

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

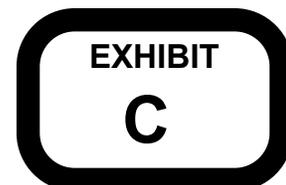
**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 22969

SUPPLEMENTAL AFFIDAVIT OF JENNIFER BLAKE

I, JENNIFER BLAKE, being duly sworn on oath, state the following:

1. I am over the age of 18, and I have personal knowledge of the matters stated herein.
2. I am employed as a petroleum geologist for Cimarex Energy Co. (“Cimarex”), and I am familiar with the subject application and the geology involved.
3. This affidavit is submitted in connection with the filing by Cimarex of the above-referenced compulsory pooling application pursuant to 19.15.4.12.A(1) NMAC.
4. I have testified previously by affidavit before the Oil Conservation Division (“Division”) as an expert petroleum geologist; my credentials have been made a matter of record, and I have been qualified as an expert by the Division.
 - a. I have a Bachelor of Science Degree in Geology from Texas A&M University, and a Master of Science Degree in Geology from the Colorado School of Mines.
 - b. I have worked on New Mexico Oil and Gas matters since June 2020.
5. **Exhibit C-1** is a structure map of the top of the Wolfcamp formation with a contour interval of 50’ in the subject area. The unit being pooled is outlined with a black rectangle. The structure map shows that there is a regional down-dip to the east-southeast. I do not



observe any faulting, pinchouts, or other geologic impediments to developing this targeted interval.

6. **Exhibit C-2** is a stratigraphic cross-section flattened on the top of the Wolfcamp formation. Each well in the cross-section contains a gamma ray and resistivity log. The well logs are oriented from northwest to southeast (left to right) and are meant to illustrate the continuity of the targeted formation. The well logs on the cross-section are representative of this formation in this area.

7. Additional exhibits for the benefit of the Division's review include **Exhibits C-3, C-4, and C-5**. **Exhibit C-3** is a gross isopach of the Upper Wolfcamp formation illustrating that the thickness of the formation is ~500-550 ft. in the subject area. **Exhibit C-4** is a gun barrel representation of the unit. It illustrates what Cimarex has concluded to be the optimal spacing and configuration for the development of the Upper Wolfcamp in this area. **Exhibit C-5** is a trajectory cross section-oriented N-S and highlights the reservoir being targeted as being correlative & continuous.

8. I conclude from the attached exhibits that:

- a. The horizontal spacing and proration unit is justified from a geologic standpoint.
- b. There are no structural impediments or faulting that will interfere with horizontal development.
- c. Each quarter-quarter section will contribute more or less equally to production.

9. The preferred well orientation in this area is North-South so that the wells run sub-perpendicular to the inferred orientation of the maximum horizontal stress.

10. The Exhibits to this Affidavit were prepared by me or compiled from Cimarex's company business records under my direct supervision.

11. The granting of this Application is in the interests of conservation, the prevention of waste and the drilling of unnecessary wells, and the protection of correlative rights.

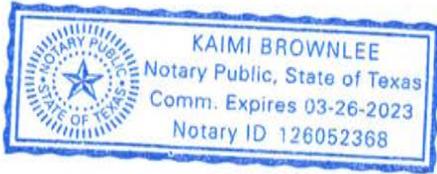
12. The foregoing is correct and complete to the best of my knowledge and belief.

[Signature page follows]

FURTHER AFFIANT SAYETH NAUGHT

Jennifer Blake
Jennifer Blake

Subscribed to and sworn before me this 8 day of August, 2022.



Kaimi Brownlee
Notary Public



Wolfcamp Structure

Top Wolfcamp Structure Map (SSTVD); C.I. = 50'

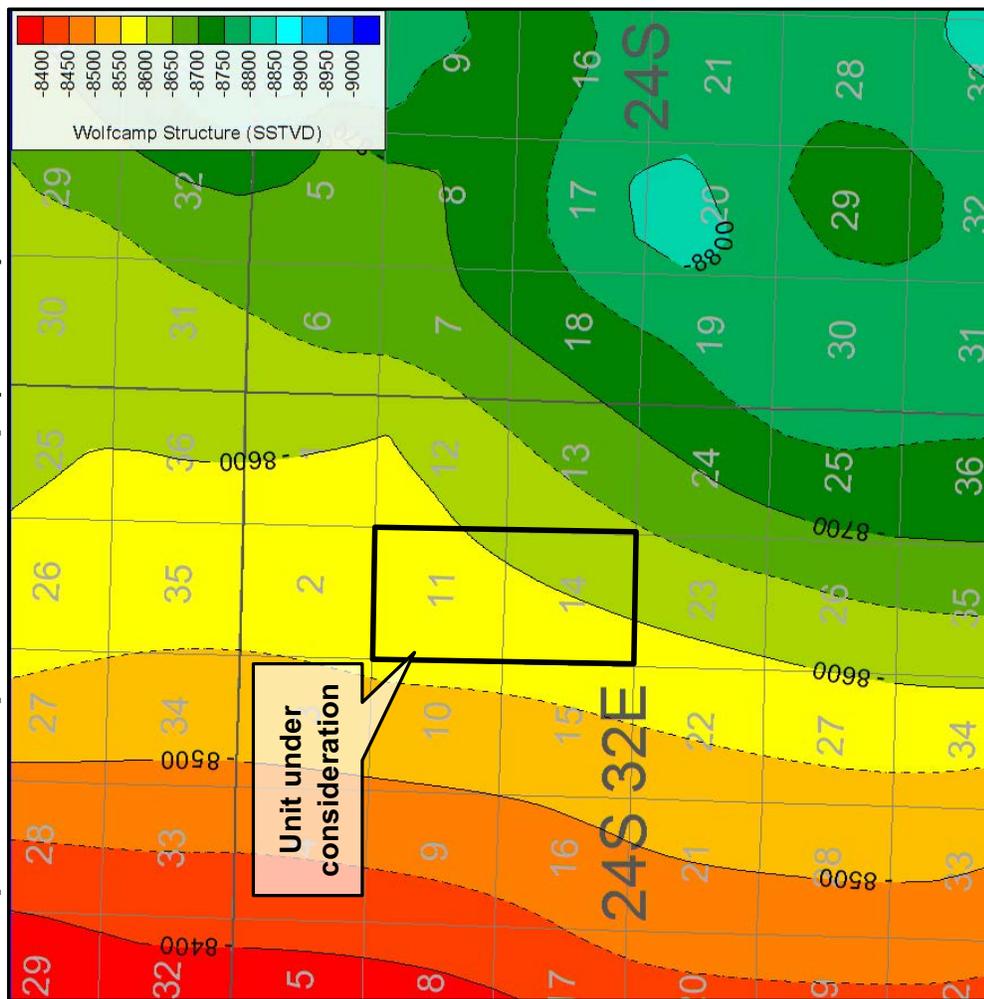
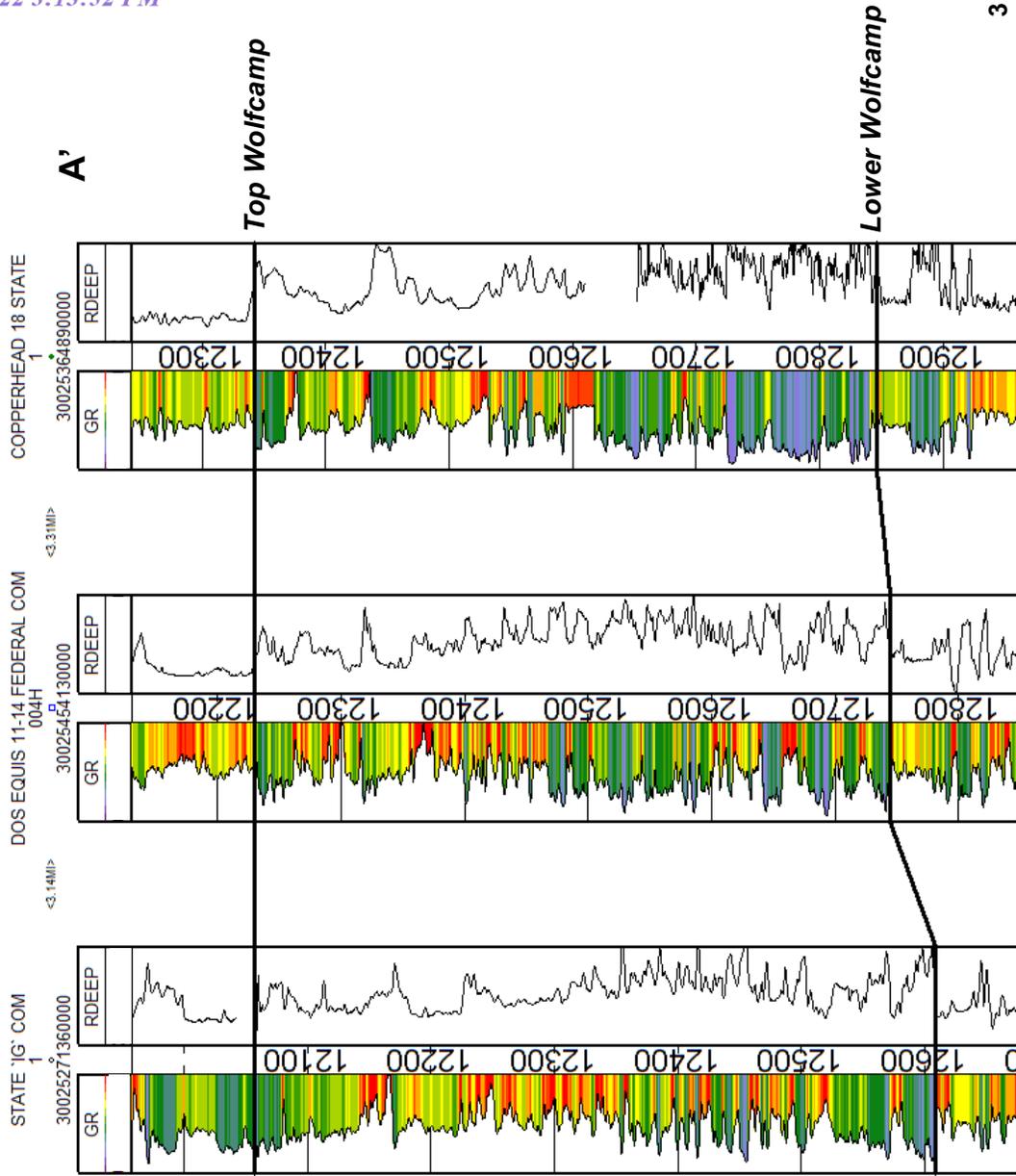


EXHIBIT
C-1



Stratigraphic Cross Section



A'

A

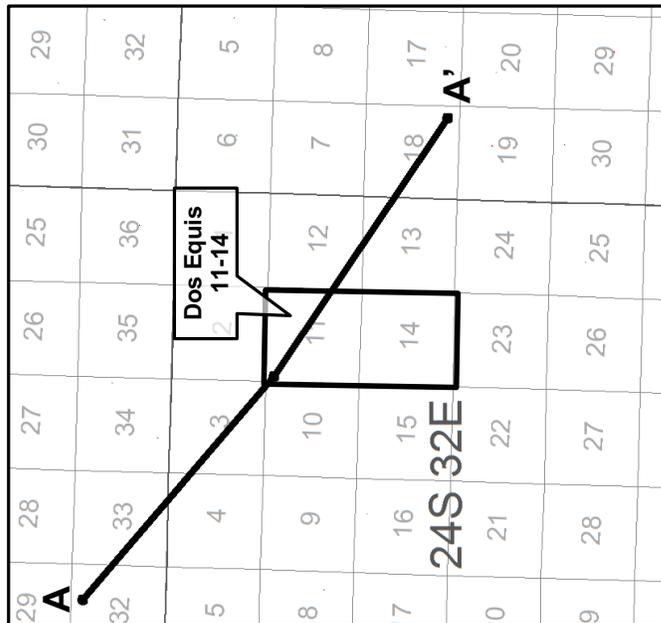


EXHIBIT C-2



Upper Wolfcamp Isopach

Upper Wolfcamp Thickness; C.I. = 50'

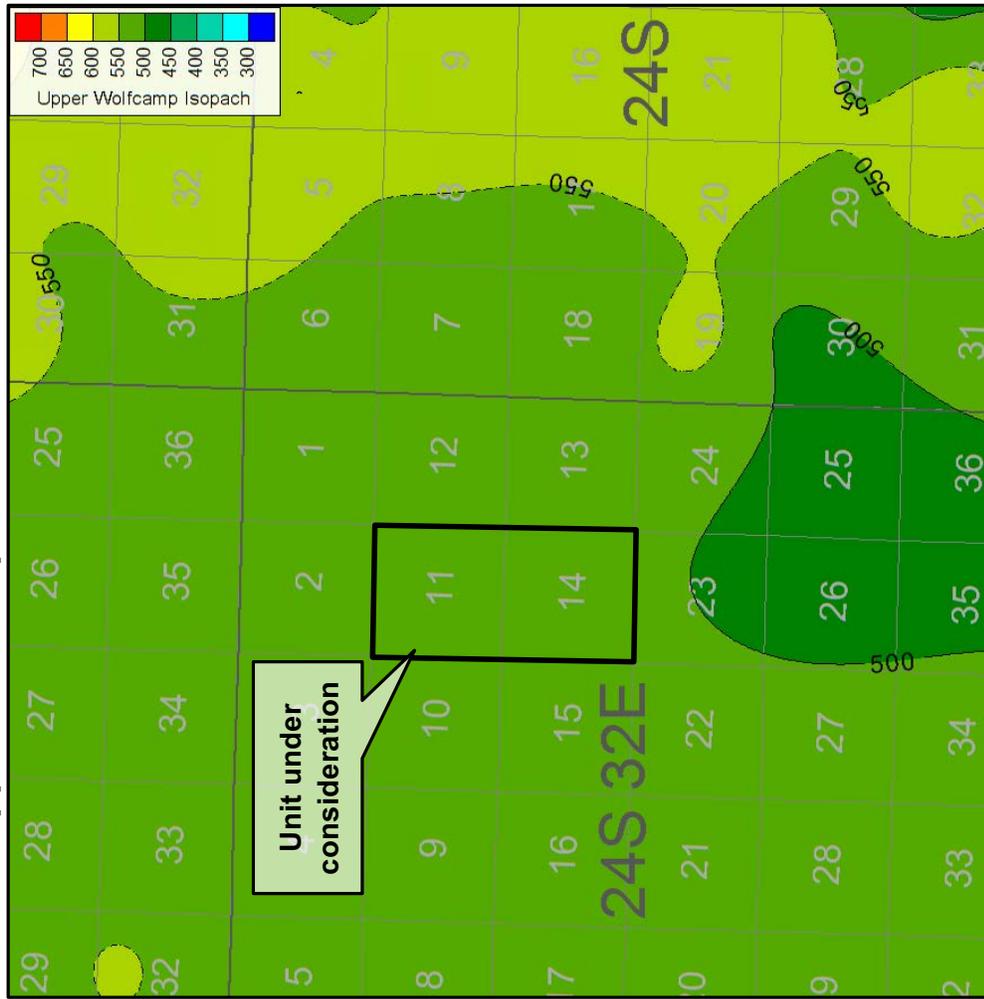


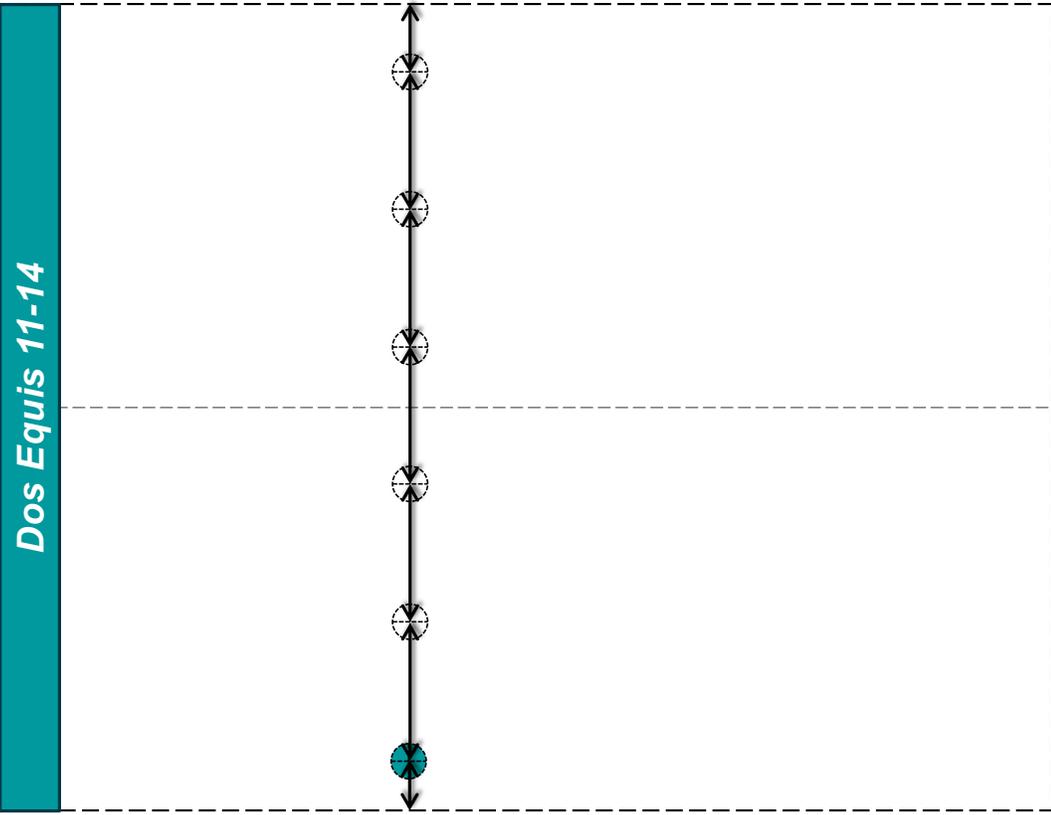
EXHIBIT
C-3



Gun Barrel Plot

DOS EQUIS 11-14 FEDERAL COM
004H
30025454130000

Dos Equis 11-14



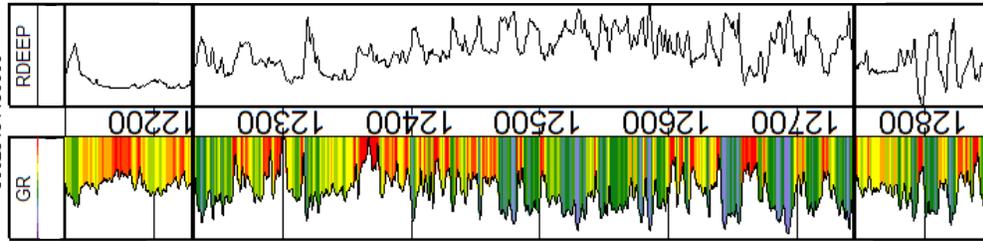
Dos Equis Fed Com 11-14 4H

Future locations



Dos Equis 11-14

24S-32E



Top Wolfcamp

Lower Wolfcamp

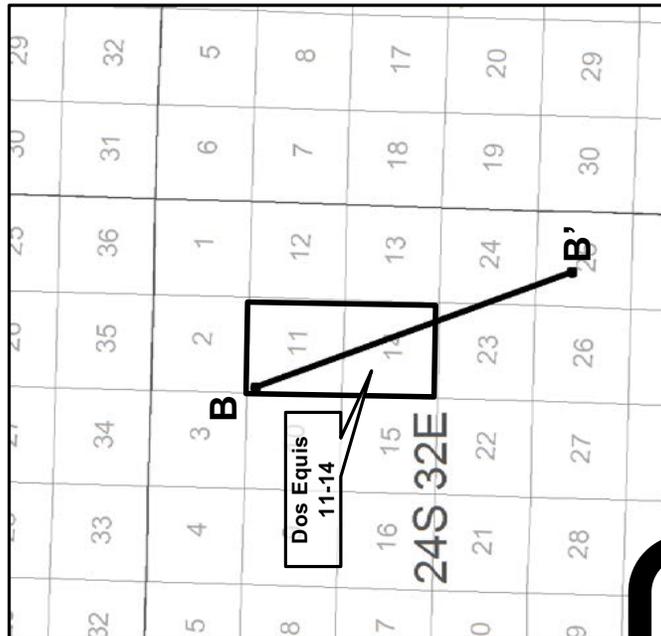
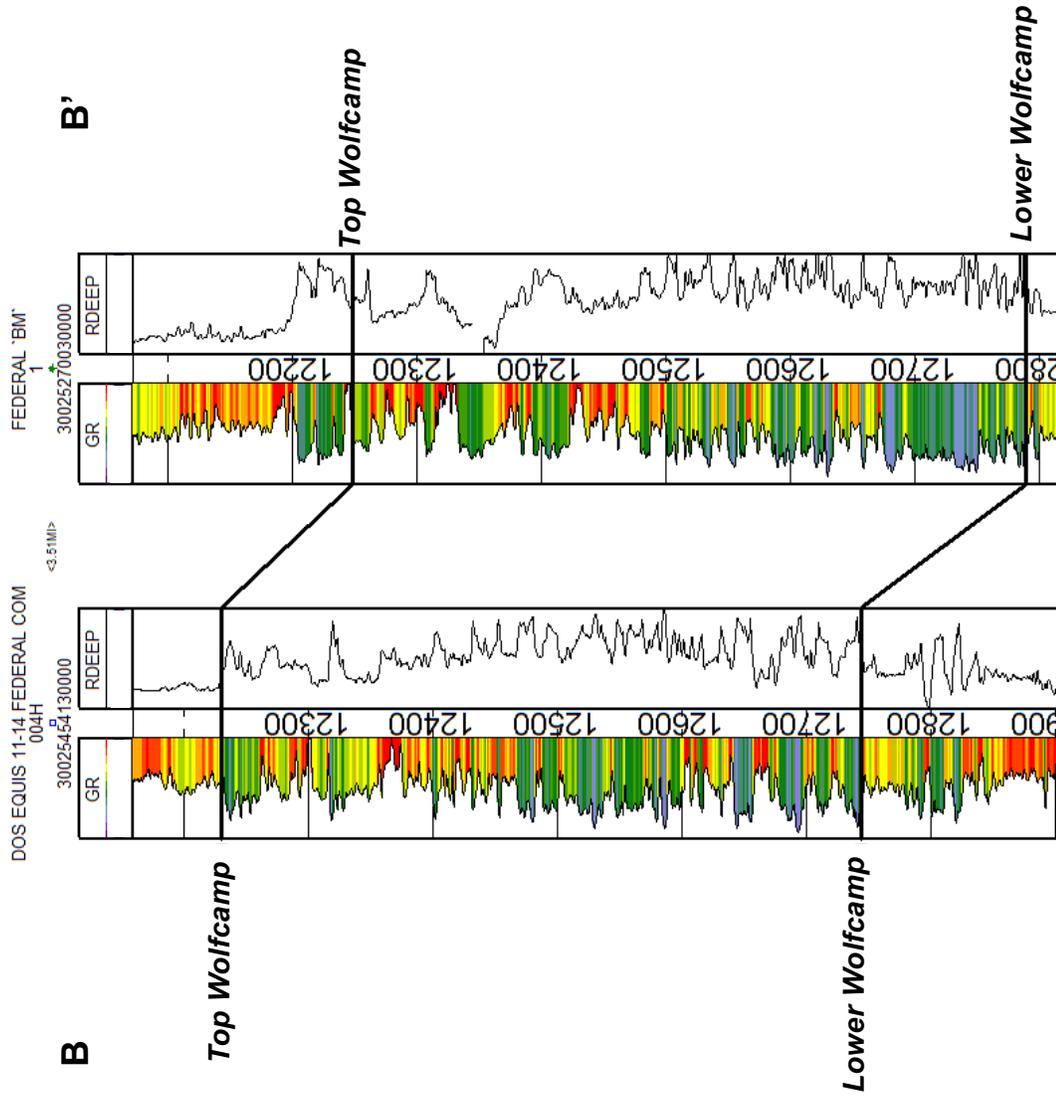
29	28	27	26	25	30	29
32	33	34	35	36	31	32
5	4	3	2	1	6	5
8	16	15	14	12	7	8
7	16	15	14	13	18	17
0	21	22	23	24	19	20
9	28	27	26	25	30	29



EXHIBIT
C-4



Trajectory Cross Section



**EXHIBIT
C-5**