IHS ENERGY GROUP
Creating Energy from Information™

Vendor Relations

297 Well Data

Y2K Compliant Export Format

FORMAT NAME: ..... 297 Well
FILE EXTENSIONS:
Comma Delimited 97C
Fixed Field 97F
FORMAT VERSION: 1.1
FORMAT STATUS: ..... Final

297 Well Export Format

Record Type: File Header Record

New record. See Appendix A for details.

	Col. (Len)	Type
Record Key	1 (20)	A
Data Type (“U.S. WELL DATA”)	21 (20)	A
Download Format (“297”)	41 (12)	A
Version (x.x_)	53 (4)	A
Delimiter (“COMMA” or “FIXED”)	57 (7)	A
Write Date (YYYY/MM/DD)	64 (10)	A
Count of Entities in Export File	74 (6)	N

Record Type: Start Record Label

New record. See Appendix A for details.

	Col. (Len)	Type
“START_US_WELL”	1 (30)	A
UWI	31 (20)	A

Record Type A: General Information

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
API Number	2 (14)	A
Latitude (±nn.nnnnn)	16 (9)	N
Longitude (±nnn.nnnnn)	25 (10)	N
Formation at Total Depth	35 (8)	A
Producing Formation	43 (8)	A
Initial Well Class	51 (1)	A
Final Well Class	52 (1)	A
Well Status	53 (6)	A
Elevation	59 (5)	N
Elevation Reference	64 (2)	A
Total Depth	66 (5)	N
Completion Date (yyyymmdd)	71 (8)	D
Lat/Long Source	79 (1)	A

Record Type BF: Footage Location

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
North/South Footage	3 (5)	N
North/South Direction	8 (4)	A
East/West Footage	12 (5)	N
East/West Direction	17 (4)	A
Footage Reference	21 (12)	A
X Coordinate (±nnnnnnnn.nn)	33 (12)	N
Y Coordinate (±nnnnnnnn.nn)	45 (12)	N
Zone Code	57 (4)	A
Projection	61 (1)	A
Feet or Meters (F/M)	62 (1)	A
Blank	63 (17)	A

Record Type BC: Congressional and Carter Location

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Township Direction	3 (1)	A
Township Number (xxx.x)	4 (5)	A
Range Direction	9 (1)	A
Range Number (xxx.x)	10 (5)	A
Section or Equivalent Indicator	15 (3)	A
Section or Equivalent Number (xxx.x)	18 (5)	A
Spot	23 (8)	A
Meridian Code	31 (2)	A
Meridian Name	33 (17)	A
State Code	50 (2)	A
County Code	52 (3)	A
Blank	55 (25)	A

Record Type BT: Texas Location

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Railroad District	3 (2)	A
Block or League Indicator	5 (1)	A
Block or League Number	6 (4)	A
Block Fraction	10 (3)	A
Section or Labor Indicator	13 (1)	A
Section or Labor Number	14 (4)	A
Section Fraction	18 (3)	A
Lot Number	21 (4)	A
Township Direction	25 (1)	A
Township Number (xx.x)	26 (4)	A
Survey Name	30(16)	A
Abstract Number	46 (7)	A
State Code	53 (2)	A
County Code	55 (3)	A
Blank	58 (22)	A

Record Type BN: Northeast and Ohio Location

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Named Township	3 (22)	A
Lot or Section Indicator	25 (1)	A
Lot or Section Number	26 (5)	A
Quadrangle Name	31 (20)	A
Reference Latitude (±dd.mm.ss)	51 (9)	G2
Reference Longitude (±ddd.mm.ss)	60 (10)	G3
State Code	70 (2)	A
County Code	72 (3)	A
Blank	75 (5)	A

Record Type BO: Offshore Location

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
OCS Number	3 (8)	A
Block Prefix	11 (1)	A
Block Number	12 (6)	A
Block Suffix	18 (1)	A
Area Name	19 (8)	A
UTM Quadrant	27 (7)	A
State/Federal Waters Indicator	34 (1)	A
Water Bottom Zone	35 (2)	A
Blank	37 (43)	A

Record Type BM: Location from Monument

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Monument ID	3 (6)	A
Monument Name	9 (37)	A
Map distance from Monument to surface location	46 (6)	N
Azimuth (xxx.x)	52 (5)	N
Distance North or South (ft)	57 (5)	N
'N' - North or 'S' - South	62 (1)	A
Distance East or West (ft)	63 (5)	N
'E' - East or 'W' - West	68 (1)	A
Blank	69 (11)	A

Record Type C: Operator Information

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
Operator Name	2 (23)	A
Lease Name	25 (19)	A
Well Number	44 (10)	A
Permit Number	54 (7)	A
Permit Date (yyyymm)	61 (6)	M
Field Code	67 (6)	A
Province Code	73 (3)	A
Blank	76 (4)	A

Record Type DA: Miscellaneous General Information

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Bottom Hole Latitude (±nn.nnnnnn)	3(9)	N
Bottom Hole Longitude (±nnn.nnnnn)	12(10)	N
Field Name	22 (17)	A
Platform	39 (22)	A
Water Depth	61 (5)	N
Water/Ref Datum	66 (4)	A
Lat/Long Source	70 (1)	A
Spud Date (yyyymmdd)	71 (8)	D
Directional Indicator	79 (1)	A

Record Type DB: Additional Miscellaneous General Info.

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
IC Number	3 (12)	A
Activity Code	15 (1)	A
Rig Release Date (yyyymmdd)	16 (8)	D
Abandoned Location Date (yyyymmdd)	24 (8)	D
First Report Date (yyyymmdd)	32 (8)	D
WRS First Report Date (yyyymmdd)	40 (8)	D
Last Activity Date (yyyymmdd)	48 (8)	D
Projected Formation	56 (8)	A
Projected Depth	64 (5)	N
Initial Lahee Class	69 (3)	A
Final Lahee Class	72 (3)	A
Whipstock Depth	75 (5)	N

Record Type DC: Additional Miscellaneous General Info. (Permit Filer)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Name of Permit Filer	3 (21)	A
Title of Permit Filer	24 (21)	A
Phone Number of Permit Filer	45 (14)	A
Blank	59 (21)	A

Record Type ET: Formation Tops

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Formation Code	3 (8)	A
Formation Top Depth	11 (5)	N
Source of Top Data	16 (1)	A
Show Code	17 (1)	A
Blank	18 (62)	A

Record Type EB: Formation Bottoms

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Formation Code	3 (8)	A
Formation Base Depth	11 (5)	N
Source of Base Data	16 (1)	A
Blank	17 (63)	A

Record Type F: Initial Potential

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Formation Code	6 (8)	A
Interval Top	14 (5)	N
Interval Base	19 (5)	N
Oil Volume	24 (5)	N
Oil Rate or Description	29 (4)	A
Gas Volume	33 (8)	N
Gas Rate or Description	41 (4)	A
Water Volume	45 (5)	N
Water Rate or Description	50 (2)	A
Flowing Tubing Pressure (ppsi)	52 (5)	N
Bottom Hole Pressure (ppsi)	57 (5)	N
Test Duration (hours)	62 (6)	N
Choke Size (64th of an inch)	68 (2)	N
Bottom Hole Temperature (° F)	70 (3)	N
Method of Production	73 (1)	A
Gross Interval Note (G)	74 (1)	A
Blank	75 (5)	A

Record Type FA: IP Treat

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Treatment Number	6 (2)	A
Type of Treatment	8 (4)	A
Interval Top	12 (5)	N
Interval Base	17 (5)	N
Volume or Weight	22 (6)	N
Measurement	28 (4)	A
Amount of Propping Agent	32 (6)	N
Propping Agent Units ('TON', 'LB' or 'SAC')	38 (3)	A
Formation Breakdown Pres. (ppsi)	41 (5)	N
Average Injection Rate (BBLS/min)	46 (3)	N
Type of Additive	49 (4)	A
Number of Stages	53 (3)	A
Propping Agent	56 (4)	A
Remark	60 (20)	A

Record Type FD: IP Detailed Perforations

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Interval Top Depth	6 (5)	N
Interval Base Depth	11 (5)	N
Blank	16 (64)	A

Record Type FN: IP Narrative

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Line Number	6 (2)	A
Narrative	8 (72)	A

Record Type G: Production Test

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Formation Code	6 (8)	A
Interval Top Depth	14 (5)	N
Interval Base Depth	19 (5)	N
Oil Volume	24 (5)	N
Oil Rate or Description	29 (4)	A
Gas Volume	33 (8)	N
Gas Rate or Description	41 (4)	A
Water Volume	45 (5)	N
Water Rate or Description	50 (2)	A
Flowing Tubing Pressure (ppsi)	52 (5)	N
Bottom Hole Pressure (ppsi)	57 (5)	N
Test Duration (hours)	62 (6)	N
Choke Size (64th of an inch)	68 (2)	N
Bottom Hole Temperature (° F)	70 (3)	N
Method of Production	73 (1)	A
Gross Interval Note (G)	74 (1)	A
Shut Off Type	75 (4)	A
Blank	79 (1)	A

Record Type GA: PDT Treat

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Treatment Number	6 (2)	A
Type of Treatment	8 (4)	A
Interval Top Depth	12 (5)	N
Interval Base Depth	17 (5)	N
Volume or Weight	22 (6)	N
Measurement	28 (4)	A
Amount of Propping Agent	32 (6)	N
Tons/Pounds ('TNS' or 'LBS')	38 (3)	A
Formation Breakdown Pres. (ppsi)	41 (5)	N
Average Injection Rate (BBLS/min)	46 (3)	N
Type of Additive	49 (4)	A
Number of Stages	53 (3)	A
Propping Agent	56 (4)	A
Remark	60 (20)	A

Record Type GD: PDT Perforations

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Interval Top Depth	6 (5)	N
Interval Base Depth	11 (5)	N
Blank	16 (64)	A

Record Type GN: PDT Narrative

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Line Number	6 (2)	A
Narrative	8 (72)	A

Record Type H: Drill Stem Tests

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Formation Code	6 (8)	A
Interval Top	14 (5)	N
Interval Bottom	19 (5)	N
Initial Hydrostatic Pressure (ppsi)	24 (5)	N
Final Hydrostatic Pressure (ppsi)	29 (6)	N
Top Choke (64^{th} of an inch)	35 (3)	N
Bottom Hole Temperature (° F)	38 (3)	N
Cushion Amount (ft)	41 (5)	N
Cushion Type	46 (6)	A
Test Indicator	52 (1)	A
Oil Gravity (nn.n)	53 (4)	N
Blank	57 (23)	A

Record Type HA: Drill Stem Tests, Pipe Recovery Detail

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Recovery Amount	6 (5)	N
Unit of Measurement	11 (3)	A
Description of Recovery	14 (7)	A
Blank	21 (59)	A

Record Type HB: Drill Stem Tests, Materials to Surface Detail

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Amount	6 (7)	N
Unit of Measurement	13 (4)	A
Type of Material	17 (4)	A
Time to Surface	21 (6)	A
Blank	27 (53)	A

Record Type HF: Drill Stem Tests, Flow Period

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
(Initial) Initial Flowing Pressure (ppsi)	6 (5)	N
(Initial) Final Flowing Pressure (ppsi)	11 (5)	N
(Final) Initial Flowing Pressure (ppsi)	16 (5)	N
(Final) Final Flowing Pressure (ppsi)	21 (5)	N
Initial Shut-in Pressure (ppsi)	26 (5)	N
Final Shut-in Pressure (ppsi)	31 (5)	N
Final Open Time	36 (5)	A
Final Shut-in Time	41 (5)	A
Blank	46 (34)	A

Record Type HN: Drill Stem Test Narrative

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Test Number	3 (3)	A
Line Number	6 (2)	A
Narrative	8 (72)	A

Record Type I: Core Data

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
Core Number	2 (3)	A
Core Top Depth	5 (5)	N
Core Base Depth	10 (5)	N
Recovery (nnn.nn)	15 (6)	N
Unit of Measure	21 (2)	A
Formation Code	23 (8)	A
Core Type	31 (4)	A
Show	35 (4)	A
Blank	39 (41)	A

Record Type ID: Core Depth/Interval Data

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Core Number	3 (3)	A
Interval Number	6 (3)	A
Thickness (nnnnn.n)	9 (7)	N
Top Depth	16 (5)	N
Base Depth	21 (5)	N
Lithology	26 (10)	A
Blank	36 (44)	A

Record Type IN: Core Narrative Data

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Core Number	3 (3)	A
Interval Number	6 (3)	A
Core Narrative Description	9 (71)	A

Record Type J: Logs Data

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
Run Number	2 (3)	N
Log Type	5 (4)	A
Log Top Depth	9 (5)	N
Log Base Depth	14 (5)	N
Blank	19 (61)	A

Record Type K: Mud Data

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
Weight (nnn.n)	2 (5)	N
Unit of Measurement (ppg/ppc)	7 (3)	A
Depth	10 (5)	N
Blank	15 (65)	A

Record Type L: Casing Data

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
Sequence Number	2 (2)	A
Size	4 (9)	A
Depth	13 (5)	N
Cement	18 (5)	N
Blank	23 (57)	A

Record Type M: Liner Data

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
Sequence Number	2 (3)	N
Size	5 (9)	A
Type of Liner	14 (5)	A
Cement	19 (5)	N
Liner Top Depth	24 (5)	N
Liner Base Depth	29 (5)	N
Blank	34 (46)	A

Record Type N: Tubing Data

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
Size	2 (9)	A
Depth	11 (5)	N
Blank	16 (54)	A

Record Type ON: Location Narrative

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Narrative	3 (77)	A

Record Type OA: Drilling Narrative

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Date (yyyymmdd)	3 (8)	D
Remarks	11 (69)	A

Record Type PF: Proposed Bottom Hole Location (Footage)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
North/South Footage	3 (5)	N
North/South Direction	8 (4)	A
East/West Footage	12 (5)	N
East/West Direction	17 (4)	A
Footage Reference	21 (12)	A
X Coordinate (±nnnnnnnn.nn)	33 (12)	N
Y Coordinate (±nnnnnnnn.nn)	45 (12)	N
Zone Code	57 (4)	A
Projection	61 (1)	A
Feet or Meters (F/M)	62 (1)	A
Blank	63 (17)	A

Record Type PC: Proposed Bottom Hole Location (Congressional and Carter)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Township Direction	3 (1)	A
Township Number (xxx.x)	4 (5)	A
Range Direction	9 (1)	A
Range Number (xxx.x)	10 (5)	A
Section or Equivalent Indicator	15 (3)	A
Section or Equivalent Number (xxx.x)	18 (5)	A
Spot	23 (8)	A
Meridian Code	31 (2)	A
Meridian Name	33 (17)	A
State Code	50 (2)	A
County Code	52 (3)	A
Blank	55 (25)	A

Record Type PT: Proposed Bottom Hole Location (Texas)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Railroad District	3 (2)	A
Block or League Indicator	5 (1)	A
Block or League Number	6 (4)	A
Block Fraction	10 (3)	A
Section or Labor Indicator	13 (1)	A
Section or Labor Number	14 (4)	A
Section Fraction	18 (3)	A
Lot Number	21 (4)	A
Township Direction	25 (1)	A
Township Number (xx.x)	26 (4)	A
Survey Name	30 (16)	A
Abstract Number	46 (7)	A
State Code	53 (2)	A
County Code	55 (3)	A
Blank	58 (22)	A

Record Type PN: Proposed Bottom Hole Location (Northeast and Ohio)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Named Township	3 (22)	A
Lot or Section Indicator	25 (1)	A
Lot or Section Number	26 (5)	A
Quadrangle Name	31 (20)	A
Reference Latitude (±dd.mm.ss)	51 (9)	G2
Reference Longitude (±ddd.mm.ss)	60 (10)	G3
State Code	70 (2)	A
County Code	72 (3)	A
Blank	75 (5)	A

Record Type PO: Proposed Bottom Hole Location (Offshore)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
OCS Code/Number	3 (8)	A
Block Prefix	11 (1)	A
Block Number	12 (6)	A
Block Suffix	18 (1)	A
Area Name	19 (8)	A
UTM Quadrant	27 (7)	A
State/Fed Waters Indicator	34 (1)	A
Water Bottom Zone	35 (2)	A
Blank	37 (43)	A

Record Type QF: Actual Bottom Hole Location (Footage)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
North/South Footage	3 (5)	N
North/South Direction	8 (4)	A
East/West Footage	12 (5)	N
East/West Direction	17 (4)	A
Footage Reference	21 (12)	A
X Coordinate (±nnnnnnnn.nn)	33 (12)	N
Y Coordinate (±nnnnnnnn.nn)	45 (12)	N
Zone Code	57 (4)	A
Projection	61 (1)	A
Feet or Meters (F/M)	62 (1)	A
Blank	63 (17)	A

Record Type QC: Actual Bottom Hole Location (Congressional and Carter)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Township Direction	3 (1)	A
Township Number (xxx.x)	4 (5)	A
Range Direction	9 (1)	A
Range Number (xxx.x)	10 (5)	A
Section or Equivalent Indicator	15 (3)	A
Section or Equivalent Number (xxx.x)	18 (5)	A
Spot	23 (8)	A
Meridian Code	31 (2)	A
Meridian Name	33 (17)	A
State Code	50 (2)	A
County Code	52 (3)	A
Blank	55 (25)	A

Record Type QT: Actual Bottom Hole Location (Texas)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Railroad District	3 (2)	A
Block or League Indicator	5 (1)	A
Block or League Number	6 (4)	A
Block Fraction	10 (3)	A
Section or Labor Indicator	13 (1)	A
Section or Labor Number	14 (4)	A
Section Fraction	18 (3)	A
Lot Number	21 (4)	A
Township Direction	25 (1)	A
Township Number (xx.x)	26 (4)	A
Survey Name	30(16)	A
Abstract Number	46 (7)	A
State Code	53 (2)	A
County Code	55 (3)	A
Blank	58 (22)	A

Record Type QN: Actual Bottom Hole Location (Northeast and Ohio)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Named Township	3 (22)	A
Lot or Section Indicator	25 (1)	A
Lot or Section Number	26 (5)	A
Quadrangle Name	31 (20)	A
Reference Latitude (±dd.mm.ss)	51 (9)	G2
Reference Longitude (±ddd.mm.ss)	60 (10)	G3
State Code	70 (2)	A
County Code	72 (3)	A
Blank	75 (5)	A

Record Type QO: Actual Bottom Hole Location (Offshore)

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
OCS Number	3 (8)	A
Block Prefix	11 (1)	A
Block Number	12 (6)	A
Block Suffix	18 (1)	A
Area Name	19 (8)	A
UTM Quadrant	27 (7)	A
Sate/Federal Waters Indicator	34 (1)	A
Water Bottom Zone	35 (2)	A
Blank	37 (43)	A

Record Type R1: Proposed Bottom Hole Reference Location

	Col. (Len)	Type
Record Type ID	1 (2)	A
Measured Total Depth	3 (5)	N
True Vertical Depth	8 (5)	N
Closure	13 (14)	A
N/S Offset Direction	27 (1)	A
N/S Offset	28 (5)	N
E/W Offset Direction	33 (1)	A
E/W Offset	34 (5)	N
State Code	39 (2)	A
County Code	41 (3)	A
Blank	44 (36)	A

Record Type R2: Proposed Bottom Hole Reference Narrative

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	Col. (Len)	Type
Record Type ID	1 (2)	A
Narrative	3 (77)	A

Record Type S1: Actual Bottom Hole Reference Location

	Col. (Len)	Type
Record Type ID	1 (2)	A
Measured Total Depth	3 (5)	N
True Vertical Depth	8 (5)	N
Closure	13 (14)	A
N/S Offset Direction	27 (1)	A
N/S Offset	28 (5)	N
E/W Offset Direction	33 (1)	A
E/W Offset	34 (5)	N
State Code	39 (2)	A
County Code	41 (3)	A
Blank	44 (36)	A

Record Type S2: Actual Bottom Hole Reference Narrative

	Col. (Len)	Type
Record Type ID	1 (2)	A
Narrative	3 (77)	A

Record Type T: Deviation Surveys

	Col. (Len)	Type
Record Type Indicator	1 (1)	A
Measured Depth	2 (5)	N
Drift Angle (nnn.nn)	7 (6)	N
Survey Type	13 (4)	A
Blank	17 (53)	A

Record Type U1: Directional Survey - Run Level/Survey Level

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Final Survey Company	3 (12)	A
Processing Type	15 (1)	A
Feet or Meters (F or M)	16 (1)	A
Run Number	17 (2)	A
Survey Company	19 (12)	A
Survey Date (yyyymmdd)	31 (8)	D
Survey Type	39 (4)	A
Start Depth	43 (5)	N
End Depth	48 (5)	N
Calculation Method	53 (2)	A
North Reference	55 (1)	A
Map Projection	56 (1)	A
Zone Code	57 (4)	A
North Correction	61 (5)	N
'E' or 'W'	66 (1)	A
Blank	67 (13)	A

Record Type U2: Directional Survey - Point Data

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Run Number	3 (3)	N
Measured Depth	6 (5)	N
True Vertical Depth	11 (8)	N
Drift Angle	19 (6)	N
Drift Direction-Azimuth (nnn.nn)	25 (6)	N
Rectangular Coordinates N/S Distance	31 (8)	N
Rectangular Coordinates N/S Direction	39 (1)	A
Rectangular Coordinates E/W Distance	340 (8)	N
Rectangular Coordinates E/W Direction	48 (1)	A
Projected Values (P)	49 (1)	A
Depth Overlap Difference Run (O)	50 (1)	A
Blank	51 (29)	A

Record Type V1: Horizontal General Information

	Col. (Len)	Type
Record Type ID	1 (2)	A
Lateral Hole Identification	3 (4)	A
Contractor Name	7 (10)	A
Maximum Angle Deviation (nnn.nn)	17 (6)	N
Buildup Radius	23 (1)	A
Maximum Buildup (degrees) (nn.nn)	24 (5)	N
Maximum Buildup (feet)	29 (5)	N
Formation Code	34 (8)	A
Reservoir	42 (11)	A
Steered/Non-Steered	53 (1)	A
Total Horizontal Displacement	54 (5)	N
Lateral Hole Length (Measured Depth)	59 (5)	N
Horizontal Length in Formation	64 (5)	N
Length of Pay	69 (5)	N
Reason Horizontally Drilled	74 (4)	A
Blank	78 (2)	A

Record Type V2: Horizontal Direction Survey Data

	Col. (Len)	Type
Record Type Indicator	1 (2)	A
Lateral Hole Identification	3 (4)	A
North Reference	7 (1)	A
Map Projection	8 (1)	A
Zone Code	9 (4)	A
North Correction (nn.nn)	13 (5)	N
North Correction Direction	18 (1)	A
Last Point (Measured Depth)	19 (5)	N
Intermediate Depth	24 (5)	N
Driller or Logger Depth Flag	29 (1)	A
Narrative	30 (50)	A

Record Type V3F: Horizontal Kickoff Point Footage Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
North/South Footage	8 (5)	N
North/South Direction	13 (4)	A
East/West Footage	17 (5)	N
East/West Direction	22 (4)	A
Footage Reference	26 (12)	A
X Coordinate (±nnnnnnnn.nn)	38 (12)	N
Y Coordinate (±nnnnnnnn.nn)	50 (12)	N
Zone Code	62 (4)	A
Projection	66 (1)	A
Feet or Meters (F/M)	67 (1)	A
Blank	68 (12)	A

Record Type V3C: Horizontal Kickoff Point Congressional and Carter Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
Township Direction	8 (1)	A
Township Number (xxx.x)	9 (5)	A
Range Direction	14 (1)	A
Range Number (xxx.x)	15 (5)	A
Section or Equivalent Indicator	20 (3)	A
Section or Equivalent Number (xxx.x)	23 (5)	A
Spot	28 (8)	A
Meridian Code	36 (2)	A
Meridian Name	38 (17)	A
State Code	55 (2)	A
County Code	57 (3)	A
Blank	60 (20)	A

Record Type V3T: Horizontal Kickoff Point Texas Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
Railroad District	8 (2)	A
Block or League Indicator	10 (1)	A
Block or League Number	11 (4)	A
Block Fraction	15 (3)	A
Section or Labor Indicator	18 (1)	A
Section or Labor Number	19 (4)	A
Section Fraction	23 (3)	A
Lot Number	26 (4)	A
Township Direction	30 (1)	A
Township Number (xx.x)	31 (4)	A
Survey Name	35 (16)	A
Abstract Number	51 (7)	A
State Code	58 (2)	A
County Code	60 (3)	A
Blank	63 (17)	A

Record Type V3N: Horizontal Kickoff Point Northeast and Ohio Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
Named Township	8 (22)	A
Lot or Section Indicator	30 (1)	A
Lot or Section Number	31 (5)	A
Quadrangle Name	36 (20)	A
Reference Latitude (±dd.mm.ss)	56 (9)	G2
Reference Longitude (±ddd.mm.ss)	65 (10)	G3
State Code	75 (2)	A
County Code	77 (3)	A

Record Type V3O: Horizontal Kickoff Point Offshore Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
OCS Number	8 (8)	A
Block Prefix	16 (1)	A
Block Number	17 (6)	A
Block Suffix	23 (1)	A
Area Name	24 (8)	A
UTM Quadrant	32 (7)	A
State/Federal Waters Indicator	39 (1)	A
Water Bottom Zone	40 (2)	A
Blank	42 (38)	A

Record Type V4F: Horizontal Point of Entry Footage Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
North/South Footage	8 (5)	N
North/South Direction	13 (4)	A
East/West Footage	17 (5)	N
East/West Direction	22 (4)	A
Footage Reference	26 (12)	A
X Coordinate (±nnnnnnnn.nn)	38 (12)	N
Y Coordinate (±nnnnnnnn.nn)	50 (12)	N
Zone Code	62 (4)	A
Projection	66 (1)	A
Feet or Meters (F/M)	67 (1)	A
Blank	68 (12)	A

Record Type V4C: Horizontal Point of Entry Congressional and Carter Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
Township Direction	8 (1)	A
Township Number (xxx.x)	9 (5)	A
Range Direction	14 (1)	A
Range Number (xxx.x)	15 (5)	A
Section or Equivalent Indicator	20 (3)	A
Section or Equivalent Number (xxx.x)	23 (5)	A
Spot	28 (8)	A
Meridian Code	36 (2)	A
Meridian Name	38 (17)	A
State Code	55 (2)	A
County Code	57 (3)	A
Blank	60 (20)	A

Record Type V4T: Horizontal Point of Entry Texas Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
Railroad District	8 (2)	A
Block or League Indicator	10 (1)	A
Block or League Number	11 (4)	A
Block Fraction	15 (3)	A
Section or Labor Indicator	18 (1)	A
Section or Labor Number	19 (4)	A
Section Fraction	23 (3)	A
Lot Number	26 (4)	A
Township Direction	30 (1)	A
Township Number (xx.x)	31 (4)	A
Survey Name	35 (16)	A
Abstract Number	51 (7)	A
State Code	58 (2)	A
County Code	60 (3)	A
Blank	63 (17)	A

Record Type V4N: Horizontal Point of Entry Northeast and Ohio Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
Named Township	8 (22)	A
Lot or Section Indicator	30 (1)	A
Lot or Section Number	31 (5)	A
Quadrangle Name	36 (20)	A
Reference Latitude (±dd.mm.ss)	56 (9)	G2
Reference Longitude (±ddd.mm.ss)	65 (10)	G3
State Code	75 (2)	A
County Code	77 (3)	A

Record Type V4O: Horizontal Point of Entry Offshore Location

	Col. (Len)	Type
Record Type Indicator	1 (3)	A
Lateral Hole Identification	4 (4)	A
OCS Number	8 (8)	A
Block Prefix	16 (1)	A
Block Number	17 (6)	A
Block Suffix	23 (1)	A
Area Name	24 (8)	A
UTM Quadrant	32 (7)	A
State/Federal Waters Indicator	39 (1)	A
Water Bottom Zone	40 (2)	A
Blank	42 (38)	A

Record Type V5: Horizontal Kickoff Point/Point of Entry Information Narrative

	Col. (Len)	Type
Record Type ID	1 (2)	A
Lateral Hole Identification	3 (4)	A
Narrative	7 (73)	A

Record Type V6: Horizontal Spoke Length/Terminus

	Col. (Len)	Type
Record Type ID	1 (2)	A
Lateral Hole Identification	3 (4)	A
Spoke Length	7 (5)	N
Measured Depth of Terminus	12 (5)	N
True Vertical Depth of Terminus	17 (5)	N
Distance N/S From Surface	22 (5)	N
N/S Direction	27 (1)	A
Distance E/W from Surface	28 (5)	N
E/W Direction	33 (1)	A
X Coordinate (±nnnnnnn.nn)	34 (12)	N
Y Coordinate (±nnnnnnn.nn)	46 (12)	N
Meters or Feet (M/F)	58 (1)	A
Blank	59 (21)	A

Record Type: End Record Label

New record. See Appendix A for details.

	Col. (Len)	Type
“END_US_WELL”	1 (30)	A
UWI	31 (20)	A

EXPORT FILE FORMAT

Two new records have been added to the year 2000 formats that will better enable the management and handling of the data contained within an IHS Energy Group download. The first is a single line record of meta-data describing the contents of the download file; and the second is the incorporating of start/end record labels for each entity contained in the download file. Each item is discussed in detail below and an example of this new file structure is provided.

File Header Record

In order to make the task of importing IHS Energy Group's ASCII download files easier, an identification record has been added to the output file that will indicate the content and format of the proceeding data. It is a single line of meta-data in a fixed field format, independent of the chosen format of the export file (i.e., comma or fixed field). This record is written each time that new data is added to a file. Therefore, in the case of the download being written to a new file, this record would be the first one in the file. If the data is appended to an existing file, the record will be added to the file ahead of the newly appended data—not the existing data. Please note it is possible for a single file to have several data sections that are not necessarily in sync with each other in regards to type or format.

Below is the layout for the record:

Item Description	FORMAT	Column	Maximum Length	Example Contents
Record Key	A	1	20	"IHS Energy Group"
Data Type	A	21	20	US Well Data US Production Data
Download Format	A	41	12	297, 298, DMP2…
Version (x.x)	A	53	4	1.1 (x.x trailed by a blank)
Delimiter	A	57	7	Fixed or Comma
Write Date (YYYY/MM/DD)	A	64	10	1998/01/24
Entity Count		74	6	12

Start/End Record Label

A special record will mark the beginning and end of data for each entity that is exported in any of the new year 2000 formats offered by IHS Energy Group. This record label will contain the well/production identifier to uniquely identify the block of data. This record is up to thirty characters long and its segments are separated by underscores.

Following each start/end record label, is the unique well/production id for the entity. For US Well data, this is the UWI. For US Production data, this is the Entity ID.

Start/End record labels will be devised for each data type (i.e., production & well). Initially we will create exports for US Well and US Production data. Each label can be up to thirty characters long. Below is the format for the record labels:

US Well Data Start/End Record

Item Description	Format	Column	Maximum Length	Example Contents
Record Label	A	1	30	START_US_WELL END_US_WELL
UWI	A	31	20	999999999XX

US Production Data Start/End Record

Item Description	Format	Column	Maximum Length	Example Contents
Record Label	A	1	30	START_US_PROD END_US_PROD
Entity ID	A	31	40	999999999XX

The format of this record will be determined by the export format chosen by the user. If the export is comma delimited, then the start/end records will be comma delimited and vice-versa for fixed field records.

Export File Structure Example

Two styles of delimiters will be supported in the new year 2000 297 Well export format. This is discussed in detail in a subsequent section. The example below is for a comma delimited 297 Well download with three producing entities being reported.

```
IHS ENERGY GROUP     US WELL DATA         297           1.1 COMMA  1999/06/01     3
"START_US_WELL",111111111
   (single entity data)
"END_US_WELL",111111111
"START_US_WELL",222222222
   (single entity data)
"END_US_WELL",222222222
"START_US_WELL",333333333
   (single entity data)
"END_US_WELL",333333333
```

Delimiters

Two styles of delimiters will be supported in the 297 format, fixed-field and comma delimited. For each style, certain rules are applied to the formatting of individual fields. These are discussed below in the section that covers the individual styles.

FIXED-FIELD FORMAT

In fixed-field exports the full length of the field, as defined in the export format definition will be used to hold the data. No special characters will be used to separate fields or indicate data types.

There are three types of fields on the download format: TEXT, DATES, and NUMBERS.

TEXT FIELDS

TEXT fields are written left justified with trailing blanks added to fill the full width of the declared field size.

DATE FIELDS

All dates are output as indicated on the individual export formats. If any of the three data elements (year, month, or day) are missing from the data, the appropriate number of zeros are added to bring the full length to the specified number of characters and to preserve data integrity. However, if there is no data for any of the data elements, blanks will be exported.

NUMBER FIELDS

Number fields are exported right justified with leading blanks to fill the entire declared length of the field. For explicit number fields, all places to the right of the decimal are padded with zeros to fill the full-declared precision. Zero values will be exported as a "0" value with the formatting appropriate to the field. If no value is available, the field will be blank filled.

COMMA DELIMITED FORMAT

In comma delimited exports, a comma is placed between fields and the data for each field is trimmed to a minimal length. A comma is not added after the last field of a record.

TEXT FIELDS

TEXT fields are trimmed of all leading or trailing blanks. They are started and ended with double quotes ("). If there are only blanks in the field then the output is two double quotes next to each other. For example if two text fields were next to each other and each contained only blanks, the output would look like "","".

DATE FIELDS

All dates are output as indicated on the individual export formats. If any of the three data elements (year, month, or day) are missing from the data, the appropriate number of zeros are added to bring the full length to the specified number of characters and to preserve data integrity. However, if there is no data for any of the three elements, nothing should be written except the comma separating this field from the next.

NUMBER FIELDS

Number fields are trimmed of all leading and trailing blanks, and are written exactly as indicated by their field format. If the field has no value (all blanks), nothing will be written except the comma separating this field from the next.