

OBSTRUCTION DATA SHEET

ODS 71
CAVERN CITY AIR TERMINAL
CARLSBAD, NEW MEXICO

DIGITIZED FROM

OC 71
SURVEYED DECEMBER 1993
10TH EDITION

HORIZONTAL DATUM NAD 83
VERTICAL DATUM NGVD 29



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OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA No. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS and the OC depict a representation of objects that existed at the time of the OC field survey.

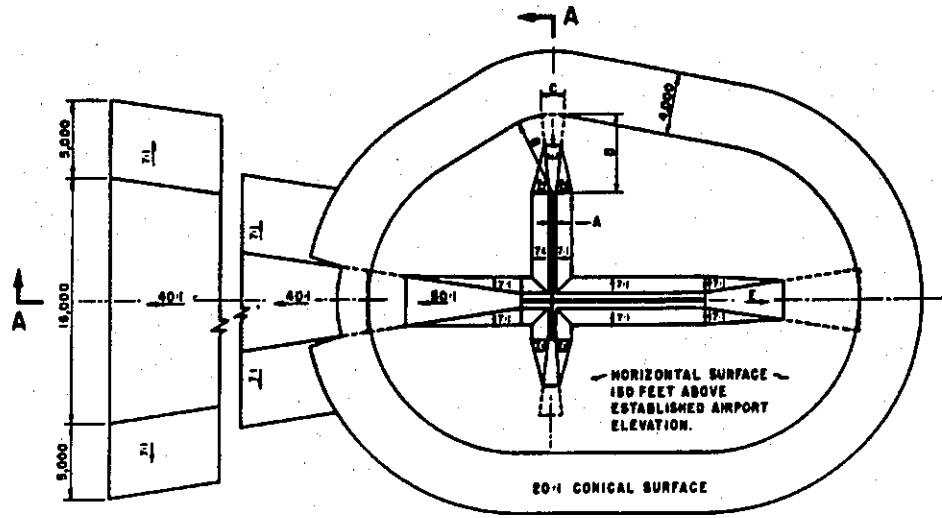
ODS information is arranged as follows:

1. Objects located in an FAR-77 approach or primary and listed with the associated runway (reference runway).
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

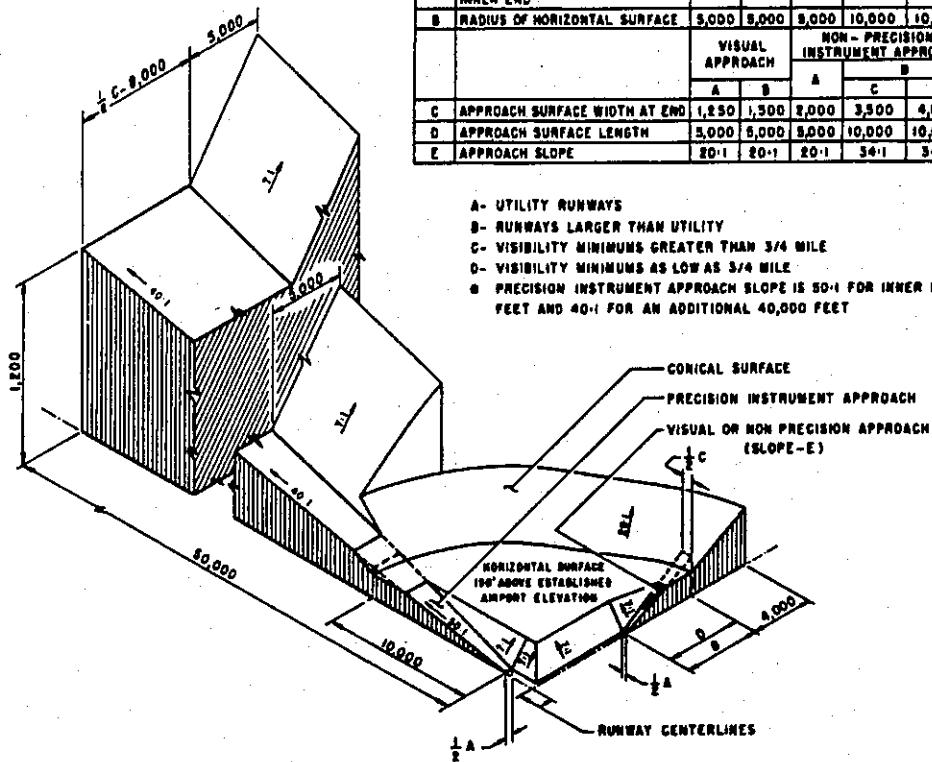
The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows:

A(V) Utility runway - visual approach only
A(NP) Utility runway - nonprecision instrument approach
B(V) Nonutility runway - visual approach only
C Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
D Nonutility runway- nonprecision instrument approach with visibility minimums as low as 3/4 mile
PIR Precision instrument runway
SUPLC Supplemental C underlying a B(V)

FAR-77 imaginary surface dimensions are defined on page 2 of this report.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY		PRECISION INSTRUMENT RUNWAY	
		A	B	A	B		
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	300	300	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
C	APPROACH SURFACE WIDTH AT END	VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH		PRECISION INSTRUMENT APPROACH	
		A	B	A	B		
D	APPROACH SURFACE LENGTH	1,250	1,500	2,000	3,500	4,000	10,000
E	APPROACH SLOPE	5,000	5,000	5,000	10,000	10,000	10,000
		20:1	20:1	20:1	34:1	34:1	6



- A- UTILITY RUNWAYS
- B- RUNWAYS LARGER THAN UTILITY
- C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- E- PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

ISOMETRIC VIEW OF SECTION A-A

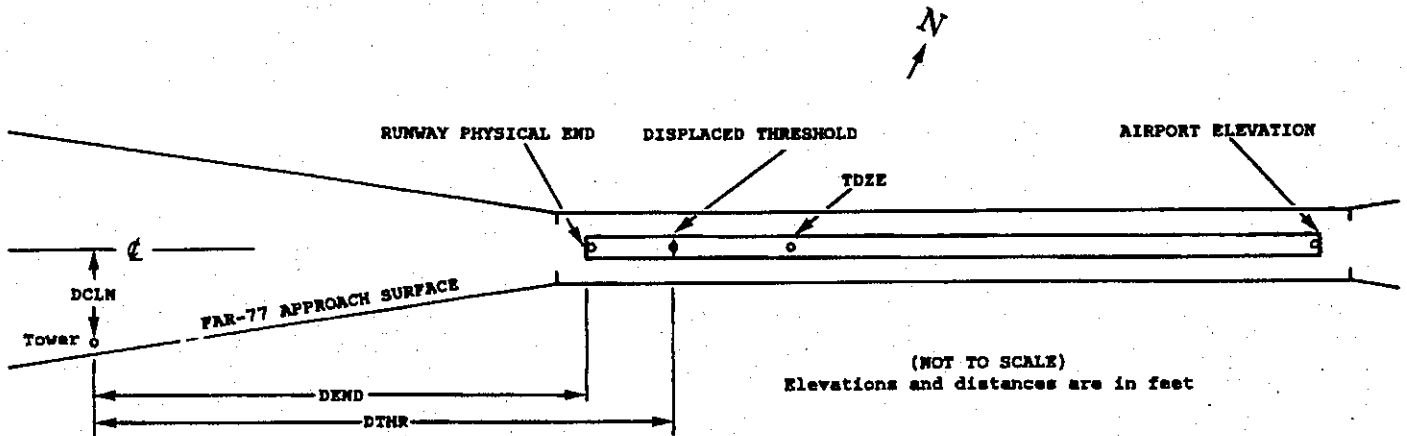
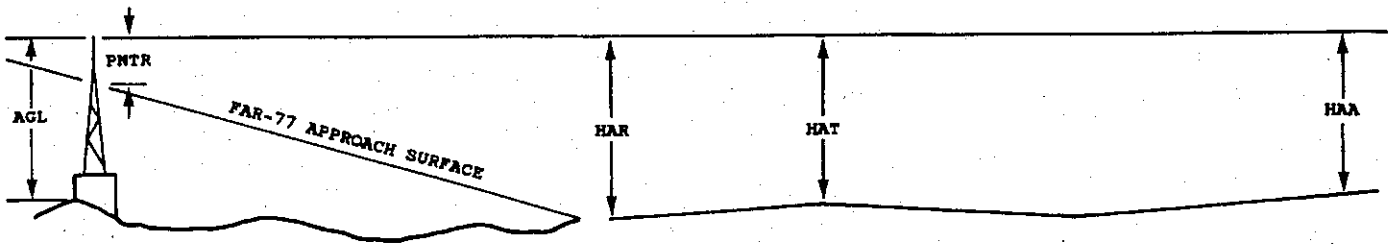
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

	1 X	2 X	3 XXXX/XXXX	4 XXXXXX.XXX	4 XXXXXXXX.XXX	5 XXXXXXX	6 XXXX/XXXX	7 XXXXXX.XXX	7 XXXXXXXX.XXX			
OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX



EXPLANATION OF FOOTNOTES

- 1 Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary areas of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.
- 2 For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed).
- 3 Elevation at approach end of reference runway/touchdown zone elevation
- 4 Latitude and longitude at approach end of reference runway
- 5 Geodetic azimuth of reference runway reckoned from north
- 6 Elevation at reference runway displaced threshold/touchdown zone elevation
- 7 Latitude and longitude at reference runway displaced threshold
- 8 Accuracy codes: Horizontal (Ft.) Vertical (Ft.)
 1 = 20 A = 2
 2 = 40 B = 5
 C = 20
- 9 Elevation above mean sea level (MSL) at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.
- 10 Height above ground level (AGL). AGL's are provided only for manmade objects appearing on the OC and equal to or greater than 200 feet AGL. AGL accuracy is 10 feet.
- 11 HAA - Height above airport
HAR - Height above approach end of reference runway
HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point nearest to object (perpendicular) to approach end of runway
DTHR - Distance along reference runway centerline from point nearest to object (perpendicular) to displaced threshold
DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft

A negative value for DEND or DTHR indicates that object is in primary on roll-out side of zero distance point.
- 13 PNTR - Penetration of indicated FAR-77 approach or primary surface (See footnote 2).

OC0071

AIRPORT ELEVATION 3293

14L AV 3239/3241 322106.685 -1041536.293 1561230.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	322022.80	-1041513.40	1A	3245		6	4	-48	-4850		8L	6
BUSH	322110.93	-1041540.05	1A	3244		5	3	-49	523		121R	-11

32R AV 3239/ 322024.073 -1041514.164 3361241. 3240/3241 322030.427 -1041517.464

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	322022.80	-1041513.40	1A	3245		6	4	-48	145	846	8R	6
ROAD (N)	322022.67	-1041511.91	1A	3257		18	16	-36	208	910	120R	17
POLE	322021.79	-1041511.35	1A	3265		26	24	-28	308	1010	128R	20
POLE	322020.06	-1041512.44	1A	3269		30	28	-24	431	1133	29L	18

14R C 3268/3268 322034.412 -1041615.095 1540211.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	321945.84	-1041544.03	1A	3270		2	2	-23	-5580		248L	5
BUSH	322030.35	-1041615.86	1A	3276		8	8	-17	-341		239R	8
FENCE	322036.70	-1041616.43	1A	3270		2	2	-23	258		1R	1
BUSH	322037.55	-1041614.91	1A	3271		3	3	-22	278		153L	1

32L C 3265/3267 321942.552 -1041545.353 3340226.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	322030.35	-1041615.86	1A	3276		11	9	-17	-5488		239L	8
BUSH	321945.84	-1041544.03	1A	3270		5	3	-23	-249		248R	5
BUSH	321940.31	-1041541.01	1A	3267		2	0	-26	367		236R	-3
POST	321938.70	-1041539.77	1A	3268		3	1	-25	560		260R	-8
BUSH	321936.27	-1041545.15	1A	3270		5	3	-23	578		262L	-6
ROAD (N)	321937.95	-1041538.60	1A	3280		15	13	-13	672		318R	1
POLE	321935.43	-1041538.83	1A	3281		16	14	-12	892		188R	-5
ROAD (N)	321934.15	-1041540.50	1A	3281		16	14	-12	946		3R	-6

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AIRPORT ELEVATION 3293

3 PIR 3293/3293 321921.545 -1041627.338 440829.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	322015.43	-1041518.11	1A	3254		-39	-39	-39	-8044		469R	8
BUSH	322015.56	-1041520.01	1A	3251		-42	-42	-42	-7940		344R	5
BUSH	322011.10	-1041526.33	1A	3250		-43	-43	-43	-7239		268R	1
ELEC EQUIP	322004.25	-1041530.49	1A	3254		-39	-39	-39	-6494		494R	1
BUSH	322003.29	-1041535.03	1A	3258		-35	-35	-35	-6153		282R	3
BUSH	321956.74	-1041542.74	1A	3263		-30	-30	-30	-5217		268R	2
BUSH	321950.42	-1041546.55	1A	3268		-25	-25	-25	-4531		479R	4
BUSH	321947.87	-1041552.05	1A	3271		-22	-22	-22	-4018		320R	3
BUSH	321939.42	-1041602.68	1A	3278		-15	-15	-15	-2770		261R	3
BUSH	321934.54	-1041608.05	1A	3280		-13	-13	-13	-2095		273R	0
ROD ON OL GS	321926.30	-1041614.60	1A	3339		46	46	46	-1106		450R	53
OL ON LTD WSK	321930.20	-1041621.10	1A	3292		-1	-1	-1	-1000		225L	5
GROUND	321918.36	-1041626.82	1A	3294		1	1	1	200		256R	1
BUSH	321919.15	-1041637.07	1A	3305		12	12	12	755		430L	1
ROAD (N)	321918.16	-1041641.32	1A	3317		24	24	24	1080		623L	7
FENCE	321913.30	-1041636.54	1A	3304		11	11	11	1148		13R	-8
ROAD (N)	321909.21	-1041641.15	1A	3320		27	27	27	1720		17R	-3
POLE	321843.60	-1041655.68	1A	3366		73	73	73	4445		925R	-12

OC0071

AIRPORT ELEVATION 3293

21 SUPLC 3246/3262 322017.303 -1041523.595 2240903.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	321918.36	-1041626.82	1A	3294		48	32	1	-8052		256L	1
OL ON LTD WSK	321930.20	-1041621.10	1A	3292		46	30	-1	-6852		225R	5
ROD ON OL GS	321926.30	-1041614.60	1A	3339		93	77	46	-6747		450L	53
BUSH	321934.54	-1041608.05	1A	3280		34	18	-13	-5758		273L	0
BUSH	321939.42	-1041602.68	1A	3278		32	16	-15	-5083		261L	3
BUSH	321947.87	-1041552.05	1A	3271		25	9	-22	-3834		320L	3
BUSH	321950.42	-1041546.55	1A	3268		22	6	-25	-3321		479L	4
BUSH	321956.74	-1041542.74	1A	3263		17	1	-30	-2635		268L	2
BUSH	322003.29	-1041535.03	1A	3258		12	-4	-35	-1699		282L	3
ELEC EQUIP	322004.25	-1041530.49	1A	3254		8	-8	-39	-1359		494L	1
BUSH	322011.10	-1041526.33	1A	3250		4	-12	-43	-613		268L	1
BUSH	322015.56	-1041520.01	1A	3251		5	-11	-42	88		344L	5
BUSH	322015.43	-1041518.11	1A	3254		8	-8	-39	192		469L	8
ROAD (N)	322016.52	-1041516.15	1A	3260		14	-2	-33	388		514L	9
SIGN	322017.52	-1041517.07	1A	3253		7	-9	-40	406		386L	1
OL ON LOC	322021.57	-1041518.72	1A	3250		4	-12	-43	601		OR	-7
ROD ON POST	322023.41	-1041520.79	1A	3262		16	0	-31	610		257R	4
POLE	322020.06	-1041512.44	1A	3269		23	7	-24	866		492L	4
BUSH	322022.80	-1041513.40	1A	3245		-1	-17	-48	1007		241L	-24
POLE	322021.79	-1041511.35	1A	3265		19	3	-28	1057		437L	-6
ROAD (N)	322022.67	-1041511.91	1A	3257		11	-5	-36	1087		342L	-15
BUSH	322024.74	-1041511.77	1A	3246		0	-16	-47	1246		204L	-30
FENCE	322031.01	-1041508.12	1A	3243		-3	-19	-50	1919		12R	-53
FENCE	322032.39	-1041508.86	1A	3241		-5	-21	-52	1974		155R	-57
BUSH	322031.83	-1041507.80	1A	3247		1	-15	-46	1997		50R	-52
ROAD (N)	322030.95	-1041506.27	1A	3251		5	-11	-42	2025		105L	-48
POLE	322030.35	-1041505.41	1A	3264		18	2	-29	2033		201L	-36
FENCE	322034.62	-1041510.15	1A	3241		-5	-21	-52	2059		392R	-59
BUSH	322034.45	-1041506.32	1A	3246		0	-16	-47	2276		143R	-61
POLE	322033.06	-1041503.47	1A	3249		3	-13	-44	2345		129L	-60
ANT ON APBN	322043.79	-1041506.70	1A	3313		67	51	20	2930		825R	-13

8 AV 3268/3268 322032.294 -1041614.415 900223.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
FENCE	322032.39	-1041508.86	1A	3241		-27	-27	-52	-5623		14L	5
FENCE	322033.35	-1041618.80	1A	3273		5	5	-20	376		107L	-4

OC0071

AIRPORT ELEVATION 3293

26 AV 3236/ 322032.252 -1041510.582 2700257. 3237/3253 322032.254 -1041512.305

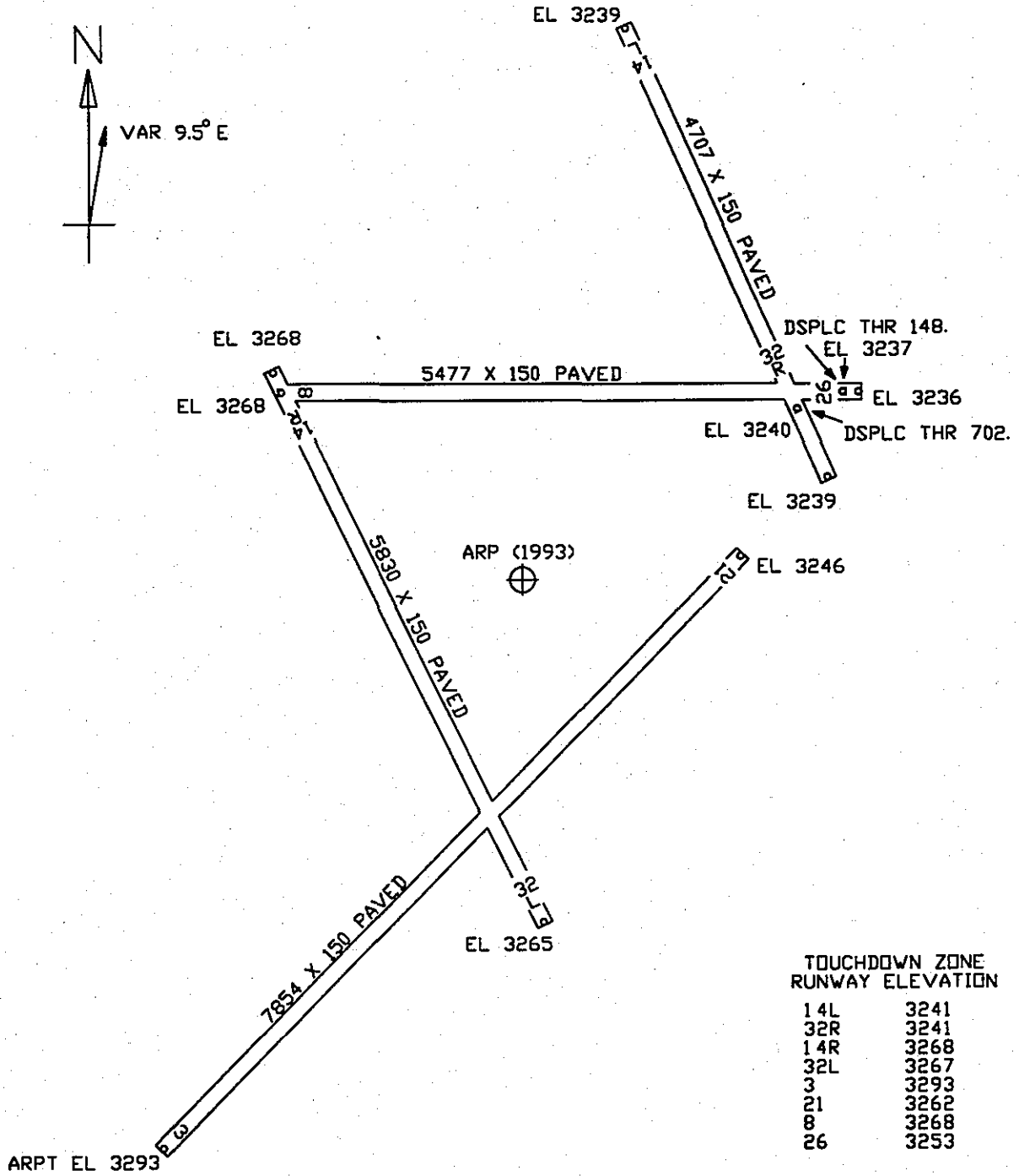
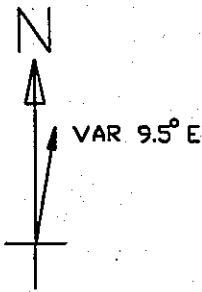
OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
FENCE	322032.39	-1041508.86	1A	3241		5	-12	-52	147	295	14R	5
FENCE	322031.01	-1041508.12	1A	3243		7	-10	-50	212	360	125L	6
BUSH	322031.83	-1041507.80	1A	3247		11	-6	-46	239	387	42L	9
ROAD (N)	322030.95	-1041506.27	1A	3251		15	-2	-42	370	518	131L	6
POLE	322033.06	-1041503.47	1A	3249		13	-4	-44	610	758	82R	-8

OC0071

AIRPORT ELEVATION 3293

ARP 322014.947 -1041547.690

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
BUSH	321955.78	-1041556.62	1A	3271		-22	19204	2083
POLE	322015.53	-1041515.40	1A	3266		-27	7916	2771
OL ON LTD WSK	322038.28	-1041529.07	1A	3272		-21	2437	2848
OL ON AMOM	322038.93	-1041528.20	1A	3265		-28	2506	2944
BUSH	321939.77	-1041547.13	1A	3270		-23	16943	3555
BUSH	321942.25	-1041612.28	1A	3283		-10	20303	3920
BUSH	321935.35	-1041602.94	1A	3282		-11	18836	4210
BUSH	321931.26	-1041625.22	1A	3295		2	20636	5464
PIPE ON TANK	322046.11	-1041657.93	1A	3318		25	28805	6799
POLE	321902.46	-1041636.50	1A	3330		37	20015	8438
PIPE ON PUMPING STATION	321858.55	-1041639.73	1A	3330		37	20032	8919



CAVERN CITY AIR TERMINAL
 CARLSBAD, NEW MEXICO
 (NOT TO SCALE)
 (ELEVATIONS AND DISTANCES IN FEET)