

Petroleum Information.

COUNTY LEA

FIELD Langley

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OPR ARCO OIL & GAS CO.

STATE NM

NO 1 LEASE Langley Griffin Com.

API 30-025-2654

Sec 28, T22S, R36E

MAP

1980' FSL, 1980' FEL of Sec

CO-ORD

9 mi SW/Eunice

8-5-36 NM

SPD 12-31-79

CMP 7-30-80

CSC

13 3/8" at 1405' w/1050 SX

9 5/8" at 6224' w/4200 SX

7" at 15,638' w/3275 SX

2 3/8" at 12,312'

2 3/8" at 15,223'

WELL CLASS: INIT D FIN DG LSE CODE

FORMATION	DATUM	FORMATION	DATUM

ID 15,656' (ELBG) PHD 15,540'

IP (Devonian) Perfs 12,435-668' CAOF 3277 MCFGPD. GOR 6293,
gty (Gas) .753, (Cond) 50, SIWHP 2717 #, SIBHP 4754#

IP (Ellenburger) Perfs 15,322-515' CAOF 5407 MCFGPD. GOR 21,755,
gty (Gas) .680, (Cond)(NR); SIWHP 1990#, SIBHP 3290#

P.L.C.: El Paso Natural Gas

CONTR Moranco #1

OPRS ELEV 3488' GL, 3508' KB PD 16,000' RT

F.R. 11-19-79

(Devonian & Ellenburger)

1-4-80

TD 1405' NU/BOPS

1-11-80

Drlg 4045'

1-18-80

TD 5007' WOC

Lost Circ @ 5007'

Setting cmt plugs to attempt to regain circ

1-24-80

TD 6224' WOC

1-30-80

TD 6224' WOC

2-13-80

TD 9939'; Trip

2-20-80

TD 10,755'; Trip

2-27-80

Drlg 11,950'

3-7-80

Drlg 12,622'

Crd (Devonian) 12,473-531, rec 58', no descr

DST (Devonian) 12,431-620' op 1 hr 45 mins w/strong
blow, GTs in 18 mins @ 1050 MCFGPD

thru 3/8" chk, RO 10BO, 1 hr ISIP 5008#,

8-5-36 NM

IC 30-025-70450-79

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3-7-80 Continued
FP 429-945#, 1 hr FSIP 4980#, HP 5639-5639#
3-14-80 Drlg 13,425'
3-21-80 Drlg 14,306'
3-26-80 Drlg 14,804'
4-3-80 Drlg 15,392'
Cored (Ellenburger) 15,325-365', rec 38',
no descr
4-9-80 TD 15,656'; Prep Log
DST (Ellenburger) 15,296-475', Mis-run
DST (Ellenburger) 15,328-498', Mis-run
4-15-80 TD 15,656'; WOCT
5-19-80 TD 15,656'; PBD 15,540'; Flwg thru Sep
8-5-36 NM

5-19-80 Continued
Perf (Ellenburger) 15,322-515' w/28 shots
(overall)
Frac (15,322-515') 134,000 gals + sd + 1,059,600
SCF N2
Flwd 1900-1800 MCFGPD + 97 BLW in 24 hrs thru
2" chk, TP 275# (15,322-515')
5-30-80 TD 15,656'; PBD 15,540'; Prep Test
Flwd 26 BO + 30 BLW in 7 hrs (15,322-515')
6-6-80 TD 15,656'; PBD 15,540'; Prep Set tbg plug
Flwd 8 BO + 6 BLW in 3 hrs thru Sep.
(15,322-515')
6-16-80 TD 15,656'; PBD 15,540'; Tstg
6-23-80 TD 15,656'; PBD 15,540'; Prep CO
RSP @ 13,018'
Perf (Devonian) 12,435-668' w/29 shots
(overall)

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8-25-80

Continued

9310', Atoka 10,281', Morrow 10,704',
Barnett 11,170', Mississippian Lime
11,504', Devonian 12,328', Silurian
13,016', Fusselman 13,799', Montoya
14,120', McKee 14,730', Ellenburger
15,260'

LOGS RUN: GRL, SONL, CNL, FDC, CBND, DIPM,
BSL, DILL

BHT 201 deg @ 15,418'

Rig Released 4-13-80

8-30-80

COMPLETION ISSUED

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6-23-80 Continued
Frac (12,435-668') 125,000 gals + sd
Flwd 21 BO + 3 BLW in 3 hrs 30 mins thru
24/64" chk, TP 620# (12,435-668')
6-30-80 TD 15,656'; P3D 15,540'; SI
Pulled RBP @ 13,018'
7-3-80 TD 15,656'; P3D 15,540'; Prep Run Tbg
7-14-80 TD 15,656'; P3D 15,540'; SI/WO tbg
7-18-80 TD 15,656'; P3D 15,540'; fsg
7-25-80 TD 15,656'; P3D 15,540'; Tstg
Flwd 60 BO + Gas @ 1711 MCFDP, TP 106#
(15,322-515')
8-1-80 TD 15,656'; P3D 15,540'; WOSP
CAOF 3277 MCFDPD (12,435-668')

8-5-36 NM

8-1-80

Continued

8-25-80

CAOF 5407 MCFDPD (15,322-515')
TD 15,656'; PED 15,540'; Complete
(Ellenburger) FOUR POINT GAUGES:
Flwd 488 MCFDPD, chk (NR), 120 mins, TP 1881#
Flwd 798 MCFDPD, chk (NR), 120 mins, TP 1787#
Flwd 1221 MCFDPD, chk (NR), 120 mins, TP 1729#
Flwd 1670 MCFDPD, chk (NR), 120 mins, TP 1647#
Ellenburger Zone Completed 7-29-80
(Devonian) FOUR POINT GAUGES:
Flwd 321 MCFDPD, chk (NR), 120 mins, TP 2371#
Flwd 863 MCFDPD, chk (NR), 120 mins, TP 2211#
Flwd 1121 MCFDPD, chk (NR), 120 mins, TP 2078#
Flwd 1471 MCFDPD, chk (NR), 120 mins, TP 1955#
LOG TOPS: Yates 3238', Grayburg 3972', San
Andres 4528', Glorieta 5920', Abo 7850', Strawn

8-5-36 NM

ATLANTIC RICHFIELD COMPANY
 LANGLEY GRIFFIN NO. 1
 W. LAKE FIELD
 COUNTY, NEW MEXICO
 MAGNETIC MULTISHOT SURVEY

DATE OF SURVEY JANUARY 22, 1980
 VERTICAL SECTION DIRECTION CLOSURE
 10 DEG. EAST CORRECTION APPLIED
 MS-6450

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MEASURED DEPTH	TRUE VERTICAL DEPTH	SUB SEA TVD	SPERRY-SUN RECORD OF SURVEY			DOG-LEG SEV DEG/100	TOTAL RECTANGULAR COORDINATES		VERTICAL SECTION
			COURSE INCLINATION DEG MIN	COURSE DIRECTION DEG	ASSUME VERTICAL TO 1405 FEET		NORTH/SOUTH	EAST/WEST	
1405	1405.00	1405.00	0 40	S	34 W	6.67	0.05 S	0.03 W	0.06
1415	1415.00	1415.00	0 10	S	62 W	0.62	0.52 S	0.42 W	-0.65
1500	1500.00	1500.00	0 20	N	75 W	0.24	0.51 S	0.83 W	-0.82
1600	1600.00	1600.00	1 0	S	40 W	0.91	1.10 S	1.67 W	-1.72
1700	1699.99	1699.99	0 15	S	90 W	0.86	1.77 S	2.45 W	-2.66
1800	1799.98	1799.98	0 55	S	65 W	0.70	2.11 S	3.39 W	-3.38
1900	1899.98	1899.98	0 45	S	24 W	0.60	3.04 S	4.38 W	-4.55
2000	1999.97	1999.97	1 5	S	45 W	0.47	4.31 S	5.32 W	-6.20
2100	2099.96	2099.96	0 30	S	41 W	0.59	5.31 S	6.27 W	-7.51
2200	2199.95	2199.95	0 45	S	31 W	0.27	6.20 S	6.90 W	-8.59
2300	2299.94	2299.94	1 0	S	37 W	0.27	7.46 S	7.76 W	-10.10
2400	2399.93	2399.93	0 15	S	12 E	0.86	8.37 S	8.24 W	-11.12
2500	2499.92	2499.92	0 15	S	70 E	0.24	8.66 S	7.99 W	-11.27
2600	2599.92	2599.92	0 10	S	7 W	0.27	8.87 S	7.80 W	-11.39
2700	2699.92	2699.92	0 5	S	10 W	0.08	9.09 S	7.83 W	-11.60
2800	2799.92	2799.92	0 10	N	16 E	0.25	9.02 S	7.80 W	-11.52
2900	2899.92	2899.92	0 30	S	79 E	0.51	8.97 S	7.33 W	-11.27
3000	2999.92	2999.92	1 0	N	74 E	0.60	8.81 S	6.07 W	-10.57
3100	3099.91	3099.91	0 40	N	50 E	0.48	8.19 S	4.78 W	-9.46
3200	3199.90	3199.90	0 55	N	55 E	0.26	7.36 S	3.68 W	-8.23
3300	3299.89	3299.89	0 45	N	40 E	0.27	6.40 S	2.61 W	-6.90
3400	3399.88	3399.88	0 30	N	34 E	0.26	5.54 S	1.94 W	-5.83
3500	3499.87	3499.87	0 50	N	31 E	0.33	4.55 S	1.32 W	-4.67
3600	3599.87	3599.87	0 55	N	26 E	0.11	3.21 S	0.60 W	-3.15
3700	3699.85	3699.85	1 0	N	29 E	0.10	1.73 S	0.18 E	-1.48
3800	3799.84	3799.84	0 55	N	28 E	0.09	0.26 S	0.97 E	0.19
3900	3899.83	3899.83	1 0	N	19 E	0.17	1.27 N	1.63 E	1.86
4000	3999.81	3999.81	0 50	N	15 E	0.18	2.80 N	2.11 E	3.44
4100	4099.80	4099.80	0 45	N	27 E	0.19	4.09 N	2.59 E	4.81
4200	4199.79	4199.79							

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SPERRY-SUN

RECORD OF SURVEY

MEASURED DEPTH	TRUE VERTICAL DEPTH	SUB SEA TVD	COURSE INCLINATION DEG MIN	COURSE DIRECTION DEG	DOG-LEG SEV DEG/100	RECTANGULAR NORTH/SOUTH	TOTAL COORDINATES EAST/WEST	VERTICAL SECTION
4300	4299.73	4299.78	0 55	N 36 E	0.21	5.32 N	3.36 E	6.25
4400	4399.77	4399.77	1 0	N 21 E	0.26	6.78 N	4.14 E	7.91
4500	4499.75	4499.75	1 5	N 14 E	0.15	8.51 N	4.68 E	9.70
4600	4599.73	4599.73	1 5	N 18 E	0.08	10.33 N	5.20 E	11.56
4700	4699.71	4699.71	1 5	N 23 E	0.09	12.09 N	5.87 E	13.44
4800	4799.69	4799.69	1 15	N 29 E	0.21	13.92 N	6.76 E	15.48
4900	4899.66	4899.66	1 45	N 35 E	0.52	16.12 N	8.17 E	18.07
5000	4999.62	4999.62	1 10	N 34 E	0.58	18.22 N	9.61 E	20.59
5100	5099.57	5099.57	2 30	N 16 E	1.44	21.16 N	10.78 E	23.74
5180	5179.49	5179.49	2 45	N 21 E	0.42	24.63 N	11.95 E	27.38

★★ THE CALCULATIONS ARE BASED ON THE MINIMUM RADIUS OF CURVATURE METHOD ★★

HORIZONTAL DISPLACEMENT = 27.38 FEET AT NORTH 25 DEG. 53 MIN. EAST (TRUE)