WILD HORSE ANTICLINE PROSPECT

Big Horn County, Wyoming

Executive Summary

Google Earth Image of Wild Horse Anticline Viewed Toward the East
Previous Test Wells, Apex and Proposed Wildcat Location Indicated
Apex of Wild Horse Anticline Is Visible In Middle-Background
Indicated By Horizontal Strata of the Cody Shale

Prepared by:
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Exploration Geologist
**Introduction**

The Wild Horse Anticline is located in the prolific Bighorn Basin of Wyoming about 5 miles northeast of the town of Basin. This structure demonstrates excellent four-way closure encompassing an area of more than 1900 acres. Only four oil test wells have been drilled and these have been located far down dip on the flanks of the structure. The untested area of closure above these wells is approximately 1140 acres.

The potential for high rates of production and large reserves is excellent. Torchlight Oil Field, 4 miles to the southwest, has produced 17 million barrels of oil. A Madison Limestone well drilled there in 1968 penetrated a cavern and came in flowing 4,400 BOPD. This well produced 858,000 barrels of oil in the first 16 months of production.

Four primary producing zones exist in the Wild Horse Anticlinal structure. The Frontier Formation offers the possibility of sweet green oil and gas at shallow depths. Sandstone strata, including the Peay Sand member of this formation, have produced over one million barrels of oil at nearby Greybull Oil Field. The Paleozoic Phosphoria Formation, Tensleep Sandstone and Madison Limestone are deeper targets that are reliable and prolific producers throughout the Bighorn Basin on similar structures.

**Geology**

Data from satellite imagery, high-altitude color-infrared photography viewed in stereo, the Wild Horse Flats Quadrangle and field observations were used to compile the map of the surface geology. Previously drilled wells in the area, although helpful in planning a wildcat test, are too sparsely spaced to allow meaningful sub-surface mapping.

Detailed geologic mapping has revealed a primary and a secondary apex within the overall area of closure of the Wild Horse Anticline. The surface geology is dominated by only one formation--the Cody Shale. It was decided to map the Quaternary stream deposits since some of the stream segments are controlled by geologic structure. In this area, the Cody Shale contains several strata of varying competence. This erosional contrast is expressed in the topography and aids in mapping the geology. Several key beds were mapped but they follow the topographic contours so closely that it was decided not to place them on the topo-based map.

A technique referred to as form-line analysis was used to create a structural contouring of the surface structure. The form-lines are controlled by strike, relative dip, key beds and outcrop pattern. Although this is a qualitative analysis, it is an accurate representation of the shape of the surface structure. It can be seen that the northeast limb of the anticline is considerably steeper than the southwest limb. As a consequence of this asymmetry, the axial plane is inclined to the southwest. Therefore, as the surface structure is projected to a subsurface formation, it must be migrated to the southwest proportionate to the depth of the projection.

A proposed test well location was staked in the field as shown in the following photograph. It was selected to be near the primary surface apex but on the southwest side of the axis to compensate for migration of the apex at the Paleozoic oil zones. An important additional consideration is the locally rough terrain which sets practical limits as to where a location can be built and a drilling rig transported. An access road exists near the location which is not indicated on the 1960-vintage quadrangle map.
Wild Horse Flats Quadrangle showing close proximity of major production at Torchlight Oil Field (4 miles SW) and Lamb Oil Field (2.5 miles SW). A Madison Limestone well drilled in 1968 at Torchlight hit a cavern and flowed 4,400 BOPD.
Proposed location staked on flat-lying strata near apex of the Wild Horse Anticline
Wildcat Test Well and Previously Drilled Wells

The well records for each well drilled in the mapped area were examined in detail. The elevation of the Phosphoria Formation top was calculated and placed on the map next to the well symbol. One well, the Ward Alfred & Son, was not drilled deep enough to penetrate the Paleozoics. The well data reinforce the form-line analysis when the analysis is migrated to the southwest a few hundred feet to compensate for the anticline’s asymmetry. The Sierra Trading Corporation well is an exception. This well calculates as being the second highest well in the mapped area despite its location being further down the flank of the anticline. No explanation for this anomaly could be found.

A formation thickness matrix was prepared and a weighted average thickness for each interval was determined. Based on the these thicknesses, and the assumption that the wildcat well would top the Frontier Formation at approximately 120 feet drilling depth, the following depth projections are calculated for the wildcat test well:

<table>
<thead>
<tr>
<th>Formation</th>
<th>Depth</th>
<th>Elevation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cody Shale</td>
<td>Surface</td>
<td>+4,420</td>
<td>May need to be placed behind surface casing to prevent caving</td>
</tr>
<tr>
<td>Frontier Fm.</td>
<td>120</td>
<td>+4,300</td>
<td>Moderate oil &amp; gas potential</td>
</tr>
<tr>
<td>Mowry Shale</td>
<td>637</td>
<td>+3783</td>
<td></td>
</tr>
<tr>
<td>Thermopolis Shale</td>
<td>1080</td>
<td>+3340</td>
<td>Muddy sandstone member has minor oil &amp; gas potential</td>
</tr>
<tr>
<td>Cloverly Fm.</td>
<td>1642</td>
<td>+2778</td>
<td>Minor oil &amp; gas potential</td>
</tr>
<tr>
<td>Morrison Fm.</td>
<td>1894</td>
<td>+2526</td>
<td>Minor oil potential</td>
</tr>
<tr>
<td>Sundance Fm.</td>
<td>2204</td>
<td>+2216</td>
<td>Minor oil potential</td>
</tr>
<tr>
<td>Gypsum Springs Fm.</td>
<td>2514</td>
<td>+1906</td>
<td></td>
</tr>
<tr>
<td>Chugwater Group</td>
<td>2689</td>
<td>+1731</td>
<td></td>
</tr>
<tr>
<td>Dinwoody Fm.</td>
<td>3399</td>
<td>+1021</td>
<td></td>
</tr>
<tr>
<td>Phosphoria Fm.</td>
<td>3445</td>
<td>+975</td>
<td>Excellent oil potential</td>
</tr>
<tr>
<td>Tensleep Sandstone</td>
<td>3711</td>
<td>+709</td>
<td>Excellent oil potential</td>
</tr>
<tr>
<td>Amsden Fm.</td>
<td>3822</td>
<td>+598</td>
<td></td>
</tr>
<tr>
<td>Madison Limestone</td>
<td>3982</td>
<td>+438</td>
<td>Excellent oil potential</td>
</tr>
<tr>
<td>TD</td>
<td>4282</td>
<td>+138</td>
<td>Evaluate upper 300 feet</td>
</tr>
<tr>
<td>TD</td>
<td>4282</td>
<td>+138</td>
<td></td>
</tr>
</tbody>
</table>

Economics

As with any wildcat prospect, economic expectations are speculative. In the following calculation for potential oil in place, the area used is the closed area above the highest dry hole, the Cominco American #2. This area is 1140 acres = the variable A. The reservoir parameters of thickness (h) and porosity (Φ) are taken from published data. Reservoir data from the Greybull Oil Field (five miles northwest) is used for the Frontier Formation and data from the Torchlight Oil Field (four miles to the southwest) is used for the Paleozoic formations. The variable oil saturation (So) is not given and assumed to be greater than 50% in order to be productive. Therefore, So = 50% is used throughout the calculations.
Frontier Formation Potential
The reservoir parameters at Greybull Oil Field are for the Peay sandstone member of the Frontier Formation. The pay thickness is given as 100-110 feet but the field-observed 35 feet is used here. The average porosity is given as 30%. The barrels of oil in place calculate:

\[ BO \text{ (in place)} = VAh\Phi S_o \]

where \( V \) (volume constant) = 7,758 bbls/ac. Ft

\[ BO \text{ (in place)} = (7,758)(1140 \text{ acres})(35 \text{ feet})(30\%)(50\%) = 46,431,630 \text{ BO} \]

Phosphoria Formation Potential
The reservoir parameters at Torchlight Oil Field are used for the Phosphoria Formation. The pay thickness is given as 30 feet and the average porosity as 12%. The barrels of oil in place calculate:

\[ BO \text{ (in place)} = (7,758)(1140)(30)(12\%)(50\%) = 15,919,416 \text{ BO} \]

Tensleep Sandstone Potential
The reservoir parameters at Torchlight Oil Field are used for the Tensleep Sandstone. The pay thickness is given as 35 feet and the average porosity as 14%. The barrels of oil in place calculate:

\[ BO \text{ (in place)} = (7758)(1140)(35)(14\%)(50\%) = 21,668,094 \text{ BO} \]

Madison Limestone Potential
The reservoir parameters at Torchlight Oil Field are used for the Madison Limestone. The pay thickness is given as 70 feet and the average porosity is given as 16%. The barrels of oil in place calculate:

\[ BO \text{ (in place)} = (7758)(1140)(70)(16\%)(50\%) = 49,527,072 \text{ BO} \]

Lease WYW173230
This lease is a 10-year term federal/BLM lease with an effective date of October 1, 2006. The lease includes 1,777 acres and covers the entire prospective area above the highest dry hole. There are no restrictive stipulations and the only notices are those that “applies to all parcels”. Of these, only the stipulation limiting development on slopes in excess of 25 percent would apply. One producing well located anywhere on the lease from any zone will HBP the entire oil field.

References (included in map pocket)
Steeply-northeast-dipping strata of the Cody Formation on northwest flank of the Wild Horse Anticline. View is to southeast.
Oblique aerial view, looking to the southwest, of the southeastern end of Wild Horse Anticline indicating apex. The town of Basin, Wyoming is visible in upper-right background.
Oblique aerial view, looking to the southwest, of the northwestern end of Wild Horse Anticline indicating the apex. The town of Basin, Wyoming is visible in the upper-center background. This image ties to the previous one and forms a panoramic view of the anticline.
Breached interior of Wild Horse Anticline showing roll-over at axis in left middle background. This area is used as an off-highway-vehicle recreation area.
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References
TORCHLIGHT
T51N R92-38W
Big Horn County, Wyoming
Mowry "Kimball" and "Och Louie", Phosphoria, Tensleep, Madison, Bighorn

Present Pressure: Depleted
Drive Mechanism: Solution gas
Rw and/or Salinity: 0.58 @ 68° F.
Bottom hole Temperature: Unknown
Character of oil or gas: Gravity - 46.3° API; Sweet;
Paraffin base; Color - dark green
Continuity of Reservoir: Over entire structure with
variable porosity and permeability
Cumulative Production: 200,745 + BO, 1/1/89
Primary Recovery: 199,244 BO
Secondary: 4461 + BO
Estimated Ultimate Recovery: 203,745 BO

DISCUSSION
The total number of wells drilled between 1913
and 1932 is not certain and primary production ceased
in 1932. A limited waterflood has been conducted with
unknown results.

RESEVOIR DATA
Formation: Phosphoria - Permian
Lithology: Dolomite, anhydritic, cherty
Discovery Date: October 31, 1947
Location: Stanolind, 1 Unit, SWSENE 24-51N-93W
Initial Potential: F 1500 MCFPD on DST
Perforations: 2830 - 2860 DST, Tensleep discovery,
did not produce from the Phosphoria
Treatment: None
Porosity: 12% average; 5.4% average, Core, Range
2.5 - 10.5% (NWSE 14 and NESE 25-51N-93W, 29
samples, nonproductive)
Permeability: 1.4 md average, Core, Range 0-15 md;
highly variable due to fracturing
Average Pay Thickness: 30 feet
Oil/Gas Column: Gas - 150 feet; Oil - 200 feet
Gas/Oil/Water Contact: Gas/Oil + 1140 feet;
Oil/Water + 940 feet
Gas Oil Ratio: Variable, 0 to 219,000:1; only gas at
the present time
Initial Pressure: 1450 psi SIP DST
Present Pressure: Unknown
Drive Mechanism: Solution gas, limited water
Rw and/or Salinity: 0.22 @ 68° F. DST
Bottom hole Temperature: 100° F. Log (SESE 24-
51N-93W)
Character of oil or gas: Oil: Gravity - 31.3° API;
Four point -9° F; Sulfur - 1.99%; Viscosity - 42
sec @ 100° F; Specific gravity - 0.869; Nitrogen -
0.08%; Color - greenish black; Gas: BTU - 1144;
Methane - 80.1%; Ethane - 10.86%; Propane -
2.12%; Butane - 1.24%; Pentanes + - .81%; N2 -
3.21%; He - 0.01%; H2S - 1.66%
Continuity of Reservoir: Covers entire structure, variable porosity and permeability
Cumulative Production: 3,394,226 MCFG, 1/1/89, oil included with Tensleep production
Primary Recovery STBO or MCF/AC FT: Unknown
Secondary: Unknown
Estimated Ultimate Recovery: 5+ BCFG; oil undetermined
Decline Curve: Appendix

RESEVOIR DATA
Formation: Tensleep - Pennsylvanian
Lithology: Sandstone
Discovery Date: October 31, 1947
Location: Stanolind, 1 Unit, SWSENE 24-51N-93W
Initial Potential: F 1632 BOPD
Perforations: 3038 - 3140 open hole
Treatment: None, natural
Porosity: 14% average Log
Permeability: Not reported
Average Pay Thickness: 35 feet
Oil Column: 200 feet
Oil/Water Contact: +940 feet
Gas Oil Ratio: Variable, 0 to 8113:1
Initial Pressure: 1600 psi Rock pressure
Present Pressure: Unknown
Drive Mechanism: Water
 Rw and/or Salinity: 3.3 @ 68° F. produced water
Bottom hole Temperature: 100° F. Log (SWSENE 24-51N-93W)
Character of oil or gas: Gravity - 20.5° API; Pour point - <5° F.; Viscosity - 400 sec @ 100° F.; Sulfur - 2.72%; Specific gravity - 0.931; Nitrogen 0.22;
Color: brownish-black
Continuity of Reservoir: Widespread, highly variable porosity and permeability
Cumulative Production: 12,212,973 BO, 581,137 MCFG, 295,932,277 BW, 1/1/89, includes 6 wells commingled with Tensleep; 38 wells
Primary Recovery STBO or MCF/AC FT: Unknown
Secondary: Unknown, gas injection started in 1964
Estimated Ultimate Recovery: 14,000,000 BO
Decline Curve: Appendix

RESEVOIR DATA
Formation: Bighorn - Ordovician
Lithology: Dolomite
Discovery Date: March 12, 1962
Location: Pan American Pet., 10 Orchard Unit
NWSNE 24-51N-93W
Initial Potential: P 51 BO, 371 BWPD
Perforations: 4119 - 4133
Treatment: None
Porosity: 14% average Log
Permeability: Unknown
Average Pay Thickness: 16 feet
Oil Column: 40° feet
Oil/Water Contact: Unknown
Gas Oil Ratio: 0
Initial Pressure: 1904 psi DST
Present Pressure: Depleted
Drive Mechanism: Water
 Rw and/or Salinity: 2.2 @ 68° F.
Bottom hole Temperature: 116° F. DST @ 4130 feet (NESE 24-51N-93W)
Character of oil or gas: Gravity - 24° API
Continuity of Reservoir: Unknown, 1 well
Cumulative Production: 5519 BO, 1/1/89
Primary Recovery: 5519 BO
Secondary: None
Estimated Ultimate Recovery: 5519 BO

REFERENCES
The second source of improved oil production performance is a result of 2001 fourth quarter drilling in the Torchlight field which was a direct result of the 3-D survey of the field the Company conducted in early 2001. One of the purposes of the survey was to attempt to locate a drilling location in the field that would replicate the type of reserves and production rate associated with the Torchlight #37 well which was drilled in 1968. That well produced a total of 858,000 barrels in the first 16 months of its productive life at rates as high as 4,400 barrels per day. The Torchlight #59, which was drilled in December 2001 and completed in January 2002, may have encountered a zone with properties similar to the Torchlight #37 since it tested at an initial rate of 300 barrels per day flowing 100% oil with a flowing tubing pressure of 350 psig. It is presently producing at a rate of 200 barrels per day due to the limitations of the surface equipment in the field. Assuming that the present flowing characteristics are sustained, additional equipment will be installed early in the third quarter of 2002 so that the full productive potential of the well can be determined. A second extension well, the #1-19 MCP Federal, was also drilled in December 2001 and has recently been completed as a more typical Torchlight well producing 50 barrels of oil and 1,050 barrels of water per day. Since both the Torchlight #59 and the #1-19 MCP Federal were completed subsequent to year-end 2001, no reserves associated with the wells were recorded in 2001.

The major thrust of our exploration activity in 2001 was the continuation of the development of our Beaver Creek prospect. This prospect is the result of the prolific Nisku discovery, the #24-15 Beaver Creek well drilled in 1998. Through year-end 2001 that well has produced a total of 1 million barrels of oil and 594 MMCF of gas at rates as high as 2,200 barrels of oil per day. During 2000 and 2001, Equity conducted a total of 35 square miles in two 3-D geophysical surveys in the Beaver Creek area to attempt to identify additional Nisku drilling targets. The surveys have identified multiple prospective drilling locations, the first of which is planned to be drilled beginning in March of 2002. Drilling in the Beaver Creek prospect area has been hampered by a protracted period of negotiations with the United States Forest Service to obtain the required drilling and surface occupancy permits. It is hoped that the initial test, the BTA #1-B Equity Redtail, will validate the effectiveness of the 3-D work that we have done in the area.
KEITH L. MOHL
CONSULTING GEOLOGIST
BILLINGS, MONTANA
APRIL, 1989

DISCOVERY WELL

Name: Gas: Peavy Hill Oil, 1 Minor-Sherard
Oil: Bighorn Oil & Gas Co., 1 George Alford
Location: Gas: Lot 1 NWNW 21-52N-93W
Oil: SESE 17-52N-93W
Date of Completion: Gas: July, 1907
Oil: October, 1908
Initial Potential: Gas: Initially a 70 foot flare
decreasing to a steady 50 foot flare that burned
out of control for 18-24 months at an estimated
rate of 6-10 MMCFGPD Cloverly "Greybull" -
Cretaceous
Oil: Unknown Cloverly "Greybull"
Total Depth: Gas: 827 Cloverly
Oil: 910 Cloverly
Elevation: Gas: 3794 Gr
Oil: 3801 Gr
Casing: Gas: 500 feet, size unknown
Oil: Unknown
Perforations: Gas: 801-821 open hole
Oil: Unknown
Treatment: Gas: Natural
Oil: Natural
Pressures: Gas: BHP estimated at over 600 psi in
September 1907
Oil: Unknown

GENERAL FIELD DATA
Regional Setting: East Flank, Bighorn Basin
Other Formations with Shows: Muddy-Cretaceous,
Amsden-Pennsylvanian, Phosphoria-Pennsylvanian,
Madison-Mississippian
Exploration Method Leading to Discovery: Surface geology
Trap Type: Oil accumulation is confined to the north
plunge and west flank. The trap for the oil is
attributed primarily to the pinchout of sand on the
north and south, and to a lesser degree to probable
faulting. The gas zone is primarily related to
structural closure.
Surface Formations: Lower Frontier, Upper Mowry
- Cretaceous
Oldest Formation Penetrated: Undifferentiated
Cambrian
Well: J. W. Osborn 1 Kreuger, NWNW 20-52N-93W
Spacing Order: Apparently little regard was given to
well spacing or pattern with wells being 100-450
feet apart.
Logging Practice: Early wells: no logs. Recent past:
ES, ML, GRN. Present: IES, FDGR, GRN.
Completion Practice: It appears most wells
completed open hole.
Productive Area: Gas: Estimated 500 acres
Oil: Estimated 900 acres

GREYBULL
T32N R93W
Big Horn, Wyoming
Frontier, Cloverly

Number of Producing Wells: 22 (21 Frontier
"Peavy", 1 Cloverly)
Number of Abandoned producers: 81 Cloverly
"Greybull"; unknown - Frontier
Number of Dry Holes: Unknown
Number of Shut-in Wells: 15 Frontier
Number of Disposal Wells: 0 (?)
Number Pressure Maintenance Injection Wells: 3
active, 14 inactive - all Frontier
Market for Production: Gas: Unknown. No sales
since 1915.
Oil: Until late 1915 transported by railroad. In
late 1915 Midwest Refinery at Greybull. In the
mid-1940s Gordons Refinery, a small topping
plant, refined the oil. Current production is
moved by trucks to Marathon.
Major Operators: Hughes Oil Corp., West Oil,
National Treasure Mines

RESERVOIR DATA
Formation: Cloverly "Greybull"-Cretaceous
Lithology: Sandstone
Discovery Date: Gas: July, 1907
Oil: October, 1908
Porosity: 15% average estimated, 1 core shows Range
13-21%. Several modern logs show Range 10-16%.
Permeability: 1 core shows a 4 foot zone with 1.6-2.7
darcys
Average Pay Thickness: 20 feet (estimated), some
modern logs show 10-15 foot zone.
Oil/Gas Column: 800+ feet
Gas/Oil/Water Contact: Unknown
Gas Oil Ratio: Unknown
Initial Pressure: 600+ psi estimated
Present Pressure: Depleted
Drive Mechanism: Gas expansion, gravity, and very
limited water drive.
Rw and/or Salinity: 1.53 @ 68' F produced (NENE
17-52N-93W)
Bottom hole Temperature: 89° F Engineering Field
Study
Character of oil or gas: Oil: Gravity - 49.9 API;
Pour point - 20° F; Sulphur - 0.7%; Paraffin base;
sweet green.
Gas: BTU-1140; Methane - 81.7%; Ethane - 17.4%;
CO₂ - .2%; Nitrogen .7%.
Continuity of Reservoir: Good continuity, trapping
by pinchout and faulting.
Cumulative Production: 1,025,206 BO, gas volumes
unknown (all formations combined). Production
from the Wyoming Oil and Gas Statistics 1987.
However there is no record of early production.
Biggs and Espach show cumulative gas through
1956 as 298,000,000 CF. There has essentially been no gas production since 1915 except on a local basis.

**Primary Recovery STBO:** 1,100,000 BO
**Secondary:** Several operators have conducted field studies and pilot floods. There has been only minor response.

**Estimated Ultimate Recovery:** 1,100,000 BO (all formations combined)

**Decline Curve:** Appendix

**RESERVOIR DATA**

**Formation:** Frontier "Peay"-Cretaceous  
**Lithology:** Sandstone, argillaceous  
**Discovery Date:** June, 1955 (?), 32 Frontier "Peay" wells were drilled 1955-1959  
**Location:** NWNWNE 17-52N-93W  
**Initial Potential:** P 6 BOPD  
**Perforations:** 343-420 open hole  
**Treatment:** Natural  
**Porosity:** 30% average, Range 21-34% 3 cores, 24% average, Density Logs, Range 23-25% 5  
**Permeability:** 333 md average, 3-Cores, Range 2-1270 md  
**Average Pay Thickness:** Logs show "Peay Sand" 100-110 feet thick. Upper 60 feet less argillaceous.  
**Oil/Gas Column:** Unknown  
**Oil/Water Contact:** +3400 feet estimated  
**Gas Oil Ratio:** Unknown  
**Initial Pressure:** Unknown  
**Present Pressure:** Depleted  
**Drive Mechanism:** Gas expansion  
**Rw and/or Salinity:** 1.80 @ 68°F produced water - Well 16 Lot 53 8-52N-93W  
**Bottom hole Temperature:** 65'-70' Logs  
**Character of oil or gas:** Gravity - 36° API  
**Continuity of Reservoir:** Massive continuous sandstone  
**Cumulative Production:** 1,025,206 BO, gas volumes unknown (all formations combined)  
**Primary Recovery STBO or MCF/AC FT:** Unknown  
**Secondary:** Extensive studies and several secondary recovery projects attempted with no effective response.

**Estimated Ultimate Recovery:** 1,100,000 BO (all formations combined)

**Decline Curve:** Appendix

**DISCUSSION**

The Greybull Anticline, formally known as Peay Hill, is an asymmetrical anticlinal closure on the east side of the Bighorn Basin. The structural trend is northwest-southeast, and exhibits 200 feet of closure. Faults trending southwest-northeast are present in outcrops of the Frontier Formation. Displacement along the faults are reported to exhibit 10-70 feet of surface displacement. A fault on the north plunge of the structure is postulated to explain this shallow Peay Sand producing area. Information on these wells is very poor and few electric logs are available. These wells seem to be the principle producing area, at the present time, on the Greybull structure.

Interpretation of "old well data" suggests Greybull "channel" trends in a northeast-southwest direction across the north end of the anticline. The maximum thickness reported in the field is 35 feet. On outcrop (five miles northeast of the Greybull Field) the sand is 22 feet thick and cross bedding indicates a stream flow from east to west.

The structure map is based on electric log control. Thus, it is limited to widely spaced control points. It was decided not to attempt putting any faults on the map, other than the fault on the north plunge of the structure to explain the Peay production.

Two marginal gas wells were completed in the Muddy Sandstone. There is no recorded production.

**REFERENCES**


Radella, Frank A., Consulting Geologist, Billings, Montana, personal files.

