


$$\underline{527} - \underline{5}$$

The diagram consists of a series of horizontal lines. A diagonal line starts from the bottom left and extends towards the top right, intersecting the horizontal lines. To the right of the horizontal lines, there is a vertical line segment.



Whiting Oil & Gas Corporation

Setback Application for the Iles & Sego, Mesaverde Group

NENE Section 27, Township 2 South, Range 98 West,
Rio Blanco County, Colorado

Cause No. 527
Docket No. 0708-SP-30

October 2007

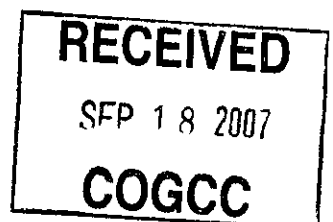


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- L1 Map showing WOGC Iles 200' setback application area

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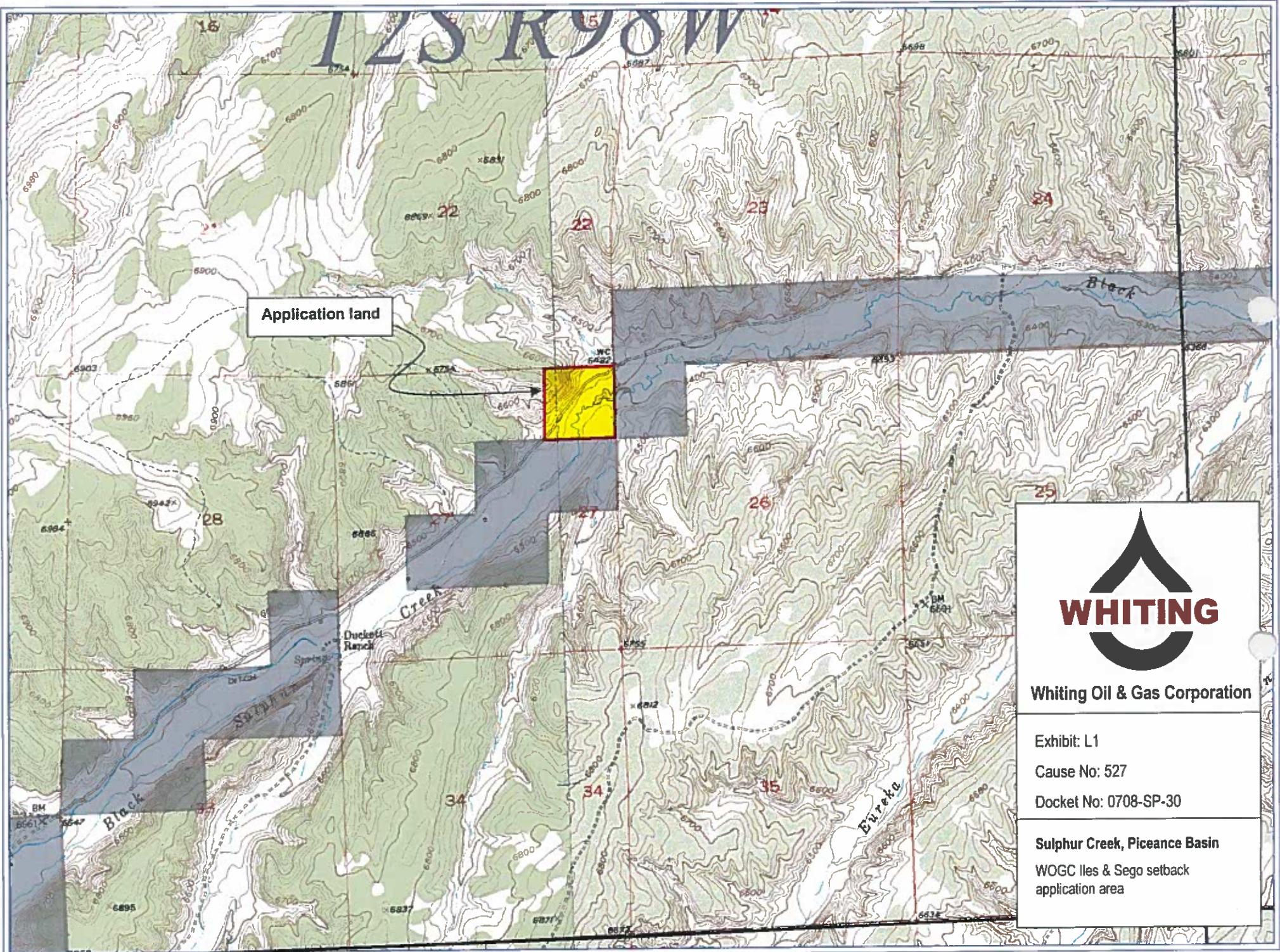
- G1. Basis for 10-acre density in Iles & Sego
- G2 Rollins structure base map indicating wells producing from Iles & Sego
- G3 Diagrammatic regional stratigraphic correlation chart for the Mesaverde Group, Piceance Basin
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- E6 Potential drainage pattern with 200' Iles setback
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Resumes

- 1 Bill R. Moomey - Landman
- 2 Dalton L. Rasmussen - Geologist
- 3 Tom Smith - Engineer



WHITING

Whiting Oil & Gas Corporation

Exhibit: L1

Cause No: 527

Docket No: 0708-SP-30

Sulphur Creek, Piceance Basin

WOGC Iles & Sego setback
application area

Basis for completing the Iles and Sego at 10-acre density

- I Two geologic models support 10-acre density
 - a Conforms to the Williams Fork fluvial sand body model – coastal plain fluvial sandstone bodies in the upper Corcoran and Cozzette members are of limited lateral extent and isolated/sealed in mudstone
 - b Conforms to the Iles shoreface sandstone model – increased density in the Iles has been granted on four separate occasions on the basis of this model which demonstrates a heterogeneous, compartmentalized reservoir with low and discontinuous reservoir properties
- II Well economics supports 10-acre density
 - a. The amount of gas in place in the Iles/Sego is not sufficient to make an Iles/Sego well economic on its own – it is only economic when produced along with gas from the Williams Fork A significant amount of gas will be left behind if the Iles and Sego are not drilled and produced along with the Williams Fork



Whiting Petroleum Corporation

EXHIBIT G1
CAUSE NO 527
DOCKET NO 0708-SP-30

SUMMARY OF ILES FORMATION
SPACING/DENSITY HEARINGS BEFORE THE COGCC

	ORDER NUMBER			
	139-46	139-51	191-10	191-25
APPLICANT	ENCANA	NOBLE ENERGY	BILL BARRETT	ANTERO RESOURCES
DATE OF HEARING	3/22/2005	10/31/2005	4/25/2005	6/5/2006
ORDER SPACING/DENSITY (ACRES)	20	10	10	10
ILES FORMATIONS ANALYZED	COZZETTE / CORCORAN	ROLLINS / COZZETTE / CORCORAN	ROLLINS/ COZZETTE/ CORCORAN	COZZETTE / CORCORAN
FEET PAY		24 - 40		74 - 83
POROSITY %	10			8.5 - 9.1
GAS SATURATION (%)				60 - 70
ILES OGIP/10 ACRES (MMCF)	296	300		332 - 525
ILES EUR (MMCF)	350 **	49	110	113 - 550
DRAINAGE AREA (ACRES)		7.9		4.9 - 14
IP	300		160 MCFD *	

* BASED ON 28 TESTS

** EUR BASED ON 20 ACRE DEVELOPMENT



Whiting Oil and Gas Corporation

Exhibit E-1

Cause 527

Docket No. 0708-SP-30

Volumetric Calculation of Original Gas-in-Place for Iles and Sego Formations

	Feet of Pay, ft	Porosity, %	Water Saturation, %	Bgi, rcf/scf	OGIP/Ac, MMCF/AC	OGIP/ 10 Acre, MMCF
Rollins	7	10.6	46.0	0.0040	4.3	42.8
Cozzette	23	11.3	43.5	0.0040	16.0	159.7
Corcoran	24	9.6	43.7	0.0040	14.4	144.3
Sego	7	10.4	48.0	0.0040	4.1	41.3
Total/Avg	61	10.5	45.3		38.8	388.1

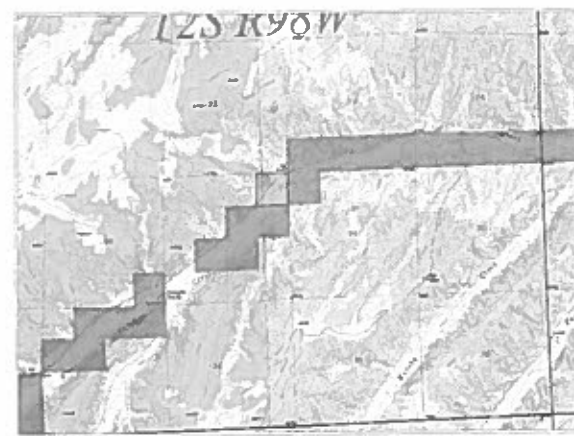
Assumptions:

BH Temperature = 220 F

BH Pressure = 4850 psi

Estimate of Iles Original Gas In Place for Application Lands

1440 Acres x 38.8 MMCF/AC = 56 BCF



Whiting Oil and Gas Corporation

Exhibit E-2

Cause 527

Docket No. 0708-SP-30

Single Well Economic Evaluation for Iles and Sego Only Development

Assumptions:

Original Gas In Place – Iles and Sego, MMCF (10 Acres)	388
Recovery Factor	70%
Gross Ultimate Recovery - Gas, MMcf	272
First Month Gas Production, Mcfd	350
Royalty Burden	12 5%
Severance and Ad Valorem Taxes	8 0%
Gross Drilling and Completion Costs, \$M (11,000' test, assume 3 completion intervals)	2,500
Monthly Lease Operating Costs, \$m	3 3
Gas Gathering and Treating Expenses, \$/Mcf	0 50
Shrinkage and Fuel	6 0%

Product Pricing:

Gas Price, \$/MCF (flat NYMEX Price of \$6 79/MMBtu, less \$0 75 differential)	6 15
BTU Content, Btu/scf	1,153

Economic Summary:

Undiscounted Payout, yrs	Does not pay out
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Whiting Oil and Gas Corporation

Exhibit E-3

Cause 527

Docket No 0708-SP-30

Single Well Economic Evaluation

Incremental Evaluation of Adding Iles and Sego Completions to a Willams Fork Test

Assumptions:

Original Gas In Place – Iles and Sego, MMCF (10 Acres)	388
Recovery Factor	70%
Gross Ultimate Recovery - Gas, MMcf	272
First Month Gas Production, Mcfd	350
Royalty Burden	12 5%
Severance and Ad Valorem Taxes	8 0%
Incremental Gross Drilling and Completion Costs, \$M (drill an additional 1,400' to Iles, and, assume 3 completion intervals in Iles)	434
Monthly Lease Operating Costs, \$m	3 3
Gas Gathering and Treating Expenses, \$/Mcf	0 50
Shrinkage and Fuel	6 0%

Product Pricing:

Gas Price, \$/MCF (flat NYMEX Price of \$6 79/MMBtu, less \$0 75 differential)	6 15
BTU Content, Btu/scf	1,153

Economic Summary:

Undiscounted Payout, yrs	1 9
Undiscounted Return on Investment	1 8 to 1
Exceeds Whiting Oil and Gas Requirements	

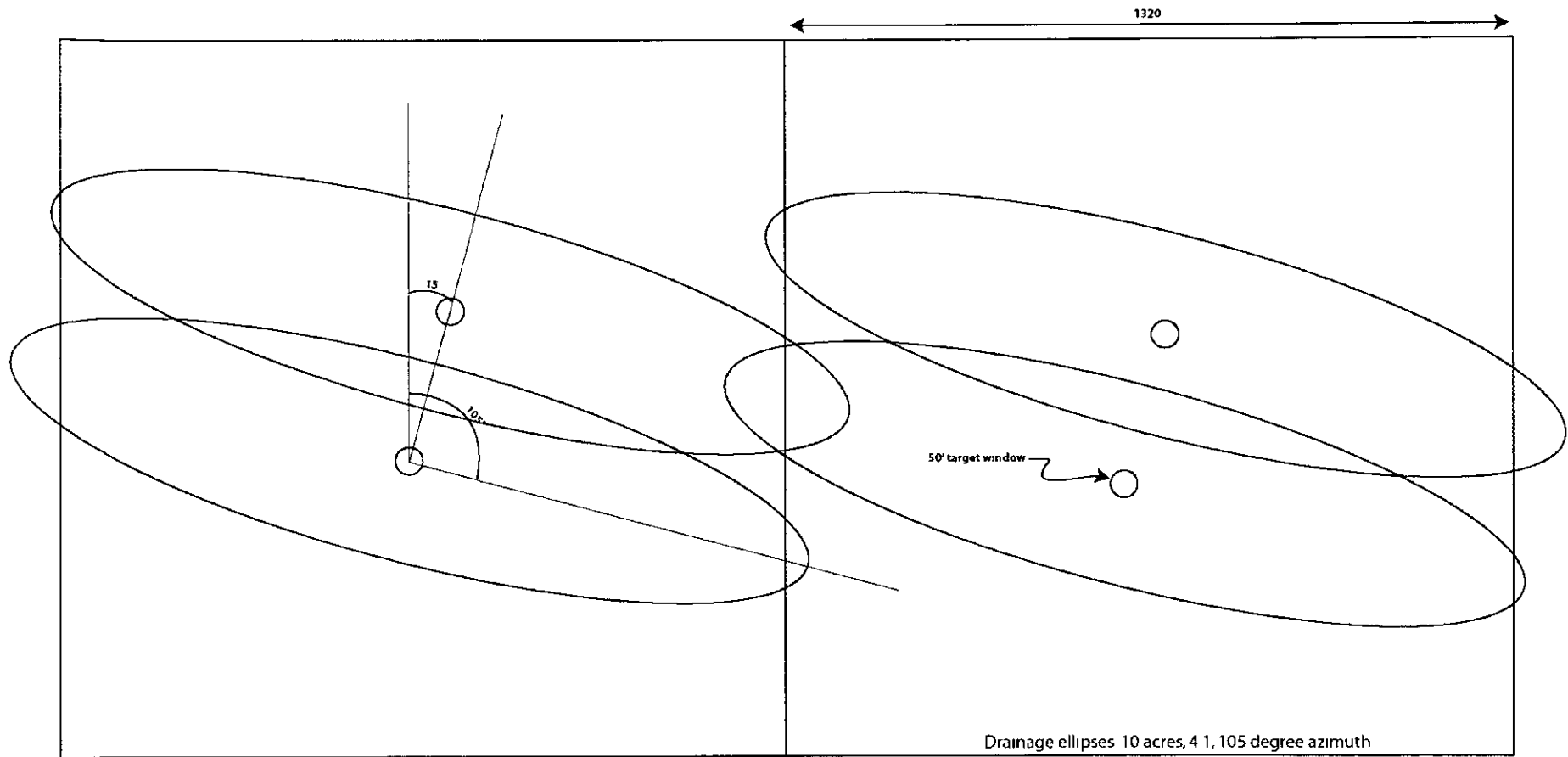


Whiting Oil and Gas Corporation

Exhibit E-4

Cause 527

Docket No 0708-SP-30



Placement of wells in two adjacent 40-acre blocks with 400' well setback

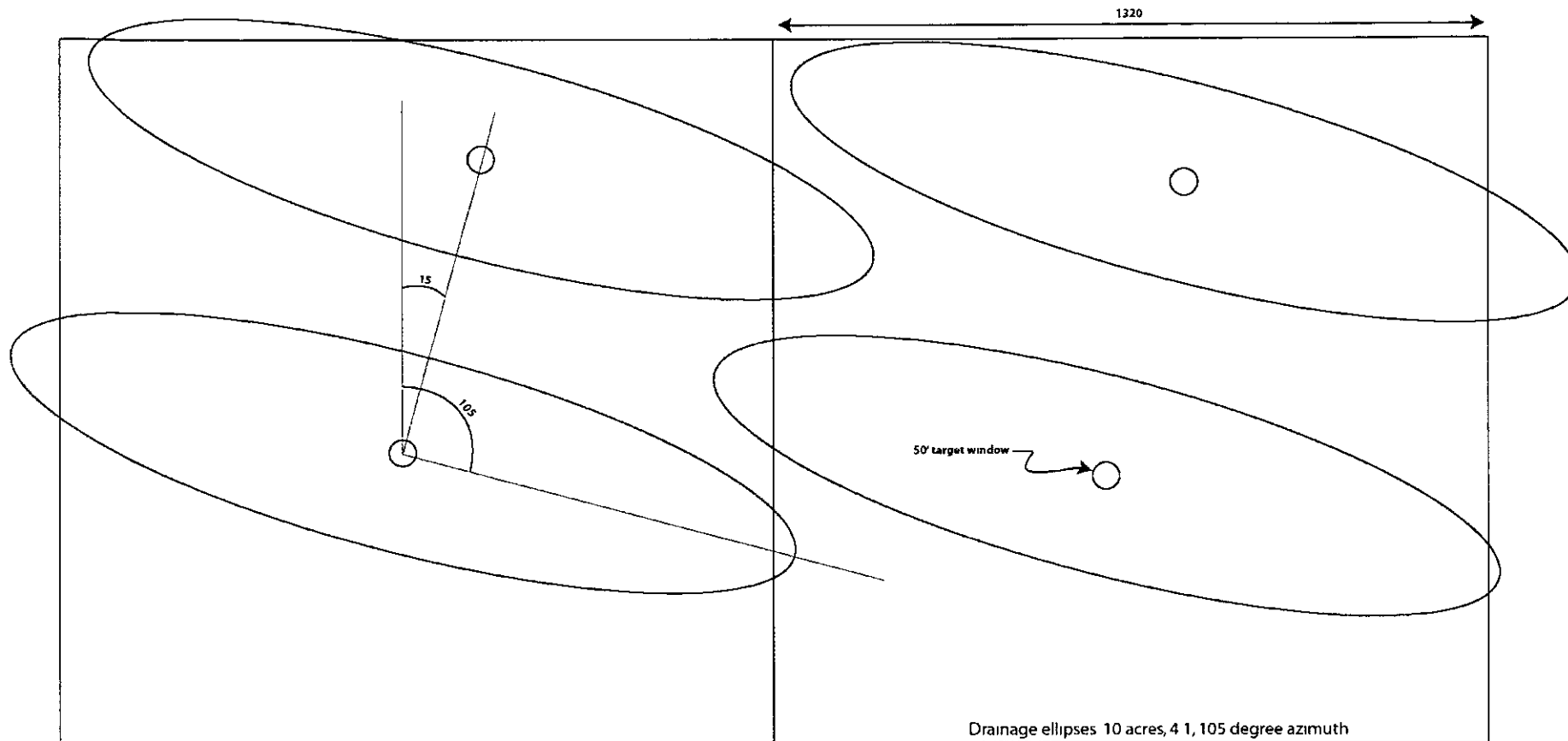


Whiting Oil and Gas Corporation

Exhibit E5

Cause 527

Docket No 0708-SP-30



Placement of wells in two adjacent 40-acre blocks with 200' well setbacks



Whiting Oil and Gas Corporation

Exhibit E-6

Cause 527

Docket No 0708-SP-30

Summary

- Previous testimony to the COGCC concerning the Iles Formation presented estimated EUR's of 49 to 550 MMCF and drainage areas of 4.9 to 14 acres. The current spacing order governing the application lands restricts the Iles to a 400' setback, whereas the Williams Fork has a 200' setback limit, both allow 10 acre development or 4 wells per 40 acres
- A volumetric calculation of original gas in place in the Iles and Sego Formations on the application lands indicate 388 MMCF/ 10 Acres, and using a 70% recovery factor, an EUR of 272 MMCF per 10 acres
- The application lands contain an estimated original gas in place of 56 BCF in the Iles and Sego formations
- Under the current spacing order governing the application lands, a total of 48 ten acre Iles completions can not be drilled, this effectively strands 13 BCF of gas that is available for production if a ten acre , 200' setback Williams Fork well could be deepened 1400' through the Iles and Sego Formations
- An economic evaluation of drilling and completing a well only in the Iles and Sego formations results in an uneconomic project. Therefore, the Iles and Sego formations are uneconomic to develop as stand alone projects and need to be combined with Williams Fork completions for economic development.
- An evaluation of the incremental costs to drill a well designed to complete the Williams Fork deeper to the Iles and Sego formations and complete result in an acceptable economic investment
- 200' lease boundary setbacks are required in order to develop the Iles and Sego formations in conjunction with the Williams Fork and prevent waste of a proven resource base.



Whiting Oil and Gas Corporation

Exhibit E-7

Cause 527

Docket No 0708-SP-30