

Commonwealth of Virginia Department of Mines, Minerals, and Energy Division of Gas and Oil

P.O. Box 1416; Abingdon, VA 24212

Telephone: (276) 676-5423

Tracking Number: 89

CNX Gas Company LLC Company:

File Number: BU-3157

Operations Name: CBM H49A W/PL Coalbed/Pipeline **Operation Type:**

Drilling Report Type: Original

DRILLING REPORT (DGO-GO-14)

1. Drilling Data					
Date drilling commenced:	7/14/2006	Orilling Contractor:	NOAH HORN WELL DRILLING		
Date drilling completed:	7/21/2006	Rig Type:	✓ Rotary ☐ Cable Tool		
Driller's Total Depth (feet):	2,540		_ , _		
Log Total Depth (feet):	2,549 C	oal Seam At Total De	epth Pocahontas		
2. Final Location Plat (as req	2. Final Location Plat (as required by 4 VAC25-150-360.C.)				
Permitted State Plane X 1,0	Permitted State Plane X 1,035,099 Final Plat State Plane X: 1,035,095				
Permitted State Plane Y: 35	1,292 Fi	Final Plat State Plane Y: 351,291			
☐ Plat Previously Submitted	Or				
List of Attached Items:	List of Attached Items:				
Descrip	tion	FileName			
H49	H49A		H49A WELL LOCATION PLAT (FINAL).pdf		

H49A	H49A WELL LOCATION PLAT (FINA

3. Geological Data

Fresh Water At:

Depth (in feet)	Rate	Unit of Measure
480	DAMP	
600	DAMP	

Salt Water At:

Depth (in feet)	Rate	Unit of Measure
2,280	DAMP	

Form DGO-GO-14-E Rev. 1/2007

Coal Seams

List of Attached Items:

Description	FileName		
H49A	H49A EXHIBIT A (COAL SEAMS).pdf		

Gas and Oil Shows

List of Attached Items:

Description	FileName		
H49A	H49A FORMATION (GAS SHOWS).jpg		

4. Electric Logs (As required by 4VAC25-150-280.A.)

List all logs run: CALIPER, GAMMA, DENSITY, TEMP, DEVIATION

Did logs disclose vertical locations of a coal seam? ✓ Yes □ No

5. Survey Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

Description	FileName		
H49A	H49A PLAN VIEW (DEVIATION LOG).pdf		

6. Casing and Tubing Program

List of Attached Items:

Description	FileName		
H49A	H49A CASING AND TUBING.jpg		

7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

MINE VOID @696'-697'; GROUTED ANNULUS ON THE 9 5/8" CASING TO SURFACE.

8. Drillers Log

Compiled By: LESLIE ARRINGTON

List of Attached Items:

Description	FileName		
H49A	H49A DRILL DATA.pdf		

Form DGO-GO-14-E

9. Comments

HARDCOPY PREVIOUSLY APPROVED BY INSPECTOR

10. Signature

Permitee: CNX Gas Company LLC Date: 12/14/2006 (Company)

Signed By: LESLIE ARRINGTON Title: MANAGER (Signature)

INTERNAL USE ONLY

Submit Date: 12/14/2006

Status: Inspr Approved Date: 1/18/2007

Final PDF Date: 1/31/2007

Form DGO-GO-14-E

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Rev. 1/2007

BU-3157 7,020' -LATITUDE: 37' 17' 30" BEARING BASIS: VIRGINIA STATE PLANE - SOUTH ZONE - NAD'27 80 ACRE UNIT 81. LONGITUDE: FINAL LOCATION СВМ CBM-H49A N 11°57'49" W 301.26' 570 IP 4, NOTE: THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION ACCORDING TO 4 VAC 25-150-290 AND 45.1-361.30. H49AFNL CON33/128-0602/04 WELL LOCATION PLAT COMPANY _ CNX GAS COMPANY, LLC. _____ WELL NAME OR NUMBER ___CBM-H49A TRACT NUMBER__POCAHONTAS MINING LLC _____ QUADRANGLE _____BRADSHAW **GARDEN** DISTRICT: ____ WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 351,290.94 E 1,035,094.65 ELEVATION: 2835.65' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS COUNTY ___BUCHANAN __Scale: 1" = 400' Date _7-19-06 ____; AN UPDATED PLAT _____; OR A FINAL LOCATION PL THIS PLAT IS A NEW PLAT ___ Denotes the location of a well on United States Topographic Maps, scalatitude and longitude lines being represented by border lines as shows No. 2289 7/20/06 Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

Form DG0-G0-7

Exhibit A

Well Name: 06-CNX-H-49-A SURFACE ELEV: 2835.65 EASTING: 1035094.65 NORTHING: 351290.94

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	(FT)	REMARKS
	1.00	159.40	2834.65	158.40	
UB1	159.40	160.90	2676.25	1.50	
	160.90	234.60	2674.75	73.70	
LB1		235.00	2601.05	0.40	
	235.00	303.70	2600.65	68.70	
LB2	303.70	304.30	2531.95	0.60	
	304.30	474.80	2531.35	170.50	
KN2		475.20	2360.85	0.40	
	475.20	624.80	2360.45	149.60	
AL2	624.80	626.90	2210.85	2.10	
	626.90	669.50	2208.75	42.60	
RA1	669.50	669.70	2166.15	0.20	
	669.70	696.00	2165.95	26.30	
RA2	696.00	697.50	2139.65	1.50	MINED OUT
	697.50	770.40	2138.15	72.90	
COAL	770.40	770.60	2065.25	0.20	
	770.60	844.00	2065.05	73.40	
JB1	844.00	845.00	1991.65	1.00	
	845.00	897.00	1990.65	52.00	
JB3	897.00	897.80	1938.65	0.80	BROKEN
	897.80		1937.85	24.70	
T2	922.50	924.20	1913.15	1.70	
	924.20	925 30	1911.45	1.10	
COAL	925.30	925.90	1910.35	0.60	
	925.90	992.00	1909.75	66.10	
COAL	992.00	992.20	1843.65	0.20	
	992.20	1090.70	1843.45	98.50	
US1	1090.70	1090.90	1744.95	0.20	
	1090.90	1115.90	1744.75	25.00	
COAL	1115.90	1116.10	1719.75	0.20	
	1116.10	1336.00	1719.55	219.90	
*SE2	1336.00	1337.00	1499.65	1.00	
	1337.00	1465.40	1498.65	128.40	
*UH1	1465.40	1466.80	1370.25	1.40	
	1466.80	1522.10	1368.85	55.30	
*UH2	1522.10	1522.40	1313.55	0.30	
	1522.40	1523.10	1313.25	0.70	
*UH3	1523.10	1523.80	1312.55	0.70	
	1523.80	1582.40	1311.85	58.60	
*MH1	1582.40	1583.90	1253.25	1.50	
	1583.90	1659.50	1251.75	75.60	
*MH2	1659.50	1660.40	1176.15	0.90	
	1660.40	1755.90	1175.25	95.50	
*LH3	1755.90	1756.30	1079.75	0.40	
	1756.30	1803.70	1079.35	47.40	
*COAL	1803.70	1803.90	1031.95	0.20	
	1803.90	1804.40	1031.75	0.50	
*COAL	1804.40	1805.00	1031.25	0.60	
	1805.00	1819.40	1030.65	14.40	
*P92	1819.40	1819.90	1016.25	0.50	
	1819.90	1843.40	1015.75	23.50	
*P81	1843.40	1843.80	992.25	0.40	
	1843.80	1862.40	991.85	18.60	
*P71	1862.40	1862.80	973.25	0.40	

H49A.CMP 7/27/2006

*P72		1862.80	1937.00	972.85	74.20
*P61	*P72	1937.00	1937.20	898.65	0.20
*P51		1937.20	2104.70	898.45	167.50
*P51	*P61	2104.70	2105.10	730.95	0.40
*P52 2166.60 2167.40 669.05 0.80 2167.40 2193.70 668.25 26.30 *COAL 2193.70 2194.00 641.95 0.30 2194.00 2243.80 641.65 49.80 *P41 2243.80 2244.50 591.85 0.70 2244.50 2265.90 591.15 21.40 *P31 2265.90 2266.10 569.75 0.20 2266.10 2314.00 569.55 47.90 *P32 2314.00 2314.80 521.65 0.80 2314.81 520.85 0.01 *P33 2314.81 2315.60 2315.61 520.05 0.01 *P34 2315.61 2316.20 520.84 0.79 2315.61 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2485.80 2489.30 349.85 3.50 *SJ2 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2105.10	2135.10	730.55	30.00
*P52	*P51	2135.10	2135.70	700.55	0.60
*COAL 2193.70 668.25 26.30 *COAL 2193.70 2194.00 641.95 0.30 2194.00 2243.80 641.65 49.80 *P41 2243.80 2244.50 591.85 0.70 2244.50 2265.90 591.15 21.40 *P31 2265.90 2266.10 569.75 0.20 2266.10 2314.00 569.55 47.90 *P32 2314.00 2314.80 521.65 0.80 2314.80 2314.81 520.85 0.01 *P33 2314.81 2315.60 520.84 0.79 2315.60 2315.61 520.05 0.01 *P34 2315.61 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10		2135.70	2166.60	699.95	30.90
*COAL 2193.70 2194.00 641.95 0.30 2194.00 2243.80 641.65 49.80 *P41 2243.80 2244.50 591.85 0.70 2244.50 2265.90 591.15 21.40 *P31 2265.90 2266.10 569.75 0.20 2266.10 2314.00 569.55 47.90 *P32 2314.00 2314.80 521.65 0.80 2314.80 2314.81 520.85 0.01 *P33 2314.81 2315.60 520.84 0.79 2315.60 2315.61 520.05 0.01 *P34 2315.61 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30	*P52	2166.60	2167.40	669.05	0.80
*P41		2167.40	2193.70	668.25	26.30
*P41 2243.80 2244.50 591.85 0.70 2244.50 2265.90 591.15 21.40 *P31 2265.90 2266.10 569.75 0.20 2266.10 2314.00 569.55 47.90 *P32 2314.00 2314.80 521.65 0.80 2314.80 2314.81 520.85 0.01 *P33 2314.81 2315.60 520.84 0.79 2315.60 2315.61 520.05 0.01 *P34 2315.61 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30	*COAL	2193.70	2194.00	641.95	0.30
*P31		2194.00	2243.80	641.65	49.80
*P31	*P41	2243.80	2244.50	591.85	0.70
*P32 2314.00 2314.80 521.65 0.80 2314.80 2314.81 520.85 0.01 2315.60 520.84 0.79 2315.60 2315.61 520.05 0.01 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 2431.30 2485.70 2485.80 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2244.50	2265.90	591.15	21.40
*P32 2314.00 2314.80 521.65 0.80 2314.80 2314.81 520.85 0.01 *P33 2314.81 2315.60 520.84 0.79 2315.60 2315.61 520.05 0.01 *P34 2315.61 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30	*P31	2265.90	2266.10	569.75	0.20
2314.80 2314.81 520.85 0.01 *P33 2314.81 2315.60 520.84 0.79 2315.60 2315.61 520.05 0.01 *P34 2315.61 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2266.10	2314.00	569.55	47.90
*P33	*P32	2314.00	2314.80	521.65	0.80
2315.60 2315.61 520.05 0.01 *P34 2315.61 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2314.80	2314.81	520.85	0.01
*P34 2315.61 2316.20 520.04 0.59 2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30	*P33	2314.81	2315.60	520.84	0.79
2316.20 2316.21 519.45 0.01 *P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2315.60	2315.61	520.05	0.01
*P35 2316.21 2317.20 519.44 0.99 2317.20 2431.10 518.45 113.90 *P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30	*P34	2315.61	2316.20	520.04	0.59
*P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2316.20	2316.21	519.45	0.01
*P01 2431.10 2431.30 404.55 0.20 2431.30 2485.70 404.35 54.40 *SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30	*P35	2316.21	2317.20	519.44	0.99
*SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2317.20	2431.10	518.45	113.90
*SJ3 2485.70 2485.80 349.95 0.10 2485.80 2489.30 349.85 3.50 *SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30	*P01	2431.10	2431.30	404.55	0.20
*SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2431.30	2485.70	404.35	54.40
*SJ2 2489.30 2489.40 346.35 0.10 2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30	*SJ3	2485.70	2485.80	349.95	0.10
2489.40 2491.50 346.25 2.10 *SJ1 2491.50 2492.80 344.15 1.30		2485.80	2489.30	349.85	3.50
*SJ1 2491.50 2492.80 344.15 1.30	*SJ2	2489.30	2489.40	346.35	0.10
		2489.40	2491.50	346.25	2.10
2492.80 2549.21 342.85 56.41	*SJ1	2491.50	2492.80	344.15	1.30
		2492.80	2549.21	342.85	56.41

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO TOPOGRAPHY.

GAMMA-CALIPER LOG FROM 0 TO 972.00 GAMMA-DENSITY LOG FROM 972.00 TO TD.

FILE: C:\VP\APPS\H49A.CMP

DATE: 07/27/06

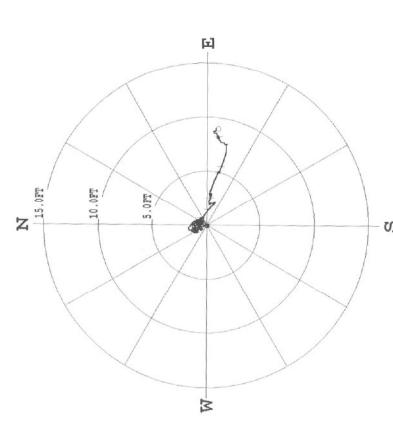
FORMATION	TOP	воттом	THICKNESS	IPF (MCFD/BOPD)	PRESSURE	HOURS TESTED
Lee/Norton	1336	1584	248	(See Below)		
Pocahontas	2491	2493	2	(See Below)		
Total IPF				31.5 thru ¾"		

COMPU-LOG DEVIATION PLAN VIEW

HOLE ID: 06-CNX-H-49-A CLIENT: Consol Energy DATE OF LOG: 07/21/06 PROBE: 9136CA 955 LOCATION:



SCALE: 5 ET/IN
TRUE DEPTH: 2540.42 FT
AZIMUTH: 97.0
DISTANCE: 9.0 FT
+ = 300 FT INCR
= BOTTOM OF HOLE



- K

9136CA .02 -0.02 2540.97 DEVI.log 06-CNX-H-49-A 07/21/06 9136CA DEPTH UNITS : FEET DATE OF LOG: HOLE ID. PROBE 06-CNX-H-49-A_07-21-06_10-45_ : Consol Energy FIELD OFFICE : Vansant, Va -6.900 DECL. DATA FROM IOG: MAG.

952

CASING AND TUBING PROGRAM

		54		Cement	Cem	ented		Packers Or
		Casing	Hole	Used In	To St	urface	Date	Bridge Plugs
	Casing	Interval	Size	Cu/Ft	Yes	No	Cemented	Kind/Size/Set
Conductor	13 3/8"	44'	16"			X	7-14-06	
Surface	9 5/8"	750'	12 3/8"	502 Cu/ft		X	7-18-06	Basket@661'
Water Protection	4 1/2"	2378.41'	6 1/2"	276 Cu/ft	X		7-21-06	
Coal Protection	4 1/2"	2378.41'	6 1/2"	276 Cu/ft	X		7-21-06	
Other Casing And Tubing Left In Well	7"	972.4°	8 7/8"	230 Cu/ft	X		7-19-06	
Liners			7					

DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC

COMPANY:

CNX

HOLE #: H-49A

LOCATION: WHITE MTN DRILL RIG #: 88

DATE STARTED: 07-14-06

DATED COMPLETED: 07-21-06

ELECTRIC LOGGED:YES

GROUTED:YES

DEPTH	THICKNI	ESS	STRATA REMARKS		
FROM	ТО	FT	DESCRIPTION, VOIDS ETC		
0	44.41	44.41	OVERBURDEN		
44.41	60	15.59	SAND/SHALE/COAL		
60	120	60	SAND/SHALE		
120	150	30	SAND/SHALE/COAL		
150	180	30	SAND/SHALE		
180	240	60	SAND/SHALE/COAL		
240	300	60	SAND/SHALE		
300	330	30	SAND/SHALE/COAL		
330	450	120	SAND/SHALE		
450	480	30	SAND/SHALE/COAL		
480	540	60	SAND/SHALE		
540	570	30	SAND/SHALE/COAL		
570	600	30	SAND/SHALE		
600	660	60	SAND/SHALE/COAL		
660	690	30	SAND/SHALE		
690	693	3	VOID		
693	770	77	SAND/SHALE		
770	810	40	SAND/SHALE/COAL		
810	840	30	SAND/SHALE		
840	870	30	SAND/SHALE/COAL		
870	900	30	SAND/SHALE/COAL BROKE UP		
900	930	30	SAND/SHALE/COAL		
930	960	30	SAND/SHALE		
960	990	30	SAND/SHALE		
990	1020	30	SAND/SHALE/COAL		
1020	1080	60	SAND/SHALE		
1080	1200	120	SAND/SHALE/COAL		
1200	1230	30	SAND/SHALE		
1230	1290	60	SAND/SHALE/COAL		
1290	1320	30	SAND/SHALE		
1320	1350	30	SAND/SHALE/COAL		
1350	1410	60	SAND/SHALE		
1410	1470	60	SAND/SHALE/COAL		
470	1530	60	SAND/SHALE/COAL		
530	1560	30	SAND/SHALE		
560	1590	30	SAND/SHALE/COAL		
590	1620	30	SAND/SHALE		
620	1680	60	SAND/SHALE/COAL		
680	1770	90	SAND/SHALE		
770	1860	90	SAND/SHALE/COAL		
860	1920	60	SAND/SHALE		
920	1950	30	SAND/SHALE/COAL		

1950	1980	30	SAND/SHALE
1980	2010	30	SAND/SHALE/COAL
2010	2070	60	SAND/SHALE
2070	2160	90	SAND/SHALE/COAL
2160	2220	60	SAND/SHALE
2220	2305	85	SAND/SHALE
2305	2310	5	COAL P-3
2310	2400	90	SAND/SHALE
2400	2430	30	SAND/SHALE/COAL
2430	2460	30	SAND/SHALE
2460	2490	30	SAND/SHALE/COAL
2490	2540	50	SAND/SHALE

2540.00 FT. TOTAL DEPTH

44.41 FT. OF 13 3/8" CASING

749.70 FT. OF 9 5/8" CASING

972.40 FT. OF 7" CASING

2378.41 FT. OF 4 1/2" CASING