

9/17/2007

# Wellbore Diagram

r263

30-005-63938-00-00

ALSAB 1525-21 FEDERAL No. 001H

**Company Name:** PARALLEL PETROLEUM CORPORATION

**Location:** Sec: 21 T: 15S R: 25E Spot:

**String Information**

Lat: 33.0056931859767 Long: -104.455872556503

**Property Name:** ALSAB 1525-21 FEDERAL

**County Name:** Chaves

## Cement Information

## Perforation Information

| Top<br>(ft sub) | Bottom<br>(ft sub) | Shts/Ft | No Shts | Dt Sqz |
|-----------------|--------------------|---------|---------|--------|
| 0               | 0                  |         |         |        |

## Formation Information

| St Code | Formation  | Depth |
|---------|------------|-------|
| Psa     | San Andres | 530   |
| Pgl     | Glorieta   | 2220  |
| Pytu    | Tubb       | 3225  |
| Pabo    | Abo        | 3913  |
| Pwc     | Wolfcamp   | 4840  |

Hole: Unknown

TD:

TVD: 0

PBTD:



Petroleum Corporation

1004 N. Big Spring Street, Suite 400 • Midland, TX 79701 • Ph: 915-684-3727 • Fax: 915-684-3905

SEP 10 2007  
OCD-ARTESIA

DEANE DURHAM  
Operations Engineer

September 5, 2007

Mr. Richard Ezeanyim  
New Mexico Oil Conservation Division  
1220 S. St. Francis  
Santa Fe, NM 87505

Re: Alsab 1525-21 Federal #1  
Parallel Petroleum Corporation  
Sec. 21, T-15-S, R-25-E  
Chaves County, New Mexico

Dear Mr. Ezeanyim:

The referenced well has reached total depth in the horizontal section. The well path in the horizontal was planned and permitted to reach a standard (orthodox) location at approximately 9056' measured depth and 670' FEL and 760' FNL of Section 21. Unfortunately the directional driller drilled to the planned measured depth of 9056' without considering the coordinates of the well at that point. Therefore at total depth the well is non-standard to the east by 17'. That puts the location at total depth at 753' FNL and 643' FEL Section 21. We will intentionally perforate the entire horizontal interval inside the standard producing area. We request a non-standard allowance for this well. All offset operators and effected parties are being noticed and all signed waivers are forthcoming.

Should you need additional information regarding this issue, please contact me.

Sincerely,

Deane Durham  
New Mexico Operations Engineer

Attachments: C-102  
Pathfinder – MWD survey  
Waivers from all offset operators

CC: Bryan Arrant

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Frances Dr. SEP 10 2007  
Santa Fe, NM 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OCD-ARTESIA

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|               |                                                 |                                   |
|---------------|-------------------------------------------------|-----------------------------------|
| API Number    | Pool Code<br>97489                              | Pool Name<br>Wildcat Wolfcamp GAS |
| Property Code | Property Name<br>ALSAB 1525-21 FEDERAL          | Well Number<br>1                  |
| OGRID No.     | Operator Name<br>PARALLEL PETROLEUM CORPORATION | Elevation<br>3494'                |

Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 21      | 15 S     | 25 E  |         | 760           | NORTH            | 208'          | WEST           | CHAVES |

Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A             | 21      | 15 S     | 25 E  |         | 760           | NORTH            | 660           | EAST           | CHAVES |

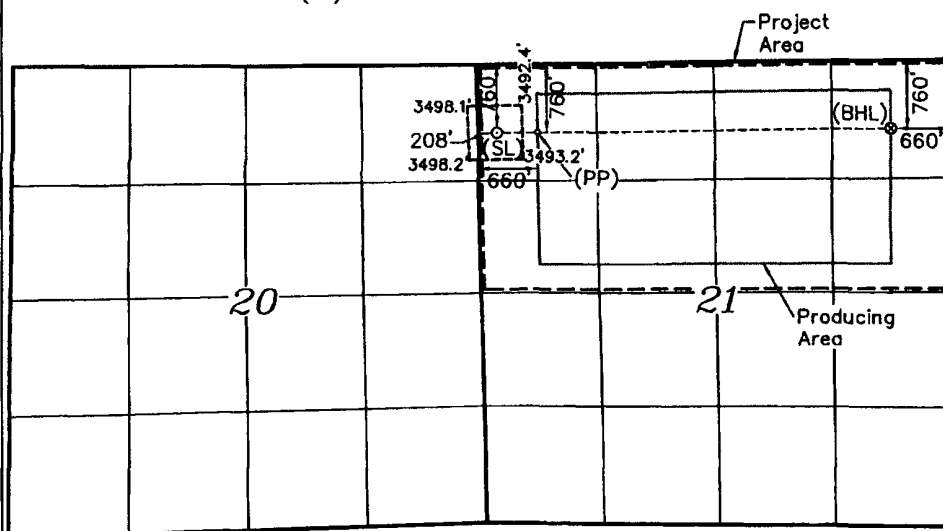
|                        |                 |                    |           |
|------------------------|-----------------|--------------------|-----------|
| Dedicated Acres<br>320 | Joint or Infill | Consolidation Code | Order No. |
|------------------------|-----------------|--------------------|-----------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NOTE:

- 1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927. Distances shown hereon are mean horizontal surface values.

(SL)



| Coordinate Table         |                  |
|--------------------------|------------------|
| Description              | Plane Coordinate |
| Alsab 1525-21 Federal #1 | X = 462,590.3    |
| Surface Location         | Y = 729,631.3    |
| Alsab 1525-21 Federal #1 | X = 463,042.1    |
| Penetration Point        | Y = 729,636.8    |
| Alsab 1525-21 Federal #1 | X = 467,012.2    |
| Bottom Hole Location     | Y = 729,683.3    |

OPERATOR CERTIFICATION

I hereby certify that the information contained hereon is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Deane Durham* 3-17-07  
Signature Date  
Deane Durham  
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief

October 12, 2006

Date of Survey KMT  
Signature & Seal of Professional Surveyor

*W.O. Num. 2008-1005*  
W.O. Num. 2008-1005  
Certificate No. MACON McDONALD 12185

Job Number: 101006677 WT-WT  
 Company: Parallel Petroleum  
 Lease/Well: Alsab 1525-21 Fed. #1  
 Location: Chaves N.M.  
 Rig Name: JW #4  
 RKB: 15  
 G.L. or M.S.L.: 3494

State/Country: New Mexico  
 Declination: 8.5  
 Grid: -0.07  
 File name: C:\WINSERVE\1006677.SVY  
 Date/Time: 01-Sep-07 / 21:40  
 Curve Name: Work

### Scientific Drilling

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane 89.33  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

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| Measured<br>Depth<br>FT   | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|---------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                           |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| Tied Into Multi Shot Gyro |                      |                           |                           |           |           |                           |                |                  |                               |
| 4300.00                   | 1.25                 | 77.34                     | 4299.83                   | 6.52      | 15.13     | 15.21                     | 16.48          | 66.69            | .00                           |
| 4373.00                   | 3.52                 | 87.32                     | 4372.76                   | 6.80      | 18.15     | 18.22                     | 19.38          | 69.46            | 3.15                          |
| 4405.00                   | 7.74                 | 88.02                     | 4404.60                   | 6.92      | 21.28     | 21.36                     | 22.38          | 71.99            | 13.19                         |
| 4437.00                   | 11.87                | 90.31                     | 4436.13                   | 6.98      | 26.73     | 26.81                     | 27.62          | 75.37            | 12.96                         |
| 4468.00                   | 16.09                | 91.71                     | 4466.20                   | 6.83      | 34.21     | 34.29                     | 34.89          | 78.71            | 13.66                         |
|                           |                      |                           |                           |           |           |                           |                |                  |                               |
| 4500.00                   | 20.22                | 92.68                     | 4496.60                   | 6.44      | 44.18     | 44.25                     | 44.64          | 81.71            | 12.94                         |
| 4532.00                   | 23.65                | 91.71                     | 4526.28                   | 5.99      | 56.12     | 56.18                     | 56.44          | 83.91            | 10.78                         |
| 4564.00                   | 26.91                | 89.43                     | 4555.21                   | 5.87      | 69.78     | 69.84                     | 70.03          | 85.19            | 10.63                         |
| 4596.00                   | 29.99                | 88.11                     | 4583.35                   | 6.21      | 85.02     | 85.08                     | 85.24          | 85.82            | 9.82                          |
| 4628.00                   | 33.24                | 87.23                     | 4610.59                   | 6.89      | 101.77    | 101.85                    | 102.01         | 86.12            | 10.26                         |
|                           |                      |                           |                           |           |           |                           |                |                  |                               |
| 4660.00                   | 36.76                | 87.23                     | 4636.80                   | 7.78      | 120.11    | 120.19                    | 120.36         | 86.29            | 11.00                         |
| 4692.00                   | 40.45                | 87.41                     | 4661.80                   | 8.71      | 140.05    | 140.14                    | 140.32         | 86.44            | 11.54                         |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| 4724.00                 | 43.62                | 87.67                     | 4685.57                   | 9.63      | 161.45    | 161.55                    | 161.74         | 86.59            | 9.92                          |
| 4756.00                 | 46.60                | 88.11                     | 4708.15                   | 10.46     | 184.10    | 184.21                    | 184.40         | 86.75            | 9.36                          |
| 4786.00                 | 49.42                | 86.88                     | 4728.22                   | 11.44     | 206.38    | 206.50                    | 206.69         | 86.83            | 9.88                          |
| 4818.00                 | 52.50                | 87.14                     | 4748.37                   | 12.74     | 231.19    | 231.33                    | 231.54         | 86.85            | 9.65                          |
| 4850.00                 | 55.84                | 87.76                     | 4767.10                   | 13.89     | 257.11    | 257.25                    | 257.48         | 86.91            | 10.55                         |
| 4882.00                 | 58.92                | 88.29                     | 4784.35                   | 14.82     | 284.04    | 284.20                    | 284.43         | 87.01            | 9.73                          |
| 4914.00                 | 62.08                | 88.90                     | 4800.11                   | 15.50     | 311.88    | 312.04                    | 312.27         | 87.16            | 10.01                         |
| 4946.00                 | 64.98                | 89.78                     | 4814.37                   | 15.82     | 340.52    | 340.68                    | 340.89         | 87.34            | 9.39                          |
| 4978.00                 | 68.06                | 88.73                     | 4827.12                   | 16.21     | 369.87    | 370.03                    | 370.22         | 87.49            | 10.08                         |
| 5010.00                 | 70.52                | 88.11                     | 4838.43                   | 17.03     | 399.78    | 399.96                    | 400.15         | 87.56            | 7.90                          |
| 5042.00                 | 73.34                | 88.55                     | 4848.36                   | 17.92     | 430.19    | 430.37                    | 430.56         | 87.61            | 8.91                          |
| 5074.00                 | 76.85                | 89.08                     | 4856.59                   | 18.56     | 461.10    | 461.29                    | 461.47         | 87.70            | 11.08                         |
| 5106.00                 | 80.99                | 89.08                     | 4862.73                   | 19.06     | 492.49    | 492.68                    | 492.86         | 87.78            | 12.94                         |
| 5138.00                 | 81.69                | 89.43                     | 4867.55                   | 19.47     | 524.13    | 524.32                    | 524.49         | 87.87            | 2.44                          |
| 5170.00                 | 81.51                | 89.69                     | 4872.23                   | 19.72     | 555.78    | 555.97                    | 556.13         | 87.97            | .98                           |
| 5202.00                 | 83.89                | 89.25                     | 4876.29                   | 20.01     | 587.52    | 587.71                    | 587.86         | 88.05            | 7.56                          |
| 5234.00                 | 85.47                | 88.46                     | 4879.26                   | 20.65     | 619.37    | 619.57                    | 619.72         | 88.09            | 5.52                          |
| 5266.00                 | 86.53                | 89.08                     | 4881.49                   | 21.33     | 651.29    | 651.49                    | 651.64         | 88.12            | 3.84                          |
| 5298.00                 | 86.70                | 88.90                     | 4883.38                   | 21.90     | 683.23    | 683.44                    | 683.58         | 88.16            | .77                           |
| 5330.00                 | 86.44                | 87.94                     | 4885.30                   | 22.78     | 715.16    | 715.37                    | 715.52         | 88.18            | 3.10                          |
| 5362.00                 | 90.84                | 89.34                     | 4886.06                   | 23.54     | 747.13    | 747.35                    | 747.50         | 88.20            | 14.43                         |
| 5394.00                 | 92.59                | 89.96                     | 4885.10                   | 23.73     | 779.11    | 779.34                    | 779.47         | 88.26            | 5.80                          |
| 5490.00                 | 92.15                | 91.10                     | 4881.13                   | 22.84     | 875.03    | 875.23                    | 875.32         | 88.50            | 1.27                          |
| 5585.00                 | 89.98                | 91.36                     | 4879.36                   | 20.80     | 969.98    | 970.16                    | 970.20         | 88.77            | 2.30                          |
| 5677.00                 | 88.46                | 91.10                     | 4880.61                   | 18.83     | 1061.95   | 1062.10                   | 1062.12        | 88.98            | 1.68                          |
| 5770.00                 | 86.97                | 90.66                     | 4884.32                   | 17.40     | 1154.86   | 1154.99                   | 1154.99        | 89.14            | 1.67                          |
| 5862.00                 | 88.20                | 91.36                     | 4888.20                   | 15.78     | 1246.76   | 1246.86                   | 1246.86        | 89.27            | 1.54                          |
| 5955.00                 | 88.55                | 90.66                     | 4890.84                   | 14.14     | 1339.71   | 1339.78                   | 1339.79        | 89.40            | .84                           |
| 6078.00                 | 88.81                | 90.48                     | 4893.67                   | 12.92     | 1462.67   | 1462.72                   | 1462.73        | 89.49            | .26                           |
| 6201.00                 | 90.66                | 89.69                     | 4894.24                   | 12.74     | 1585.66   | 1585.70                   | 1585.71        | 89.54            | 1.64                          |
| 6325.00                 | 90.57                | 89.25                     | 4892.91                   | 13.88     | 1709.65   | 1709.70                   | 1709.71        | 89.53            | .36                           |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| 6448.00                 | 88.64                | 87.32                     | 4893.76                   | 17.57     | 1832.58   | 1832.66                   | 1832.67        | 89.45            | 2.22                          |
| 6545.00                 | 88.20                | 86.70                     | 4896.43                   | 22.62     | 1929.41   | 1929.54                   | 1929.54        | 89.33            | .78                           |
| 6638.00                 | 88.46                | 87.50                     | 4899.14                   | 27.33     | 2022.25   | 2022.43                   | 2022.44        | 89.23            | .90                           |
| 6734.00                 | 89.34                | 88.02                     | 4900.98                   | 31.08     | 2118.16   | 2118.38                   | 2118.39        | 89.16            | 1.06                          |
| 6829.00                 | 89.52                | 88.81                     | 4901.93                   | 33.71     | 2213.12   | 2213.36                   | 2213.37        | 89.13            | .85                           |
| 6925.00                 | 88.81                | 89.25                     | 4903.33                   | 35.33     | 2309.09   | 2309.35                   | 2309.36        | 89.12            | .87                           |
| 7021.00                 | 89.08                | 89.61                     | 4905.10                   | 36.28     | 2405.07   | 2405.33                   | 2405.35        | 89.14            | .47                           |
| 7117.00                 | 87.76                | 89.78                     | 4907.74                   | 36.80     | 2501.03   | 2501.29                   | 2501.30        | 89.16            | 1.39                          |
| 7212.00                 | 86.97                | 89.08                     | 4912.11                   | 37.74     | 2595.93   | 2596.19                   | 2596.20        | 89.17            | 1.11                          |
| 7308.00                 | 88.29                | 90.22                     | 4916.08                   | 38.33     | 2691.84   | 2692.10                   | 2692.11        | 89.18            | 1.82                          |
| 7403.00                 | 87.49                | 90.13                     | 4919.58                   | 38.04     | 2786.77   | 2787.03                   | 2787.03        | 89.22            | .85                           |
| 7595.00                 | 89.60                | 91.01                     | 4924.45                   | 36.13     | 2978.69   | 2978.91                   | 2978.91        | 89.31            | 1.19                          |
| 7690.00                 | 90.48                | 92.07                     | 4924.39                   | 33.57     | 3073.65   | 3073.83                   | 3073.83        | 89.37            | 1.45                          |
| 7785.00                 | 89.60                | 91.28                     | 4924.32                   | 30.80     | 3168.61   | 3168.75                   | 3168.76        | 89.44            | 1.24                          |
| 7881.00                 | 89.78                | 90.04                     | 4924.84                   | 29.69     | 3264.60   | 3264.72                   | 3264.73        | 89.48            | 1.31                          |
| 7977.00                 | 88.90                | 89.17                     | 4925.95                   | 30.35     | 3360.59   | 3360.71                   | 3360.73        | 89.48            | 1.29                          |
| 8072.00                 | 89.25                | 88.73                     | 4927.48                   | 32.09     | 3455.56   | 3455.70                   | 3455.71        | 89.47            | .59                           |
| 8168.00                 | 89.87                | 88.90                     | 4928.22                   | 34.08     | 3551.54   | 3551.69                   | 3551.70        | 89.45            | .67                           |
| 8263.00                 | 90.40                | 89.43                     | 4927.99                   | 35.46     | 3646.53   | 3646.69                   | 3646.70        | 89.44            | .79                           |
| 8359.00                 | 89.08                | 88.81                     | 4928.43                   | 36.94     | 3742.51   | 3742.69                   | 3742.69        | 89.43            | 1.52                          |
| 8454.00                 | 88.55                | 88.73                     | 4930.39                   | 38.97     | 3837.47   | 3837.66                   | 3837.67        | 89.42            | .56                           |
| 8550.00                 | 88.64                | 88.55                     | 4932.75                   | 41.25     | 3933.41   | 3933.63                   | 3933.63        | 89.40            | .21                           |
| 8646.00                 | 88.11                | 87.32                     | 4935.47                   | 44.71     | 4029.31   | 4029.56                   | 4029.56        | 89.36            | 1.39                          |
| 8774.00                 | 88.37                | 87.50                     | 4939.40                   | 50.49     | 4157.12   | 4157.42                   | 4157.42        | 89.30            | .25                           |
| 8869.00                 | 88.64                | 87.41                     | 4941.88                   | 54.71     | 4251.99   | 4252.34                   | 4252.34        | 89.26            | .30                           |
| 8992.00                 | 88.72                | 87.41                     | 4944.71                   | 60.27     | 4374.83   | 4375.24                   | 4375.25        | 89.21            | .07                           |
| TD WELL                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 9056.00                 | 88.76                | 87.41                     | 4946.12                   | 63.16     | 4438.75   | 4439.19                   | 4439.20        | 89.18            | .06                           |



Field: Chaves County, NM NAD-27  
Site: Alsab 1525-21 Federal #1  
Well: Alsab 1525-21 Federal #1  
Wellpath: OH  
Survey: Pathfinder MWD



#### LEGEND

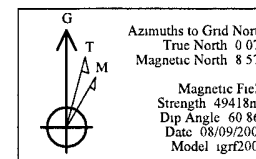
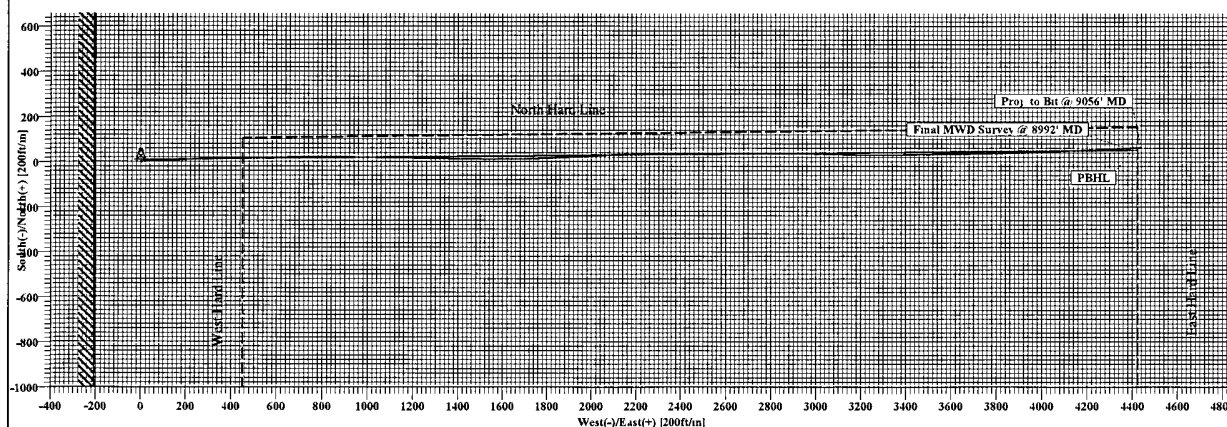
— Alsab 1525-21 Federal #1, OH, Plan #2 8-23-07  
— OH  
— Pathfinder MWD

#### Survey Pathfinder MWD (Alsab 1525-21 Federal #1/OH)

| No | MD      | Inc   | Az    | TVD     | +N/-S | +E/-W   | DLeg | TFace   | VSec    |
|----|---------|-------|-------|---------|-------|---------|------|---------|---------|
| 65 | 8550 00 | 88 64 | 88 55 | 4932 75 | 41 25 | 3933 42 | 0 21 | -63 43  | 3933 63 |
| 66 | 8646 00 | 88 11 | 87 32 | 4935 47 | 44 71 | 4029 31 | 1 39 | -113 34 | 4029 56 |
| 67 | 8774 00 | 88 37 | 87 50 | 4939 40 | 50 49 | 4157 12 | 0 25 | 34 69   | 4157 43 |
| 68 | 8869 00 | 88 64 | 87 41 | 4941 88 | 54 71 | 4252 00 | 0 30 | -18 43  | 4252 35 |
| 69 | 8992 00 | 88 72 | 87 41 | 4944 71 | 60 26 | 4374 84 | 0 07 | 0 00    | 4375 24 |
| 70 | 9056 00 | 88 76 | 87 41 | 4946 12 | 63 16 | 4438 76 | 0 06 | 0 00    | 4439 19 |

#### TARGET DETAILS

| Name | TVD     | +N/-S | +E/-W   | Shape |
|------|---------|-------|---------|-------|
| PBHL | 4948 30 | 51 74 | 4399 70 | Point |



#### SITE DETAILS

|                          |           |
|--------------------------|-----------|
| Alsab 1525-21 Federal #1 |           |
| Site Centre Northing     | 729631 30 |
| Eastings                 | 462590 30 |
| Ground Level             | 3494 00   |
| Positional Uncertainty   | 0 00      |
| Convergence              | -0 07     |

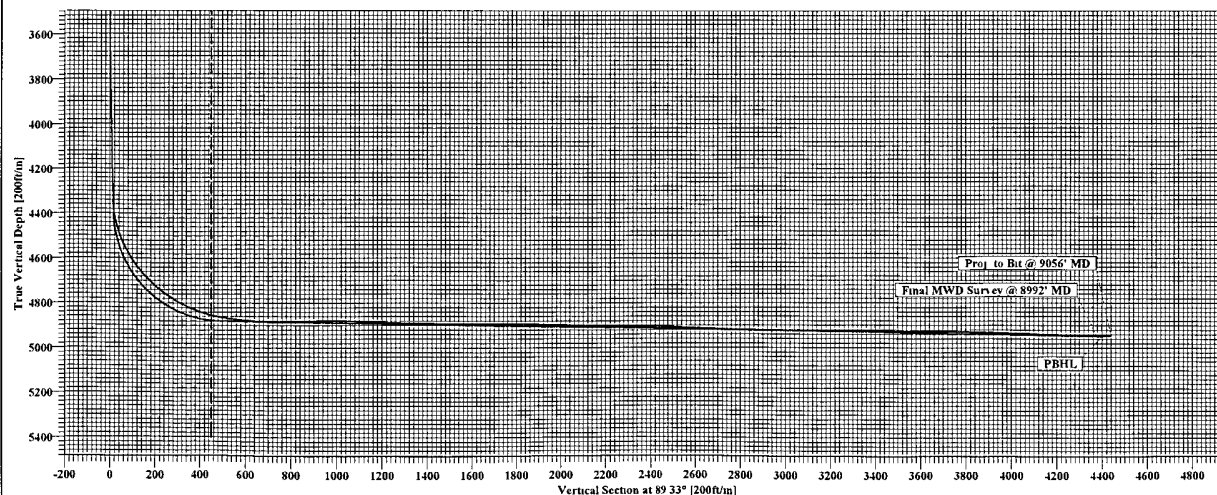
#### WELLPATH DETAILS

##### OH

|                 |                |              |                   |
|-----------------|----------------|--------------|-------------------|
| Rig             | SITE 3507 00ft |              |                   |
| Ref Datum       |                |              |                   |
| V Section Angle | Origin +N/-S   | Origin +E/-W | Starting From TVD |
| 89 33°          | 0 00           | 0 00         | 0 00              |

#### ANNOTATIONS

| No | TVD     | MD      | Annotation                                     |
|----|---------|---------|------------------------------------------------|
| 1  | 4399 64 | 4400 00 | Tie In to Gyro @ 4400' MD                      |
| 2  | 4409 55 | 4410 00 | KOP @ 4410' MD/TVD. Begin Build @ 11 88°/100'  |
| 3  | 4868 87 | 5147 13 | EOC @ 5147' MD. 4880' TVD, 89° Inc, Hold to TD |
| 4  | 4862 89 | 5107 00 | Interp HL Xing @ 451' V S, 5107' MD            |
| 5  | 4944 71 | 8992 00 | Final MWD Survey @ 8992' MD                    |
| 6  | 4946 12 | 9056 00 | Proj to Bit @ 9056' MD                         |



SEP 10 2007  
OCF