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**RESTRICTION**

**LIFTED February 1, 1958**



GEOLOGIC COMPLETION REPORT

EL PASO NATURAL GAS

FIELD: Wildcat

PROPERTY: Double Mountain Area

WELL NO.: Spurrier #1 Federal

LOCATION: Malheur County, Oregon  
NE $\frac{1}{4}$ NE $\frac{1}{4}$  Sec. 5, T 20 S - R 144 E, Willamette Meridian

ELEVATION: 2520 gr. 2531 K.B.

DRILLED: Loffland Brothers  
Casper, Wyoming

DATE SPUDED: November 25, 1954

DATE COMPLETED DRILLING: January 12, 1955

DATE PLUGGED: January 17, 1955

TOTAL DEPTH: 7470 Driller, 7484 Lane Wells

PLUGS: 1. 7415-7315 w/40 sx. 6. 3725-3625 w/40 sx.  
2. 6210-6085 w/50 sx. 7. 2975-2850 w/50 sx.  
3. 5675-5600 w/30 sx. 8. 1925-1825 w/40 sx.  
4. 5450-5375 w/30 sx. 9. 335-275 w/70 sx.  
5. 3975-3850 w/50 sx.

CASING: 13-3/8" 48# @ 293 w/265 sx.

*Leroy Bechtel*

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GEOLOGIC INTERPRETATION

Two groups of geologic tops were called because of the conflicting nature of bulletins published pertaining to this area. The reports considered are Mr. Coleman Renick's "Report on Southern Malheur County, Oregon", and Mr. Kirkham's "Snake River Downwarp".

It can be seen that the only top in agreement using both of the aforementioned reports is the Owyhee Basalt. The Owyhee according to all information gathered is the only major formation to contain large amounts of Rhyolite. The bottom 1000' of this well were almost entirely Rhyolite or Dacite with two minor flows of Basalt. Therefore, it must be assumed to be the Owyhee Series. This is as far as any agreement can be carried between the reports.

Mr. Renick used the Owyhee to separate the lower Payette shales from what he calls older tertiary. Mr. Kirkham uses the Owyhee to separate the Idaho from the Payette series. This leads to a very confusing situation, so this writer chose Mr. Renick's report to be more nearly suited to the situation found at the #1 Federal Spurrier.

Three reasons for the above choice are:

1. Mr. Renick described an area close by to the well, whereas Mr. Kirkham attempted to describe the entire Snake River Downwarp area.
2. Mr. Kirkham's stratigraphy did not fit to the apparent surface or near surface picture. (*Dibb's read it very well*)
3. Mr. Kirkham almost overlooks the Grassy Mountain and Blackjack Basalt, saying that they are flows within the Idaho Formations. <sup>*They are!*</sup> Also, he mentions the Idaho to contain fresh water shell limestone, none of which were found in this well. *Beds of this crop out a few miles N. of well site*

GRASSY MOUNTAIN BASALI

This formation is a series of basalts flows separated by shales, silts, and baked shales, some of which are bentonitic.

UPPER PAYETTE

Shales and sandstones plus tuffs predominate. Sandstone beds were logged

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3.

The idea was presented by Dr. Manning with Shell Oil Co. to our Elko office, who found that condition in their well in Nevada.

BLACKJACK BASALT

This zone consisted of various types of Basalts flows interbedded with shales. No shows or zones of interest were found.

LOWER PAYETTE

Varicolored shales and sands make up the formation. A sand is logged at 5450'-5575'. This is the most promising zone in the lower Payette, but appears to contain fresh water.

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OWHYEE BASALT & RHYOLITE SERIES

The upper 250' consist mostly of basalt flows with the remainder to the total depth being Rhyolite.

Conclusion: Bill Martin of El Paso Natural Gas Co. pointed out that all of the gas shows to date in the Vale-Payette area have been in the Idaho formation. This formation is almost entirely within the Snake River Downwarp.

This leads to at least two explanations as to the presence of gas. First, the source may be indigenous within the Idaho Formation. This would make the gas more or less marsh gas but gas analysis does not support a marsh gas theory. Second, the downwarp is really a graben such as the Rio Grande River Valley. If this is the case, then perhaps gas has migrated up the fault zones and been trapped or partially trapped in the Idaho formation. (possible, but unlikely)

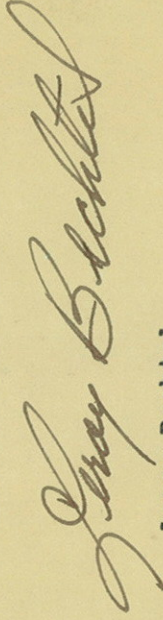
The proposed depth for the #1 Federal Spurrier was pre-tertiary. The drilling depth to the pre-tertiary was not known and still is not known. It can be assumed pre-tertiary or Columbia River basalts would be found at approximately 9000'-10,000' in the area of this well. The drilling depths in the Snake River Downwarp would be fantastic because the Idaho has been measured 6000' to 17,000' in thickness which would make the pre-tertiary top approximately 20,000' if it is present. (Correct!)

Recommendation: First, drilling depths are not economically suited for gas production. Second, El Paso has no acreage in this area and also a good deal of

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It is suggested that this area be dropped from an area of active drilling interest and more carefully appraised before any additional wells are drilled there.

Respectfully submitted,



Leroy Bechtel  
Geologist.

