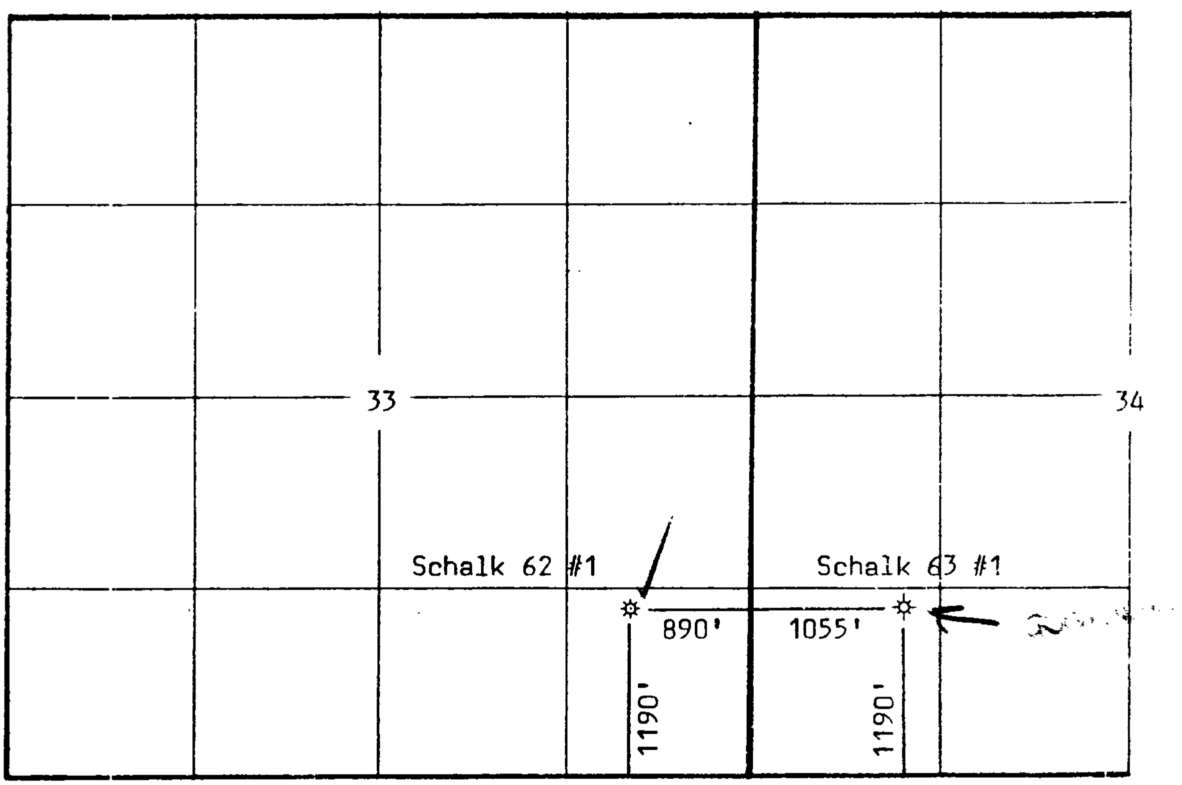
[redacted]

TOWNSHIP 32 NORTH, RANGE 5 WEST



890' + 1055' = 1945'

Schalk 1
8337

Schalk 2
8337

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

WELL: Schalk 62#1

1. It is our feeling that prolonged shut in periods for this well will cause damage to the producing intervals due to exposure of non water production zones to water producing zones. These waters may also be treatment water used during the completion of producing zones. It is possible that said exposure may result in swelling of clays or fine particles in said zones. It is also possible that if this well is shut in for an extended period that some of the available reservoir energy may be dissipated, thus reducing the wells ability to unload produced water and/or treatment water.

2.
(a) Our problems with this well began in May of 1982 when Northwest Pipeline shut in the well in to repair their dehydrator. We checked the casing pressure the next week and found 736 psig. After being shut in for a week or more we normally would have had 1080 psig or more pressure on the casing.

We thought that the lower casing pressure was due to the buildup of water in the well, causing the well to log off. After Northwest repaired the dehydrator, we tried to bring the well on. At that time there was 335 psig on the tubing and 736 psig on the casing.

We could not get the well to unload on the tubing. We then equalized the tubing and casing and left it to pressure up overnight. We tried to unload the well again on the tubing. This was not possible, so we started producing the well on the casing.

The well produced on the casing during June, July and August of 1982. The volume of gas continued to decline and on August 11, 1982 we used nitrogen to unload the well. The well was first brought around on the casing and then the flow was reversed up the tubing. The well came around and flowed on the tubing for 3 hours then logged off.

We felt that after unloading the well with nitrogen the well would go ahead and produce through the tubing. We were not successful and had to again start producing the well on the casing.

It appears that with the amount of fluid in the well, along with reduced casing pressure, the well is incapable of lifting fluid up the tubing. We let the well produce on the casing until September 1983 when we hired a workover unit to enter the well to find out what problems existed. The following information shows the work performed on the well and the dates the work was performed.

9/13/83
Found tubing and casing equalized with 760 psig. Opened the tubing to atmosphere and casing pressure dropped to 595 psig, but the well would not unload. Thirty minutes later the casing pressure had built up to 605 psig. We gave the well 1 hour to unload but it would not. The well did not have enough casing pressure to unload the amount of water in the tubing. We then let the well pressure up for 2 hours and started swabbing.

1st swabb run - fluid level at 5306'
2nd swabb run - fluid level at 4206'
3rd swabb run - fluid level at 5306' - well came around on tubing, we flowed the well on the tubing for 4 hours and shut well in.

9/14/83
Found 0 psig on the tubing and 820 psig on the casing. Went in the hole with a sinker bar to the seating nipple to see if there was an obstruction in the tubing. We did not find any problems and started swabbing again.
1st run - fluid level @ 4100'
2nd run - fluid level @ 4100'
3rd run - fluid level @ 3900'
4th run - fluid level @ 4600' - well started to flow on the tubing. We let the well flow for 1.5 hours and shut it in for 1.5 hours. We tried to bring the well on at this time, but it logged off. Made another swabb run and the well started flowing again, but logged off after blowing for 30 minutes.

9/15/83
Found 300 psig on the tubing and 820 psig on the casing. Opened the tubing to blow, but the well would not unload.
1st run - fluid level @ 3300'
2nd run - fluid level @ 4800' - well came around, we let the well flow for 1 hour and started swabbing off the seating nipple. We made 6 more swabb runs off the seating nipple. After each swabb run the well was flowing only small amounts of gas, with a decrease in the amount of water that we felt the well should have been bringing up.
We decided at this time to go in the hole with a packer and acidize well to see if the formation was restricted by a calcium carbonated scale. We lost the 63#1 Dakota because of this a few years before.

9/16/83
Ran packer and make 3 swabb runs, the well looked similar to the day before. Pumped 6 barrels 8% Hydrochloric acid followed by 31 barrels 2% KCl water. Let the acid set on bottom for 1 hour and started swabbing. Swabbed well for 4 hours and shut well in overnight.

9/17/83
Found 860 psig on tubing. Opened well to blow and well came around in 5 minutes. We let the well blow to pit for 2 hours. We then shut the well in to watch the pressure buildup on the tubing. 30 minutes - 208 psig
60 minutes - 300 psig
Opened the well to atmosphere after being shut in for 1 hour and well started to unload again.

9/18/83
Found 1115 psig on tubing, turned the well to pipeline at this time and started selling gas.

2.

(b) After the well was completed on 5-15-73, it made a tremendous amount of water. It was decided to try a plunger lift. This device did not work as well as expected, as the well still unloaded during the month of May, 1981. The plunger came apart in the tubing and we hired a completion unit in June, 1981 to pull the tubing and remove the pieces of the plunger. We placed the tubing back in the well and brought it around with nitrogen. We didn't notice any difference in the production of the well without the plunger lift. We still had to blow the well every other day to get any production. In the month of July, 1981 we installed a system on the well to equalize the tubing and the casing at different times of the day. This system would then shut the casing value and allow us to produce the tubing. This system worked well until May, 1982 when we noticed the decrease in casing pressure. The rason smaller bore tubing was not tried in the well is that we were concerned about formation damage in the well at the time we ran the packer and acidized the well and at a cost of $2.01 per foot for 1.900 inch tubing, we felt the cost to be prohibitive, as we weren't sure we could even get the well to come back. It is also our thought that with the amount of water in the tubing, the smaller tubing wouldn't work.

3.

(a) At this time we feel that the well has formation damage due to a calcium carbonated scale buildup in the wellbore. We performed a small acid job on the well on 9/16/83 and swabbed the well in. The well did not respond well after the treatment.

(b) With the information we now have, it would appear that we can produce the well for 20 days before the well logs off.

(c) The last time the well was swabbed it took 5 swabb runs before the well would start unloading and we were charged 13.5 hours rig time due to the distance of the well from Farmington.

(d) The following information shows the amount of dollars spent on swabbing and the dollar amount of gas produced following swabbing and prior to logging off again.

November 16, 1983 - well swabbed			
November, 1983	685 MCF	=	$1470.00
December, 1983	486 MCF	=	$1048.10
			$2518.10
	Cost of swabbing		$1226.01
			$1292.09

4. If this well were to be prematurely abandoned because of production problems caused by an inability to have this well granted a classification as a hardship gas well, we estimate the loss of reserves to be 249,005 MCF.

5.
(a) The most gas we could possibly see this well producing is 34 MCFD due to the fact that the well made 7611 MCF in 1983 and was on 219 days.

(b) We have checked the amount of water the well produces several times with a counter on the water dump line and found that it makes 4 barrels a day. This has been consistent over the years, up until May, 1982 when we started to have problems with the well. As far as the well production history, enclosed is a graph showing a 10 year production history of the well. You will note that in the year 1982 the well produced 17140 MCF of gas and was on for 248 days which would average out to 69 MCFD. In the year 1983 the well produced 7611 MCF of gas and was on for 219 days which would average out to 34 MCFD. You will also note by the graph that the average line pressure in 1983 was lower than in 1982. We feel that if we didn't have a problem with the well it would be capable of producing over 15000 MCF in 1983.

When the well is swabbed again, we would like to shut the well in for approximately eighteen hours and produce the well for about six hours daily. The actual amount of time the well would be on would be determined by the buildup of pressure in the tubing and by the line pressure existent at the time. We are hoping that by holding back pressure and using soap in the well, we would be able to deliver 25 to 30 MCF per day to Northwest Pipeline.

6. At the present time there are no offset producing Dakota wells.

7.

8. This well is presently classified as a marginal unit.

9. Enclosed

SCHALK 62 #1

RECAP OF REMEDIAL ACTION

9/4/84 Swabbed approximately 60 barrels of fluid. Left well open to pit overnight.

9/5/84 Well was flowing to pit. Shut well in for 6 hours for build-up. 6-hour pressure was 1165 psi. Turned well into pipeline for two hours. Prsssure fell to 350 psi. Well made 27 Mcf. Shut well in to avoid logging off.

9/6/84 Shut-in pressure was 1045 psia. Turned well into pipeline for 3 hours.

1st hour	differential =	10.0	No fluid.
2nd hour	differential =	9.0	No fluid.
3rd hour	differential =	7.0	Fluid came in @ 20 minutes of 3rd hour.

Well unloaded good for the next 40 minutes until the well was shut-in. Pressure at the time was 400 psig on the tubing. The well made 57 Mcf during the 3 hours it was on.

Schalk 62-1
Costs of Remedial Actions

DATE	VENDOR	COST
7/82	Chemical Consultants Inc.	$ 30.80
9/82	Chemical Consultants Inc.	56.52
	Chemical Consultants Inc.	56.52
	Chemical Consultants Inc.	17.88
	Halliburton	1,218.31
11/82	Chemical Consultants Inc.	297.01
12/82	Quadco, Inc.	32.12
1/83	Chemical Consultants Inc.	32.54
2/83	Unichem, Inc.	352.37
4/83	Unichem, Inc.	19.53
5/83	Unichem, Inc.	22.97
	Unichem, Inc.	138.47
7/83	Unichem, Inc.	32.54
8/83	Unichem, Inc.	28.10
	Unichem, Inc.	138.80
10/83	Western Co. of N. America	668.32
	Unichem, Inc.	592.21
11/83	Bayless Drilling Company	3,897.28
	C & J Trucking	385.82
12/83	Action Swab Company	858.21
1/84	Baker Packers	2,748.25
3/84	Unichem, Inc.	64.27
6/84	Unichem, Inc.	34.20

Schalk 3
8337

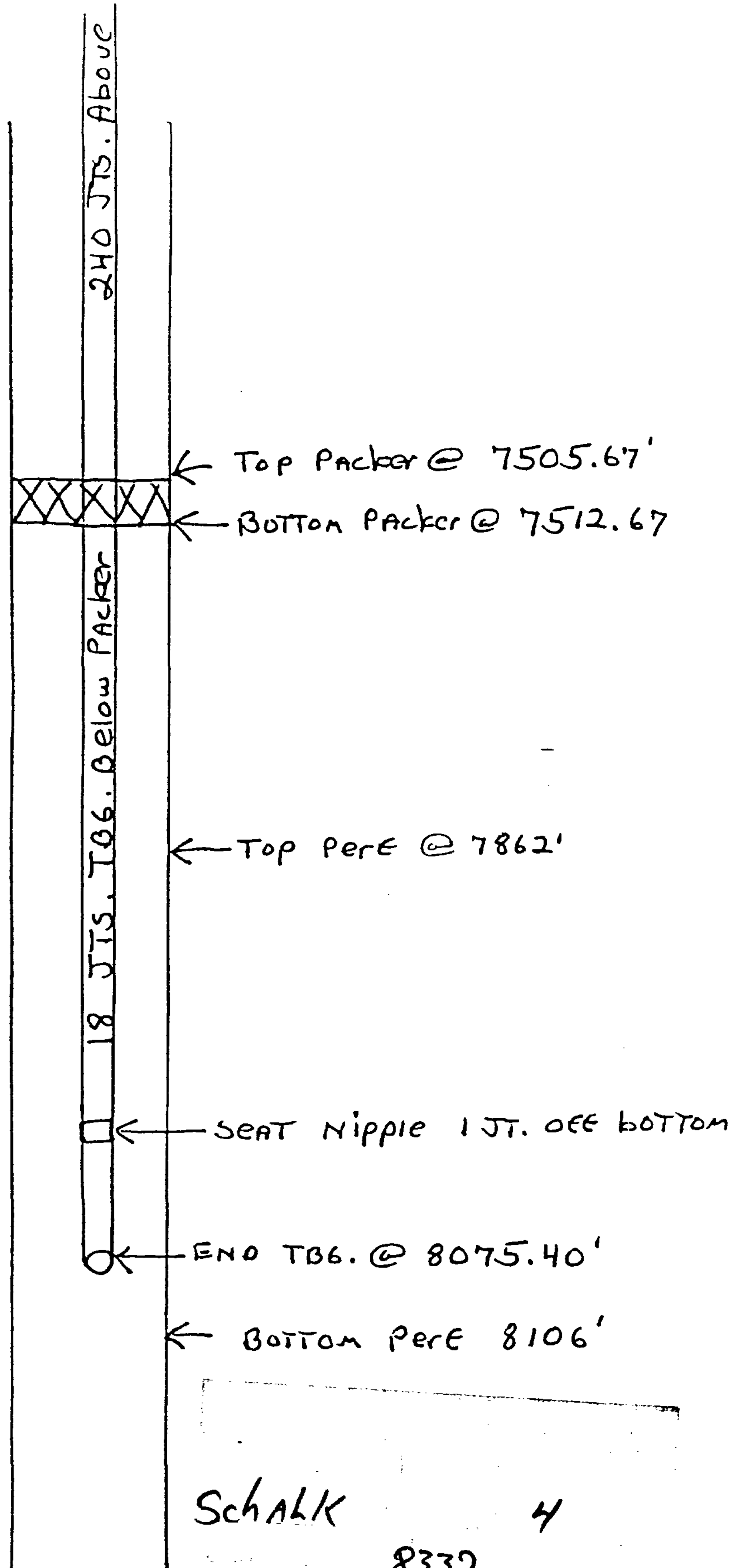
62 # 1

BAKER MO. R-3

PAcker - Full Bore

2.375 EUEU TBG.

4.500 CSG.



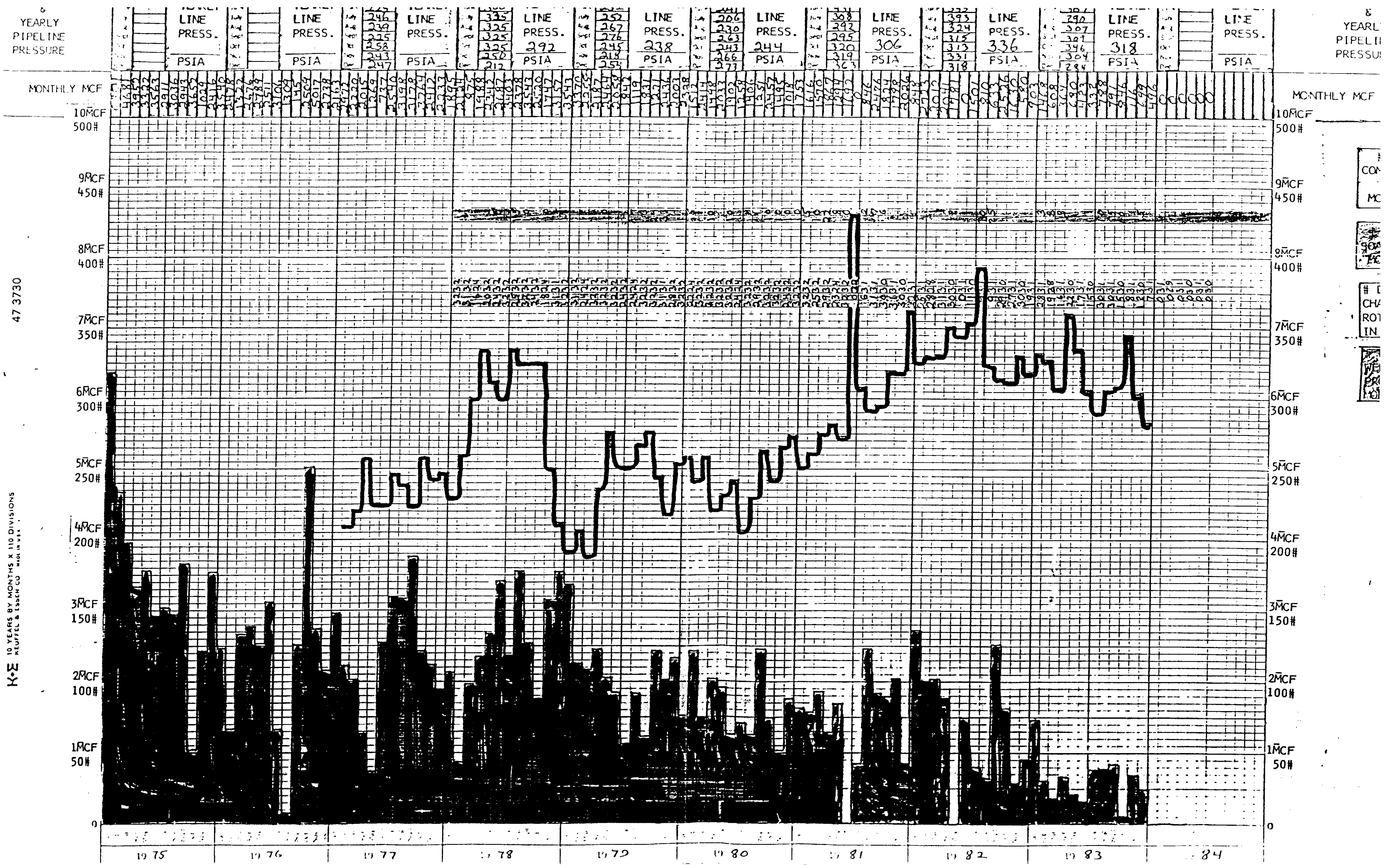
SchALK 4

8337

PRODUCTION HISTORY

YEAR	SCHALK 62 #1		SCHALK 63 #1	
	ANNUAL	CUMULATIVE	ANNUAL	CUMULATIVE
1974	7,066	7,066	0	0
1975	41,399	48,465	46,744	46,744
1976	29,158	77,623	32,419	79,163
1977	28,601	106,224	29,891	109,026
1978	30,187	136,411	5,724	114,750
1979	24,641	161,052	13	114,763
1980	19,551	180,603	32	114,795
1981	17,505	198,108	0	114,795
1982	16,792	214,900	0	114,795
1983	6,688	221,588	0	114,795

Schalk 5
8337



YEARLY PIPELINE PRESSURE
MONTHLY MCF
LINE PRESS. PSIA
LINE PRESS. 292 PSIA
LINE PRESS. 238 PSIA
LINE PRESS. 244 PSIA
LINE PRESS. 306 PSIA
LINE PRESS. 336 PSIA
LINE PRESS. 318 PSIA
10MCF 500#
9MCF 450#
8MCF 400#
7MCF 350#
6MCF 300#
5MCF 250#
4MCF 200#
3MCF 150#
2MCF 100#
1MCF 50#
0
1975
1976
1977
1978
1979
1980
1981
1982
1983
84
47 3730
K+E 10 YEARS BY MONTHS X 110 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

SCHALK 62 #1

RESERVE CALCULATIONS

2012 psia	Reported pressure at time of completion.
1165 psia	6-hour pressure build-up on 9/5/84.
847 psi	pressure depletion.

221,588 Mcf Cumulative production as/of 9/5/84.

$\frac{221,588}{847}$ = 261.615 Mcf per pound of pressure depletion.

AT 100 PSI ABANDONMENT PRESSURE:

1165 - 100 = 1065 psi remaingin usable pressure.
1065 X 261.615 = 278,620 Mcf remaining recoverable reserves.

AT 50 MCF PER DAY RATE:

$\frac{278620}{50}$ = 5572 Days or 15.3 Years to depletion.

AT SECTION 108(b) BASE PRICE, OCTOBER, 1984:

278,620 X 4.066 = $1,132,868 Value of remaining recoverable reserves.

Schalk ?
8337

SCHALK 63 #1

REMEDIAL ACTION RECAP

5/11/78 Circulated well with nitrogen. Well unloaded for 2 hours & died.

5/19/78 Ran impression block in tubing. Stopped @ 7400'.

6/4/78 Circulated well with nitrogen. Turned well into line. Sold 31 Mcf. Well died.

7/28/78 Tripped tubing. Found 728' plugged with scale. Replaced plugged tubing. Spotted 250 gallons of acid.

7/29/78 thru 8/3/78 Swabbed well. Turned well into pipeline. Sold 234 Mcf. Well died.

10/11/78 Attempted to circulate well with nitrogen - not successful.

10/19/78 Set tubing plug in well. Rig crew installed BOP. Pulled wellhead, found tubing hanger seals leaking - repaired seals. Checked fluid level @ 5996'. Circluated well with nitrogen twice until ran out of nitrogen.

10/20/78 Tripped tubing - Set packer @ 7652'.

10/21/78 Found fluid level @ 4759'. Loaded back side, pumped in 5000 gallons acid plus 10 bbl flush. Attempted balloff - no indication of ball action. Tripped tubing - landed @ 7836'.

10/22/78

10/23/78 Swabbed. Fluid level remained @ 4850'. Released rig.

6/13/81 Pulled tubing. Went back in hole with bit & scraper to 7920'. Ran junk basket to 7920'. Logged 7200 to 8004'. Set BP @ 7909'.

6/14/81 Off.

6/15/81 Ran tubing - set packer @ 7719'. Swabbed.

6/16/81 Swabbed. Shut well in over night.

6/17/81 16-hour shut-in = 200 psi. Swabbed. Trace of gas less than yesterday.

6/18/81 Acidized well. Set packer. Left tubing open overnight.

6/19/81 Swabbed. Some acid gas.

6/20/81 Fluid level @ 5500'. Swabbed. Casing went on vacuum - lost packer seal. Shut well in for build-up.

12/17/82 Rigged up workover unit.

12/18/82 Started out of hole - well began to unload. Let well cleanup - then finished coming out of hole with tubing. Logged from 7910 to 7400'. Set drillable bridgeplug @ 7796'.

12/19/82 Rig off.

12/20/82 Ran tubing to 7772' with packer @ 7699'. Swabbed. Made trace of gas by end of day. Shut-in overnight.

12/21/82 Tubing pressure 150 psig. Fluid level @ 4000'. Swabbed - lost bottom mandrel from swab. Tripped tubing to recover fish.

12/22/82 Tubing pressure 75 psig. Swabbed - trace of gas by end of day.

12/23/82 thru 12/26/82 Rig off.

12/27/82 Tubing pressure 225 psig. Fluid level @ 4000'. Fluid recovery small. Total recovery approximately 105 barrels in 26 swab runs. Released rig.

Schalk 8

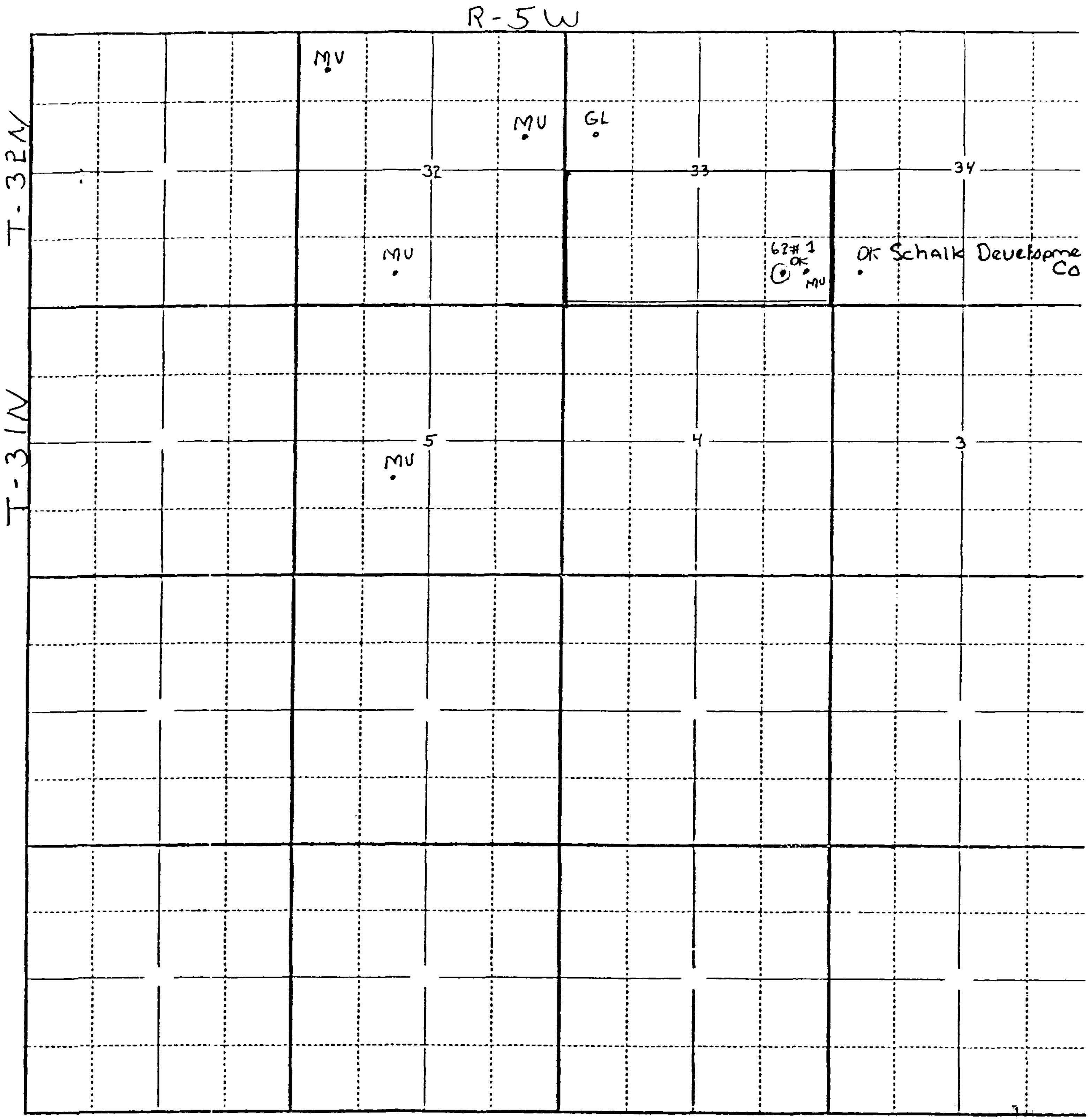
8337

Schalk 63-1
Costs of Remedial Actions

DATE	VENDOR	COST
5/78	Nitrogen Oil Well Service	$ 1,861.60
	B. & R. Service, Inc.	353.60
6/78	B. & R. Service, Inc.	353.60
7/78	Chief Transport Co.	87.51
	Western Co.	1,384.48
8/78	Aztec Well Servicing Co.	9,521.26
	Basin Tool Company	218.93
	Saguaro Trucking Company	356.32
10/78	Aztec Well Servicing Co.	11,006.92
	Baker Packers	770.43
	Nitrogen Oil Well Service	2,251.99
	Nitrogen Oil Well Service	2,453.32
	Overland Transport Co.	467.04
	Western Company	2,433.09
11/78	Otis Engineering Corp.	618.35
6/81	Bayless	20,435.90
	Teffeteller	491.67
	Baker	4,129.84
	Bluejet	4,652.57
	Baker	4,129.84
	Smith	12,201.78
	Bayless	15,746.81
	Halliburton	1,312.52
12/82	Bayless	10,824.82
	Bluejet	2,539.40
	Baker	2,154.10
	Smith	936.25
	Baker	460.25

Schalk 9
CASE NO. 8337

Township 31 & 32 N Range 5 W County RIO ARRIBA State New Mexico



Schalk 10
8332

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACERAGE DEDICATION PLAT

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
JOHN E. SCHALK	JOHN E. SCHALK - USA - 62 - NO. 4 (NM-4462)	1

Unit Letter	Section	Township	Range	County
P	33	32 NORTH	5 WEST	RIO ARRIBA

Actual Footage Location of Well: 1190 feet from the SOUTH line and 890 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6301.0	DAKOTA	BASIN DAKOTA	320 Acres

1. Outline the acerage dedicated to the subject well by colored pencil or hachure marks on the plot below.

2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

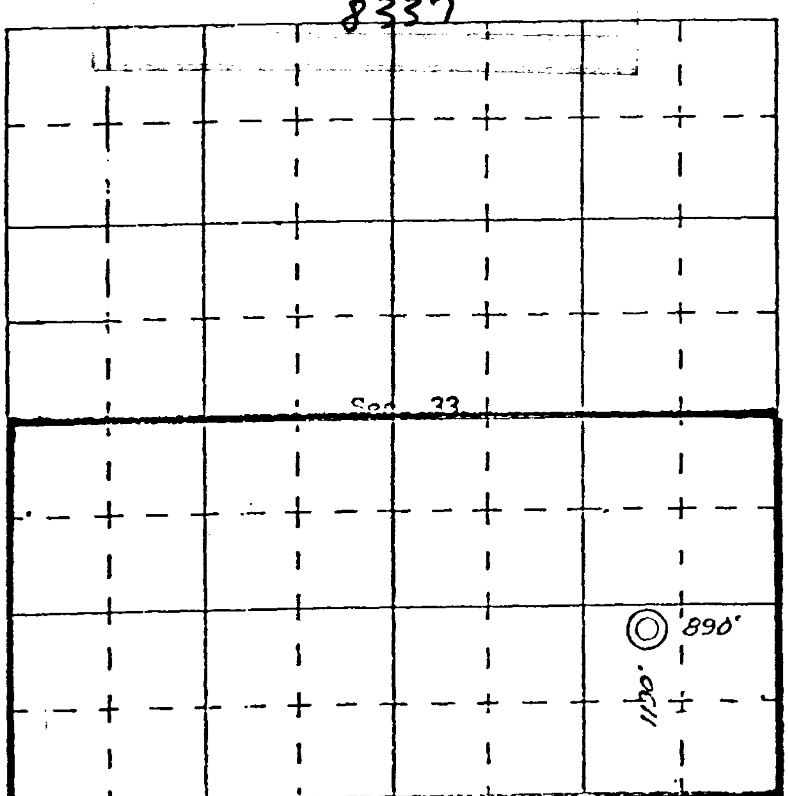
( ) Yes ( ) No If answer is "yes," type of consolidation ....

If answer is "no," list the owners and tract descriptions which have actually consolidated. (Use reverse side of this form if necessary.) ....

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non standard unit, eliminating such interests, has been approved by the Commission.

Schalk 11

8337



SCALE—4 INCHES EQUALS 1 MILE

SAN JUAN ENGINEERING COMPANY, FARMINGTON, N. M.

CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

John E. Schalk

Name

Position

Company

JOHN E. SCHALK

Date

JANUARY 19, 1973

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

12 January, 1973

Date Surveyed

James P. Leese

Registered Professional Engineer and/or Land Surveyor

JAMES P. LEESE

1463

Certificate No.