

U. S. LAND OFFICE **Santa Fe**

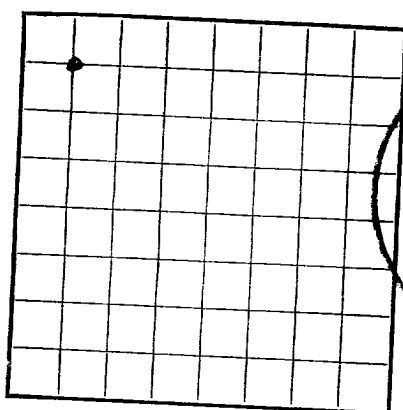
SERIAL NUMBER

LEASE OR PERMIT **N.M. 567720**

RECEIVED

JAN 29 1962

OIL OR GAS

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

LOCATE WELL CORRECTLY

## LOG OF OIL OR GAS WELL

Company **The Atlantic Refining Company** Address **Box 2197 Farmington, New Mexico**  
Lessor or Tract **Torreon** Field **Wildcat** State **New Mexico**  
Well No. **3** Sec. **15** T. **20N** R. **3W** Meridian **NMPM** County **Sandoval**  
Location **660** ft. **N** of **N** Line and **660** ft. **E** of **W** Line of **Sec. 15** Elevation **6877**  
(Derick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Date **January 24, 1962**Signed **B. J. Santani** Title **Drilling Supervisor**

The summary on this page is for the condition of the well at above date.

Commenced drilling **December 21**, 19 **61** Finished drilling **January 19**, 19 **62**

## OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from **None** to \_\_\_\_\_ No. 4, from \_\_\_\_\_ to \_\_\_\_\_  
No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 5, from \_\_\_\_\_ to \_\_\_\_\_  
No. 3, from \_\_\_\_\_ to \_\_\_\_\_ No. 6, from \_\_\_\_\_ to \_\_\_\_\_

## IMPORTANT WATER SANDS

No. 1, from **2153** to **2230** No. 3, from \_\_\_\_\_ to \_\_\_\_\_  
No. 2, from **2955** to **3100** No. 4, from \_\_\_\_\_ to \_\_\_\_\_

## CASING RECORD

| Size casing        | Weight per foot | Threads per inch | Make | Amount | Kind of shoe | Cut and pulled from | Perforated |     | Purpose           |
|--------------------|-----------------|------------------|------|--------|--------------|---------------------|------------|-----|-------------------|
|                    |                 |                  |      |        |              |                     | From—      | To— |                   |
| 8 5/8              | 29.77           | 215              |      |        | Pump & Plug  |                     |            |     | Cement Circulated |
| P & A RECORD BELOW |                 |                  |      |        |              |                     |            |     |                   |

## MUDDING AND CEMENTING RECORD

| Size casing        | Where set | Number sacks of cement | Method used | Mud gravity | Amount of mud used |
|--------------------|-----------|------------------------|-------------|-------------|--------------------|
| 8 5/8              | 295.77    | 215                    | Pump & Plug |             | Cement Circulated  |
| P & A RECORD BELOW |           |                        |             |             |                    |

## PLUGS AND ADAPTERS

Heaving plug—Material \_\_\_\_\_ Length \_\_\_\_\_ Depth set \_\_\_\_\_  
Adapters—Material \_\_\_\_\_ Size \_\_\_\_\_

## SHOOTING RECORD

| Size | Shell used | Explosive used | Quantity | Date | Depth shot | Depth cleaned out |
|------|------------|----------------|----------|------|------------|-------------------|
|      |            |                |          |      |            |                   |
|      |            |                |          |      |            |                   |
|      |            |                |          |      |            |                   |

## TOOLS USED

Rotary tools were used from **Surface** feet to **4376 (T. Deck)**, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet  
Cable tools were used from \_\_\_\_\_ feet to \_\_\_\_\_ feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet

## DATES

Put to producing **P & A (1-20-62)**, 19 \_\_\_\_\_  
The production for the first 24 hours was \_\_\_\_\_ barrels of fluid of which \_\_\_\_\_% was oil; \_\_\_\_\_%  
emulsion; \_\_\_\_\_% water; and \_\_\_\_\_% sediment.  
Gravity, °Bé. \_\_\_\_\_  
If gas well, cu. ft. per 24 hours \_\_\_\_\_ Gallons gasoline per 1,000 cu. ft. of gas \_\_\_\_\_  
Rock pressure, lbs. per sq. in. \_\_\_\_\_

## EMPLOYEES

\_\_\_\_\_, Driller  
**Gardner Bros. Drilling Co.**, Driller  
\_\_\_\_\_, Driller

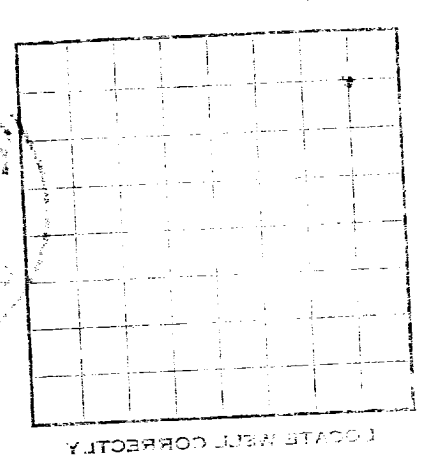
## FORMATION RECORD

| FROM—                  | TO—      | TOTAL FEET                       | FORMATION                                           |
|------------------------|----------|----------------------------------|-----------------------------------------------------|
| Surface                | 940      | 940                              | Upper Cretaceous-Pictured Cliffs (Undifferentiated) |
| 940                    | 2153     | 1213                             | Pictured Cliffs-Lewis Shale                         |
| 2153                   | 3168     | 1015                             | Mesa Verde                                          |
| 3168                   | 4233     | 1065                             | Upper Mancos                                        |
| 4233                   | 4375     | 142                              | Gallup                                              |
| P & A RECORD (1-20-62) |          |                                  |                                                     |
| From 3250'             | To 3150' | With 23 sacks cement plus 4% gel |                                                     |
| 2200'                  | 2100'    | 23 sacks cement plus 4% gel      |                                                     |
| 310'                   | 265'     | 15 sacks cement plus 4% gel      |                                                     |
| 28'                    | 10'      | 8 sacks cement plus 4% gel       |                                                     |

FORMATION RECORD—Continued

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL



Company: The Atlantic Refining Company  
Location of Well: No. 1, from 100 to 1100  
The information given herewith is a complete and correct record of the well and all work done thereon to the date of completion of the well.  
Date: January 1, 1910  
The well was drilled by the Atlantic Refining Company.

OIL OR GAS SANDS OR ZONES

No. 1, from 100 to 1100  
No. 2, from 1100 to 1200  
No. 3, from 1200 to 1300  
No. 4, from 1300 to 1400

IMPORTANT WATER SANDS

No. 1, from 100 to 1100  
No. 2, from 1100 to 1200  
No. 3, from 1200 to 1300  
No. 4, from 1300 to 1400

CASING RECORD

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "stretched" or left in the well, give the size and location. If the well has been dynamited, give date, size, position, and number of shots. If pipes or bridges were put in to test for water, state kind of material used, position, and results of pumping or burning.

HISTORY OF OIL OR GAS WELL

10-43094-2 U. S. GOVERNMENT PRINTING OFFICE

MUDDING AND CEMENTING RECORD

| Amount of mud used | Mud used | Method used | Number sacks of cement | Water used | Remarks |
|--------------------|----------|-------------|------------------------|------------|---------|
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |
| 1000               | Water    | Hand        | 10                     | 100        |         |

PLUGS AND ADAPTERS

Plugs and adapters used in the well. State size, position, and results of use.

SHOOTING RECORD

| Shot | Explosive used | Quantity | Date        | Depth shot | Depth cleared out |
|------|----------------|----------|-------------|------------|-------------------|
| 1    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 2    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 3    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 4    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 5    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 6    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 7    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 8    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 9    | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |
| 10   | Black powder   | 100      | Jan 1, 1910 | 100        | 100               |

TOOLS USED

Tools used in the well. State name, size, position, and results of use.

DATES

Put to producing on Jan 1, 1910. The production for the first 24 hours was 100 barrels of fluid of which 80% was oil. Gravity, 28.0. Gallons gasoline per 1,000 cu. ft. of gas, 10.0.

EMPLOYEES

Driller, Driller, Driller, Driller, Driller, Driller, Driller, Driller, Driller, Driller.

FORMATION RECORD

| FORMATION                          | TOTAL FEET | TO-  | FROM- |
|------------------------------------|------------|------|-------|
| Shale (reddish-brown) (100-150)    | 100        | 100  | 0     |
| Shale (reddish-brown) (150-200)    | 150        | 150  | 100   |
| Shale (reddish-brown) (200-250)    | 200        | 200  | 150   |
| Shale (reddish-brown) (250-300)    | 250        | 250  | 200   |
| Shale (reddish-brown) (300-350)    | 300        | 300  | 250   |
| Shale (reddish-brown) (350-400)    | 350        | 350  | 300   |
| Shale (reddish-brown) (400-450)    | 400        | 400  | 350   |
| Shale (reddish-brown) (450-500)    | 450        | 450  | 400   |
| Shale (reddish-brown) (500-550)    | 500        | 500  | 450   |
| Shale (reddish-brown) (550-600)    | 550        | 550  | 500   |
| Shale (reddish-brown) (600-650)    | 600        | 600  | 550   |
| Shale (reddish-brown) (650-700)    | 650        | 650  | 600   |
| Shale (reddish-brown) (700-750)    | 700        | 700  | 650   |
| Shale (reddish-brown) (750-800)    | 750        | 750  | 700   |
| Shale (reddish-brown) (800-850)    | 800        | 800  | 750   |
| Shale (reddish-brown) (850-900)    | 850        | 850  | 800   |
| Shale (reddish-brown) (900-950)    | 900        | 900  | 850   |
| Shale (reddish-brown) (950-1000)   | 950        | 950  | 900   |
| Shale (reddish-brown) (1000-1050)  | 1000       | 1000 | 950   |
| Shale (reddish-brown) (1050-1100)  | 1050       | 1050 | 1000  |
| Shale (reddish-brown) (1100-1150)  | 1100       | 1100 | 1050  |
| Shale (reddish-brown) (1150-1200)  | 1150       | 1150 | 1100  |
| Shale (reddish-brown) (1200-1250)  | 1200       | 1200 | 1150  |
| Shale (reddish-brown) (1250-1300)  | 1250       | 1250 | 1200  |
| Shale (reddish-brown) (1300-1350)  | 1300       | 1300 | 1250  |
| Shale (reddish-brown) (1350-1400)  | 1350       | 1350 | 1300  |
| Shale (reddish-brown) (1400-1450)  | 1400       | 1400 | 1350  |
| Shale (reddish-brown) (1450-1500)  | 1450       | 1450 | 1400  |
| Shale (reddish-brown) (1500-1550)  | 1500       | 1500 | 1450  |
| Shale (reddish-brown) (1550-1600)  | 1550       | 1550 | 1500  |
| Shale (reddish-brown) (1600-1650)  | 1600       | 1600 | 1550  |
| Shale (reddish-brown) (1650-1700)  | 1650       | 1650 | 1600  |
| Shale (reddish-brown) (1700-1750)  | 1700       | 1700 | 1650  |
| Shale (reddish-brown) (1750-1800)  | 1750       | 1750 | 1700  |
| Shale (reddish-brown) (1800-1850)  | 1800       | 1800 | 1750  |
| Shale (reddish-brown) (1850-1900)  | 1850       | 1850 | 1800  |
| Shale (reddish-brown) (1900-1950)  | 1900       | 1900 | 1850  |
| Shale (reddish-brown) (1950-2000)  | 1950       | 1950 | 1900  |
| Shale (reddish-brown) (2000-2050)  | 2000       | 2000 | 1950  |
| Shale (reddish-brown) (2050-2100)  | 2050       | 2050 | 2000  |
| Shale (reddish-brown) (2100-2150)  | 2100       | 2100 | 2050  |
| Shale (reddish-brown) (2150-2200)  | 2150       | 2150 | 2100  |
| Shale (reddish-brown) (2200-2250)  | 2200       | 2200 | 2150  |
| Shale (reddish-brown) (2250-2300)  | 2250       | 2250 | 2200  |
| Shale (reddish-brown) (2300-2350)  | 2300       | 2300 | 2250  |
| Shale (reddish-brown) (2350-2400)  | 2350       | 2350 | 2300  |
| Shale (reddish-brown) (2400-2450)  | 2400       | 2400 | 2350  |
| Shale (reddish-brown) (2450-2500)  | 2450       | 2450 | 2400  |
| Shale (reddish-brown) (2500-2550)  | 2500       | 2500 | 2450  |
| Shale (reddish-brown) (2550-2600)  | 2550       | 2550 | 2500  |
| Shale (reddish-brown) (2600-2650)  | 2600       | 2600 | 2550  |
| Shale (reddish-brown) (2650-2700)  | 2650       | 2650 | 2600  |
| Shale (reddish-brown) (2700-2750)  | 2700       | 2700 | 2650  |
| Shale (reddish-brown) (2750-2800)  | 2750       | 2750 | 2700  |
| Shale (reddish-brown) (2800-2850)  | 2800       | 2800 | 2750  |
| Shale (reddish-brown) (2850-2900)  | 2850       | 2850 | 2800  |
| Shale (reddish-brown) (2900-2950)  | 2900       | 2900 | 2850  |
| Shale (reddish-brown) (2950-3000)  | 2950       | 2950 | 2900  |
| Shale (reddish-brown) (3000-3050)  | 3000       | 3000 | 2950  |
| Shale (reddish-brown) (3050-3100)  | 3050       | 3050 | 3000  |
| Shale (reddish-brown) (3100-3150)  | 3100       | 3100 | 3050  |
| Shale (reddish-brown) (3150-3200)  | 3150       | 3150 | 3100  |
| Shale (reddish-brown) (3200-3250)  | 3200       | 3200 | 3150  |
| Shale (reddish-brown) (3250-3300)  | 3250       | 3250 | 3200  |
| Shale (reddish-brown) (3300-3350)  | 3300       | 3300 | 3250  |
| Shale (reddish-brown) (3350-3400)  | 3350       | 3350 | 3300  |
| Shale (reddish-brown) (3400-3450)  | 3400       | 3400 | 3350  |
| Shale (reddish-brown) (3450-3500)  | 3450       | 3450 | 3400  |
| Shale (reddish-brown) (3500-3550)  | 3500       | 3500 | 3450  |
| Shale (reddish-brown) (3550-3600)  | 3550       | 3550 | 3500  |
| Shale (reddish-brown) (3600-3650)  | 3600       | 3600 | 3550  |
| Shale (reddish-brown) (3650-3700)  | 3650       | 3650 | 3600  |
| Shale (reddish-brown) (3700-3750)  | 3700       | 3700 | 3650  |
| Shale (reddish-brown) (3750-3800)  | 3750       | 3750 | 3700  |
| Shale (reddish-brown) (3800-3850)  | 3800       | 3800 | 3750  |
| Shale (reddish-brown) (3850-3900)  | 3850       | 3850 | 3800  |
| Shale (reddish-brown) (3900-3950)  | 3900       | 3900 | 3850  |
| Shale (reddish-brown) (3950-4000)  | 3950       | 3950 | 3900  |
| Shale (reddish-brown) (4000-4050)  | 4000       | 4000 | 3950  |
| Shale (reddish-brown) (4050-4100)  | 4050       | 4050 | 4000  |
| Shale (reddish-brown) (4100-4150)  | 4100       | 4100 | 4050  |
| Shale (reddish-brown) (4150-4200)  | 4150       | 4150 | 4100  |
| Shale (reddish-brown) (4200-4250)  | 4200       | 4200 | 4150  |
| Shale (reddish-brown) (4250-4300)  | 4250       | 4250 | 4200  |
| Shale (reddish-brown) (4300-4350)  | 4300       | 4300 | 4250  |
| Shale (reddish-brown) (4350-4400)  | 4350       | 4350 | 4300  |
| Shale (reddish-brown) (4400-4450)  | 4400       | 4400 | 4350  |
| Shale (reddish-brown) (4450-4500)  | 4450       | 4450 | 4400  |
| Shale (reddish-brown) (4500-4550)  | 4500       | 4500 | 4450  |
| Shale (reddish-brown) (4550-4600)  | 4550       | 4550 | 4500  |
| Shale (reddish-brown) (4600-4650)  | 4600       | 4600 | 4550  |
| Shale (reddish-brown) (4650-4700)  | 4650       | 4650 | 4600  |
| Shale (reddish-brown) (4700-4750)  | 4700       | 4700 | 4650  |
| Shale (reddish-brown) (4750-4800)  | 4750       | 4750 | 4700  |
| Shale (reddish-brown) (4800-4850)  | 4800       | 4800 | 4750  |
| Shale (reddish-brown) (4850-4900)  | 4850       | 4850 | 4800  |
| Shale (reddish-brown) (4900-4950)  | 4900       | 4900 | 4850  |
| Shale (reddish-brown) (4950-5000)  | 4950       | 4950 | 4900  |
| Shale (reddish-brown) (5000-5050)  | 5000       | 5000 | 4950  |
| Shale (reddish-brown) (5050-5100)  | 5050       | 5050 | 5000  |
| Shale (reddish-brown) (5100-5150)  | 5100       | 5100 | 5050  |
| Shale (reddish-brown) (5150-5200)  | 5150       | 5150 | 5100  |
| Shale (reddish-brown) (5200-5250)  | 5200       | 5200 | 5150  |
| Shale (reddish-brown) (5250-5300)  | 5250       | 5250 | 5200  |
| Shale (reddish-brown) (5300-5350)  | 5300       | 5300 | 5250  |
| Shale (reddish-brown) (5350-5400)  | 5350       | 5350 | 5300  |
| Shale (reddish-brown) (5400-5450)  | 5400       | 5400 | 5350  |
| Shale (reddish-brown) (5450-5500)  | 5450       | 5450 | 5400  |
| Shale (reddish-brown) (5500-5550)  | 5500       | 5500 | 5450  |
| Shale (reddish-brown) (5550-5600)  | 5550       | 5550 | 5500  |
| Shale (reddish-brown) (5600-5650)  | 5600       | 5600 | 5550  |
| Shale (reddish-brown) (5650-5700)  | 5650       | 5650 | 5600  |
| Shale (reddish-brown) (5700-5750)  | 5700       | 5700 | 5650  |
| Shale (reddish-brown) (5750-5800)  | 5750       | 5750 | 5700  |
| Shale (reddish-brown) (5800-5850)  | 5800       | 5800 | 5750  |
| Shale (reddish-brown) (5850-5900)  | 5850       | 5850 | 5800  |
| Shale (reddish-brown) (5900-5950)  | 5900       | 5900 | 5850  |
| Shale (reddish-brown) (5950-6000)  | 5950       | 5950 | 5900  |
| Shale (reddish-brown) (6000-6050)  | 6000       | 6000 | 5950  |
| Shale (reddish-brown) (6050-6100)  | 6050       | 6050 | 6000  |
| Shale (reddish-brown) (6100-6150)  | 6100       | 6100 | 6050  |
| Shale (reddish-brown) (6150-6200)  | 6150       | 6150 | 6100  |
| Shale (reddish-brown) (6200-6250)  | 6200       | 6200 | 6150  |
| Shale (reddish-brown) (6250-6300)  | 6250       | 6250 | 6200  |
| Shale (reddish-brown) (6300-6350)  | 6300       | 6300 | 6250  |
| Shale (reddish-brown) (6350-6400)  | 6350       | 6350 | 6300  |
| Shale (reddish-brown) (6400-6450)  | 6400       | 6400 | 6350  |
| Shale (reddish-brown) (6450-6500)  | 6450       | 6450 | 6400  |
| Shale (reddish-brown) (6500-6550)  | 6500       | 6500 | 6450  |
| Shale (reddish-brown) (6550-6600)  | 6550       | 6550 | 6500  |
| Shale (reddish-brown) (6600-6650)  | 6600       | 6600 | 6550  |
| Shale (reddish-brown) (6650-6700)  | 6650       | 6650 | 6600  |
| Shale (reddish-brown) (6700-6750)  | 6700       | 6700 | 6650  |
| Shale (reddish-brown) (6750-6800)  | 6750       | 6750 | 6700  |
| Shale (reddish-brown) (6800-6850)  | 6800       | 6800 | 6750  |
| Shale (reddish-brown) (6850-6900)  | 6850       | 6850 | 6800  |
| Shale (reddish-brown) (6900-6950)  | 6900       | 6900 | 6850  |
| Shale (reddish-brown) (6950-7000)  | 6950       | 6950 | 6900  |
| Shale (reddish-brown) (7000-7050)  | 7000       | 7000 | 6950  |
| Shale (reddish-brown) (7050-7100)  | 7050       | 7050 | 7000  |
| Shale (reddish-brown) (7100-7150)  | 7100       | 7100 | 7050  |
| Shale (reddish-brown) (7150-7200)  | 7150       | 7150 | 7100  |
| Shale (reddish-brown) (7200-7250)  | 7200       | 7200 | 7150  |
| Shale (reddish-brown) (7250-7300)  | 7250       | 7250 | 7200  |
| Shale (reddish-brown) (7300-7350)  | 7300       | 7300 | 7250  |
| Shale (reddish-brown) (7350-7400)  | 7350       | 7350 | 7300  |
| Shale (reddish-brown) (7400-7450)  | 7400       | 7400 | 7350  |
| Shale (reddish-brown) (7450-7500)  | 7450       | 7450 | 7400  |
| Shale (reddish-brown) (7500-7550)  | 7500       | 7500 | 7450  |
| Shale (reddish-brown) (7550-7600)  | 7550       | 7550 | 7500  |
| Shale (reddish-brown) (7600-7650)  | 7600       | 7600 | 7550  |
| Shale (reddish-brown) (7650-7700)  | 7650       | 7650 | 7600  |
| Shale (reddish-brown) (7700-7750)  | 7700       | 7700 | 7650  |
| Shale (reddish-brown) (7750-7800)  | 7750       | 7750 | 7700  |
| Shale (reddish-brown) (7800-7850)  | 7800       | 7800 | 7750  |
| Shale (reddish-brown) (7850-7900)  | 7850       | 7850 | 7800  |
| Shale (reddish-brown) (7900-7950)  | 7900       | 7900 | 7850  |
| Shale (reddish-brown) (7950-8000)  | 7950       | 7950 | 7900  |
| Shale (reddish-brown) (8000-8050)  | 8000       | 8000 | 7950  |
| Shale (reddish-brown) (8050-8100)  | 8050       | 8050 | 8000  |
| Shale (reddish-brown) (8100-8150)  | 8100       | 8100 | 8050  |
| Shale (reddish-brown) (8150-8200)  | 8150       | 8150 | 8100  |
| Shale (reddish-brown) (8200-8250)  | 8200       | 8200 | 8150  |
| Shale (reddish-brown) (8250-8300)  | 8250       | 8250 | 8200  |
| Shale (reddish-brown) (8300-8350)  | 8300       | 8300 | 8250  |
| Shale (reddish-brown) (8350-8400)  | 8350       | 8350 | 8300  |
| Shale (reddish-brown) (8400-8450)  | 8400       | 8400 | 8350  |
| Shale (reddish-brown) (8450-8500)  | 8450       | 8450 | 8400  |
| Shale (reddish-brown) (8500-8550)  | 8500       | 8500 | 8450  |
| Shale (reddish-brown) (8550-8600)  | 8550       | 8550 | 8500  |
| Shale (reddish-brown) (8600-8650)  | 8600       | 8600 | 8550  |
| Shale (reddish-brown) (8650-8700)  | 8650       | 8650 | 8600  |
| Shale (reddish-brown) (8700-8750)  | 8700       | 8700 | 8650  |
| Shale (reddish-brown) (8750-8800)  | 8750       | 8750 | 8700  |
| Shale (reddish-brown) (8800-8850)  | 8800       | 8800 | 8750  |
| Shale (reddish-brown) (8850-8900)  | 8850       | 8850 | 8800  |
| Shale (reddish-brown) (8900-8950)  | 8900       | 8900 | 8850  |
| Shale (reddish-brown) (8950-9000)  | 8950       | 8950 | 8900  |
| Shale (reddish-brown) (9000-9050)  | 9000       | 9000 | 8950  |
| Shale (reddish-brown) (9050-9100)  | 9050       | 9050 | 9000  |
| Shale (reddish-brown) (9100-9150)  | 9100       | 9100 | 9050  |
| Shale (reddish-brown) (9150-9200)  | 9150       | 9150 | 9100  |
| Shale (reddish-brown) (9200-9250)  | 9200       | 9200 | 9150  |
| Shale (reddish-brown) (9250-9300)  | 9250       | 9250 | 9200  |
| Shale (reddish-brown) (9300-9350)  | 9300       | 9300 | 9250  |
| Shale (reddish-brown) (9350-9400)  | 9350       | 9350 | 9300  |
| Shale (reddish-brown) (9400-9450)  | 9400       | 9400 | 9350  |
| Shale (reddish-brown) (9450-9500)  | 9450       | 9450 | 9400  |
| Shale (reddish-brown) (9500-9550)  | 9500       | 9500 | 9450  |
| Shale (reddish-brown) (9550-9600)  | 9550       | 9550 | 9500  |
| Shale (reddish-brown) (9600-9650)  | 9600       | 9600 | 9550  |
| Shale (reddish-brown) (9650-9700)  | 9650       | 9650 | 9600  |
| Shale (reddish-brown) (9700-9750)  | 9700       | 9700 | 9650  |
| Shale (reddish-brown) (9750-9800)  | 9750       | 9750 | 9700  |
| Shale (reddish-brown) (9800-9850)  | 9800       | 9800 | 9750  |
| Shale (reddish-brown) (9850-9900)  | 9850       | 9850 | 9800  |
| Shale (reddish-brown) (9900-9950)  | 9900       | 9900 | 9850  |
| Shale (reddish-brown) (9950-10000) | 9950       | 9950 | 9900  |