

TECHNICAL EXHIBIT  
MINOR MODIFICATION APPLICATION  
STATION KOAS(FM) (FACILITY ID 25692)  
DOLAN SPRINGS, ARIZONA

MARCH 29, 2004

CH 289C 100 KW 537 M

TECHNICAL EXHIBIT  
MINOR MODIFICATION APPLICATION  
STATION KOAS(FM) (FACILITY ID 25692)  
DOLAN SPRINGS, ARIZONA  
CH 289C 100 KW 537 M

Table of Contents

	Technical Narrative
Figure 1	Proposed Transmitter Site
Figure 2	Tower Sketch
Figure 3	Coverage Map
Figure 4	FM Separation Study

TECHNICAL EXHIBIT  
MINOR MODIFICATION APPLICATION  
STATION KOAS(FM) (FACILITY ID 25692)  
DOLAN SPRINGS, ARIZONA  
CH 289A 100 KW 537 M

Technical Narrative

This Technical Exhibit supports a minor modification application for FM station KOAS at Dolan Springs, Arizona. Station KOAS is currently licensed for operation on channel 289 a non-directional effective radiated power (ERP) of 98 kW and an antenna height above average terrain (HAAT) of 605 meters (BLH-20010726AAF). KOAS is authorized for a 100 kW operation with an antenna HAAT of 544 meters at a new transmitter site (BPH-20021030AAP). It is proposed only to reduce the proposed tower height and antenna height from the current authorization.

Proposed Facilities

The proposed transmitter site remains at the authorized site, 20.5 kilometers north of the license site. The proposed NAD27 site coordinates are: 35-50-11 N, 114-19-08 W (see Figure 1). A non-directional ERP of 100 kW and antenna HAAT of 537 meters is proposed.

The Federal Aviation Administration (FAA) is not being notified of the proposed construction as it is less than 200 feet and meets the FCC TOWAIR slope program. A sketch of antenna and supporting structure is shown in Figure 2.

The proposed transmitter site is approximately 349 kilometers from the closest point of the Mexican border. This is beyond the US/Mexican coordinate area and therefore, not an allocation concern.

### FCC Predicted Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. Pursuant with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

Figure 3 is a map showing the predicted coverage contours. The map indicates that the FCC predicted 70 dBu coverage contour entirely encompasses all of the Dolan Springs city limits (2000 U.S. Census).

Inspection of the intervening terrain between the proposed transmitter site and the principal community of Dolan Springs indicates the obstructions can be classified as minor since studies based on the Longley-Rice propagation method show 70 dBu or greater signals over all of the populated areas of Dolan Springs.

### Allocation Study

Figure 4 contains a tabulation of actual and required separation distances with respect to other pertinent stations as specified in Section 73.207(b) of the Commission's Rules. The FCC's FM database was used as the basis for the separation study. The study does not indicate any "short-spacings" and, therefore, it is believed the proposal is in compliance with the FCC's FM allocation rules.

### Radiofrequency Electromagnetic Field Exposure

The proposed FM facility was evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed Shively 6600 10-Bay ( $1/2\lambda$  spaced) antenna is located 42 meters above ground level. The proposed ERP is 100 kW (horizontal polarization only). Using the FCC's *FM Model* program, the worst-case relative field is approximately  $0.084 \text{ mW/cm}^2$ . This is

42% of the FCC's recommended limit of 0.2 mW/cm<sup>2</sup> for FM frequencies for an "uncontrolled" environment. There are no other known broadcast stations at the proposed site. Therefore, it is believed that station KOAS(FM) will be the only RFR contributor in the area. Since the total RFR power density calculation is less 100%, the proposal appears to comply with the FCC's RFR limits.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed FM operation appears to be otherwise categorically excluded from environmental processing.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.

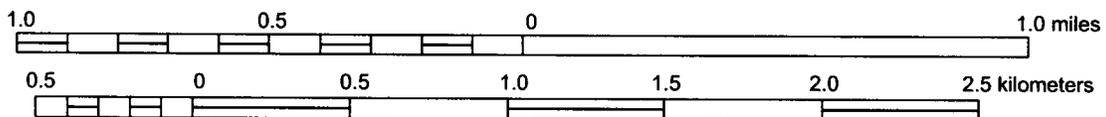
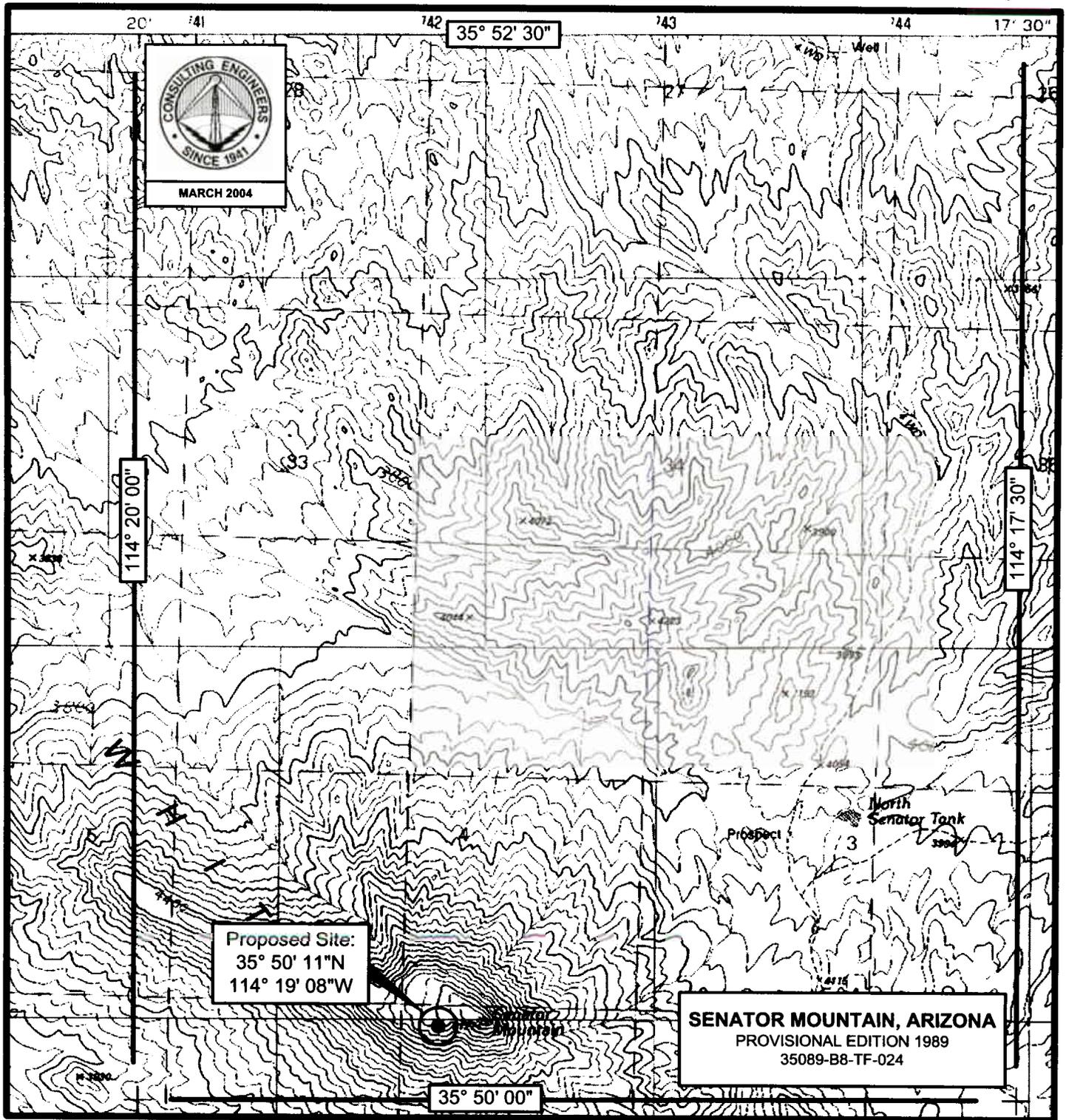


Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941) 329-6000

March 29, 2004

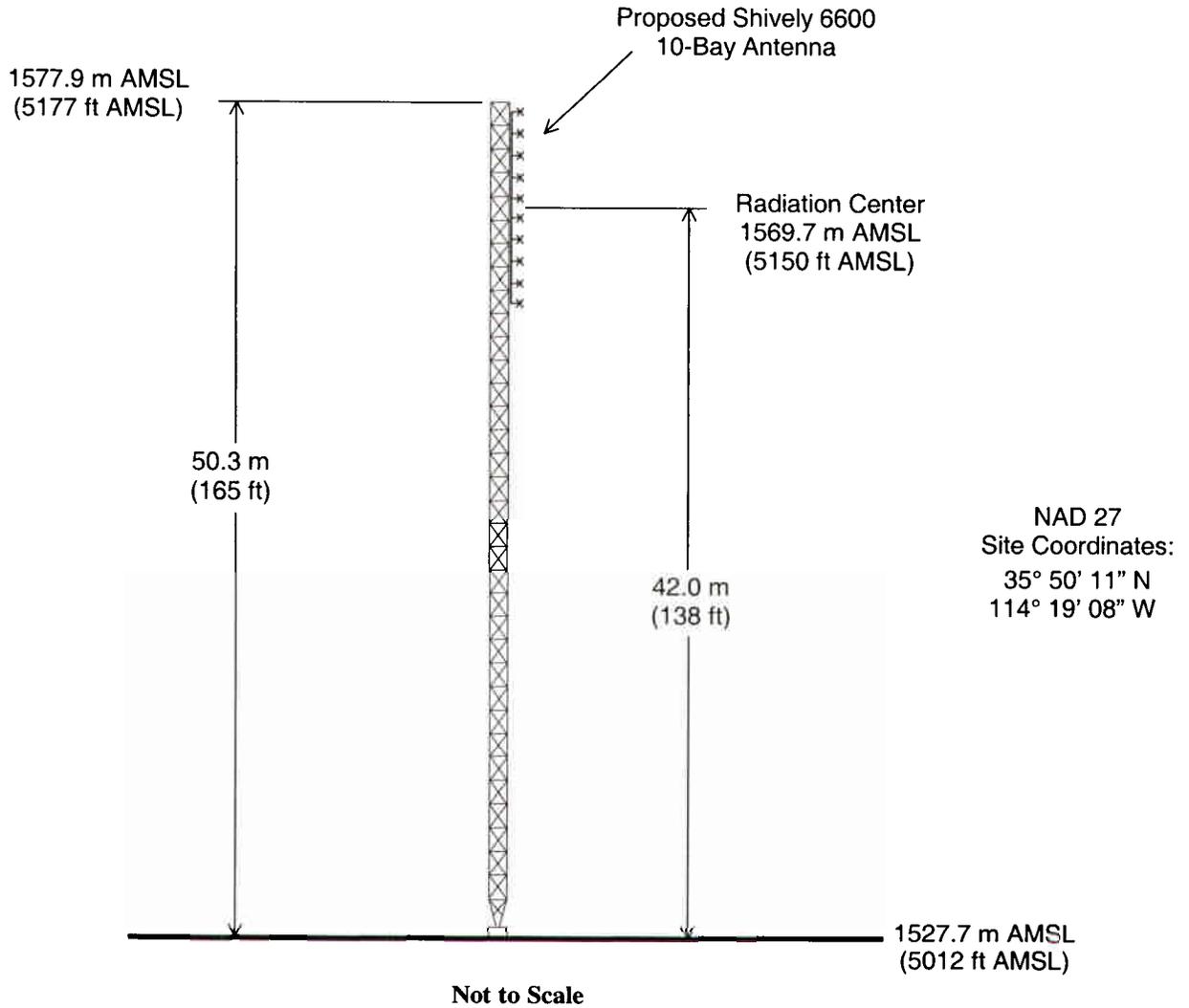
Figure 1



## **PROPOSED TRANSMITTER SITE**

**STATION KOAS(FM)  
DOLAN SPRINGS, ARIZONA  
CH 289C 100 KW 537 M**

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



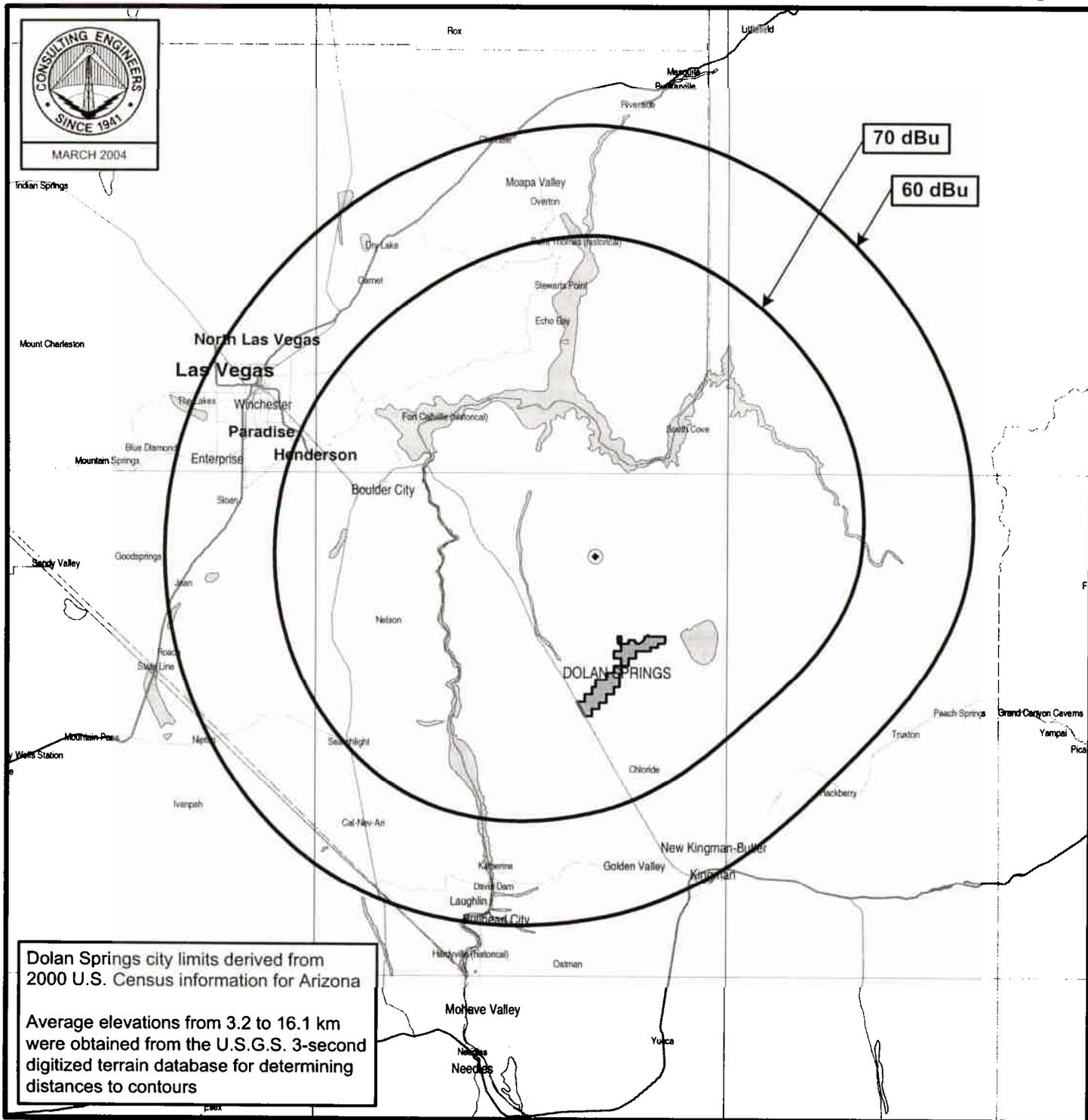
## ANTENNA AND SUPPORTING STRUCTURE

STATION KOAS(FM)

DOLAN SPRINGS, ARIZONA

CH 289C 100 KW 537 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**FCC PREDICTED COVERAGE CONTOURS**

STATION KOAS(FM)

DOLAN SPRINGS, ARIZONA

CH 289C 100 KW 537 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

TECHNICAL EXHIBIT  
 MINOR MODIFICATION APPLICATION  
 STATION KOAS(FM) (FACILITY ID 25692)  
 DOLAN SPRINGS, ARIZONA  
 CH 289A 100 KW 537 M

CDBS FM SEPARATION STUDY

Channel: 289 C  
03/29/2004

Separation Buffer: 50 km  
Coordinates: 35-50-11 N 114-19-08 W

Call Id	City St	File Status Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km) 73.215	73.207
KQRT 51731	LAS VEGAS NV LIC C	BLH 19930914KA	286 C2 105.1	50.000 11	N	36-20-00 115-21-41	N	300.8	108.89 3.89	96.0 Close	105.0
KVRD-FM 35865	COTTONWOOD AZ LIC C	BLH 199711110KI	289 C3 105.7	0.300 779	N	34-41-11 112-06-58	N	122.0	237.61 0.61	226.0 Close	237.0
KWBR-LP 123781	ST. GEORGE UT CP C	BNPL 20000602ABP	289 L1 105.7	0.005 125.0	N	37-03-48 113-34-23	N	25.8	151.68 21.68	226.0 Clear	130.0
KOAS 25692	DOLAN SPRIN AZ LIC C	BPH 20021030AAP	289 C 105.7	98.000 605	N	35-39-07 114-18-42	N	0.0	0.0		
KOAS 25692	DOLAN SPRIN AZ LIC C	BLH 20010726AAF	289 C 105.7	98.000 605	N	35-39-07 114-18-42	N	178.2	20.47		