

STATE OF KANSAS
 STATE CORPORATION COMMISSION
 200 Colorado Derby Building
 Wichita, Kansas 67202

WELL PLUGGING RECORD
 K.A.R.-82-3-117

API NUMBER 15-129-2011 0000

LEASE NAME Mc Clain

WELL NUMBER 11-4

TYPE OR PRINT
 NOTICE: Fill out completely
 and return to Cons. Div.
 office within 30 days.

4620.1 Ft. from S Section Line

4631.6 Ft. from E Section Line

SEC. 4 TWP. 34SRGE. 42 (X)or(W)

COUNTY Morton

Date Well Completed 5-15-73

Plugging Commenced 1-29-91

Plugging Completed 1-31-91

LEASE OPERATOR Coastal Oil & Gas

One Leadership Square

ADDRESS 211 N. Robinson, Suite 1700, OKC, OK 73102

PHONE#(405) 239-7031 OPERATORS LICENSE NO. 6593

Character of Well Oil

(Oil, Gas, D&A, SWD, Input, Water Supply Well)

The plugging proposal was approved on January 15, 1991 (date)

by Dan Goodrow (KCC District Agent's Name).

Is ACO-1 filed? No If not, is well log attached? Logs previously sent with application.

Producing Formation Morrow Depth to Top 4312 Bottom 4322 T.D. 4757

Show depth and thickness of all water, oil and gas formations.

OIL, GAS OR WATER RECORDS

CASING RECORD

Formation	Content	From	To	Size	Put In	Pulled out
Morrow	Oil	0	123	13 3/8"	123	4'
		0	1231	8 5/8"	1231	4'
		0	4430	5 1/2"	4330	4'

Describe in detail the manner in which the well was plugged, indicating where the mud fluid was placed and the method or methods used in introducing it into the hole. If cement or other plugs were used, state the character of same and depth placed, from feet to feet each set. Set CIBP @ 4300', cap/10' cement. Load hole/9 PPG mud. Perforate 1230'-1231'. Circulate & fill 5 1/2" casing & 8 5/8" x 5 1/2" annulus to surface/405 sxs cement. Cut off 4' BGL & install cap/marker.

(If additional description is necessary, use BACK of this form.)

Name of Plugging Contractor Dowell-Schlumberger License No. N/A

Address 204 S. Missouri, P.O. Box 887, Ulysses, Kansas 67880

NAME OF PARTY RESPONSIBLE FOR PLUGGING FEES: Coastal Oil & Gas Corp.

STATE OF Oklahoma COUNTY OF Oklahoma, ss.

John D. Perry

(Employee of Operator) or (Operator) of

above-described well, being first duly sworn on oath, says: That I have knowledge of the facts, statements, and matters herein contained and the log of the above-described well as filed that the same are true and correct, so help me God.

(Signature) [Signature]

One Leadership Square, Suite 1700

(Address) 211 N. Robinson, Okla. City, OK 73102

SUBSCRIBED AND SWORN TO before me this 8th day of February, 19 91

[Signature]
 Notary Public

My Commission Expires: 11-28-94

EXHIBIT 3

COLORADO OIL COMPANY McClain 11-4

GEOLOGICAL REPORT

STIMULATION PROCEDURE

CHRONOLOGICAL WELL HISTORY

OPERATOR: Colorado Oil Company

FARM & WELL NO: #11-4 McLain

LOCATION: C NW NW Sec. 4, T34S-R42W,
Morton County, Kansas

CONTRACTOR: Gabbert-Jones, Inc.--Rig #8

MUD COMPANY: Agent Mud Company

ELEVATIONS: 3407' G.L.
3415' D.F.
3417' K.B.

TOTAL DEPTH: 4757' (K.B.) Driller
4757' (K.B.) Schlumberger

SPUD DATE: 4-10-73

COMPLETED DRILLING: 4-24-73

CASING PROGRAM: 13 3/8" @ 123' w/175 sacks
8 5/8" @ 1232' w/400 sacks light weight &
150 sacks common cement
5 1/2" @ 4430' w/250 sacks posmix

PRCDUTION: Upper Morrow Sandstone Oil

WELLSITE PROCEEDURE: Thirty foot samples were caught from surface to 3000'. Ten foot wet samples were caught from 3000' to RTD of 4747' (KB) Driller. Samples were examined for lithology, porosity and shows of oil and gas. A Baroid portable gas logging unit was in operation on the well to log shows of methane gas in the drilling mud from 3000 feet to 4757'. A copy of the lithologic log is to be found at the back of this report for the interval 2990' to 4757'.

DRILLING TIME: One foot drilling time was recorded by Geolograph from surface to RTD of 4757'. One foot drilling time is plotted on the accompanying lithologic log from 2900' to 4757'.

ELECTRICAL LOGS: The following Schlumberger logs were conducted in this well:

1. Dual Induction-Laterolog--on 2" vertical scale from 1332' to LTD of 4757'.
2. Dual Induction-Laterolog--5" vertical scale from 2500' to LTD of 4757' (KB).
3. Compensated Formation Density Log (with Gamma Gamma & Caliper) vertical scale 2900' to 4757'.

These logs were used to calculate porosities and connate water percentages from 3000' to 4757' of potential oil or gas zones. The calculations were used to aid in the evaluation of such oil or gas zones.

LITHOLOGY, POROSITY DESCRIPTIONS & PERTINENT DATA:

Schlumberger Tops:

Permian System:

Cimarron Series:

Base Cimarron Anhydrite:

1260 (+2157)

Pennsylvanian System:

Upper Pennsylvanian, Undifferentiated:

Shawnee Group:

Lecompton Limestone:

3006 (+411)

3006-3022' Limestone, white, tan, finely crystalline, chalky in part, in top 6 feet; bottom 10 feet, limestone, cream, buff, some white, finely crystalline, sub-chalky, scattered poor pinpoint & fine vuggy porosity, some dull gray chert. 3012-3016' Porosity 8-14%, s.w. 19%.

3022-3028' Limestone, as above, more chalky, scattered oolites and oocastic porosity. Some light gray, dense limestone.

3028-3058' Limestone, as above, some poor oocastic porosity, becoming limestone, white to light gray, traces pinpoint porosity, increasing in limestone, white, cream, finely crystalline in bottom 8 feet.

<u>Interval</u>	<u>Porosity</u>	<u>Salt Water</u>
3029-3032'	12-14%	33%
3032-3034	17	34
3034-3038	19	42
3038-3044	13	49
3044-3049	20-30	61
3049-3055	14-18	72

3058-3060' Shale, dark gray.

3060-3067' Limestone, white, cream, as in bottom interval 3028-3058'.

3067-3069' Shale, as above.

3069-3072' Limestone, as above.

Heebner Shale:

3072 (+345)

3072-3074' Shale, as above.

3074-3086' Limestone, as above, white, gray, dense, trace porosity. Density log shows porosity 3076-3084'.

3086-3096' Shale, red & dark gray.

3096-3099' Limestone, white, cream, finely crystalline.

Toronto Limestone:

3099 (+318)

3099-3114' Limestone, as above, some poor vuggy porosity in lower portion; some fine sandy.

3114-3118' Shale, red, some dark gray & black.

3118-3130' Limestone, white, cream, tan in part, very finely crystalline, clastic, fossiliferous, no visible porosity. 3123-3126' Porosity 9-11%, s.w. 93%.

3130-3140' Shale, as above, increase in dark gray to black shale.

3140-3149' Limestone, as above, some medium oolitic.

3149-3151' Shale, dark gray, black.

Lansing-Kansas City Groups:

3151 (+266)

3151-3166' Limestone, as above, tan and oolitic in part, dense, microfossils, no visible porosity. 3154-3158' Porosity 11%, s.w. 80%.

3166-3176' Limestone, as above, white, cream, scattered poor fine vuggy porosity; some tan, becoming fine sandy in part, dense. Density log indicates porosity 3166-3176'.

3176-3202' Shale, red, medium to dark gray, silty in part, few thin interbeds of dense limestone.

3202-3214' Limestone, tan, white, light gray, dense, no visible porosity.

3214-3221' Shale, as above.

3221-3228' Limestone, white, cream, very fine to finely crystalline, dense.

3228-3236' Shale, red, some gray.

3236-3264' Sandstone, medium-dark gray, very fine-grained, probable interbeds of brown & gray shale. Limestone, white, light gray, fine sandy, dense in bottom 7 feet. 3259-3264' Porosity 12%, s.w. 85%.

3264-3266' Shale, as above.

3266-3276' Limestone, as above. 3268-3274' Porosity 14%, s.w. 86%.

3276-3318' Sandstone, gray, very fine-grained, shaly, interbeds of dark gray and black shale in top 22'; bottom 20', light to medium gray, very fine-grained, very calcareous, shaly, very calcareous.

3318-3336' Sandstone, as above, even shalier, very calcareous, shale interbeds, as above.

3336-3350' Sandstone, gray, very fine-grained, shaly, calcareous.

3350-3353' Shale, dark gray, black.

Lansing "A" ? Zone:

3353 (+64)

3353-3368' Limestone, white, cream, finely crystalline, some light tan, fine oolitic, micro-fossils, some poor fine vuggy porosity.

<u>Interval</u>	<u>Porosity</u>	<u>Salt Water</u>
3356-3360'	6%	60%
3360-3362	6-10	74

3368-3370' Shale, dark gray, black.

3370-3381' Limestone, white, cream, finely crystalline, some light tan, finely oolitic, micro-fossils--some fine sandy, dense, no visible porosity

3381-3396' Shale, dark gray to black, carbonaceous.

3396-3399' Limestone, white, cream, tan, very fine to finely crystalline, dense.

3399-3405' Shale, as above.

3405-3426' Limestone, white, cream, tan, brown, very fine to finely crystalline, slightly clastic and fossiliferous, dense in top 15 feet. Bottom 8 feet, white, gray, brown, micro-crystalline, dense; some white, finely oolitic.

3426-3431' Shale, as above.

Lansing "B" Zone:

3431 (-14)

3431-3442' Limestone, white, light gray in part, very fine to finely crystalline, micro-fossils, indistinct white oolites.

3442-3446' Shale, dark gray, black.

3446-3452' Limestone, as above.

3452-3455' Shale, as above.

3455-3459' Limestone, as above.

3459-3462' Shale, dark gray & black.

Lansing "C" Zone:

3462 (-45)

3462-3510' Limestone, white, cream, very fine to finely crystalline, fine sandy, some fine vuggy and pinpoint porosity.

<u>Interval</u>	<u>Porosity</u>	<u>Salt Water</u>
3462-3464'	9%	70%
3464-3468	15	58
3468-3478	11-8	77-86

Lansing "C" Zone (Cont'd.)

3510-3531' Siltstone, light to medium gray, shaly, two thin, buff, silty limestone beds near base.

3531-3557' Limestone, cream, white, micro to finely crystalline, scattered fossils and oolites, dense. Density log shows porosity 3532-3542'.

3557-3568' Shale, dark gray, black.

3568-3594' Limestone, cream, white, fine to medium crystalline, oolitic and fossiliferous, scattered oolites, scattered poor oolitic porosity; bottom becoming buff, tan, oolitic, dense. Density log shows porosity 3574-3579'.

3594-3634' Shale, dark gray, black, increase in silty shale below 3620'.

3634-3652' Limestone, tan, cream, buff, very fine to finely crystalline, clastic, fossiliferous, dense, no shows.

3652-3654' Shale, as above.

3654-3668' Limestone, as above, dense. 3658-3666' Porosity 8-5%, s.w. 52-100%.

3668-3711' Shale, gray, silty to dark gray, thin bed of limestone
3696-3699', cream, tan, fine to medium clastic, fossils, dense.

Marmaton Group:

3711 (-294)

3711-3734' Limestone, white, cream, finely crystalline, some coarse crystalline, fossiliferous, clastic, fine sandy in part, no visible porosity, no shows. Density log shows porosity for the following intervals: 3712-3715'; 3717-3721' & 3724-3732'.

3734-3792' Shale, dark gray to black, silty and sandy.

3792-3799' Limestone, white, cream, fine to medium crystalline, fossiliferous & finely oolitic in part, no visible porosity, no shows.

3799-3837' Shale, dark gray, black, carbonaceous in part, silty in part; some bright green shale in bottom 10 feet.

3837-3878' Mostly shale, as above, with probable thin interbeds of limestone, buff, gray, very fine to finely crystalline, shaly, impure, hard.

3878-3896' Shale, dark gray, silty to black, carbonaceous.

3896-3917' Limestone, cream, light gray, very finely crystalline, some gray, dense, with probable thin dark gray to black interbeds of shale.

3917-3919' Shale, as above.

3919-3944' Limestone, cream, buff, fine to coarse crystalline, some finely oolitic, dense. No shows.

3944-3951' Shale, as above.

Marmaton Group (Cont'd.)

3951-3973' Limestone, cream, buff, fine to medium oolitic, dense, hard with interbeds of shale 3957-3960' & 3966-3970'.

3973-3984' Shale, as above.

3984-3990' Limestone, buff, tan, fine to medium crystalline, very fossiliferous, dense.

3990-4002' Shale, as above, with thin interbeds of limestone as above.

4002-4020' Limestone, as above, some fine-sandy, no visible porosity, no shows.

4020-4031' Shale, as above, some pale green-gray.

4031-4048' Limestone, white, cream, finely crystalline, with interbedded shale.

4048-4058' Limestone, as above.

4058-4060' Shale, as above.

4060-4072' & 4074-4081' Limestone, white, cream, some light gray, very finely crystalline, dense.

4081-4091' Shale, dark gray to black.

4091-4108' Interbeds of limestone and shale, as above.

4108-4112', 4113-4114' & 4115-4127' Limestone, white, light gray, brown, very finely crystalline, dense--some black chert.

4127-4131' Shale, as above.

4131-4138' Limestone, as above, mostly light gray, tan, dense, some black chert.

4138-4156' Shale, dark gray to black, carbonaceous with thin interbeds of limestone, as above.

4156-4163' Limestone, gray-brown, white, brown, very finely crystalline, dense.

4163-4165' Shale, as above.

4165-4168' Limestone, as above, clastic, fossiliferous.

4168-4177' Shale, dark gray, black, carbonaceous.

4177-4185' & 4186-4192' Limestone, as above, brown, some gray, very finely crystalline, dense.

4192-4197' Shale, as above.

4197-4206' Limestone, as above, becoming clastic, shaly, impure, brown, black.

Morrowan Series:

4206 (-789)

4206-4213' Shale, as above.

4213-4216' Limestone, as above.

4216-4277' Shale, dark gray to black, carbonaceous.

4277-4299' Shale, as above, with thin sandstone interbeds, sandstone, fine-grained, medium-grained, shaly.

4299-4312' Shale, as above.

Upper Morrow Sandstone:

4312 (-895)

4312-4322' Sandstone, colorless or quartz wash, medium to coarse-grained, angular, good odor, good white fluorescence, light brown oil stain, mostly unconsolidated, some clusters.

DST #1, 4120-4325' 3 minute pre-flow, weak to strong blow of air. Open 2 hours, gas to the surface in 17 minutes.

Time	Gauge	Time	Gauge	Time	Gauge
20 min.	20.7 MCF	45 min.	23.9 MCF	95 min.	26.1 MCF
25 min.	25.0 MCF	55 min.	21.8 MCF	105 min.	29.9 MCF
35 min.	26.1 MCF	65 min.	19.5 MCF	115 min.	30.8 MCF
		75 min.	20.7 MCF	120 min.	30.8 MCF
		85 min.	20.7 MCF		

Recovered 1510' total fluid; top 1225' green oil (41.2° @ 62° F); 60' oil cut mud & 225' oil cut salt water. (22,000 PPM).

IHH=2033#

IpreF=66#

FpreF=165#

ISIP(60 min.)=1345# (still bldg.)

IFP=198#

FFP=561#

FSIP(90 min.)=1336# (still bldg.)

FHH=1993#

BHT=114 F

4322-4326' Shale, as above.

4326-4328' Quartz wash, as above.

4328-4337' Shale, as above.

4337-4339' Quartz wash, as above.

4339-4414' Shale, dark gray to black, carbonaceous, few interbeds of light gray siltstone..

4414-4441' Sandstone, light gray, fine to coarse-grained with interbeds of shale, as above.

4441-4476' Shale, as above.

4476-4480' Quartz wash, as above.

4480-4506' Shale dark gray to black, carbonaceous.

4506-4509', 4510-4516' & 4518-4525' Limestone, buff, gray, fine to coarse crystalline, some white, clastic, some large "floating" quartz grain inclusions--thin interbeds of coarse-grained quartz wash and shale, as above.

4525-4556' Shale, black, silty & sandy with thin interbeds of quartz wash, colorless, gray, fine to coarse-grained, angular.

Forrowan Series (Cont'd.)

4556-4562' Sandstone, light gray, fine-grained, glauconitic, calcareous, no visible porosity, no shows.

4562-4616' Shale, as above, some beds of medium-grained siltstone.

Keyes Sandstone:

4616 (-1199)

4616-4621' Sandstone, light to medium gray, fine to medium-grained, glauconitic and calcareous, dirty, shaly, no visible porosity, no shows.

4621-4634' Shale, as above.

4639-4654' Shale, dark gray, black, very carbonaceous, some pale green and light gray, thin sandstone stringers, as above.

4654-4668' Sandstone, white, fine-grained, to light gray, not glauconitic, not calcareous. No shows.

4668-4670' Shale, black, some very light gray.

4670-4677' Sandstone, as above.

4677-4682' Shale, as above.

4682-4691' Sandstone, as above, some gray, fine to medium-grained, very glauconitic, calcareous, some medium to coarse-grained and finely conglomeratic, no shows.

4691-4720' Shale, as above, with thin interbeds of sandstone, as above, slightly glauconitic.

4720-4730' Sandstone, white, very fine to medium-grained, interbed very shaly, gray sandstone 4723-4727'.

4730-4742' Shale, dark gray, black, carbonaceous.

Mississippian System:

Chester Series:

4742 (-1325)

4742-4757' Limestone, cream, light gray, green tint, some pink, very fine to micro-crystalline, slightly chalky, dense.

RTD 4757' (KB) Driller

LTD 4757' (KB) Schlumberger

STRUCTURAL COMPARISON:

	Colorado Oil Co. McLain 11-4 NW NW Sec. 4	Colorado Oil Co. Government 1-9 NE SW NW Sec. 9	C. S. O. Co. Gear "A" 2 C SE/4 Sec. 5
B. Cimarron	1260 (+2157)	1270 ? (+2170)	1245 (+2178)
Lecompton	3006 (+411)	2990 (+450)	2972 (+451)
Toronto	3099 (+318)	3095 (+345)	3070 (+353)
Lansing	3151 (+266)	3142 (+298)	3127 (+296)
Lansing "A"	3353 (+64) ?	3326 (+114)	3295 (+128)
Lansing "B"	3431 (-14)	3421 (+19)	3404 (+19)
Lansing "C"	3462 (-45)	3450 (-10)	3425 (-2)
Narmaton	3711 (-294)	3699 (-259)	3678 (-256)
Cherokee	3944 (-527)	3914 (-464)	3896 (-473)
Morrow	4206 (-789)	4182 (-742)	4163 (-740)
U. Morrow Sd.	4312 (-895)	4279 (-839)	---
Keyes	4616 (-1199)	4600 (-1160)	4574 (-1151)
Miss.-Chester	4742 (-1325)	4610 (-1170)	4623 (-1200)

The above shows the Colorado Oil Company--McLain #11-4 to be low structurally on all geologic units from the Cimarron Anhydrite down to and including the Mississippian-Chester Series.

It is debatable as to whether the Lansing "A" Zone is the same limestone that occurs in both the Colorado Oil Company--Government 1-9 and the C.S.O.--Geary "A" 2.

Also, there is some doubt that the Upper Morrow Sandstone found in the McLain 11-4 from 4312-4322' is the same sandstone as found in the Government 1-9 from 4279-4286'. It is possible that the resistive streak on the electric log from 4292-4295' in the Government 1-9 is the same as the McLain sand 4312-4322'.

OIL & GAS SHOWS:

The only oil show found in the McLain 11-4 was in the Upper Morrow Sandstone 4312-4322'. Even though gas surfaced on Drill Stem Test #1, 4210-4325', the Baroid gas logging unit had no show of methane gas in the drilling mud.

CONCLUSIONS & RECOMMENDATIONS:

The Colorado Oil Company--McLain 11-4, NW NW Sec. 4, is low structurally to both the Colorado Oil Company--Government 1-9, NE SW NW Sec. 9 and the C.S.O.--Gear "A" 2, approximately C SE/4 Sec. 5. The Lansing "A" Zone (?) in the McLain 11-4 from 3353-3369' does not appear to correlate with the Lansing "A" Zone in the Colorado Oil--Government 1-9, 3326-3350' and the C.S.O.--Gear "A" 2 gas zone, 3295-3328'. The Lansing "B" and "C" Zones apparently correlate in all three wells. All three Lansing zones in the McLain 11-4 were barren of gas.

The Upper Morrow Sandstone, 4312-4322' oil zone in the McLain 11-4 does not appear to correlate with the Colorado Oil Company--Government 1-9 from 4279-4286'; rather, the Upper Morrow oil zone 4312-4322' in the McLain 11-4 seems to correlate better with the resistive zone found from 4292-4295' in the Government 1-9.

Conclusions & Recommendations (Cont'd.)

In view of the drill stem test #1 that recovered over 1510' of total fluid (top 1285' oil, bottom 225' oil cut water) from the Upper Morrow Sandstone 4312-4322', it was recommended that casing be set through this formation and the sandstone perforated and treated for oil production.

D. W. Marden

D. W. Marden

BIT RECORD

<u>No.</u>	<u>Size</u>	<u>Mft.</u>	<u>Type</u>	<u>Depth out</u>	<u>Hours</u>
1	17 1/2	HTC	OSC	68'	11
2	12 1/4	HTC	H1G	1232	8 3/4
1	7 7/8	Sec.	Y12J	2042	19 1/4
2	7 7/8	Sec.	Y13J	2438	11 1/4
3	7 7/8	Sec.	F52	3462	59 1/2
4	7 7/8	Sec.	F53	4325	52
5	7 7/8	Sec.	FC5S	4757	

DEVIATION

<u>Depth</u>	<u>Deviation</u>
126'	1/2°
385	1/2
702	1
953	3/4
1232	1/2
1745	1/4
2438	1/4
2642	1/4
2691	1/4
2944	1/4
3750	1/4
4008	1/4
4325	1/4

April 25, 1973

McClain 11-4
Morton County, Kansas

FORMATION STIMULATION

WELL DATA: 5-1/2" 14# K-55 casing cemented [±] 4430'
Morrow Formation
Net Pay 10'

PROPOSED: Remove mud damage and stimulate the Morrow pay.

PROCEDURE: 1) If further stimulation is necessary, fracture the formation with 20,000 gallons of 3% HCl gelled with 20#/1000 gallons WG-7, 20#/1000 gallons WAC-11, .1 - .25% non-emulsifier and carrying 16,500 pounds of 20-40 sand and 4,000 pounds of 10-20 sand.

Preceding this job should be the casing capacity of 2% KCl water containing a non-emulsifier and 25# of WAC-10 in the last 1000 gallons. This job should be flushed with 2% KCl water containing a non-emulsifier.

A suggested sand schedule would be:

<u>Event</u>	<u>Pounds</u>	<u>Gallons</u>
a. Load casing (KCl water)		3300
b. Pad (KCl water plus WAC-10)		1000
c. 1/2 #/gal. 20-40 sand	2500	5000
d. 1#/gal. 20-40 sand	5000	5000
e. 1-1/2#/gal. 20-40 sand	9000	6000
f. 1#/gal. 10-20 sand	4000	4000
g. Flush (KCl water)		[±] 4300

Rate: 20 BPM
Pressure: 2000 psi
HHP: 980

McClain 11-4
Morton County, Kansas

The proper non-emulsifiers should be determined in the laboratory using crude oil recovered after the acid job and frac fluids.

COST ESTIMATE:

Fracturing Treatment \$5,000

Costs in this recommendation are estimates only based on published prices and can be changed by field operations or by a change in well conditions. All prices are exclusive of Federal or State taxes.

SERVICE POINT: Liberal, Kansas
316/624-3879
R. R. Cross, District Superintendent

BR:jl

Chronological Well History

McFARLIN NO. 11-4

Development

North Taloga Field

Horton County, Kansas

API #18136

ATD 4300' S.D. 4-10-73 GR 3407'

Casing: 13 3/8" @ 123'

Contractor: Cabbert-Jones, Inc.

4-9-73

W. I.
100%

SPUD DATE
4-10-73

Loc: C NW NW Sec. 4-T34S-R42W
4-9 MERY.

4-10 RU. Should sat condr csg this PM.

4-11 At 126', WOC. Spd @ 7 PM
4-10-73. 2 1/2 hr drlg w/12 1/2" bit,
3/4 hr surv, 1/2 @ 126' and trip out
1 1/2 hr ream w/17 1/2" reamer, 1/2 hr COG
1 hr run 13 3/8" csg set @ 123' @
12:30 AM 4-11-73. 1/2 hr cntd w/175
sxs 60-40 poz mix. PD @ 1 AM
4-11-73.

4-12 Drlg @ 625' (1'/min). Md wt 9,
vis 40. Dev: 1/2 @ 385'.

4-13 Dpth @ 1232'. WOC. 9 hr drlg,
1/2 hr circ, 2 1/2 hr circ, 2 1/2 TOOH. Rig
up to run csg. 2 hr ran 8 5/8" csg,
set at 1231' with 3 cent, 1/2 hr. circ.
3/4 hr cntd w/400 sxs Howco Light +
2% CaCl & 150 sxs com w/3% CaCl. Gd
ret. PD 6:10 AM. 4-13-73.

4-14 Drlg @ 1425', 193' - 8 hr, WOC,
RU, tested to 700 psi OK, Drld.
cement plug @ 10 PM (WOC 16 hrs).

4-15 Drlg @ 2260' w/native md. Md wt
9.2, vis 30, Dev 1/4 @ 1705', 1/4 @
2042'. Bit #1 in @ 1232', out 2042'
810' in 19 hr. Bit #2 in @ 2042' Re
Y13J.

4-16 Drlg. @ 2700', 440' 24 hrs. Mix
md. Md wt 9.0, Vis 30, WL 8. Bit #3
out @ 2438 Dev. 1/4 @ 2433'.

4-17 Drlg. @ 3010' 6AM. 20 hr drlg,
1 surv, 2 1/2 mix md, 3/4 hr jetting
pits. Md wt 9.0, vis 31. Bit #3
Reed F52. Dev @ 2691 1/4, @ 2944'
1/4.

4-18 Drlg. @ 3360'. 19 1/2 hr drlg, 2
hr mixing md, 1 1/2 circ for samples,
3/4 jet pits, 1/2 hr serv rig, md wt
9, vis 40, WL 10.

4-19 Drlg @ 3600'. 16-3/4 drlg,
3/4 jet pits, 3 1/2 circ for saap,
2 1/2 trip & sur, 1/2 serv rig. Drlg
rate 15' hr. Md wt 9.1, vis 38,
WL 13, pH 10. S/T Lansing 3138' +27'
17' low to Gear A-2, Lansing hd,
tite NS.

4-20 @ 3,935'. Drlg 335' 18-3/4 hr.
Md wt 9.0, vis 40, WL 9.6. Dev 1/2^o
@ 3750'. Drlg 18-3/4, jet pits 1-3/4
wkg on pap 1, mix md 1 1/2, serv rig 1.

4-21 Drlg 4230', 345' 20, Drlg 20,
1/2 jet pits, 1/2 rig rep, 3 mix md &
surv. Dev 1/2^o @ 4008', vis 45, md wt
9, WL 9.6.

4-22 @ 4325'. Strapped pipe 8' up-
hole corr. 4325 = 4317. Morrow 4203
(-786). Sd 4293 - 4307. crse ang ch:
wht with lt yel fluor, lt stn & cd.
8 DST, 3 1/2 TTH & circ, 7 drlg, 1/2 wkg
on rig, 5 1/2 SD rig rep. WO rot hose.
Md wt 9, vis 47, WL 9.6

4-23 . DST #1 4202-4317, Opn 2", SI
60", opn 120", SI 90", GTS 17",
In 20 min gauged 20.7 mcf, 75 min
gauged 20.7 mcf, 95 min gauged 26.1
mcf, 120 min gauged 32.4 mcf. Rec
1225' 41.4 grav green oil. 60' OCH,
225' wtr. HP 2033 - 1993, PP 66-165
198-561, SIP 1345 - 1336. (chl on wtr
were 15,600 ppa)

4-24 @ 4656'. Drld 170' in 24 hr.
SD @ 4:45 to rep rot hose. 20 drlg,
2 1/2 rep rot hose, 1/2 serv rig, 1/2 mix
md, 1/2 pld 15 stds. Md wt 9.1, vis 47
WL 9.6

4-25 @ TD 4757. Logging (comp by
8:30 AM). Drld 101' in 9 1/2 hr. 5 WO
rotary hose, 9 1/2 drlg, 1 1/2 mix md, 3
circ for log sur, 3 1/2 POOH to log, 1/2
RU to log, 2 logging. Md wt 9.2, vis
60, WL 9.6. Logs ccaing in @ 10
Drlr TD 4757, LTD 4757, Morrow sh
4206 (-789), 47' low to Gov't 1.9,
sd 4312 - 22 (-895), Keyes 4617
(-1200), Chester 4740' (-1323).

4-26 RC. 2½ logging, 1½ WOO, 1½ TII, 3-3/4 circ, 3½ LD DP, set off BOP, 5½ WO csg, 2 prep to run csg. 4 RC. Plg down @ 7:45 AM. Set pkr shoe @ 4431'. Plg @ 4399', press to 1500 lb. Plg held ok. Ran 4439' 5½", K-55, 14.0 lb csg w/ 7 cent. Cem w/ 250 sxs (50-50 Pozmix, 18% salt & 3/4% CFR2). Used 500 gal, 10% md acid FL. Md wt 9.2, vis 60, WL 9.6.

4-27 WOC

4-28 RD & MO rig.

4-29 MI & RU comp rig. Ran bond & correl log. Good bond. Perf 4313 - 4319 with 4 jets/ft. Swbd 38 BBL fl 3 hr, minor amount wtr. SION.

4-30 SIP 240 lbs. Opnd well & flwd 8.35 BO in 15 min. Found fl lvl @ approx 1000'. Swbd from 2000' & REC 18.37 BO in 15 min. Will cont swbg well.

5-1 1:30 - 5:00 PM swbd 20 BBL in 3½ hr. Prep to frac well.

5-2 Swbg.

5-3 Swbd 141 BBL fl in 4½ hr (5-2). Fl REC LW with some oil.