



BARRICK

Managing Split Mineral and Surface Interests in Flexicadastre

Presented By

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INTRODUCTION

- Who am I and why am I here?



Today's Presentation

- What is “fee property”?
- What does split interest mean?
- What are the issues related to managing fee property in Flexicadastre?
- How we (finally!) resolved the issues.

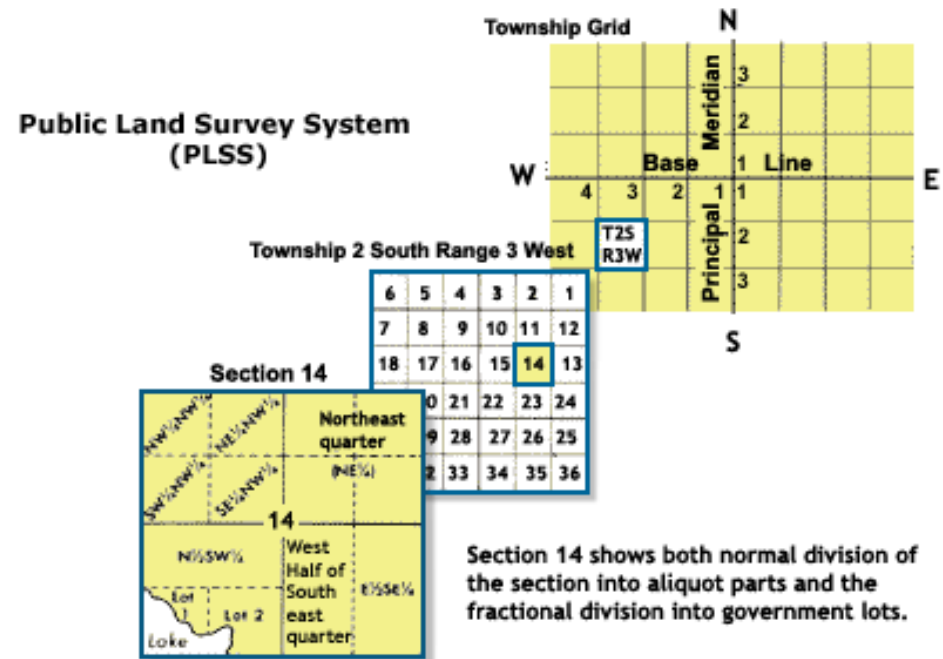
We **burned** a LOT of brain cells!

- What the data and map look like now.
- Things remaining to do.
- Conclusion.
- Questions.



What is “fee” property?

- For our purposes, it is owned or leased interests except unpatented and patented claims. Can include platted lots or tracts. Does not include easements, ROWs, Confidentiality Agreements.
- The Public Land Survey System (PLSS) is a way of subdividing and describing land in the United States. All lands in the public domain are subject to subdivision by this rectangular system of surveys, which is regulated by the U.S. Department of the Interior, Bureau of Land Management (BLM).



One section = 640 Acres / 259 Hectares

One section = 1 square mile / 2.6 square kilometers

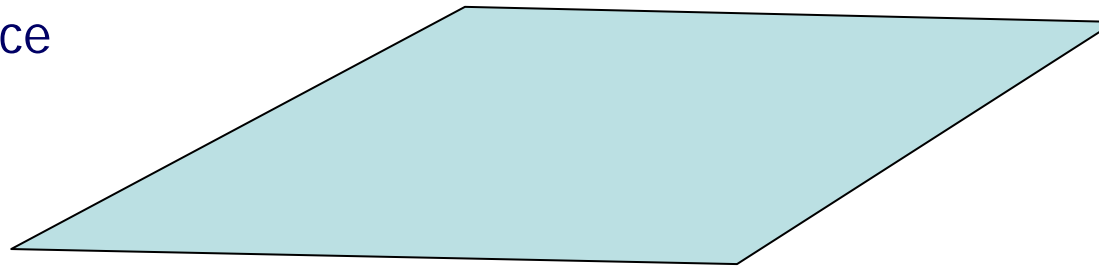
What does split interest mean?

- The surface and mineral ownership are treated as separate ownerships.
- Let's look at some examples.

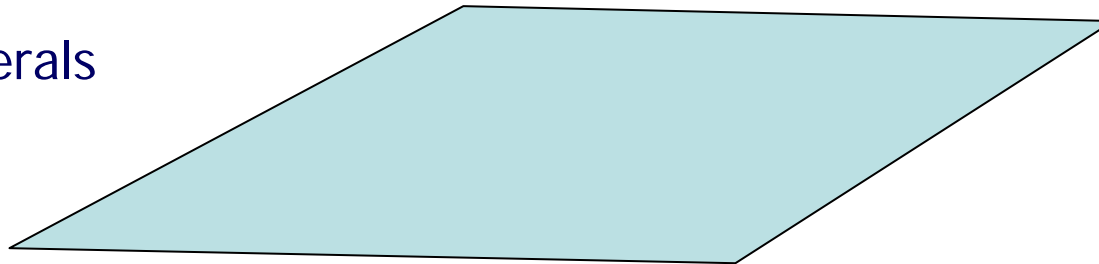
100% Ownership

Deed into Barrick

100% Surface



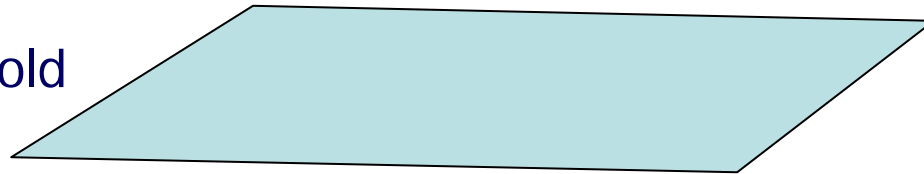
100% Minerals



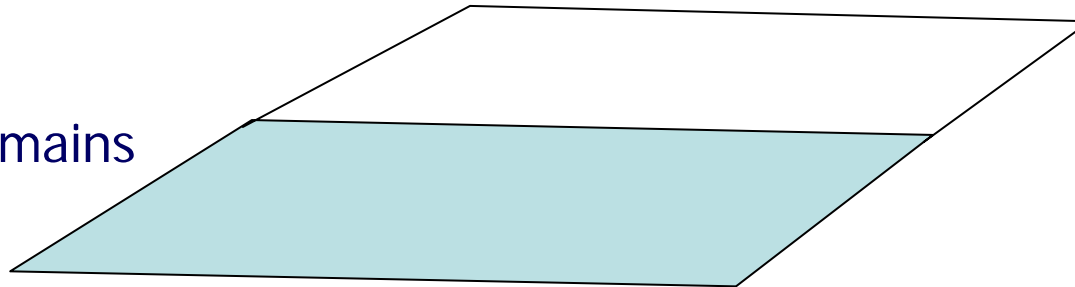
Sold a portion of the Surface

Deed out to buyer

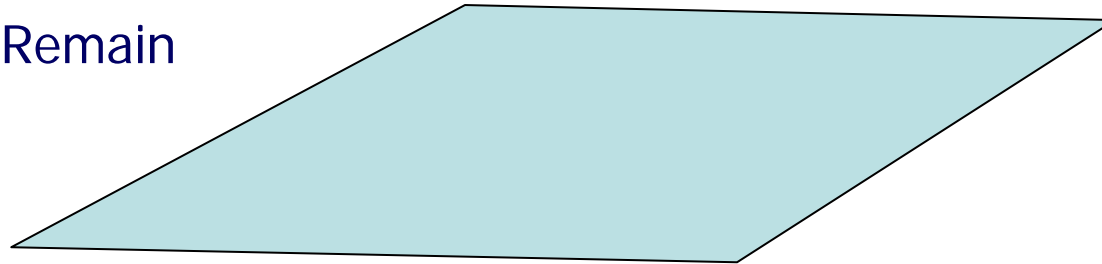
50% Surface Sold



50% Surface Remains



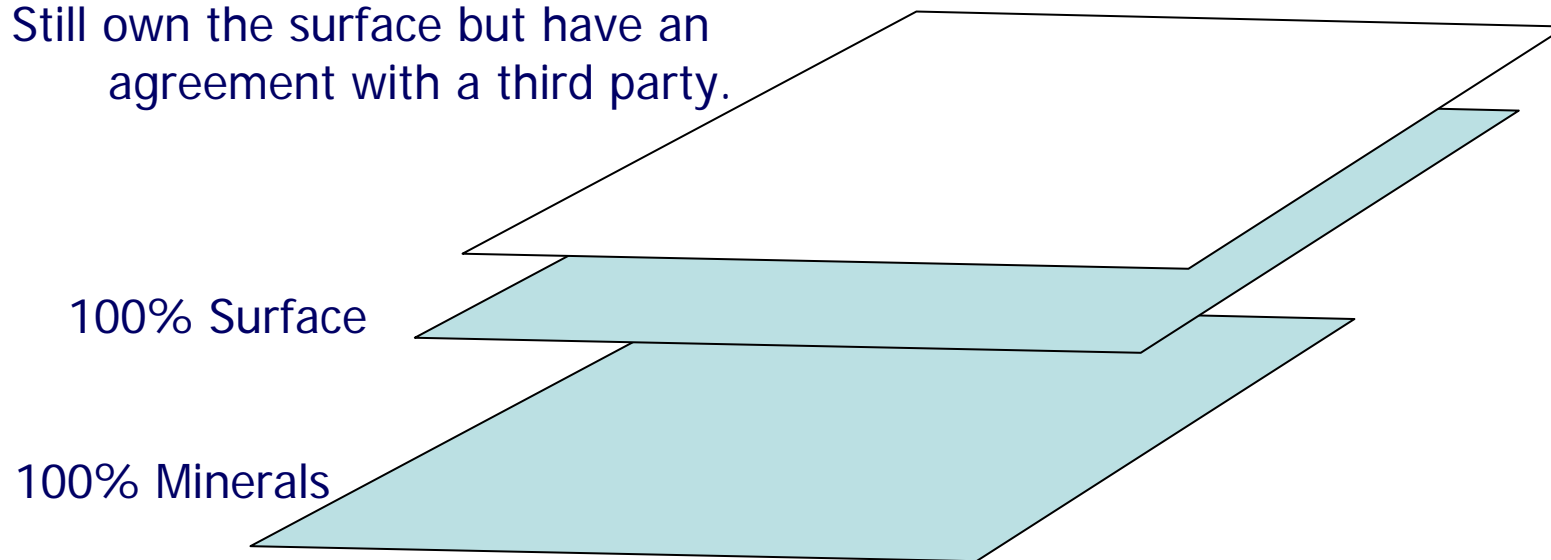
100% Minerals Remain



100% Ownership With Surface Only Leased Out

Surface lease for cattle grazing

Still own the surface but have an agreement with a third party.



Problems

- Legacy system
 - Did not have clear distinction between mineral and surface descriptions.
 - Indicated mineral and surface in parties rather than on the license.
- Property description originally imported into License comments.
- Unable to show attributes on map because mineral and surface was in parties and there is only one shape per license.
- Let's take a quick look at some of these problems.

FlexiCadastre - Microsoft Internet Explorer provided by Barrick Gold Corporation

Address: http://usasfcfe1/FlexiCadastre/Flexicadastre.htm

User: Karen Auchampach
Version: 2.2.1 (Release) Database: 2.2.1.1935
Copyright: © Spatial Dimension 2005 - 2007

FlexiCadastre Barrick North America

License Search

Home
Diary
Regions
Project
Claim Group
Mineral Survey
Licenses
Actions
Approvals
Companies
People
Agreements
Documents
Map
Reports
My Settings
Admin Tools
Help
Legal
Logout

License > Details [EDIT]

License Code: FP6814 License Type: Fee Property Owners: BARRICK GOLDSTRIKE MINES INC. (100%)
License Name: G991 BLM 1997 EXCHANGE N-57578-BLM TO BGMI Status: Active Expiry Date:

General Parties Agreements Conditions Reference Codes Shape Map References Commitments Actions Open Actions Closed Documents Groups
Resources Related Licenses Roles

There are 2 Parties associated with this license. Extract: [icon]

Party	Type	Status	Party Type	Communication Party	Physical Address	Postal Address	%	Area	Nett Area
BARRICK GOLDSTRIKE MINES INC.	Company	Active	Mineral	<input checked="" type="checkbox"/>	P. O. Box 29, Elko, Nevada		100.000000		
BARRICK GOLDSTRIKE MINES INC.	Company	Active	Surface	<input type="checkbox"/>	P. O. Box 29, Elko, Nevada		100.000000		

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Percentage of ownership carried in Parties

If shape is the same for minerals and surface this model might work. If shape is different for minerals and surface this does not work. In this example there is no acreage in the shape so no net acreage is calculated here. Unable to separately map and attribute surface & minerals.

Local intranet



License > Details

License Code:	FP2254	License Type:	Fee Property-Surface	Project:	MCL
License Name:	C630 SKLAR, H. A.	Status:	Active	Claim Group:	
License Ownership:	Homestake Mining Company (100%)	Expiry Date:		Affidavit Group:	

- General
- Parties
- Agreements
- Conditions
- Reference Codes
- Shape
- Map References
- Commitments
- Actions Open
- Actions Closed
- Doc
- Resources
- Related Licenses
- Roles

<p>License Code: <input type="text" value="FP2254"/></p> <p>Jurisdiction: <input style="border: none; background-color: #f0f0f0; width: 100%;" type="text" value="United States"/></p> <p>License Type: <input style="border: none; background-color: #f0f0f0; width: 100%;" type="text" value="Fee Property-Surface"/></p> <p>Status: <input style="border: none; background-color: #f0f0f0; width: 100%;" type="text" value="Active"/></p> <p>Interest: <input style="border: none; background-color: #f0f0f0; width: 100%;" type="text" value="Owned"/></p> <p>Date Applied: <input style="width: 100%;" type="text"/> </p> <p>Date Pegged: <input style="width: 100%;" type="text"/> </p> <p>Date Granted: <input style="width: 100%;" type="text"/> </p> <p>Date Expires: <input style="width: 100%;" type="text"/> </p> <p>Date Renewed: <input style="width: 100%;" type="text"/> </p>	<p>License Name: <input type="text" value="C630 SKLAR, H. A."/></p> <p>Application Number: <input type="text"/></p> <p>Old License Code: <input type="text"/></p> <p>Accounting Code: <input type="text"/></p> <p>Region: <input style="border: none; background-color: #f0f0f0; width: 100%;" type="text" value="North America"/></p> <p>License Term: <input type="text"/></p> <p>License Year: <input type="text"/></p> <p>Renewal Period: <input type="text"/></p> <p>Responsible Office: <input style="border: none; background-color: #f0f0f0; width: 100%;" type="text"/></p> <p>On Hold: <input type="checkbox"/></p> <p>Archive: <input type="checkbox"/></p>
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T11N R5W SEC 11: E/2NE/4; NE/4SE/4.

Comment:

Property descriptions were imported as a license comment.
 Property descriptions do not belong in comments.

Map Reference Qualifier

- Map Reference Qualifier was added to the license location information.
- Property description that was originally imported into License comments was re-imported into the qualifier.
- This allows the property description to be displayed with the location information - Country, State, County, Township, Range, Section.
- Let's take a look at an example.

Example of Map Reference Qualifier

[License](#) > **Details** [<--](#) [EDIT](#) [-->](#)

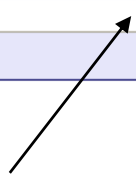
License Code:	FP2254	License Type:	Fee Property-Surface	Project:	MCLAUGHLIN MINE
License Name:	C630 SKLAR, H. A.	Status:	Active	Claim Group:	
License Ownership:	Homestake Mining Company (100%)	Expiry Date:		Affidavit Group:	

[General](#) [Parties](#) [Agreements](#) [Conditions](#) [Reference Codes](#) [Shape](#) [Map References](#) [Commitments](#) [Actions Open](#) [Actions Closed](#) [Documents](#) [Groups](#)
[Resources](#) [Related Licenses](#) [Roles](#)

[GET MAP REFERENCES](#)

There are 2 map references in the list.

Full Map Reference	Category	Map Reference	Abbreviation	In	Qualifier
United States, California, Lake	County	Lake		California	
United States, Mount Diablo, 11N 05W, 11	Section	11		11N 05W	E/2NE/4; NE/4SE/4.



Only a Partial Solution

- Map Reference Qualifier was only a partial solution to the problem.
- Surface owner not showing in license search grid.
- Still unable to attribute minerals and surface on the map.
- After many months of discussions and arguments....


The Solution!

- Two new license types:
 - Fee Mineral
 - Fee Surface
- Each license type has own attributes:
 - Acreage, shape, ownership, description.
- A license code generator was set up - FPxxxx.
- Fee property groups were added.
- Let's look at some examples of how this works.



Example of Surface and Mineral Ownership

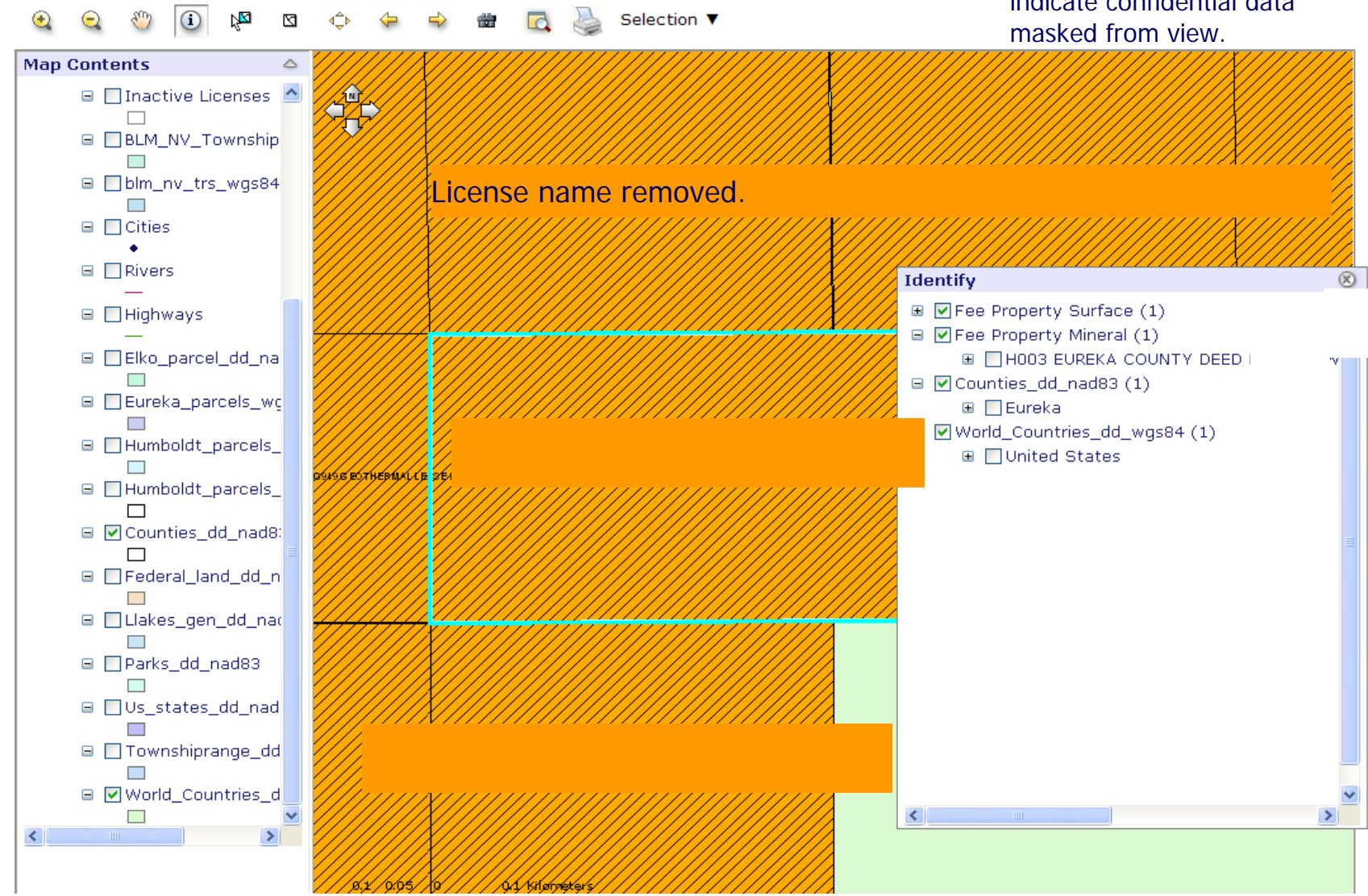
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All	Map	Ggl	Code	Name	Parties	Type	Interest	Status	Expires	Area	Map Reference	Project	Claim Group
<input type="checkbox"/>			FP8915	H003 EUREKA COUNTY DEED	Barrick (100%)	Fee Surface	Owned	Active		80.11 NV, Eureka; 36N 49E, 24 AC N/2NW/4 (Parcel 1)			
<input type="checkbox"/>			FP10134	H003 EUREKA COUNTY DEED	Barrick (100%)	Fee Mineral	Owned	Active		NV, Eureka; 36N 49E, 24 N/2NW/4 (Parcel 1)			

Now let's take a look at these licenses on the map.

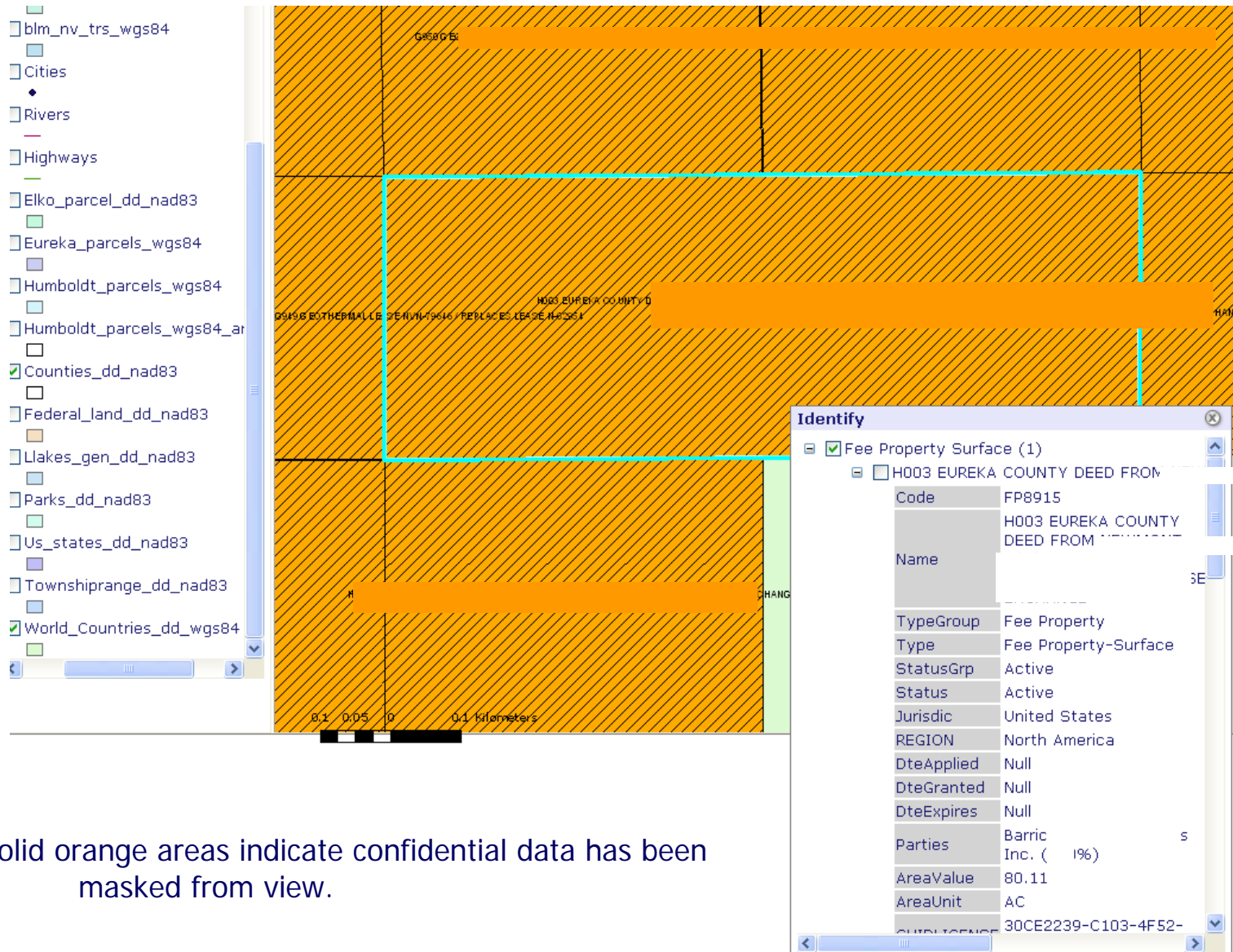
Split Interest on the Flexi Development Map

Solid orange areas indicate confidential data masked from view.



The screenshot shows a GIS application interface. On the left is the 'Map Contents' panel with a tree view of layers including 'Inactive Licenses', 'BLM_NV_Township', 'blm_nv_trs_wgs84', 'Cities', 'Rivers', 'Highways', 'Elko_parcel_dd_na', 'Eureka_parcel_wgs84', 'Humboldt_parcel_wgs84', 'Counties_dd_nad83', 'Federal_land_dd_nad83', 'Lakes_gen_dd_nad83', 'Parks_dd_nad83', 'Us_states_dd_nad83', 'Townshiprange_dd_nad83', and 'World_Countries_dd_nad83'. The main map area is mostly covered by orange hatched areas, with a cyan rectangle highlighting a specific region. Text on the map reads 'License name removed.' and '09196 BOTHERMALLE SE1'. A scale bar at the bottom indicates 0.1, 0.05, and 0.1 Kilometers. On the right, an 'Identify' window is open, showing a list of features: 'Fee Property Surface (1)', 'Fee Property Mineral (1)' (with sub-item 'H003 EUREKA COUNTY DEED'), 'Counties_dd_nad83 (1)' (with sub-item 'Eureka'), and 'World_Countries_dd_wgs84 (1)' (with sub-item 'United States').

Split interest on the Flexi Development Map



Solid orange areas indicate confidential data has been masked from view.

Fee Property Groups

- Needed for acreage (area) reporting.
- Created to hold fee property licenses.
- Can have multiple groups associated with one agreement.
- The group outline can be mapped.
- Management tool.
- Let's take a look at an example.

Example of Fee Property Groups

[Fee Property Group](#) > Search [Clear Search Criteria](#)

Name: Group Type: Status:

Code: Region: Saved Searches:

Party: Jurisdiction:

[Advanced](#)

There are 3 Groups in the list. Extract: Tools:

1















Del.	Name	Code	Interest	Status	Jurisdiction	Licenses	Agreements	Map Reference
	Clovers Ranch (Squaw Valley Ranch)	FPG112	Owned	Active	United States	65	1	NV, Elko, Humboldt
	Squaw Valley (Squaw Valley Ranch)	FPG113	Owned	Active	United States	223	1	NV, Elko
	White House Ranch (Squaw Valley)	FPG100	Owned	Active	United States	85	1	NV, Humboldt

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These three groups are part of one deed covering 101,000 acres or 40,873 hectares.

Example of Fee Property Groups

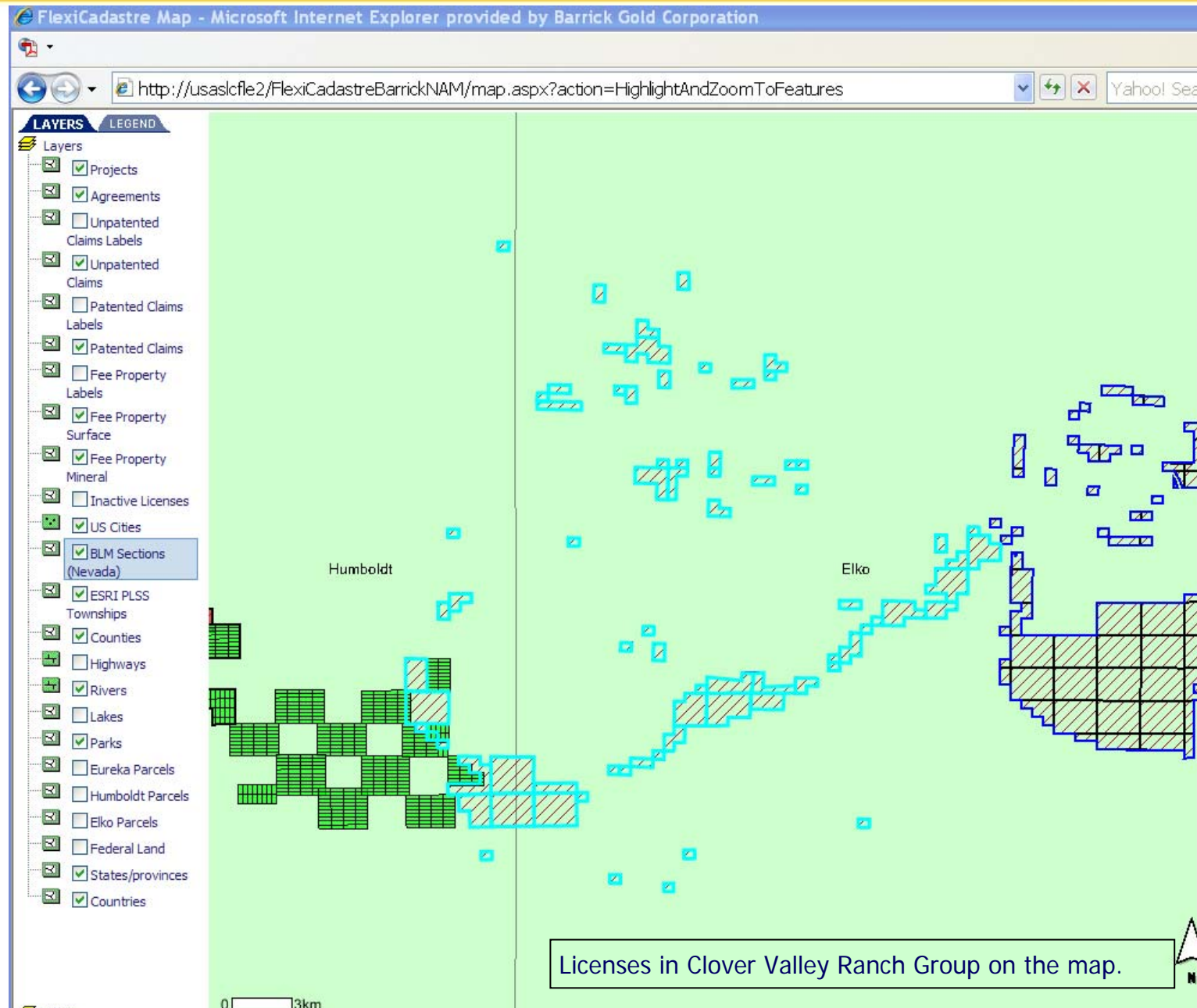
Group Name: **Clovers Ranch (Squaw Valley Ranch)**

General	Parties	Licenses	Shape	Map References	Agreements	Documents	Actions Open	Actions Closed	Resources	Related Groups	Roles				
There are 65 Licenses associated with this Group. (0.00 AC)															
Report:  View:  Extract:    Tools:   															
1															
All	Map	Ggl	Code	Name	Parties	Type	Interest	Status	Granted	Expires	Pegged	Area	Map Reference	Project	Fee Property Group
<input type="checkbox"/>			FP13483	ELLISON 6/1/95 DEED TO E		Fee Surface	Owned	Active					NV, Elko; 37N 44E, 2 LOT 4	SQUAW VALLEY RANCH	Clovers Ranch (Squaw Valley Ranch)
<input type="checkbox"/>			FP13484	E I E		Fee Surface	Owned	Active					NV, Elko; 37N 44E, 3 ALL	SQUAW VALLEY RANCH	Clovers Ranch (Squaw Valley Ranch)
<input type="checkbox"/>			FP13485	E I E		Fee Surface	Owned	Active					NV, Elko, Humboldt; 37N 44E, 4 ALL; Excepting Deeded HWY & RR ROW	SQUAW VALLEY RANCH	Clovers Ranch (Squaw Valley Ranch)

Let's look at all 65 licenses on the map.



Barrick Gold of North America – Managing Split Ownership Interests in Flexicadastre



Maintaining the Data

- Lease Analyst, Landman and GIS Specialist work together to review data.
- Use of mass upload spreadsheet for the licenses.
- Once uploaded, GIS specialist links tabular data to the spatial data.
- Scanned copy of title insurance policy and deed stored with the agreement record for reference.
- Calculated area (from map) is official area unless there is a reason for a more exact area figure.
 - In Admin Tools there is a batch update function to update official area from the calculated area.

The To Do List

- Assign all fee licenses to a fee property group.
- Work closely with GIS Specialist to clean up the existing data.
- Populate the official area for all fee licenses.
 - Official area is used for acreage reports and search grids.
- Create the group shapes.

Conclusion

- A simple solution to a complex problem.
- Data entry and mapping must be carefully managed to ensure data integrity.
- This model will
 - Allow for fee mineral and fee surface layers on the map.
 - Allow separate attributes for each ownership type.
 - Better support multiple agreements related to split ownership interests.
 - Allow for managing the various property taxes on the surface and mineral ownerships.
- Questions?

FAMOUS LAST WORDS

from our GIS Specialist

I don't know how it works...

I think it's magic!

