

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

Operator: License # 32119 ORIGINAL

Name: Northern Natural Gas

Address P.O. Box 178

City/State/Zip Cunningham, KS 67035

Purchaser: N/A

Operator Contact Person: Dan Dobbins

Phone (316) 298-6117

Contractor: Name: Pratt Well Service

License: 5893

Wellsite Geologist: None 11-20-98

Designate Type of Completion
 New Well Re-Entry Workover

Oil SWD S1OW Temp. Abd.
 Gas ENHR SIGW
 Dry Other (Core, WSW, Expl., Cathodic, etc)

If Workover:

Operator: Northern Natural Gas

Well Name: Rohlman-Meyers 20-43

Comp. Date 12-4-78 Old Total Depth 4032

Deepening Re-perf. Conv. to Inj/SWD
 Plug Back PBDT
 Commingled Docket No. _____
 Dual Completion Docket No. _____
 Other (SWD or Inj?) Docket No. _____

8-11-98 8-22-98 8-27-98
Spud Date Date Reached TD Completion Date

API NO. 15- 095-207810101

County Kingman

S - NE - SW - 20 Sec. 27S Twp. 10 Rge. X W

1427 Feet from S (circle one) Line of Section

1973 Feet from E (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:
NE, SE, NW or SW (circle one)

Lease Name Rohlman-Meyers Well # 20-43

Field Name Cunningham

Producing Formation Viola

Elevation: Ground 1692 KB 1702

Total Depth 5591 3971 TVD PBTD 5591 3971 TVD

Amount of Surface Pipe Set and Cemented at 1413 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cmt.

Drilling Fluid Management Plan adwd 12-4-98 JK
(Data must be collected from the Reserve Pit)

Chloride content 800 ppm Fluid volume 400 bbls

Dewatering method used N/A

Location of fluid disposal if hauled offsite:

Operator Name Geary Mud Disposal

Lease Name Gray License No. 284168

Quarter 15 Sec. 14N Twp. 7 Rng. W

County Garfield, OK Docket No. 284168

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Dan Dobbins

Title Sr. Reservoir Analyst Date 11-18-98

Subscribed and sworn to before me this 18th day of November, 1998.

Notary Public Karen Elliot

Date Commission Expires January 25, 1999

NOTARY PUBLIC - State of Kansas
KAREN ELLIOT
My Appt. Exp. 1-25-99

K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Geologist Report Received
Distribution
 KCC S/D/Rep NGPA
 KGS Plug Other
(Specify)

SIDE TWO

Operator Name Northern Natural Gas Lease Name Rohlman-Meyers Well # 20-43
 Sec. 20 Twp. 27S Rge. 10 East West
 County Kingman

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken Yes No
 (Attach Additional Sheets.)

Samples Sent to Geological Survey Yes No

Cores Taken Yes No

Electric Log Run Yes No
 (Submit Copy.)

List All E.Logs Run:

Log Formation (Top), Depth and Datum Sample
 Name Top Datum

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Conductor	20"	13 3/8"	54.5	90	Common	150	-----
Surface	12 1/4"	8 5/8"	24	1413	Reg Poz	650	1/4# Flocele 3% CC
Production	7 7/8"	5 1/2"	15.5	40	Reg Poz	800	4% Gel 18% Salt 5# Gilsonite

ADDITIONAL CEMENTING/SQUEEZE RECORD				
Purpose: Set Liner	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	3604-4057	Standard	25	

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type		Acid, Fracture, Shot, Cement Squeeze Record	
	Specify Footage of Each Interval Perforated		(Amount and Kind of Material Used)	Depth

TUBING RECORD		Size	Set At	Packer At	Liner Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj. Storage Well			Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
N/A					

Disposition of Gas: **METHOD OF COMPLETION** **Production Interval**

Vented Sold Used on Lease Open Hole Perf. Dually Comp. Commingled
 (If vented, submit ACO-18.) Other (Specify) _____



Job Number: P98-117
 Company: Netherland, Sewell & Associates, Inc.
 Lease/Well: 20-43 Myers
 Location: Cunningham Gas Storage Field
 Rig Name: Pratt Well Service #25
 RKB: 1704'
 G.L. or M.S.L.: 1692'

State/Country: Kingman/Pratt Counties, Kansas
 Declination: 6.56° East (est.)
 Grid: Assumed True
 File name: D:\98110\SVP98117\MYER2043.SVY
 Date/Time: 15-Sep-98 / 00:51
 Curve Name: Diamondback Surveys

Phoenix Drilling Services, Inc.

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 223.05
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

ORIGINAL

RECEIVED
 KANSAS ODP
 1998 OCT -3 AM 11:39

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
Interpolated from Finder Survey									
3749.00	1.68	230.65	3744.40	-97.51	54.55	34.02	111.73	150.78	.00
3780.00	9.50	218.80	3775.23	-99.80	52.59	37.02	112.81	152.21	25.37
3812.00	19.30	223.90	3806.19	-105.68	47.26	44.96	115.76	155.91	30.85
3844.00	29.00	229.20	3835.35	-114.58	37.70	58.00	120.62	161.79	31.03
3875.00	39.40	229.50	3860.96	-125.91	24.49	75.29	128.27	168.99	33.55
3907.00	48.10	228.00	3884.05	-140.50	7.89	97.29	140.72	176.79	27.38
3937.00	56.10	224.30	3902.47	-156.91	-9.14	120.90	157.18	183.33	28.38
3969.00	64.40	227.20	3918.34	-176.26	-29.04	148.63	178.64	189.35	27.10
4001.00	70.50	228.40	3930.60	-196.10	-50.92	178.06	202.60	194.56	19.37
4032.00	75.00	228.30	3939.79	-215.77	-73.04	207.53	227.79	198.70	14.52

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
4063.00	80.90	226.80	3946.26	-236.22	-95.40	237.74	254.76	201.99	19.61
4095.00	84.20	226.80	3950.41	-257.94	-118.52	269.40	283.87	204.68	10.31
4126.00	84.90	228.10	3953.36	-278.81	-141.26	300.17	312.55	206.87	4.75
4158.00	85.90	228.50	3955.92	-300.03	-165.07	331.93	342.44	208.82	3.36
4189.00	87.70	227.00	3957.65	-320.84	-187.98	362.78	371.85	210.37	7.55
4220.00	88.80	226.60	3958.60	-342.05	-210.57	393.70	401.67	211.62	3.78
4252.00	88.50	227.10	3959.35	-363.93	-233.91	425.62	432.61	212.73	1.82
4283.00	88.00	227.30	3960.30	-384.98	-256.64	456.52	462.68	213.69	1.74
4315.00	88.50	227.60	3961.28	-406.61	-280.21	488.41	493.81	214.57	1.82
4346.00	88.80	228.20	3962.01	-427.39	-303.20	519.29	524.01	215.35	2.16
4378.00	88.80	228.10	3962.68	-448.73	-327.03	551.16	555.26	216.08	.31
4410.00	89.70	229.00	3963.10	-469.91	-351.01	583.01	586.54	216.76	3.98
4441.00	89.20	228.90	3963.39	-490.27	-374.39	613.84	616.87	217.37	1.64
4471.00	92.50	228.60	3962.95	-510.04	-396.94	643.69	646.30	217.89	11.05
4502.00	91.00	229.30	3962.00	-530.39	-420.31	674.51	676.74	218.39	5.34
4533.00	89.40	228.00	3961.89	-550.87	-443.58	705.36	707.26	218.84	6.65
4564.00	90.20	226.80	3962.00	-571.85	-466.40	736.27	737.93	219.20	4.65
4596.00	91.50	228.70	3961.53	-593.37	-490.08	768.15	769.58	219.55	7.19
4627.00	91.40	228.40	3960.74	-613.88	-513.31	799.00	800.21	219.90	1.02
4659.00	90.10	228.10	3960.32	-635.19	-537.18	830.86	831.88	220.22	4.17
4690.00	90.70	226.90	3960.11	-656.13	-560.03	861.77	862.64	220.48	4.33
4721.00	90.50	227.20	3959.78	-677.25	-582.72	892.69	893.44	220.71	1.16
4752.00	90.70	225.30	3959.46	-698.68	-605.11	923.64	924.29	220.90	6.16
4784.00	89.90	225.50	3959.29	-721.15	-627.90	955.61	956.20	221.05	2.58
4815.00	89.70	225.40	3959.40	-742.90	-649.99	986.59	987.11	221.18	.72
4847.00	91.70	226.80	3959.01	-765.09	-673.04	1018.54	1018.99	221.34	7.63
4877.00	90.20	226.70	3958.51	-785.64	-694.89	1048.47	1048.86	221.49	5.01
4909.00	89.40	227.10	3958.62	-807.50	-718.26	1080.40	1080.72	221.65	2.80
4941.00	89.70	227.30	3958.87	-829.24	-741.73	1112.31	1112.57	221.81	1.13
4972.00	90.20	226.80	3958.90	-850.37	-764.42	1143.23	1143.44	221.95	2.28
5003.00	87.70	225.90	3959.47	-871.76	-786.85	1174.18	1174.35	222.07	8.57
5034.00	87.30	225.80	3960.82	-893.33	-809.07	1205.11	1205.25	222.17	1.33

ORIGINAL

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5065.00	87.70	226.20	3962.17	-914.84	-831.35	1236.04	1236.16	222.26	1.82
5096.00	87.50	227.20	3963.47	-936.08	-853.89	1266.95	1267.04	222.37	3.29
5128.00	86.70	227.70	3965.09	-957.70	-877.43	1298.81	1298.87	222.50	2.95
5158.00	86.50	227.40	3966.87	-977.91	-899.53	1328.67	1328.71	222.61	1.20
5189.00	87.30	228.00	3968.55	-998.74	-922.43	1359.52	1359.54	222.73	3.22
5221.00	89.40	227.90	3969.47	-1020.16	-946.18	1391.39	1391.40	222.85	6.57
5252.00	89.80	227.40	3969.68	-1041.05	-969.09	1422.29	1422.29	222.95	2.07
5284.00	89.10	227.20	3969.99	-1062.75	-992.60	1454.20	1454.20	223.05	2.28
5315.00	88.70	227.20	3970.59	-1083.81	-1015.34	1485.11	1485.11	223.13	1.29
5346.00	89.80	227.10	3970.99	-1104.89	-1038.07	1516.03	1516.03	223.21	3.56
5377.00	90.10	226.90	3971.02	-1126.03	-1060.74	1546.95	1546.97	223.29	1.16
5408.00	89.60	227.40	3971.10	-1147.11	-1083.47	1577.87	1577.90	223.37	2.28
5439.00	89.70	227.60	3971.29	-1168.05	-1106.32	1608.78	1608.82	223.45	.72
5470.00	89.50	227.40	3971.51	-1189.00	-1129.18	1639.69	1639.74	223.52	.91
5501.00	89.20	228.10	3971.86	-1209.84	-1152.12	1670.58	1670.66	223.60	2.46
5533.00	89.50	228.10	3972.22	-1231.21	-1175.94	1702.45	1702.56	223.68	.94
Projected Survey to TD									
5591.00	89.50	227.80	3972.73	-1270.05	-1219.01	1760.24	1760.40	223.83	.52

ORIGINAL