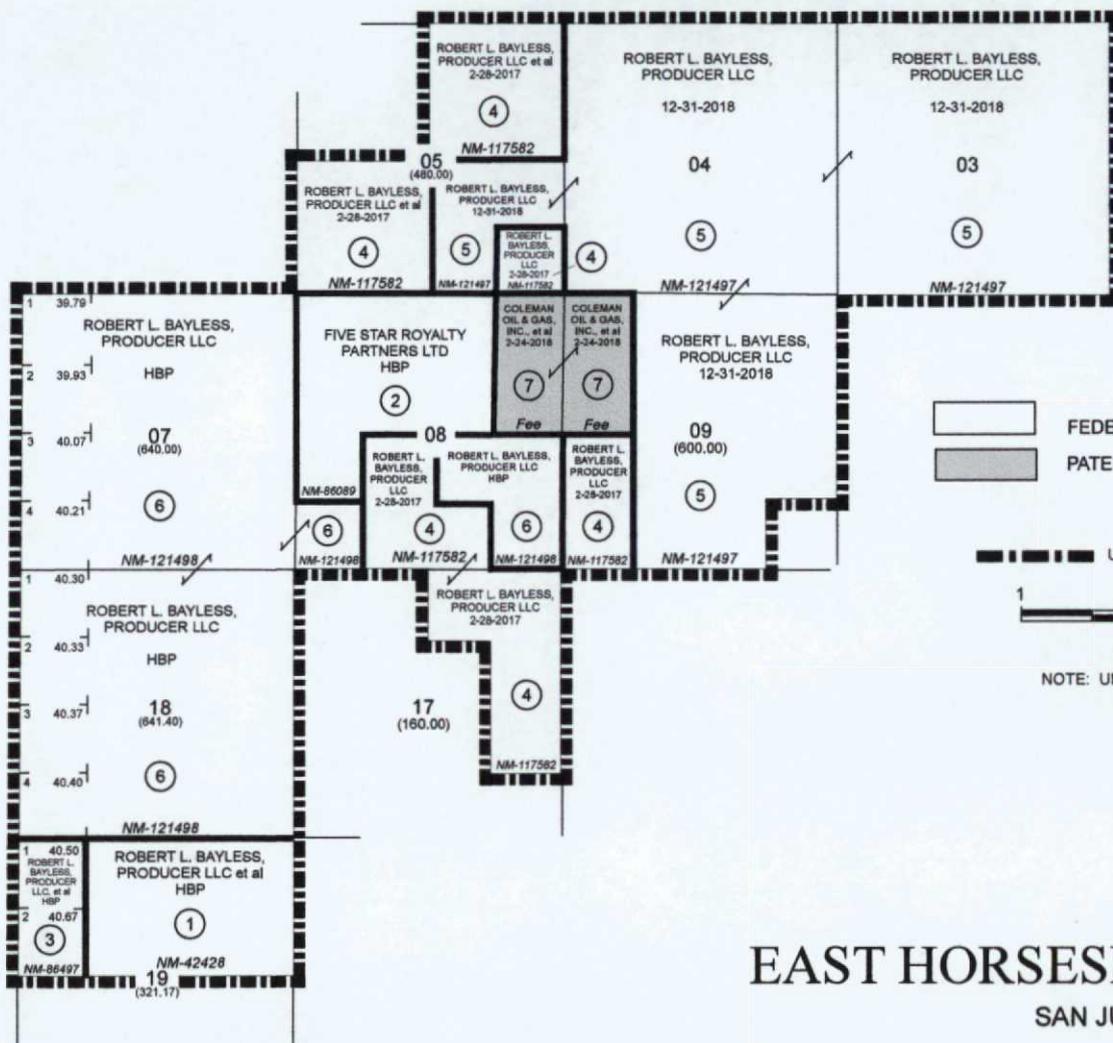
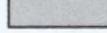
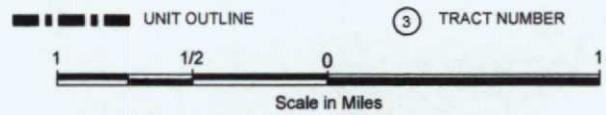


R 15 W

T  
30  
N



	ACREAGE	PERCENTAGE
 FEDERAL LANDS	4,602.57	96.64%
 PATENTED LANDS	160.00	3.36%
<b>TOTALS</b>	<b>4,762.57</b>	<b>100.00%</b>



NOTE: UNLESS OTHERWISE NOTED HEREIN THE SECTIONS ON THIS PLAT CONTAIN 640.00 ACRES

EXHIBIT "1"

**EAST HORSESHOE GALLUP UNIT AREA**  
SAN JUAN COUNTY, NEW MEXICO

ROBERT L. BAYLESS, PRODUCER LLC  
DENVER, COLORADO

10-27-2016

EXHIBIT A



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Farmington Field Office  
6251 College Blvd, Suite A  
Farmington, New Mexico 87402  
[www.nm.blm.gov](http://www.nm.blm.gov)



IN REPLY REFER TO:  
East Horseshoe Gallup Unit  
NMNM136440X

October 27, 2016

Mr. John Thomas  
Robert L. Bayless, Producer LLC  
P. O. Box 168  
Farmington, NM 87499

Reference is made to your request for the designation of 4,762.57 acres, more or less, in San Juan County, New Mexico as logically subject to exploration and development under unitization provisions of the Mineral Leasing Acts for Federal Lands. Pursuant to unitization regulations under 43 CFR Part 3180, the lands requested, as outlined on your plat marked Exhibit 'A' and dated 10/19/2016 for the **East Horseshoe Gallup Unit** is hereby designated as a logical unit area. Your proposed use of the modified form for Federal and patented lands and for a single formation undivided unit areas will be accepted. The undivided exploratory unit will unitize the Mancos Shale Group only within the vertical limits defined in type log shown as Exhibit C from Ute Mountain Tribal #35D well in your application. If conditions are such that further modification of said form is deemed necessary, two copies of the proposed modifications with appropriate justification must be submitted to this office for preliminary approval.

The unit agreement to be submitted for the area designated will provide for the initial obligation well to be the East Horseshoe Gallup 18-8H, a horizontal lateral which will develop the Mancos Shale Group within the defined vertical limits.

In the absence of any other type of land requiring special provisions or of any objections not now apparent, a duly executed agreement identical with said form will be approved if submitted in an approvable status within a reasonable period of time. However, notice is hereby given that the right is reserved to deny approval of any executed agreement submitted that, in our opinion, does not have the full commitment of sufficient lands to afford effective control of operations in the unit area.

Please include the latest status of all acreage when the executed agreement is submitted for final approval. The format of the sample exhibits attached to the model unit agreement (43 CFR 3186.1) should be followed closely in the preparation of Exhibits A and B. A minimum of Four (4) copies of the executed agreement should be submitted with your request for final approval. If you require additional executed copies of the agreement for further distribution, please increase the number of copies accordingly.

If you have questions regarding the above unit, please contact me at (505) 564-7740 or [jhewitt@blm.gov](mailto:jhewitt@blm.gov).

Sincerely,

Joe Hewitt,  
Geologist, Petroleum Mgt Team

## EXHIBIT B



# United States Department of the Interior



## BUREAU OF LAND MANAGEMENT

Farmington District Office  
6251 College Blvd., Suite A  
Farmington, New Mexico 87402  
[www.blm.gov/nm](http://www.blm.gov/nm)

In Reply Refer To:  
3100 (F01100)

November 1, 2016

**Your Reference: Robert L Bayless, Producer LLC C-108 Application to prevent waste from venting and flaring**

Mr. Michael A. McMillan  
Engineering and Geological Services Bureau  
New Mexico Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe NM 87505

Dear Mr. McMillan:

The Bureau of Land Management (BLM) supports Robert L Bayless, Producer LLC's application to temporarily inject gas to prevent waste from venting and flaring associated gas with oil production from the Horseshoe Gallup 18-16H located 220' FSL & 140' FEL Sec 18, T30N, R 15W San Juan County, NM, Horseshoe Gallup 18-8H located 2420' FNL & 245' FEL Sec 18, T30N, R 15W San Juan County, NM, and Horseshoe Gallup 19-8H located 1500' FNL & 555' FEL Sec 19, T30N, R 15W San Juan County, NM. As you are aware, the BLM is promulgating new regulations to reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production activities on onshore Federal and Indian (other than Osage Tribe) leases. This project is consistent with the new regulations and will prevent waste of a royalty bearing resource.

This project will require additional filings and approvals from the BLM.

If you have any questions, please contact David Mankiewicz, Assistant Field Manager at (505) 564-7731 or at [dmankiew@blm.gov](mailto:dmankiew@blm.gov).

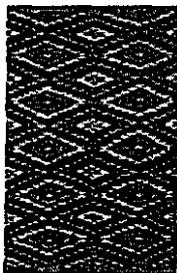
Sincerely,

David J. Mankiewicz  
Assistant Field Manager

2016 NOV -2 P 10 10

RECEIVED

EXHIBIT C



## Robert L. Bayless, Producer LLC

Post Office Box 168  
2700 Farmington Avenue, Building F Suite 1  
Farmington, New Mexico 87499  
505-326-2659  
505-326-6911 Fax

621 Seventeenth Street, Suite 2300  
Denver, Colorado 80293  
303-296-9900  
Fax 303-296-0753

September 12, 2016

Temporary Gas Injection  
SAN JUAN COUNTY, NEW MEXICO

**Offset Operators:**

For your information, as an offset operator, Robert L. Bayless, Producer LLC has requested NMOCD and BLM administrative approval to intermittently inject the gas production from the Horseshoe Gallup 18-16H located 220' FSL & 140' FEL Sec 18, T30N, R 15W San Juan County, NM, Horseshoe Gallup 18-8H located 2420' FNL & 245' FEL Sec 18, T30N, R 15W San Juan County, NM, and Horseshoe Gallup 19-8H located 1500' FNL & 555' FEL Sec 19, T30N, R 15W San Juan County, NM. Production from two of the wells will be temporarily injected in the third well.

Attached is an OCD Form C-108 and the information relative to the proposed Injection Request. A copy of the legal notice posted in the Farmington Daily times is included. The enclosed map highlights the location of the referenced well in relation to you offset operations.

If additional information is required, please contact me at (505-326-2659)

**Interested parties must file objection with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico, 87505, within 15 days.**

Sincerely,

John D Thomas  
Production and Asset Manager

Enclosure

# EXHIBIT D

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE:  Secondary Recovery  Pressure Maintenance  Disposal  Storage  Temporary Gas Injection  
Application qualifies for administrative approval?  Yes  No
- II. OPERATOR: Robert L Bayless, Producer LLC  
ADDRESS: PO Box 168 Farmington, NM 87499  
CONTACT PARTY: John D Thomas PHONE: 505-326-2659
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project?  Yes  No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review. **ATTACHED**
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail. **ATTACHED**
- VII. Attach data on the proposed operation, including: **ATTACHED**
- Proposed average and maximum daily rate and volume of fluids to be injected;
  - Whether the system is open or closed;
  - Proposed average and maximum injection pressure;
  - Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  - If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval. **ATTACHED**
- IX. Describe the proposed stimulation program, if any. **NO INCREMENTAL STIMULATION WILL BE NEEDED OR UTILIZED**
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **LOGS HAVE BEEN FILED WITH THE DIVISION**
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken. **NO FRESH WATER WELLS**
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water. **ATTACHED**
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. **ATTACHED**
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: JOHN D THOMAS TITLE: PRODUCTION AND ASSET MANAGER

SIGNATURE: \_\_\_\_\_ DATE: 8/24/16

E-MAIL ADDRESS: JTHOMAS@RLBAYLESS.COM

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

**NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.**

---

**NOTICE:** Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



**INJECTION WELL DATA SHEET**

Tubing Size: 2-7/8" Lining Material: NA

Type of Packer: NA

Packer Setting Depth: NA

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes  X  No

If no, for what purpose was the well originally drilled? Oil Production

\_\_\_\_\_

2. Name of the Injection Formation: Gallup

3. Name of Field or Pool (if applicable): Horseshoe Gallup

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. \_\_\_\_\_

\_\_\_\_\_

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Mesaverde~2,500'; No Lower Producing Zones

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



INJECTION WELL DATA SHEET

Tubing Size: 2-3/8" Lining Material: NA

Type of Packer: NA

Packer Setting Depth: NA

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes  No

If no, for what purpose was the well originally drilled? Oil Production

\_\_\_\_\_

2. Name of the Injection Formation: Gallup

3. Name of Field or Pool (if applicable): Horseshoe Gallup

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. \_\_\_\_\_

Tocito Sand-Plug Set at 4,284'

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Mesaverde~2,500'; No Lower Producing Zones

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# INJECTION WELL DATA SHEET

OPERATOR: Robert L Bayless, Producer LLC

WELL NAME & NUMBER: Horseshoe Gallup 18-16H

WELL LOCATION: 220' FSL & 140' FEL      P      18      30N      15W  
FOOTAGE LOCATION      UNIT LETTER      SECTION      TOWNSHIP      RANGE

## WELLBORE SCHEMATIC

## WELL CONSTRUCTION DATA

### Surface Casing

Hole Size: 12 1/4"      Casing Size: 9 5/8"  
Cemented with: 200 sx.      or \_\_\_\_\_ ft<sup>3</sup>  
Top of Cement: Surface      Method Determined: Circ

### Intermediate Casing

Hole Size: 8 3/4"      Casing Size: 7"  
Cemented with: 405 sx.      or \_\_\_\_\_ ft<sup>3</sup>  
Top of Cement: Surface      Method Determined: Circ

### Production Casing

Hole Size: 6 1/8"      Casing Size: 4 1/2"  
Cemented with: 0 sx.      or \_\_\_\_\_ ft<sup>3</sup>  
Top of Cement: NA      Method Determined: \_\_\_\_\_  
Total Depth: 7,767'

### Injection Interval

4,256' feet to 7,767'

(Perforated or Open Hole; indicate which)

**INJECTION WELL DATA SHEET**

Tubing Size: 2-7/8" Lining Material: NA

Type of Packer: NA

Packer Setting Depth: NA

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes X No

If no, for what purpose was the well originally drilled? Oil Production

\_\_\_\_\_

2. Name of the Injection Formation: Gallup

3. Name of Field or Pool (if applicable): Horseshoe Gallup

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. \_\_\_\_\_

Tocito Sand-Plug Set at 4,284'

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Mesaverde~2,500'; No Lower Producing Zones

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# III. WELL DATA

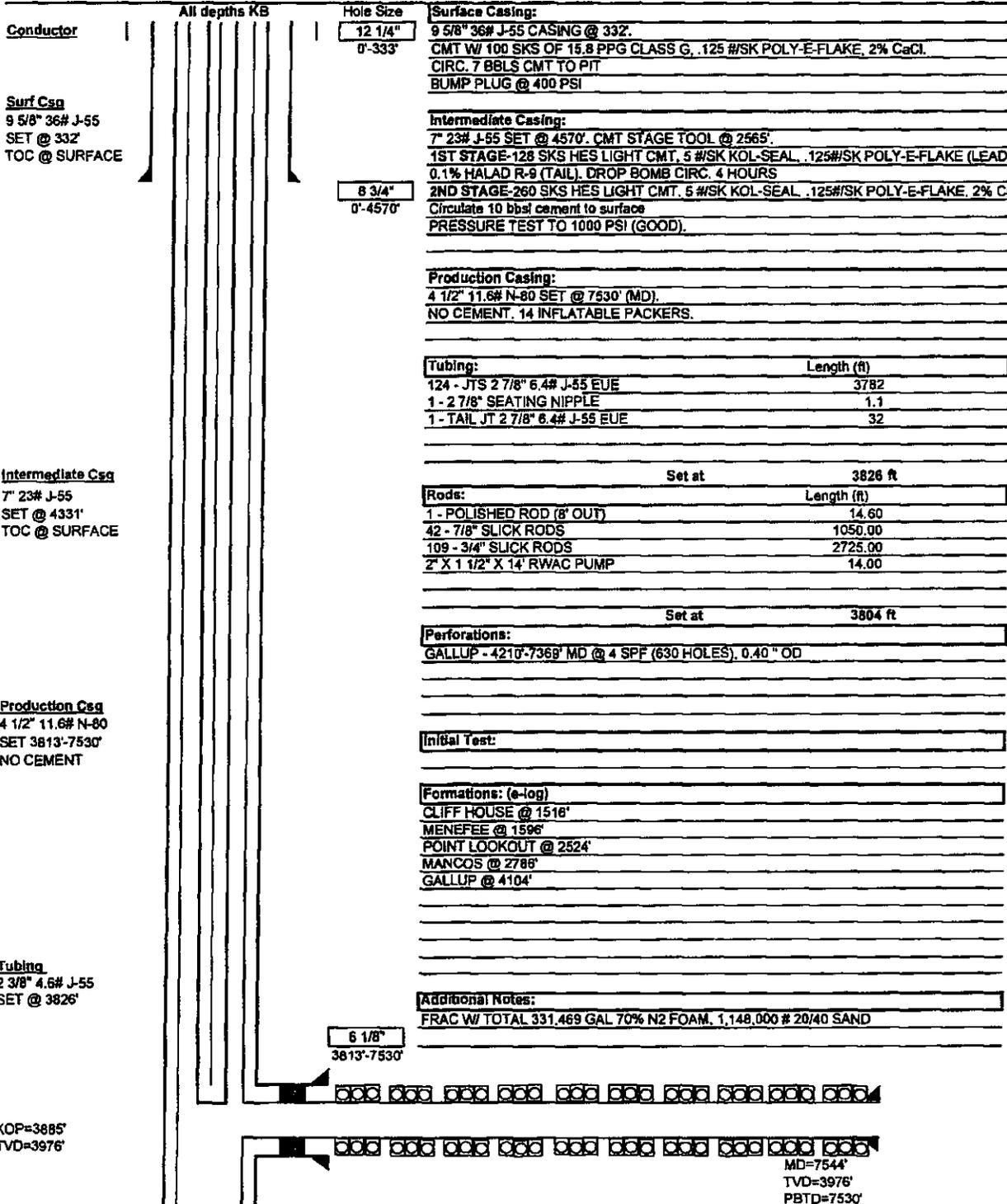
ROBERT L BAYLESS, PRODUCER LLC

PO Box 168  
Farmington, New Mexico 87499  
505-328-2859  
505-328-8911 fax

Wellbore Schematic

Well Name: HORSESHOE GALLUP 19-8H  
S.H. Location: SEC 19 T30N R15W 1500' FNL & 555' FEL  
B.H. Location: SEC 19 T30N R15W 1653' FNL & 1029' FWL  
County: SAN JUAN COUNTY, NEW MEXICO  
API #: 30-046-35378  
Co-ordinates: 36.80275 N LAT. ; 108.45122 W LONG.  
Elevations: GROUND: 5379'  
KB: 11'  
PBTD: 7767'  
TD: 7767'

Date Prepared: 1/6/2015  
Last Updated: 1/6/2015  
Spud Date: 8/24/2012  
Completion Date: 12/5/2012  
Last Workover Date: 8/4/2014  
Communitization Agreement #: NMNM129464



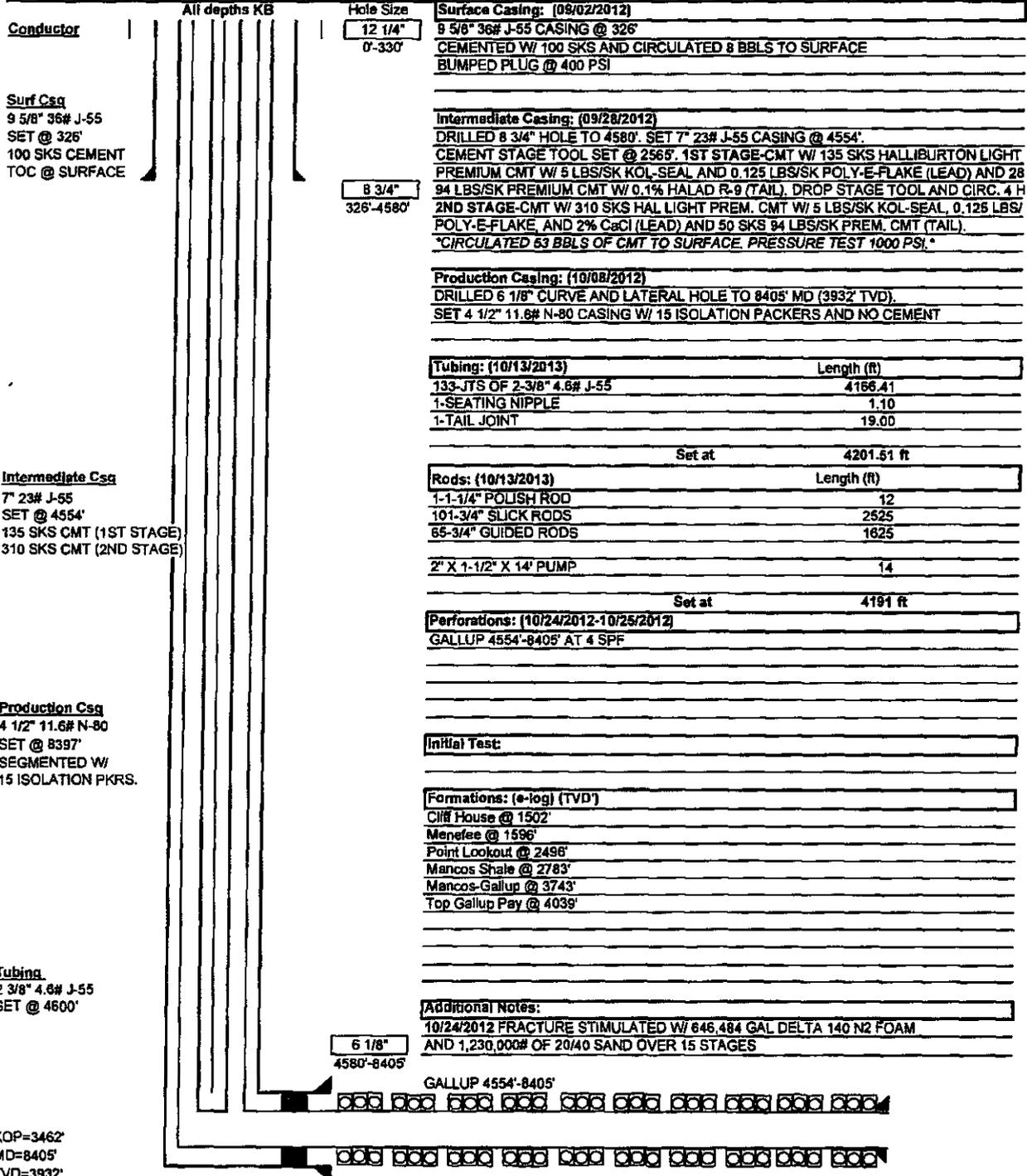
ROBERT L BAYLESS, PRODUCER LLC

PO Box 168  
Farmington, New Mexico 87489  
505-326-2659  
505-326-6911 fax

Wellbore Schematic

Well Name: HORSESHOE GALLUP 18-8H  
S.H. Location: SENE 18-30N-15W 2420' FNL 245' FEL  
B.H. Location: SWNW 18-30N-15W 1720' FNL 400' FWL  
County: SAN JUAN COUNTY, NEW MEXICO  
API #: 30-045-35373  
Co-ordinates: 39.847506 N LAT. ; 109.034671 W LONG.  
Elevations: GROUND: 5396'  
KB: 15'  
PBTD: 8355'  
TD: 8405'  
Depths (KB):

Date Prepared: 2/13/2014  
Last Updated: 2/13/2014  
Spud Date: 9/2/2012  
Completion Date:  
Last Workover Date:  
Lease Name: NMNM121498



KOP=3462  
MD=8405'  
TVD=3932'

PBTD=8355'  
TVD=3932'

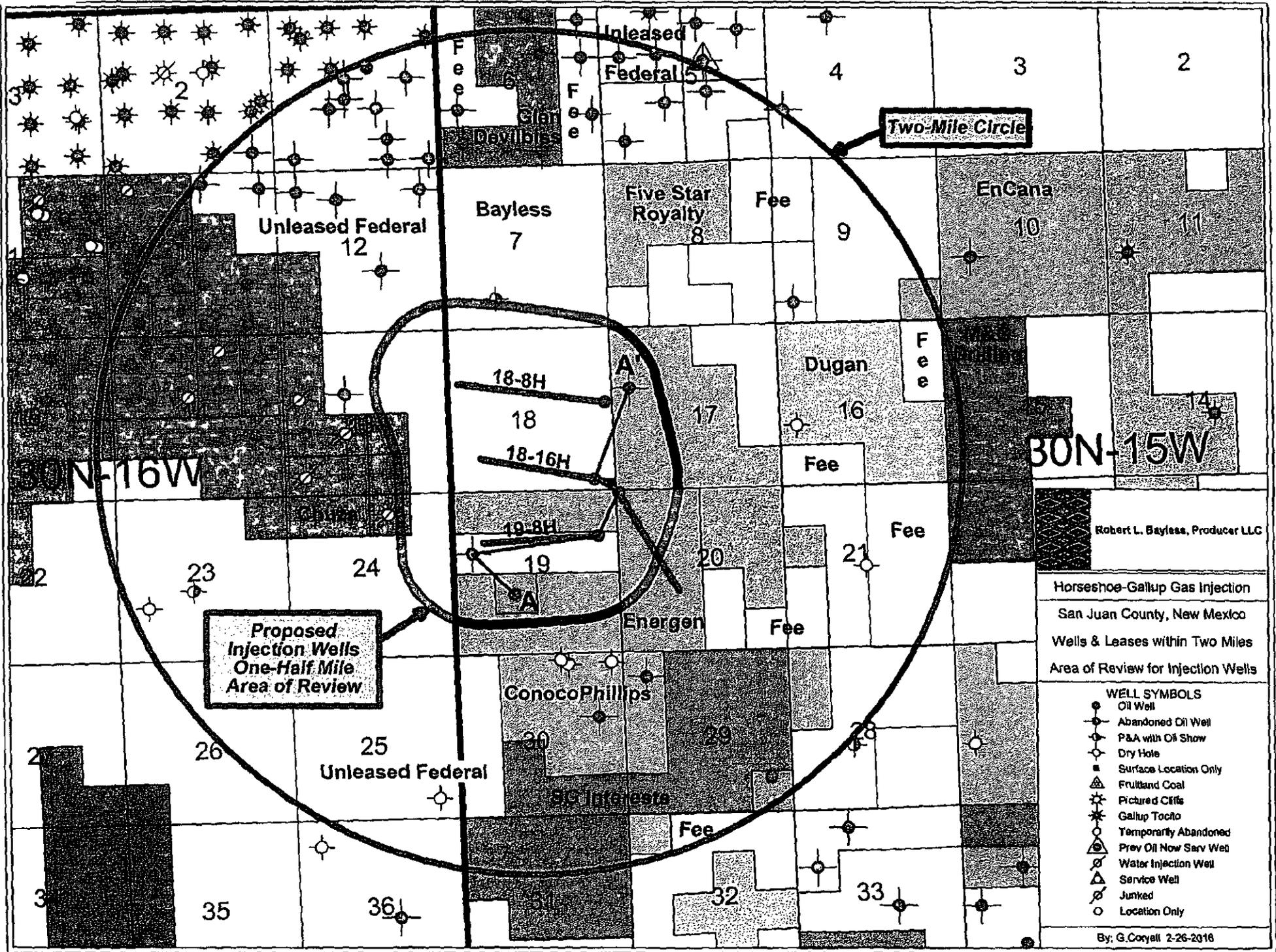


## III.B.

- (1) Produced gas will be injected in the Gallup formation in the Horseshoe Gallup Pool.
- (2) The Injection interval in all wells is perforated casing with external casing packers for isolation between perforation sets.
- (3) The wells were NOT drilled for injection and are classified as oil producing wells.
- (4) The Horseshoe Gallup 18-16H (API #30-045-35300) was tested in the Tocito sandstone which is also part of the Horseshoe Gallup pool. The Tocito is isolated by a Bridge Plug at 4,284 ft.
- (5) The next higher producing zone in the area is the Mesaverde (Point Lookout) at ~2,500 ft. The next lower producing zone is the Tocito Sandstone which is also in the Gallup Pool. There are no wells producing lower than the Horseshoe Gallup pool zones.

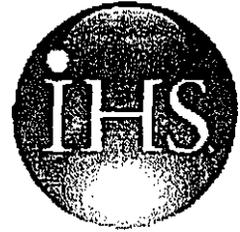
# **IV. Existing Project? NO**

# **V. Map of Review Area**



# **VI. Public Well Data**

# IHS Well Report



User: John Thomas

Run Date: 2016-05-05

---

## Scout Ticket

---

( Total Well ID in this report is 1 )



# Scout Ticket

Thu May 05, 2016

Gas:  
 Interval:  
 Duration of Test: Hours  
 Oil Gravity:  
 Cond Gravity:  
 Remarks on IP Test Data Source: PI P 16 BO/24 hrs Grav 39 deg

Water:  
 Method:  
 Choke:  
 GOR:  
 Cond Ratio:

## Perforations

Test	Data Source	Interval	Count	Type	Status	Shots/ Ft	Prod Method	Top Form Code	Top Form Name
001	PI	3780 - 4050					PERF	603GLLP	GALLUP /SD/

## Production Tests

PT: 001

Data Source: PI  
 Top Formation Name: GALLUP /SD/ Top Formation Code: 603GLLP  
 Base Formation Name: GALLUP /SD/ Base Formation Code: 603GLLP  
 Oil:  
 Gas:  
 Interval: 3,780 - 4,050 Water: UNDESIGNATED  
 Duration of Test: Hours Method:  
 Oil Gravity: Choke:  
 Cond Gravity: GOR:  
 Prod Method: OPENHOLE Cond Ratio:  
 Main Fluid Code: X

PT: 002

Data Source: PI  
 Top Formation Name: GALLUP /SD/ Top Formation Code: 603GLLP  
 Base Formation Name: GALLUP /SD/ Base Formation Code: 603GLLP  
 Oil: 20 BPD Condensate:  
 Gas: Water:  
 Interval: 3,780 - 4,050 Method: PUMPING  
 Duration of Test: 24 Hours Choke:  
 Oil Gravity: GOR:  
 Cond Gravity: Cond Ratio:  
 Prod Method: OPENHOLE Main Fluid Code:

PT: 003

Data Source: PI  
 Top Formation Name: GALLUP /SD/ Top Formation Code: 603GLLP  
 Base Formation Name: GALLUP /SD/ Base Formation Code: 603GLLP  
 Oil: 16 BPD Condensate:  
 Gas: Water:  
 Interval: 3,780 - 4,050 Method: PUMPING  
 Duration of Test: 24 Hours Choke:  
 Oil Gravity: GOR:  
 Cond Gravity: Cond Ratio:  
 Prod Method: OPENHOLE Main Fluid Code:

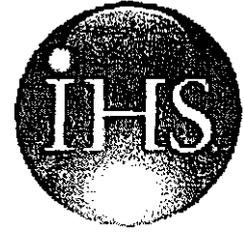
## Pressures

Test	Data Source	FTP	FCP	SITP	SICP
001	PI				375 PSIG

## Perforations

Test	Data Source	Interval	Count	Type	Status	Shots/ Ft	Prod Method	Top Form Code	Top Form Name
001	PI	3780 - 4050					OPENHOLE	603GLLP	GALLUP /SD/
002	PI	3780 - 4050					OPENHOLE	603GLLP	GALLUP /SD/

# IHS Well Report



User: John Thomas

Run Date: 2016-05-05

---

## Scout Ticket

---

( Total Well ID in this report is 1 )



# Scout Ticket

Thu May 05, 2016

Gas: -  
 Interval: -  
 Duration of Test: Hours  
 Oil Gravity:  
 Cond Gravity:  
 Remarks on IP Test Data Source: PI P 12 BOPD grav 36; 37 MCFGPD; 1 BWPD  
 Water:  
 Method:  
 Choke:  
 GOR:  
 Cond Ratio:

## Perforations

Test	Data Source	Interval	Count	Type	Status	Shots/ Ft	Prod Method	Top Form Code	Top Form Name
001	PI	3969 - 3969					PERF	603GLLP	GALLUP /SD/
001	PI	3971 - 3971					PERF	603GLLP	GALLUP /SD/
001	PI	3974 - 3974					PERF	603GLLP	GALLUP /SD/
001	PI	3977 - 3977					PERF	603GLLP	GALLUP /SD/
001	PI	3979 - 3979					PERF	603GLLP	GALLUP /SD/
001	PI	4022 - 4022					PERF	603GLLP	GALLUP /SD/
001	PI	4040 - 4040					PERF	603GLLP	GALLUP /SD/
001	PI	4045 - 4045					PERF	603GLLP	GALLUP /SD/
001	PI	4047 - 4047					PERF	603GLLP	GALLUP /SD/
001	PI	4049 - 4049					PERF	603GLLP	GALLUP /SD/
001	PI	4051 - 4051					PERF	603GLLP	GALLUP /SD/
001	PI	4057 - 4057					PERF	603GLLP	GALLUP /SD/
001	PI	4059 - 4059					PERF	603GLLP	GALLUP /SD/
001	PI	4062 - 4062					PERF	603GLLP	GALLUP /SD/
001	PI	4064 - 4064					PERF	603GLLP	GALLUP /SD/

## Treatments

Treatment: 001

Interval: 3,969 - 4,064  
 Fluid: FRAC Type: W  
 Additive:  
 Prop Agent: SAND Amount:  
 Form Break Down Pressure:  
 Average Injection Rate: Instant Shut-in Pressure:  
 Stages: Remarks:

## Production Tests

PT: 001

Data Source: PI  
 Top Formation Name: GALLUP /SD/ Top Formation Code: 603GLLP  
 Base Formation Name: GALLUP /SD/ Base Formation Code: 603GLLP  
 Oil: 56 BBL  
 Gas:  
 Interval: 3,969 - 4,064 GROSS  
 Water:  
 Duration of Test: Hours  
 Method: SWABBING  
 Oil Gravity:  
 Choke:  
 Cond Gravity:  
 GOR:  
 Prod Method: PERF  
 Cond Ratio:  
 Main Fluid Code:  
 Remarks on PT Test: Data Source: PI FRACD W/75000# 20/40 SD, 15000# 10/20 SD

PT: 002

Data Source: PI  
 Top Formation Name: GALLUP /SD/ Top Formation Code: 603GLLP  
 Base Formation Name: GALLUP /SD/ Base Formation Code: 603GLLP  
 Oil: 28 BBL  
 Condensate:

# Scout Ticket



Thu May 05, 2016

## Formations

Form Code	Top Source	Interpreter	Form Name	Top Depth	Top TVD	Base Depth	Base TVD	Source	Lithology	Age Code
604CLFH	PI		CLIFF HOUSE	1,424				LOG		604
604MENF	PI		MENEFEE	1,486				LOG		604
604PNLK	PI		POINT LOOKOUT	2,372				LOG		604
603MNCS	PI		MANCOS	2,666				LOG		603
603GLLP	PI		GALLUP /SD/	3,912				LOG		603

## Logs

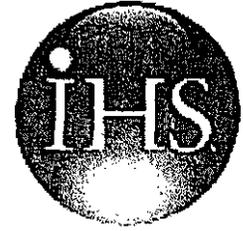
Log	Data Source	Type	Top Depth	Base Depth	Logging Co.	BHT	since circ.
1	PI	IL					
2	PI	GR					
3	PI	DN					
4	PI	NEC					

## Dwights Energydata Narrative

Accumulated through 1997

Data Source	Type	Nbr	Remark
DEI	IP	1	P 12 BOPD grav 36; 37 MCFGPD; 1 BWPD
DEI	Perf	1	3969-4064 (Gallup )
DEI	Perf	1	w/15 holes total - frac w/51,000 gal gel 90,000# 10/20 sd 20/40 sd
DEI	Perf	1	488 MCF N2 - swbd 1300 bbls load wtr - sw bd 50 BO/5 hrs
DEI	DST	1	None reported
DEI	Cores	002	None
PI	Dwights Number		300457044381

# IHS Well Report



User: John Thomas

Run Date: 2016-05-05

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## Scout Ticket

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( Total Well ID in this report is 1 )



# Scout Ticket

Thu May 05, 2016

Ground Elevation: 5,361 FT GR LTD:  
 Contractor: FOUR CORNERS DRILLING  
 Completed: Oct 10, 1993 Final Drilling: Aug 21, 1993  
 Rig Release Date: Rig #: 15  
 Tool: ROTARY

## Initial Potential Tests

IP: 001 Data Source: PI  
 Top Formation Name: GALLUP /SD/ Top Formation Code: 603GLLP  
 Base Formation Name: GALLUP /SD/ Base Formation Code: 603GLLP  
 Oil: 96 BPD Condensate:  
 Gas: 295 MCFD Water:  
 Interval: 4,416 - 7,559 GROSS Method: FLOWING  
 Duration of Test: Hours Choke:  
 Oil Gravity: GOR:  
 Cond Gravity: Cond Ratio:

Remarks on IP Test Data Source: PI NATURAL.

IP: 1 Data Source: DEI  
 Top Formation Name: Top Formation Code:  
 Base Formation Name: Base Formation Code:  
 Oil: Condensate:  
 Gas: Water:  
 Interval: - Method:  
 Duration of Test: Hours Choke:  
 Oil Gravity: GOR:  
 Cond Gravity: Cond Ratio:  
 Remarks on IP Test Data Source: PI (Gallup 4334-7559) Swabbed 96 BOPD; 295 MCFGPD; FCP 45

## Pressures

Test	Data Source	FTP	FCP	SITP	SICP
001	PI		45 PSIG	5 PSIG	271 PSIG

## Perforations

Test	Data Source	Interval	Count	Type	Status	Shots/ Ft	Prod Method	Top Form Code	Top Form Name
001	PI	4416 - 7559					PERF	603GLLP	GALLUP /SD/

## Production Tests

PT: 001  
 Data Source: PI  
 Top Formation Name: GALLUP /SD/ Top Formation Code: 603GLLP  
 Base Formation Name: GALLUP /SD/ Base Formation Code: 603GLLP  
 Oil: UO Condensate:  
 Gas: Water:  
 Interval: 4,416 - 7,559 GROSS Method: FLOWING  
 Duration of Test: Hours Choke:  
 Oil Gravity: GOR:  
 Cond Gravity: Cond Ratio:  
 Prod Method: PERF Main Fluid Code:  
 Remarks on PT Test: Data Source: PI FLWD 40 BO/10 HRS.

## Perforations

Test	Data Source	Interval	Count	Type	Status	Shots/ Ft	Prod Method	Top Form Code	Top Form Name
001	PI	4416 - 7559					PERF	603GLLP	GALLUP /SD/



# Scout Ticket

Thu May 05, 2016

Form Code	Top Source	Interpreter	Form Name	Top Depth	Top TVD	Base Depth	Base TVD	Source	Lithology	Age Code
603MNCS	PI		MANCOS	2,893				LOG		603
603NBRR	PI		NIOBRARA	3,743				LOG		603

## Logs

Log	Data Source	Type	Top Depth	Base Depth	Logging Co.	BHT	since circ.
1	PI	ML					
2	PI	DNCP					
3	PI	NEC					
4	PI	NED					

## Dwights Energydata Narrative

Accumulated through 1997

Data Source	Type	Nbr	Remark
DEI	IP	1	(Gallup 4334-7559) Swabbed 96 BOPD; 295 MCFGPD; FCP 45
DEI	Perf	1	4334-7559 (Gallup )
DEI	Perf	1	open hole predrld lnr - natural
DEI	DST	1	None rptd
DEI	Cores	002	None
PI	Dwights Number	300457004393	

## Horizontal

Lateral Hole: 100  
 Data Source: PI  
 Horizontal Length: 3,301 FT  
 Formation: 603GLLP GALLUP /SD/  
 Total Horizontal Displacement: 3,664 FT  
 Max Build-up rate: 14.1 ANG / 100 FT  
 Max angle of Deviation: 95.62 ANG  
 Contractor: 078490  
 Feet in Pay:  
 Method: S

Kickoff Point  
 100 KOP MD: 3,552 FT TVD: 3,551 FT  
 Surface Coord KOP offset: 3 FT N 55 FT W  
 Data Source: PI

## Directional Survey

Data Source: PI  
 Run: 1  
 Depth: 7,560  
 Date: Aug 21, 1993  
 Zone Code:  
 Survey Type: DIR SURVEY  
 Company: UNKNWN  
 Type: MWD  
 Calculation Method: MC  
 Map Projection:  
 North Ref: Z

## Boreholes

Run	Data Source	Measured Depth	TVD	Drift Angle	Drift Azimuth	Rectangular N/S	Coordinates E/W	Overlap/ Proj/End
1	PI	0	0	0.000000	0.000000	0.00000 N	0.00 E	
1	PI	486	486	0.370000	205.000000	1.42000 S	0.66 W	



# Scout Ticket

Thu May 05, 2016

Run	Data Source	Measured Depth	TVD	Drift Angle	Drift Azimuth	Rectangular N/S	Coordinates E/W	Overlap/ Proj/End
1	PI	5,070	4,113	84.000000	146.000000	990.19000 S	624.66 E	
1	PI	5,090	4,115	85.130000	146.500000	1006.74000 S	635.72 E	
1	PI	5,134	4,118	86.250000	146.500000	1043.33000 S	659.94 E	
1	PI	5,167	4,120	86.000000	147.000000	1070.86000 S	677.99 E	
1	PI	5,199	4,122	85.870000	146.500000	1097.56000 S	695.49 E	
1	PI	5,232	4,125	85.750000	147.000000	1125.08000 S	713.54 E	
1	PI	5,264	4,127	85.870000	147.000000	1151.85000 S	730.92 E	
1	PI	5,296	4,130	85.750000	147.000000	1178.61000 S	748.30 E	
1	PI	5,328	4,132	86.120000	147.000000	1205.38000 S	765.69 E	
1	PI	5,362	4,134	86.370000	147.000000	1233.84000 S	784.17 E	
1	PI	5,393	4,136	86.500000	147.000000	1259.79000 S	801.02 E	
1	PI	5,422	4,138	86.750000	148.000000	1284.20000 S	816.57 E	
1	PI	5,456	4,139	87.750000	149.000000	1313.16000 S	834.31 E	
1	PI	5,487	4,140	89.250000	149.500000	1339.79000 S	850.16 E	
1	PI	5,519	4,141	89.250000	149.500000	1367.36000 S	866.40 E	
1	PI	5,551	4,141	89.250000	149.500000	1394.93000 S	882.64 E	
1	PI	5,584	4,141	89.370000	150.000000	1423.43000 S	899.26 E	
1	PI	5,615	4,142	89.620000	149.500000	1450.21000 S	914.88 E	
1	PI	5,648	4,142	89.620000	149.500000	1478.64000 S	931.63 E	
1	PI	5,680	4,143	87.870000	149.500000	1506.21000 S	947.86 E	
1	PI	5,712	4,144	87.750000	149.000000	1533.69000 S	964.21 E	
1	PI	5,746	4,145	87.750000	147.500000	1562.58000 S	982.09 E	
1	PI	5,778	4,146	89.120000	148.000000	1589.63000 S	999.16 E	
1	PI	5,809	4,146	89.500000	148.000000	1615.92000 S	1015.58 E	
1	PI	5,839	4,147	89.500000	147.500000	1641.29000 S	1031.59 E	
1	PI	5,870	4,147	88.620000	147.500000	1667.43000 S	1048.25 E	
1	PI	5,902	4,148	88.750000	147.500000	1694.41000 S	1065.44 E	
1	PI	5,932	4,148	89.120000	148.500000	1719.85000 S	1081.33 E	
1	PI	5,964	4,149	89.370000	147.500000	1746.98000 S	1098.29 E	
1	PI	5,994	4,149	89.750000	147.500000	1772.28000 S	1114.40 E	
1	PI	6,025	4,149	89.750000	147.500000	1798.43000 S	1131.06 E	
1	PI	6,056	4,149	90.000000	147.000000	1824.50000 S	1147.83 E	
1	PI	6,087	4,149	90.250000	147.500000	1850.57000 S	1164.60 E	
1	PI	6,118	4,149	90.500000	146.000000	1876.50000 S	1181.60 E	
1	PI	6,149	4,149	90.750000	147.000000	1902.34000 S	1198.71 E	
1	PI	6,181	4,148	90.620000	147.500000	1929.26000 S	1216.02 E	
1	PI	6,213	4,148	91.120000	147.500000	1956.24000 S	1233.21 E	
1	PI	6,243	4,147	90.370000	148.000000	1981.61000 S	1249.21 E	
1	PI	6,275	4,148	89.370000	148.000000	2008.75000 S	1266.17 E	
1	PI	6,306	4,148	89.750000	147.500000	2034.96000 S	1282.71 E	
1	PI	6,338	4,148	90.120000	148.000000	2062.03000 S	1299.79 E	
1	PI	6,370	4,148	88.500000	148.000000	2089.16000 S	1316.74 E	
1	PI	6,401	4,150	86.500000	149.500000	2115.64000 S	1332.81 E	
1	PI	6,433	4,152	86.120000	149.500000	2143.15000 S	1349.02 E	
1	PI	6,464	4,154	86.620000	148.500000	2169.67000 S	1364.95 E	
1	PI	6,496	4,155	87.130000	149.000000	2196.99000 S	1381.53 E	
1	PI	6,528	4,157	87.250000	149.000000	2224.38000 S	1397.99 E	
1	PI	6,559	4,158	87.250000	149.500000	2250.99000 S	1413.82 E	
1	PI	6,623	4,161	88.250000	149.500000	2306.09000 S	1446.28 E	
1	PI	6,655	4,162	88.370000	149.000000	2333.58000 S	1462.63 E	
1	PI	6,687	4,163	88.500000	149.000000	2361.00000 S	1479.11 E	
1	PI	6,718	4,164	87.120000	149.500000	2387.62000 S	1494.94 E	
1	PI	6,750	4,166	86.870000	149.500000	2415.16000 S	1511.16 E	

# IHS Well Report



User: John Thomas

Run Date: 2016-05-05

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## Scout Ticket

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( Total Well ID in this report is 1 )



# Scout Ticket

Thu May 05, 2016

<b>Top Formation Name:</b>	<b>Top Formation Code:</b>
<b>Base Formation Name:</b>	<b>Base Formation Code:</b>
<b>Oil:</b>	<b>Condensate:</b>
<b>Gas:</b>	<b>Water:</b>
<b>Interval:</b>	<b>Method:</b>
<b>Duration of Test: Hours</b>	<b>Choke:</b>
<b>Oil Gravity:</b>	<b>GOR:</b>
<b>Cond Gravity:</b>	<b>Cond Ratio:</b>
<b>Remarks on IP Test</b> <b>Data Source:</b> PI <b>P 91 BO/24 hrs grav 42 deg</b>	

## Perforations

Test	Data Source	Interval	Count	Type	Status	Shots/ Ft	Prod Method	Top Form Code	Top Form Name
001	PI	4130 - 4140		BULLT		4 FT	PERF	603GLLP	GALLUP /SD/

## Treatments

Treatment: 001

<b>Interval:</b>	4,130 - 4,140		
<b>Fluid:</b>	58,846 GAL	<b>FRAC</b>	<b>Type: O</b>
<b>Additive:</b>			
<b>Prop Agent:</b>	SAND	<b>Amount:</b>	72,000 LB
<b>Form Break Down Pressure:</b>			
<b>Average Injection Rate:</b>	35 BPM	<b>Instant Shut-in Pressure:</b>	
<b>Stages:</b>	<b>Remarks:</b>	SOFR:ORIG TREATMENT CD	

## Cores

CORE ID: 001

<b>Formation:</b>	603GLLP GALLUP /SD/	<b>Data Source:</b> PI
<b>Interval:</b>	4070-4091	<b>Rec:</b> 21 FT
<b>Core Type:</b>	CONV	<b>Show Type:</b>
<b>Description:</b>	<ul style="list-style-type: none"> <li>* 4.0TSH,BLK, FOSS, HIGHLY FRACT W/SH INCLUS</li> <li>* 6.0TSH,BLK, HRD W/VERT FRACS, FOSS</li> <li>* 6.0TSH,BLK, HRD, CALC, SLI GAS ODOR W/VERT FRACS</li> <li>* 2.0TSH,BLK, CALC, SLI MICA, SLI OIL ODOR</li> <li>* 1.0TSH,BLK, CALC, SLI MICA, SLI BENT, SLI OIL ODOR</li> <li>* 2.0TSS,MED GRY, QTZ, CALC, SLICKENSIDES FOSS W/ THIN SH STRKS, BLEDG OIL ON FRACS</li> </ul>	

CORE ID: 002

<b>Formation:</b>	603GLLP GALLUP /SD/	<b>Data Source:</b> PI
<b>Interval:</b>	4091-4116	<b>Rec:</b> 23.5 FT
<b>Core Type:</b>	CONV	<b>Show Type:</b>
<b>Description:</b>	<ul style="list-style-type: none"> <li>* 2.0TSH,BLK, VFG, SILTY W/VERT FRACS</li> <li>* 3.0TSS,DK GRY, F-M SUB-RNDD GRAINS, SILTY</li> <li>* 1.0TSH,BLK, SDY, V FOSS</li> <li>* 1.0TSS,DK GRY, MG</li> <li>* 7.0TSS,BLK, VFG, SILTY</li> <li>* 5.0TSH,BLK, HRD W/FN GRY SS LAM W/VERT FRACS</li> <li>* 4.0TSS,DK GRY, M-FG, HRD, SHLY W/VERT FRACS</li> <li>* .5TSS,DK GRY, FN, HRD W/THIN BLK SH STRKS</li> </ul>	

CORE ID: 003

<b>Formation:</b>	603GLLP GALLUP /SD/	<b>Data Source:</b> PI
<b>Interval:</b>	4116-4146	<b>Rec:</b> 31.5 FT
<b>Core Type:</b>	CONV	<b>Show Type:</b>

# VII. Proposed Operations Data

Proposed Operation: Robert L Bayless, Producer LLC proposes the temporary gas injection of produced sweet hydrocarbon gas from the Horseshoe Gallup 18-8H and Horseshoe Gallup 18-16H into the Gallup interval of the Horseshoe Gallup 19-8H for three months. Produced sweet hydrocarbon gas will then be injected from the Horseshoe Gallup 19-8H and Horseshoe Gallup 18-8H into the Horseshoe Gallup 18-16H for three months. Produced sweet hydrocarbon gas will then be injected from the Horseshoe Gallup 19-8H and Horseshoe Gallup 18-18H into the Horseshoe Gallup 18-8H for three months.

1. A maximum daily injection rate of 2,000 MCFPD and an average daily rate of 500 MCFPD is anticipated.
2. The system will be closed
3. The proposed maximum injection pressure will be 1,000 psi with an average injection pressure 500 psi.
4. The source of the injection fluid (gas) will be from the Gallup interval of the Horseshoe Gallup 18-8H, Horseshoe Gallup 19-8H, and Horseshoe Gallup 18-16H. Since the gas stream are produced and injected into the same (Gallup) Formation they are compatible.
5. Not Applicable

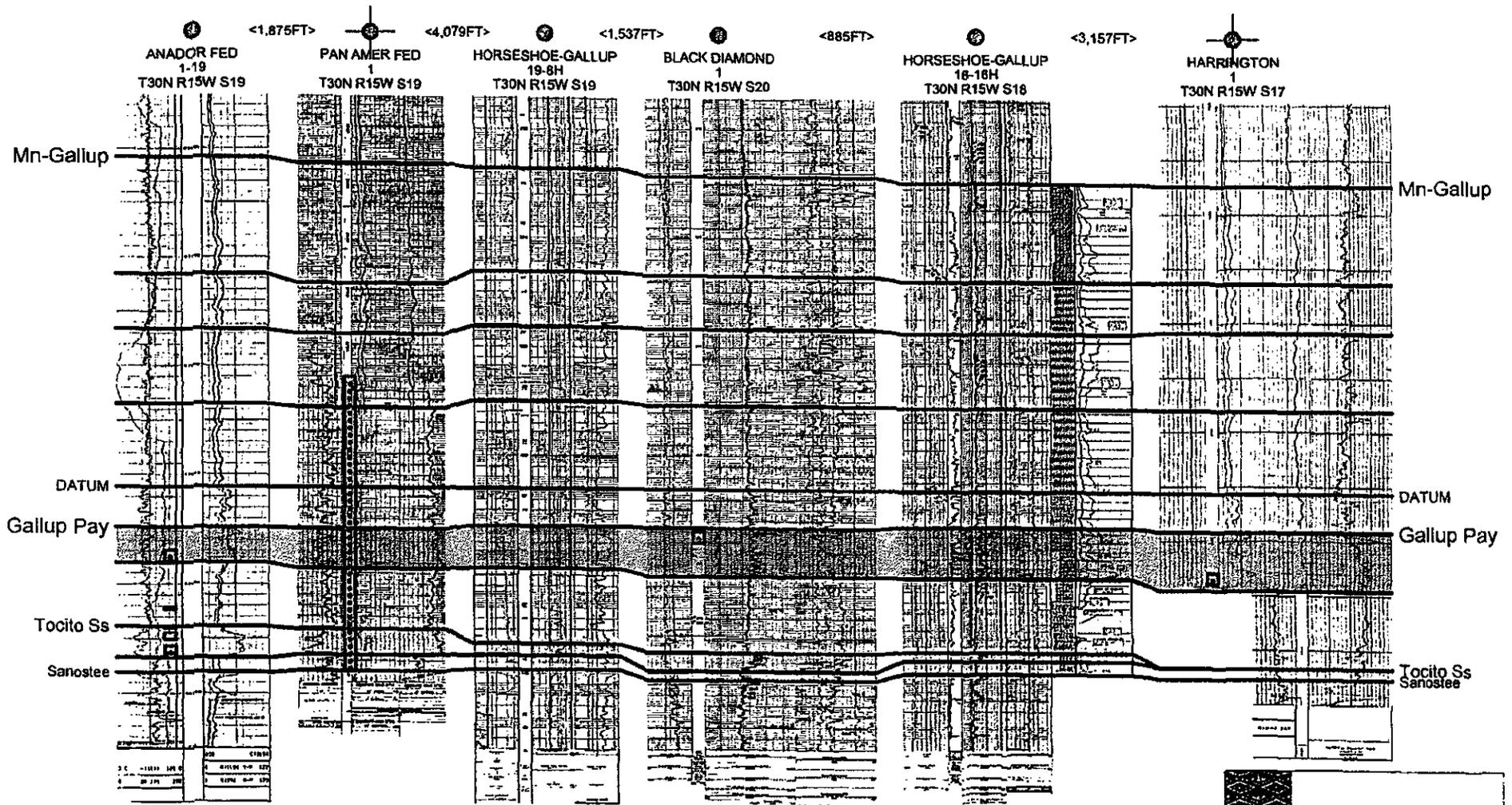
# Section VIII. Geology

The three subject horizontal injection wells (labeled green lines inside the area of review on the attached map) are all entirely completed within the "Gallup pay" zone in the lower Gallup interval of the Mancos Shale formation. The Gallup pay is an informal designation used by Bayless for the primary horizontal target zone in the Horseshoe-Gallup project area. The stratigraphic position of the Gallup pay is shown in orange on the attached cross-section "A", which includes all logged wells within the area of review. The location of cross-section A is indicated on the attached map. The Gallup pay consists of interbedded sandstone, siltstone, and shale. The thickness of the Gallup pay zone ranges from 33 feet in the south part of the area of review to 54 feet in the north part. The Gallup pay in the area of review dips to the east, causing the zone's true vertical depth in the subject wells to vary between 3900 and 4100 feet.

There are no known aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less.

A

A'



Robert L. Bayless, Producer LLC
Horseshoe-Gallup Gas Injection
San Juan County, New Mexico
Mancos-Gallup Cross-Section A
Gallup Pay Injection Zone
By: G. Coryell 2-28-2016

## **X. Logs** Filed with Division

## **IX. Stim. Program**

No incremental stimulation will be needed or utilized

## **XI. Water Analysis**

No fresh water well within 1 mile radius

## **XII. Statement**

Robert L Bayless, Producer' LLC has examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.