

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE*
(Other instructions on reverse side)

Budget Bureau NO. 1004-0130
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

NM 40645 ✓

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

CONFIDENTIAL

1.

OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

Mallon Oil Company ✓

3. ADDRESS OF OPERATOR

2750 Security Life Building, Denver, CO 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)

At surface

860' FSL & 990' FEL ✓

7. UNIT AND WELL NAME

8. FARM OR LEASE NAME

Ribeyowids

9. WELL NO.

#2-16 ✓

10. FIELD AND POOL, OR WILDCAT

Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec. 2, T25N, R2W ✓

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, CR, etc.)

7432' GL

12. COUNTY OR PARISH

Rio Arriba

13. STATE

NM

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

(Other) ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

ABANDON* Temp. ☒

CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐

FRACTURE TREATMENT ☐

SHOOTING OR ACIDIZING ☐

(Other) ☐

REPAIRING WELL ☐

ALTERING CASING ☐

ABANDONMENT* ☒

* Temp. ☐

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Mallon Oil Company plans to temporarily abandon the Dakota interval perforations from 7950 to 8086 ft of the Ribeyowids #2-16 well due to State Order regarding commingling in this area.

A bridge plug has been set at 7900' RKB with 62 feet of sand above to serve as a seal between the Dakota and the Gallup formations.

RECEIVED

MAR 05 1985

OIL CON. DIV.
DIST. 3

RECEIVED
FEB 20 1985
BUREAU OF LAND MANAGEMENT
FARMINGTON RESOURCE AREA

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

Agent

DATE

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

ACCEPTED FOR RECORD

FEB 21 1985

FARMINGTON RESOURCE AREA

BY

*See Instructions on Reverse Side

FARMINGTON COPY

BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM 40645	
2. NAME OF OPERATOR Mallon Oil Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
3. ADDRESS OF OPERATOR 2750 Security Life Building, Denver, CO 80202		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 860' FSL & 990' FEL		8. FARM OR LEASE NAME Ribeyowids	
14. PERMIT NO.		9. WELL NO. #2-16	
15. ELEVATIONS (Show whether DF, RT, CR, etc.) 7432' GL		10. FIELD AND POOL, OR WILDCAT Basin Dakota-Undes Gallup	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 2, T25N, R2W	
		12. COUNTY OR PARISH Rio Arriba	13. STATE NM

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) ☐PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☒SHOOTING OR ACIDIZING ☒

(Other) T.D., run casing

REPAIRING WELL ☐ALTERING CASING ☐ABANDONMENT* ☐

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

See Attached Sheets.

RECEIVED

FEB 20 1985

BUREAU OF LAND MANAGEMENT
FARMINGTON RESOURCE AREA

CONFIDENTIAL

RECEIVED
MAR 05 1985
OIL CON. DIV.
DIST. 3

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

Agent

DATE

2-19-85

(This space for Federal or State office use)

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

ACCEPTED FOR RECORD

DATE

FEB 20 1985

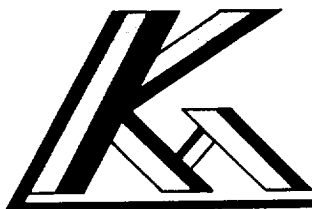
FARMINGTON RESOURCE AREA

BY

*See Instructions on Reverse Side

FARMINGTON COPY

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



CONFIDENTIAL

KM PRODUCTION COMPANY
P.O. Box 2406
Farmington, NM 87401
(505) 325-6900

MALLON OIL COMPANY
RIBEYOWIDS #2-16
860' FSL & 990' FEL
Sec. 2, T25N, R2W
Rio Arriba County, NM

DAILY REPORT

12-08-84 Spud at 1:45 p.m. on 12-07-84. Drilled 284' of 12½" hole and ran 265' of 9-5/8" 36#/ft casing and set at 277'. Cement with 159 ft³ (135 sx) Class B cement with 2% CaCl₂. Circulated cement to surface. Plug down @ 8:00 p.m.

12-09-84 Drilling @ 2000' Mud Wt. 8.8, Visc. 35, W.L. 6.0 cc.

12-10-84 Drilling @ 3200' Mud Wt. 8.9, Visc. 36, W.L. 6.0 cc.

12-11-84 Drilling @ 3900' Mud Wt. 9.1, Visc. 34, W.L. 7.0 cc.

12-12-84 Drilling @ 4390' Mud Wt. 9.1, Visc. 38, W.L. 6.0 cc.

12-13-84 Drilling @ 4870' Mud Wt. 9.0, Visc. 38, W.L. 6.2 cc. Changed to 7-7/8" hole @ 4449'.

12-14-84 Drilling @ 5415' Mud Wt. 9.1, Visc. 36, W.L. 6.4 cc.

12-15-84 Drilling @ 5900' Mud Wt. 8.9+, Visc. 41, W.L. 8.4 cc.

12-16-84 Drilling @ 6265' Mud Wt. 9.1, Visc. 41, W.L. 7.6 cc.

12-17-84 Drilling @ 6565' Mud Wt. 9.0, Visc. 43, W.L. 6.2 cc.

12-18-84 Drilling @ 7081' Mud Wt. 8.9+, Visc. 42, W.L. 6.8 cc.

12-19-84 Drilling @ 7452' Mud Wt. 9.0+, Visc. 43, W.L. 6.4 cc.

12-20-84 Drilling @ 7821' Mud Wt. 9.0, Visc. 41, W.L. 8.0 cc.

12-21-84 Drilling @ 7915' Mud Wt. 8.9+, Visc. 37, W.L. 7.2 cc.
12-22-84 Drilling @ 8095' Mud Wt. 8.9+, Visc. 55, W.L. 7.6 cc.
12-23-84 TD @ 8176' RKB. Rigged up Gearhart; ran Induction-GR-SP and Compensated Density Compensated Neutron logs. Loggers TD @ 8166 ft.
12-24-84 Ran 206 jts. of 5-1/2" casing as follows:

<u>Description</u>	<u>Length</u>	<u>Depth</u>
KB to landing point	12.00	0-12
1 cutoff joint 5-1/2, 23#, N-80	20.49	12-32
13 jts. 5-1/2", 23#/ft. N-80 LTC new (MKK)	513.47	32-546
83 jts. 5-1/2", 17#/ft. N-80 used	3264.87	546-3811
1 5-1/2" upper stage D.V. tool	2.53	3811-3813
58 jts. 5-1/2" 17#/ft. N-80 used	2315.94	3813-6129
1 5-1/2" lower stage D.V. tool	2.53	6129-6132
50 jts. 5-1/2" 17#/ft. N-80 used	1984.41	6132-8116
1 5-1/2" DFFC	2.21	8116-8118
1 jt. 5-1/2" 17#/ft. N-80 used	42.12	8118-8161
1 5-1/2" cement filled guide shoe	.95	8161-8162
	<u>8161.52</u>	

Casing landed @ 8162 ft. RKB
DFFC @ 8116
Bottom D.V. tool @ 6129
Top D.V. tool @ 3811
Centralizers @ 3777, 3861, 6093, 6172, 6727, 6840, 6967, 7093,
7205, 7320, 7437, 7563, 7918, 7996, 8080, and 8140.

Rigged up Dowell; pumped 10 bbls. water ahead, cemented first stage with 450 sacks of 50-50 pozmix with 2% gel, 10% salt, and 1/4# celoflake per sack. Good circulation throughout job. Bumped plug to 1750 psi, held ok; plug down @ 3:15 a.m. 12/24/84. Dropped bomb to open stage tool. Tool opened at 1000 psi. Circulated with mud for 3 hours. Pumped 10 bbls. water ahead; cemented second stage with 200 sacks Class B cement with 2% D-79 and 1/4# celoflake/sack, tailed by 275 sacks of 50-50 pozmix with 2% gel, 10% salt, and 1/4# celoflake per sack. Good circulation throughout job. Bumped plug to 2500 psi, held ok. Plug down at 8:15 a.m. 12/24/84. Dropped bomb to open upper stage tool. Tool opened at 1800 psi. Circulated hole with mud for three hours. Pumped 10 bbls. water ahead; circulated third stage with 175 sacks Class B cement with 2% D-79 and 1/4# celoflake/sack, tailed by 175 sacks of 50-50 pozmix with 2% gel, 10% salt, and 1/4# celoflake/sack. Good circulation throughout job. Bumped plug to 2500 psi, held ok. Plug down @ 12:05 p.m. 12/24/84. Released rig. Ran temperature survey with Wilson Service Co. Top of cement in casing @ 3780 ft., top of cement in annulus @ 1900 ft.

- 1-16-85 Move in and rig up Bayless Rig 6. Nipple up wellhead, nipple up BOP. Pick up 4-5/8" bit, could not get bit into casing, picked up 4 1/2" bit, casing scraper, and 90 joints of 2-7/8" tubing. SDFN.
- 1-17-85 Pick up 2-7/8" tubing. Tag cement above upper D.V. tool at 3762'. Drilled 65 feet of cement and D.V. tool at 3827'. Had trouble getting casing scraper through D.V. tool. Worked on tool with casing scraper until assembly only hung up slightly moving through the D.V. tool. Pressure tested casing and wellhead to 4000 psi. Held OK. Picked up more 2-7/8" tubing. Tagged cement above lower D.V. tool at 6114'. SDFN.
- 1-18-85 Drilled out 31 feet of cement and bottom D.V. tool at 6145'. The casing scraper was hanging up on this D.V. tool also. Worked scraper through tool to make as free as possible. Picked up 2-7/8" tubing. Tagged cement on top of DFFC at 8029'. Drilled 103 feet of cement to PBTD of 8132'. Pressure tested casing to 4000 psi. Held OK. Pulled 10 stands of tubing. SDFN.
- 1-19-85 Trip tubing, casing scraper, and 4 1/2" bit out of hole. Trip in hole with 4.578" O.D. mill on 2-7/8" tubing. Mill went through upper D.V. tool easily. Mill tagged up on lower D.V. tool. Drilled through lower D.V. tool with mill. Tripped remaining tubing in hole. Pressure tested casing and wellhead to 4000 psi. Held OK. SD for Sunday.
- 1-20-85 S.D. Sunday
- 1-21-85 Rigged up Smith Energy Services. Pressure tested casing and wellhead assembly to 4000 psi (on chart) held OK for 15 minutes. Circulated hole clean with 1% KCL water. Moved tubing to 6088'. Spotted 250 gallons of 7 1/2% D.I. HCL acid. Tripped tubing and mill out of hole. Rigged up Basin Perforators. Ran gamma ray-collar locator log from PBTD of 8123' (RKB) to 6500'. Perforated Dakota interval per GR-CLL with 3-1/8" casing gun and 1JSPF as follows:

7950-7958	8'	
8016-8022	6'	
8024-8028	4'	
8048-8056	8'	
8067-8086	19'	
	<u>45'</u>	Total 45 holes (.34" diameter)

Broke down Dakota perforations down casing @ 2000 psi. Established injection rate into perforations of 9.6 BPM @ 1100 PSI - ISIP = 700 PSI (.52 grac gradient). Acidized down casing with 500 gallons of 7 1/2% weighted HCL acid containing 68 l.l s.g. RCN ball sealers. Acid rate 8.5 BPM @ 1300 PSI. Saw some ball action. Did not balloff. Overdisplaced acid into formation by 15 bbls. Final displacement rate 4.1 BPM @ 2300 PSI - ISIP

1-21-85 = 2100 PSI (frac gradient .70 psi/ft) Total bbls to recover
(cont.) = 217 bbls. Ran junk basket to retrieve ball sealers. Junk
basket got hung up in hole @ 5670'. Pulled 2000 lbs on junk
basket. Line parted at cable head. Rigged up overshot fishing
tool on tubing. Trip tubing in hole. SDFN.

1-22-85 Overnight pressure on well was 20 psi. Well made a small amount
of oil. Tripped tubing in hole and tagged fish at 5670'. Pulled
2000 lbs over tubing weight and fish came free. Moved tubing
down the hole, could not get past lower D.V. tool. Tripped
tubing out of hole. Fish was not in the overshot. Tripped
in hole with overshot fishing tool on tubing. Tagged fish
at lower D.V. tool - worked on fish. Worked through lower
D.V. tool. Tripped tubing to PBTD. Tripped tubing out of
hole with the fish. Tripped in the hole with 5½" (Mountain
States Oil Tools) fullbore packer. Left packer hanging below
the lower D.V. tool. SDFN.

1-23-85 Overnight pressures: tubing 225 psi, annulus 190 psi - Blew
down well. Unloaded approximately 1 bbl of oil. Killed well
and tripped packer on tubing to 7931'. Circulated acid out
of hole. Set packer. Pressure tested packer and casing down
the annulus to 2500 psi. Held OK. Released packer and reset
between upper and lower Dakota perforations at 8030'. Rigged
up to swab and swabbed the following:

			DEPTH			
	TIME	FLUID LEVEL	PULLED FROM	FOOTAGE PULLED	APPROX BBLS	REMARKS
1	1:45	Surface	1500	1500	8.7	Gas cut
2	2:00	800	2000	1100	6.4	Gas cut
3	2:15	1500	3000	1400	8.1	Gas cut
4	2:30	2200	3500	1000	5.8	Gas cut
5	2:45	2400	4000	1000	5.8	Gas cut
6	3:00	2400	4000	1500	8.7	Gas burns. Heavy gas cut. Some oil.
7	3:20	3200	5000	1500	8.7	Heavy gas cut. Oil shows
8	3:50	4000	7000	800	4.6	Heavy gas cut. Oil shows
9	4:30	4500	8000	200	1.5	Heavy gas cut. Oil shows
10	5:15	gas cut	8000	0	0	Heavy gas cut. Oil shows
					58.3	

Swabbed an estimated total of 58 bbls of fluid. Swabbed well
down. Well making oil with good gas shows. SDFN.

1-24-85 Overnight pressures: tubing 700 psi, annulus on vacuum. Opened tubing - well flowed for 15 minutes, mostly oil. Released unloader on packer to kill well. Unseated packer and tripped tubing and packer out of hole. Rigged up Smith Energy Services. Fracture stimulated Dakota interval with 41,850 gallons of 30#/1000 gallon cross linked gelled water containing 1% KCL, ½ gal/1000 clay stabilizer, 1 gal/1000 surfactant and 35,700# 20-40 sand as follows:

14,000 gallons of pad	25½ BPM @2200 psi
20,000 gallons of 1 ppg 20-40 sand	25 BPM @ 2200 - 2500 psi
7,850 gallons of 2 ppg 20-40 sand	25 BPM @ 2500 - 3500 psi
2,646 gallons of flush w/uncross-linked gel	25-13 BPM @ 3500 - 4000 psi

Well screened off with 35,700 lbs of 20-40 sand in the formation and 9,240 lbs of sand in the wellbore (662 feet of sand fill)

ISIP = 4000 psi 10 minute shutin = 1550 psi
5 minute shutin = 1650 psi 15 minute shutin = 1500 psi

Average rate 25 BPM, average pressure 2300 psi. Maximum pressure 4000 psi. Minimum pressure 2200 psi. Load to recover 1171 bbls. Shut well in overnight to allow gel to break. SDFN.

1-25-85 Overnight shut in casing pressure was 500 psi. Well flowed for 1 hour. Tripped in hole with sawtooth collar on 2-7/8" tubing. Tagged sand fill at 6510' (1622 feet of sand fill, 22,650 lbs of sand) circulated out 1097 feet of sand (15,320 lbs) with water. 525 feet of sand left in hole (7330 lbs). Adjusted amount of sand in the formation is 22,400 lbs. SDFN.

1-26-85 Overnight pressures: tubing 300 psi, annulus 375 psi. Well blew right down. Circulated remaining 525 feet of sand out of hole. Tripped tubing out of hole. Trip in hole with packer on 2-7/8" tubing. Well flowing mostly frac water on trip in hole. Set packer at 7931'. Rigged to swab. Swabbed well as follows:

			DEPTH			
	TIME	FLUID	PULLED	FOOTAGE	APPROX	REMARKS
		LEVEL	FROM	PULLED	BBLS	
1	5:45	0	2000	2000	11.6	Frac water
2	6:00	800	3500	1500	8.7	Frac water
					20.3	

Swabbed 20 bbls of fluid. Shut well in-SD for Sunday.

1-27-85 Shut down - Sunday

1-28-85 Overnight pressures: tubing 175 psi, annulus 0 psi. Swabbed well as follows:

		FLUID	DEPTH PULLED	FOOTAGE	APPROX	
	TIME	LEVEL	FROM	PULLED	BBLS	REMARKS
1	8:30	0	1500	1500	8.7	Frac water
2	8:45	700	2500	1800	10.4	Frac water
3	9:00	1400	3000	1600	9.3	Frac water, slight gas cut
4	9:20	1900	3900	1500	8.7	Frac water, slight gas cut

Swabbed total of 37 bbls of fluid. On 5th swab run, transmission hose broke on rig. Swab mandrel was at 3900'. Called for new hose from town. Installed hose. Tried to pull swab but swab mandrel was stuck in tubing @ 3900'. Worked on swab and line broke free 150 feet above swab mandrel. Rigged to pull tubing. Unseated packer. Tripped tubing out to 3888'.

Well had pressure under mandrel. Flow water, some oil, and gas. Shut well in. SDFN.

1-29-85 Overnight tubing pressure was 300 psi. Blew right down. Pulled swab mandrel from tubing. Mandrel had 30 feet of sand on top of it. Tripped tubing and packer in the hole. Reset packer at 7931 feet. Restrung sand line and poured rope socket. Rigged to swab. Swabbed Dakota zone as follows:

			DEPTH PULLED	FOOTAGE	APPROX	
	TIME	LEVEL	FROM	PULLED	BBLS	REMARKS
1	2:30	500	1800	1100	6.4	First 400' O&G-rest frac water
2	2:45	1100	2800	1500	8.7	Frac water-slightly gas cut
3	3:05	1700	3000	1500	8.7	Frac water-slightly gas cut
4	3:30	1900	3500	1100	6.4	Frac water-slightly gas cut
5	3:50	2400	3700	1300	7.5	Frac water-slightly gas cut Some oil
6	4:05	2600	4100	1300	7.5	Frac water-slightly gas cut Some oil-well making sand
7	4:20	2600	4100	1300	7.5	Frac water-slightly gas cut Some oil-well making sand
8	4:50	2200	3000	1100	6.4	Frac water-some oil, well making sand, strong gas kick
9	5:25	2200	3500	1300	7.5	Frac water-some oil, well making sand, strong gas kick

Swabbed approximately 67 bbls of fluid. Last two runs had strong gas kicks. Well would flow 3-5 minutes after run. Well making sand during each run. Shut well in to build pressure. SDFN.

1-30-85 Overnight tubing pressure 450 psi. Well blew down in 10-15 minutes.
Unloaded oil and frac water. Rigged to swab. Swabbed well as follows:

		FLUID	DEPTH PULLED FROM	FOOTAGE PULLED	APPROX BBLs	REMARKS
	TIME	LEVEL				
1	9:15	1800	3000	1300	7.5	Pulled 400-500' of oil-slightly gas cut water
2	9:35	2800	3800	1000	5.8	Slightly gas cut water-show of oil
3	9:55	2800	4300	1200	6.9	Slightly gas cut water-show of oil
4	10:15	3000	4800	1500	8.7	Heavy gas cut water-show of oil-gas blow after run
5	10:35	1800GC	4800	1800	10.4	Heavy gas cut water-show of oil-gas blow after run
6	11:05	2800GC	5300	1800	10.4	Heavy gas cut water-show of oil-gas blow after run
7	11:45	3500GC	6000	1500	8.7	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 10-15 minutes after run
8	1:05	3500GC	6000	1000	5.8	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 10-15 minutes after run (a)
9	1:50	5000GC	7100	800	4.6	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 10 minutes after run (b)
10	2:25	4800GC	7100	1800	10.4	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 10 minutes after run (c)
11	2:55	5500GC	7100	900	5.2	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 5-10 minutes
12	3:30	6000GC	7100	300	1.7	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 5-10 minutes
13	3:55	couldn't tell	7100	400	2.3	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 5-10 minutes
14	4:30	couldn't tell	7100	300	1.7	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 5-10 minutes
15	5:00	couldn't tell	7100	300	1.7	Heavy gas cut water-approx. 15-20% oil cut-gas blow for 5-10 minutes

(a)	ORIFICE	TIME	READING (PSI)	GAS RATE MCFGPD
	1.25	1:15	1.5	287
	.75	1:20	2	108
	.75	1:25	1.5	93
	.5	1:25	3.5	64
	.5	1:30	TSTM	TSTM
(b)	.75	2:00	3	133
	.75	2:05	2.5	121
	.5	2:05	4	69
	.5	2:10	TSTM	TSTM

1-30-85 (c) Sample of Fluid Taken to Smith Energy Services for Analysis.
(cont) This water is frac fluid.

Swabbed a total of 92 bbls of fluid with an approximate 15-20% oil cut. Well still making some sand. Total load recovered by swabbing since frac is 216 bbls of fluid (from 1171 bbls of load to recover). Approximate fluid entry rate into the wellbore at the end of the day was 3½bbls per hour. SDFN.

1-31-85 Overnight tubing pressure was 475 psi. Blew down immediately. Riggged to swab. Swabbed well as follows:

	TIME	FLUID LEVEL	DEPTH PULLED FROM	FOOTAGE PULLED	APPROX BBLS	REMARKS
1	9:10	3500	5000	1200	6.9	Heavy gas cut water-oil show- virtually no flow after run
2	9:30	4300	5800	1100	6.4	Heavy gas cut water-oil show- virtually no flow after run
3	9:55	6200	7100	1200	6.9	Heavy gas cut water-oil show- virtually no flow after run
4	10:35	couldn't tell	7100	100	.6	Very little fluid out of formation

Total fluid swabbed was 21 bbls. Final fluid entry rate into well-bore was approximately 1 bbl per hour. Had 1½ hours downtime due to rig repair. Unseated packer. Tagged sand fill at 8035 ft RKB (lower 2 zones of Dakota covered by sand). Tripped packer out of hole. Tripped in hole with saw tooth collar on tubing. SDFN.

2-1-85 Repaired broken gear chain. Tagged sand fill. Circulated 88 feet of sand out of hole with water to PBTD of 8123' RKB. Sand was very compacted at 8045' RKB. Had to use power swivel to work through sand. Pulled 10 stands of tubing. SDFN.

2-2-85 No overnight pressure on well. Tripped tubing out of hole. Tripped in hole with packer on 2-7/8" tubing. Set packer @ 7900' RKB. Riggged to swab. Swabbed all Dakota zones as follows:

	TIME	FLUID LEVEL	DEPTH PULLED FROM	FOOTAGE PULLED	APPROX BBLS	REMARKS	TANK GAUGE
1	3:25	600	2000	1500	8.7	Some oil shows - frac water	
2	3:40	1300	2800	1500	8.7	Frac water	
3	3:50	2100	3600	1500	8.7	Frac water	
4	4:05	3100	4600	1500	8.7	Frac water	
5	4:20	3800	5300	1300	7.5	Slightly gas cut water-small oil show	
6	4:40	3500	5000	1400	8.1	Heavy gas cut fluid-mostly water Some oil show-some gas flow after run-trace of sand.	
7	5:05	3800GC	7100SN	200	1.2	Swab cup bad-most of fluid lost Heavy gas cut water-Some gas flow after run	

2-2-85
(cont)

		FLUID	DEPTH	FOOTAGE	APPROX	
	TIME	LEVEL	PULLED FROM	PULLED	BBLs	REMARKS
8	5:25	3800GC	7100SN	2500	14.5	Heavy gas cut fluid-mostly water-some oil show-some gas flow after run
9	5:45	4200GC	7100SN	2000	11.6	Heavy gas cut fluid-mostly water-good oil show-some gas flow after run-fluid sample taken

Swabbed approximate total of 77 bbls of fluid. Some oil shows seen. 20% oil cut on last run. Heavy gas cut fluid. Approximate fluid entry rate into wellbore is 35 bbls of gas cut fluid per hour. Shut well in to build pressure. SDFN.

2-3-85 S.D. for Sunday

2-4-85 Overnight tubing pressure was 550 psi. Well blew down in 20 minutes unloaded some oil. Rigged to swab. Swabbed all Dakota zones as follows:

		FLUID	DEPTH	FOOTAGE	APPROX	
	TIME	LEVEL	PULLED FROM	PULLED	BBLs	REMARKS
1	9:15	2800	4400	1300	7.5	Recovered about 250' of oil gas cut water
2	9:45	3200	4700	1400	8.1	Heavy gas cut fluid-Good oil show
3	10:10	2000GC	6000	2000	11.6	Heavy gas cut fluid-Good oil show Well flowed for 20 minutes after run-misting water.
4	10:50	3000GC	7100SN	2000	11.6	Very heavy gas cut fluid-Good oil show-Well flowed for 10 minutes after run-misting water.
5	11:15	5000GC	7100SN	900	5.2	Very heavy gas cut fluid-Good oil show-Well flowed for 20 minutes after run as follows:

ORIFICE	TIME AFTER RUN	READING(psi)	MCFGPD
1.25	1 minute	1.0	233
.75	2 minutes	2.5	121
.75	3 minutes	2.0	108
.75	4 minutes	1.5	93
.75	5 minutes	1.0	76
.25	8 minutes	5.0	20.7
.25	10 minutes	7.5	26.1
.25	15 minutes	10.0	30.8
.25	20 minutes	10.5	31

2-4-85 (cont) Swabbed a total of 44 bbls of gas cut fluid from the well. Good oil show. Last run had an approximate 20% oil cut. Gas flow rate decreased from 233 MCFGPD to 31 MCFGPD after the last run. Approximate fluid entry into wellbore on last run was 12.5 bbls per hour. Released packer. Tagged sand fill at 8124' RKB. Tripped tubing and packer out of hole. Tripped in hole with 4½" drillable bridge plug on tubing. Did not have any trouble getting the bridge plug through the 2 D.V. tools. SDFN.

2-5-85 Rigged up Smith Energy Services. Broke circulation. Dropped ball to set bridge plug at 7857' RKB. Pressured up to 1750 psi on tubing and pressure broke back. This should have set the bridge plug. Tried to tag plug with tubing. Plug didn't set. Tried to pressure test casing. Pumped into Dakota perfs. Tripped to sand fill. Tripped tubing out of hole. Rigged up Basin Perforators. Set drillable bridge plug at 7900' RKB. Pressure tested casing and plug to 4000 psi. Held OK for 5 minutes. Dropped sand on top of bridge plug. SDFN.

2-6-85 Rigged up Basin Perforators. Perforated Gallup interval from GR-CLL, perfs on depth with open hole log as follows:

6784	7024	7096	7210	7290	7431	7551
6803	7030	7108	7214	7314	*7485	*7590
6816	7034	7125	7225	7318	7493	7594
6854	7042	7142	7234	7334	*7513	*7598
6867	7046	7176	7238	7346	7518	7602
6904	7062	7188	7255	7365	*7537	7612
6920	7065	7191	7261	7422	7541	7618
6931	7078	7194	7275	*7424	*7547	

Total of 55 holes (.34" diameter)

*NOTE: 7 holes shot out of zone due to perforation equipment malfunction.

Had a total of 4 extra runs due to perforation equipment malfunction. SDFN.

2-7-85 Rigged up Smith Energy Services. Broke down Gallup perforations @ 2100 psi. Established rate of 21 BPM @ 2100 psi down the casing ISIP = 600 psi (frac gradient .52 psi/ft). Acidized the Gallup formation down the casing with 750 gallons of 7½% D.I. weighted HCL acid containing 83 l.l s.g. RCN ball sealers. Acid rate was 23 BPM @ 1600 psi. Had good ball action. Balled off casing to 4000 psi. Rigged up Basin Perforators. Ran junk basket in hole. Recovered 80 ball sealers. Rigged up Smith Energy Services. Fracture stimulated Gallup interval with 104,900 gallons of 25#/1000

2-7-85 gallon crosslinked gelled water containing 1% KCL, ½ gal/1000
(cont) Clay stabilizer, 1 gal/1000 surfactant and 102,800 lbs of 20-40
sand containing 51 millicuries of radioactive tracer material as
follows:

26,000 gallons pad	60 BPM @ 2800 psi
40,000 gallons 1 ppg 20-40 sand	56 BPM @ 3200 psi(1)
30,000 gallons 1½ ppg 20-40 sand	56 BPM @ 3200-3400 psi
(2) 8,900 gallons 2 ppg 20-40 sand	55 BPM @ 3300 psi(3)
6,552 gallons uncrosslinked gel flush	14-4 BPM @ 800-3200 psi

(1) NOTE: 500 psi pressure increase after the 1 ppg sand hit
the formation

(2) NOTE: Had to flush sand from hole due to lack of water
on location

(3) NOTE: It appears that approximately 29 perfs were open at
the end of the job.

ISIP = 1200 psi; 5 min = 950 psi; 10 min = 850 psi; 15 min = 800 psi.
Average Rate 56 BPM. Average pressure 3150 psi. Maximum pressure
3400 psi. Minimum pressure 2700 psi. Total load fluid to recover
= 2870 bbls. Shut in overnight to allow gel to break. SDFN.

2-8-85 Well was on a vacuum from overnight shut in. Tripped 9 stands
of tubing in the hole and well started flowing mostly water with
some gas and oil shows. Well flowed for 1½ hours. Tripped tubing
in the hole. Tagged sand fill at 7602' RKB. (298 feet of sand
fill above bridge plug, 4160 lbs of sand. Adjusted sand in
formation from frac job is 98,640 lbs). Circulated sand fill out
of hole to bridge plug at 7900' RKB. Perforations were bleeding
sand. Moved tubing to 7018' RKB. Rigged to swab. Swabbed Gallup
zone as follows:

	TIME	FLUID LEVEL	DEPTH PULLED FROM	FOOTAGE PULLED	APPROX BBLS	REMARKS
1	5:05	0	2500	2200	12.7	Frac water
2	5:20	600	2600	1800	10.4	Frac water
3	5:40	700	2700	1800	10.4	Frac water
4	5:55	900	3000	2000	11.6	Gas cut frac water, oil shows.

Swabbed a total of 45 bbls of fluid. Had gas cut fluid with an
oil cut on the last run. Shut well in to build pressure. SDFN.

2-9-85 Overnight pressures: tubing 300 psi. Annulus 60 psi. Tubing flowed for 10 minutes. Unloaded gas and some oil. Rigged to swab. Swabbed Gallup zone as follows:

		DEPTH				
	TIME	FLUID LEVEL	PULLED FROM	FOOTAGE PULLED	APPROX BBLs	REMARKS
1	8:40	900	2900	2000	11.6	Pulled about 200' of oil-Gas cut fluid-mostly frac water
2	9:00	800	2900	2000	11.6	Gas cut fluid-mostly frac water
3	9:20	1000	3000	2000	11.6	Gas cut fluid-mostly frac water
4	9:45	1200GC	3000	1800	10.4	Gas cut fluid-mostly frac water-well making sand.
5	10:10	1200GC	3200	2000	11.6	Gas cut fluid-mostly frac water-well making sand.
6	10:25	1500GC	3600	2000	11.6	Heavy gas cut fluid-mostly frac water-oil show-well making sand
7	10:50	1800GC	4500	2500	14.5	Heavy gas cut fluid-mostly frac water-oil show-well making sand
8	11:25	1400GC	4000	2500	14.5	Heavy gas cut fluid-mostly frac water-oil show-well making sand
9	11:45	2300GC	6300	2500	14.5	Heavy gas cut fluid-mostly frac water-15% cut oil-well making sand
10	12:05	2200GC	4400	2000	11.6	Heavy gas cut fluid-mostly frac water-15% cut oil-well making sand annulus press 30 psi.
11	12:50	1500GC	3900	2000	11.6	Heavy gas cut fluid-mostly frac water-15% cut oil-well making sand annulus press 30 psi.
12	1:10	1800GC	4300	2000	11.6	Heavy gas cut fluid-mostly frac water-15% cut oil-well making sand annulus press 30 psi.
13	1:35	1800GC	4300	1800	10.4	Heavy gas cut fluid-mostly frac water-15% cut oil-well making sand annulus press 30 psi.
14	2:00	2000GC	4300	2100	12.2	Heavy gas cut fluid-mostly frac water-15% cut oil-well making sand annulus press 30 psi.
15	2:25	2000GC	5000	2700	15.6	Heavy gas cut fluid-mostly frac water-10-20% oil cut-well making sand annulus press 30 psi.
16	2:55	2000GC	4000	1800	10.4	Heavy gas cut fluid-mostly frac water-10-20% cut oil-well making sand annulus press 30 psi.
17	3:25	1800GC	4000	2000	11.6	Heavy gas cut fluid-mostly frac water-10-20% cut oil-well making sand annulus press 30 psi.

2-9-85 Swabbed a total of 207 bbls of heavy gas cut fluid with a 10-20%
(cont) oil cut. Well was making quite a bit of sand. Well kicked off
flowing after 17th swab run and flowed 21 bbls of fluid in 2 hours
into a frac tank. Oil cut was approximately 10-15%. Annulus
pressure increased from 30 psi to 100 psi while well was flowing.
Shut well in to build pressure. SDFN.

2-10-85 S.D. Sunday

2-11-85 Overnight pressures: tubing 600 psi; annulus 400 psi. Well flowed
for 1 hour and logged off. Well made 11 bbls of fluid with an
approximate oil cut of 10-20%. Rigged to swab. Swabbed Gallup
interval as follows:

	TIME	FLUID LEVEL	DEPTH PULLED FROM	FOOTAGE PULLED	APPROX BBLS	REMARKS
1	10:30	2500GC	5000	2000	11.6	Heavy gas cut fluid-mostly water
2	10:55	2500GC	5000	2000	11.6	Heavy gas cut fluid-mostly water
3	11:20	2500GC	5000	2000	11.6	Heavy gas cut fluid-mostly frac water-15-20% oil cut-well making small amount of sand.
4	11:40	2500GC	5000	2000	11.6	Heavy gas cut fluid-mostly frac water-15-20% oil cut-well making small amount of sand.
5	12:00	2500GC	5000	2000	11.6	Heavy gas cut fluid-mostly frac water-15-20% oil cut-well making small amount of sand.
6	12:50	2500GC	5000	2000	11.6	Heavy gas cut fluid-mostly frac water-15-20% oil cut-well making small amount of sand.
7	1:15	2500GC	5000	2000	11.6	Heavy gas cut fluid-mostly frac water-15-20% oil cut-well making small amount of sand.
8	1:55	2500GC	5000	2000	11.6	Heavy gas cut fluid-mostly frac water-15-20% oil cut-well flowed 5 minutes after swab run.
9	2:40	1800GC	SN	2500	14.5	Heavy gas cut fluid-mostly frac water-15-20% oil cut-well flowed 5 minutes after swab run.
10	3:10	1800GC	SN	2500	14.5	Heavy gas cut fluid-mostly frac water-15-20% oil cut-well kicked off flowing.

Swabbed a total of 122 bbls of heavy gas cut fluid with 10-20% oil
cut. Well was making less sand than Saturday swab runs. Well kicked
off flowing at 3:10 p.m. Well made 19 bbls in 1st hour, 17 bbls in
the 2nd hour. Casing pressure increased from 390 to 510 psi while well
was flowing. Oil percentage at the end of the day was 20%. Left
well flowing to the frac tank overnight. SDFN.

2-12-85 Well was flowing this morning. Annulus 550 psi, flowing tubing pressure 30 psi. Well made 242 bbls of fluid overnight. Approximate oil cut is 25%. Well averaged 17 bbls of fluid per hour overnight. Monitored well flow as follows:

TIME	BEFORE GAUGE	BEFORE GAUGE	FOOTAGE PRODUCED	BBLS PRODUCED	REMARKS
8:00-9:00	12'8"	13'5"	9"	15.0	Approx oil cut 25%
9:00-10:00	13'5"	14'3"	10"	16.7	Approx oil cut 25%
10:00-11:00	14'3"	15'0"	9"	15.0	Switch tanks
11:30-12:30	8'8"	9'4"	8"	13.3	Approx oil cut 25%
12:30-1:30	9'4"	9'11"	7"	11.7	Approx oil cut 25%
1:30-2:30	9'11"	10'5"	6"	10.0	Approx oil cut 25%
2:30-3:30	10'5"	10'10"	5"	8.3	Approx oil cut 25%
3:30-4:30	10'10"	10'10"	0"	0.0	Well heading up-Logged Off

Well logged off from 3:30 to 4:30 but started flowing again by 5:00. Well flowed 90 bbls of fluid in 8½ hours. Average flow rate of 10.6 bbls per hour. Approximate oil cut is 25%. Annulus pressure was 500 psi at end of day. Left well flowing to frac tank. SDFN.

2-13-85 Well was not flowing fluid this morning, but was gassing heavily. Well made 22 bbls of fluid overnight. Annulus pressure was 500 psi. Made 1 swab run and kicked well off flowing. Well flowed for 4 hours and died, made 60 bbls of fluid. Made 1 swab run and kicked well off flowing. Well flowed for 3½ hours and died, made 44 bbls of fluid. Made 1 swab run and kicked well off flowing. Well made 104 bbls of fluid on the day. Well making an approximate 30% oil cut. Annulus pressure at end of day was 500 psi. Left well flowing to frac tank overnight. SDFN.

2-14-85 Well was not flowing fluid this morning, but was gassing heavily. Well made 57 bbls of fluid overnight. Annulus pressure was 380 psi. Blew down annulus pressure. Tripped tubing in hole to tag sand fill. Tagged sand at 7838' RKB (62 feet of sand on top of bridge plug). Moved tubing to 6685' RKB. Rigged up Basin Perforators. Ran Gamma Ray tracer log from 7839 to 6650' RKB. Tracer log showed that Lower Mancos interval did not take any radioactive tracer material. Nearly all of the Gallup zone took radioactive tracer material. Tripped tubing in the hole and landed as follows:

DESCRIPTION	LENGTH	DEPTH
KB to landing point	2.50	0-3
Open Hole Log correction	9.00	3-12
226jts 2-7/8" 6.5#/ft N80 EUE used tbg	6971.19	12-6982
Seating nipple	.65	6982-6983
1 jt 2-7/8" N80 tail-pipe	30.86	6983-7014
	7014.20	

Nipple down BOP. Nipple up wellhead. Rigged to swab. Made 1 swab run and well kicked off. Left well flowing to the frac tank. Released rig. Turned well over to pumper.