Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: STAR	Date Open: 11/08/2010	Task #: 2010110825948101004	Request #: 20101108259481
Procedure: STAR LOWBO (RNAV) ONE ALBUQUERQUE NM KABQ		Airport ID: KABQ	Airport: ALBUQUERQUE INTL SUNPORT		Reimbursable #:
City: ALBUQUERQUE	ST: NM	GPS #:		Estimated Chart Date: 01/10/2013	FICO #:
Fac ID:	Fac. Type: Proc D	Specialist: STEPHEN PETERSON			

Procedure Review

pl

	Rec'd	Rel'd	Full Name	Comments
Lead:	05/07/2012	09/13/2012	JILL OLSON	
QA:	09/13/2012	09/13/2012	SCOTT BEARD	
Liaison:	09/13/2012		Spurlin	REPLACEMENT 9/13/12 - DME/DME

DME / DME

ESV REQUEST INCLUDED

pg 3 of 5

Procedure Comments: ENROUTE **Remark Type:** INFORMATION

ALBUQUERQUE, NM ALBUQUERQUE INTL SUNPORT (KABQ) LOWBO ONE (RNAV) (STAR) ENROUTE-YES FC: 11.13.12 PUB: 1.10.13

ATTACHED FORMS: ESV REPORTS; 7100-4; 7100-3; 8260-2(S): BUKEE, ORIG; CMSTR, REV 1; DWNLD, ORIG; FORUN, ORIG; GALLUP (GUP) VTAC, REV 14; ITUNE, ORIG; JOKLO, ORIG; LOWBO, ORIG; MUSCC, ORIG; NODME-INT, REV 2; PASEO, ORIG; ROSEI, ORIG; SDUNX, ORIG; TANER-INT, REV 2; WSTRN, ORIG.

CONTACT: JILL OLSON/STEVE BARNETT -AVJ-353 LEADS, 405.954.4014 / 405.954.9307.

LOWBO ONE ARRIVAL (RNAV)

ALBUQUERQUE ARTCC
121.5 243.0
ALBUQUERQUE APP CON
123.9 354.1
ATIS
118.0 257.7

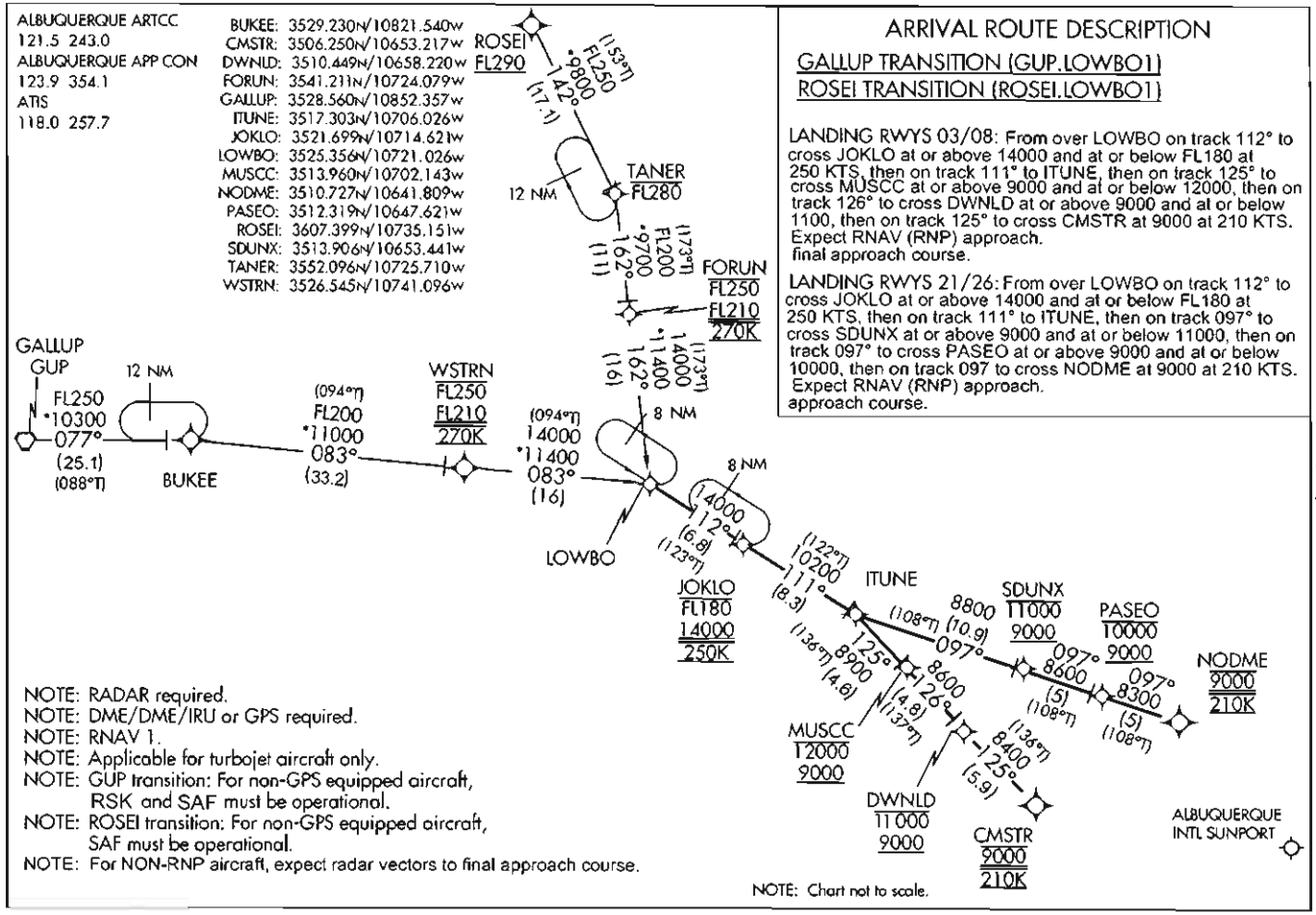
BUKEE: 3529.230N/10821.540W
CMSTR: 3506.250N/10653.217W
DWNLD: 3510.449N/10658.220W
FORUN: 3541.211N/10724.079W
GALLUP: 3528.560N/10852.357W
ITUNE: 3517.303N/10706.026W
JOKLO: 3521.699N/10714.621W
LOWBO: 3525.356N/10721.026W
MUSCC: 3513.960N/10702.143W
NODME: 3510.727N/10641.809W
PASEO: 3512.319N/10647.621W
ROSEI: 3607.399N/10735.151W
SDUNX: 3513.906N/10653.441W
TANER: 3552.096N/10725.710W
WSTRN: 3526.545N/10741.096W

ARRIVAL ROUTE DESCRIPTION

GALLUP TRANSITION (GUP.LOWBO1)
ROSEI TRANSITION (ROSEI.LOWBO1)

LANDING RWYS 03/08: From over LOWBO on track 112° to cross JOKLO at or above 14000 and at or below FL180 at 250 KTS, then on track 111° to ITUNE, then on track 125° to cross MUSCC at or above 9000 and at or below 12000, then on track 126° to cross DWNLD at or above 9000 and at or below 1100, then on track 125° to cross CMSTR at 9000 at 210 KTS. Expect RNAV (RNP) approach.
final approach course.

LANDING RWYS 21/26: From over LOWBO on track 112° to cross JOKLO at or above 14000 and at or below FL180 at 250 KTS, then on track 111° to ITUNE, then on track 097° to cross SDUNX at or above 9000 and at or below 11000, then on track 097° to cross PASEO at or above 9000 and at or below 10000, then on track 097 to cross NODME at 9000 at 210 KTS. Expect RNAV (RNP) approach.
approach course.



NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: Applicable for turbojet aircraft only.
NOTE: GUP transition: For non-GPS equipped aircraft, RSK and SAF must be operational.
NOTE: ROSEI transition: For non-GPS equipped aircraft, SAF must be operational.
NOTE: For NON-RNP aircraft, expect radar vectors to final approach course.

NOTE: Chart not to scale.

AUTOMATED ST-12 LOWBO ARRIVAL

SW-1
10 JUL 2012
COMPILER: CW
REVIEWER:
DBL CHKR:
EFF DATE:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : ALBUQUERQUE	City : ALBUQUERQUE	Ident : ABQ	State : NM
Type/Class : TACR	Frequency : M1166	Reference No.: 11065642	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 704131-020	273	290	65	125	180

Requirement: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/23/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704131-020	273	290	65	125	180	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Meza Michael	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704131-020	273	290	65	125	180	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704131-020	273	290				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : CORONA	City : CORONA	Ident : CNX	State : NM
Type/Class : TACR	Frequency : M1189	Reference No.: 11065636	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 850151-020	288	299	110	80	180

Requirement: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ.

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/23/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 850151-020	288	299	110	80	180	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ.Restricted. Inadequate Coverage at ALT (min)=FLT155

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 850151-020	288	299	110	80	180	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ.Restricted. Inadequate Coverage at ALT (min)=FLT155

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 850151-020	288	299	110	145	180	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ.Restricted. Inadequate Coverage at ALT (min)=FLT145

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 850151-020	288	299	110	145	180	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ.Restricted. Inadequate Coverage at ALT (min)=FLT145

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (FIFO)						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 850151-020	288	299				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : ORMOND BEACH	City : SOCORRO	Ident : ONM	State : NM
Type/Class : TACR	Frequency : M1202	Reference No.: 11065638	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698219-028	313	332	76	120	180

Requirement: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/23/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698219-028	313	332	76	120	180	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698219-028	313	332	76	120	180	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698219-028	313	332				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : ORMOND BEACH	City : SOCORRO	Ident : ONM	State : NM
Type/Class : TACR	Frequency : M1202	Reference No.: 11065639	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698219-029	337	1	70	70	120

Requirement: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/23/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698219-029	337	1	70	70	120	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698219-029	337	1	70	70	120	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698219-029	337	1				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : RATTLESNAKE	City : FARMINGTON	Ident : RSK	State : NM
Type/Class : TACR	Frequency : M1187	Reference No.: 11065643	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 704205-017	152	167	85	125	230

Requirement: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/23/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704205-017	152	167	85	125	230	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704205-017	152	167	85	125	230	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704205-017	152	167				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : SANTA FE	City : SANTA FE	Ident : SAF	State : NM
Type/Class : TACR	Frequency : M1004	Reference No.: 11065640	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 694086-009	214	250	75	85	180

Requirement: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/23/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-009	214	250	75	85	180	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQRestricted. Inadequate Coverage at ALT (min)=FLT095

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-009	214	250	75	85	180	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQRestricted. Inadequate Coverage at ALT (min)=FLT095

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-009	214	250	75	95	180	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQRestricted. Inadequate Coverage at ALT (min)=FLT095

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-009	214	250	75	95	180	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQRestricted. Inadequate Coverage at ALT (min)=FLT095

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (FIFO)						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-009	214	250				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : SANTA FE	City : SANTA FE	Ident : SAF	State : NM
Type/Class : TACR	Frequency : M1004	Reference No.: 11065641	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 694086-010	217	240	70	85	150

Requirement: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/23/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-010	217	240	70	85	150	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQRestricted. Inadequate Coverage at ALT (min)=FLT090

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-010	217	240	70	85	150	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQRestricted. Inadequate Coverage at ALT (min)=FLT090

Signature: mai kimberly	Routing Symbol:	Date: 06/24/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-010	217	240	70	93	150	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQRestricted. Inadequate Coverage at ALT (min)=FLT093

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-010	217	240	70	93	150	RESTRICT

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQRestricted. Inadequate Coverage at ALT (min)=FLT093

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/27/2011

Expanded Service Volume Data: (FIFO)						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694086-010	217	240				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : ZUNI	City : ZUNI PUEBLO	Ident : ZUN	State : AZ
Type/Class : TACR	Frequency : M1168	Reference No.: 12086260	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 020160-021	63	105	105	130	230

Requirement: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQ

Signature: Peterson Stephen	Routing Symbol:	Date: 08/17/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 020160-021	63	105	105	130	230	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 08/17/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 020160-021	63	105	105	130	230	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE RNAV STAR LOWBO INTO ABQAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 08/17/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 020160-021	63	105				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

US Department of Transportation
Federal Aviation Administration

STAR - Standard Terminal Arrival

1. Bearings, headings, courses and radials are listed to the nearest hundredth (e.g. 360.00)
2. Distances are in nautical miles to nearest hundredth (e.g. 00.00)
3. Altitudes are minimum altitudes unless otherwise indicated

(1) Transition Routes

(a) Transition Name	(b) Transition Computer Codes	(c) From RNAV WP / FIX / NAVAID	(d) To RNAV WP / FIX / NAVAID	(e) Mag Course / Distance	(f) MEA	(g) MOCA	(h) MAA	(i) Crossing Altitudes / Fixes
GALLUP	GUP.LOWBO1	GUP VORTAC	BUKEE	077.33/25.18	FL250	10300		
			WSTRN	083.44/33.15	FL200	11000		+FL210/-FL250
			LOWBO	083.17/15.96	14000	11400		
ROSEI	ROSEI.LOWBO1	ROSEI	TANER	142.33/17.09	FL250	9800		-FL280
			FORUN	162.03/10.95	FL200	9700		+FL210/-FL250
			LOWBO	161.76/15.96	14000	11400		

(2) Arrival Route Description: LANDING RWYS 3/8: FROM OVER LOWBO ON TRACK 111.51/06.79 TO CROSS JOKLO AT OR ABOVE 14000 AND AT OR BELOW FL180 AT 250 KTS (MEA 14000), THEN ON TRACK 110.92/08.29 TO ITUNE (MEA 10200), THEN ON TRACK 125.37/04.61 TO CROSS MUSCC AT OR ABOVE 9000 AND AT OR BELOW 12000 (MEA 8900), THEN ON TRACK 126.46/04.76 TO CROSS DWNLD AT OR ABOVE 9000 AND AT OR BELOW 11000 (MEA 8600), THEN ON TRACK 124.60/05.87 TO CROSS CMSTR AT 9000 AT 210 KTS (MEA 8400). EXPECT RNAV (RNP) APPROACH.
LANDING RWYS 21/26: FROM OVER LOWBO ON TRACK 111.51/06.79 TO CROSS JOKLO AT OR ABOVE 14000 AND AT OR BELOW FL180 AT 250 KTS (MEA 14,000), THEN ON TRACK 110.92/08.29 TO ITUNE (MEA 10200), THEN ON TRACK 097.16/10.85 TO CROSS SDUNX AT OR ABOVE 9000 AND AT OR BELOW 11000 (MEA 8800), THEN ON TRACK
Continued on block 16...

(3) Procedural Data Notes: CROSS WSTRN AT 270 KTS. CROSS FORUN AT 270 KTS.
NOTE: RADAR REQUIRED.
NOTE: DME/DME/IRU OR GPS REQUIRED.
NOTE: RNAV 1.
NOTE: CHART NOT TO SCALE.
NOTE: APPLICABLE FOR TURBOJET AIRCRAFT ONLY.
NOTE: GUP TRANSITION: FOR NON GPS EQUIPPED AIRCRAFT, RSK AND SAF MUST BE OPERATIONAL.
NOTE: ROSEI TRANSITION: FOR NON GPS EQUIPPED AIRCRAFT, SAF MUST BE OPERATIONAL.
NOTE: FOR NON-RNP AIRCRAFT, EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.
NOTE: CHART AT OR ABOVE FL290 AT ROSEI.

(4) Fixes and/or Holding Patterns: CHART HOLDING AT BUKEE: HOLD W, LT, 077.33 INBOUND, 12 NM LEGS.
CHART HOLDING AT TANER: HOLD NW, RT, 142.33 INBOUND, 12 NM LEGS.
CHART HOLDING AT LOWBO: HOLD W, LT, 111.51 INBOUND, 8 NM LEGS.
CHART HOLDING AT JOKLO: HOLD W, LT, 111.51 INBOUND, 8 NM LEGS.

(5) Communications: ABQ ARTCC, ABQ APP CON, ABQ ATIS.

QUALITY CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

FAA Form 7100-4 (7/02)

(12) Airports Served

Airport Name ALBUQUERQUE INTL SUNPORT	**City/State** ALBUQUERQUE, NM
Airport Name	**City/State**
Airport Name	**City/State**
Airport Name	**City/State**
Airport Name	**City/State**
Airport Name	**City/State**

(13) Lost Communications Procedure: STANDARD.

(14) Remarks: REFERENCE MAGNETIC VARIATION = KABQ 11E/1995

(15) Additional Flight Data: (DO NOT CHART) DME/DME ASSESSMENT: SAT (RNP 2.0)

QUALITY CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

(16) Continuation:

(2) Arrival Route Description:

097.36/5.02 TO CROSS PASEO AT OR ABOVE 9000 AND AT OR BELOW 10000 (MEA 8600), THEN ON TRACK 097.42/5.02 TO CROSS NODME AT 9000 AT 210 KTS (MEA 8300). EXPECT RNAV (RNP) APPROACH.

(17) Changes:

(18) Reasons for Changes:

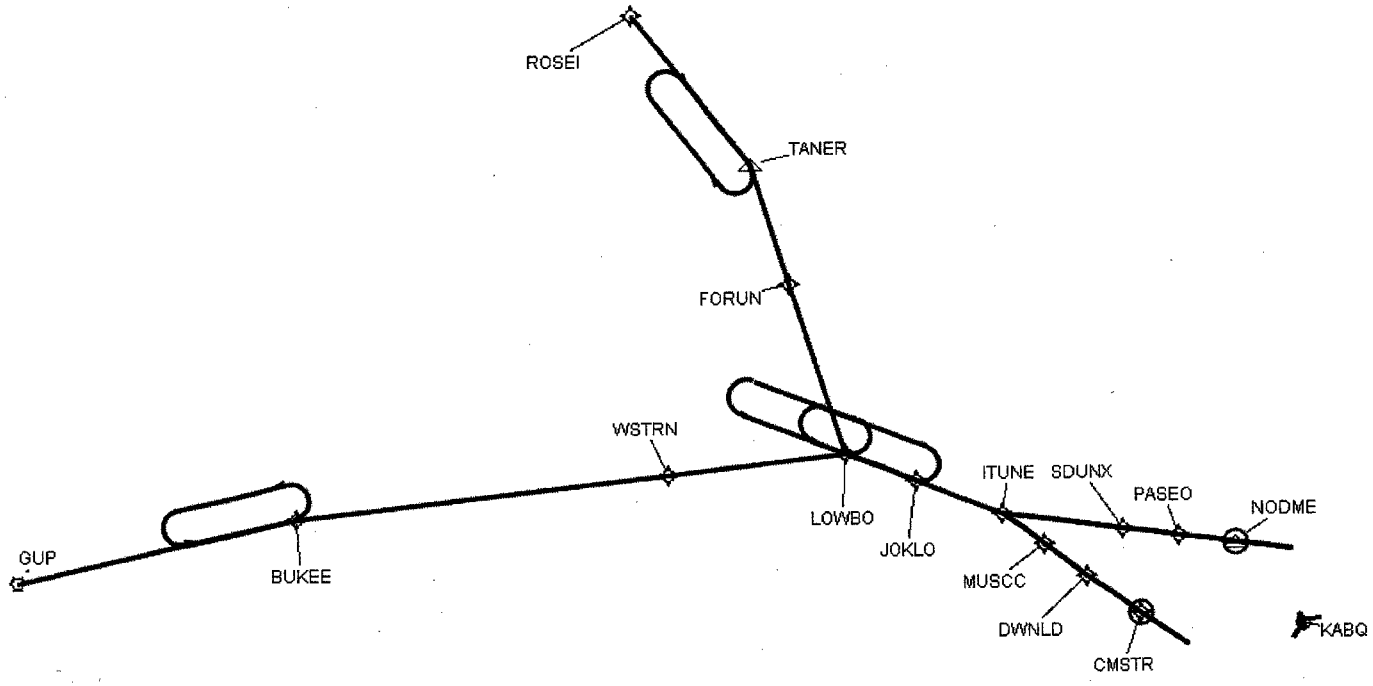
8/28/2012: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 4/5/2012.
1. CHANGED ALL RWY TRANSITIONS FROM EXPECTING RADAR VECTORS TO EXPECTING RNAV (RNP) APPROACH.
2. REMOVED "LANDING RWY" NOTES AND REPLACED WITH "NON-RNP AIRCRAFT" NOTE.
3. CHANGED HOLDING AT TANER FROM 8NM LEGS TO 12NM LEGS.
4. CHANGED HOLDING AT JOKLO FROM 12NM LEGS TO 8NM LEGS.

QUALITY CHECKED

Developed By	**Name (Typed and Signed), Title and Organization**		**DATE**
	Leoni Sanmiguel, Support Manager, Airspace & Procedures, Albuquerque ARTCC		
Approved	**NFPG**		
	Reg. ATD		

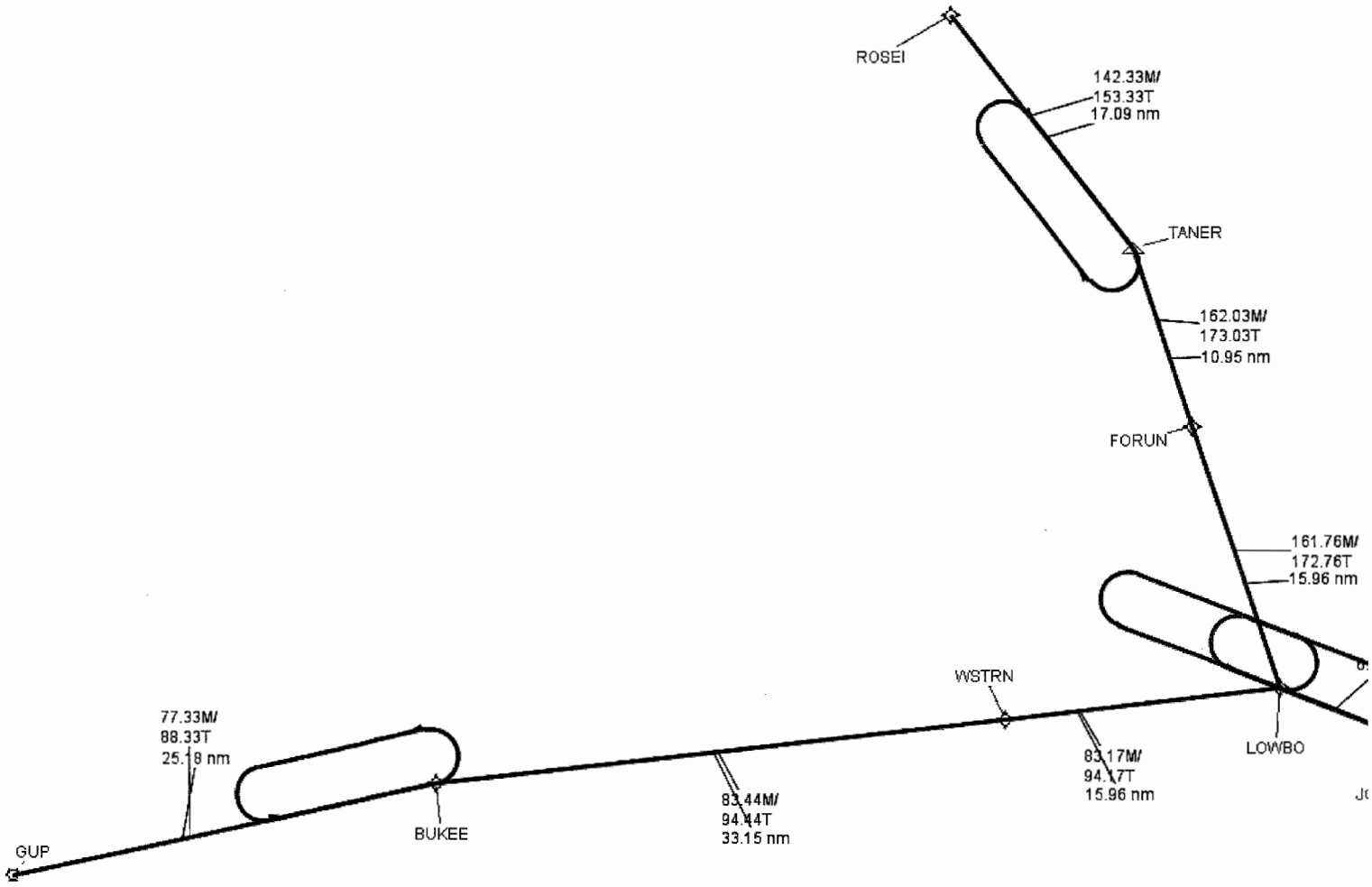
(6) Arrival Name	**(7) Number**	**(8) STAR Computer Code**	**(9) Superseded Nr.**	**(10) Dated**	**(11) Effective Date**
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

(19) Graphic Depiction (1 of 12)



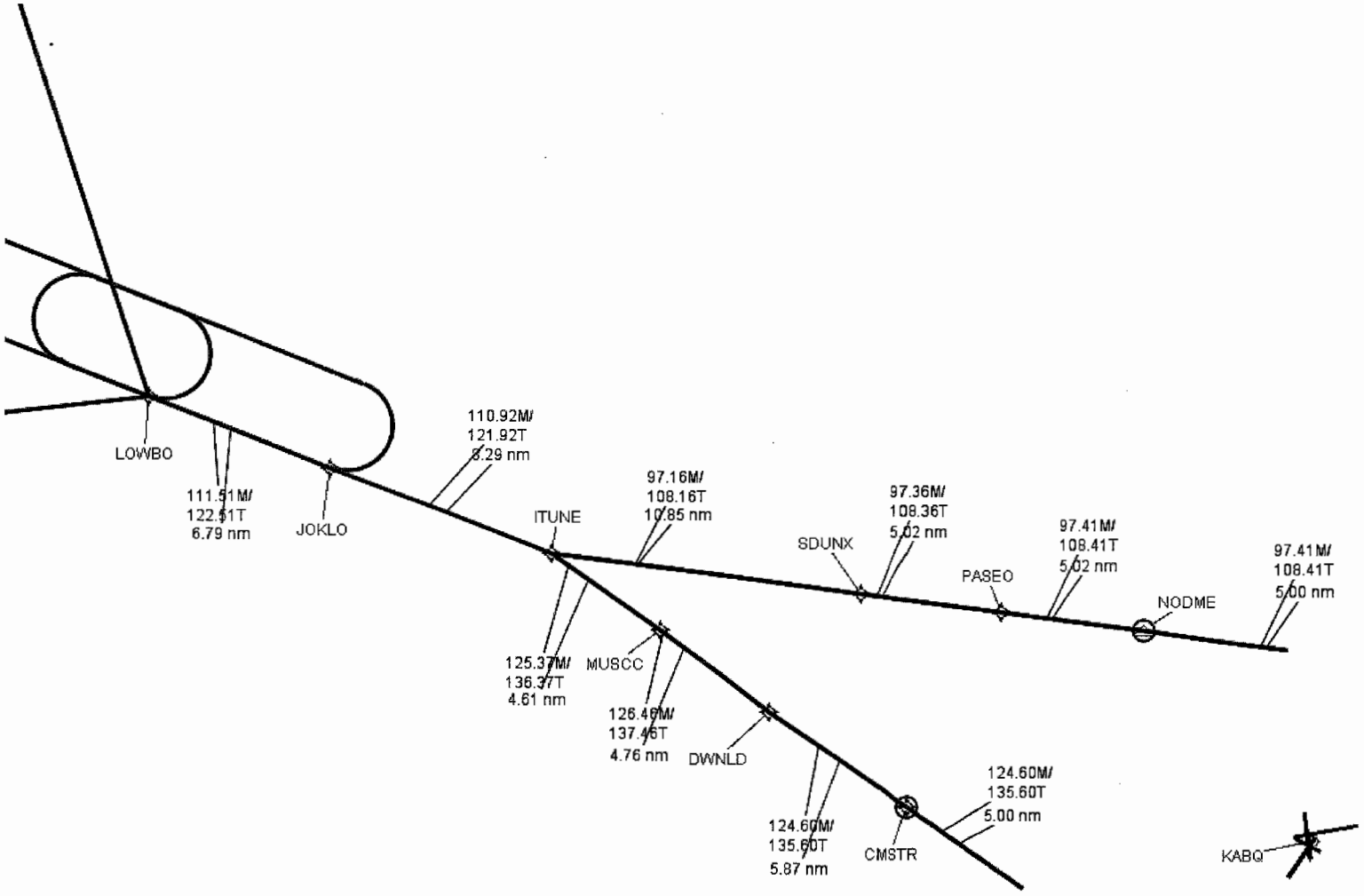
QUALITY CHECKED 4

(19) Graphic Depiction (2 of 12)



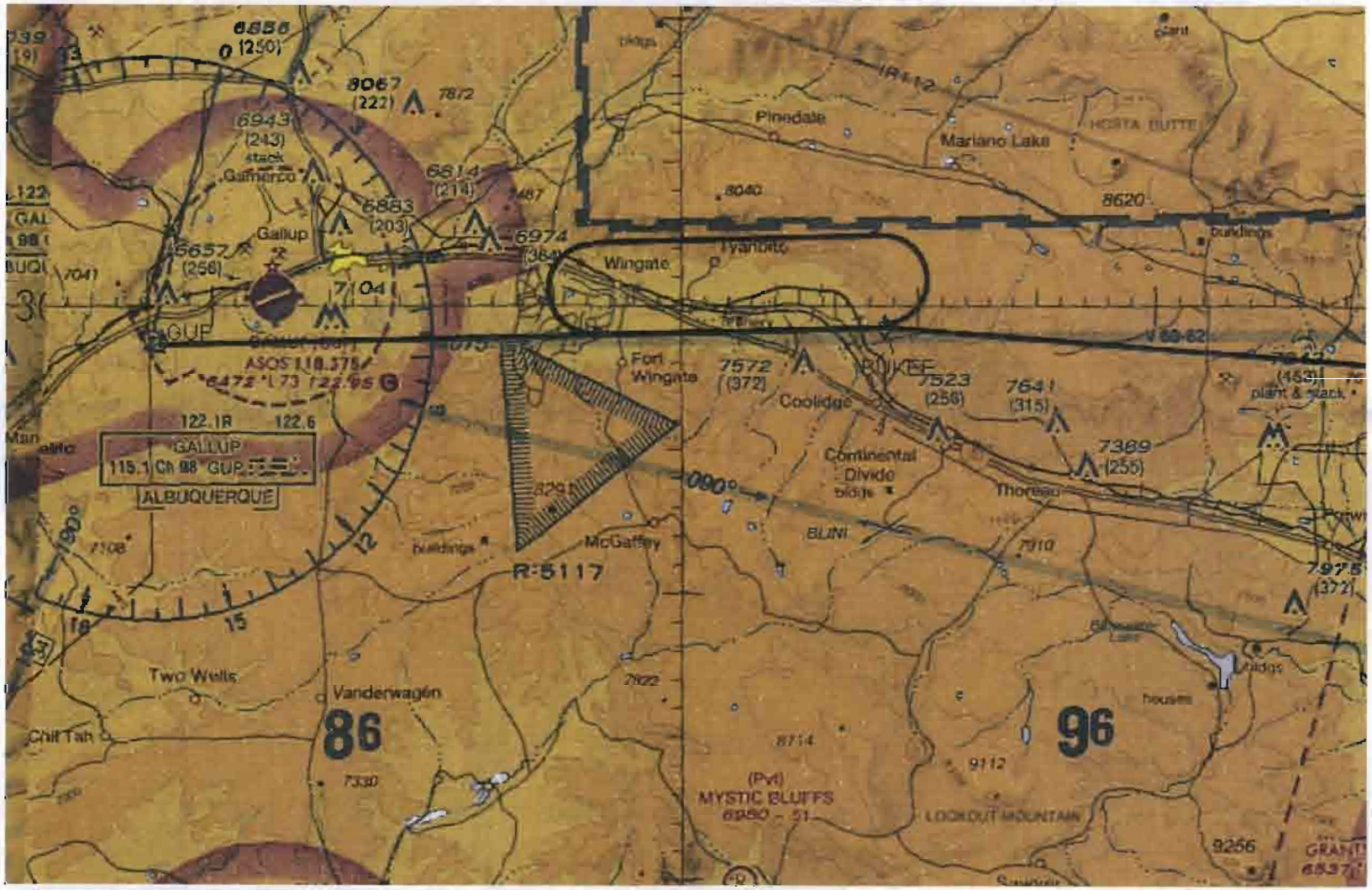
QUALITY CHECKED

(19) Graphic Depiction (3 of 12)



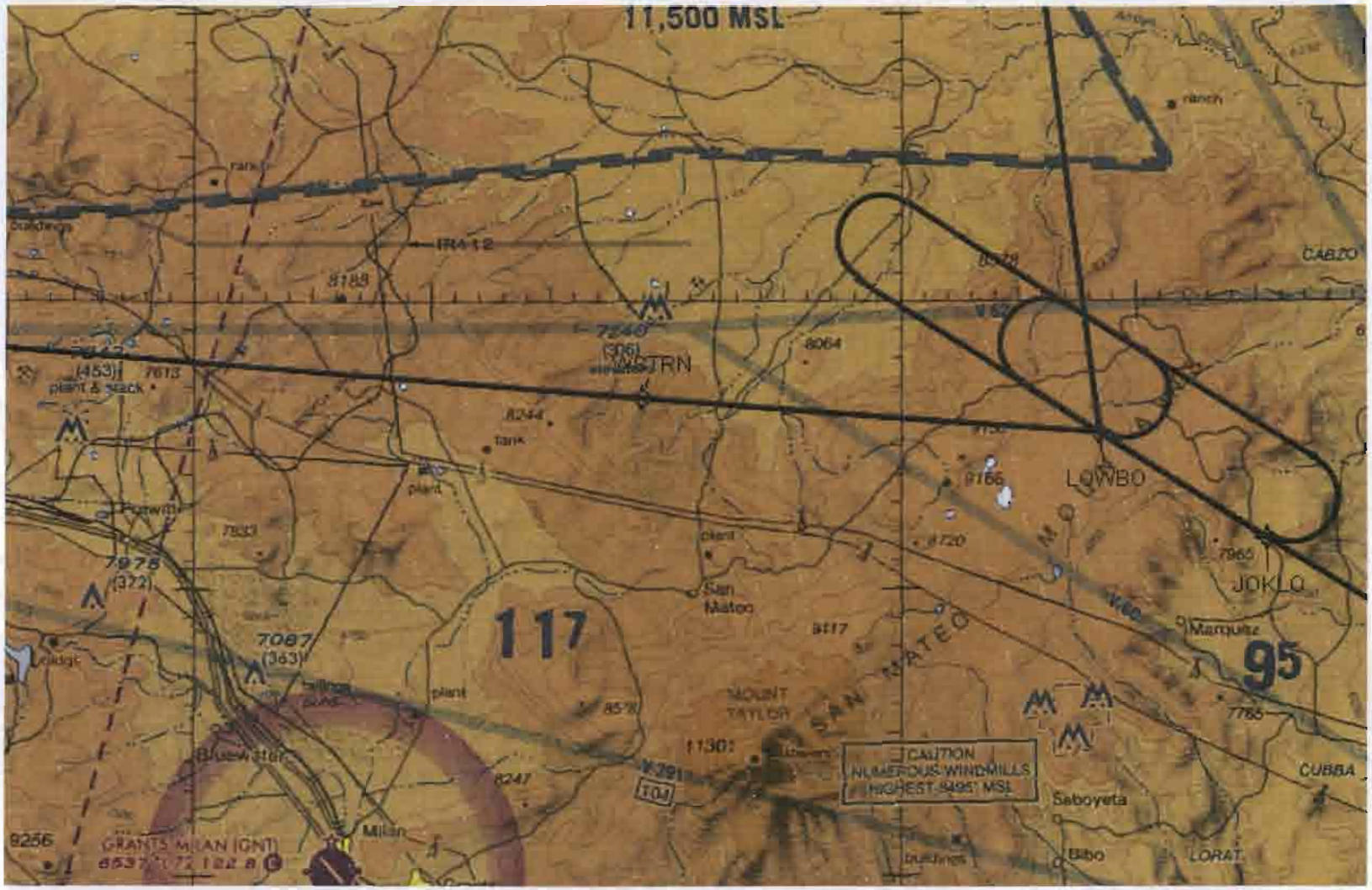
QUALITY 4 CHECKED

(19) Graphic Depiction (4 of 12)



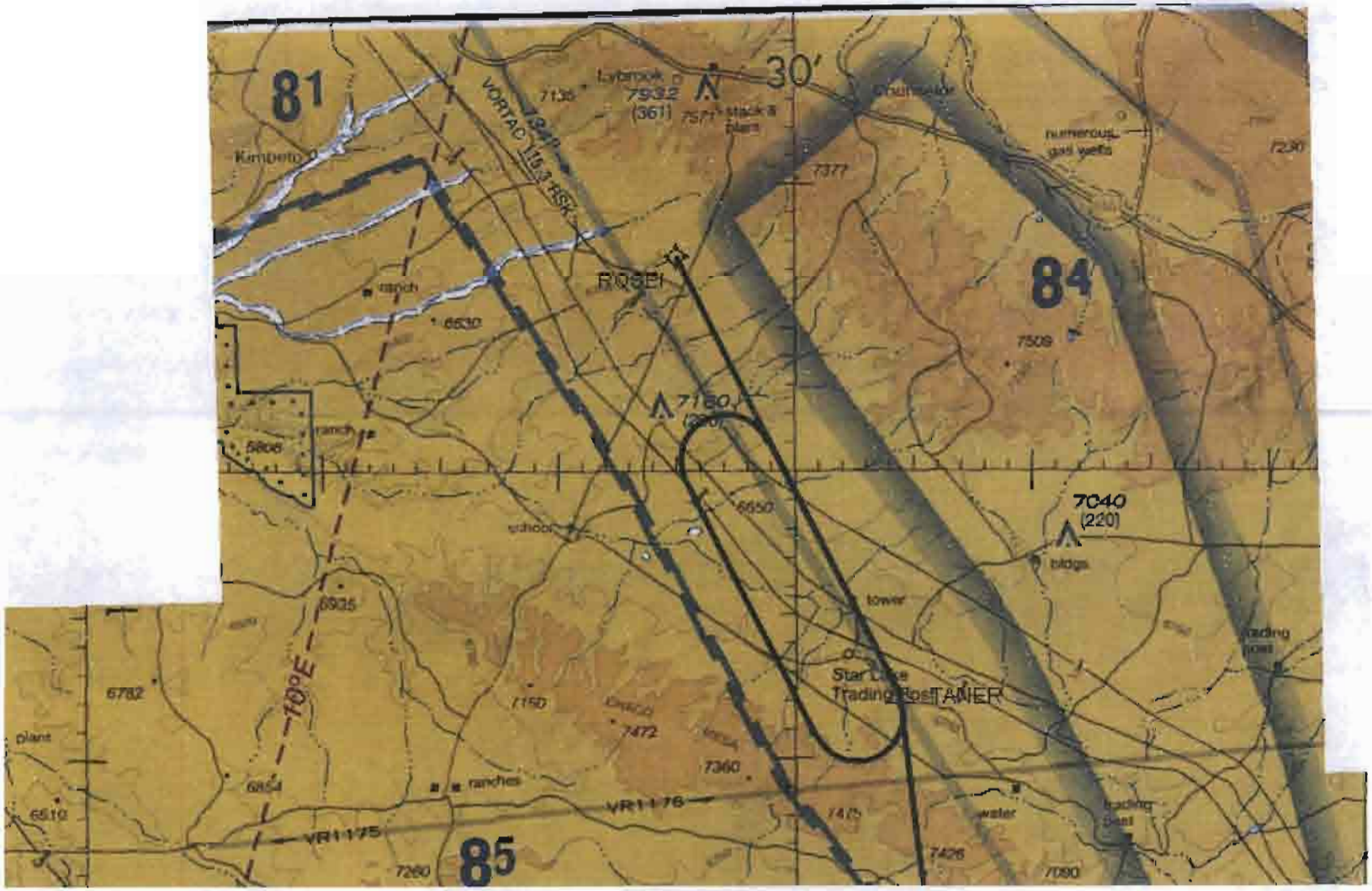
QUALITY CHECKED

(19) Graphic Depiction (5 of 12)



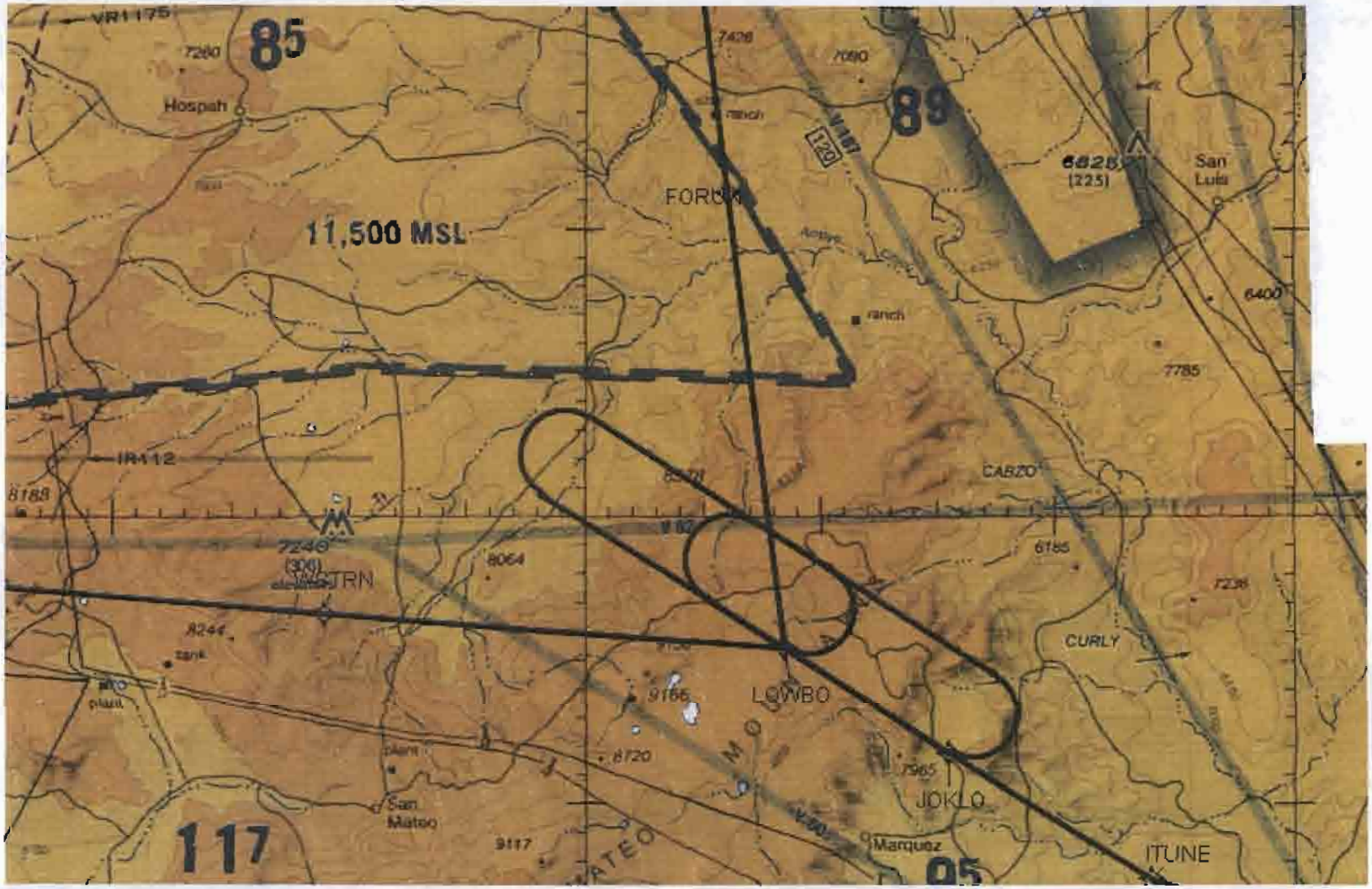
QUALITY CHECKED

(19) Graphic Depiction (6 of 12)



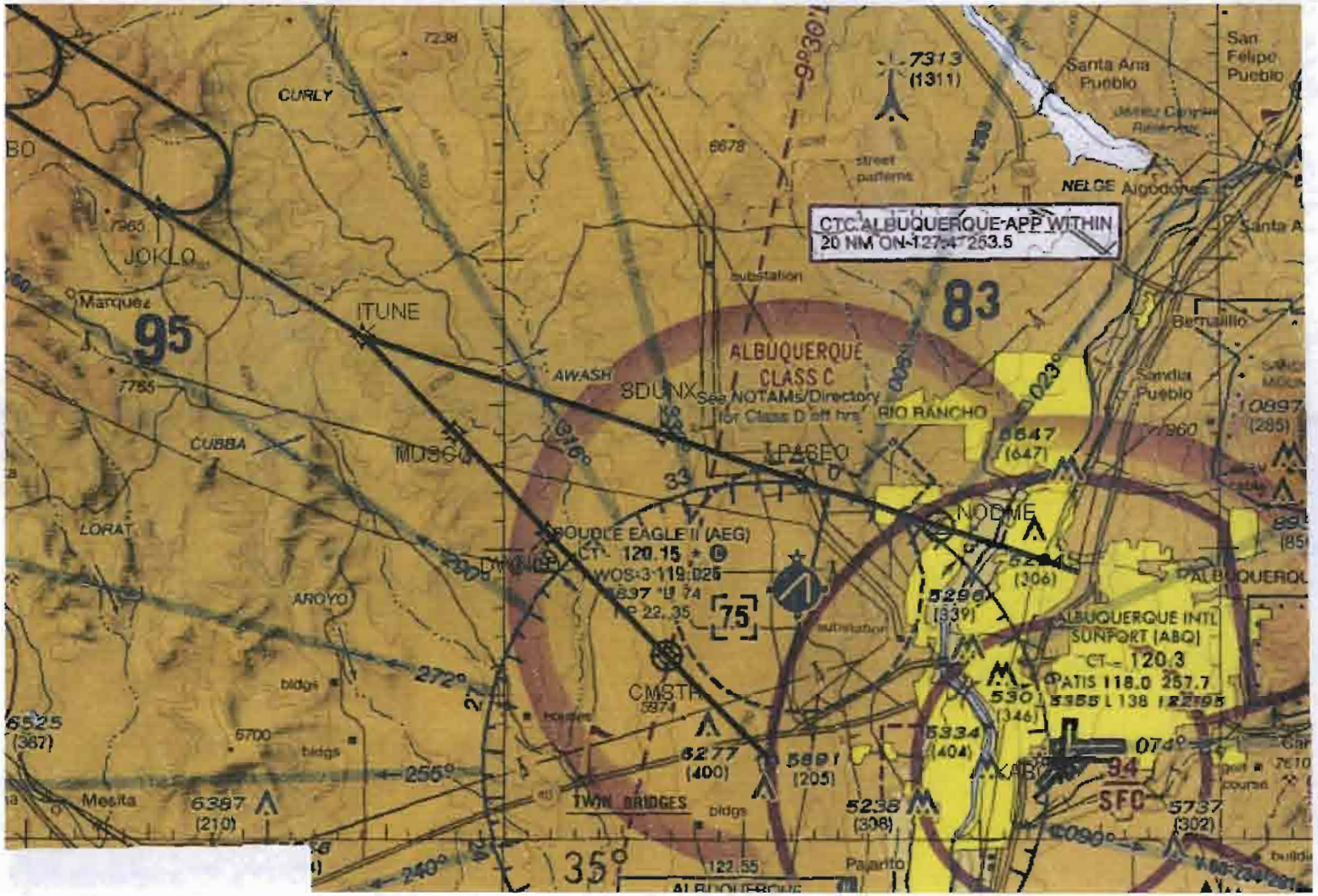
QUALITY CHECKED

(19) Graphic Depiction (7 of 12)

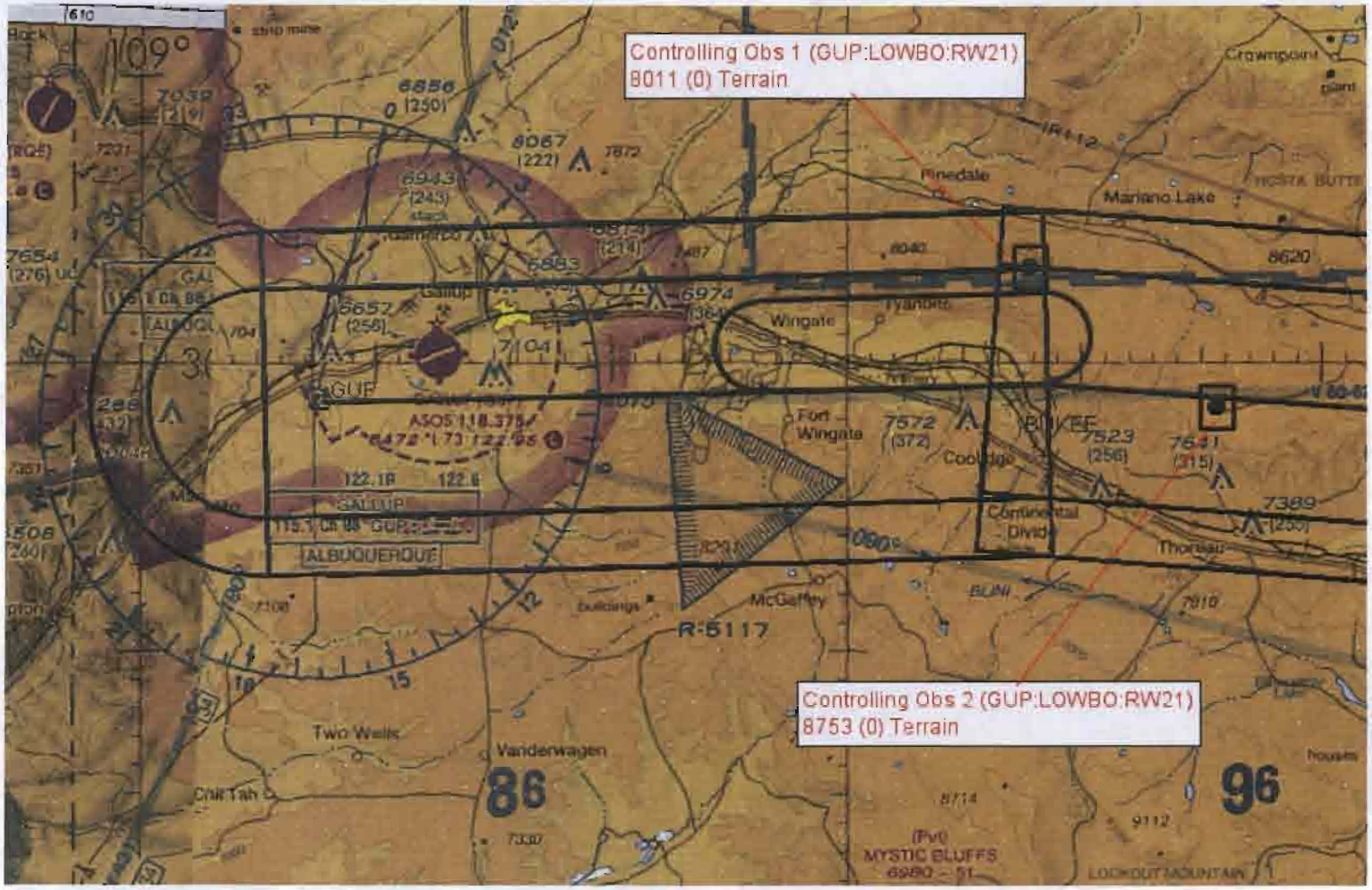


QUALITY CHECKED

(19) Graphic Depiction (8 of 12)

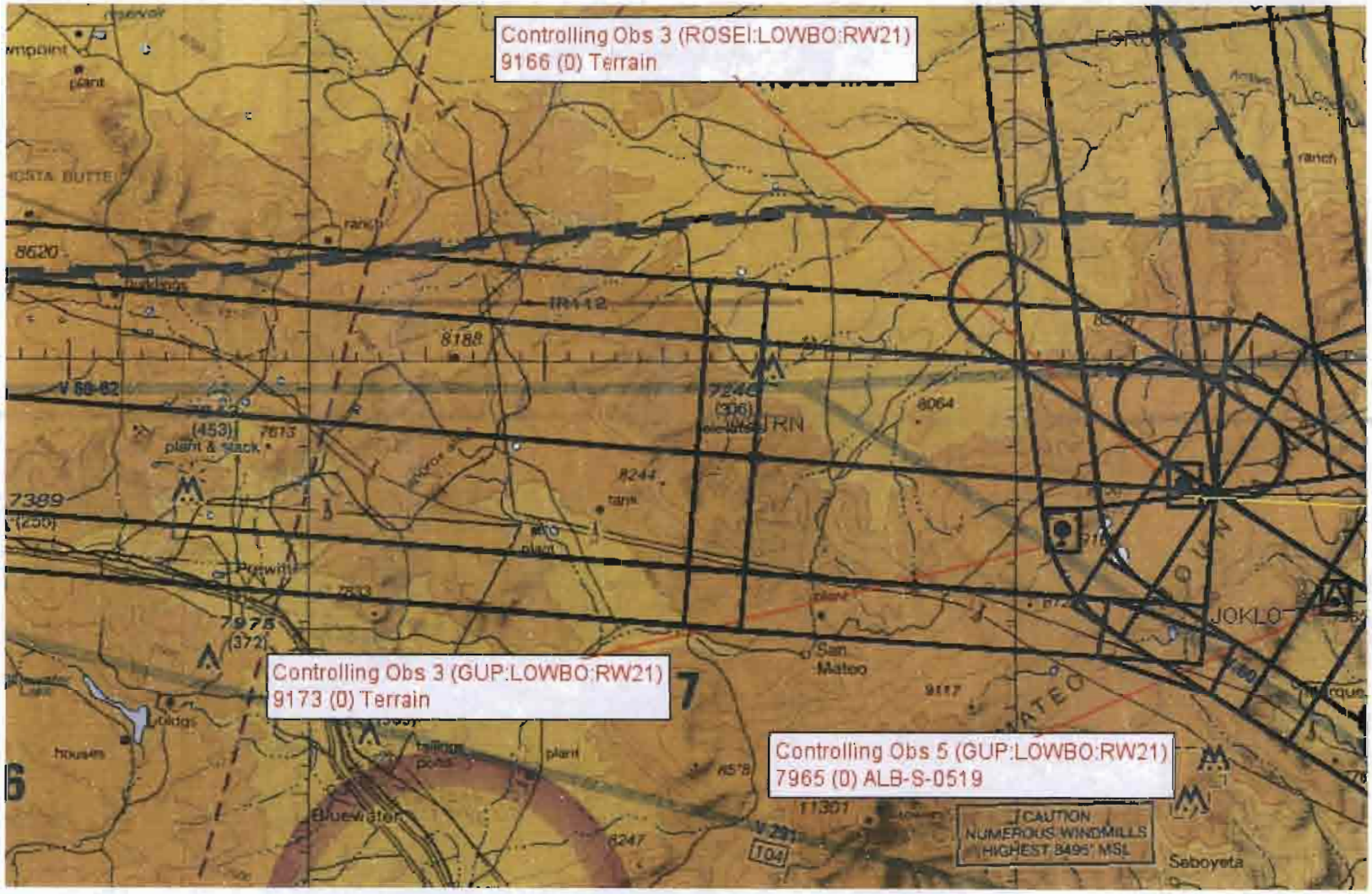


(19) Graphic Depiction (9 of 12)



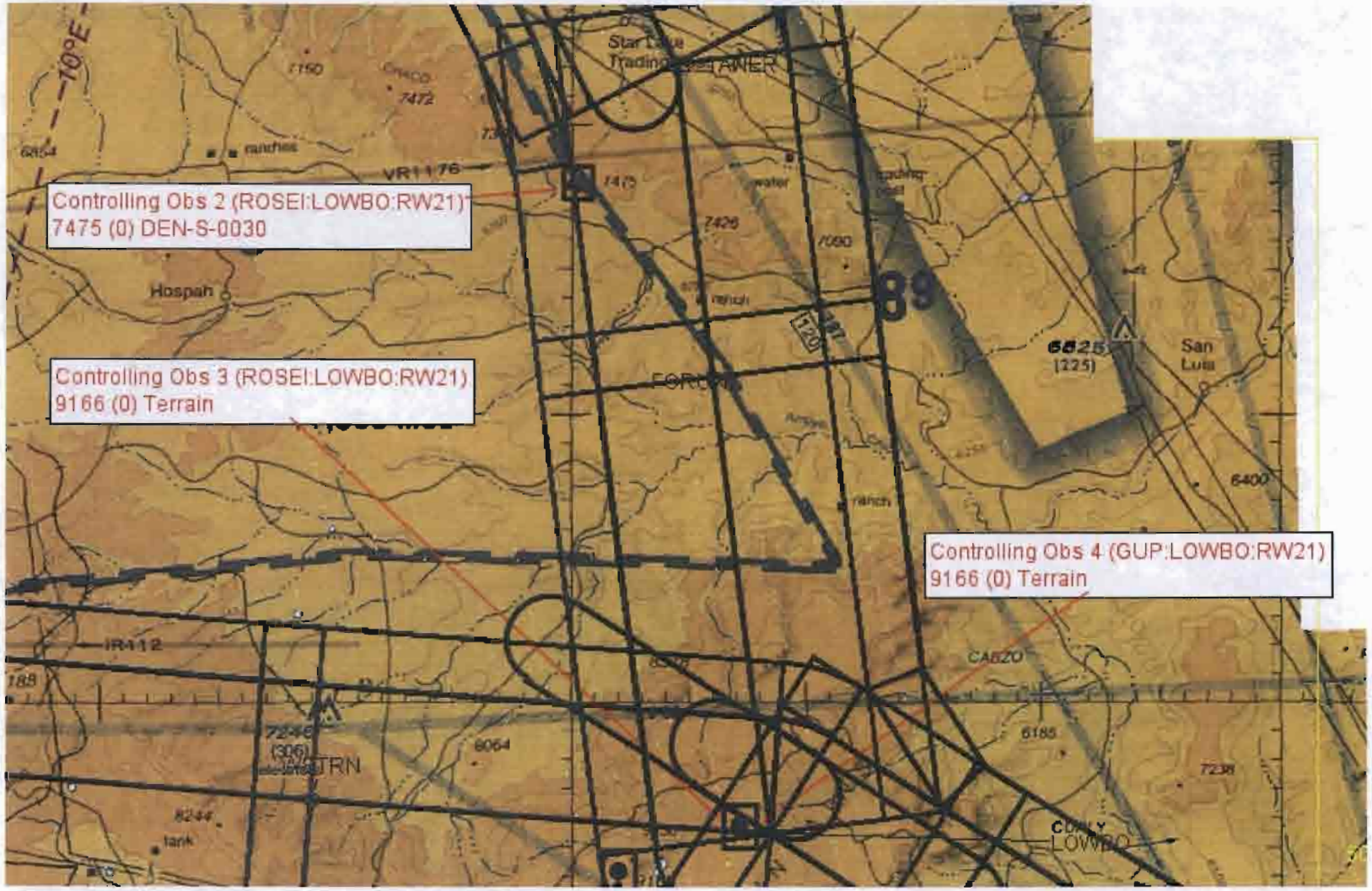
QUALITY CHECKED

(19) Graphic Depiction (10 of 12)



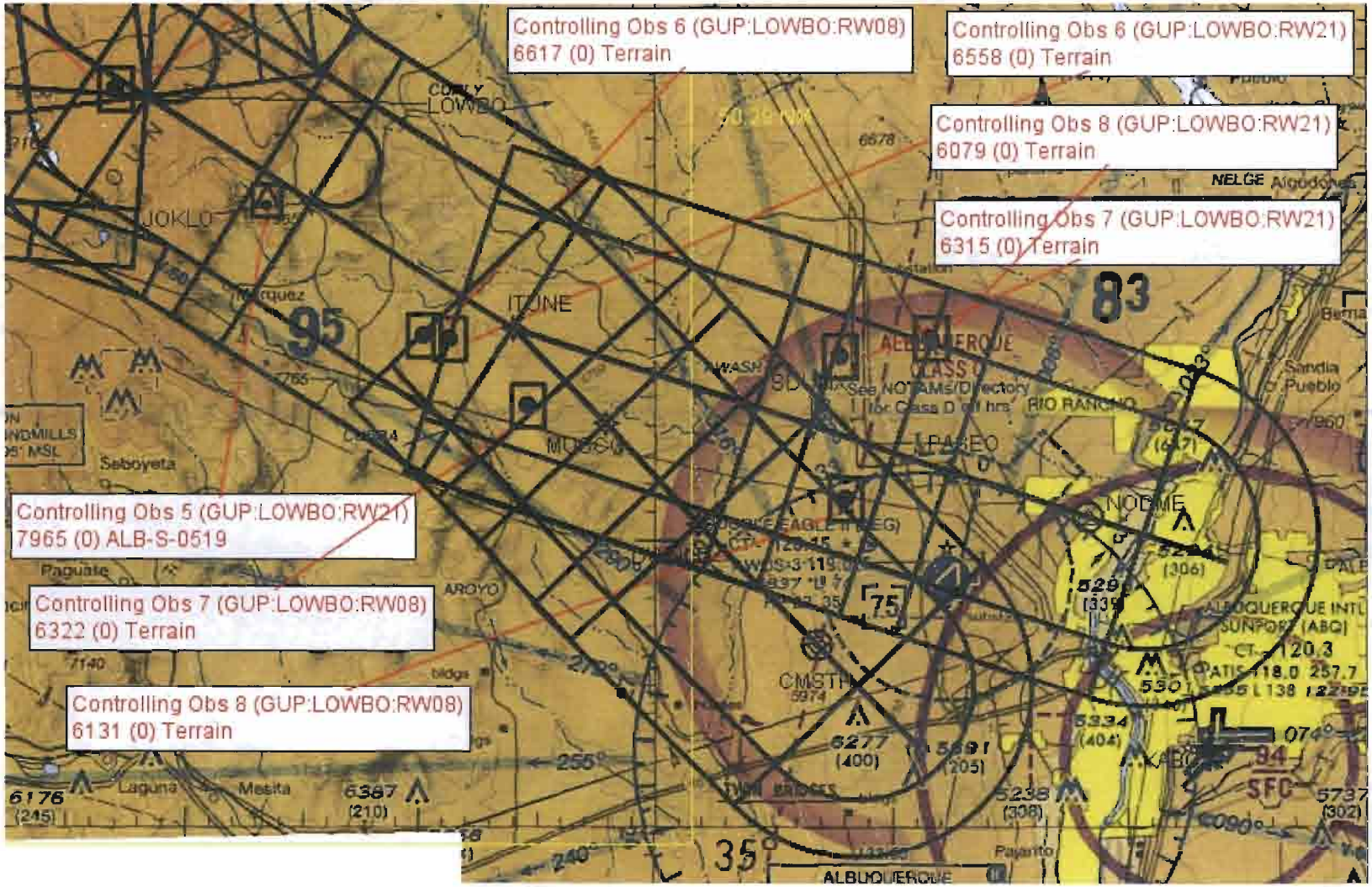
QUALITY CHECKED

(19) Graphic Depiction (11 of 12)



QUALITY CHECKED

(19) Graphic Depiction (12 of 12)



QUALITY CHECKED

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
En Route Transition									
GUP VORTAC	352833.60N / 1085221.40W	Y		IF					GUP.LOWBO1
BUKEE	352913.82N / 1082132.39W	Y	FB	TF	088.33	25.18			HOLD W,LT, 077.33 INBOUND.
WSTRN	352632.71N / 1074105.74W	Y	FB	TF	094.44	33.15	+FL210/-FL250	270	
LOWBO	352521.37N / 1072137.15W	Y	FB	TF	094.17	15.96			HOLD W, LT, 111.51 INBOUND
En Route Transition									
ROSEI	360723.91N / 1073509.05W	Y		IF			+FL290		ROSEI.LOWBO1
TANER	355205.77N / 1072542.57W	Y	FB	TF	153.33	17.09	-FL280		HOLD NW,RT, 142.33 INBOUND
FORUN	354112.68N / 1072404.74W	Y	FB	TF	173.03	10.95	+FL210/-FL250	270	
LOWBO	352521.37N / 1072137.15W	Y	FB	TF	172.76	15.96			HOLD W, LT, 111.51 INBOUND
Common Route									LOWBO.LOWBO1
LOWBO	352521.37N / 1072137.15W	Y		IF					HOLD W, LT, 111.51 INBOUND
JOKLO	352141.93N / 1071437.24W	Y	FB	TF	122.51	06.79	+14000/-FL180	250	HOLD W, LT, 111.51 INBOUND
ITUNE	351718.20N / 1070601.53W	Y	FB	TF	121.92	08.29			

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
Runway Transition									
ITUNE	351718.20N / 1070601.53W	Y		IF					RW03.LOWBO1
MUSCC	351357.61N / 1070208.56W	Y	FB	TF	136.37	04.61	+9000/-12000		
DWNLD	351026.96N / 1065813.21W	Y	FB	TF	137.46	04.76	+9000/-11000		
CMSTR	350614.97N / 1065313.01W	Y	FB	TF	135.60	05.87	9000	210	
RW03									
Runway Transition									
ITUNE	351718.20N / 1070601.53W	Y		IF					RW08.LOWBO1
MUSCC	351357.61N / 1070208.56W	Y	FB	TF	136.37	04.61	+9000/-12000		
DWNLD	351026.96N / 1065813.21W	Y	FB	TF	137.46	04.76	+9000/-11000		
CMSTR	350614.97N / 1065313.01W	Y	FB	TF	135.60	05.87	9000	210	
RW08									
Runway Transition									

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
ITUNE	351718.20N / 1070601.53W	Y		IF					RW21.LOWBO1
SDUNX	351354.37N / 1065326.46W	Y	FB	TF	108.16	10.85	+9000/-11000		
PASEO	351219.12N / 1064737.27W	Y	FB	TF	108.36	05.02	+9000/-10000		
NODME	351043.64N / 1064148.51W	Y	FB	TF	108.42	05.02	9000	210	
RW21									
Runway Transition									
ITUNE	351718.20N / 1070601.53W	Y		IF					RW26.LOWBO1
SDUNX	351354.37N / 1065326.46W	Y	FB	TF	108.16	10.85	+9000/-11000		
PASEO	351219.12N / 1064737.27W	Y	FB	TF	108.36	05.02	+9000/-10000		
NODME	351043.64N / 1064148.51W	Y	FB	TF	108.42	05.02	9000	210	
RW26									

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
LOWBO RNAV ARRIVAL	ONE	LOWBO.LOWBO1	NONE		

FAA Form 7100-3 (9/02)

ARINC PACKET - 424-18 - STAR

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        GUP   K2011510VTH  N35283360W108522140    N35283360W108522140E0140070532     NARGALLUP

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   BUKEE K20    W   H N35291382W108213239                      E0098     NAR           BUKEE
        SUSAEAENRT   CMSTR K20    W   L N35061497W106531301                      E0092     NAR           CMSTR
        SUSAEAENRT   DWNLD K20    W   L N35102696W106581321                      E0092     NAR           DWNLD
        SUSAEAENRT   FORUN K20    W   H N35411268W107240474                      E0095     NAR           FORUN
        SUSAEAENRT   ITUNE K20    W   L N35171820W107060153                      E0093     NAR           ITUNE
        SUSAEAENRT   JOKLO K20    W   B N35214193W107143724                      E0094     NAR           JOKLO
        SUSAEAENRT   LOWBO K20    W   B N35252137W107213715                      E0094     NAR           LOWBO
        SUSAEAENRT   MUSCC K20    W   L N35135761W107020856                      E0093     NAR           MUSCC
        SUSAEAENRT   NODME K20    C   L N35104364W106414851                      E0091     NAR           NODME
        SUSAEAENRT   PASEO K20    W   L N35121912W106473727                      E0092     NAR           PASEO
        SUSAEAENRT   ROSEI K20    W   H N36072391W107350905                      E0096     NAR           ROSEI
        SUSAEAENRT   SDUNX K20    W   L N35135437W106532646                      E0092     NAR           SDUNX
        SUSAEAENRT   TANER K20    C   B N35520577W107254257                      E0095     NAR           TANER
        SUSAEAENRT   WSTRN K20    W   H N35263271W107410574                      E0096     NAR           WSTRN

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KABQK2AABQ     0     137YHN35022470W106363310E011005355         1800018000C    MNAR    ALBUQUERQUE INTL SUNPORT

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
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        SUSAP KABQK2ELOWBO14GUP   010GUP  K2D 0V       IF                                                  18000
        SUSAP KABQK2ELOWBO14GUP   020BUKEEK2EA0E  H 010TF                    07730252
        SUSAP KABQK2ELOWBO14GUP   030WSTRNK2EA0E    010TF                    08340332    B FL250FL210     270
        SUSAP KABQK2ELOWBO14GUP   040LOWBOK2EA0EE H 010TF                    08320160
        SUSAP KABQK2ELOWBO14ROSEI 010ROSEIK2EA0E       IF                                + FL290     18000
        SUSAP KABQK2ELOWBO14ROSEI 020TANERK2EA0E  H 010TF                    14230171    - FL280
        SUSAP KABQK2ELOWBO14ROSEI 030FORUNK2EA0E    010TF                    16200110    B FL250FL210     270
        SUSAP KABQK2ELOWBO14ROSEI 040LOWBOK2EA0EE H 010TF                    16180160
        SUSAP KABQK2ELOWBO15      010LOWBOK2EA0E  H    IF                                                  18000
```

QUALITY CHECKED 4

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

```
SUSAP KABQK2ELOWBO15       020JOKLOK2EA0E  H 010TF                    11150068    B FL18014000     250
SUSAP KABQK2ELOWBO15       030ITUNEK2EA0EE   010TF                    11090083
SUSAP KABQK2ELOWBO16RW03   010ITUNEK2EA0E       IF                                            18000
SUSAP KABQK2ELOWBO16RW03   020MUSCCK2EA0E    010TF                    12540046    B 1200009000
SUSAP KABQK2ELOWBO16RW03   030DWNLDK2EA0E    010TF                    12650048    B 1100009000
SUSAP KABQK2ELOWBO16RW03   040CMSTRK2EA0EE   010TF                    12460059      09000          210
SUSAP KABQK2ELOWBO16RW08   010ITUNEK2EA0E       IF                                            18000
SUSAP KABQK2ELOWBO16RW08   020MUSCCK2EA0E    010TF                    12540046    B 1200009000
SUSAP KABQK2ELOWBO16RW08   030DWNLDK2EA0E    010TF                    12650048    B 1100009000
SUSAP KABQK2ELOWBO16RW08   040CMSTRK2EA0EE   010TF                    12460059      09000          210
SUSAP KABQK2ELOWBO16RW21   010ITUNEK2EA0E       IF                                            18000
SUSAP KABQK2ELOWBO16RW21   020SDUNXK2EA0E    010TF                    09720109    B 1100009000
SUSAP KABQK2ELOWBO16RW21   030PASEOK2EA0E    010TF                    09740050    B 1000009000
SUSAP KABQK2ELOWBO16RW21   040NODMEK2EA0EE   010TF                    09740050      09000          210
SUSAP KABQK2ELOWBO16RW26   010ITUNEK2EA0E       IF                                            18000
SUSAP KABQK2ELOWBO16RW26   020SDUNXK2EA0E    010TF                    09720109    B 1100009000
SUSAP KABQK2ELOWBO16RW26   030PASEOK2EA0E    010TF                    09740050    B 1000009000
SUSAP KABQK2ELOWBO16RW26   040NODMEK2EA0EE   010TF                    09740050      09000          210
```

```
                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
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        SUSAP KABQK2GRW03    0100000338 N35012009W106375017+0100    +1595705305000060150IIBZY1
        SUSAP KABQK2GRW08    0137930794 N35023960W106370569+0300    +1598705315100054150IISPT1
        SUSAP KABQK2GRW21    0100002138 N35023027W106362546-0100    +1599205316000055150R
        SUSAP KABQK2GRW26    0137932595 N35023863W106343189-0300    +1611205355000050150R
```

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

US Department of Transportation
Federal Aviation Administration

STAR (Data Record)

ARINC SUMMARY - 424-18 - STAR

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	GUP	GUP	010		IF		FB					
	GUP	BUKEE	020		TF		FB	1.0	077.3()	025.2		
	GUP	WSTRN	030		TF		FB	1.0	083.4()	033.2	BT FL250FL210	AT 270
	GUP	LOWBO	040		TF		FB	1.0	083.2()	016.0		
	ROSEI	ROSEI	010		IF		FB				AA FL290	
	ROSEI	TANER	020		TF		FB	1.0	142.3()	017.1	AB FL280	
	ROSEI	FORUN	030		TF		FB	1.0	162.0()	011.0	BT FL250FL210	AT 270
	ROSEI	LOWBO	040		TF		FB	1.0	161.8()	016.0		
		LOWBO	010		IF		FB					
		JOKLO	020		TF		FB	1.0	111.5()	006.8	BT FL18014000	AT 250
		ITUNE	030		TF		FB	1.0	110.9()	008.3		
	RW03	ITUNE	010		IF		FB					
	RW03	MUSCC	020		TF		FB	1.0	125.4()	004.6	BT 1200009000	
	RW03	DWNLD	030		TF		FB	1.0	126.5()	004.8	BT 1100009000	
	RW03	CMSTR	040		TF		FB	1.0	124.6()	005.9	AT 09000	AT 210
	RW08	ITUNE	010		IF		FB					
	RW08	MUSCC	020		TF		FB	1.0	125.4()	004.6	BT 1200009000	
	RW08	DWNLD	030		TF		FB	1.0	126.5()	004.8	BT 1100009000	
	RW08	CMSTR	040		TF		FB	1.0	124.6()	005.9	AT 09000	AT 210
	RW21	ITUNE	010		IF		FB					
	RW21	SDUNX	020		TF		FB	1.0	097.2()	010.9	BT 1100009000	
	RW21	PASEO	030		TF		FB	1.0	097.4()	005.0	BT 1000009000	
	RW21	NODME	040		TF		FB	1.0	097.4()	005.0	AT 09000	AT 210
	RW26	ITUNE	010		IF		FB					
	RW26	SDUNX	020		TF		FB	1.0	097.2()	010.9	BT 1100009000	
	RW26	PASEO	030		TF		FB	1.0	097.4()	005.0	BT 1000009000	
	RW26	NODME	040		TF		FB	1.0	097.4()	005.0	AT 09000	AT 210

POINT DATA

WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
GUP	N352833.60	W1085221.40	N3528.560	W10852.357
BUKEE	N352913.82	W1082132.39	N3529.230	W10821.540
CMSTR	N350614.97	W1065313.01	N3506.250	W10653.217
DWNLD	N351026.96	W1065813.21	N3510.449	W10658.220
FORUN	N354112.68	W1072404.74	N3541.211	W10724.079
ITUNE	N351718.20	W1070601.53	N3517.303	W10706.026
JOKLO	N352141.93	W1071437.24	N3521.699	W10714.621
LOWBO	N352521.37	W1072137.15	N3525.356	W10721.619

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

FAA Form 7100-3 (9/02)

MUSCC	N351357.61	W1070208.56	N3513.960	W10702.143
NODME	N351043.64	W1064148.51	N3510.727	W10641.809
PASEO	N351219.12	W1064737.27	N3512.319	W10647.621
ROSEI	N360723.91	W1073509.05	N3607.399	W10735.151
SDUNX	N351354.37	W1065326.46	N3513.906	W10653.441
TANER	N355205.77	W1072542.57	N3552.096	W10725.710
WSTRN	N352632.71	W1074105.74	N3526.545	W10741.096
RW03	N350120.09	W1063750.17	N3501.335	W10637.836
RW08	N350239.60	W1063705.69	N3502.660	W10637.095
RW21	N350230.27	W1063625.46	N3502.505	W10636.424
RW26	N350238.63	W1063431.89	N3502.644	W10634.532

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW03	05305	60
RW08	05315	54
RW21	05316	55
RW26	05355	50

QUALITY CHECKED 4

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
LOWBO RNAV	ONE	LOWBO.LOWBO1	NONE		

RADIO FIX AND HOLDING DATA RECORD

NAME: BUKEE **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 352913.82N/1082132.39W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	W		WP	257.33	077.33	L		12	25000	40000	21	28

REASON FOR NONSTANDARD HOLDING:
PAT 1 AVOID R-5117

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)		1	KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CMSTR **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 350614.97N/1065313.01W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 3			KABQ	ALBUQUERQUE	NM (US)
IAP	RNAV (RNP) Z RWY 8			KABQ	ALBUQUERQUE	NM (US)
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
ADDED STAR, CONTROLLER, AND EN ROUTE LOW TO REQUIRED CHARTING.

DEVELOPED BY: **DATE:** 07/20/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON/ABQ TOWER
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: DWNLD **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 351026.96N/1065813.21W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: FORUN **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 354112.68N/1072404.74W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: GALLUP VORTAC **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 352833.60N/1085221.40W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	GALLUP	GUP	VORTAC	H							45000

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	SW	GUP	VORTAC	227.09	047.09	R	1		8900	14000	9	10
2	SE	GUP	VORTAC	125.00	305.00	R	1		9800	14000	9	10
3	NE	GUP	VORTAC	037.94	217.94	L	1 1/2		18000	39000	16	27
4	NE		WP	037.94	217.94	L		10	18000	39000	17	28

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	230	AAO	352230.00N/1083515.00W	8524	4E
1	230	AAO	352543.00N/1090356.00W	7551	6C
2	230	AAO	352236.00N/1083530.00W	8514	4E

REASON FOR NONSTANDARD HOLDING:
PAT 3 ATC REQUEST
PAT 4 ATC REQUEST

HOLDING RESTRICTIONS:
PRIOR COORDINATION REQUIRED WITH CONTROLLING AGENCY FOR HOLDING OVER R-5117 AND R-5121
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 10500.
PORTIONS OF UNPLANNED HOLDING LIE IN UNCONTROLLED AIRSPACE.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ADYOS (RNAV)			KABQ	ALBUQUERQUE	NM (US)
DP	ALBUQUERQUE			KABQ	ALBUQUERQUE	NM (US)
DP	LARGO			KABQ	ALBUQUERQUE	NM (US)
DP	RDRNR (RNAV)			KABQ	ALBUQUERQUE	NM (US)
DP	CHACO			KFMN	FARMINGTON	NM (US)
DP	ZAISE			KSAF	SANTA FE	NM (US)
DP	FLAMZ (RNAV)			KHND	LAS VEGAS	NV (US)
DP	COWBY (RNAV)			KLAS	LAS VEGAS	NV (US)
EN ROUTE	J102		3			(US)
EN ROUTE	J134					(US)
EN ROUTE	J19					(US)
EN ROUTE	J72					(US)
EN ROUTE	J8					(US)
EN ROUTE	J96					(US)
EN ROUTE	V291					(US)
EN ROUTE	V421					(US)
EN ROUTE	V60					(US)
EN ROUTE	V62					(US)
IAP	VOR/DME-A		2	KRQE	WINDOW ROCK	AZ (US)
IAP	HI-ILS OR LOC RWY 8			KABQ	ALBUQUERQUE	NM (US)
IAP	HI-TACAN RWY 8			KABQ	ALBUQUERQUE	NM (US)
IAP	LOC RWY 6		1	KGUP	GALLUP	NM (US)
IAP	RNAV (GPS) RWY 24			KGUP	GALLUP	NM (US)
IAP	RNAV (GPS) RWY 6			KGUP	GALLUP	NM (US)
IAP	VOR RWY 6		1	KGUP	GALLUP	NM (US)
STAR	BUNTR		3	KPHX	PHOENIX	AZ (US)
STAR	EAGUL (RNAV)		4	KPHX	PHOENIX	AZ (US)
STAR	JESSE		3	KPHX	PHOENIX	AZ (US)
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: DP, STAR, MILITARY IAP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 14 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
UPDATED FIX USE.
UPDATED CONTROLLING OBSTACLE FOR HOLDING PAT 1; NO IMPACT ON MINIMUM HOLDING ALTITUDE.
DELETED OBSTACLE 3 AND 4 FROM HOLDING PATTERNS. ABOVE FL180.

DEVELOPED BY:	**DATE:** 05/09/2012	**OFFICE:** AJV-353	**NAME:** BEV L BORDY
APPROVED BY:	**DATE:**	**OFFICE:** AJV-353	**NAME:** LARRY STROUT
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: PHX APP CON
OTHER: PHX ATCT, ABQ FSS

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: ITUNE **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 351718.20N/1070601.53W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JOKLO **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 352141.93N/1071437.24W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	W		WP	291.51	111.51	L		8	14000	18000	11	17

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	AAO	352342.00N/1072801.00W	9366	6C

PRECIPITOUS TERRAIN ADDITIONS:

PAT	SPEED	ADDITION
1	230	274

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST.

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)		1	KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: LOWBO **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 352521.37N/1072137.15W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	W		WP	291.51	111.51	L		8	14000	20000	11	18

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	AAO	352342.00N/1072801.00W	9366	6C

PRECIPITOUS TERRAIN ADDITIONS:

PAT	SPEED	ADDITION
1	230	254

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)		1	KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: MUSCC **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 351357.61N/1070208.56W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: NODME **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 351043.64N/1064148.51W **TYPE:** WP, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	ALBUQUERQUE	ABQ	VORTAC	H	023.00	036.00	10.00	10.00		9000	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V611	1				(US)
IAP	ILS OR LOC RWY 3	1		KABQ	ALBUQUERQUE	NM (US)
IAP	RNAV (RNP) Y RWY 21			KABQ	ALBUQUERQUE	NM (US)
IAP	RNAV (RNP) Y RWY 26			KABQ	ALBUQUERQUE	NM (US)
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
ADDED WP TO FIX TYPE.
ADDED FAC 1 DIST FROM FAC (NM).
UPDATED FAC 1 MRA FROM 8000 TO 9000.
ADDED STAR TO REQUIRED CHARTING.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 03/12/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ ATCT
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: PASEO **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 351219.12N/1064737.27W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: ROSEI **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 360723.91N/1073509.05W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

REVIEWED & CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SDUNX **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 351354.37N/1065326.46W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: TANER **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 355205.77N/1072542.57W **TYPE:** WP, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	ALBUQUERQUE	ABQ	VORTAC	H	315.90	328.90	57.79	57.79		11000	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
ABQ	VORTAC	R-316	58	11000	45000

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	NW		WP	322.33	142.33	R		12	25000	28000	21	22

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J15	1				(US)
EN ROUTE	J76	1				(US)
EN ROUTE	V187	1				(US)
STAR	CURLY	1		KABQ	ALBUQUERQUE	NM (US)
STAR	LOWBO (RNAV)		1	KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
ADDED WP TO FIX TYPE.
ADDED PAT 1.
CHANGED FAC 1 MAG/TRUE BRG FROM 316/329 TO 315.90/328.90.
CHANGED FAC 1 DME FROM 58 TO 57.79.
ADDED DIST FROM FAC IN NM FOR FAC 1.
ADDED ESV INFORMATION.
ADDED LIMITED HOLDING NOTE.
ADDED PRECIPITOUS TERRAIN NOTE.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WSTRN **STATE:** NM **COUNTRY:** US

LATITUDE/LONGITUDE: 352632.71N/1074105.74W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	LOWBO (RNAV)			KABQ	ALBUQUERQUE	NM (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

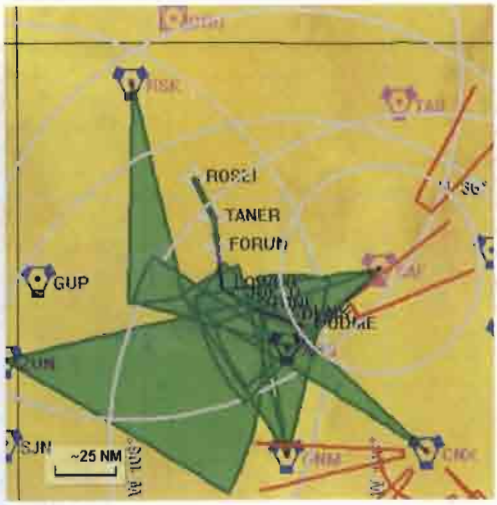
RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZAB
ATC FACILITY: ABQ APP CON
OTHER:



Name:	enanders
Project Name:	
Output File:	LOWBO STAR ROSEI NODME 20120419_1429
Procedure Name:	LOWBO
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	4/19/2012 2:29:05 PM
Input File:	KABQ LOWBO STAR ROSEI NODME 20120419_1423.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ **Please Check Flyability Results**
DME/DME	✔
Radars	✔
Comms	?
TERPS	?

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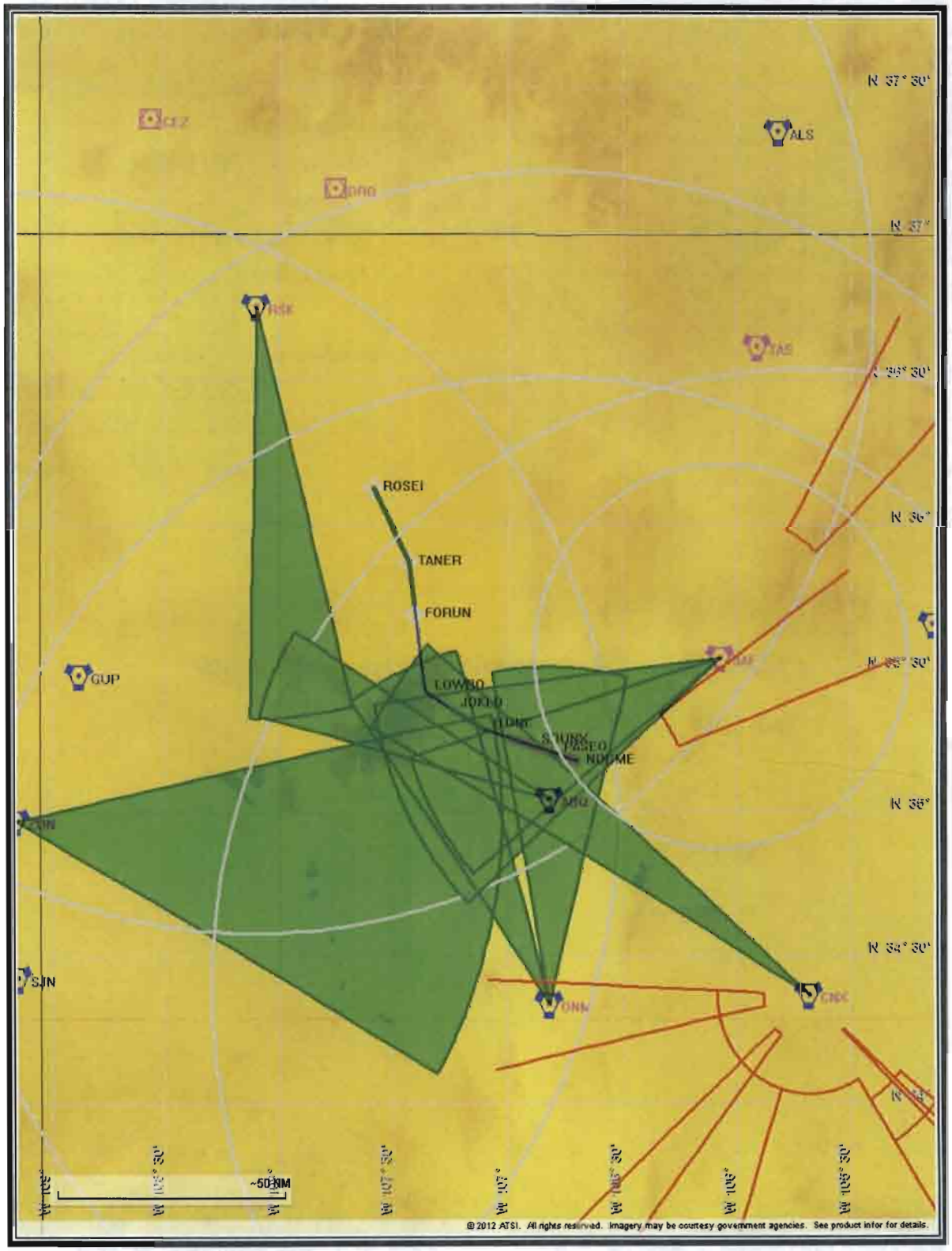
N 37° 30'
ALS
N 37°
HSK
TAS
N 36° 30'
ROSEI
N 36°
TANER
FORUN
GUP
LOWBO
JOXLO
NODME
N 35°
N 34° 30'
SJN
ONK
CNK
~50 NM
W 107° 30'
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W 100°
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
ROSEI	WP	N 36° 7' 23.91" W 107° 35' 9.05"	25000.0	Step	280.0	Fly By	TF
TANER	WP	N 35° 52' 5.77" W 107° 25' 42.57"	25000.0	Step	280.0	Fly By	TF
FORUN	WP	N 35° 41' 12.68" W 107° 24' 4.74"	20000.0	Step	270.0	Fly By	TF
LOWBO	WP	N 35° 25' 21.37" W 107° 21' 37.15"	14000.0	Step	210.0	Fly By	TF
JOKLO	WP	N 35° 21' 41.93" W 107° 14' 37.24"	14000.0	Step	250.0	Fly By	TF
ITUNE	WP	N 35° 17' 18.20" W 107° 6' 1.53"	10200.0	Step	180.0	Fly By	TF
SDUNX	WP	N 35° 13' 54.37" W 106° 53' 26.46"	8800.0	Step	180.0	Fly By	TF
PASEO	WP	N 35° 12' 19.12" W 106° 47' 37.27"	8600.0	Step	180.0	Fly By	TF
NODME	WP	N 35° 10' 43.64" W 106° 41' 48.51"	8300.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Aircraft ALTITUDE at Fly-By WP FORUN too high.

DME/DME

Return To Summary

Settings:

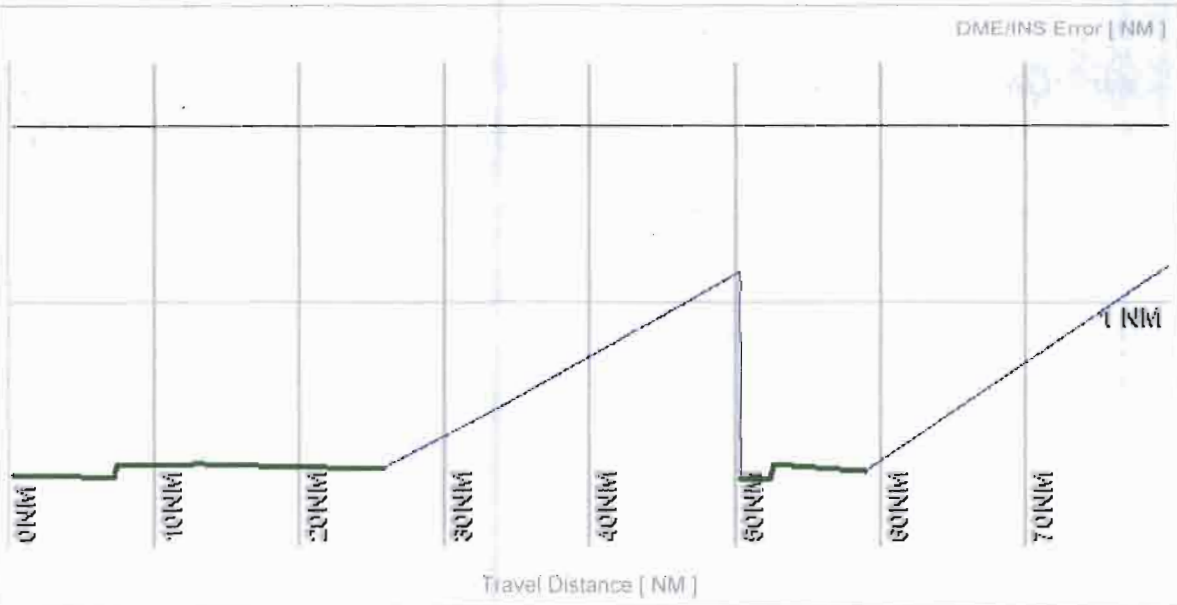
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
  Initial Drift: 0.558 NM
  INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 6

Maximum DME Error: 1.148 NM.

1 Critical DME was found.

Available DMEs: ZUN, ABQ, ONM, RSK, DVC, GUP, SJN, CNX, ACH, SAF



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H + ESV	User	NO	1.340	Enabled	16.3 %	18.4 %
2	GUP	N 35° 28' 33.60" W 108° 52' 21.40" E 14	H	Database	NO	1.334	Enabled	18.7 %	23.8 %
3	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H + ESV	User	NO	1.148	Enabled	6.1 %	8.4 %
4	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H + ESV	User	NO	1.148	Enabled	5.3 %	7.2 %
5	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H + ESV	User	NO	1.148	Enabled	14.8 %	17.4 %
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L + ESV	User	YES	**2.256**	Enabled	11.6 %	10.8 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	ABQ	GUP	RSK	ZUN	ONM	SJN
15.9	ABQ	GUP	RSK	ZUN	ONM	ACH
28.0	ABQ	ONM	RSK			
42.9	ABQ	ONM	SAF			
50.6	ABQ	ONM	SAF			
58.5	ABQ	ONM	SAF			
69.8	ABQ	ONM				
74.8	ABQ	ONM				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 35° 43' 28.69" W 107° 24' 24.90"	N 35° 21' 53.33" W 107° 14' 59.15"	24.5
	VOR: ABQ	Available from N 35° 31' 40.30" W 107° 22' 35.91" to N 35° 21' 53.33" W 107° 14' 59.15"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 35° 17' 18.20" W 107° 5' 57.51"	N 35° 10' 43.87" W 106° 41' 49.33"	20.8
	VOR: ABQ	Available from N 35° 17' 18.20" W 107° 5' 57.51" to N 35° 10' 43.87" W 106° 41' 49.33"	
	VOR: SAF	Available from N 35° 11' 49.36" W 106° 45' 48.52" to N 35° 10' 43.87" W 106° 41' 49.33"	
	VOR: OTO	Available from N 35° 11' 21.91" W 106° 44' 8.20" to N 35° 10' 43.87" W 106° 41' 49.33"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H	6550.0	113.40	ZUN	Used
	Restriction:	Bearing [True]: 319.0° to 349.0° Bearing [Mag]: 305.0° to 335.0°		Distance: Beyond 15.0 NM Altitude: Below 99999.0 Ft.			
	ESV:	Bearing [True]: 77.0° to 119.0° Bearing [Mag]: 63.0° to 105.0°		Arc Distance: Out to 105.0 NM Altitude: 13000.0 to 23000.0 Ft.			
2	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H	5748.5	113.20	ABQ	Used
	Restriction:	Bearing [True]: 53.0° to 68.0° Bearing [Mag]: 40.0° to 55.0°		Distance: Beyond 30.0 NM Altitude: Below 15000.0 Ft.			
	ESV:	Bearing [True]: 286.0° to 303.0° Bearing [Mag]: 273.0° to 290.0°		Arc Distance: Out to 65.0 NM Altitude: 12500.0 to 18000.0 Ft.			

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
3	CNX	N 34° 22' 1.26" W 105° 40' 40.82" E 13	H	6412.0	115.50	CNX	Not Used
	Restriction:	Bearing [True]: 128.0° to 132.0° Bearing [Mag]: 115.0° to 119.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 128.0° to 148.0° Bearing [Mag]: 115.0° to 135.0°			Distance: Beyond 35.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 132.0° to 134.0° Bearing [Mag]: 119.0° to 121.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 134.0° to 148.0° Bearing [Mag]: 121.0° to 135.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 148.0° to 198.0° Bearing [Mag]: 135.0° to 185.0°			Distance: Beyond 20.0 NM Altitude: Below 12000.0 Ft.		
	Restriction:	Bearing [True]: 198.0° to 218.0° Bearing [Mag]: 185.0° to 205.0°			Distance: Beyond 20.0 NM Altitude: Below 13000.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 228.0° Bearing [Mag]: 205.0° to 215.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 273.0° Bearing [Mag]: 205.0° to 260.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 228.0° to 258.0° Bearing [Mag]: 215.0° to 245.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 258.0° to 273.0° Bearing [Mag]: 245.0° to 260.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	ESV:	Bearing [True]: 301.0° to 312.0° Bearing [Mag]: 288.0° to 299.0°			Arc Distance: Out to 110.0 NM Altitude: 14500.0 to 18000.0 Ft.		
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H	4910.0	116.80	ONM	Used
	ESV:	Bearing [True]: 326.0° to 345.0° Bearing [Mag]: 313.0° to 332.0°			Arc Distance: Out to 76.0 NM Altitude: 12000.0 to 18000.0 Ft.		
	ESV:	Bearing [True]: 350.0° to 14.0° Bearing [Mag]: 337.0° to 1.0°			Arc Distance: Out to 70.0 NM Altitude: 7000.0 to 12000.0 Ft.		
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H	5823.1	115.30	RSK	Used
	ESV:	Bearing [True]: 166.0° to 181.0° Bearing [Mag]: 152.0° to 167.0°			Arc Distance: Out to 85.0 NM Altitude: 12500.0 to 23000.0 Ft.		

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

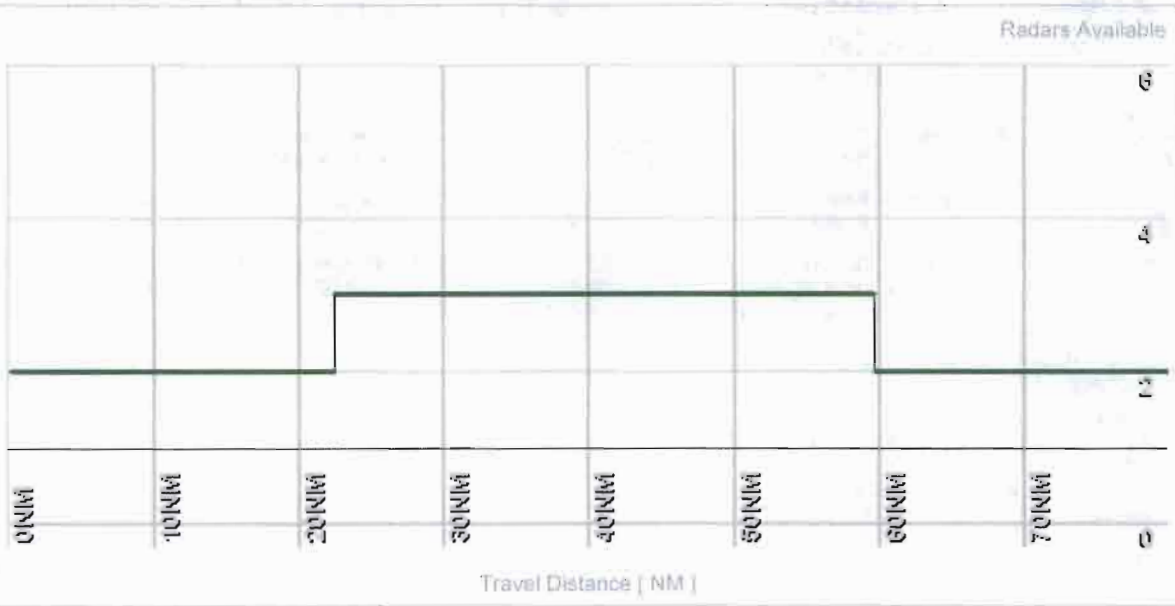
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L	6263.2	110.60	SAF	Used

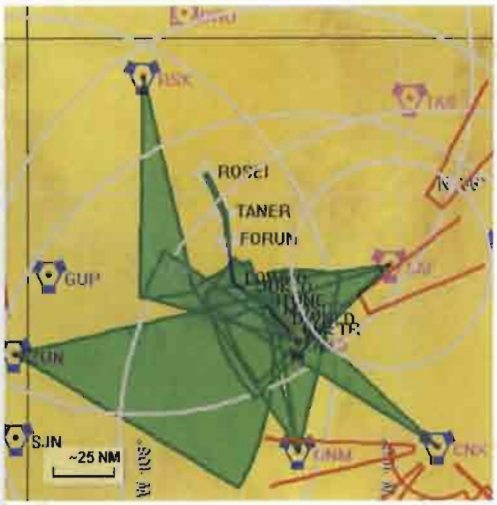
Restriction:	Bearing [True]: 28.0° to 43.0° Bearing [Mag]: 15.0° to 30.0°	Distance: Beyond 30.0 NM Altitude: Below 14600.0 Ft.
ESV:	Bearing [True]: 227.0° to 263.0° Bearing [Mag]: 214.0° to 250.0°	Arc Distance: Out to 75.0 NM Altitude: 9500.0 to 18000.0 Ft.
ESV:	Bearing [True]: 230.0° to 253.0° Bearing [Mag]: 217.0° to 240.0°	Arc Distance: Out to 70.0 NM Altitude: 9300.0 to 15000.0 Ft.

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Output File:	LOWBO STAR ROSEI CMSTR 20120419_1422
Procedure Name:	LOWBO
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	4/19/2012 2:22:33 PM
Input File:	KABQ LOWBO STAR ROSEI CMSTR 20120419_1417.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ **Please Check Flyability Results**
DME/DME	✔
Radars	✔
Comms	?
TERPS	?

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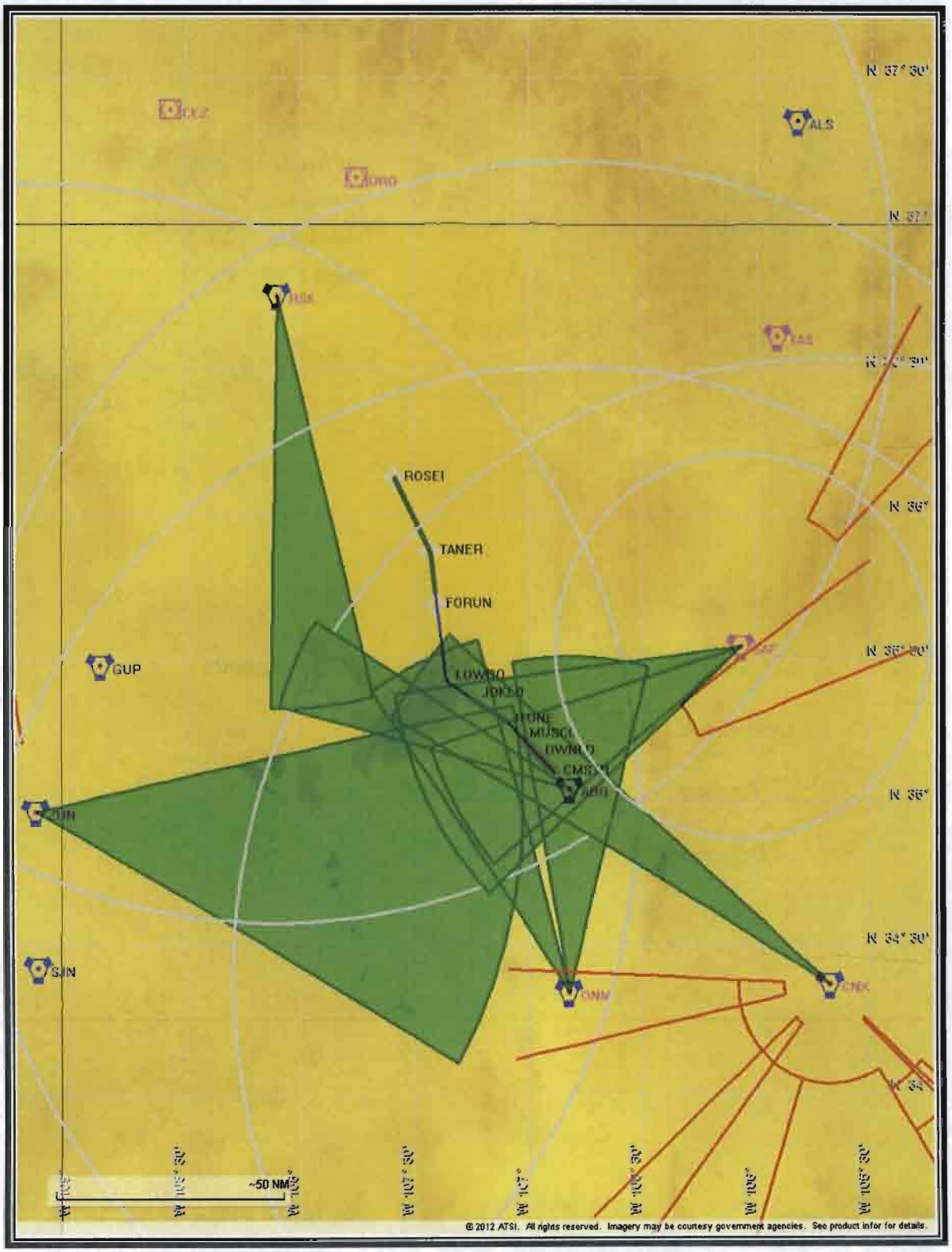
N 37° 30'
ALS
N 37°
ROSEI
TANER
FORUN
N 36°
GUP
LOWBO
JOKLO
JTURE
MUSCO
DWNLO
CMSTR
N 36°
N 34° 30'
SJN
CNK
N 34°
~50 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
ROSEI	WP	N 36° 7' 23.91" W 107° 35' 9.05"	25000.0	Step	280.0	Fly By	TF
TANER	WP	N 35° 52' 5.77" W 107° 25' 42.57"	25000.0	Step	280.0	Fly By	TF
FORUN	WP	N 35° 41' 12.68" W 107° 24' 4.74"	20000.0	Step	270.0	Fly By	TF
LOWBO	WP	N 35° 25' 21.37" W 107° 21' 37.15"	14000.0	Step	210.0	Fly By	TF
JOKLO	WP	N 35° 21' 41.93" W 107° 14' 37.24"	14000.0	Step	250.0	Fly By	TF
ITUNE	WP	N 35° 17' 18.20" W 107° 6' 1.53"	10200.0	Step	180.0	Fly By	TF
MUSCC	WP	N 35° 13' 57.61" W 107° 2' 8.56"	8900.0	Step	180.0	Fly By	TF
DWNLD	WP	N 35° 10' 26.96" W 106° 58' 13.21"	8600.0	Step	180.0	Fly By	TF
CMSTR	WP	N 35° 6' 14.97" W 106° 53' 13.01"	8400.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Aircraft ALTITUDE at Fly-By WP FORUN too high.

DME/DME

Return To Summary

Settings:

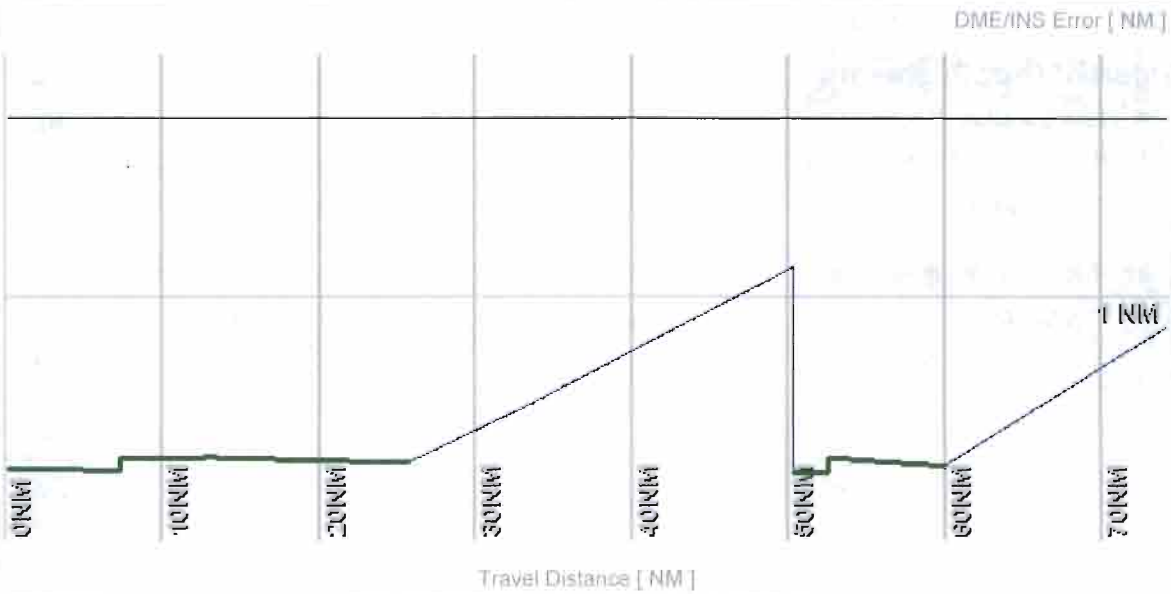
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 6

Maximum DME Error: 1.122 NM.

1 Critical DME was found.

Available DMEs: ZUN, ABQ, ONM, RSK, DVC, GUP, SJN, CNX, ACH, SAF



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H + ESV	User	NO	1.122	Enabled	19.6 %	21.1 %
2	GUP	N 35° 28' 33.60" W 108° 52' 21.40" E 14	H	Database	NO	1.334	Enabled	20.5 %	25.6 %
3	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H + ESV	User	NO	1.122	Enabled	6.7 %	9.0 %
4	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H + ESV	User	NO	1.122	Enabled	5.8 %	7.8 %
5	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H + ESV	User	NO	1.103	Enabled	16.2 %	18.7 %
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L + ESV	User	YES	**2.029**	Enabled	14.4 %	13.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	ABQ	GUP	RSK	ZUN	ONM	SJN
15.9	ABQ	GUP	RSK	ZUN	ONM	ACH
28.0	ABQ	ONM	RSK			
42.9	ABQ	ONM	SAF			
50.6	ABQ	ONM	SAF			
58.5	ABQ	SAF				
63.5	ABQ					
68.2	ABQ	ONM				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 35° 43' 28.69" W 107° 24' 24.90"	N 35° 21' 53.33" W 107° 14' 59.15"	24.5
	VOR: ABQ	Available from N 35° 31' 40.30" W 107° 22' 35.91" to N 35° 21' 53.33" W 107° 14' 59.15"	
2	N 35° 16' 32.55" W 107° 5' 8.21"	N 35° 6' 15.59" W 106° 53' 13.75"	14.2
	VOR: ABQ	Available from N 35° 16' 32.55" W 107° 5' 8.21" to N 35° 6' 15.59" W 106° 53' 13.75"	

DME/DME (Continued.)

Return To Summary

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H	6550.0	113.40	ZUN	Used
	Restriction:	Bearing [True]: 319.0° to 349.0° Bearing [Mag]: 305.0° to 335.0°			Distance: Beyond 15.0 NM Altitude: Below 99999.0 Ft.		
	ESV:	Bearing [True]: 77.0° to 119.0° Bearing [Mag]: 63.0° to 105.0°			Arc Distance: Out to 105.0 NM Altitude: 13000.0 to 23000.0 Ft.		
2	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H	5748.5	113.20	ABQ	Used
	Restriction:	Bearing [True]: 53.0° to 68.0° Bearing [Mag]: 40.0° to 55.0°			Distance: Beyond 30.0 NM Altitude: Below 15000.0 Ft.		
	ESV:	Bearing [True]: 286.0° to 303.0° Bearing [Mag]: 273.0° to 290.0°			Arc Distance: Out to 65.0 NM Altitude: 12500.0 to 18000.0 Ft.		
3	CNX	N 34° 22' 1.26" W 105° 40' 40.82" E 13	H	6412.0	115.50	CNX	Not Used
	Restriction:	Bearing [True]: 128.0° to 132.0° Bearing [Mag]: 115.0° to 119.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 128.0° to 148.0° Bearing [Mag]: 115.0° to 135.0°			Distance: Beyond 35.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 132.0° to 134.0° Bearing [Mag]: 119.0° to 121.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 134.0° to 148.0° Bearing [Mag]: 121.0° to 135.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 148.0° to 198.0° Bearing [Mag]: 135.0° to 185.0°			Distance: Beyond 20.0 NM Altitude: Below 12000.0 Ft.		
	Restriction:	Bearing [True]: 198.0° to 218.0° Bearing [Mag]: 185.0° to 205.0°			Distance: Beyond 20.0 NM Altitude: Below 13000.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 228.0° Bearing [Mag]: 205.0° to 215.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 273.0° Bearing [Mag]: 205.0° to 260.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 228.0° to 258.0° Bearing [Mag]: 215.0° to 245.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 258.0° to 273.0° Bearing [Mag]: 245.0° to 260.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	ESV:	Bearing [True]: 301.0° to 312.0° Bearing [Mag]: 288.0° to 299.0°			Arc Distance: Out to 110.0 NM Altitude: 14500.0 to 18000.0 Ft.		

DME/DME (Continued.)

Return To Summary

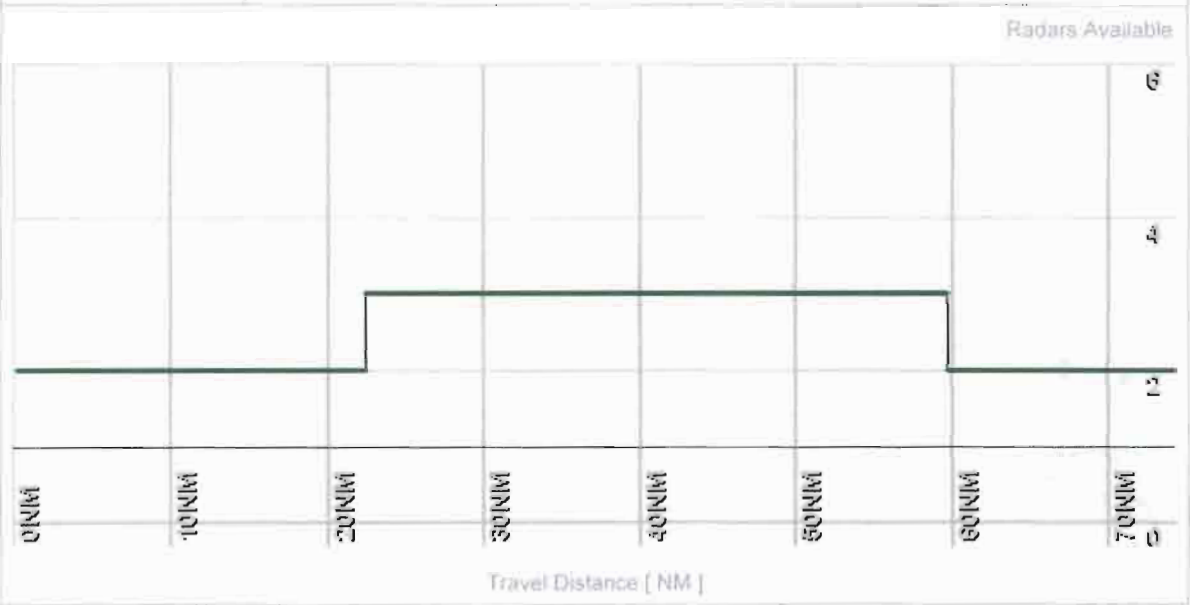
User DMEs (Continued.)

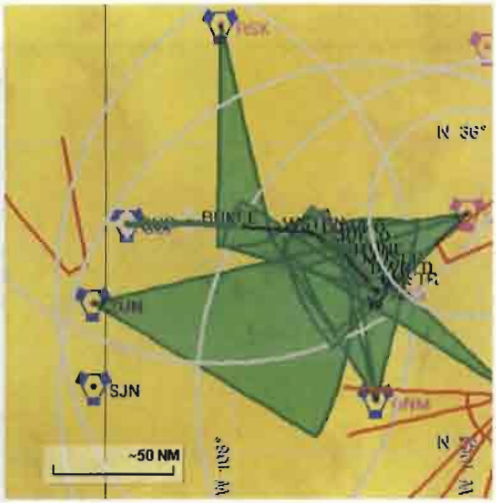
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H	4910.0	116.80	ONM	Used
		ESV:	Bearing [True]: 326.0° to 345.0° Bearing [Mag]: 313.0° to 332.0°		Arc Distance: Out to 76.0 NM Altitude: 12000.0 to 18000.0 Ft.		
		ESV:	Bearing [True]: 350.0° to 14.0° Bearing [Mag]: 337.0° to 1.0°		Arc Distance: Out to 70.0 NM Altitude: 7000.0 to 12000.0 Ft.		
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H	5823.1	115.30	RSK	Used
		ESV:	Bearing [True]: 166.0° to 181.0° Bearing [Mag]: 152.0° to 167.0°		Arc Distance: Out to 85.0 NM Altitude: 12500.0 to 23000.0 Ft.		
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L	6263.2	110.60	SAF	Used
		Restriction:	Bearing [True]: 28.0° to 43.0° Bearing [Mag]: 15.0° to 30.0°		Distance: Beyond 30.0 NM Altitude: Below 14600.0 Ft.		
		ESV:	Bearing [True]: 227.0° to 263.0° Bearing [Mag]: 214.0° to 250.0°		Arc Distance: Out to 75.0 NM Altitude: 9500.0 to 18000.0 Ft.		
		ESV:	Bearing [True]: 230.0° to 253.0° Bearing [Mag]: 217.0° to 240.0°		Arc Distance: Out to 70.0 NM Altitude: 9300.0 to 15000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Output File:	LOWBO STAR GUP CMSTR 20120419_1344
Procedure Name:	LOWBO
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	4/19/2012 1:44:32 PM
Input File:	KABQ LOWBO STAR GUP CMSTR 20120419_1339.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	?
TERPS	?

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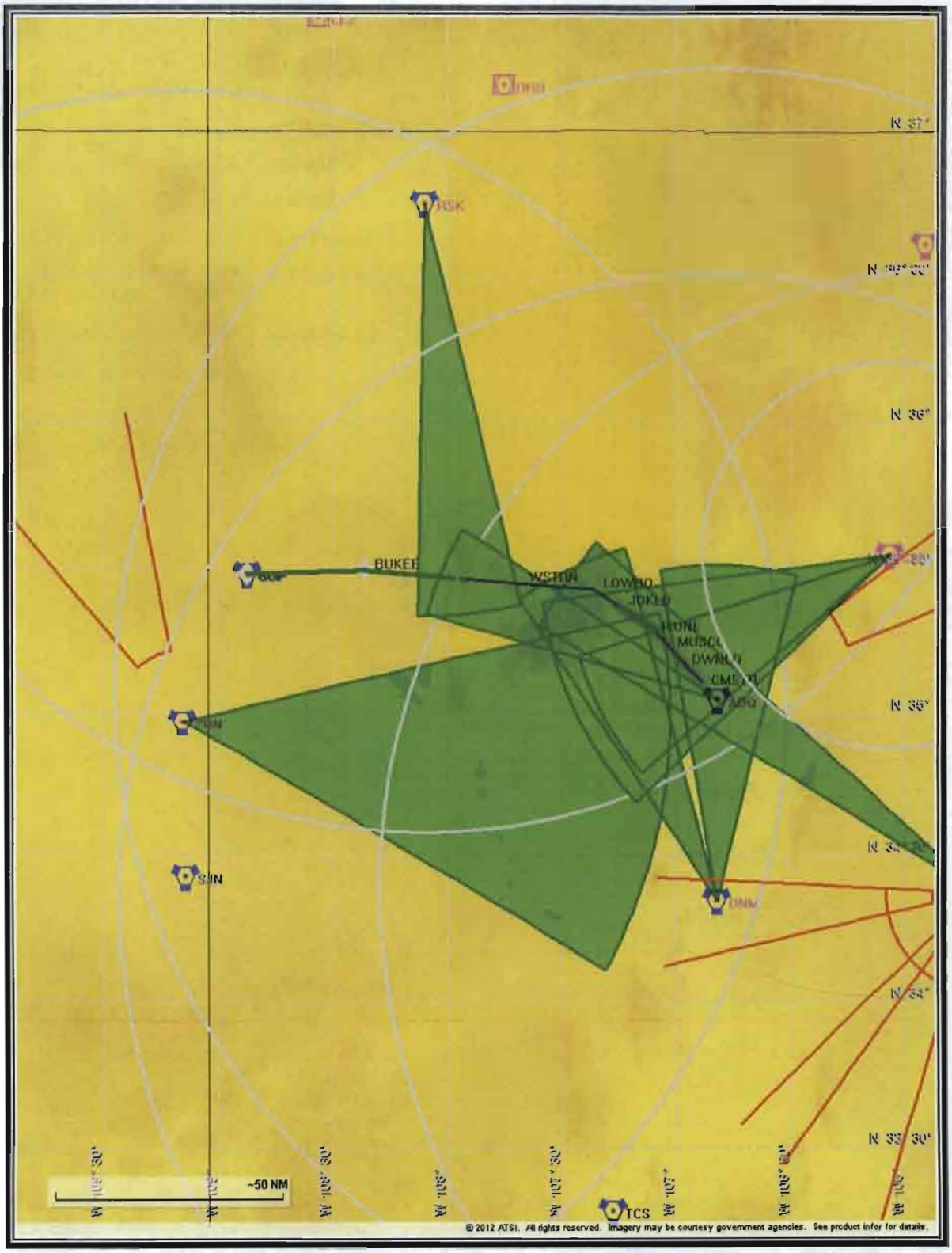
N 37°
N 36°
N 35°
N 34°
N 33°
N 32° 30'
BUKEE
WSTIN
LOWBO
~50 NM
TCS
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
GUP	WP	N 35° 28' 33.60" W 108° 52' 21.40"	25000.0	Step	280.0	Fly By	TF
BUKEE	WP	N 35° 29' 13.82" W 108° 21' 32.39"	25000.0	Step	280.0	Fly By	TF
WSTRN	WP	N 35° 26' 32.71" W 107° 41' 5.74"	20000.0	Step	270.0	Fly By	TF
LOWBO	WP	N 35° 25' 21.37" W 107° 21' 37.15"	14000.0	Step	210.0	Fly By	TF
JOKLO	WP	N 35° 21' 41.93" W 107° 14' 37.24"	14000.0	Step	250.0	Fly By	TF
ITUNE	WP	N 35° 17' 18.20" W 107° 6' 1.53"	10200.0	Step	180.0	Fly By	TF
MUSCC	WP	N 35° 13' 57.61" W 107° 2' 8.56"	8900.0	Step	180.0	Fly By	TF
DWNLD	WP	N 35° 10' 26.96" W 106° 58' 13.21"	8600.0	Step	180.0	Fly By	TF
CMSTR	WP	N 35° 6' 14.97" W 106° 53' 13.01"	8400.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

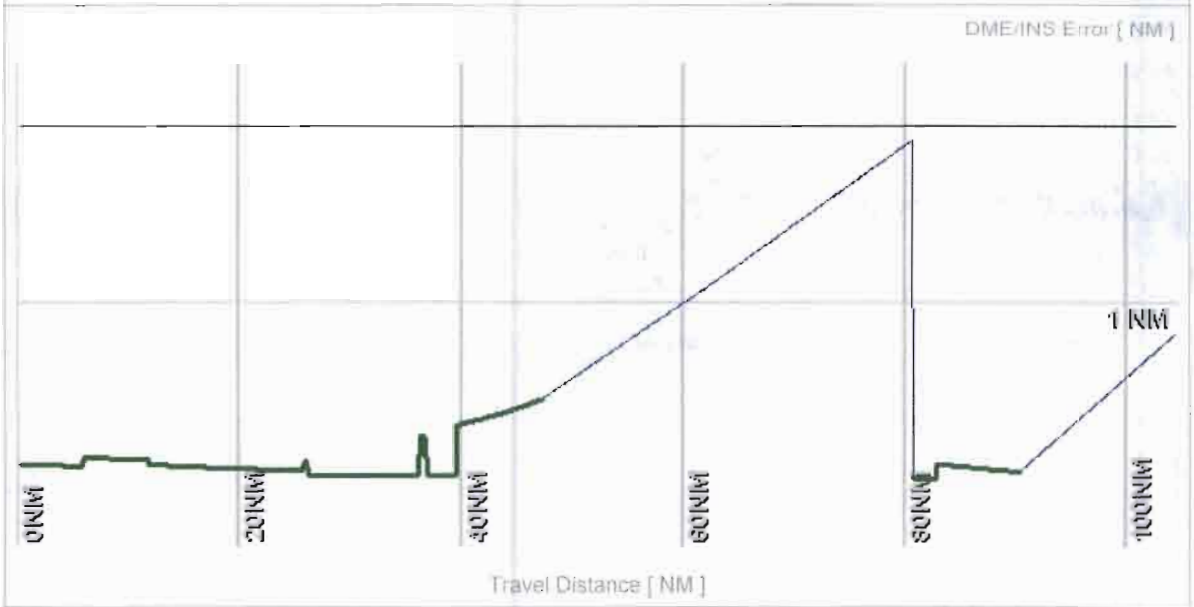
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 7

Maximum DME Error: 1.679 NM.

2 Critical DMEs were found.

Available DMEs: ZUN, ABQ, RSK, INW, SJN, TBC, ONM, GUP, SAF



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H + ESV	User	NO	1.679	Enabled	22.9 %	26.2 %
2	SJN	N 34° 25' 26.55" W 109° 8' 36.71" E 12	H	Database	NO	1.679	Enabled	4.5 %	5.8 %
3	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H + ESV	User	NO	1.679	Enabled	4.3 %	5.7 %
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H + ESV	User	NO	1.604	Enabled	14.6 %	15.9 %
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H + ESV	User	YES	**1.750**	Enabled	29.1 %	33.0 %
6	GUP	N 35° 28' 33.60" W 108° 52' 21.40" E 14	H	Database	NO	1.679	Enabled	12.2 %	12.9 %
7	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L + ESV	User	YES	**2.583**	Enabled	10.5 %	9.3 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	ABQ	SJN	ONM	ZUN	INW	RSK
10.1	ABQ	RSK	ONM	ZUN	GUP	SJN
24.6	ABQ	RSK	ONM	SJN	GUP	ZUN
58.3	ABQ	ONM				
73.5	ABQ	ONM	SAF			
81.0	ABQ	ONM	SAF			
88.9	ABQ	SAF				
93.9	ABQ					
98.6	ABQ	ONM				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 35° 27' 28.29" W 107° 54' 37.50"	N 35° 21' 52.12" W 107° 14' 56.66"	33.5
	VOR: ABQ	Available from N 35° 25' 47.99" W 107° 28' 48.21" to N 35° 21' 52.12" W 107° 14' 56.66"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 35° 16' 28.81" W 107° 5' 3.88"	N 35° 6' 16.73" W 106° 53' 15.12"	14.1
	VOR: ABQ	Available from N 35° 16' 28.81" W 107° 5' 3.88" to N 35° 6' 16.73" W 106° 53' 15.12"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H	6550.0	113.40	ZUN	Used
	Restriction:	Bearing [True]: 319.0° to 349.0° Bearing [Mag]: 305.0° to 335.0°			Distance: Beyond 15.0 NM Altitude: Below 99999.0 Ft.		
	ESV:	Bearing [True]: 77.0° to 119.0° Bearing [Mag]: 63.0° to 105.0°			Arc Distance: Out to 105.0 NM Altitude: 13000.0 to 23000.0 Ft.		
2	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H	5748.5	113.20	ABQ	Used
	Restriction:	Bearing [True]: 53.0° to 68.0° Bearing [Mag]: 40.0° to 55.0°			Distance: Beyond 30.0 NM Altitude: Below 15000.0 Ft.		
	ESV:	Bearing [True]: 286.0° to 303.0° Bearing [Mag]: 273.0° to 290.0°			Arc Distance: Out to 65.0 NM Altitude: 12500.0 to 18000.0 Ft.		
3	CNX	N 34° 22' 1.26" W 105° 40' 40.82" E 13	H	6412.0	115.50	CNX	Not Used
	Restriction:	Bearing [True]: 128.0° to 132.0° Bearing [Mag]: 115.0° to 119.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 128.0° to 148.0° Bearing [Mag]: 115.0° to 135.0°			Distance: Beyond 35.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 132.0° to 134.0° Bearing [Mag]: 119.0° to 121.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 134.0° to 148.0° Bearing [Mag]: 121.0° to 135.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 148.0° to 198.0° Bearing [Mag]: 135.0° to 185.0°			Distance: Beyond 20.0 NM Altitude: Below 12000.0 Ft.		
	Restriction:	Bearing [True]: 198.0° to 218.0° Bearing [Mag]: 185.0° to 205.0°			Distance: Beyond 20.0 NM Altitude: Below 13000.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 228.0° Bearing [Mag]: 205.0° to 215.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 273.0° Bearing [Mag]: 205.0° to 260.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 228.0° to 258.0° Bearing [Mag]: 215.0° to 245.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 258.0° to 273.0° Bearing [Mag]: 245.0° to 260.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	ESV:	Bearing [True]: 301.0° to 312.0° Bearing [Mag]: 288.0° to 299.0°			Arc Distance: Out to 110.0 NM Altitude: 14500.0 to 18000.0 Ft.		

DME/DME (Continued.)

Return To Summary

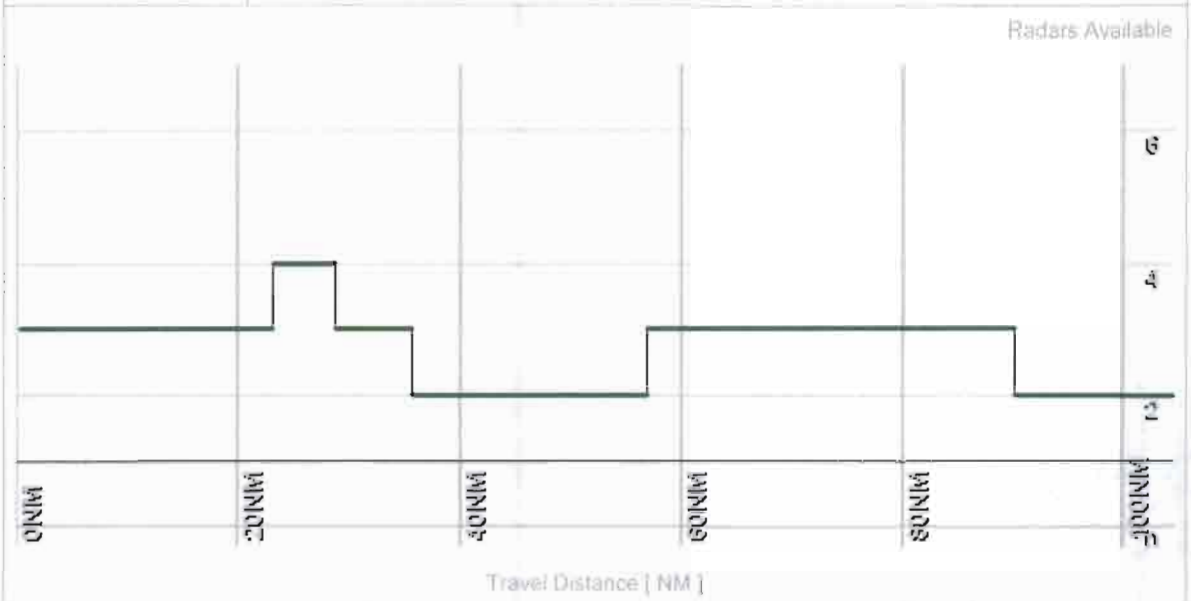
User DMEs (Continued.)

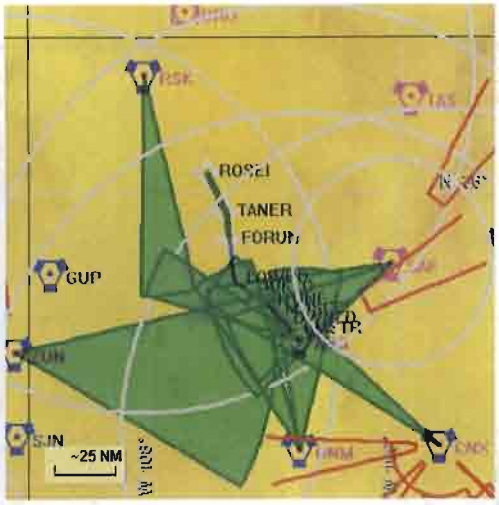
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H	4910.0	116.80	ONM	Used
		ESV:	Bearing [True]: 326.0° to 345.0° Bearing [Mag]: 313.0° to 332.0°		Arc Distance: Out to 76.0 NM Altitude: 12000.0 to 18000.0 Ft.		
		ESV:	Bearing [True]: 350.0° to 14.0° Bearing [Mag]: 337.0° to 1.0°		Arc Distance: Out to 70.0 NM Altitude: 7000.0 to 12000.0 Ft.		
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H	5823.1	115.30	RSK	Used
		ESV:	Bearing [True]: 166.0° to 181.0° Bearing [Mag]: 152.0° to 167.0°		Arc Distance: Out to 85.0 NM Altitude: 12500.0 to 23000.0 Ft.		
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L	6263.2	110.60	SAF	Used
		Restriction:	Bearing [True]: 28.0° to 43.0° Bearing [Mag]: 15.0° to 30.0°		Distance: Beyond 30.0 NM Altitude: Below 14600.0 Ft.		
		ESV:	Bearing [True]: 227.0° to 263.0° Bearing [Mag]: 214.0° to 250.0°		Arc Distance: Out to 75.0 NM Altitude: 9500.0 to 18000.0 Ft.		
		ESV:	Bearing [True]: 230.0° to 253.0° Bearing [Mag]: 217.0° to 240.0°		Arc Distance: Out to 70.0 NM Altitude: 9300.0 to 15000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Output File:	LOWBO STAR ROSEI CMSTR 20120419_1415
Procedure Name:	LOWBO
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	4/19/2012 2:15:47 PM
Input File:	KABQ LOWBO STAR ROSEI CMSTR 20120419_1410.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ **Please Check Flyability Results**
DME/DME	✔
Radars	✔
Comms	?
TERPS	?

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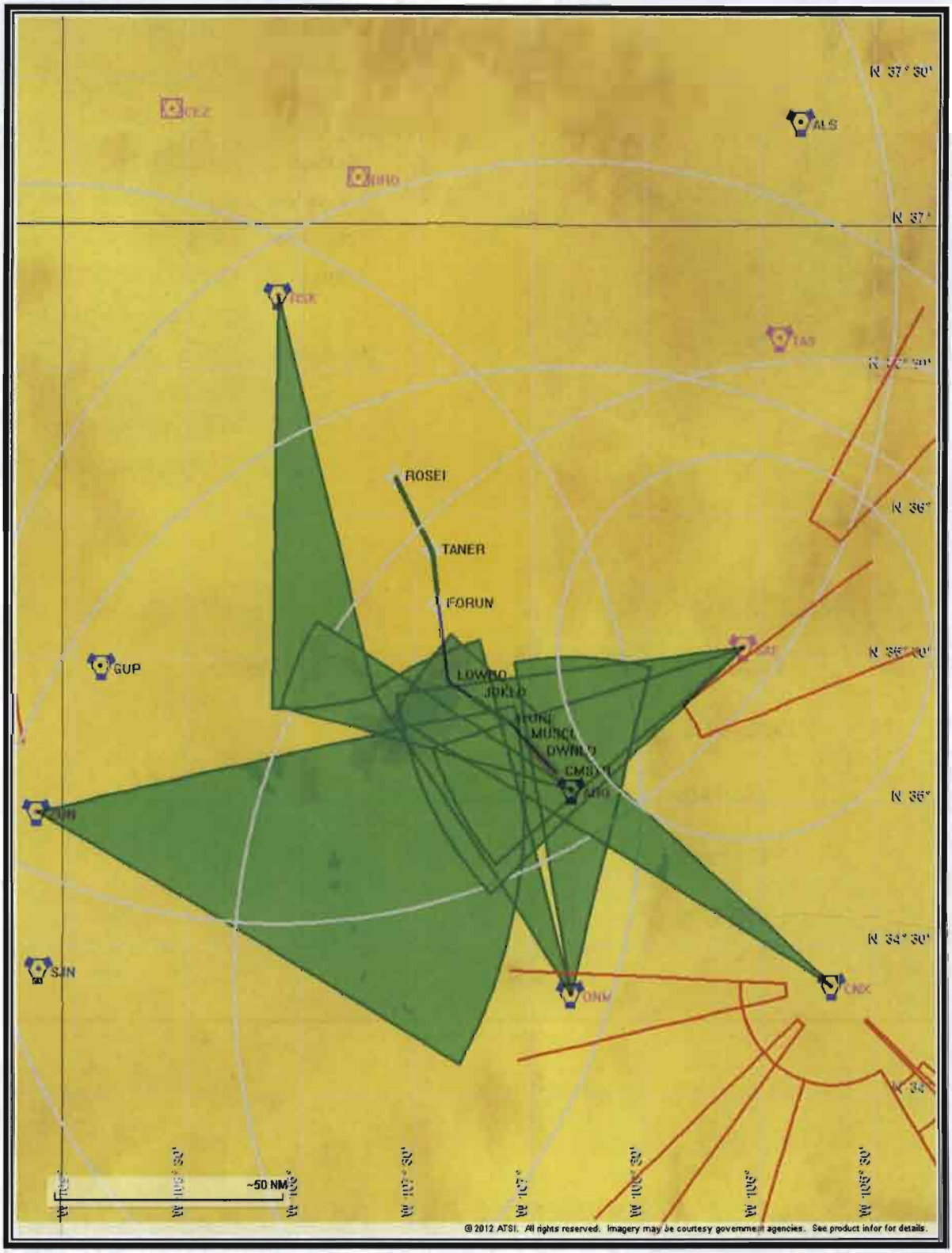
N 37° 30'
ALS
N 37°
TGK
TAS
ROSEI
TANER
FORUN
N 36°
GUP
LOWBO
JOKLO
MUNCI
DWNLO
N 36°
N 34° 30'
SJN
ONX
~50 NM
W 106° 30'
W 106°
W 105° 30'
W 105°
W 104° 30'
W 104°
W 103° 30'
W 103°
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
ROSEI	WP	N 36° 7' 23.91" W 107° 35' 9.05"	25000.0	Step	280.0	Fly By	TF
TANER	WP	N 35° 52' 5.77" W 107° 25' 42.57"	25000.0	Step	280.0	Fly By	TF
FORUN	WP	N 35° 41' 12.68" W 107° 24' 4.74"	20000.0	Step	270.0	Fly By	TF
LOWBO	WP	N 35° 25' 21.37" W 107° 21' 37.15"	14000.0	Step	210.0	Fly By	TF
JOKLO	WP	N 35° 21' 41.93" W 107° 14' 37.24"	14000.0	Step	250.0	Fly By	TF
ITUNE	WP	N 35° 17' 18.20" W 107° 6' 1.53"	10200.0	Step	180.0	Fly By	TF
MUSCC	WP	N 35° 13' 57.61" W 107° 2' 8.56"	8900.0	Step	180.0	Fly By	TF
DWNLD	WP	N 35° 10' 26.96" W 106° 58' 13.21"	8600.0	Step	180.0	Fly By	TF
CMSTR	WP	N 35° 6' 14.97" W 106° 53' 13.01"	8400.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Aircraft ALTITUDE at Fly-By WP FORUN too high.

DME/DME

Return To Summary

Settings:

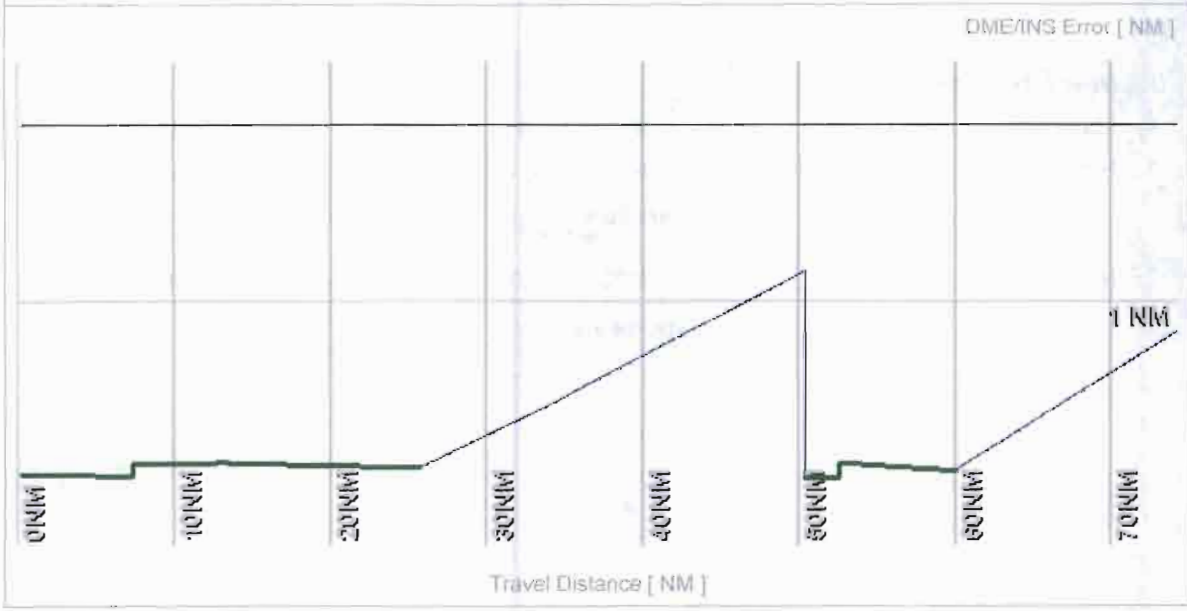
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 6

Maximum DME Error: 1.122 NM.

1 Critical DME was found.

Available DMEs: ZUN, ABQ, ONM, RSK, DVC, GUP, SJN, CNX, ACH, SAF



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H + ESV	User	NO	1.122	Enabled	19.6 %	21.1 %
2	GUP	N 35° 28' 33.60" W 108° 52' 21.40" E 14	H	Database	NO	1.334	Enabled	20.5 %	25.6 %
3	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H + ESV	User	NO	1.122	Enabled	6.7 %	9.0 %
4	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H + ESV	User	NO	1.122	Enabled	5.8 %	7.8 %
5	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H + ESV	User	NO	1.103	Enabled	16.2 %	18.7 %
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L + ESV	User	YES	**2.029**	Enabled	14.4 %	13.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	ABQ	GUP	RSK	ZUN	ONM	SJN
15.9	ABQ	GUP	RSK	ZUN	ONM	ACH
28.0	ABQ	ONM	RSK			
42.9	ABQ	ONM	SAF			
50.6	ABQ	ONM	SAF			
58.5	ABQ	SAF				
63.5	ABQ					
68.2	ABQ	ONM				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 35° 43' 28.69" W 107° 24' 24.90"	N 35° 21' 53.33" W 107° 14' 59.15"	24.5
	VOR: ABQ	Available from N 35° 31' 40.30" W 107° 22' 35.91" to N 35° 21' 53.33" W 107° 14' 59.15"	
2	N 35° 16' 32.55" W 107° 5' 8.21"	N 35° 6' 15.59" W 106° 53' 13.75"	14.2
	VOR: ABQ	Available from N 35° 16' 32.55" W 107° 5' 8.21" to N 35° 6' 15.59" W 106° 53' 13.75"	

DME/DME (Continued.)

Return To Summary

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H	6550.0	113.40	ZUN	Used
	Restriction:	Bearing [True]: 319.0° to 349.0° Bearing [Mag]: 305.0° to 335.0°			Distance: Beyond 15.0 NM Altitude: Below 99999.0 Ft.		
	ESV:	Bearing [True]: 77.0° to 119.0° Bearing [Mag]: 63.0° to 105.0°			Arc Distance: Out to 105.0 NM Altitude: 13000.0 to 23000.0 Ft.		
2	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H	5748.5	113.20	ABQ	Used
	Restriction:	Bearing [True]: 53.0° to 68.0° Bearing [Mag]: 40.0° to 55.0°			Distance: Beyond 30.0 NM Altitude: Below 15000.0 Ft.		
	ESV:	Bearing [True]: 286.0° to 303.0° Bearing [Mag]: 273.0° to 290.0°			Arc Distance: Out to 65.0 NM Altitude: 12500.0 to 18000.0 Ft.		
3	CNX	N 34° 22' 1.26" W 105° 40' 40.82" E 13	H	6412.0	115.50	CNX	Not Used
	Restriction:	Bearing [True]: 128.0° to 132.0° Bearing [Mag]: 115.0° to 119.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 128.0° to 148.0° Bearing [Mag]: 115.0° to 135.0°			Distance: Beyond 35.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 132.0° to 134.0° Bearing [Mag]: 119.0° to 121.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 134.0° to 148.0° Bearing [Mag]: 121.0° to 135.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 148.0° to 198.0° Bearing [Mag]: 135.0° to 185.0°			Distance: Beyond 20.0 NM Altitude: Below 12000.0 Ft.		
	Restriction:	Bearing [True]: 198.0° to 218.0° Bearing [Mag]: 185.0° to 205.0°			Distance: Beyond 20.0 NM Altitude: Below 13000.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 228.0° Bearing [Mag]: 205.0° to 215.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 273.0° Bearing [Mag]: 205.0° to 260.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 228.0° to 258.0° Bearing [Mag]: 215.0° to 245.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 258.0° to 273.0° Bearing [Mag]: 245.0° to 260.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	ESV:	Bearing [True]: 301.0° to 312.0° Bearing [Mag]: 288.0° to 299.0°			Arc Distance: Out to 110.0 NM Altitude: 14500.0 to 18000.0 Ft.		

DME/DME (Continued.)

Return To Summary

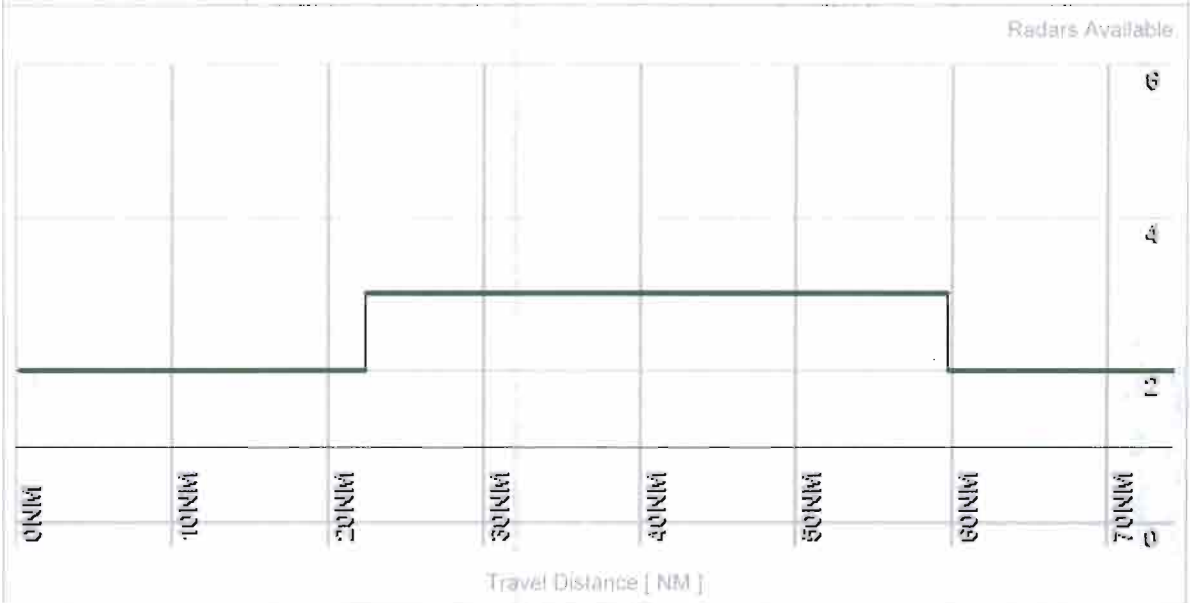
User DMEs (Continued.)

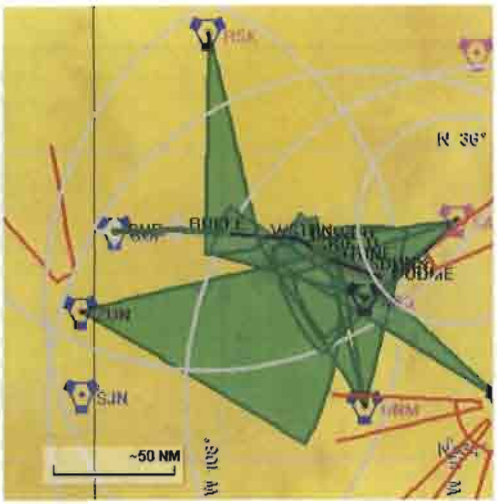
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H	4910.0	116.80	ONM	Used
		ESV:	Bearing [True]: 326.0° to 345.0° Bearing [Mag]: 313.0° to 332.0°		Arc Distance: Out to 76.0 NM Altitude: 12000.0 to 18000.0 Ft.		
		ESV:	Bearing [True]: 350.0° to 14.0° Bearing [Mag]: 337.0° to 1.0°		Arc Distance: Out to 70.0 NM Altitude: 7000.0 to 12000.0 Ft.		
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H	5823.1	115.30	RSK	Used
		ESV:	Bearing [True]: 166.0° to 181.0° Bearing [Mag]: 152.0° to 167.0°		Arc Distance: Out to 85.0 NM Altitude: 12500.0 to 23000.0 Ft.		
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L	6263.2	110.60	SAF	Used
		Restriction:	Bearing [True]: 28.0° to 43.0° Bearing [Mag]: 15.0° to 30.0°		Distance: Beyond 30.0 NM Altitude: Below 14600.0 Ft.		
		ESV:	Bearing [True]: 227.0° to 263.0° Bearing [Mag]: 214.0° to 250.0°		Arc Distance: Out to 75.0 NM Altitude: 9500.0 to 18000.0 Ft.		
		ESV:	Bearing [True]: 230.0° to 253.0° Bearing [Mag]: 217.0° to 240.0°		Arc Distance: Out to 70.0 NM Altitude: 9300.0 to 15000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Output File:	LOWBO STAR GUP NODME 20120419_1351
Procedure Name:	LOWBO
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	4/19/2012 1:51:08 PM
Input File:	KABQ LOWBO STAR GUP NODME 20120419_1345.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	?
TERPS	?

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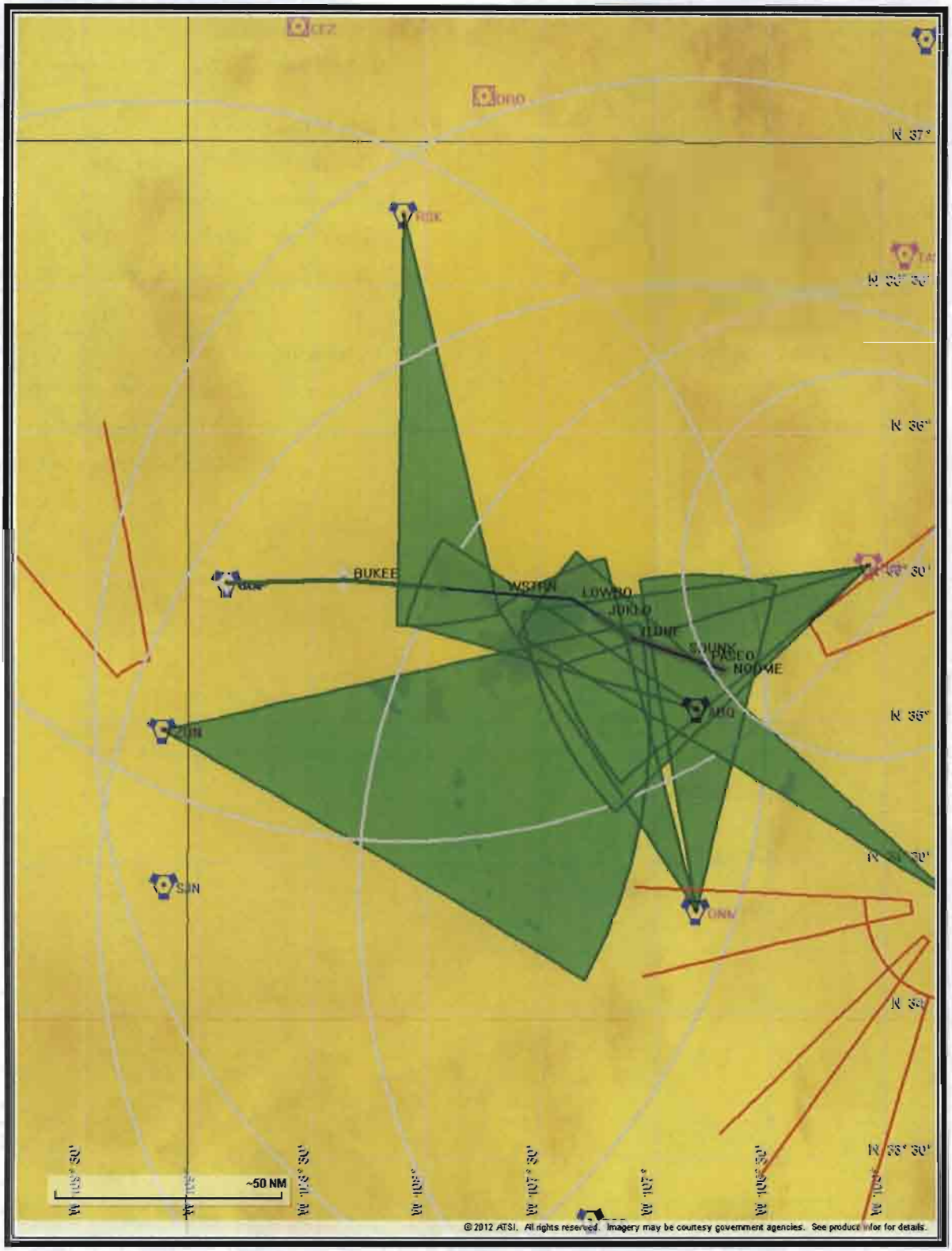
BUKEE
LOWBO
NODME
~50 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
GUP	WP	N 35° 28' 33.60" W 108° 52' 21.40"	25000.0	Step	280.0	Fly By	TF
BUKEE	WP	N 35° 29' 13.82" W 108° 21' 32.39"	25000.0	Step	280.0	Fly By	TF
WSTRN	WP	N 35° 26' 32.71" W 107° 41' 5.74"	20000.0	Step	270.0	Fly By	TF
LOWBO	WP	N 35° 25' 21.37" W 107° 21' 37.15"	14000.0	Step	210.0	Fly By	TF
JOKLO	WP	N 35° 21' 41.93" W 107° 14' 37.24"	14000.0	Step	250.0	Fly By	TF
ITUNE	WP	N 35° 17' 18.20" W 107° 6' 1.53"	10200.0	Step	180.0	Fly By	TF
SDUNX	WP	N 35° 13' 54.37" W 106° 53' 26.46"	8800.0	Step	180.0	Fly By	TF
PASEO	WP	N 35° 12' 19.12" W 106° 47' 37.27"	8600.0	Step	180.0	Fly By	TF
NODME	WP	N 35° 10' 43.64" W 106° 41' 48.51"	8300.0	Step	210.0	Fly Over	TF

Flyability

Return To Summary

Settings:	**Flight Type:** Arrival **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 Ft.** **240.0 Kts** up to **18000.0 Ft.** **260.0 Kts** up to **24000.0 Ft.** **340.0 Kts** up to **99900.0 Ft.** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME

Return To Summary

Settings:

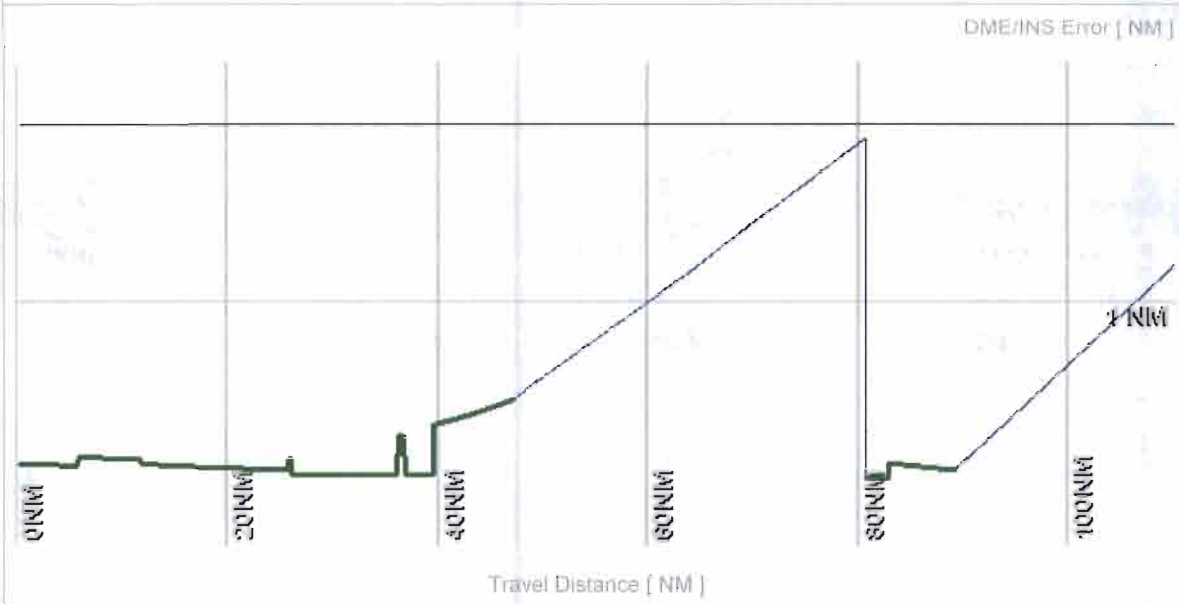
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 7

Maximum DME Error: 1.679 NM.

2 Critical DMEs were found.

Available DMEs: ZUN, ABQ, RSK, INW, SJN, TBC, ONM, GUP, SAF



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H + ESV	User	NO	1.679	Enabled	20.0 %	23.8 %
2	SJN	N 34° 25' 26.55" W 109° 8' 36.71" E 12	H	Database	NO	1.679	Enabled	4.2 %	5.5 %
3	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H + ESV	User	NO	1.679	Enabled	4.1 %	5.4 %
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H + ESV	User	NO	1.604	Enabled	13.7 %	15.1 %
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H + ESV	User	YES	**1.750**	Enabled	27.2 %	31.3 %
6	GUP	N 35° 28' 33.60" W 108° 52' 21.40" E 14	H	Database	NO	1.679	Enabled	11.4 %	12.3 %
7	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L + ESV	User	YES	**2.810**	Enabled	8.5 %	7.7 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	ABQ	SJN	ONM	ZUN	INW	RSK
10.1	ABQ	RSK	ONM	ZUN	GUP	SJN
24.6	ABQ	RSK	ONM	SJN	GUP	ZUN
58.3	ABQ	ONM				
73.5	ABQ	ONM	SAF			
81.0	ABQ	ONM	SAF			
88.9	ABQ	ONM	SAF			
100.2	ABQ	ONM				
105.2	ABQ	ONM				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 35° 27' 28.29" W 107° 54' 37.50"	N 35° 21' 52.12" W 107° 14' 56.66"	33.5
	VOR: ABQ	Available from N 35° 25' 47.99" W 107° 28' 48.21" to N 35° 21' 52.12" W 107° 14' 56.66"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 35° 17' 20.25" W 107° 6' 2.88"	N 35° 10' 44.37" W 106° 41' 51.18"	20.9
	VOR: ABQ	Available from N 35° 17' 20.25" W 107° 6' 2.88" to N 35° 10' 44.37" W 106° 41' 51.18"	
	VOR: SAF	Available from N 35° 11' 49.86" W 106° 45' 50.37" to N 35° 10' 44.37" W 106° 41' 51.18"	
	VOR: OTO	Available from N 35° 11' 22.42" W 106° 44' 10.05" to N 35° 10' 44.37" W 106° 41' 51.18"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H	6550.0	113.40	ZUN	Used
	Restriction:	Bearing [True]: 319.0° to 349.0° Bearing [Mag]: 305.0° to 335.0°			Distance: Beyond 15.0 NM Altitude: Below 99999.0 Ft.		
	ESV:	Bearing [True]: 77.0° to 119.0° Bearing [Mag]: 63.0° to 105.0°			Arc Distance: Out to 105.0 NM Altitude: 13000.0 to 23000.0 Ft.		
2	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H	5748.5	113.20	ABQ	Used
	Restriction:	Bearing [True]: 53.0° to 68.0° Bearing [Mag]: 40.0° to 55.0°			Distance: Beyond 30.0 NM Altitude: Below 15000.0 Ft.		
	ESV:	Bearing [True]: 286.0° to 303.0° Bearing [Mag]: 273.0° to 290.0°			Arc Distance: Out to 65.0 NM Altitude: 12500.0 to 18000.0 Ft.		

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
3	CNX	N 34° 22' 1.26" W 105° 40' 40.82" E 13	H	6412.0	115.50	CNX	Not Used
	Restriction:	Bearing [True]: 128.0° to 132.0° Bearing [Mag]: 115.0° to 119.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 128.0° to 148.0° Bearing [Mag]: 115.0° to 135.0°			Distance: Beyond 35.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 132.0° to 134.0° Bearing [Mag]: 119.0° to 121.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 134.0° to 148.0° Bearing [Mag]: 121.0° to 135.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 148.0° to 198.0° Bearing [Mag]: 135.0° to 185.0°			Distance: Beyond 20.0 NM Altitude: Below 12000.0 Ft.		
	Restriction:	Bearing [True]: 198.0° to 218.0° Bearing [Mag]: 185.0° to 205.0°			Distance: Beyond 20.0 NM Altitude: Below 13000.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 228.0° Bearing [Mag]: 205.0° to 215.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 273.0° Bearing [Mag]: 205.0° to 260.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 228.0° to 258.0° Bearing [Mag]: 215.0° to 245.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 258.0° to 273.0° Bearing [Mag]: 245.0° to 260.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	ESV:	Bearing [True]: 301.0° to 312.0° Bearing [Mag]: 288.0° to 299.0°			Arc Distance: Out to 110.0 NM Altitude: 14500.0 to 18000.0 Ft.		
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H	4910.0	116.80	ONM	Used
	ESV:	Bearing [True]: 326.0° to 345.0° Bearing [Mag]: 313.0° to 332.0°			Arc Distance: Out to 76.0 NM Altitude: 12000.0 to 18000.0 Ft.		
	ESV:	Bearing [True]: 350.0° to 14.0° Bearing [Mag]: 337.0° to 1.0°			Arc Distance: Out to 70.0 NM Altitude: 7000.0 to 12000.0 Ft.		
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H	5823.1	115.30	RSK	Used
	ESV:	Bearing [True]: 166.0° to 181.0° Bearing [Mag]: 152.0° to 167.0°			Arc Distance: Out to 85.0 NM Altitude: 12500.0 to 23000.0 Ft.		

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

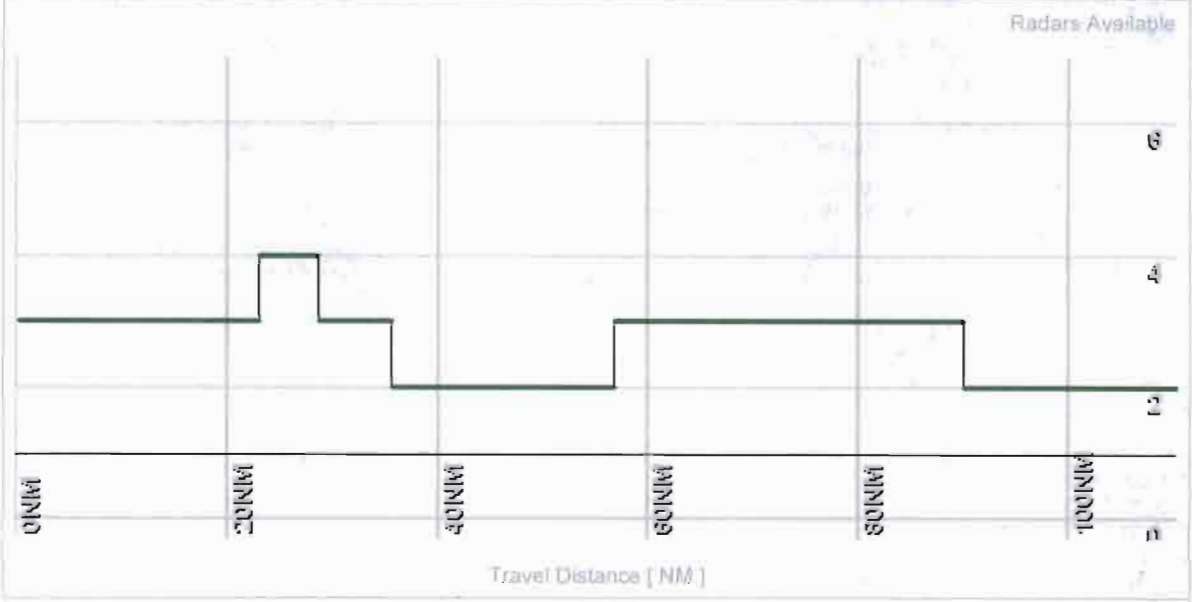
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L	6263.2	110.60	SAF	Used

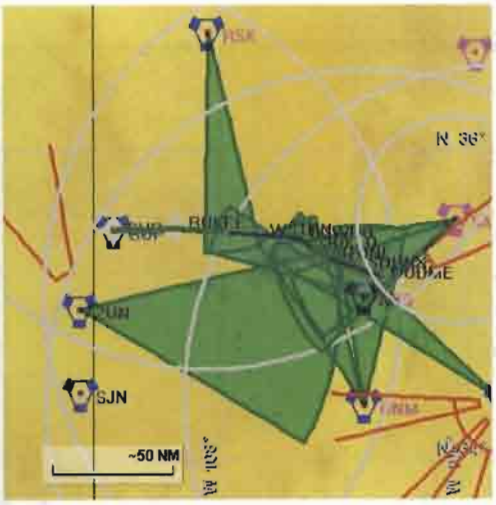
Restriction:	Bearing [True]: 28.0° to 43.0° Bearing [Mag]: 15.0° to 30.0°	Distance: Beyond 30.0 NM Altitude: Below 14600.0 Ft.
ESV:	Bearing [True]: 227.0° to 263.0° Bearing [Mag]: 214.0° to 250.0°	Arc Distance: Out to 75.0 NM Altitude: 9500.0 to 18000.0 Ft.
ESV:	Bearing [True]: 230.0° to 253.0° Bearing [Mag]: 217.0° to 240.0°	Arc Distance: Out to 70.0 NM Altitude: 9300.0 to 15000.0 Ft.

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Output File:	LOWBO STAR GUP NODME 20120419_1409
Procedure Name:	LOWBO
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	4/19/2012 2:09:39 PM
Input File:	KABQ LOWBO STAR GUP NODME 20120419_1352.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	?
TERPS	?

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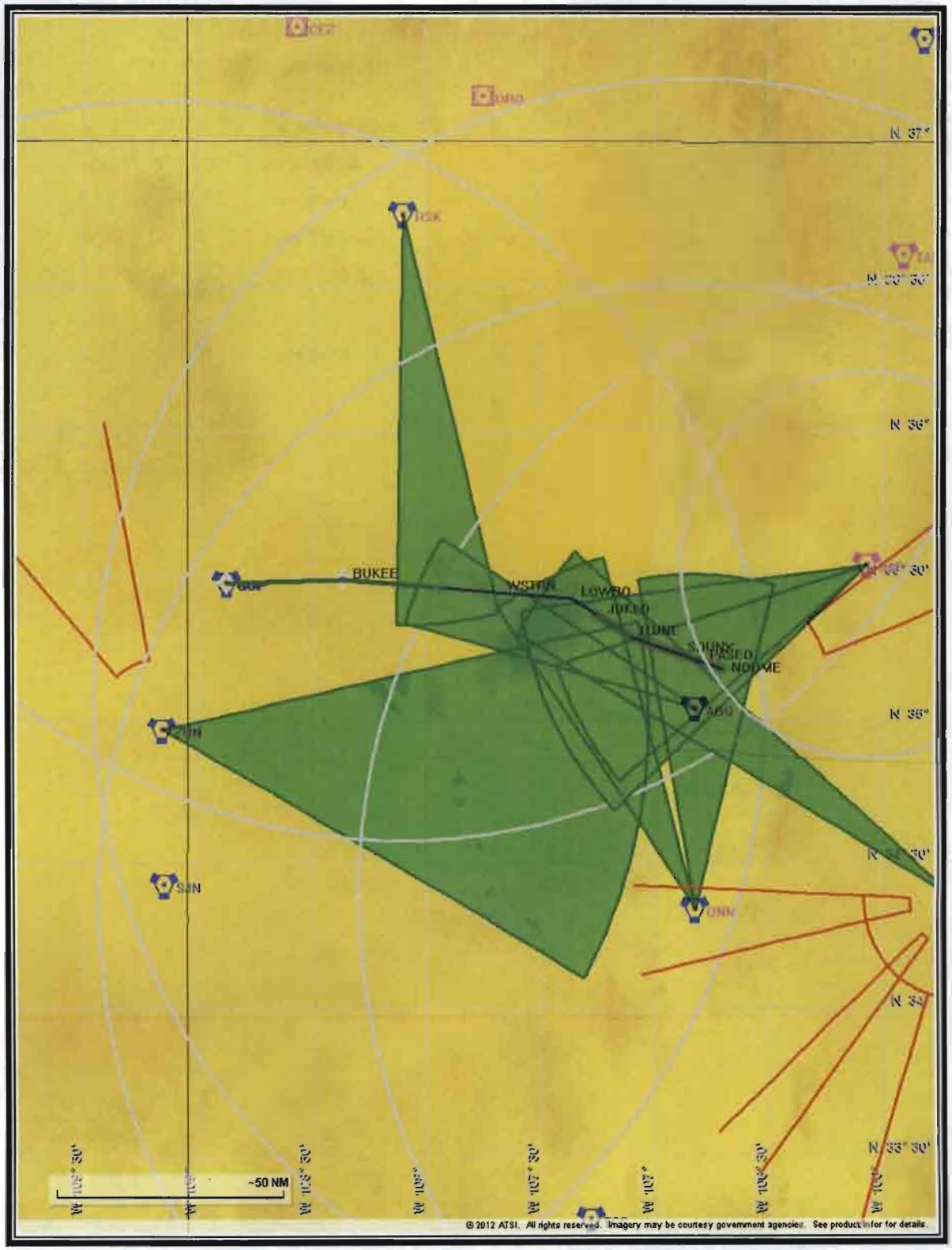
N 37°
N 36°
N 35°
N 34°
N 33° 30'
BUKEE
WSTPN
LOWBO
JUELO
JUNE
SKUNK
PASED
NDDME
~50 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
GUP	WP	N 35° 28' 33.60" W 108° 52' 21.40"	25000.0	Step	280.0	Fly By	TF
BUKEE	WP	N 35° 29' 13.82" W 108° 21' 32.39"	25000.0	Step	280.0	Fly By	TF
WSTRN	WP	N 35° 26' 32.71" W 107° 41' 5.74"	20000.0	Step	270.0	Fly By	TF
LOWBO	WP	N 35° 25' 21.37" W 107° 21' 37.15"	14000.0	Step	210.0	Fly By	TF
JOKLO	WP	N 35° 21' 41.93" W 107° 14' 37.24"	14000.0	Step	250.0	Fly By	TF
ITUNE	WP	N 35° 17' 18.20" W 107° 6' 1.53"	10200.0	Step	180.0	Fly By	TF
SDUNX	WP	N 35° 13' 54.37" W 106° 53' 26.46"	8800.0	Step	180.0	Fly By	TF
PASEO	WP	N 35° 12' 19.12" W 106° 47' 37.27"	8600.0	Step	180.0	Fly By	TF
NODME	WP	N 35° 10' 43.64" W 106° 41' 48.51"	8300.0	Step	210.0	Fly Over	TF

Flyability		Return To Summary
Settings:	**Flight Type:** Arrival **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 Ft.** **240.0 Kts** up to **18000.0 Ft.** **260.0 Kts** up to **24000.0 Ft.** **340.0 Kts** up to **99900.0 Ft.** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan	
Entire track is fly-able		

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 7

Maximum DME Error: 1.679 NM.

2 Critical DMEs were found.

Available DMEs: ZUN, ABQ, RSK, INW, SJN, TBC, ONM, GUP, SAF

DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H + ESV	User	NO	1.679	Enabled	20.0 %	23.8 %
2	SJN	N 34° 25' 26.55" W 109° 8' 36.71" E 12	H	Database	NO	1.679	Enabled	4.2 %	5.5 %
3	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H + ESV	User	NO	1.679	Enabled	4.1 %	5.4 %
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H + ESV	User	NO	1.604	Enabled	13.7 %	15.1 %
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H + ESV	User	YES	**1.750**	Enabled	27.2 %	31.3 %
6	GUP	N 35° 28' 33.60" W 108° 52' 21.40" E 14	H	Database	NO	1.679	Enabled	11.4 %	12.3 %
7	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L + ESV	User	YES	**2.810**	Enabled	8.5 %	7.7 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	ABQ	SJN	ONM	ZUN	INW	RSK
10.1	ABQ	RSK	ONM	ZUN	GUP	SJN
24.6	ABQ	RSK	ONM	SJN	GUP	ZUN
58.3	ABQ	ONM				
73.5	ABQ	ONM	SAF			
81.0	ABQ	ONM	SAF			
88.9	ABQ	ONM	SAF			
100.2	ABQ	ONM				
105.2	ABQ	ONM				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 35° 27' 28.29" W 107° 54' 37.50"	N 35° 21' 52.12" W 107° 14' 56.66"	33.5

VOR: ABQ

Available from N 35° 25' 47.99" W 107° 28' 48.21"
to N 35° 21' 52.12" W 107° 14' 56.66"

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 35° 17' 20.25" W 107° 6' 2.88"	N 35° 10' 44.37" W 106° 41' 51.18"	20.9
	VOR: ABQ	Available from N 35° 17' 20.25" W 107° 6' 2.88" to N 35° 10' 44.37" W 106° 41' 51.18"	
	VOR: SAF	Available from N 35° 11' 49.86" W 106° 45' 50.37" to N 35° 10' 44.37" W 106° 41' 51.18"	
	VOR: OTO	Available from N 35° 11' 22.42" W 106° 44' 10.05" to N 35° 10' 44.37" W 106° 41' 51.18"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H	6550.0	113.40	ZUN	Used
	Restriction:	Bearing [True]: 319.0° to 349.0° Bearing [Mag]: 305.0° to 335.0°			Distance: Beyond 15.0 NM Altitude: Below 99999.0 Ft.		
	ESV:	Bearing [True]: 77.0° to 119.0° Bearing [Mag]: 63.0° to 105.0°			Arc Distance: Out to 105.0 NM Altitude: 13000.0 to 23000.0 Ft.		
2	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H	5748.5	113.20	ABQ	Used
	Restriction:	Bearing [True]: 53.0° to 68.0° Bearing [Mag]: 40.0° to 55.0°			Distance: Beyond 30.0 NM Altitude: Below 15000.0 Ft.		
	ESV:	Bearing [True]: 286.0° to 303.0° Bearing [Mag]: 273.0° to 290.0°			Arc Distance: Out to 65.0 NM Altitude: 12500.0 to 18000.0 Ft.		

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
3	CNX	N 34° 22' 1.26" W 105° 40' 40.82" E 13	H	6412.0	115.50	CNX	Not Used
	Restriction:	Bearing [True]: 128.0° to 132.0° Bearing [Mag]: 115.0° to 119.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 128.0° to 148.0° Bearing [Mag]: 115.0° to 135.0°			Distance: Beyond 35.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 132.0° to 134.0° Bearing [Mag]: 119.0° to 121.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 134.0° to 148.0° Bearing [Mag]: 121.0° to 135.0°			Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.		
	Restriction:	Bearing [True]: 148.0° to 198.0° Bearing [Mag]: 135.0° to 185.0°			Distance: Beyond 20.0 NM Altitude: Below 12000.0 Ft.		
	Restriction:	Bearing [True]: 198.0° to 218.0° Bearing [Mag]: 185.0° to 205.0°			Distance: Beyond 20.0 NM Altitude: Below 13000.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 228.0° Bearing [Mag]: 205.0° to 215.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	Restriction:	Bearing [True]: 218.0° to 273.0° Bearing [Mag]: 205.0° to 260.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 228.0° to 258.0° Bearing [Mag]: 215.0° to 245.0°			Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.		
	Restriction:	Bearing [True]: 258.0° to 273.0° Bearing [Mag]: 245.0° to 260.0°			Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.		
	ESV:	Bearing [True]: 301.0° to 312.0° Bearing [Mag]: 288.0° to 299.0°			Arc Distance: Out to 110.0 NM Altitude: 14500.0 to 18000.0 Ft.		
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H	4910.0	116.80	ONM	Used
	ESV:	Bearing [True]: 326.0° to 345.0° Bearing [Mag]: 313.0° to 332.0°			Arc Distance: Out to 76.0 NM Altitude: 12000.0 to 18000.0 Ft.		
	ESV:	Bearing [True]: 350.0° to 14.0° Bearing [Mag]: 337.0° to 1.0°			Arc Distance: Out to 70.0 NM Altitude: 7000.0 to 12000.0 Ft.		
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H	5823.1	115.30	RSK	Used
	ESV:	Bearing [True]: 166.0° to 181.0° Bearing [Mag]: 152.0° to 167.0°			Arc Distance: Out to 85.0 NM Altitude: 12500.0 to 23000.0 Ft.		

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

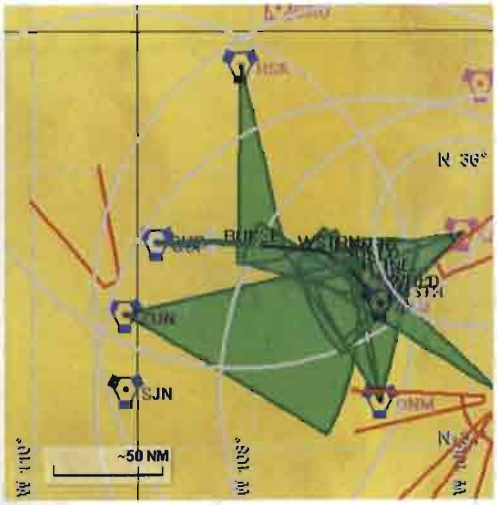
#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L	6263.2	110.60	SAF	Used

Restriction:	Bearing [True]: 28.0° to 43.0° Bearing [Mag]: 15.0° to 30.0°	Distance: Beyond 30.0 NM Altitude: Below 14600.0 Ft.
ESV:	Bearing [True]: 227.0° to 263.0° Bearing [Mag]: 214.0° to 250.0°	Arc Distance: Out to 75.0 NM Altitude: 9500.0 to 18000.0 Ft.
ESV:	Bearing [True]: 230.0° to 253.0° Bearing [Mag]: 217.0° to 240.0°	Arc Distance: Out to 70.0 NM Altitude: 9300.0 to 15000.0 Ft.

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR



Name:	enanders
Project Name:	
Output File:	LOWBO STAR GUP CMSTR 20120419_1338
Procedure Name:	LOWBO
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	4/19/2012 1:38:11 PM
Input File:	KABQ LOWBO STAR GUP CMSTR 20120419_1319.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	?
TERPS	?

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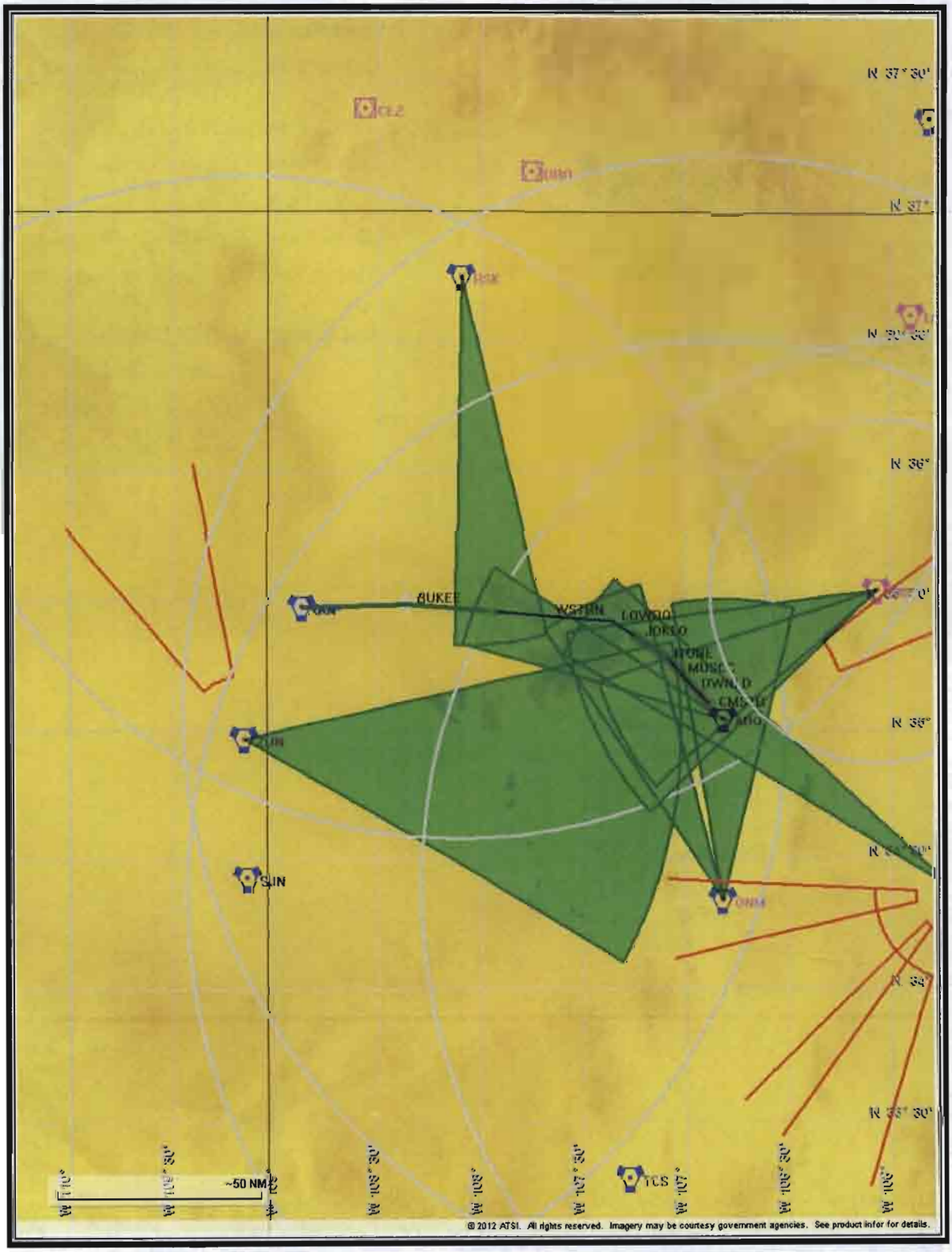
N 37° 30'
N 37°
N 36°
N 35°
N 34°
N 33° 30'
W 110°
W 109° 30'
W 109°
W 108° 30'
W 108°
W 107° 30'
W 107°
W 106° 30'
W 106°
~50 NM
BUKEE
WSTRN
LOWBO
JOKOO
TCS
SLIN
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
GUP	WP	N 35° 28' 33.60" W 108° 52' 21.40"	25000.0	Step	280.0	Fly By	TF
BUKEE	WP	N 35° 29' 13.82" W 108° 21' 32.39"	25000.0	Step	280.0	Fly By	TF
WSTRN	WP	N 35° 26' 32.71" W 107° 41' 5.74"	20000.0	Step	270.0	Fly By	TF
LOWBO	WP	N 35° 25' 21.37" W 107° 21' 37.15"	14000.0	Step	210.0	Fly By	TF
JOKLO	WP	N 35° 21' 41.93" W 107° 14' 37.24"	14000.0	Step	250.0	Fly By	TF
ITUNE	WP	N 35° 17' 18.20" W 107° 6' 1.53"	10200.0	Step	180.0	Fly By	TF
MUSCC	WP	N 35° 13' 57.61" W 107° 2' 8.56"	8900.0	Step	180.0	Fly By	TF
DWNLD	WP	N 35° 10' 26.96" W 106° 58' 13.21"	8600.0	Step	180.0	Fly By	TF
CMSTR	WP	N 35° 6' 14.97" W 106° 53' 13.01"	8400.0	Step	210.0	Fly Over	TF

Flyability		Return To Summary
Settings:	**Flight Type:** Arrival **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 Ft.** **240.0 Kts** up to **18000.0 Ft.** **260.0 Kts** up to **24000.0 Ft.** **340.0 Kts** up to **99900.0 Ft.** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan	
Entire track is fly-able		

DME/DME

Return To Summary

Settings:

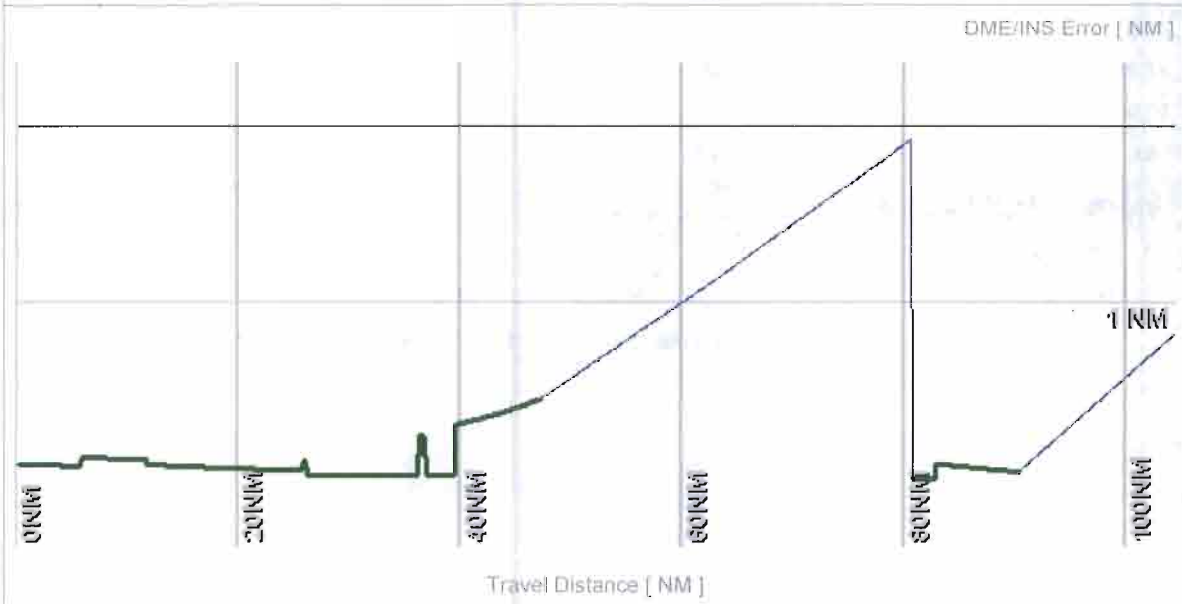
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 7

Maximum DME Error: 1.679 NM.

2 Critical DMEs were found.

Available DMEs: ZUN, ABQ, RSK, INW, SJN, TBC, ONM, GUP, SAF



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H + ESV	User	NO	1.679	Enabled	22.9 %	26.2 %
2	SJN	N 34° 25' 26.55" W 109° 8' 36.71" E 12	H	Database	NO	1.679	Enabled	4.5 %	5.8 %
3	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H + ESV	User	NO	1.679	Enabled	4.3 %	5.7 %
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H + ESV	User	NO	1.604	Enabled	14.6 %	15.9 %
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H + ESV	User	YES	**1.750**	Enabled	29.1 %	33.0 %
6	GUP	N 35° 28' 33.60" W 108° 52' 21.40" E 14	H	Database	NO	1.679	Enabled	12.2 %	12.9 %
7	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L + ESV	User	YES	**2.583**	Enabled	10.5 %	9.3 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	ABQ	SJN	ONM	ZUN	INW	RSK
10.1	ABQ	RSK	ONM	ZUN	GUP	SJN
24.6	ABQ	RSK	ONM	SJN	GUP	ZUN
58.3	ABQ	ONM				
73.5	ABQ	ONM	SAF			
81.0	ABQ	ONM	SAF			
88.9	ABQ	SAF				
93.9	ABQ					
98.6	ABQ	ONM				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 35° 27' 28.29" W 107° 54' 37.50"	N 35° 21' 52.12" W 107° 14' 56.66"	33.5
	VOR: ABQ	Available from N 35° 25' 47.99" W 107° 28' 48.21" to N 35° 21' 52.12" W 107° 14' 56.66"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 35° 16' 28.81" W 107° 5' 3.88"	N 35° 6' 16.73" W 106° 53' 15.12"	14.1
	VOR: ABQ	Available from N 35° 16' 28.81" W 107° 5' 3.88" to N 35° 6' 16.73" W 106° 53' 15.12"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	ZUN	N 34° 57' 56.71" W 109° 9' 16.23" E 14	H	6550.0	113.40	ZUN	Used
	Restriction:	Bearing [True]: 319.0° to 349.0° Bearing [Mag]: 305.0° to 335.0°		Distance: Beyond 15.0 NM Altitude: Below 99999.0 Ft.			
	ESV:	Bearing [True]: 77.0° to 119.0° Bearing [Mag]: 63.0° to 105.0°		Arc Distance: Out to 105.0 NM Altitude: 13000.0 to 23000.0 Ft.			
2	ABQ	N 35° 2' 37.66" W 106° 48' 58.72" E 13	H	5748.5	113.20	ABQ	Used
	Restriction:	Bearing [True]: 53.0° to 68.0° Bearing [Mag]: 40.0° to 55.0°		Distance: Beyond 30.0 NM Altitude: Below 15000.0 Ft.			
	ESV:	Bearing [True]: 286.0° to 303.0° Bearing [Mag]: 273.0° to 290.0°		Arc Distance: Out to 65.0 NM Altitude: 12500.0 to 18000.0 Ft.			
3	CNX	N 34° 22' 1.26" W 105° 40' 40.82" E 13	H	6412.0	115.50	CNX	Not Used
	Restriction:	Bearing [True]: 128.0° to 132.0° Bearing [Mag]: 115.0° to 119.0°		Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.			
	Restriction:	Bearing [True]: 128.0° to 148.0° Bearing [Mag]: 115.0° to 135.0°		Distance: Beyond 35.0 NM Altitude: Below 10000.0 Ft.			
	Restriction:	Bearing [True]: 132.0° to 134.0° Bearing [Mag]: 119.0° to 121.0°		Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.			
	Restriction:	Bearing [True]: 134.0° to 148.0° Bearing [Mag]: 121.0° to 135.0°		Distance: Beyond 25.0 NM Altitude: Below 10000.0 Ft.			
	Restriction:	Bearing [True]: 148.0° to 198.0° Bearing [Mag]: 135.0° to 185.0°		Distance: Beyond 20.0 NM Altitude: Below 12000.0 Ft.			
	Restriction:	Bearing [True]: 198.0° to 218.0° Bearing [Mag]: 185.0° to 205.0°		Distance: Beyond 20.0 NM Altitude: Below 13000.0 Ft.			
	Restriction:	Bearing [True]: 218.0° to 228.0° Bearing [Mag]: 205.0° to 215.0°		Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.			
	Restriction:	Bearing [True]: 218.0° to 273.0° Bearing [Mag]: 205.0° to 260.0°		Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.			
	Restriction:	Bearing [True]: 228.0° to 258.0° Bearing [Mag]: 215.0° to 245.0°		Distance: Beyond 20.0 NM Altitude: Below 14000.0 Ft.			
	Restriction:	Bearing [True]: 258.0° to 273.0° Bearing [Mag]: 245.0° to 260.0°		Distance: Beyond 10.0 NM Altitude: Below 11800.0 Ft.			
	ESV:	Bearing [True]: 301.0° to 312.0° Bearing [Mag]: 288.0° to 299.0°		Arc Distance: Out to 110.0 NM Altitude: 14500.0 to 18000.0 Ft.			

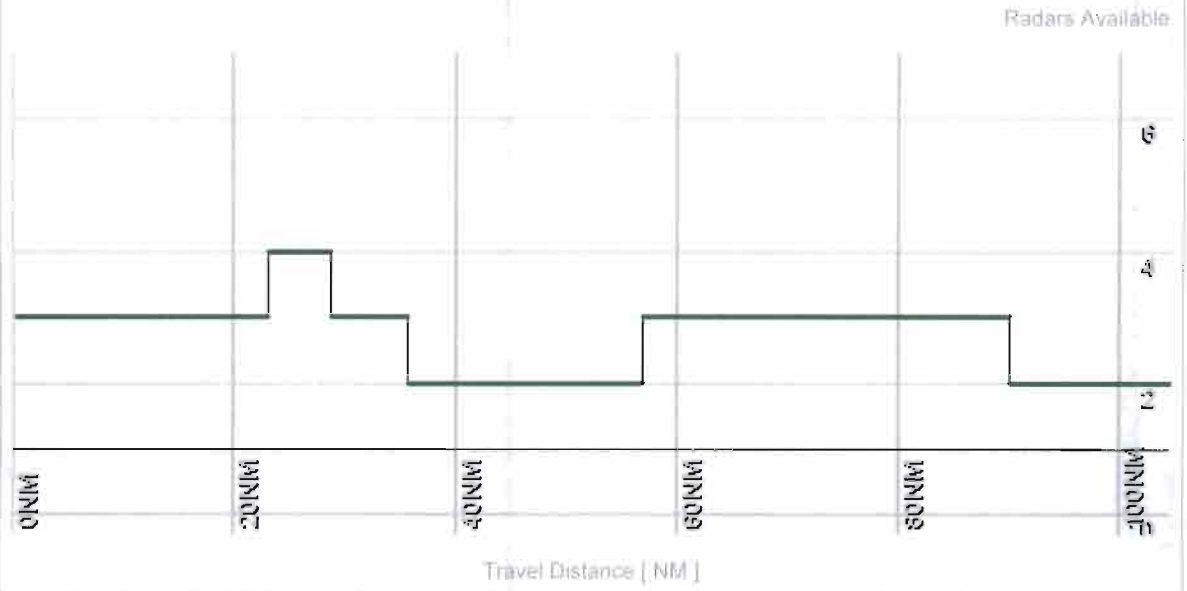
DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
4	ONM	N 34° 20' 20.04" W 106° 49' 13.69" E 13	H	4910.0	116.80	ONM	Used
		ESV:	Bearing [True]: 326.0° to 345.0° Bearing [Mag]: 313.0° to 332.0°		Arc Distance: Out to 76.0 NM Altitude: 12000.0 to 18000.0 Ft.		
		ESV:	Bearing [True]: 350.0° to 14.0° Bearing [Mag]: 337.0° to 1.0°		Arc Distance: Out to 70.0 NM Altitude: 7000.0 to 12000.0 Ft.		
5	RSK	N 36° 44' 54.21" W 108° 5' 56.04" E 14	H	5823.1	115.30	RSK	Used
		ESV:	Bearing [True]: 166.0° to 181.0° Bearing [Mag]: 152.0° to 167.0°		Arc Distance: Out to 85.0 NM Altitude: 12500.0 to 23000.0 Ft.		
6	SAF	N 35° 32' 25.95" W 106° 3' 53.81" E 13	L	6263.2	110.60	SAF	Used
		Restriction:	Bearing [True]: 28.0° to 43.0° Bearing [Mag]: 15.0° to 30.0°		Distance: Beyond 30.0 NM Altitude: Below 14600.0 Ft.		
		ESV:	Bearing [True]: 227.0° to 263.0° Bearing [Mag]: 214.0° to 250.0°		Arc Distance: Out to 75.0 NM Altitude: 9500.0 to 18000.0 Ft.		
		ESV:	Bearing [True]: 230.0° to 253.0° Bearing [Mag]: 217.0° to 240.0°		Arc Distance: Out to 70.0 NM Altitude: 9300.0 to 15000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR