

WELL HISTORIES

Harry L. Bigbee - No. 1-13 Torreon:

Location: 2310' fsl, 990' fwl
Section 13, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 7039' KB
T. D.: 5632', PB 3327'

Spudded: 10-31-63
Completed: 5-22-64
Results: D & A

Casing: 8-5/8" @ 123' w/75 sx, 4 1/2" @ 3380' w/125 sx

Remarks: No cores or tests. Perforated 3240'-3266' w/2 per ft.
Sand/water frac. Perforated 3066'-3092', 3118'-3126',
3154'-3468', 3182'-3196' w/2 per ft. Sand/water frac.
Swabbed water (from perfs 3066'-3266').

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Base of Pictured Cliffs	Surface	
Mesaverde	608'	+ 6430'
Menefee	1382'	+ 5656'
Point Lookout	2209'	+ 4829'
Mancos	2372'	+ 4666'
Gallup	3060'	+ 3978'
Greenhorn	4168'	+ 2870'
Graneros shale	4294'	+ 2744'
Graneros Dakota	4342'	+ 2696'
Dakota	4516'	+ 2522'
Morrison	4710'	+ 2328'
Todilto	5480'	+ 1558'
Top of Oil	5504'	+ 1535' (71')
Entrada	5574'	+ 1464'
Oil/Water contact	5574'	+ 1464'

BEFORE 1/20/64
CR. 1/20/64
apphals 5
CASE 4642

WELL HISTORIES

Magnolia Petroleum - No. 1 Harvey-Federal:

Location: 1980' fnl, 660' fwl
Section 14, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6823' KB
T. D.: 5292'

Spudded: 2-7-54
Completed: 3-6-54
Results: D & A, completed as a water well

Casing: 10-3/4" @ 478' w/500 sx

Remarks: Cored 5187'-5232', recovered 45' - 44' anhydrite, 1' fine-grained sand, no show. DST 5217'-5232', open 2 hrs, recovered 90' slightly OCM, 90' slightly O&WCM, FP 200#, SIP 30 min 2075#, HP 2600#. DST 5227'-5242', open 1½ hrs, recovered 360' water cut mud, 4170' slightly salty water, FP 1075-1950#, SIP 30 min 2050#, HP 2625#.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Point Lookout	1974'	+ 4849'
Mancos	2102'	+ 4721'
Gallup	2794'	+ 4019'
Greenhorn	3876'	+ 2947'
Graneros Dakota	4040'	+ 2783'
Dakota	4212'	+ 2611'
Morrison	4448'	+ 2375'
Todilto	5180'	+ 1643'
Top of Oil	5210'	+ 1613' (50')
Entrada	5238'	+ 1585'
Oil/Water Contact	5260'	+ 1563'

WELL HISTORIES

Magnolia Petroleum - No. 1 Hutchinson-Federal:

Location: 1930' fsl, 660' fwl
Section 14, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6845' KB
T. D.: 9684', PB 5231'

Spudded: 7-3-53
Completed: 11-20-53
Results: Pumped 79 BOPD, 33° gravity, from Entrada

Casing: 10-3/4" @ 452' w/550 sx, 7" @ 5478'

Remarks: DST #1 1491'-1511', tool open 1 hr, weak blow of air throughout, recovered 180' MCW, 30' water w/scum of oil, FP O#, SIP 30 min 380#, HP 785#. DST #2 1725'-1743', open 1 hr, weak blow of air throughout, recovered 20' mud - bottom few ft oil cut, 1' free oil, FP O#, SIP 30 min 380#, HP 795#. DST #3 1130'-1196', open 1 hr, slight blow of air throughout, recovered 90' WCM, FP O-250#, SIP 30 min 250#, HP 590#. DST #4 1511'-1560', open 1 hr, good blow of air throughout, recovered 390' WCM, FP O-150#, HP 695#. DST #5 1599'-1617', open 1 hr, weak blow of air throughout, recovered 90' MCW, SIP 30 min 380#, HP 790#. DST #6 1816'-1826', open 1 hr, recovered 60' fresh WCM, 150' fresh water, FP O-60#, SIP 30 min 565#, HP 915#. DST #7 1972'-1982', open 1 hr, slight blow of air throughout, recovered 20' MCW, FP O#, SIP 30 min 570#, HP 1010#. DST #8 2545'-2570', open 55 min, weak blow of air for 10 min and died, recovered 5' oil cut mud, FP O#, SIP 15 min C#, HP 1500#. DST #9 2805'-2822', open 41 min, weak blow of air, died in 11 min, recovered 5' oil cut mud, FP O#, SIP 15 min C#, HP 1475#. DST #10 2883'-2927', open 45 min, weak blow of air for 2 min, died, recovered 5' oil cut mud, FP O#, SIP 15 min C#, HP 1420#. DST #11 2995'-3011', open 1 hr, weak blow of air 2 min, died, recovered 10' oil cut mud, FP O#, SIP 20 min C#, HP 1420#. DST #12 3225'-3275', open 70 min, weak blow of air 6 min, died, recovered 5' oil cut mud, FP O#, SIP 30 min C#, HP 1480#. DST #13 5200'-5219', open 1½ hr, weak blow of air, increasing to fair, recovered 180' clean oil, 35.5° gravity at 60°, 60' MCO, FP 60-120#, SIP 30 min 1440#, HP 2490#. DST #14 5205'-5229', open 2 hr, weak blow of air increasing to fair, gas to surface in 25 min, recovered 310' clean oil, 90' OCM, FP 60-170#, SIP 1490# in 45 min, HP 2460#.

(continued on following page)

WELL HISTORIES

Magnolia Petroleum - No. 1 Hutchinson-Federal:

Remarks: (continued from previous page)

Core #1 1743'-1764', recovered 21' - 8' gray shale, 13' coarse-grained gray sand, no show. Core #2 3100'-3160', recovered dark gray shale, sandy. Core #3 3160'-3191', recovered 31' sandy shale. Core #4 3191'-3210', recovered 25' sandy shale. Core #5 3216'-3275', recovered 59' - 14' gray shaley sandstone (3230'-3250') 20' gray gray fine-grained sandstone, bleeding oil, 25' gray shaley sandstone. Core #6 5219'-5229', recovered 10' fine to medium-grained gray sandstone, good show of oil. Core #7 5229'-5263', recovered 34' light gray medium-grained Entrada sandstone, w/oil. Core #8 5263'-5289', recovered 26' light gray medium-grained Entrada sandstone, w/oil. Core #9 5289'-5348', recovered 54' light gray medium-grained Entrada sandstone, w/oil. Core #10 5348'-5408', recovered 60' fine to coarse-grained sandstone, no show.

Perforated w/40 5210'-5220', swabbed 22 bbls oil in 2 hrs, 31 bbls new oil, 267 BW in 23 hrs, swabbed 11 bbls oil, 166 BW 8 hrs. Squeezed. Perforated 5210'-5217', swabbed 22 BO, 22 hrs, 7BO 7 hrs, swabbed 41 BO 22 hrs. Acidized w/250, squeezed perforations 5210'-5217', plugged back to 5231'. Perforated 5210'-5215' w/20, swabbed 22 bbls load oil, 3 hrs; 24 bbls oil, 12 hrs; swabbed 59 bbls oil 24 hrs, 35° gravity.

Losing circulation while drilling 3191'-3216'.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Point Lookout	1970'	+ 4875'
Mancos	2116'	+ 4729'
Gallup	2796'	+ 4049'
Greenhorn	3966'	+ 2879'
Graneros Dakota	4048'	+ 2797'
Dakota	4218'	+ 2627'
Morrison	4444'	+ 2401'
Todilto	5190'	+ 1655'
Top of Oil	5208'	+ 1637' (54')
Entrada	5218'	+ 1627'
Oil/Water Contact	5262'	+ 1583'
Chinle	5548'	
Permian	6558'	
Pennsylvanian	8459'	
Hermosa	9526'	
Pre-Cambrian	9660'	

WELL HISTORIES

Harry L. Bigbee - No. 1 Media:

Location: 330' fsl, 2310' fel
Section 14, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6865' KB
T. D.: 5351'

Spudded: 7-27-62
Completed: 8-12-62
Results: D & A

Casing: 8-5/8" @ 224' w/150 sx

Remarks: DST 2755'-2970', open 1 hr, recovered 1130' sli GCM,
trace of oil, 1030' mud, FP 810-1105#, SIP 30 min
1120#, HP 1310#. Cored 5133'-5169', recovered 36'
sand. Cored 5197'-5247', recovered 50' sand w/shale
streaks.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Mesaverde	400'	+ 6465'
Point Lookout	1950'	+ 4915'
Mancos	2116'	+ 4749'
Gallup	2816'	+ 4049'
Greenhorn	3938'	+ 2927'
Graneros Dakota	4092'	+ 2773'
Dakota	4264'	+ 2601'
Morrison	4470'	+ 2395'
Todilto	5236'	+ 1629'
Top of Oil	5248'	+ 1617' (92')
Entrada	5330'	+ 1535'
Oil/Water Contact	5340'	+ 1525'

WELL HISTORIES

Don C. Wiley & Fluid Power Pump Company - No. 1 Federal Media:

Location: 990' fsl, 660' fwl
Section 14, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6851' KB
T. D.: 5312', PB 5299'

Spudded: 3-26-69
Completed: 4-16-69
Results: 220 BOPD, producing from Entrada

Casing: 8-5/8" @ 200' w/150 sx, 4-1/2" @ 5310' w/300 sx

Remarks: DST 4033'-4055', 22', IFP 5" 72 lbs, ICIP 95" 1173 lbs, FFP 30" 78 lbs, FCIP 45" 783 lbs, recovered 100' slightly gas cut mud, HP 1943#. DST 5239'-5256', 17', IFP 15" 634 lbs, ICIP 30" 2020 lbs, FFP 2 hrs 1674 lbs, FCIP 1 hr 2020 lbs, recovered 4650' of oil, no water, in 2 hrs. HP 2528#.

Core No. 1, 5196'-5256', 60' recovered, 5196'-5245' red shale and red and gray limestone, 5245'-5256' sandstone, oil saturated, dark brown. Core No. 2, 5256'-5296', 40' recovered, 5156'-5169' sandstone, oil saturated, dark brown, 5169'-5196' sandstone, gray, water saturated.

Perforated 5252'-5258' w/3 holes per ft. Acidized w/200 gallons 10% acetic acid.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Mesaverde	370'	+ 6481'
Point Lockout	1966'	+ 4885'
Mancos	2108'	+ 4743'
Gallup	2792'	+ 4059'
Greenhorn	3936'	+ 2915'
Graneros shale	3944'	+ 2907'
Graneros Dakota	4050'	+ 2801'
Dakota	4216'	+ 2635'
Morrison	4450'	+ 2401'
Todilto	5238'	+ 1613'
Top of Oil	5240'	+ 1611' (38')
Entrada	5249'	+ 1602'
Oil/Water Contact	5278'	+ 1573'

WELL HISTORIES

Don C. Wiley & Fluid Power Pump Company - No. 4 Federal Media:

Location: 990' fsl, 1650' fwl
Section 14, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6886' KB
T. D.: 5344', PB 5311'

Spudded: 5-19-69
Completed: 7-7-69
Results: IPP 18 BOPD, 96 BWPD, producing from Entrada

Casing: 8-5/8" @ 200' w/150 sx, 4-1/2" @ 5344' w/300 sx

Remarks: Cored 5291'-5313', recovered 13' oil saturated sand,
7' water saturated sand. No DST.

Perforated 5293'-5297' w/3 per ft, acidized. Squeezed
perforations 5293'-5297' w/75 sx. Perforated 5290'-
5295.5' w/4 per ft, acidized.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Mesaverde	404'	+ 6482'
Point Lookout	2006'	+ 4880'
Mancos	2150'	+ 4736'
Gallup	2834'	+ 4052'
Greenhorn	3990'	+ 2896'
Graneros shale	4048'	+ 2838'
Graneros Dakota	4102'	+ 2784'
Dakota	4272'	+ 2614'
Morrison	4514'	+ 2372'
Todilto	5282'	+ 1604'
Top of Oil	5282'	+ 1604' (26')
Entrada	5290'	+ 1596'
Oil/Water Contact	5308'	+ 1578'

WELL HISTORIES

Don C. Wiley - No. 1 Beard:

Location: 1980' fsl, 1650' fwl
Section 14, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6866' KB

T. D.: 5346'

Spudded: 7-1-69

Completed: Not complete

Results: Temporarily shut down

Casing: 8-5/8" @ 212' w/100 sx, 5-1/2" @ 5346' w/275 sx

Remarks: No cores or tests.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Mesaverde	402'	+ 6464'
Point Lookout	1994'	+ 4872'
Mancos	2140'	+ 4726'
Gallup	2824'	+ 4042'
Greenhorn	3972'	+ 2894'
Graneros shale	4030'	+ 2836'
Graneros Dakota	4178'	+ 2688'
Dakota	4250'	+ 2616'
Morrison	4451'	+ 2415'
Todilto	5210'	+ 1656'
Top of Oil	5230'	+ 1636' (55')
Entrada	5282'	+ 1584'
Oil/Water Contact	5285'	+ 1581'

WELL HISTORIES

Fluid Power Pump Company - No. 1 Fluid Power Pump:

Location: 1980' fsl, 330' fwl
Section 14, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6825' GR, 6842' KB (Datum)
T. D.: 5351'

Spudded: 10-10-71
Completed: 11-1-71
Results: IPP 508 BOPD, 1500 BWPD, producing from the Entrada

Casing: 10-3/4' @ 217' w/140 sx, 7" @ 5340' w/300 sx

Remarks: No cores or tests. Perforated 5206' - 5254' w/2 per ft. Acidized
w/500 gallons 15% mud acid.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Lewis shale	0'	+ 6842'
Mesaverde	380'	+ 6462'
Menefee	1148'	+ 5694'
Point Lookout	1970'	+ 4872'
Mancos	2098'	+ 4744'
Gallup	2790'	+ 4052'
Dakota "A"	4202'	+ 2640'
Dakota "B"	4312'	+ 2530'
Morrison	4456'	+ 2386'
Todilto	5200'	+ 1642'
Entrada	5218'	+ 1624'

WELL HISTORIES

Magnolia Petroleum - No. 2 Hutchinson:

Location: 1980' fsl, 660' fel
Section 15, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6800' KB
T. D.: 5209'

Spudded: 11-18-53
Completed: 1-2-54
Results: Pumped 62 BO and 162 bbls salt water in 24 hrs, 33.8° gravity oil from Entrada 5200'-5209', open hole.

Casing: 9-5/8" @ 470' w/475 sx, 7" @ 5200' w/520 sx

Remarks: DST 5187'-5202', open 1 hr, recovered 1380' clean oil, FP 130-540#, SIP 30 min 2020#, HP 2460#.

Cored 5160'-5175', recovered 5' sand, 1' shale and lime, 3' shale and sand, 5' sand. Cored 5175'-5202', recovered 20.5' anhydrite, 3.5' sand.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Point Lookout	1932'	+ 4868'
Mancos	2064'	+ 4736'
Gallup	2756'	+ 4044'
Greenhorn	3840'	+ 2960'
Graneros shale	3955'	+ 2845'
Graneros Dakota	4000'	+ 2800'
Dakota	4172'	+ 2628'
Morrison	4430'	+ 2370'
Todilto	5182'	+ 1618'
Top of Oil	5193'	+ 1607' (16')
Entrada	5207'	+ 1593'

WELL HISTORIES

Don C. Wiley and Fluid Power Pump Company - No. 2 Federal Media:

Location: 914' fsl, 320' fel
Section 15, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6821' KB
T. D.: 5280'

Spudded: 4-14-69
Completed: 6-1-69
Results: IPP 124 BOPD, 72 BWPD, producing from Entrada

Casing: 8-5/8" @ 208' w/175 sx, 4-1/2" @ 5283' w/150 sx

Remarks: Cored 5192'-5252', recovered 46' - 5192'-5218' limestone
and anhydrite, 5218'-5238' oil saturated sandstone, lost
core from 5238'-5252'.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Mesaverde	350'	+ 6471'
Point Lookout	1939'	+ 4882'
Mancos	2066'	+ 4755'
Gallup	2760'	+ 4061'
Greenhorn	3906'	+ 2915'
Graneros shale	3962'	+ 2859'
Graneros Dakota	4010'	+ 2811'
Dakota	4186'	+ 2635'
Morrison	4436'	+ 2385'
Todilto	5170'	+ 1651'
Top of Oil	5184'	+ 1637' (64')
Entrada	5218'	+ 1603'
Oil/Water Contact	5248'	+ 1573'

WELL HISTORIES

Fluid Power Pump Company - No. 2 Fluid Power Pump:

Location: 2310' fn. 330' fel
Section 15, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6781' GR, 6795' KB (Datum)
T. D.: 5300'

Spudded: 11-29-71
Completed: Not complete
Results: Pump being set, preparing to test.

Casing: 10-3/4" @ 210' w/140 sx, 7" @ 5300' w/310 sx

Remarks: No cores or tests. Perforated 5188'-5202' and 5202' - 5214'
w/2 per ft.

Formations:	<u>Name</u>	<u>Top</u>	<u>Datum</u>
	Lewis shale	0'	+ 6795'
	Mesaverde	334'	+ 6461'
	Menefee	958'	+ 5837'
	Point Lookout	1944'	+ 4851'
	Mancos	2074'	+ 4721'
	Gallup	2752'	+ 4043'
	Greenhorn	3844'	+ 2951'
	Graneros shale	3966'	+ 2824'
	Graneros Dakota	4006'	+ 2789'
	Dakota "A"	4182'	+ 2613'
	Dakota "B"	4284'	+ 2511'
	Morrison	4422'	+ 2373'
	Todilto	5166'	+ 1629'
	Entrada	5203'	+ 1592'

WELL HISTORIES

F. L. Harvey - No. 1-C Gonzales:

Location: 1980' fsl, 660' fel
Section 16, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6868' KB

T. D.: 3568'

Spudded: 6-26-56

Completed: 7-14-56

Results: D & A

Casing: 8-5/8" @ 92' w/70 sx

Remarks: No cores or tests.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Mesaverde	637'	+ 6231'
Point Lookout	2209'	+ 4659'
Mancos	2350'	+ 4518'
Gallup	3042'	+ 3826'

WELL HISTORIES

Don C. Wiley and Fluid Power Pump Company - No. 3 Federal Media:

Location: 470' fnl, 1690' fel
Section 22, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6882' KB
T. D.: 5341', PB 3102'

Spudded: 5-4-69
Completed: 6-4-69
Results: IPP 97 BOPD, producing from Gallup, 40° gravity.

Casing: 8-5/8" @ 233' w/175 sx, 4-1/2" @ 3102' w/175 sx

Remarks: No drillstem tests made. Cored 5278'-5327', recovered 49' - 5278'-5317' limestone, anhydrite, and black shale, 5317'-5327' sandstone - 4' total oil saturation from 5317'-5319' and 5321'-5323'.

Plugged back to 3102'. Perforated 70' w/2 per ft as follows: 2826'-2836', 2838'-2849', 2856'-2860', 2872'-2878', 2900'-2916', 2926'-2930', 2933'-2942', 2950'-2954' and 3013'-3019'. Acidized w/1000 gal 15% mud acid. Sand/oil fractured w/40,000# sand and 31,810 gal oil. IR 41 BPM, TP 2000#, MP 3000#, dropped 75 balls.

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Mesaverde	422'	+ 6460'
Point Lookout	1998'	+ 4884'
Mancos	2136'	+ 4746'
Gallup	2818'	+ 4064'
Greenhorn	3922'	+ 2960'
Graneros shale	4020'	+ 2862'
Graneros Dakota	4074'	+ 2808'
Dakota	4240'	+ 2642'
Morrison	4436'	+ 2446'
Todilto	5241'	+ 1641'
Top of Oil	5266'	+ 1616' (57')
Entrada	5317'	+ 1565'
Oil/Water Contact	5323'	+ 1569'

WELL HISTORIES

Don C. Wiley and Fluid Power Pump Company - No. 5 Federal Media:

Location: 1650' fnl, 660' fel
Section 22, Township 19 North, Range 3 West, NMPM
Sandoval County, New Mexico

Elevation: 6866' KB
T. D.: 5379', PB 3380'

Spudded: 6-1-69
Completed: 9-21-69
Results: IPF 5 BOPD, FTP 30#.

Casing: 8-5/8" @ 200' w/150 sx, 4-1/2" @ 3433' w/322 sx

Remarks: No drillstem tests. Sidewall cores made at 1611', 1705', 1711', 1714', 1718', 1720', 1769', 1811', 1833', 1844', 1892', 1896'. Menefee sandstone samples at each foot.

Perforated 2784'-2798', 2812'-2816', 2824'-2828', 2836'-2850', 2870'-2876', 2890'-2900', 2904'-2910' (4th stage) w/4 per ft. Perforated 2964'-2972', 2984'-2992', 3006'-3014', 3024'-3032', 3046'-3058' (3rd stage) w/4 per ft. Perforated 3176'-3182', 3188'-3192', 3198'-3202', 3210'-3216', 3224'-3231', 3236'-3244', 3262'-3268' (2nd stage) w/4 per ft. Perforated 3290'-3294', 3300'-3304', 3318'-3322', 3330'-3338', 3363.5'-3367.5', 3374'-3378' (1st stage) w/4 per ft.

First stage: Sand/water fractured 3290'-3378' w/50,000# sand and 50,730 gal water. Broke down with 500 gallons 15% mud acid. Breakdown pressure 800#. Maximum pressure 2400#. Average pressure 2300#. ISIP 200#, 5 min 50#. Average injection rate 68 BPM. Dropped 25 rubber balls.

Second stage: Sand/water fractured 3176'-3268' w/50,000# sand and 49,030 gal water. Treated w/500 gal mud acid. Breakdown pressure 0#. Maximum pressure 2400#. Average pressure 2200#. ISIP 200#, 5 min 100#. Average injection rate 72 BPM. Dropped 75 rubber balls.

Third stage: Sand/oil fractured 2964'-3058' w/50,000# sand and 52,950 gal oil. Treated w/500 gal mud acid. Breakdown pressure 400#. Average treating pressure 3000#. ISIP 0#, 5 min 0#. Average injection rate 46 BPM. No balls dropped.

Fourth stage: Sand/water fractured 2784'-2910' w/75,000# sand and 60,690 gal water. Treated w/500 gal mud acid. Breakdown pressure 0#, maximum pressure 1950#. Average pressure 1900#. ISIP 100#, 5 min 50#. Average injection rate 79 BPM. Dropped 150 rubber balls.

(continued on following page)

WELL HISTORIES

Don C. Wiley and Fluid Power Pump Company - No. 5 Federal Media:

(continued from previous page)

Formations:

<u>Name</u>	<u>Top</u>	<u>Datum</u>
Mesaverde	388'	+ 6478'
Point Lookout	1960'	+ 4906'
Mancos	2102'	+ 4764'
Gallup	2782'	+ 4084'
Greenhorn	3942'	+ 2924'
Graneros shale	4000'	+ 2866'
Graneros Dakota	4048'	+ 2818'
Dakota	4219'	+ 2647'
Morrison	4422'	+ 2444'
Todilto	5224'	+ 1642'
Entrada	5328'	+ 1538'

