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CENTRAL NEVADA  
SUPPLEMENTAL TEST AREA  
FACILITY RECORDS  
1970

UNITED STATES ATOMIC ENERGY COMMISSION  
NEVADA OPERATIONS OFFICE  
LAS VEGAS, NEVADA

September 1970

Prepared By  
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CENTRAL NEVADA SUPPLEMENTAL TEST AREA

FACILITY RECORDS 1970

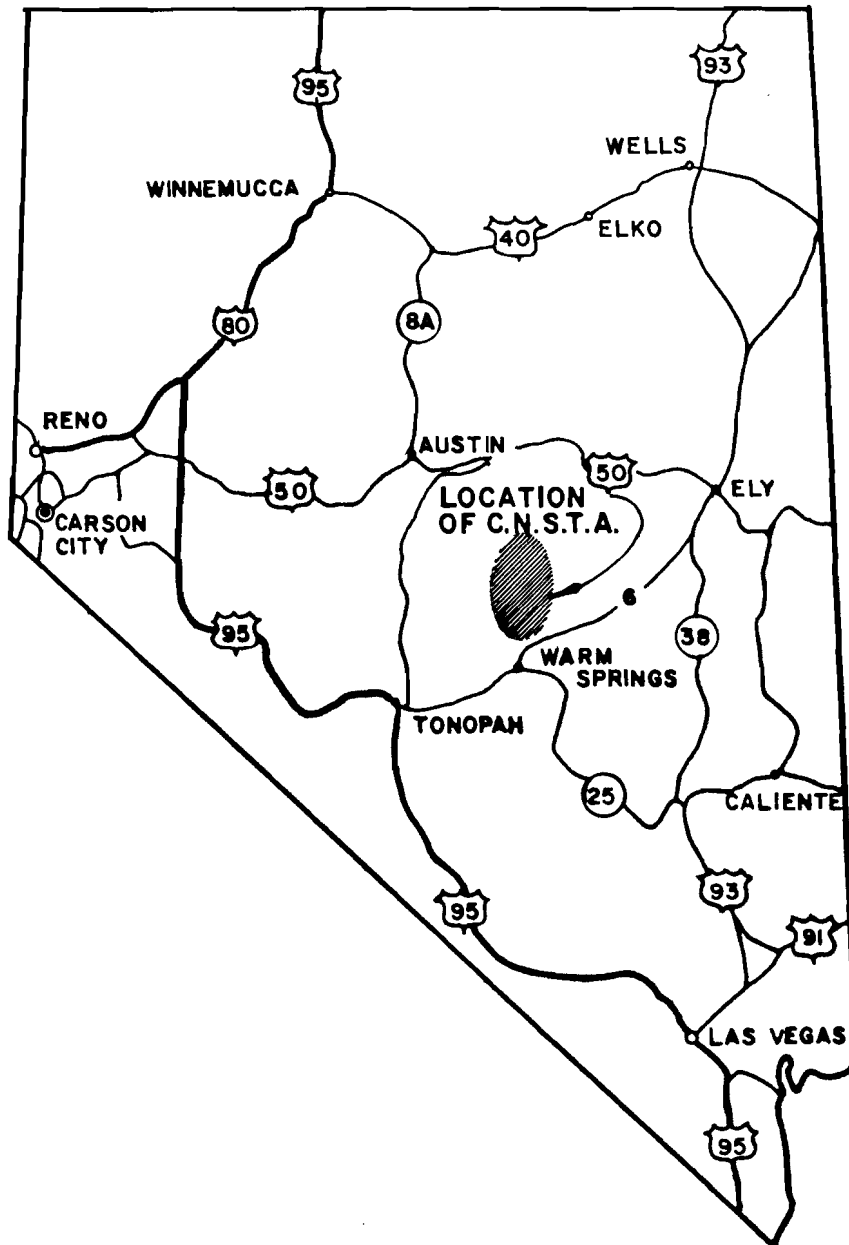
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### PURPOSE

This facility study has been prepared in response to a request of the AEC/NV00 Property Management Division and confirmed by letter, W. D. Smith to L. E. Rickey, dated April 14, 1970, STS Program Administrative Matters. The purpose is to identify each facility, including a brief description, the acquisition cost either purchase and/or construction, and the AE costs if identifiable. A narrative review of the history of the subcontracts and contracts of the Central Nevada Supplemental Test Area is included in this study.

#### GENERAL LOCATION DATA

The Central Nevada Supplemental Test Area is located approximately fifty-seven (57) miles Northeasterly from Tonopah, and approximately one hundred nine miles Southwesterly from Ely in Nye County, Nevada, on U. S. Highway No. 6. The base camp is six (6) miles from Warm Springs at an elevation of approximately 6500 feet above sea level. The test area is on land that was withdrawn for testing purposes from the Bureau of Land Management. The area was selected for its remoteness to habitation, although there are some ranches and mines in the general area, and for its geological and hydrological formations. General location is shown on Sheet No. SK 30168-C1.



# STATE OF NEVADA

## HOLMES & NARVER, INC.

ENGINEERS-CONSTRUCTORS  
ON-CONTINENT TEST DIVISION

3030 S. HIGHLAND DRIVE

LAS VEGAS, NEVADA

DRAWN BY	CHECKED BY	DATE	SHEET NO.
GF	TW	1-17-69	SK
JOB NO.	APPROVED:	30168	
	E. P. Gilman	C1	

## GENERAL DESCRIPTION

### A. Camp

The original (Faultless Project) camp and facilities were constructed under subcontract dated July 1967, as a lease arrangement whereby the Subcontractor furnished the complete camp, warehousing and utilities, and maintained and operated them, with the exceptions of the power and telephone utilities, which were operated by the respective utility companies. Facilities were minimal and austere, and of a temporary nature. On completion of the project, the basic lease was terminated and part of the facilities were purchased by Holmes & Narver, Inc., for the AEC. The balance were removed by the Subcontractor.

In preparation for the next scheduled event, a contract was awarded in 1968 for the design of a new, more permanent base camp, control point and balloon launch facility. The original camp was designed to accommodate 250 men. The construction bids exceeded the AE estimate and allowable budget. The design was thus changed and several buildings which had been designed were eliminated from the final camp construction. The AE costs so accumulated have been prorated to the construction costs of the balance of the facilities. The AE costs are, therefore, included as part of the total cost, but it presents a distorted ratio of engineering to construction. With a reduced scope of construction, proposals for construction were received and in May 1969, a construction subcontract was awarded. The costs for utilities for the control point area have been included with the appropriate base camp items. The balance of the control point facilities were considered as temporary and/or trailers so have not been included.

Housing units to accommodate 248 persons consist of four "H" shaped complexes, each having twelve 10 ft. x 55 ft. dormitory-type trailers, and one 10 ft. x 55 ft. latrine trailer. These units were transferred to the AEC/NVOO from the Department of the Air Force in the latter part of 1968. Three 37.5 KVA 4160/208 volt transformers, furniture and appliances were included with each complex. (Individual trailer units are shown on CNSTA Property Inventory, dated April 30, 1970, pages 65 to 69 inclusive, and page 71.)

### B. Airstrip and Access Roads

A subcontract was awarded to construct an airstrip, three access roads and a signal cable plant. Inclement weather delayed contract completion, but all work was completed and accepted by August 5, 1969. The decision to install a radio repeater station at Noname Hill necessitated preparation of a site, and the construction of a road which was accomplished by subcontract. Other roads and trails used were existing and upgraded by minimal repair and maintenance.



C. Testing and Laboratory

Testing and analysis of soils, aggregate, admixture, concrete, roadway asphalt and other laboratory work was done by service subcontract to a testing laboratory. The subcontract was awarded for the period December 1968 to June 30, 1969, and then modified to extend to September 28, 1969, and to adjust to actual quantities.

D. Water

The water system was originally developed under the basic lease type subcontract, and consisted of a well, an underground distribution system of asbestos-cement piping, a storage tank and the necessary pumps, chlorinator and other appurtenances. This system was expanded and modified to include another well drilled under subcontract to supplement the original domestic supply, and the extension of water mains to the control point area and to the expanded camp buildings. The expansion to the system was a part of the subcontract for camp and control point construction.

E. Communications

Basic communications was provided by telephone with trunks into Mercury and Tonopah. The equipment was furnished and maintained by the telephone company. Two-way mobile radio with three V.H.F. nets on-site and one safety net off-site and the repeater station on Noname Hill provided the necessary communications. Closed circuit television and weather facsimile also was a part of the system. The communications equipment has not been considered as a facility other than the building housing the radio maintenance shop. The equipment is mounted in trailers and treated as capital equipment.

F. Other

Other costs which have been incurred, but not included in this report, are the charges by Bell of Nevada for the telephone service, lines, PBX and the phase-out of this equipment; miscellaneous minor construction expenditures not entirely identifiable; construction identified with Faultless, but no longer in existence; scientific facilities of a temporary nature; and capital equipment, basically communications, transferred to REEC Co Accountability.

Appendix

The Appendix contains a synopsis of the subcontracts and contracts awarded for construction at the Central Nevada Supplemental Test Area.

Central Nevada

Base Camp Facilities

1. Warehouse

ID 30157

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor McKenzie Construction Co., H&N Subcontractor	
Costs	Construction	\$130,281
	A.E. Costs	<u>23,068</u>
	Total Costs	\$153,349

A. Description

60'-0" x 150'-0" Butler type building, 12' eave height, rigid steel frame, concrete foundation and floor slab; sheet steel exterior; sheet steel interior wainscot panel up 8' fiberglass insulation batting on inside of exterior walls and under roof. A 20'-0" x 30'-0" office is in the southwest corner, with 8' high walls and no ceiling. At the west end of the building there is a 10'-0" wide 3'-6" high exterior loading platform with a ramp. There are three 12'-0" x 10'-0" overhead doors and six man doors.

B. Utilities and Services

1. Only plumbing in the building is a sprinkler system fed by a 4" wet stand pipe and a 6" main.
2. Electrical service is a 4/0 quadraplex drop from commercial 120/208 V to parallel 4/0 THW and a 600A 3P main circuit breaker, 450A trip units, and a 30A/2P disconnect switch for fire alarm system.
3. An automatic fire alarm system is installed, connected to the sprinkler system. Post indicator valves are supervised by the Fire Department. Manual pull boxes also installed.
4. Heating system consists of six overhead electrical unit heaters, 15 KW each, 208 V, 3 phase in the warehouse, and four 4.0 KW 208 V single phase electrical wall heaters in the office area.

C. Miscellaneous

Included as part of the Construction Costs under Minor Construction is the enameled steel shelving and bins.

Exterior storage areas enclosed by 4' high hog wire type 15 $\frac{1}{2}$  gage woven wire mesh fence.

# REAL PROPERTY ACCOUNTABILITY RECORD - BUILDINGS

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. CNSTA - Warehouse		DATE 31 Mar. 70	DRAWING NO. NV-33-02-07	RP ACCOUNT NO.	CONTROL NO.	BUILDING NO.	CODE
DIMENSIONS (Width X Length)				LOCATION			
MAIN BUILDING 60' x 150'	OFFSETS 10' x 60'	WINGS --	BASEMENTS --	Base Camp - Central Nevada			
Loading Platform and Ramp				ASSIGNMENT			
MATERIALS				TYPE OF CONSTRUCTION Rigid Steel Frame			
FOUNDATION Conc.	FLOOR Conc. Slab	WALL Steel Panels	ROOF Steel Sheeting Mineral Cap Sheet	CONDITION New			
HEATING				OCCUPANCY Warehouse			
SOURCE WH-Warehouse 6 d-Office 4	TYPE TIG-4639 - 15 KW - 208V 3φ Wesex 40 DG F8 - 4.0 KW - 208V 1φ		FUEL Electric Electric	BASE INTEREST			
NO. OF USABLE FLOORS 1	FIRE PROTECTION NO. 4" Sprinkler Standpipe TYPE Sprinkler and Alarm			SQUARE FEET 9,000			
UTILITY CONNECTIONS			BLDG. EQUIP.	NO.	TOTAL CAPACITY		
WATER 6" Main			AIR CONDITIONING		None		
SEWER None			EVAPORATIVE COOLING		None		
ELECTRIC Parallel 4/0 THW to 600A/450Atr. C.B.			MECHANICAL COOLING		None		
SALT WATER None			HOT WATER FACILITIES		None		
STEAM None			REMARKS:  Building could be disassembled.				
CONDENSATE None							

FOLDER NO.	DATE	DESCRIPTION	DATE COMPLETED	INSTALLED EQUIPMENT VALUE		COST		TOTAL COST	
				AMOUNT	VALUE				

## Base Camp Facilities

### 2. Medical Facility

ID 30155

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor	
Costs	Construction Costs, including equipment furnished with construction contract	\$65,622
	A.E. Costs	<u>11,619</u>
	Total Costs	\$77,241

#### A. Description

Ambulance shelter 20'-0" x 27'-0" x 12'-0" eave height rigid frame building, steel sheeting on exterior and roof, concrete footings and floor slab. Attached are two trailer type units 9'-10" x 60'-0" connected with 6' wide corridor with steel sheeting over wood frame roof, partitioned into offices, examination rooms, 2-bed ward, toilets and storage.

#### B. Utilities and Services

1. Water - 1" line from 8" A.C. main.
2. Sewer - 4" sanitary sewer.
3. Electric - four #1/0 drop from 120/208 V, 3 phase commercial power to three 350 mcm and one 250 mcm service, 300A/3P circuit breaker with a 20A/2P parallel for fire alarm.
4. Manual fire alarm system integrated with nurse's call stations.
5. Heating and air conditioning systems, 2 A/C units, one 32,000 BTUH with 7.5 KW heat strip, and one 44,000 BTUH with 15 KW heat strip; one 12 KW heater in ambulance storage.

#### C. Miscellaneous

Equipment and furnishings are included in Construction Costs.

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

10[illegible]

Base Camp Facilities

3. Office Complex

ID 30154

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor McKenzie Construction Co., H&N Subcontractor	
Costs	Construction	\$ 48,465
	Trailer Type Units	146,394
	A.E. Costs	<u>34,502</u>
	Total Costs	\$229,361

A. Description

Complex consists of sixteen 9'-10" x 60'-0" trailer type units assembled to form a prefabricated office 60'-0" x 157'-0" with interconnecting corridors. Exterior walls and roof insulated.

B. Utilities and Services

1. Water -  $1\frac{1}{4}$ " main
2. Sewer - 4"
3. Electric - 480/277 V, 3 phase, 4 wire, two 350 mcm parallel per phase - two 4/0 neutral 600A, 3P main circuit breaker with 30A/2P switch for fire alarm. Drop from commercial service.
4. Fire alarm system with automatic sprinklers. Post indicator valves are supervised by Fire Department. Manual pull boxes also installed.
5. Air conditioning and heating throughout.
6. Sprinkler system - 6" main, 6" wet pipe system 166 heads.

HOLMES & NARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. Office Complex		DATE 14 April 70	DRAWING NO. NV-30-04-01 NV-30-30-04	RP ACCOUNT NO.	CONTROL NO.	BUILDING NO.	CODE
DIMENSIONS (Width X Length)				LOCATION			
MAIN BUILDING		OFFSETS	WINGS	BASEMENTS		Base Camp	
Complex of 16		Trailers (?) forming an area 60' x 157'		ASSIGNMENT			
				Office & Administration			
				TYPE OF CONSTRUCTION			
				Trailer			
MATERIALS				CONDITION			
FOUNDATION		FLOOR	WALL	ROOF			
Concrete Footings		Vinyl		Metal		New	
Steel Cross Members		Tile	Paneled				
				OCCUPANCY			
				Offices			
HEATING				BASE INTEREST			
SOURCE		TYPE		FUEL			
		Included in A/C Units		Electric			
NO. OF USABLE FLOORS		FIRE PROTECTION		SQUARE FEET			
1		NO. TYPE Fire Detection Sprinkler		9,420			
				CUBIC FEET			
				79,360			
UTILITY CONNECTIONS		BLDG. EQUIP.	NO.	TOTAL CAPACITY		NOMENCLATURE	
WATER			2	23000BTUH 7.5KW Htg.			
1 1/4"		AIR	1	23000BTUH 5KW Htg.		MAINTENANCE STANDARD	
SEWER		CONDITIONING	2	28000BTUH 5KW Htg.			
4"			2	36000BTUH 10KW Htg.		REMARKS:	
ELECTRIC 480/277V 3 phase 4 wire		<del>23000BTUH</del>	1	36000BTUH 7.5KW Htg.		Security Homes Mfg., Inc., Dwg. #09-2054 Separate units requiring additional construction if separated.	
2-350 parallel/phase-2-4/0 neutral		<del>36000BTUH</del>	7	47000BTUH 10KW Htg.			
SALT WATER 600A - 3P main C.B.		<del>59000BTUH</del>	1	59000BTUH 10KW Htg.			
30A - 2P F.A.		<del>59000BTUH</del>		59000BTUH 15KW Htg.			
STEAM							
CONDENSATE		HOT WATER FACILITIES	--	--			

[illegible]

Base Camp Facilities

4. Fire Station Complex

ID 30156

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor	
Costs	Construction Only	\$22,026
	Trailer Type Units and Furnishings	33,909
	A.E. Costs	<u>9,904</u>
	Total Costs	\$65,839

A. Description

33'-0" x 40'-0" x 16'-0" eave height Butler type, rigid steel frame, metal siding and roof, concrete foundation and slab floor; two 10'-0" x 12'-0" overhead doors, one man door. Attached to the metal building are two trailer type dormitory structures each 11'-10" x 40'-0" on concrete pier footings.

B. Utilities and Services

1. Water - 1"
2. Sewer - 4"
3. Electric 2/0 quadraplex drop from commercial 120/208 V, 3 phase, 4 wire service; four 250 mcm, 200A, 4PSN switch (to trailer units), 100A, 3P circuit breaker for engine shed, 30A 3PSN for fire alarm (all parallel).
4. Central fire alarm board - high and low level alarm panel for 210,000 gallon water storage tank.
5. Heating and air conditioning - two A/C units with heat strips, one 7.5 KW, and 10 KW.

C. Miscellaneous

Furnishings are included with costs of the trailer type units.



# REAL PROPERTY ACCOUNTABILITY RECORD - BUILDINGS

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. Fire Station		DATE 15 April 70	DRAWING NO.	RP ACCOUNT NO.	CONTROL NO.	BUILDING NO.	CODE
DIMENSIONS (Width X Length)				LOCATION			
MAIN BUILDING	OFFSETS	WINGS	BASCMENTS	Base Camp			
33' x 40'		2 Trailer type		ASSIGNMENT			
(Engine Shelter)		Units		TYPE OF CONSTRUCTION			
MATERIALS				Rigid Steel & Trailer Type Units			
FOUNDATION	FLOOR	WALL	ROOF	CONDITION			
Concrete	Slab	Metal Sheeting	Metal Sheeting	New			
HEATING				OCCUPANCY			
SOURCE	TYPE		FUEL	Fire Department			
A/C Units	1 - 7.5 KW 1 - 10 KW		Electric	BASE INTEREST			
NO. OF USABLE FLOORS	FIRE PROTECTION			SQUARE FEET			
1	NO.	TYPE		--			
		Alarm Receiving Panel & Alarm Bell		CUBIC FEET			
UTILITY CONNECTIONS		BLDG. EQUIP.	NO.	TOTAL CAPACITY		NOMENCLATURE	
WATER	1"	AIR	1	28000BTUH w/7.5 KW		MAINTENANCE STANDARD	
SEWER	4"	CONDITIONING	1	heating			
ELECTRIC	4-250mcm - 200A 4 PSN, 100A 3P C.B., 30A 3PSN for F.A.	XXXXXXXXXX		23000 BTUH w/10 KW		REMARKS:	
SALT WATER		MECHANICAL		heating		Varco-Pruden, Inc., Dwgs. #94185	
STEAM		COOLING				Metal building could be disassembled.	
CONDENSATE		HOT WATER				Trailer units are removeable.	
		FACILITIES					

FOLDER NO.	DATE	DESCRIPTION	DATE COMPLETED	INSTALLED EQUIPMENT VALUE		COST		TOTAL COST	
				AMOUNT	VALUE				

## Base Camp Facilities

5. Communication Radio Shop

ID 30152

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor	
Costs	Construction Only	\$44,816
	A.E. Costs	<u>7,935</u>
	Total Costs	\$52,751

A. Description

38'-0" x 50'-0" x 10'-0" eave height rigid frame steel building, steel sheeting on sides and roof, concrete foundation and slab floor; fiberglass insulation batting, walls and roof; partitioned into warehouse areas, shop, office and vehicle equipment installation areas.

B. Utilities and Services

1. Water - None
2. Sewer - None
3. Electric - four #2 from commercial 120/208 V, 3 phase, 4 wire system to 100 amp. main circuit breaker in panel with a parallel 30A, 3PSN switch for fire alarm.
4. Manual fire alarm connected to fire alarm system.
5. Heating and air conditioning - two A/C units with heat strips, also two 6 KW unit heaters.

# REAL PROPERTY ACCOUNTABILITY RECORD - BUILDINGS

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. Communication Radio Shop			DATE 4/21/70	DRAWING NO. VarcoPruden #94183	RP ACCOUNT NO.	CONTROL NO.	BUILDING NO.	CODE
DIMENSIONS (Width X Length)					LOCATION			
MAIN BUILDING	OFFSETS	WINGS	BASEMENTS		Base Camp			
38' x 50'					ASSIGNMENT			
10' eave height					TYPE OF CONSTRUCTION			
MATERIALS					Rigid Frame - Metal			
FOUNDATION	FLOOR	WALL	ROOF		CONDITION			
Concrete	Concrete Slab	Steel Sheeting	Steel Sheeting		New			
HEATING					OCCUPANCY			
SOURCE					Radio Maintenance			
TYPE					BASE INTEREST			
2 - 1lg H6976 - 6 KW heaters					SQUARE FEET			
2 - heaters in A/C units					1900			
FUEL					CUBIC FEET			
Electric								
NO. OF USABLE FLOORS	FIRE PROTECTION							
1	NO.	TYPE						
		Manual Fire Alarm						
UTILITY CONNECTIONS		BLDG. EQUIP.	NO.	TOTAL CAPACITY	NOMENCLATURE			
WATER		AIR	1	2800 BTUH	MAINTENANCE STANDARD			
SEWER		CONDITIONING	1	5KW heating				
ELECTRIC 4 #2 from Commercial		EVAPORATIVE		23000 BTUH	REMARKS:			
120/208V - 100 A main breaker in		COOLING		7.5 KW heating	Could be dismantled.			
<del>WATER</del> panel - 30 A 3PSN Switch		MECHANICAL						
parallel for F.A.		COOLING						
STEAM								
CONDENSATE		HOT WATER						
		FACILITIES						

FOLDER NO.	DATE	DESCRIPTION	DATE COMPLETED	INSTALLED EQUIPMENT VALUE		COST		TOTAL COST
				AMOUNT	VALUE			

## Base Camp Facilities

6. Motor Pool

ID 30153

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor	
Costs	Construction (includes H&N equipment)	\$ 90,152
	A.E. Costs	<u>15,965</u>
	Total Costs	\$106,117

A. Description

48'-0" x 100'-0" x 16'-0" eave height rigid frame steel building, steel sheeting on sides and roof, concrete foundation and floor slab, fiberglass insulation batting, walls and roof; eight overhead doors, three man doors, raised grease rack, 20'-0" x 20'-0" wire cage tool crib enclosure, two-post truck lift, toilet room with one stool and one wash basin.

B. Utilities and Services

1. Water - two 1 1/2" water lines.
  2. Sewer - four 4" sewer taps, three floor drains, one toilet.
  3. Electric - four #4/0 THW copper to a 200A/3P main circuit breaker in the main panel, 30A, 3 PSN switch parallel for fire alarm.
  4. Fire alarm connected to fire alarm system. Supervised post indicator valves. Manual pull boxes also installed.
- Sprinklers - 6" main to 4" wet stand pipe.
5. Heating and air conditioning - no air conditioning, six ILG unit heaters, 12 KW 208 V, 3 phase and one 1.5 KW Wesix units; one #71CR Jenn - aire exhaust fan.

C. Miscellaneous

Exterior storage areas (motor pool) fenced with 15 1/2 gage woven wire mesh (hog wire type) 4' high.

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO.			DATE		DRAWING NO.		RP ACCOUNT NO.		CONTROL NO.		BUILDING NO.		CODE	
Motor Pool					Vargo Pruden 04181-7									
DIMENSIONS (Width X Length)							LOCATION							
MAIN BUILDING		OFFSETS		WINGS		BASEMENTS		Base Camp						
48'x100'x16'								ASSIGNMENT						
eave height														
							TYPE OF CONSTRUCTION							
							Rigid Frame - Steel							
MATERIALS							CONDITION							
FOUNDATION		FLOOR		WALL		ROOF		New						
Concrete		Concrete Slab		Steel Sheeting		Steel Sheeting		OCCUPANCY						
							Vehicle Maintenance							
HEATING							BASE INTEREST							
SOURCE		TYPE				FUEL		SQUARE FEET						
		6 - ILG unit heaters-H6887 - 12KW 208Volt, 3Phase w/thermostats				Electric		4800						
		1 - Wesix -#15DGF-8-1 1/2KW - 208V-1Phase												
NO. OF USABLE FLOORS		FIRE PROTECTION							CUBIC FEET					
1		NO.		TYPE			Fire Detection Sprinklers							
UTILITY CONNECTIONS				BLDG. EQUIP.		NO.		TOTAL CAPACITY		NOMENCLATURE				
WATER				AIR				None		MAINTENANCE STANDARD				
2 - 1/2" water lines				CONDITIONING										
SEWER				EVAPORATIVE				--		REMARKS:				
4 - 4" sewer taps				COOLING										
ELECTRIC 4 - #4/0 T.H.W. to 200A -3P Main C.B. in panel w/parallel 30A				MECHANICAL		1		Jenn - Aire Exhaust fan #71CR						
<del>3000000</del> 3PSN for Fire Alarm				COOLING										
STEAM				HOT WATER				--						
CONDENSATE				FACILITIES										

## Base Camp Facilities

7. Maintenance Building

ID 30158

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor	
Costs	Construction (including H&N equipment)	\$117,745
	A.E. Costs	<u>20,848</u>
	Total Costs	\$138,593

A. Description

40'-0" x 150'-0" x 12'-0" eave height rigid frame steel building, steel sheeting sides and roof, concrete foundation, floor slab and curbs under partitions, five shop areas - one for painting; four overhead doors, three man doors, one double door to paint area. Fiberglass insulation batting, walls and roof.

B. Utilities and Services

1. Water - 6" and 1"
2. Sewer - 6"
3. Electric - two #3/0 parallel per phase and neutral to 400A/3P main circuit breaker in panel with parallel 30A, 3PSN switch for fire alarm.
4. Fire alarm to system alarm - supervised post indicator valves - manual pull boxes also installed.  
  
Sprinkler system, 6" main to 4" wet stand pipe.
5. Heating and ventilating - heating by two oil fired units; 630 MBH and 490 MBH with duct work to distribute air, one 1.5 KW electric heater in toilet room; three airayne rotary coolers.
6. Fuel tank - 1000 gallon.
7. Air Conditioning - four evaporative type coolers - one 6000 cfm and three 4000 cfm units.

C. Miscellaneous

Fenced storage areas enclosed by 4' high 15½ gage woven wire mesh (hog wire type).

# REAL PROPERTY ACCOUNTABILITY RECORD - BUILDINGS

HOLMES & HARVEY, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. Maintenance Building			DATE		DRAWING NO.		RP ACCOUNT NO.		CONTROL NO.		BUILDING NO.		CODE	
DIMENSIONS (Width X Length)										LOCATION				
MAIN BUILDING		OFFSETS		WINGS		BASEMENTS		Base Camp						
40'x150'x12'								ASSIGNMENT						
eave height								TYPE OF CONSTRUCTION						
								Rigid Frame - Steel						
MATERIALS										CONDITION				
FOUNDATION		FLOOR		WALL		ROOF		New						
Concrete		Concrete Slab		Steel Sheeting		Steel Sheeting		OCCUPANCY						
								Carpenters, Plumbers, Painters, Welders						
HEATING										Carpenters, Plumbers, Painters, Welders				
SOURCE		TYPE				FUEL				XXXXXXXXXXXX & Electricians				
		Lennox - OG5630 - 630 MBH - 5HP Fan				Fuel Oil								
		" OG5490 - 490 MBH - 1.5HP Fan				1000 Gal. Stor								
		Wesix - 15DGF - Electric				age Tank								
NO. OF USABLE FLOORS		FIRE PROTECTION												
1		NO.		TYPE						SQUARE FEET		CUBIC FEET		
		1		FA to System						6000				
				Sprinkler - 6" Main to 4" Wet Stand Pipe										
UTILITY CONNECTIONS				BLDG. EQUIP.		NO.		TOTAL CAPACITY		NOMENCLATURE				
WATER				AIR				None		MAINTENANCE STANDARD				
6" and 1"				CONDITIONING										
SEWER				EVAPORATIVE		1		6M cfm		REMARKS:				
6" sewer				COOLING		3		4M cfm						
ELECTRIC Parallel 2 - #3/0 per phase				MECHANICAL		3		A4RC112						
& neutral to 400A 3P main C.B. in				COOLING				Airayne Rotary						
SALT WATER panel with parallel 30A				HOT WATER				Coolers 208V - 1 Phase						
fused switch for Fire Alarm				FACILITIES				None						
STEAM														
CONDENSATE														

FOLDER NO.	DATE	DESCRIPTION	DATE COMPLETED	INSTALLED EQUIPMENT VALUE		COST		TOTAL COST	
				AMOUNT	VALUE				

## Base Camp Facilities

### 8. Kitchen and Mess Hall

ID 30151

Design	Holmes & Narver, Inc., and McKenzie Construction Company	
Construction	McKenzie Construction Company	
Costs	Construction (original purchase from McKenzie)	\$135,000
	Modification (part of Minor Construction Costs)	62,215
	A.E. Costs	<u>19,688</u>
	Total Costs	\$216,903

#### A. Description

Thirteen trailer type units 10'-0" x 57'-0" assembled into a complex containing dining areas, kitchen, service areas, refrigerators, storage area and freezers. Added to the trailer complex are arctic entrances, 14'-0" x 20'-0" coat room, 14'-0" x 20'-0" latrine, a garbage can wash room, garbage storage room and an 8'-0" x 28'-0" loading dock.

#### B. Utilities and Services

1. Water - 2" water line.
2. Sewer - One 6" sanitary sewer line with a grease trap, and one 4" sanitary sewer line.
3. Electric - four 350 mcm,  $3\frac{1}{2}$ " conduit, underground from commercial power, 120/208 V, panel "A" and 200A/3P switch (for A/C units) parallel.
4. Fire alarm and protection system - None.
5. Heating and ventilating - nine floor furnaces, propane fuel, 56 MBTU each, one 1.5 KW heater, one 2 KW heater, three 50 MBTUH air conditioning units with evaporators, fans and duct work.
6. Gas -  $1\frac{1}{4}$ " gas line from LPG (propane) storage tanks.



# REAL PROPERTY ACCOUNTABILITY RECORD - BUILDINGS

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. Mess Hall			DATE N-024-----	DRAWING NO.	RP ACCOUNT NO.	CONTROL NO.	BUILDING NO.	CODE	
DIMENSIONS (Width X Length)					LOCATION				
MAIN BUILDING		OFFSETS	WINGS	BASEMENTS	Base Camp				
13 - 10' x 57'		Trailer type	14'x20' Coat Room		ASSIGNMENT				
Units			14'x20' Latrine						
			8'x28' Loading Dock		TYPE OF CONSTRUCTION				
MATERIALS					Trailer Type				
FOUNDATION	FLOOR	WALL	ROOF	CONDITION					
--				Used - Good					
					OCCUPANCY				
HEATING									
SOURCE	TYPE 1 Electric Wall Htr. 1500W. 1 Electric Wall Htr. 2000W. 9 Floor Furnaces 56000BTU			FUEL	Electric Electric Propane				
					BASE INTEREST				
					SQUARE FEET				
					--				
NO. OF USABLE FLOORS					CUBIC FEET				
1					--				
UTILITY CONNECTIONS			BLOG. EQUIP.	NO.	TOTAL CAPACITY		NOMENCLATURE		
WATER 2" line			AIR CONDITIONING	3	50000 BTUH with evaporator units		MAINTENANCE STANDARD		
SEWER 1 - 6" sewer with grease trap 1 - 4" sewer			EVAPORATIVE COOLING				REMARKS:		
ELECTRIC 4 - 350 mcm underground to a distribution panel - 120/208volt			MECHANICAL COOLING				Building could be disassembled.		
<del>WATER</del> Gas - 1 1/4" line from LPG Tanks			HOT WATER FACILITIES						
STEAM									
CONDENSATE									
FOLDER NO.	DATE	DESCRIPTION			DATE COMPLETED	INSTALLED EQUIPMENT VALUE		COST	TOTAL COST
						AMOUNT	VALUE		

Base Camp Facilities

9. Motor Pool Bldg. (Old-Faultless) ID 5027

Design	McKenzie Construction Co.	
Construction	McKenzie Construction Co., H&N Subcontractor	
Costs	Purchase	\$13,000
	A.E. Costs	<u>268</u>
	Total Costs	\$13,268

A. Description

Wood frame building, 108'-5½" x 24'-1½" x 15'-4" eave height 21'-0" at peak, 2" x 4" studs and asbestos cement siding and roofing; concrete wash slab, car hoist, and toilet with lavatory.

NOTE: Building was originally leased from McKenzie Construction Co., as a part of Base Camp lease and later purchased. Purchase included entire motor pool complex, oil shed, dispatch shack, diesel and gaso-line tanks (See Item #19, P.O.L. Systems), and dispensing pumps. (Leasing cost prior to purchase \$63,586).

B. Utilities and Services

1. Water - 3/4" and 1/2".
2. Sewer - 4" to septic tank not connected to sewer system.  
Wash pad drain is connected to sewer system.
3. Electric - service drops from commercial 120/208 V system.
4. Fire alarm and fire protection system - None.
5. Heating, ventilating and air conditioning - propane space heater.

# REAL PROPERTY ACCOUNTABILITY RECORD - BUILDINGS

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. Motor Pool Bldg. (Old)			DATE	DRAWING NO.	RP ACCOUNT NO.	CONTROL NO.	BUILDING NO.		CODE	
DIMENSIONS (Width X Length)					LOCATION					
MAIN BUILDING	OFFSETS	WINGS	BASEMENTS	Base Camp						
108'x24'x15' eave	height			ASSIGNMENT						
				TYPE OF CONSTRUCTION						
				Wood Frame						
FOUNDATION	FLOOR	WALL	ROOF	CONDITION						
Concrete	Slab	Asbestos Cement	Asbestos Cement	Used - Fair						
				OCCUPANCY						
HEATING					BASE INTEREST					
SOURCE	TYPE		FUEL	SQUARE FEET						
NO. OF USABLE FLOORS	FIRE PROTECTION				CUBIC FEET					
	NO.	TYPE								
UTILITY CONNECTIONS		BLDG. EQUIP.	NO.	TOTAL CAPACITY	NOMENCLATURE					
WATER 3/4" and 1/2"		AIR CONDITIONING			MAINTENANCE STANDARD					
SEWER Septic Tank		EVAPORATIVE COOLING			REMARKS:					
ELECTRIC 120/208 Volt		MECHANICAL COOLING								
SALT WATER		HOT WATER FACILITIES								
STEAM										
CONDENSATE										
FOLDER NO.	DATE	DESCRIPTION		DATE COMPLETED	INSTALLED EQUIPMENT VALUE		COST		TOTAL COST	
					AMOUNT      VALUE					

Base Camp Facilities

10. Warehouse (Old-Faultless)

ID 05140

Design	McKenzie Construction Co.
Construction	McKenzie Construction Co., H&N Subcontractor

Costs	Purchase	\$2,280
	A.E. Costs	<u>78</u>

Total Costs	\$2,358
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A. Description

Wood frame building, 105'-0" x 24'- $\frac{1}{2}$ " x 11'-5" eave height, 17'-1" peak - 2" x 4" stud framing with asbestos cement sheeting and roofing.

NOTE: Building was originally leased from McKenzie Construction Co., and later purchased. (\$12,818)

B. Utilities and Services

1. Water - None.
2. Sewer - None.
3. Electric - service drop from commercial 120/208 V system.
4. Heating, ventilating and air conditioning - propane space heater.
5. Gas - propane (see Item #10).
6. Fire protection - None.

HOLMES & NARVER, INC.  
ENGINEERS - CONSTRUCTORS

[illegible]

Base Camp Facilities

11. Maintenance Building (Old-Faultless) ID 5026

Design	McKenzie Construction Co.
Construction	McKenzie Construction Co., H&N Subcontractor

Costs	Purchase	\$2,220
	A.E. Costs	<u>186</u>

Total Costs	\$2,406
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A. Description

Wood frame building, 84'-1" x 24'- $\frac{1}{2}$ " x 11'-5" eave height, 17'-1" peak - 2" x 4" stud frame with asbestos cement siding and roofing.

NOTE: Building was originally leased from McKenzie Construction Co., and later purchased (\$8,469).

B. Utilities and Services

1. Water - None.
2. Sewer - None.
3. Electric - service drop from commercial 120/208 V system.
4. Heating, ventilating and air conditioning - propane space heater.
5. Fire alarm and protection - None.
6. Gas - propane (see Item #10).

# REAL PROPERTY ACCOUNTABILITY RECORD - BUILDINGS

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. Maintenance Bldg. (Old-Faultless)			DATE		DRAWING NO.		RP ACCOUNT NO.		CONTROL NO.		BUILDING NO.		CODE	
DIMENSIONS (Width X Length)								LOCATION						
MAIN BUILDING		OFFSETS		WINGS		BASEMENTS		Base Camp						
84'-1"x24'- $\frac{1}{2}$ "x11'-5" eave height								ASSIGNMENT						
								TYPE OF CONSTRUCTION						
MATERIALS								Wood Frame						
FOUNDATION		FLOOR		WALL		ROOF		CONDITION						
Concrete		Earth		Asbestos Cement		Asbestos Cement		Used - Fair						
								OCCUPANCY						
HEATING								BASE INTEREST						
SOURCE		TYPE				FUEL		SQUARE FEET						
NO. OF USABLE FLOORS		FIRE PROTECTION						CUBIC FEET						
		NO.		TYPE										
UTILITY CONNECTIONS				BLDG. EQUIP.		NO.		TOTAL CAPACITY		NOMENCLATURE				
WATER None				AIR CONDITIONING						MAINTENANCE STANDARD				
SEWER None				EVAPORATIVE COOLING						REMARKS:				
ELECTRIC 120/208 Volt				MECHANICAL COOLING										
SALT WATER				HOT WATER FACILITIES										
STEAM														
CONDENSATE														

FOLDER NO.	DATE	DESCRIPTION	DATE COMPLETED	INSTALLED EQUIPMENT VALUE		COST	TOTAL COST
				AMOUNT	VALUE		

# Tank

## Base Camp Facilities

### 12. Potable Water System

ID 30148  
ID 30168 Supplemental  
ID 30241

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates
Construction	McKenzie Construction Co., H&N Subcontractor Zuni Construction Co., H&N Subcontractor
Costs	Construction \$269,300 A.E. Costs <u>54,100</u> \$323,400

NOTE: ID 30241 was to modify the system. Engineering was completed and approved, but procurement and construction were deferred (ltr. AEC-ECC:WAW-99) A.E. Cost is included.

#### A. Description

1. Booster Pump Building, 18'-4" x 46'-0" x 10'-0" eave height, rigid frame, steel sheeting on sides and roof, concrete footings and slab floor. *29,808.00*
2. Storage Tank, 5000 Bbl bolted steel tank, galvanized (210,000 gallons) 38'-8" diameter x 24'-1 $\frac{1}{2}$ " high, manhole, cleanout, roof vent, overflow; stabilized gravel foundation - can be dismantled. High and low level alarm panel in fire station. *23,392.30*
3. The underground system is A/C pipe in base camp, and C.P. consisting of a part of the original system plus the new system, connected to all facilities and to the fire protection system.
4. Well - Ron Floyd Pump Co., Contract C9S07-A, rate 225 gpm av.; depth approximately 200' cased.
5. Well - McKenzie Construction Co., Contract HN-LV-67-23, rate 100 gpm av.; 200' deep.
6. Truck fill station - two elevated 10,000 gallon tanks mounted on structural steel frame.

#### B. Utilities and Services

1. Water - None.
2. Sewer - None.
3. Electrical - four #2/0, 480 V commercial power, 200A/3P with S/N 600 V, 30A, 3PSN switch for fire alarm, and 30A, 3PSN switch for lighting.
4. Fire alarm system - manual pull box at pumphouse.



5. Heating and ventilating - 4.0 KW electric wall heater in the pumphouse.
6. Chlorinator - gas injection system.

# REAL PROPERTY ACCOUNTABILITY RECORD - BUILDINGS

HOLMES & HARVER, INC.  
ENGINEERS - CONSTRUCTORS

INSTALLATION NAME AND NO. Booster Pump Station			DATE 16 April 70		DRAWING NO. A18		RP ACCOUNT NO.		CONTROL NO.		BUILDING NO.		CODE	
DIMENSIONS (Width X Length)								LOCATION						
MAIN BUILDING		OFFSETS		WINGS		BASEMENTS		Base Camp						
18'4" x 46'0" x								ASSIGNMENT						
10' Eave Height								TYPE OF CONSTRUCTION						
								Rigid Steel Building						
MATERIALS								CONDITION						
FOUNDATION		FLOOR		WALL		ROOF		New						
Concrete		Concrete Slab		Steel Sheeting		Steel Sheeting		OCCUPANCY						
								Pump Station						
HEATING								BASE INTEREST						
SOURCE		TYPE				FUEL		SQUARE FEET						
1		Wesix - Wall 4.0 KW heater				Electric		--						
NO. OF USABLE FLOORS		FIRE PROTECTION						CUBIC FEET						
1		NO.		TYPE				--						
				Alarm System										
UTILITY CONNECTIONS				BLDG. EQUIP.		NO.		TOTAL CAPACITY		NOMENCLATURE				
WATER				AIR						MAINTENANCE STANDARD				
SEWER				CONDITIONING										
ELECTRIC 4 - #2/0 - 480V - 200A				EVAPORATIVE						REMARKS:  Varco Pruden Inc., Dwg. #94182  Building could be dismantled.				
3PSN, Fused Sw.-30A/3PSN Sw. for				COOLING										
<del>WATER</del> F.A., 30A/3PSN Sw. for Ltg.				MECHANICAL										
STEAM				COOLING										
CONDENSATE				HOT WATER										
FACILITIES														

FOLDER NO.	DATE	DESCRIPTION	DATE COMPLETED	INSTALLED EQUIPMENT VALUE		COST	TOTAL COST
				AMOUNT	VALUE		

Base Camp Facilities

13. Sanitary Sewer System

ID 30149

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	McKenzie Construction Co., and Zuni Construction Co.	
Costs	Construction and equipment McKenzie (part of Camp Package)	
	Zuni	\$169,290
	A.E. Costs	<u>26,088</u>
	Total Costs	\$195,378

A. Description

1. Sanitary sewer collection system, outfall line and lagoon; original system built by McKenzie Construction Co., now abandoned.
2. Sanitary sewer collection system, outfall line, lift station and lagoon, design by Edward B. Hendricks Associates, built by Zuni Construction Co.

The lift station consists of a 72" i.d. concrete pipe set on an 8" slab, 18 feet deep, pump, motor and appurtenances required.

The lagoon is four 140'-0" x 140'-0" ponds approximately 9' deep, diked 5' above grade with interconnecting 8" A.C. pipes, drains and overflow ditches. Fenced with 3-strand barbed wire.

3. All trenching, underground work, manholes, and backfill are included in Construction Costs.

Base Camp Facilities

14. Gas Distribution System

ID 5006

Design	Holmes & Narver, Inc.
Construction	McKenzie Construction Co.

Costs	Construction (Estimate)	\$3,400
	A.E. Costs	<u>300</u>

Total Costs	\$3,700
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A. Description

The Liquid petroleum gas (propane) system consists of underground piping to the mess hall, old motor pool, old maintenance shop, and to the fire station. The system is fed through necessary valves and regulators from propane tanks which are the property of the gas supply company.

Base Camp Facilities

15. Electrical Distribution System ID 30150

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor - (Interstate Electric Co.)	
Costs	Construction	\$188,000
	A.E. Costs	<u>28,479</u>
	Total Costs	\$216,479

A. Description

The electrical power distribution system consists of a 34.5 KV distribution connected to the Southern California Edison lines at the meter pole. The meter pole, and cabinet are a part of this system, but the meters, current transformers and potential transformers are the property of the power company. The system feeds the base camp and C.P. with service drops to each building and/or other facility through appropriate transformer banks.

Base Camp Facilities

16. P.O.L. System

ID 5027

ID 30159

Design                    Holmes & Narver, Inc., and  
                         Edward B. Hendricks Associates  
Construction            McKenzie Construction Co., and  
                         Zuni Construction Company -  
                         both H&N Subcontractors

Costs	Construction	\$23,398
	A.E. Costs	<u>2,806</u>

Total Costs                    \$26,204

A. Description

The original P.O.L. system consists of an oil shed, dispatch shack, a 10,000 gallon diesel tank, and a 10,000 gallon mogas tank, dispensing pumps and a car hoist. A modification was made to the P.O.L., adding another 10,000 gallon tank each to the diesel and mogas systems with the necessary piping, valves, etc.

NOTE: The original P.O.L. system acquisition cost is included with the motor pool purchase from McKenzie Construction Co. (Item #13).

Base Camp Facilities

17. Airstrip

ID 30055

Design	Johannessen and Girard	
	Consulting Engineers, Inc., and H&N	
Construction	McKenzie Construction Co.	
Costs	Construction	\$159,000
	A.E. Costs	<u>87,514</u>
	Total Costs	\$246,514

A. Description

Airstrip - 6000' long -150' wide, constructed as follows:  
A single bituminous surface treatment (oil and chip), consisting of 3/8" minus aggregate rolled into an emulsified liquid asphalt (RS-3KH) placed on a compacted aggregate base course with a specified gradation (1 1/2" max.) after being primed with MC70 liquid asphalt. Fenced with 3-strand barbed wire fencing.

Base Camp Facilities

18. Roads, Walkways, Fencing and Parking Areas

ID 30160

ID 5143 (See Note)

Design	Holmes & Narver, Inc., and Edward B. Hendricks Associates	
Construction	Zuni Construction Co., H&N Subcontractor	
Costs	Construction	\$33,443
	A.E. Costs	<u>5,922</u>
	Total Costs	\$39,365

A. Description

Parking bumpers, surface treatment of road and parking areas in Base Camp and CP area. Fencing, 15½ gage wire mesh (hog wire type) 4' high, with 2', 3-strand barbed wire extension, CP area.

NOTE: ID 5143 - McKenzie Construction Company contract for original Base Camp streets, parking areas, etc. Construction Cost \$19,631, and A.E. Costs \$532. Not included in above costs.



Central Nevada

Miscellaneous Facilities

1. Decontamination Facility ID 30118

Design Holmes & Narver, Inc.

Construction Pending

Costs	Construction	\$ 50
	A.E. Costs	<u>14,137</u>

\$14,187

A. Description

Design of the Decontamination Facility has been completed, but actual construction has been deferred.

Miscellaneous Facilities

2. Fencing

ID 30181

Minor Construction ID's

Design  
Construction

Holmes & Narver, Inc.  
McKenzie Construction Co.

Costs (ID 30181  
only)

Construction  
A.E. Costs

\$23,970  
3,423

Total Costs

\$27,393

A. Description

1. ID 30181 - Three strand barbed wire on steel posts spaced at standard spacing for Base Camp, UCE-18 water well, UC3 storage yard, UC4 storage yard, and central drill yard near UC1.
2. Minor Construction ID's - Three strand barbed wire fence installed at the following locations:

UC-4 Perimeter  
UC-1 (Faultless GZ)  
UC-1 (Central Mud Storage Pit)  
UC-3 Perimeter  
UC-3 Cableway  
UC-3 Sandia Trailer Park  
Airstrip  
Sewage Lagoon  
PBX Van at Base Camp

3. Minor Construction ID's - 15½ gage woven wire mesh (4'-0" high) hog wire type installed at the following locations:

UC-3 GZ Trailer Park with 3-strand barbed wire on top;  
one removable section of 6'-0" high picket fence.

UC-3 RTP same as GZ.

## Miscellaneous Facilities

### 3. Access Roads

ID 30054

ID 30161

ID 5013

#### Design

Holmes & Narver, Inc.

(Noname Hill and Lower Access Roads)

Johannessen & Girard (Main Access Road)

#### Construction

McKenzie Construction Company

K. H. Petersen Construction Company

#### Costs

Construction \$ 536,046

A. Main Access Road

B. UC4 Access Road

C. UC3 Access Road

D. Noname Hill Access Road 226,000

E. Lower Access Road 24,387

A.E. Costs 238,100

Total Costs \$1,024,533

#### A. Description

1. Main Access Road (begins approximately 15.5 miles from the Base Camp and C.P. area on Highway #6). The road extends northerly approximately 12.1 miles to the "Y" at Central Drill Yard, is 24' wide with 4' shoulders and has a 4" thick aggregate surface course.
2. UC 4 Access Road (begins at the "Y" on the main access road). The road extends northwest approximately 4.5 miles, constructed similar to the main access road except that it is 20' wide.
3. UC 3 Access Road (begins at the "Y" on the main access road). The road extends southwest approximately 3.2 miles, constructed similar to UC 4 road.
4. Noname Hill Access Road (begins approximately 12.6 miles from the Base Camp and C.P. area on U. S. Highway #6). The road extends northerly approximately 3.95 miles, is 12' wide with no shoulders, has steep grades to the top of Noname Hill (Halligan Mesa) and has a 3" thick aggregate surface course.
5. Lower Access Road (begins approximately 11.0 miles from the Base Camp and C.P. area on U. S. Highway #6). The road extends northerly approximately 11 miles to UC 3, and was improved from an existing dirt surface road to a well graded dirt surface approximately 22' wide.

## Miscellaneous Facilities

4. Back Bone Signal Cable System ID 5021  
ID 30059

Design Holmes & Narver, Inc.  
Construction McKenzie Construction Co.

Costs	Construction	\$553,000
	Ext. to UC3 & UC4	124,000
	A.E. Costs	<u>39,000</u>

Total Costs \$716,000

### A. Description

One 50 pair 19 ga. cable was ploughed in from Base Camp to UC1. A second 50 pair cable was added from Base Camp to UC3. These cables were cut and extensions were spliced onto them at UC3 and then extended around UC3 to UC4. Cables are terminated or spliced in backboard terminal cabinets at the UC3 technical facilities and at UC4.

## Miscellaneous Facilities

### 5. Noname Hill Repeater Site ID 30161

Design	Holmes & Narver, Inc.
Construction	McKenzie Construction Co.

Costs	Construction*	\$19,559
	A.E. Costs**	<u>25,716</u>
	Total Costs	\$45,275

#### A. Description

Noname Hill Repeater Site consists of graded areas for trailers, an access road, an antenna tower and two sources of power, one commercial and the other a stand-by generator. The site preparation and access roads have been included in, Access Roads; the power line is a Southern California Edison installation.

The antenna tower is a 52' high triangular shape with 6" diameter pipe legs, attached to anchor bolts in concrete footings, access ladders with safety cages, with five working platforms. Tower is bolted and could be disassembled.

\*Cost includes all except that shown in Access Roads.

\*\*All A.E. Costs including engineering for roads.

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APPENDIX

SYNOPSIS OF CONSTRUCTION SUBCONTRACTS

CONSTRUCTION SUBCONTRACT HN-LV-67-23

GENERAL CONSTRUCTION, MAINTENANCE & OPERATIONS

CENTRAL NEVADA SUPPLEMENTAL TEST AREA

SUBCONTRACTOR: McKenzie Construction Co., Inc.  
905 Industrial Way  
Sparks, Nevada 89431

BASIS OF AWARD:

The Basis of Award was made by Invitation for Bid including five amendments to the original invitation prior to bid opening. Final determination for award was based on price plus all other factors considered.

SYNOPSIS:

Notice of Award was issued on July 21, 1967, and Notice to Proceed on July 25, 1967, with the effective date of the subcontract July 19, 1967, with an estimated 26-week work effort. Completion would be as directed by the Contractor.

The Subcontractor was to furnish all material, equipment, and labor to accomplish the subcontract. All materials and equipment would remain the property of the Subcontractor and would be removed from the site and the site restored at the termination of the subcontract. The scope of work was defined in three categories: (1) Construction consisted of the design and construction of a 350 man portable base camp, including all utilities, the construction of technical facilities including a control point, recording trailer park, ground zero event area, upgrading of existing and construction of new access roads and trails interconnecting all facilities and the support of plowing in Bell Telephone cables from control point to the event area.

(2) Operation and maintenance consisted of the operation and maintenance of roads, trails, base camp (including housing and messing), fire station, structures and utilities at the control point, recording trailer park, ground zero event area, and maintenance of all Government-owned vehicles, generators, pumps, compressors, etc., on a scheduled basis.

(3) Contractor directed work consisted of furnishing, maintaining and operation of construction type equipment, i.e., cranes, tractors, forklifts, trucks, etc., and furnishing reimbursable labor as directed by the Contractor.



Payment to the Contractor was made under four schedules. Schedule "A", construction support, was paid at a fixed unit price. Schedule "B", operation and maintenance, was paid at a fixed unit price, maintenance of roads and trails by the hour, base camp, CP, RTP and GZ by the work, and vehicles by cost of material plus unit price for items of work done. Operation of the mess hall and housing was paid by the man/day and generators by the operational hour. Schedule "C", Contractor directed work, was paid on equipment by the operational hour or week whichever was applicable and labor was paid by actual cost plus a fixed per-hour unit price to cover his indirect cost. Schedule "D", payment and performance bonds.

There were five (5) extensions to the subcontract made by modifications and/or Change Orders. Change Order #15A and #15B extend the subcontract from January 30, 1968, to March 25, 1968, and added new items to Schedule "C" of the payment schedule. Change Order #16 extended the contract from March 25, 1968, through September 24, 1968, and changed the scope of work to provide a camp to house and feed 40 men, and to furnish labor and equipment as directed by the Contractor. Change Order #20 extended the subcontract from September 24, 1968, through December 24, 1968, with an option to extend an additional 90 days. Change Order #21 exercised the option and extended the subcontract from December 24, 1968, through March 25, 1969. Modification No. 28 was a negotiated supplemental agreement to extend the subcontract from March 25, 1969, through June 22, 1969, and to change the scope of work to operate and maintain a Government-owned camp, including housing and feeding on a man/day or meal basis. Furnishing equipment and labor remained basically the same.

There were a total of 38 change orders and/or modifications, including the extensions noted above, made to the subcontract during its active period. Most of these were to add new items that came up due to operational requirements and changes to the unit price schedules. Those of an unusual nature were Change Order #6, construct concrete emplacement pad at UC-4; Change Order #10 provided for the purchase of facilities at the base camp and control point consisting of the maintenance shop, warehouse, motor pool complex, water well and water distribution system, base camp electrical system and control point electrical system. Change Order #11, install water lines from UCE18 to UC-3 and UC-4; Change Order #17, construct concrete emplacement pad at UC-3; and Change Order #18, construct mud pits at UC-3.

On June 23, 1969, negotiations were completed for a new subcontract with McKenzie Construction Co., Inc., and Subcontract HN-LV-67-23 was terminated. (See C9S10-A for continuation)

During the entire term of this subcontract, McKenzie Construction Co., Inc., performed all tasks and assignments in an efficient and expert manner; maintained and protected Government property in the best interests of the Government and cooperated in an excellent manner with all participating agencies at the site of work.

CONSTRUCTION SUBCONTRACT C9S02-A  
AIRSTRIP, ROADS AND SIGNAL CABLE PLANT  
CENTRAL NEVADA SUPPLEMENTAL TEST AREA

SUBCONTRACTOR: McKenzie Construction Co., Inc.  
905 Industrial Way  
Sparks, Nevada 89431

BASIS OF AWARD:

Subcontract was by Invitation for Bid dated September 9, 1968, five (5) amendments were issued prior to bid opening date October 9, 1968, with the basis of award being price and other factors such as responsibility and conformance.

SYNOPSIS:

Notice to Proceed was issued on November 1, 1968, with ten (10) days allotted for the Subcontractor to start work.

Scope of work was for the Subcontractor to furnish all such labor, services, equipment, materials, tools and supplies necessary to construct three (3) access roads, an airstrip, and a signal cable plant in accordance with drawings, plans, and specifications. The Subcontractor would furnish his own power, transportation, communications, housing and feeding. The Government would furnish all construction water, aggregate materials, laboratory testing services, materials for the signal cable plant, and first aid services.

A pre-construction conference was held at the base camp, CNSTA, on November 1, 1968, with mobilization taking place on November 4, 1968. During the term of the subcontract, six (6) modifications were issued to cover changes and increases in the original scope of work. Original construction schedule was for all phases to be complete and ready for use by March 1, 1969, with the cable to be plowed in by December 1, 1968.

Exceptionally bad weather began to occur during December and January, and it became obvious that the completion date of March 1, 1969, would not be met. On January 29, 1969, a meeting was held between the Contractor and Subcontractor to discuss the placement of frozen materials on the airstrip and roads. Extremely bad weather was occurring at this time and the Subcontractor was notified that all frozen material used as fill would be rejected and would have to be replaced. The Subcontractor stopped operations at this time, with the exception of the production of surface aggregate. On January 31, 1969, the Subcontractor submitted a written request for an extension until such time as weather would permit resumption of construction. Although several letters were written between both the Subcontractor and Contractor, a formal approval for extension was never issued, though both parties agreed in writing that it would be approximately May 1, 1969, before work could be resumed. The roads were approximately thirty-nine (39) percent complete when the work ceased.

Construction was resumed on April 22, 1969, with a projected completion date of June 15, 1969. On June 5, 1969, the Subcontractor revised his estimated completion date to June 27, 1969.

On June 9, 1969, the Subcontractor submitted a claim for extra work involving the replacement of construction that had been damaged by spring floods occasioned by heavy rains and melting snow pack. A resolution to this claim between the Contractor and Subcontractor has never been reached. The claim has been referred to the AEC Contracting Officer.

The Contractor admonished the Subcontractor on several occasions, both prior and subsequent to the suspension of work, for being behind schedule. However, due to programmatic delays, the completion dates were not critical and the Subcontractor was permitted to continue towards completion.

In addition to the flood damage repairs, it was necessary for the Subcontractor to replace one (1) of the cattle guards as the concrete froze due to the pour being made late in the day and freezing weather occurring during the night.

All construction was completed and accepted on August 5, 1969.

Relationship between the Contractor and Subcontractor during the term of the subcontract was considered very good. There were minor areas of friction between the Contractor's inspectors and the lower-tier subcontractor in reference to earthwork.

SERVICE SUBCONTRACT C9S04-A

FIELD TESTING SERVICES

CENTRAL NEVADA SUPPLEMENTAL TEST AREA

SUBCONTRACTOR: Intermountain Testing Company  
1916 East Charleston Blvd.  
Las Vegas, Nevada 89104

NOTICE OF AWARD:

Subcontract was by Request for Proposal with award based on demonstration of ability to conform to technical requirements and capabilities as set forth in the Special Conditions and Technical Provisions, plus the resulting overall lowest cost to the Government.

SYNOPSIS:

The subcontract was awarded on December 31, 1968, with Notice to Proceed issued on January 16, 1969, with completion date to be June 30, 1969. Subcontractor was mobilized and started work on January 20, 1969.

Scope of work included, but was not limited to, soil tests, aggregate, and admixture tests, concrete tests, roadway asphalt tests and such other tests as requested by the Contractor. The Subcontractor was to furnish all labor, plant equipment, supplies and transportation with the Government to furnish space, utilities, excavation support and first aid facilities. Expendable supplies would be reimbursable to the Subcontractor at invoice cost.

During the term of the subcontract, two (2) modifications were issued. The first to extend the subcontract through September 28, 1969, and the second to adjust the subcontract total price to actual.

The subcontract was terminated on schedule, September 28, 1969, with the Subcontractor being demobilized in less than the allotted five (5) days, and the site of work properly cleaned of all debris and waste.

Relationship between the Contractor and Subcontractor were deemed excellent in nature with the Subcontractor performing all tests in the specified manner.

The subcontract was terminated without any ensuing claims or disputes.

CONSTRUCTION SUBCONTRACT C9S07-A

SUPPLEMENTAL WATER SUPPLY WELL

CENTRAL NEVADA SUPPLEMENTAL TEST AREA

SUBCONTRACTOR: Ron E. Floyd D/B/A  
Ron Floyd Pump Company  
P. O. Box 157  
Pahrump, Nevada

BASIS OF AWARD:

The subcontract was by Request for Proposal with award based on the most favorable terms from a price and technical standpoint.

SYNOPSIS:

Notice of Award was made on April 14, 1969, with Notice to Proceed being issued on April 24, 1969. The Subcontractor had ten (10) days from Notice to Proceed to start work and twenty (20) days from Notice to Proceed to complete all work.

Original scope of work consisted of the Subcontractor furnishing all labor, tools, equipment, materials, transportation and appurtenances to drill, gravel, case and develop a water well complete and ready for use according to drawings and special conditions. Subcontractor would supply his own power, chemical toilets, housing and feeding. The only Government-furnished material and service was twenty (20) linear feet of 20-inch diameter surface conductor casing and first aid services.

Subcontractor started work on April 26, 1969, completing the original scope of work on May 12, 1969.

On May 15, 1969, authority was granted the Contractor (Holmes & Narver, Inc.) by the Client (AEC) to expedite the purchase and installation of a submersible pump, controls and associated fixtures. A verbal request was immediately made to the Subcontractor for his proposal to furnish and install same. The Subcontractor's price proposal was well in line with the Contractor's estimate, and on May 16, 1969, Notice to Proceed with the furnishing and installation was made to the Subcontractor.

The Subcontractor completed the increased scope of work on May 24, 1969, with the approved acceptance of the Contractor.

On June 23, 1969, Modification No. 1 to the subcontract was issued to include the increase.

Subcontractor was demobilized from the site in the allotted time and no claims or disputes resulted during the term of the subcontract. All work was done in an efficient and workmanlike manner.

CONSTRUCTION SUBCONTRACT C9S10-A

BASE CAMP - CONTROL POINT

BALLOON LAUNCH FACILITIES

SUBCONTRACTOR: Zuni Construction Company, Inc.  
205 West Colorado Avenue  
Las Vegas, Nevada 89102

BASIS OF AWARD:

Subcontract was by Invitation for Bid on a competitive lump sum amount. Award was based on price plus other factors being considered such as experience and responsibility.

SYNOPSIS:

Eight (8) amendments to the original "Invitation for Bids" were issued prior to bid opening on April 21, 1969, with award being made on May 2, 1969, and Notice to Proceed issued on May 5, 1969.

On May 8, 1969, a pre-construction conference was held at the base camp, CNSTA, and this was the same date the Subcontractor began his survey work.

The scope of work consisted of furnishing all labor, tools, equipment, materials, drawings, and design calculations to complete, ready for use, the base camp facilities, control point technical facilities and balloon launch area, in accordance with the drawings and specifications.

The Government would furnish five (5) substations, three (3) transformers, eight (8) trailers, two (2) antenna poles, construction and drinking water, all aggregate, first aid services and testing facilities and services. In addition, there would be available to the Subcontractor housing and messing at a nominal fee. The Subcontractor would have to furnish his own power for both construction and housing, and on-site chemical toilets as required.

Construction completion schedule was in three (3) increments:

1. Warehouse	65 Days	July 9, 1969
2. CPTF & BLA	100 Days	August 13, 1969
3. Completed Camp	118 Days	September 1, 1969

The Subcontractor immediately submitted a request to substitute prefabricated metal buildings for all wooden type buildings as shown on the original design, for which permission was subsequently approved.

The Subcontractor also submitted a listing reflecting his intent to utilize no less than ten (10) lower-tier subcontractors during the course of construction. It has been estimated that between ninety (90) and ninety-five (95) percent of the total construction effort was by lower-tier subcontractors.

There were many areas of delay in receipt of installed equipment. Principally in the purchase of fire pumps which were eventually changed from gasoline to diesel with the approval of the Contractor, as there would have been an undue delay in the procurement of gasoline pumps. Another big problem was the procurement of transformers. Final shipment of transformers would not leave the vendor's shop prior to October 15, 1969, which was forty-five (45) days beyond the completion date. Last transformer was received at Jobsite October 31, 1969. Several other items of procurement were delayed in reaching Jobsite even though the lower-tier subcontractors did make timely purchase requests.

As a result of delay in procurement, the Subcontractor did make several written requests for assistance in exercising his priority DX-E-1 to expedite these items. However, due to programmatic delays in the scheduled event, neither the Contractor nor the AEC felt a need to enforce the priority as the requirement to meet the original completion date no longer existed. Therefore, the Subcontractor was permitted to continue.

Beneficial occupancy of the warehouse occurred on September 2, 1969, with final completion date to be December 5, 1969. Beneficial occupancy of the administrative offices was taken on October 13, 1969, with final completion of base camp and control point to be January 23, 1970.

In reference to the above dates, it should be noted that by November 25, 1969, the entire project was ninety-seven (97) percent complete. The remaining three (3) percent being punch-list, cleanup, and the delivery and installation of several unit heaters which were being shipped from Chicago on December 12, 1969. The units were delayed as a result of a strike that had occurred at the General Electric plant in Chicago. The units were delivered at Jobsite December 17, 1969.

A general inspection of all construction was conducted on December 23, 1969, by the AEC Site Manager, H&N Resident Manager, H&N Construction Supervisor, and Zuni Project Manager. A punch-list was developed at that time, but no action was taken due to the approaching holiday season. All punch-list items with two (2) exceptions were completed and final acceptance made on January 23, 1970.

During the term of the subcontract, the Subcontractor put in a claim for additional survey work which was subsequently denied without dispute. Three (3) modifications were issued to cover changes during the course of construction. After completion, the Subcontractor put in an additional claim which was eventually resolved and settled on May 14, 1960. This fourth and final modification also included a credit to the Contractor for the two (2) exceptions noted at the time of completion.

Working relationship between the Contractor and Subcontractor was excellent during the entire period. Not only at Jobsite but during negotiations between parent offices. Good documentation was maintained by both parties evidenced by the issuance of only four (4) modifications to the original contract.

CONSTRUCTION SUBCONTRACT C9S09-A

NONAME HILL ACCESS ROAD

AND REPEATER SITE

SUBCONTRACTOR: K. H. Peterson Construction Co.  
1360 Foothill Road  
Reno, Nevada 89502

BASIS OF AWARD:

Subcontract was by Invitation for Bid dated February 21, 1969, with award being based on price and other factors considered. Four (4) amendments to the original invitation were issued prior to bid opening March 24, 1969.

SYNOPSIS:

Notice of Award was made on April 14, 1969, with Notice to Proceed issued on April 22, 1969; a Pre-Construction conference was held in the offices of the Resident Manager at Base Camp, CNSTA, on April 28, 1969.

The scope of work was for the Subcontractor to furnish all labor, equipment, tools and appurtenances to construct an access road and repeater site complete and ready for use in accordance with drawings and specifications. The Contractor would furnish all borrow, aggregate, construction water, testing services, first aid services and drinking water. Messing and housing facilities would also be available at a nominal fee. The Subcontractor would furnish his own power and on-site chemical toilets.

The Subcontractor commenced work in less than the allotted ten (10) days from Notice to Proceed with the completion date set as July 1, 1969. By May 27, 1969, it was apparent that the completion date would not be met and the Subcontractor was requested to submit his remedy. He advised that he was increasing his work force and extending the work day to ten (10) hours. On June 26, 1969, the Subcontractor requested an additional thirty-one (31) day extension to August 1, 1969. No formal approval was granted but the Subcontractor was permitted to continue construction. Completion percentage was estimated to be seventy-five (75) percent at this time.

Construction continued at a very slow pace, but due to the increase in estimated quantities of borrow, aggregate, the percentage of completion, acceptable quality of performance, and the delay in the scheduled event, it was apparent there would be no advantage to terminate the Subcontractor and he was permitted to continue.



On August 18, 1969, at 1200 hours the business agent for Local 12, of the Operating Engineers, stopped all members of that local from returning to work. His complaint was that the Subcontractor was delinquent in his remittance of fringe benefits as stipulated in the Project Labor Agreement for CNSTA. This work stoppage was in effect until 0700 hours of August 20, 1970, when work was resumed after settlement of complaint between the Subcontractor and Local 12. Percentage of completion was approximately ninety (90) percent at this time.

By September 16, 1969, construction was ninety-nine plus (99+) percent complete and all personnel and equipment had demobilized. The only remaining effort was the painting of the guardrails. Painting was finally completed during the latter part of October and a Notice of Completion was issued to reflect completion date as November 2, 1969.

During the term of the subcontract, the Subcontractor submitted three (3) claims for price increases.

1. Borrow. A forty-four (44) percent increase over the original estimate quantities resulted in the Subcontractor claiming increased costs in unit price. Settlement was reached and a nominal increase was paid for the quantities in excess of one hundred fifteen (115) percent of the original estimate.
2. Excavation. The Subcontractor claimed more yardage than allowed by the Contractor. No settlement was reached as the Contractor's method of computing yards excavated was the accepted standard method.
3. Aggregate Surface Course. An eighteen (18) percent underrun of the original estimated quantities resulted in the Subcontractor claiming increased costs for the same reason as the overrun on Item 1. Subcontractor was unable to substantiate costs and claim was denied.

Subcontractor has filed claims with the U. S. Atomic Energy Commission contracting officer for items two (2) and three (3).

During the entire phase of construction, it was quite obvious the Subcontractor was not following standard proven methods of road building. Though the end result was in accordance with the drawings, specifications and provisions, his daily progress was extremely slow. As this was a competitive low-bid award, the Contractor could not direct method of construction, but only monitor and inspect the end result for compliance with the conditions of the subcontract. In addition to the above, it was necessary for the Contractor to enforce the Subcontractor to follow the safety program set forth in the subcontract.

SERVICE SUBCONTRACT HN-LV-70-007

HOUSING, FEEDING & RECREATIONAL SERVICES, CNSTA

SUBCONTRACTOR: Burtco Company, Inc.  
421 Michigan Street  
Seattle, Washington 98108

SYNOPSIS:

Basis of award was by submission of technical proposal for pre-qualification and subsequent Invitation to Bid with price the final determination.

Notice of Award was issued on June 17, 1969, and Notice to Proceed on June 17, 1969, with the effective date of the subcontract to be June 23, 1969, through May 31, 1970.

Scope of work was for the Subcontractor to furnish all supervision, labor, food supplies, expendables and certain items of equipment to perform feeding, housing, janitorial and recreational services at the Central Nevada Supplemental Test Area.

Government-furnished facilities included a completely equipped mess hall, excluding expendable supplies; housing facilities including fully equipped single and double occupancy rooms including all bedding. All recreation equipment was also government furnished with the exception of movie films. All utilities were Government-furnished such as power, water, gas for cooking and heating, etc.

During the term of services there were no modifications to the subcontract, and only one request for proposal to collect housing fees was made to the Subcontractor. His proposal was subsequently denied as being too costly and the collection of housing fees stayed with the on-site Holmes & Narver, Inc., accounting force.

The one questionable item that arose during the term of the subcontract was the collection and/or payment of Nevada sales tax on meals. As all meals were at a fixed price, defined in the special conditions without mention of sales tax, it was the Subcontractor's contention that sales tax should be added to the price of the meal and collected from the consumer, and not to be borne by the Subcontractor as part of his overhead costs. Final determination was in favor of the Subcontractor and an adjustment to housing fees was made to offset the sales tax charges added to the consumer's cost of meals.

On February 2, 1970, a letter entitled, "Notice of Termination for Convenience", was mailed to the Subcontractor, including instructions for termination, advising him that his subcontract was to be terminated in its entirety February 13, 1970.

During the term of the subcontract, Subcontractor personnel performed in a satisfactory manner, prepared above average meals, maintained an excellent degree of cleanliness in the mess hall and living quarters, substantiated by inspection records performed by Eberline Medical Services. Subcontractor personnel were neat, clean and courteous at all times, and conducted themselves in an exemplary manner. Recreation services were limited to movies and a recreation and reading room. The limitation was due to non-participation of the camp population and had no reflection on the Subcontractor.

CONSTRUCTION SUBCONTRACT C9S12-A

GENERAL CONSTRUCTION AND MAINTENANCE AND

OPERATIONAL SUPPORT, CNSTA

SUBCONTRACTOR: McKenzie Construction, Inc.  
905 Industrial Way  
Sparks, Nevada 89431

SYNOPSIS:

Basis of award for this subcontract was by request for proposal and subsequent negotiation to the sole requested proposer McKenzie Construction, Inc., who at the time of proposal was the incumbent Subcontractor at CNSTA on Subcontract No. HN-LV-67-23.

The subcontract effective date was June 23, 1969, to be in effect for a period of fifty-three (53) weeks until June 30, 1970, with option to extend for six months. The Subcontractor was to furnish all labor and equipment with all materials and certain supplies to be Government-furnished. The scope of work was defined in three (3) categories:

1. General construction consisted of known technical facilities, structures, roads, etc., to be constructed at the forward areas. Principal construction of the Base Camp and CP was a lump sum contract by another subcontractor.
2. Maintenance and operations support was to maintain all Government-owned facilities and equipment including routine maintenance of equipment leased to the Government by the Subcontractor or others. Operation of Government facilities was limited to certain facilities such as shops, utilities and fire protection. The operation of the mess hall and housing was by another subcontractor with the dispensary being operated by a Government Prime Contractor.
3. Contractor directed work was defined as any and all other work not shown on existing drawings or defined in specifications.

Payment to the Subcontractor was under two items; Labor and Equipment. Labor was reimbursable at actual cost for all crafts, including fringes. Supervisory, administrative and clerical was reimbursable at a fixed unit price. The Subcontractor also received a fixed per-hour unit price for all hourly paid employees such as crafts, clerical and fire fighters to cover his overhead, taxes and profit. Equipment was paid at a fixed monthly rental fee plus operating costs by the hour or mile.

During the term of the Subcontractor, eight (8) modifications were issued to cover changes to the original subcontract.

On February 2, 1970, the Subcontractor was notified to suspend all work for a period of four (4) months to be effective from February 14, 1970, until on or about June 15, 1970, and the subcontract completion date was extended from June 30, 1970, to October 31, 1970.

On June 9, 1970, a teletype message was transmitted to the Subcontractor advising him that the subcontract was terminated in its entirety effective that date with letter of instructions to follow. The letter was transmitted on June 11, 1970, under the heading, "Notice of Termination for Convenience", with full instructions.

That same date McKenzie personnel began preparing equipment for demobilization. The first piece of equipment left Base Camp on June 18, 1970, and demobilization of all McKenzie equipment, materials, and supplies was completed on July 10, 1970.

During the entire term of the subcontract, McKenzie personnel performed all tasks and assignments in an efficient and expert manner; maintained and protected all Government property in the best interests of the Government, and displayed excellent working relationships with all participating agencies at the site of work.