

State of New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division

Sundry Notices and Reports on Wells

1. Type of Well  
GAS

2. Name of Operator  
**MERIDIAN OIL**

3. Address & Phone No. of Operator  
PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec., T, R, M  
950' FSL, 940' FEL, Sec. 15, T-32-N, R-12-W, NMPM, San Juan County

API # (assigned by OCD)  
30-045-22858  
5. Lease Number  
Fee  
6. State Oil&Gas Lease #  
7. Lease Name/Unit Name  
Hubbard  
8. Well No.  
4A  
9. Pool Name or Wildcat  
Blanco Mesaverde  
10. Elevation: 6150 GR

Type of Submission	Type of Action
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment <input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion <input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Plugging Back <input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair <input type="checkbox"/> Water Shut off
	<input type="checkbox"/> Altering Casing <input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other - Bradenhead repair, pay add

13. Describe Proposed or Completed Operations

It is intended to repair the bradenhead on the subject well and add by-passed pay in the Mesaverde formation according to the attached procedure and wellbore diagram.

RECEIVED  
MAY - 3 1995  
OIL CON. DIV.  
DIST. 3

SIGNATURE *Donna Bradenhead* (TJM4) Regulatory Affairs May 2, 1995

(This space for State Use)

Approved by *Johnny Robinson* Title DEPUTY OIL & GAS INSPECTOR, DIST. #3

Date MAY - 3 1995

\* Notify OCD in time to witness BH repair

### Pertinent Data Sheet - Hubbard #4A

**Location:** 950' FSL, 940' FEL, Unit P, Section 15, T32N, R12W, San Juan County, New Mexico  
Latitude: 36.98160 Longitude: 108.07657

**Field:** Blanco Mesaverde      **Elevation:** 6150' GL      **TD:** 5380'  
6162' KB      **PBTD:** 5340'

**Completed:** 05-08-78                      **Spud Date:** 04-12-78

Meridian W.I.: 25.00	SJBT: 75.00	<u>Initial Potential:</u>	<u>Fed. No:</u> Fee
Meridian N.R.I.: 21.360	SJBT: 64.08	AOF: 6578 MCFD	<u>DP No:</u> 29902
		SICP: 738	<u>Prop. No:</u> 0023316
		SITP: 211	

**Casing/Liner Record:**

<u>Hole Size</u>	<u>Csg Size</u>	<u>Wt. &amp; Grade</u>	<u>Depth Set</u>	<u>Cement</u>	<u>Top/Cement</u>
12 1/4"	9 5/8"	36.0# K-55	224'	110 sxs	Circ/Surface
8 3/4"	7"	20.0# K-55	2899'	240 sxs	TOC @ 1500' TS
6 1/4"	4 1/2"	10.5# K-55	2773'-5360'	325 sxs	Circ/Liner Top
	4 1/2"	Liner Hanger @ 2773'			

**Tubing Record:**

<u>Tbg Size</u>	<u>Wt. &amp; Grade</u>	<u>Depth Set</u>
2 3/8"	4.7# CSR-55	5271'

**Formation Tops:**

Ojo Alamo:	1370'
Fruitland Coal:	2097'
Pictured Cliffs:	2599'
Cliffhouse:	4256'
Point Lookout:	4902'

**Logging Record:** GR-IND, GR-Density, Correlation, Neutron, Temp. Survey

**Stimulation:**

**Perf:** CH @ 4300', 4313', 4413', 4423', 4443', 4483', 4491', 4499'.  
PL @ 4919', 4927', 4935', 4943', 4951', 4959', 4967', 4975', 4982', 4989', 4997',  
5005', 5013', 5026', 5033', 5040', 5047', 5058', 5124', 5139', 5159', 5174', 5240', 5316'.

**Frac:** CH w/60,000 gallons water & 30,000# 20/40 sand.  
PL w/157,000 gallons water & 78,500# 20/40 sand.

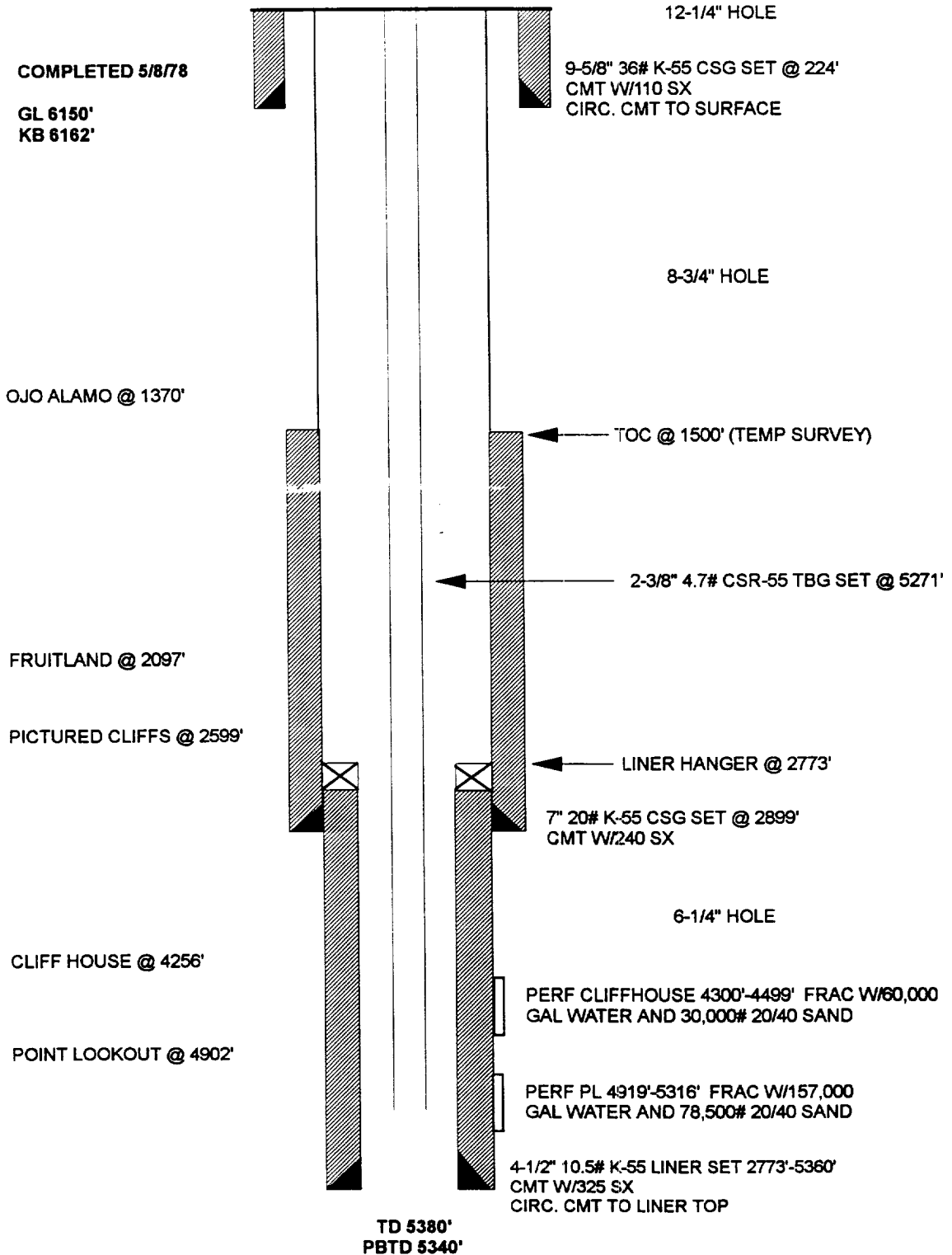
**Workover History:** None

# HUBBARD #4A

BLANCO MESAVERDE

950' FSL, 940' FEL

UNIT P SEC 15, T32N, R12W, SAN JUAN COUNTY, NM



**HUBBARD #4A**  
**SECTION 15 T32N R12W**  
**Lat - Long: 36.98160 - 108.07657**  
**Completion Procedure**

1. Comply with all BLM, MOI & NMOCD rules & regulations. MOL and RU completion rig. NU BOP with flow tee and stripping head. Test operation of rams. NU blooie line and 2-7/8" relief line.
2. Spot 11 frac tanks. Fill with 1% KCl water that is filtered.
3. TOH w/ 2-3/8" 4.7# CSR-55 tbg (5271') .
4. TIH w/ 2-3/8" workstring and a 7" 20# casing scraper to 2773'. TOH
5. TIH w/ 2-3/8" workstring and a 4-1/2" 10.5# casing scraper to 5340'. TOH
6. TIH with a 4-1/2" Model "G" BP and a 4-1/2" Model EA Retrievmatic pkr. Set the Model "G" BP at 4250' and TOH to 2800' and then set the packer. Test casing to 3600# and the backside to 1500#. Unseat packer and TIH to retrieve the Model "G" BP. Latch onto the BP and release BP. TIH to 4900' and set BP. Set packer and test BP to 3600#. Unseat packer and TOH. Lay down the pkr. Dump sand on top of packer.
7. RU wireline company. Perforate @ the following intervals: 4526', 4535', 4544', 4552', 4582', 4594', 4610', 4627', 4650', 4672', 4682', 4690', 4800', 4811', 4824', 4837'. A total of 16 holes. These perforations are to be shot on the attached Densilog. RD wireline company.
8. TIH w/ 2-3/8" workstring and a 4-1/2" packer. Set packer @ 4250'. Balloff the perforations w/ 2500 gals of 15% HCL acid and 50 RCN balls @ 10 BPM. Max pressure is 3600#.
9. Release packer and TIH to 4875'. TOH.
10. TIH w/ 3-1/2" frac string, 100' of 2-3/8" N-80 tbg and a 4-1/2" fullbore packer. Set packer @ 2800'. Hold 500 psi on the backside. Establish rate into the perforations.

**Hold a safety mtg w/ all personnel on location.**

11. RU Stimulation Company and fracture stimulate the well with the attached schedule. Max Pressure = 4500#. Anticipated Press = 3427#. Maximum static pressure is 3800#. Sand will be tagged w/ 4 mci/1000#.
12. RD stimulation company.
13. Flow well back through 3/4" choke at 20 BPM or less if sand production is present; until well logs off. Release 4-1/2" packer.
14. TOH laying down the 3-1/2" & 2-3/8" frac string and packer once sand and water production rate are minimal.
15. RU wireline company and set a 4-1/2" RBP @ 3800' provided 7" casing tested in step 6. Otherwise set a 7" RBP above the liner top @ 2700'. Dump one sx of sand on top of RBP.

16. Load the hole. Pressure test the casing to 1500#. Run a CBL from RBP to surface.
17. Perf 2 SQ holes 50' above the TOC. TIH w/ 2-3/8" tbg. and fullbore pkr. Set pkr 100' above the perf holes. Squeeze the perf holes w/ 100% excess cmt w/ the BH valve open at surface. Circ 5 bbls of good cmt out of the bradenhead valve and then shut in valve and squeeze remaining cmt away. Over displace the cmt out of the 2-3/8" tbg by 2 bbls. Hold pressure on cmt for 4 hrs then open at surface and check for flow. Shut well in until flow ceases. TOH w/ packer.
18. WOC for 12 hrs then drill out the cmt. Run a CBL to locate TOC, if cmt was not circulated. Pressure test the sqz holes to 750#.
19. When Sqz holes test TIH w/ a retrieving tool and latch onto the RBP @ 2700' and TOH.
20. TIH w/ 2-3/8" tbg and a retrieving tool and clean out to 4900' w/ gas. Obtain pitot gauges when possible. When well is clean latch on to the RBP and TOH.
21. RU wireline company. Run an After-Frac GR from 5000' to the top of radioactive material. Have company tag bottom w/ tool to check for fill. RD wireline company.
22. TIH w/ 2-3/8" tbg w/ a F Nipple one joint from the bottom and an expendable check on bottom. CO to PBTD of 5340'.
23. When well is clean land tbg at 5300'.
24. ND BOP, NU wellhead. Pump off expendable check. Take final gauges.
25. RD and release the rig.

Approve: \_\_\_\_\_

  
Drilling Superintendent

Recommend: \_\_\_\_\_

NW Basin Team Leader

Telephone Numbers:

Todd Mushovic	326-9584 (W)	324-0692 (H)	Prod. Eng
Mary Ellen Lutey	599-4052 (W)	325-9387 (H)	Prod. Eng
Jack Kean	599-4038 (W)	326-2642 (H)	Res. Eng
Mike Martinez	860-7518 (M)	326-4861 (H)	599-7429 (Pager)
Mark Byars	320-0349 (M)	327-0096 (H)	327-8470 (Pager)

Vendors:

Wireline:	Schlumberger	325-5006
Pkrs & BP:		
Stimulation:	Halliburton	325-3575
Cement:	Cementers Inc.	632-3683

**Stimulation Procedure  
Meridian Oil Inc.**

General Information			Well Configuration			Formation and Stimulation Data		
Well Name:	Hubbard #4A		Casing:	3-1/2" 9.3#	0	2800	Max Treating Pressure	4500 psi
Location:	Sec 15 T32N R12W		Liner:	4-1/2" 10.5#	2773	5340	Frac Gradient:	0.45 psi/ft
Formation:	Cliffhouse / Menefee		Capacity:	0.0087 bbl/ft	0.0159	bbl/ft	BH Temp:	120 deg. F
Vendors			PBTD	4900 ft	Vol. to:	(gals)	Antic. Treating Rate:	45 BPM
Stimulation:	Halliburton (325-3575)		Top Perf:	4300 ft	PBTD	2,426	Antic. BH Treating Pres:	2,056 psi
Tagging:	Pro-Technics (326-7133)		Bot Perf:	4837 ft	Top Per:	2,025	Antic. Surf Treating Pres:	3,427 psi
			Midpoint:	4569 ft	^20'	2,011	Percent Pad:	25%
Fluid:	30# X-link Fluid		Perforations				Net Pay:	200 ft
Note:	Use 1%KCL Water		1 spf	0.31 " holes			lb prop/net ft pay:	1,350 lb/ft
			24 holes	12.02 " penetration			Job Duration:	94.8 min
Perf Friction =								1115.4

**Stimulation Schedule**

Sand Data						Fluid Data				Rate and Time Data			Comments
Tag	Stage	Sand	Conc	Stage	Cum	Stage	Cum	Stage	Cum	Slurry	Stage	Cum	
		Mesh	ppg	Sand	Sand	Fluid	Fluid	Slurry	Slurry	Rate	Time	Time	
				lbs	lbs	gals	gals	gals	gals	bpm	min	min	
	Pad	N/A	0.0	0	0	40,833	40,833	40,833	40,833	45.0	21.6	21.6	Throughout job, adjust rate to max w/o exceeding max. pressure
yes	2	20/40	0.5	20,000	20,000	40,000	80,833	40,912	81,745	45.0	21.6	43.3	
yes	3	20/40	1.5	40,000	60,000	26,667	107,500	28,491	110,236	45.0	15.1	58.3	
yes	4	20/40	3.0	70,000	130,000	23,333	130,833	26,525	136,761	45.0	14.0	72.4	
yes	5	20/40	4.0	90,000	220,000	22,500	153,333	26,604	163,365	45.0	14.1	86.4	
yes	6	20/40	5.0	50,000	270,000	10,000	163,333	12,280	175,645	45.0	6.5	92.9	
	Flush	N/A	0.0	0	270,000	2,011	165,345	2,011	177,657	25.0	1.9	94.8	
				Total	lb/ft	Total		Total		Ave.	Total		
				270,000	1,350	165,345		177,657		42.1	94.8		

**Volumes and Additives**

Water Volume=	165,345	treat +	8,267	excess =	173,612 gallons (MOI)
Water Volume=	3,937	treat +	197	excess =	4,134 bbls (MOI)
Fluid Volume:	4,134 bbl designed treating volume				
20/40 Arizona Sand:	270,000 lbs				
Fluid end:	30# X-Link				
Breaker:	Enzyme breaker designed for 3 hour break @ 120 degrees F.				

**Radioactive Tagging**

.4 mCi IR192/1000# sand

**Equipment**

Tanks: 11 x 400 bbl frac tanks(supplied by MOI).  
Filled w/ 4,134 bbls 2% KCl water (supplied by MOI).  
Mix on the fly equipment.  
Mountain Mover.  
Blender.  
Fluid Pumps as required.

**Comments and Special Instructions**

**MAXIMUM ALLOWABLE TREATING PRESSURE IS 4500 PSI.**

Hold safety meeting with everyone on location before pressure testing surface lines.  
Pressure test surface lines to 5500 psi (1000 over max allowable but less than working pressure).  
Re-calculate flush volume prior to job to ensure sand will be flushed out of the tubing.  
SI well for 3 hours upon completion to allow the gel to break.  
If well is on a vacuum then cut flush by 25% and bring rate up to 35 BPM.

Production Engineer: T. J. Mushovic