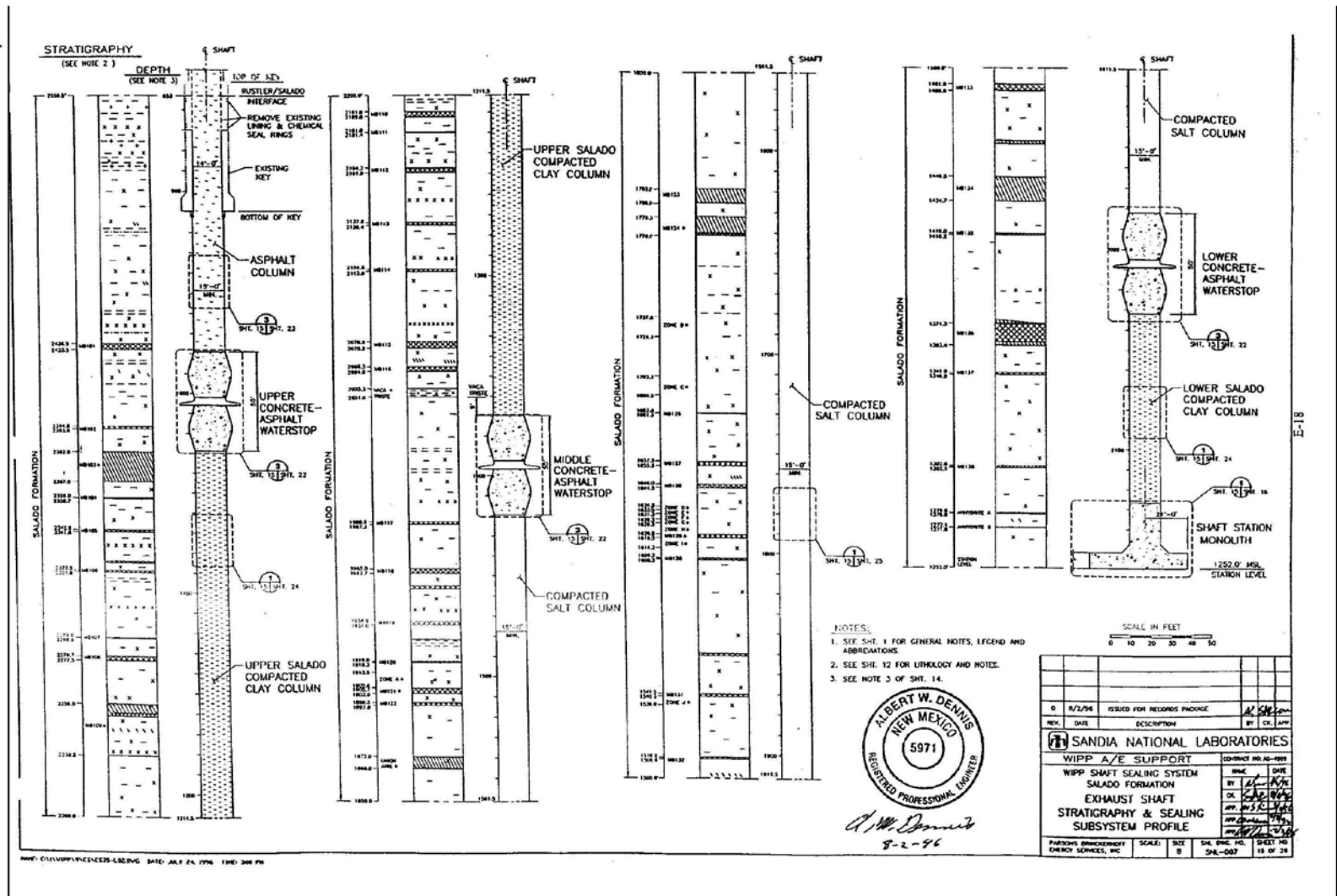
Near-Surface / Rustler Formations Exhaust Shaft Stratigraphy and AS-Built Elements Sheet 12 of 28



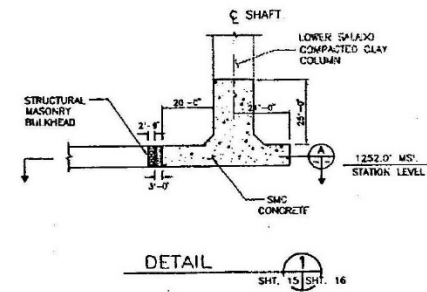
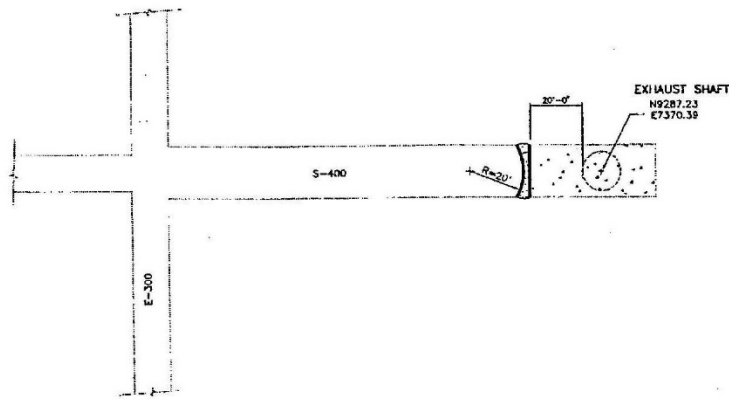
Salado Formation Exhaust Shaft Stratigraphy and AS-Built Elements



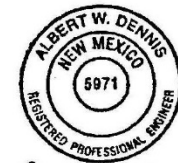
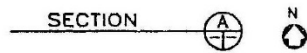




Salado Formation Exhaust Shaft Stratigraphy and Sealing Subsystem Profile



**NOTES:**  
 1. SEE SHT. 1 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.

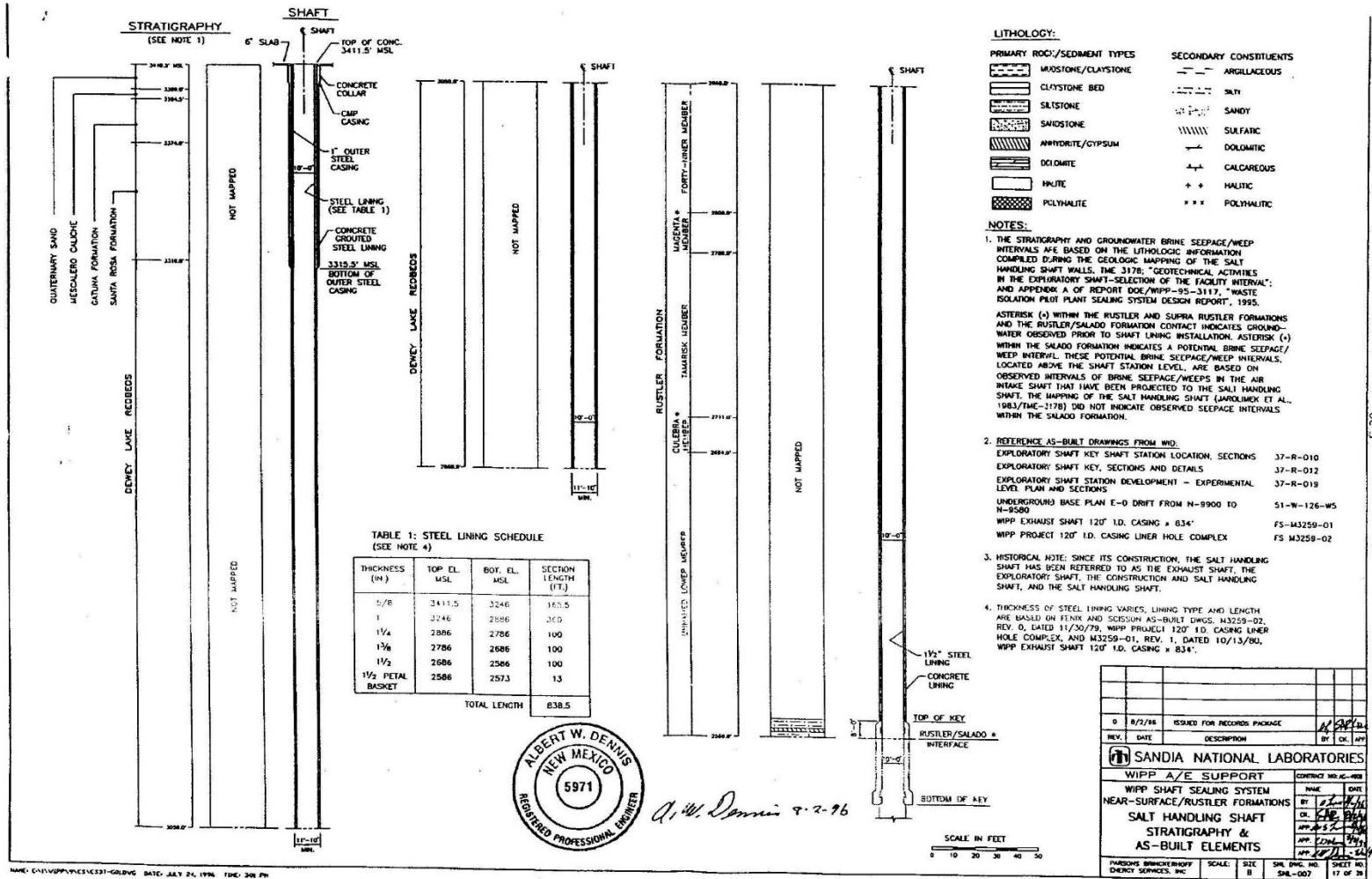


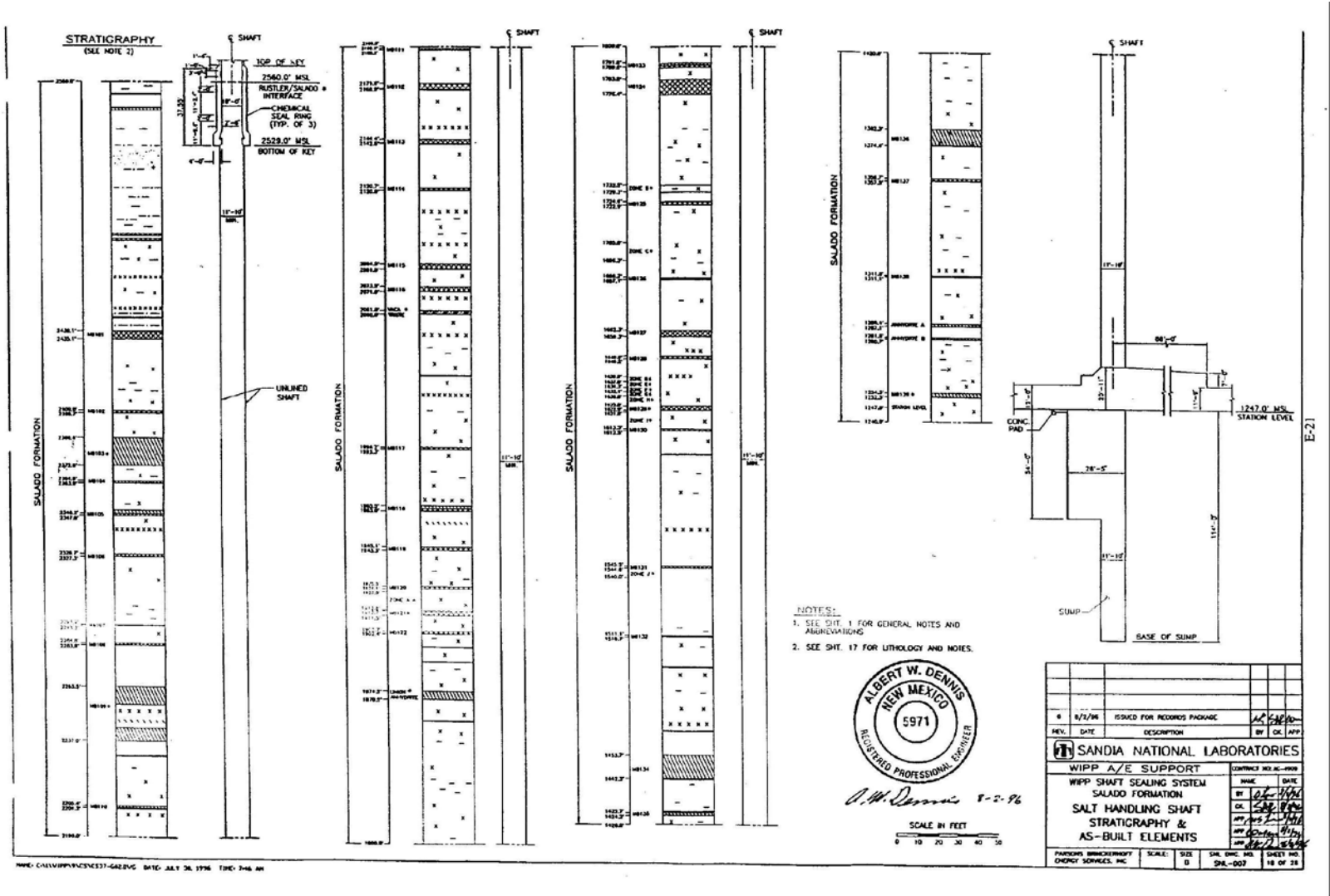
*A. W. Dennis* 8-2-86

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				DATE	BY
				8/2/85	J. J. [Signature]

Exhaust Shaft Station Monolith

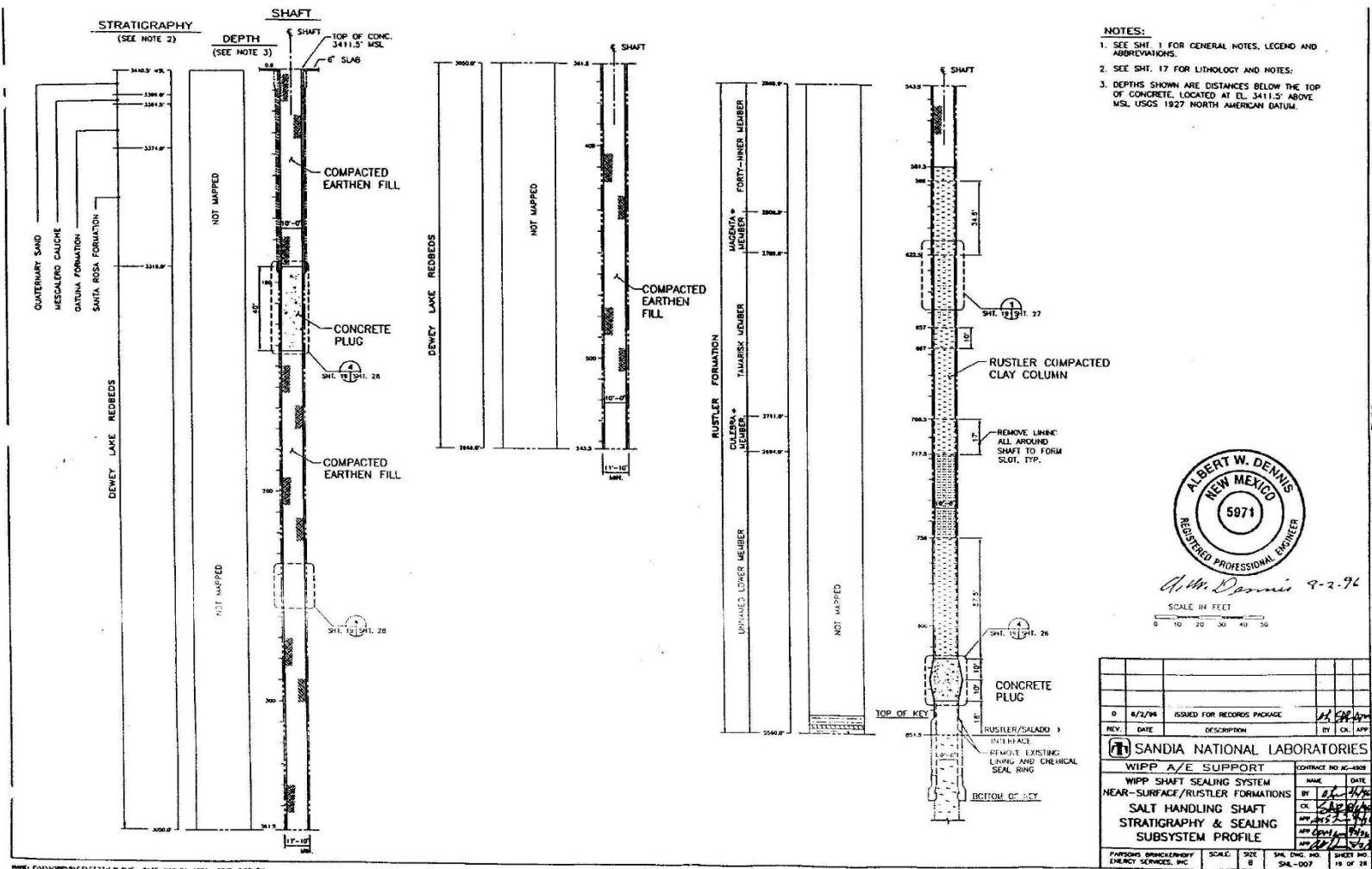
Sheet 16 of 28



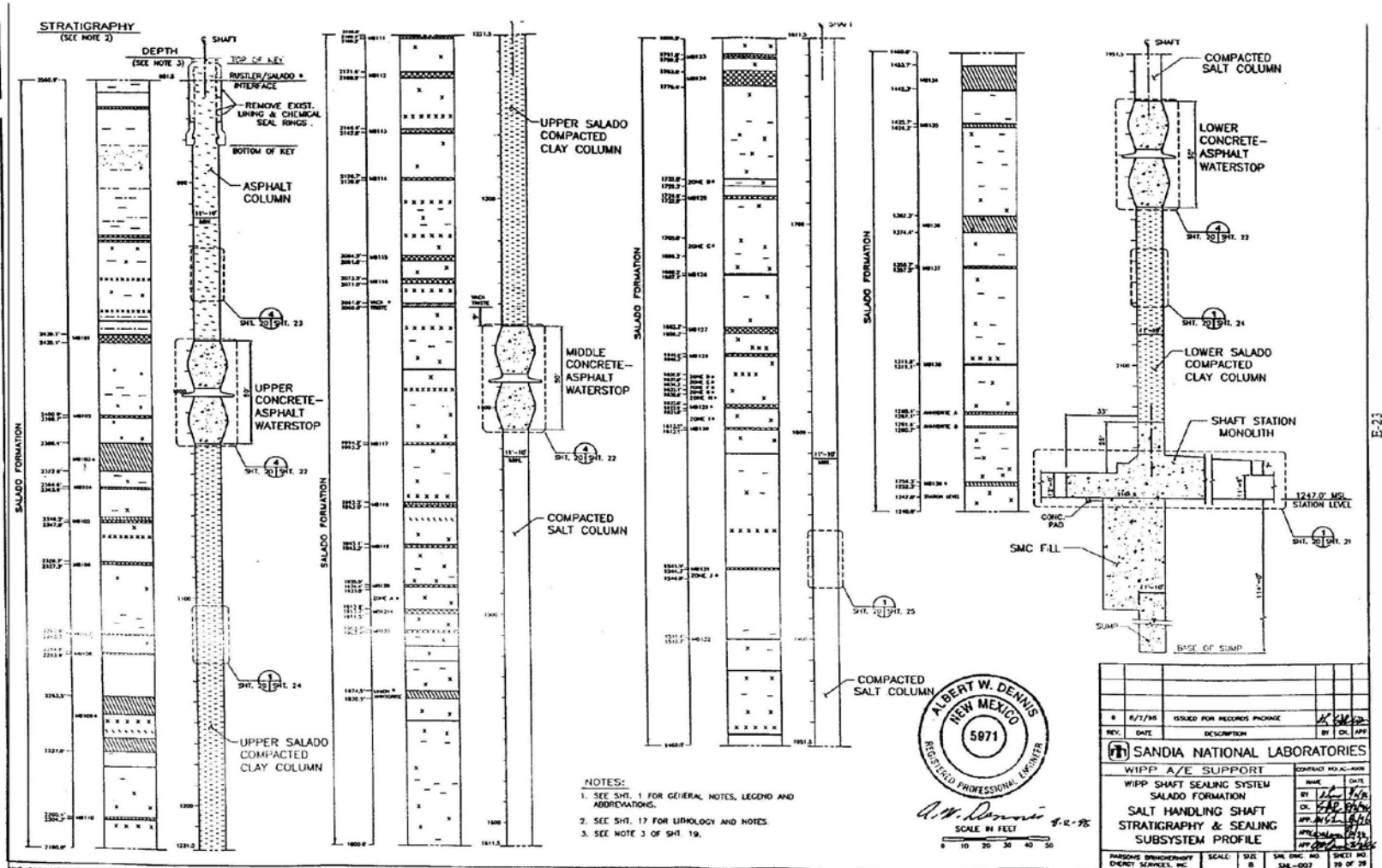


Salado Formation Salt Handling Shaft Stratigraphy and AS-Built Elements

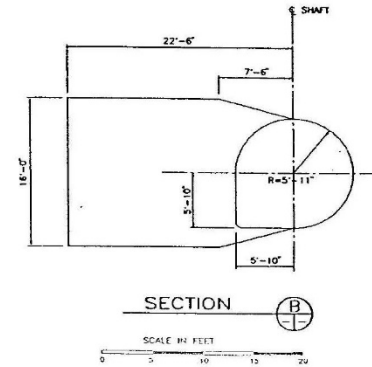
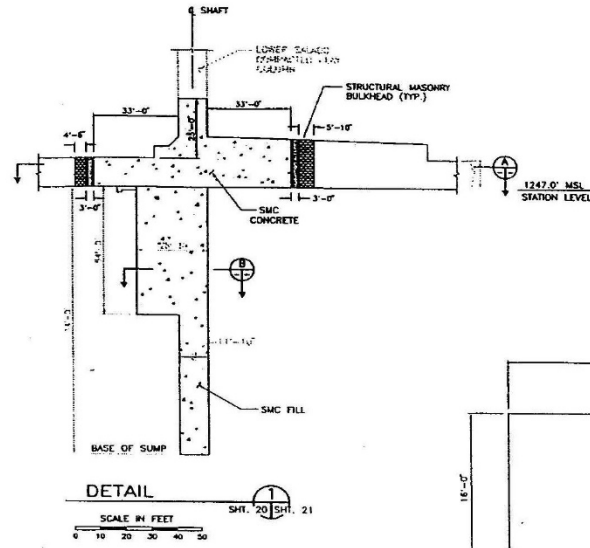
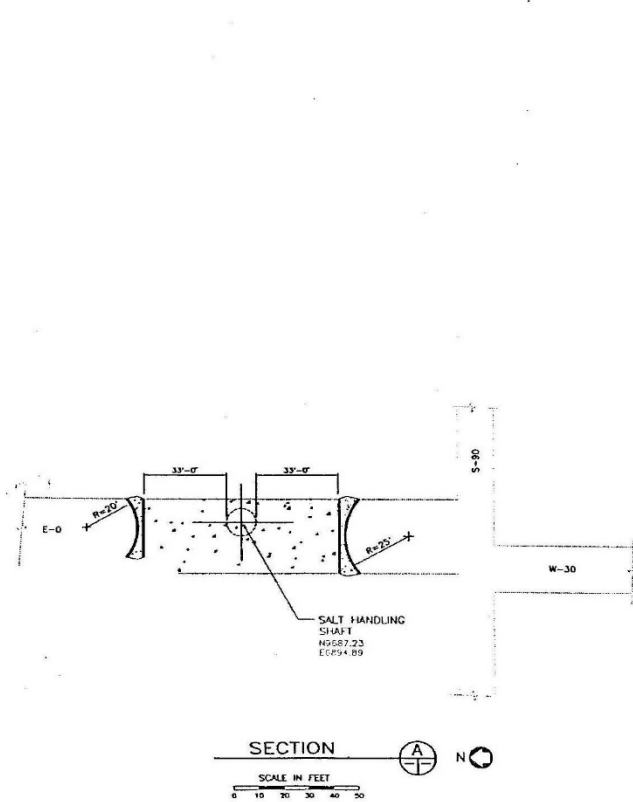
Waste Isolation Pilot Plant  
 Hazardous Waste Facility Permit  
 Attachment G2, Appendix G2-E  
 October 2023



Near-Surface / Rustler Formations Salt Handling Shaft Stratigraphy and Sealing Subsystem Profile



Salado Formation Salt Handling Shaft Stratigraphy and Sealing Subsystem Profile



NOTES:  
 1. SEE SHT. 1 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.



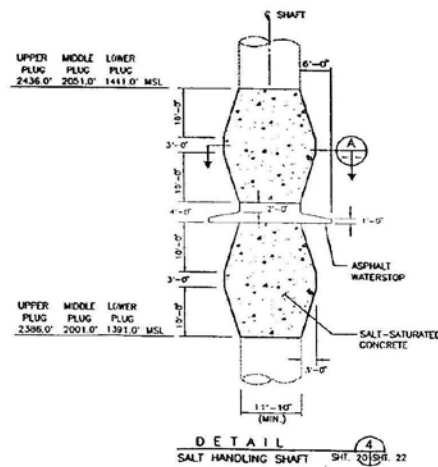
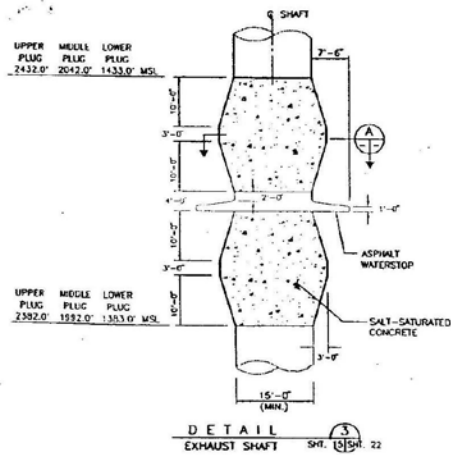
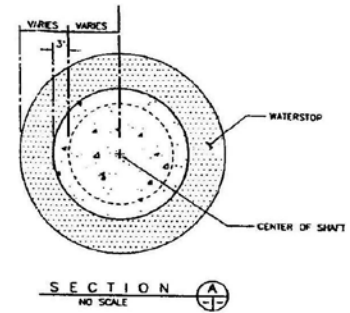
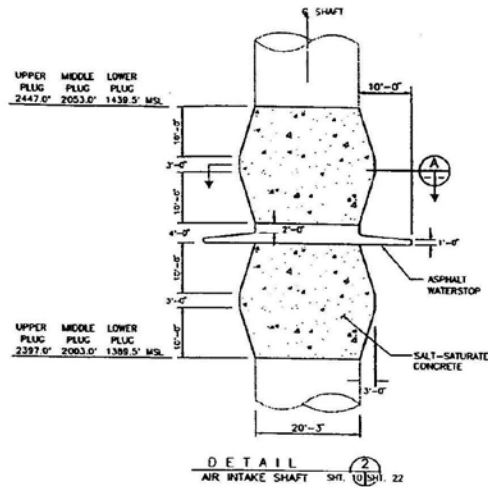
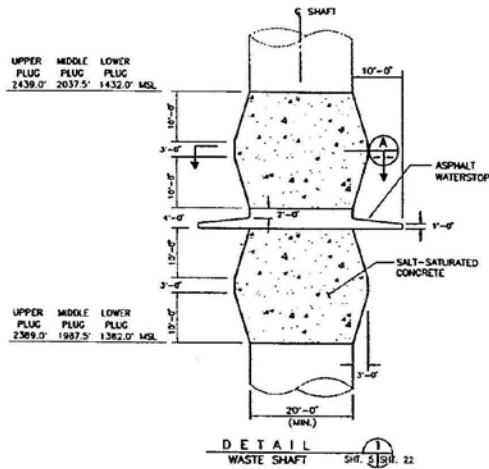
*Albert W. Dennis*  
 8-22-16

REV.	DATE	DESCRIPTION	BY	CHK.	APP.
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SANDIA NATIONAL LABORATORIES WIPP A/E SUPPORT WIPP SHAFT SEALING SYSTEM SALT HANDLING SHAFT SHAFT STATION MONOLITH					
PARSONS BRINCKERHOFF ENERGY SERVICES, INC.			SCALE:	SIZE:	SAL. DWG. NO.:
			B	B	SNL-007
			SHEET NO.		21 OF 28

Salt Handling Shaft Shaft Station Monolith

Sheet 21 of 28

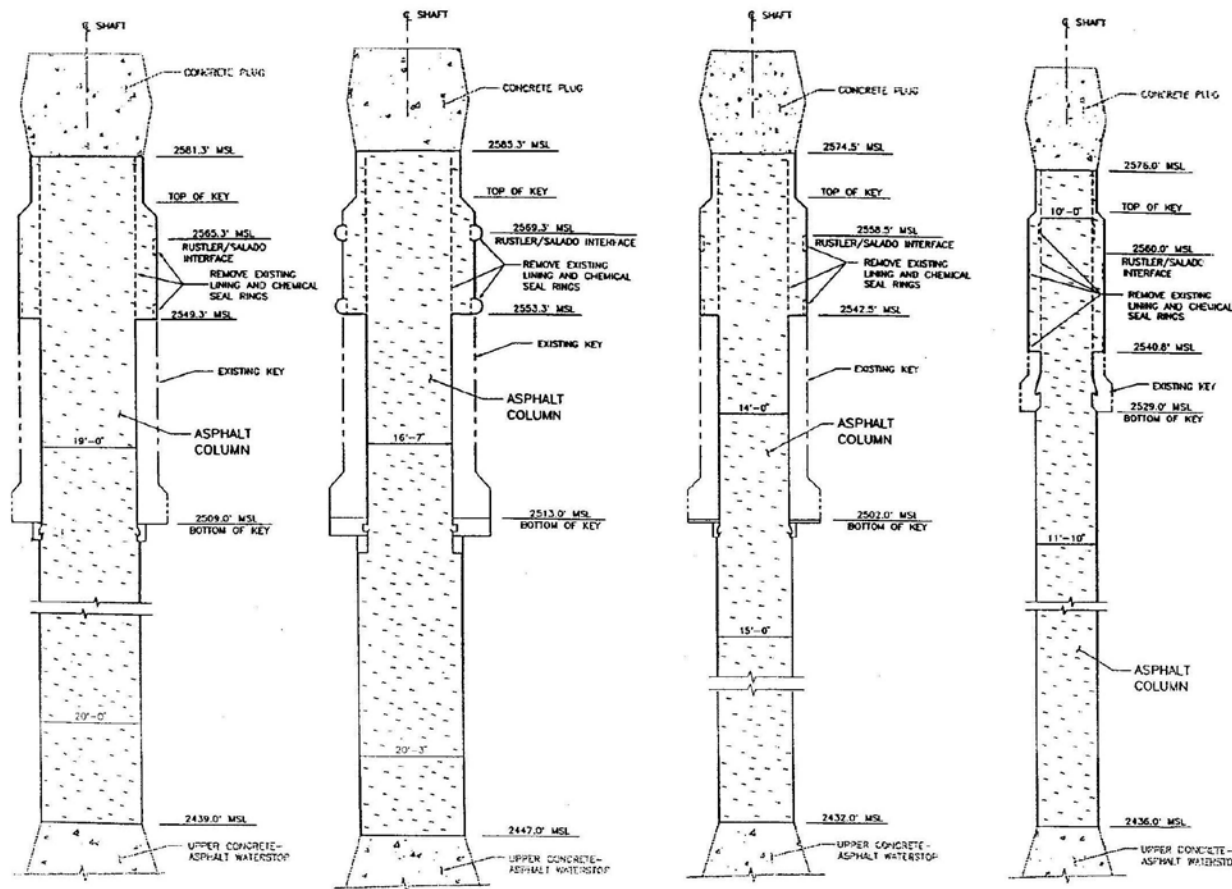




*Albert W. Dennis*  
 1-2-76

SCALE IN FEET  
 0 5 10 15 20 25

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BY	DATE	CHK.	DATE		
CONCRETE-ASPHALT WATERSTOP IN SALADO FORMATION					
PARSONS BRINCKERHOFF ENERGY SERVICES, INC.		SCALE:	SHEET:	SHEET NO.:	SHEET NO.:
		B	22	22	28



DETAIL 1 WASTE SHAFT SH. 23  
 DETAIL 2 AIR INTAKE SHAFT SH. 23  
 DETAIL 3 EXHAUST SHAFT SH. 23  
 DETAIL 4 SALT HANDLING SHAFT SH. 23



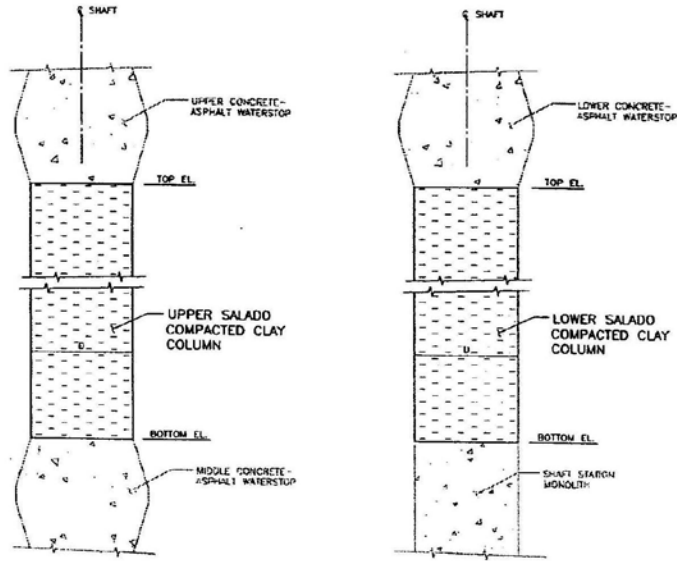
*Albert W. Dennis*  
 8-2-91

SCALE IN FEET  
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<b>SANDIA NATIONAL LABORATORIES</b> WIPP A/E SUPPORT WIPP SHAFT SEALING SYSTEM ASPHALT COLUMN				
CONTRACT NO. K-809 DATE: 11/2/96 BY: [Signature] CHECKED: [Signature] APPROVED: [Signature]		SCALE: 5/8" = 1'-0" SHEET NO. 23 OF 28		

E-26

Asphalt Column



DETAIL  
 SEE TABLE 1 FOR DETAILS  
 NO SCALE  
 SHT. 5 SHT. 24  
 SHT. 10  
 SHT. 15  
 SHT. 20

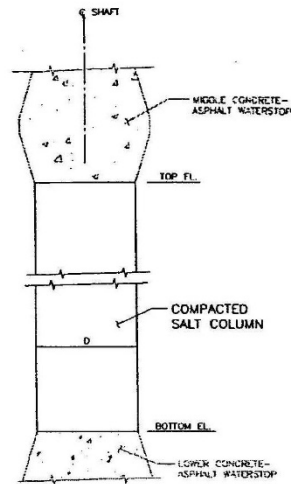
TABLE 1

SHAFT	NOMINAL SHAFT DIAMETER D	UPPER SALADO COMPACTED CLAY COLUMN			LOWER SALADO COMPACTED CLAY COLUMN		
		TOP EL. (FT. MSL)	BOTTOM EL. (FT. MSL)	TOTAL HT. (FT.)	TOP EL. (FT. MSL)	BOTTOM EL. (FT. MSL)	TOTAL HT. (FT.)
WASTE	20'-0"	2389.0	2037.5	351.5	1382.0	1286.0	96.0
AIR INTAKE	20'-3"	2397.0	2053.0	344.0	1389.5	1296.0	93.5
EXHAUST	15'-0"	2382.0	2042.0	340.0	1383.0	1285.0	98.0
SALT HANDLING	11'-10"	2386.0	2051.0	335.0	1391.0	1284.0	107.0



*Albert W. Dennis*  
 9-2-96

REV.	DATE	DESCRIPTION	BY	CHK.	APP.
1	11/2/96	ISSUED FOR RECORDS PHOENIX	JL	SK	SK
<b>SANDIA NATIONAL LABORATORIES</b> WIPP A/E SUPPORT WIPP SHAFT SEALING SYSTEM UPPER AND LOWER SALADO COMPACTED CLAY COLUMNS					
NAME		DATE			
BY: JL		11/2/96			
CHK: SK		11/2/96			
APP: JL		11/2/96			
APP: SK		11/2/96			
PARSONS BRINCKERHOFF ENERGY SERVICES, INC.	SCALE:	SIZE:	SHE. DWG. NO.:	SHEET NO.:	
			SNL-007	24 OF 28	



**DETAIL**  
 SEE TABLE 1 FOR DETAILS  
 NO SCALE  
 SH. 5 SH. 25  
 SH. 10  
 SH. 15  
 SH. 20

TABLE 1

SHAFT	NOMINAL SHAFT DIAMETER D	COMPACTED SALT COLUMN		
		TOP EL. (FT. MSL)	BOTTOM EL. (FT. MSL)	TOTAL HT. (FT.)
WASTE	20'-0"	1987.5	1432.0	555.5
AIR INTAKE	20'-3"	2003.0	1439.5	563.5
EXHAUST	15'-0"	1992.0	1433.0	559.0
SALT HANDLING	11'-10"	2001.0	1441.0	560.0



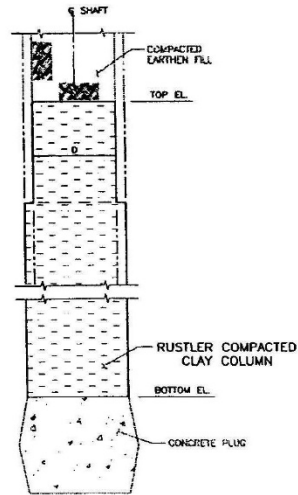
*Albert W. Dennis*  
 8-2-76

REV.	DATE	DESCRIPTION	BY	CHK.	APP.
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WIPP A/E SUPPORT				CONTRACT NO. AG-4808	
WIPP SHAFT SEALING SYSTEM				NAME DATE	
<b>COMPACTED SALT COLUMN</b>				BY <i>[Signature]</i> 8/2/96	
				CHK. <i>[Signature]</i> 8/2/96	
				APP. <i>[Signature]</i> 8/2/96	
				APP. <i>[Signature]</i> 8/2/96	
PARSONS BRINCKERHOFF ENERGY SERVICES, INC.		SCALE: SIZE 8	S&L DWG. NO. S&L-007	SHEET NO. 25 OF 28	

E-28

**WIPP Shaft Sealing System Concrete Plug**

**Drawing SNL 007 26 of 28 not currently available. Drawing is not displayed in the Permit.**



DETAIL  
 SEE TABLE 1 FOR DETAILS  
 NO SCALE

SH. 4 | SH. 27  
 SHT. 9  
 SHT. 14  
 SHT. 19

TABLE 1

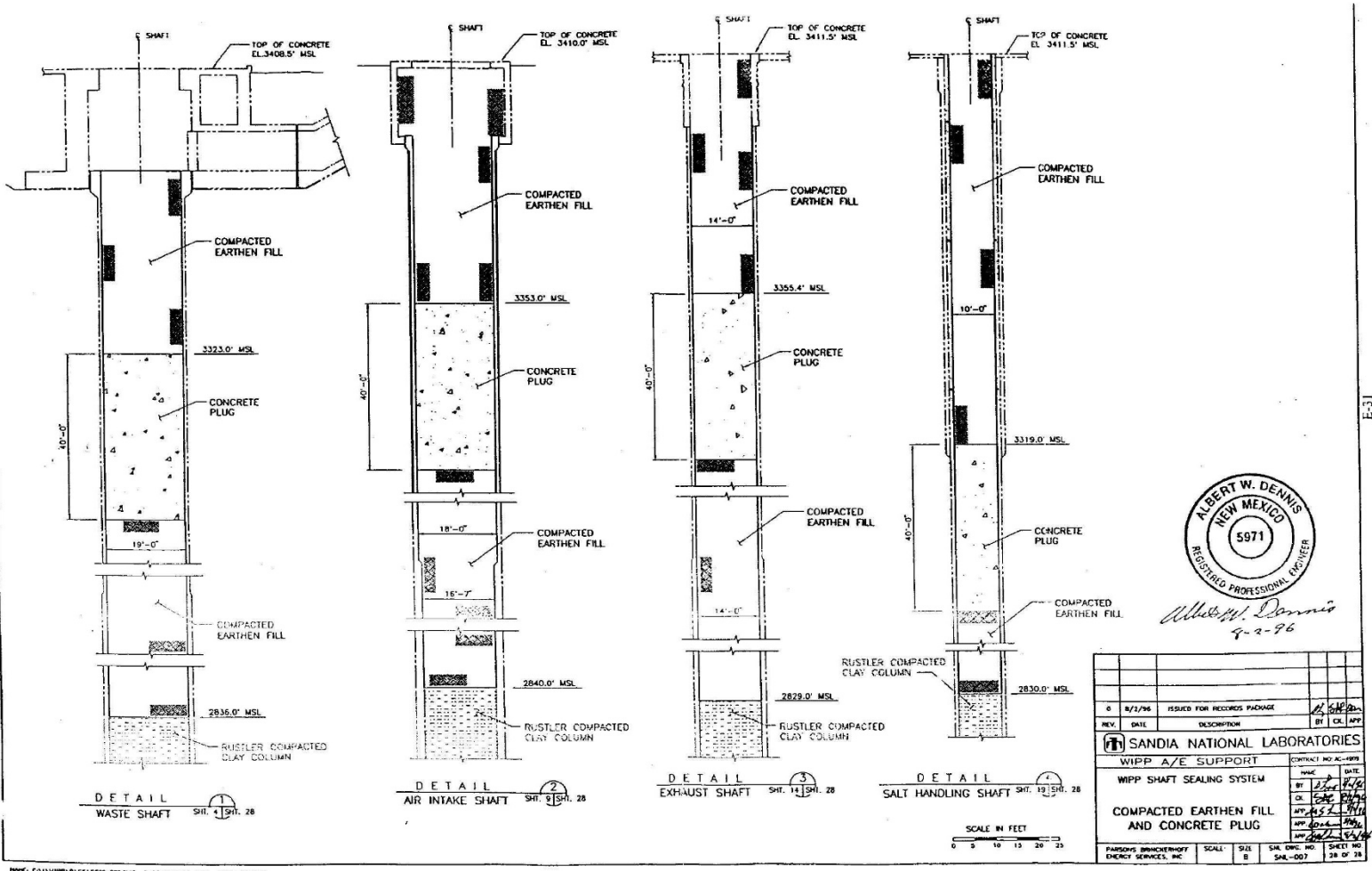
SHAFT	NOMINAL SHAFT DIAMETER D	RUSTLER COMPACTED CLAY COLUMN		
		TOP EL. (FT. MSL)	BOTTOM EL. (FT. MSL)	TOTAL HT. (FT.)
WASTE	19'-0"	2836.0	2801.3	234.7
AIR INTAKE	16'-7"	2840.0	2805.3	234.7
EXHAUST	14'-0"	2829.0	2594.5	234.5
SALT HANDLING	10'-0"	2830.0	2596.0	234.0



*Albert W. Dennis*  
 7-2-96

REV.	DATE	DESCRIPTION	BY	CHK.	APP.
0	8/1/96	ISSUED FOR RECORDS PACKAGE	AS	SK	LD
SANDIA NATIONAL LABORATORIES WIPP A/E SUPPORT WIPP SHAFT SEALING SYSTEM RUSTLER COMPACTED CLAY COLUMN					
CONTRACT NO. AC-4999		NAME	DATE		
		BY	DATE		
		CHK.	DATE		
		APP.	DATE		
		DATE	DATE		
PARSONS BRINCKERHOFF ENERGY SERVICES, INC.	SCALE: 1/8" = 1'-0"	SHEET NO. 27	ENC. NO. B	SHEET NO. 27	OF 28

WIP: ENVIRONMENTAL SEALING DATE: MAY 06, 1996 TIME: 04:10 PM



ALBERT W. DENNIS  
 NEW MEXICO  
 5971  
 REGISTERED PROFESSIONAL ENGINEER  
*Albert W. Dennis*  
 9-2-96

0	8/1/96	ISSUED FOR RECORDS PACKAGE	BY: CJK
REV.	DATE	DESCRIPTION	BY: CJK, APP
<b>SANDIA NATIONAL LABORATORIES</b>			
WIPP A/E SUPPORT		CONTRACT NO. A-1099	
WIPP SHAFT SEALING SYSTEM		DATE: 8/1/96	
COMPACTED EARTHEN FILL AND CONCRETE PLUG		BY: CJK	
		APP: CJK	
		APP: CJK	
		APP: CJK	
PARSONS BRINCKERHOFF ENERGY SERVICES, INC.		SCALE: 1" = 10'	SHEET NO. 28 OF 28

Compacted Earthen Fill and Concrete Plug

Sheet 28 of 28

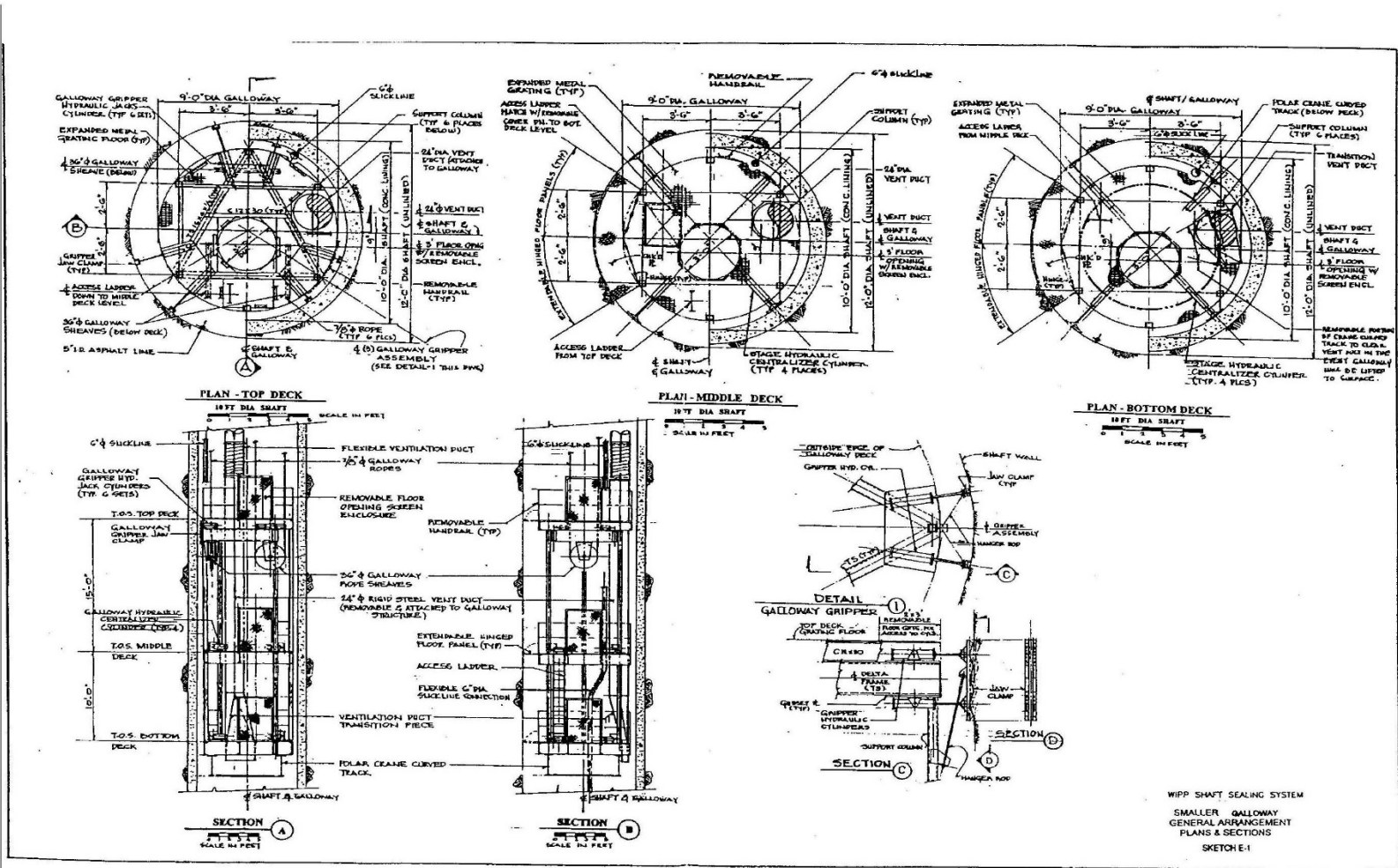
WASTE ISOLATION PILOT PLANT  
CARLSBAD, NM  
SHAFT SEALING SYSTEM DESIGN  
EQUIPMENT AND CONSTRUCTION SKETCHES

DRAWING NUMBER	TITLE
SKETCH E-1	WIPP SHAFT SEALING SYSTEM SMALLER GALLOWAY GENERAL ARRANGEMENT PLANS AND SECTIONS
SKETCH E-2	WIPP SHAFT SEALING SYSTEM LARGER GALLOWAY GENERAL ARRANGEMENT PLANS AND SECTIONS
SKETCH E-3	WIPP SHAFT SEALING SYSTEM TYPICAL HEADFRAME PLANS AND SECTIONS
SKETCH E-4	WIPP SHAFT SEALING SYSTEM PERSPECTIVE HEADFRAME AND ASSOCIATED SURFACE FACILITIES

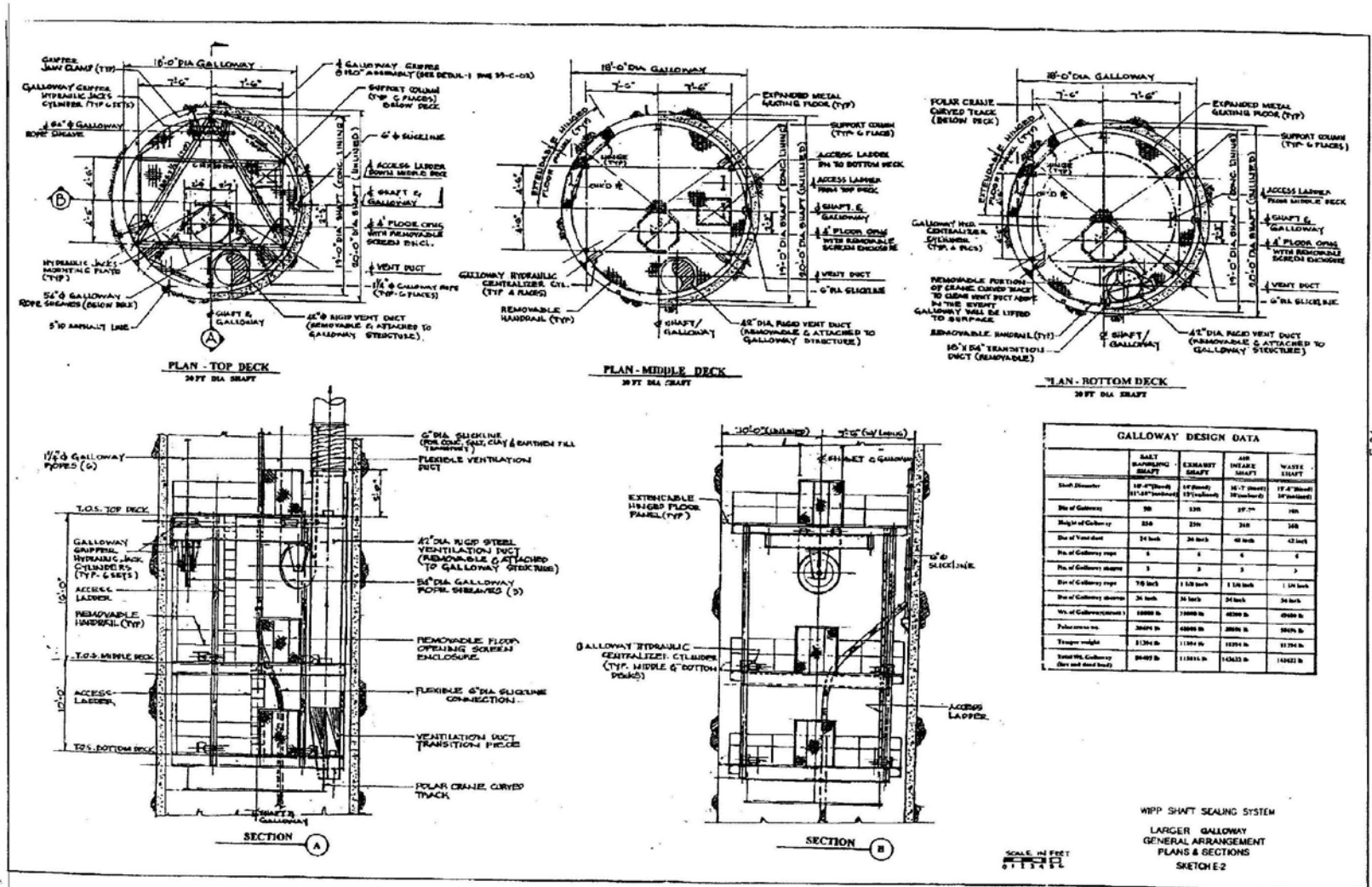
E-32

List of Sketches

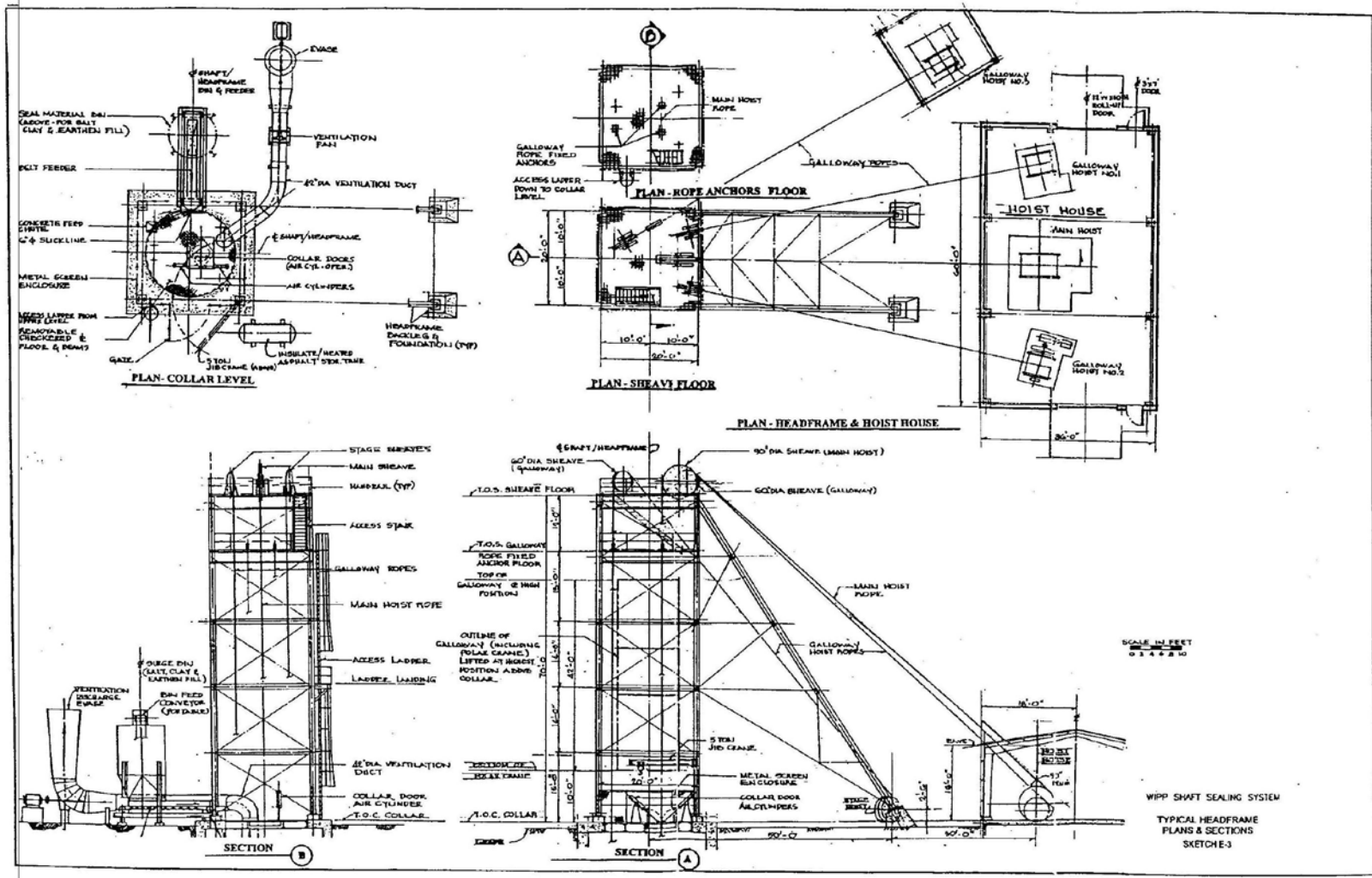




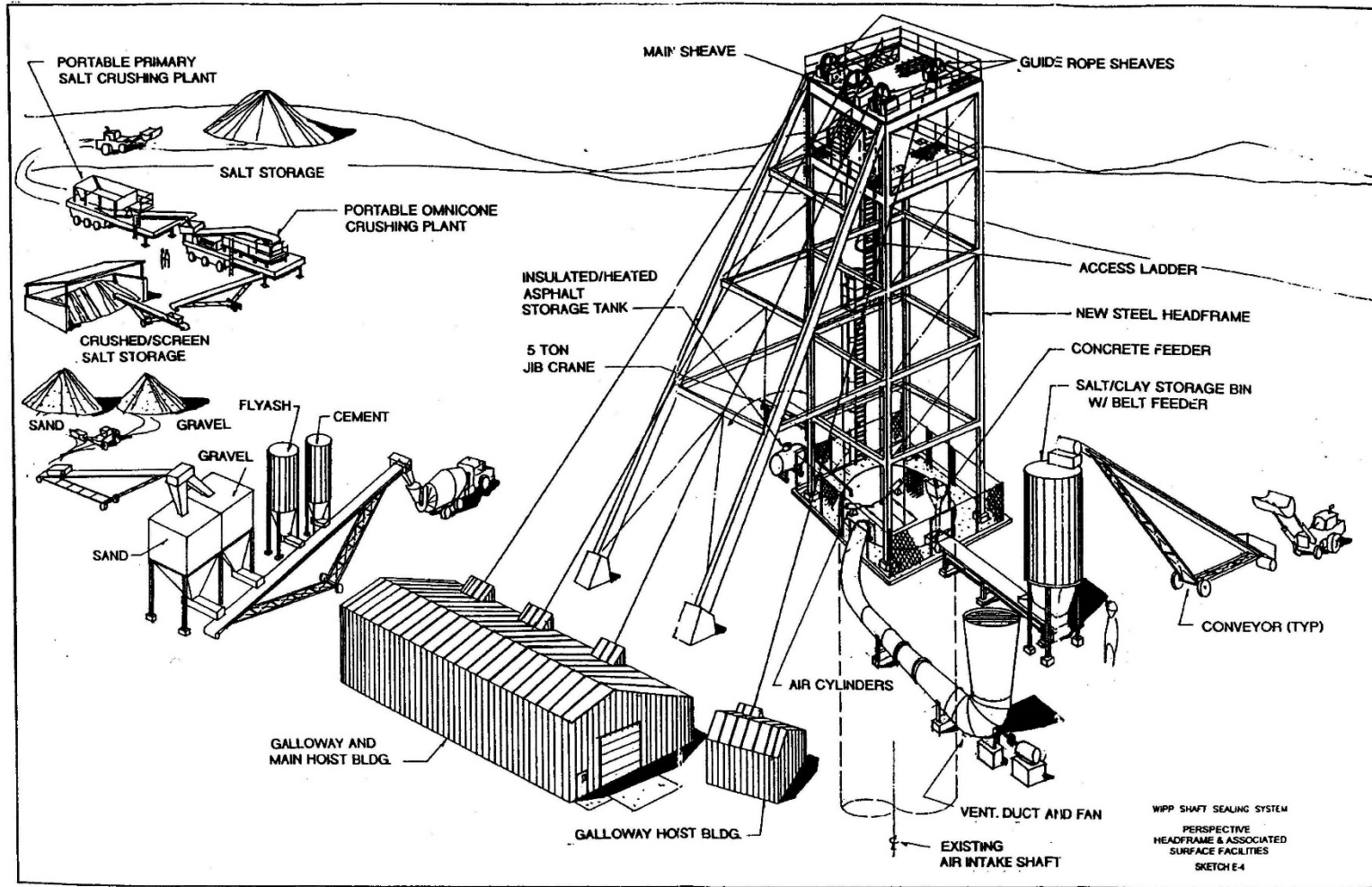
WIPP Shaft Sealing System Smaller Galloway Genral Arrangement Plans and Sections



WIPP Shaft Sealing System Larger Galloway General Arrangement Plans and Sections



WIPP Shaft Sealing System Typical Headframe Plans and Sections



WIPP Shaft Sealing System Typical Headframe and Associated Surface Facilities

Waste Isolation Pilot Plant  
 Hazardous Waste Facility Permit  
 Attachment G2, Appendix G2-E  
 October 2023

WIPP  
 UC721 Distribution List

Federal Agencies

US Department of Energy (4)  
 Office of Civilian Radioactive Waste Mgmt.  
 Attn: Deputy Director, RW-2  
 Acting Director, RW-10  
 Office of Human Resources & Admin.  
 Director, RW-30  
 Office of Program Mgmt. & Integ.  
 Director, RW-40  
 Office of Waste Accept., Stor., & Tran.  
 Forrestal Building  
 Washington, DC 20585

Attn: Project Director (2)  
 Yucca Mountain Site Characterization Office  
 Director, RW-3  
 Office of Quality Assurance  
 101 Convention Center Drive, Suite #P-110  
 Las Vegas, NV 89109

US Department of Energy  
 Albuquerque Operations Office  
 Attn: National Atomic Museum Library  
 P.O. Box 5400  
 Albuquerque, NM 87185-5400

US Department of Energy  
 Research & Waste Management Division  
 Attn: Director  
 P.O. Box E  
 Oak Ridge, TN 37831

US Department of Energy (8)  
 Carlsbad Area Office  
 Attn: G. Dials  
 D. Galbraith (3)  
 M. Matthews  
 M. McFadden  
 R. Lark  
 J. A. Mewhinney  
 P.O. Box 3090  
 Carlsbad, NM 88221-3090

US Department of Energy  
 Office of Environmental Restoration and  
 Waste Management  
 Attn: J. Lytle, EM-30  
 Forrestal Building  
 Washington, DC 20585-0002

US Department of Energy (3)  
 Office of Environmental Restoration and  
 Waste Management  
 Attn: M. Frei, EM-34, Trevion II  
 Washington, DC 20585-0002

US Department of Energy  
 Office of Environmental Restoration and  
 Waste Management  
 Attn: S. Schneider, EM-342, Trevion II  
 Washington, DC 20585-0002

US Department of Energy (2)  
 Office of Environment, Safety & Health  
 Attn: C. Borgstrom, EH-25  
 R. Pelletier, EH-231  
 Washington, DC 20585

US Department of Energy (2)  
 Idaho Operations Office  
 Fuel Processing & Waste Mgmt. Division  
 785 DOE Place  
 Idaho Falls, ID 83402

US Environmental Protection Agency (2)  
 Radiation Protection Programs  
 Attn: M. Oge  
 ANR-460  
 Washington, DC 20460

Boards

Defense Nuclear Facilities Safety Board  
 Attn: D. Winters  
 625 Indiana Ave. NW, Suite 700  
 Washington, DC 20004

Nuclear Waste Technical Review Board (2)  
 Attn: Chairman  
 S. J. S. Parry  
 1100 Wilson Blvd., Suite 910  
 Arlington, VA 22209-2297

State Agencies

Attorney General of New Mexico  
 P.O. Drawer 1508  
 Santa Fe, NM 87504-1508

Environmental Evaluation Group (3)  
 Attn: Library  
 7007 Wyoming NE, Suite F-2  
 Albuquerque, NM 87109

Metropolitan Water District of Southern Calif.  
 Attn: J. Narvaiz  
 P.O. Box 54153  
 Los Angeles, CA 90071-3123

NM Energy, Minerals, and Natural  
 Resources Department  
 Attn: Library  
 2040 S. Pacheco  
 Santa Fe, NM 87505

NM Environment Department (3)  
 Secretary of the Environment  
 Attn: Mark Weidler  
 1190 St. Francis Drive  
 Santa Fe, NM 87503-0968

NM Bureau of Mines & Mineral Resources  
 Socorro, NM 87801

NM Environment Department  
 WIPP Project Site  
 Attn: P. McCasland  
 P.O. Box 3090  
 Carlsbad, NM 88221

Laboratories/Corporations

Battelle Pacific Northwest Laboratories (2)  
 Attn: R. E. Westerman  
 R. Romiac, MS P8-38  
 P.O. Box 999  
 900 Battelle Blvd.  
 Richland, WA 99352

Brookhaven National Laboratory  
 Attn: P. D. Moskowitz  
 Environmental & Waste Technology  
 Center  
 Building 830  
 Upton, NY 11973

Harnischfeger Corp.  
 Phonex Engineering Services  
 Attn: R. Luebke  
 2969 S. Chase Avenue  
 Milwaukee, WI 53207-6408

Ian Clelland  
 6656 N. Amdahl Dr.  
 Tucson, AZ 85704

INTERA, Inc.  
 Attn: G. A. Freeze  
 1650 University Blvd. NE, Suite 300  
 Albuquerque, NM 87102

INTERA, Inc. (6)  
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 M. Reeves  
 W. Statham  
 J. Beach  
 D. Fryar  
 INTERA WIPP Library  
 6850 Austin Center Blvd., Suite 300  
 Austin, TX 78731

INTERA, Inc.  
 Attn: J. Lee, YMP PA Dept.  
 1261 Town Center Drive  
 Las Vegas, NV 89134

INTERA, Inc.  
 Attn: W. Stensrud  
 P.O. Box 2123  
 Carlsbad, NM 88221

Istasca Consulting Group, Inc.  
 Attn: John Timocci  
 Thresher Square East  
 708 South Third Street, Suite 310  
 Minneapolis, MI 55415

Los Alamos National Laboratory  
 Attn: B. Erdal, INC-12  
 P.O. Box 1663  
 Los Alamos, NM 87544

Morton International, Morton Salt  
 Attn: H. W. Diamond  
 Morton International Building  
 100 N. Riverside Plaza,  
 Randolph Street at the River  
 Chicago, IL 60606-1597

Parsons Brinckerhoff Energy Services, Inc.  
 Attn: W. S. Roman  
 One Penn Plaza  
 New York, NY 10119

Parsons Brinckerhoff Energy Services, Inc. (2)  
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 C. D. Maxon  
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 303 Second Street  
 Suite 850 North  
 San Francisco, CA 94107

Distribution - 1

Waste Isolation Pilot Plant  
 Hazardous Waste Facility Permit  
 Attachment G2, Appendix G2-E  
 October 2023

Parsons Brinckerhoff International, Inc.  
 Attn: Mary Ann Novak  
 700 11th Street, NW, Suite 710  
 Washington, DC 20001

Phillips Mining, Geotechnical & Grouting  
 Attn: Stephen Phillips  
 8640 North Glenhurst Place  
 Tucson, AZ 85704

RESPEC, Inc. (5)  
 Attn: L. Van Sambeek (3)  
 G. Callahan  
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 J. Raigan  
 T. Pfeifle  
 3824 Jet Drive  
 P.O. Box 725  
 Rapid City, SD 57709

RESPEC, Inc.  
 Attn: Angus Robb  
 4775 Indian School NE, Suite 300  
 Albuquerque, NM 87110-3927

Science Applications International Corp.  
 Attn: W. Thompson  
 15000 W. 6th Avenue, Suite 202  
 Golden, CO 80401

Tech Keys, Inc. (3)  
 Attn: J. Chapman (1)  
 L. Robledo (2)  
 5000 Marble NE, Suite 222  
 Albuquerque, NM 87110

Westinghouse Electric Corporation (5)  
 Attn: Library  
 J. Epstein  
 J. Lee  
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 R. Kehrman  
 P.O. Box 2078  
 Carlsbad, NM 88221

S. Cohen & Associates  
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 WIPP Panel

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 Newport Beach, CA 92660-2027

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 Aiken, SC 29802

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 CH<sub>2</sub> M Hill  
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 Bellevue, WA 98009-2050

Thomas A. Zordon  
 Zordon Associates, Inc.  
 3807 Edinburg Drive  
 Murrysville, PA 15668

Universities

Harvey Mudd College  
 Attn: M. Cardenas  
 Department of Engineering  
 Claremont, CA 91711

New Mexico State University  
 Waste-management Education & Research  
 Corporation.  
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 Las Cruces, NM 88003-8001

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 Department of Mechanical and Environmental  
 Engineering  
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 University of California  
 Santa Barbara, CA 93106

University of Nevada-Reno  
 Department of Mining Engineering  
 Mackay School of Mines  
 Attn: J. Daamen  
 Reno, NV 89557

University of New Mexico  
 Center for Radioactive Waste Management  
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 209 Faris Engineering Building  
 Albuquerque, NM 87131-1341

University of New Mexico  
 Department of Civil Engineering  
 Attn: J. C. Stormont  
 Albuquerque, NM 87131-1351

University of New Mexico  
 Geology Department  
 Attn: Library  
 141 Northrop Hall  
 Albuquerque, NM 87131

University of Washington  
 College of Ocean & Fishery Sciences  
 Attn: G. R. Heath  
 583 Henderson Hall, HN-15  
 Seattle, WA 98195

Libraries

Thomas Brannigan Library  
 Attn: D. Dresp  
 106 W. Hadley St.  
 Las Cruces, NM 88001

Government Publications Department  
 Zimmerman Library  
 University of New Mexico  
 Albuquerque, NM 87131

New Mexico Junior College  
 Pansell Library  
 Attn: R. Hill  
 Lovington Highway  
 Hobbs, NM 88240

New Mexico State Library  
 Attn: N. McCallan  
 325 Don Gaspar  
 Santa Fe, NM 87503

New Mexico Tech  
 Martin Speere Memorial Library  
 Campus Street  
 Socorro, NM 87810

WIPP Public Reading Room  
 Carlsbad Public Library  
 101 S. Halagueno St.  
 Carlsbad, NM 88220

Foreign Addresses

Atomic Energy Canada Ltd. (5)  
 Whiteshell Laboratory  
 Attn: Neil Chandler  
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 B. Goodwin  
 Malcolm Gray  
 Maria Onefrei  
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Distribution - 2

Waste Isolation Pilot Plant  
 Hazardous Waste Facility Permit  
 Attachment G2, Appendix G2-E  
 October 2023

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 92266 Fontenay-aux-Roses, Cedex  
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Claude Sombret  
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 de la Vallee Rhone  
 CEN/VALRHO  
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 30205 Bagnols-Sur-Ceze, FRANCE

Commissariat a L'Energie Atomique  
 Attn: D. Alexandre  
 Centre d'Etudes de Cadarache  
 13108 Saint Paul Lez Durance Cedex  
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 Technologie  
 Postfach 200 706  
 5300 Bonn 2, GERMANY

Forschungszentrum Karlsruhe GmbH  
 Institut für Nukleare Entsorgungstechnik  
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 P. Zuidema  
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Gesellschaft für Anlagen und Reaktorsicherheit  
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 D-50667 Cologne, GERMANY

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 Henricistraße 50  
 52072 Aachen, GERMANY

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 04279 Leipzig, GERMANY

Institut Für Tief Lagerung  
 Attn: K. Kuhn  
 Theodor-Heuss-Strasse 4  
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 Project KBS (Kärnbränslesakerhet)  
 Box 5864  
 S-102 48 Stockholm  
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Nationale Genossenschaft für die Lagerung  
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 Attn: S. Vomvoris  
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 Abingdon, Oxfordshire OX14 3DB  
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 Dorchester, Dorset DT2 8DH  
 UNITED KINGDOM

AEA Technology  
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 B4244 Harwell Laboratory  
 Didcot, Oxfordshire OX11 0RA  
 UNITED KINGDOM

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