FINAL WELL REPORT

J. W. Nylund, et al

#1 Hass

NE SW Section 15-T3S-R55W
Washington County, Colorado

GENERAL INFORMATION

OPERATOR:	J. W. Nylund
FARM:	Oscar Hass
WELL NUMBER:	1
LOCATION:	1980' FSL, 1980' FWL; C NE SW Section 15-T3S-R55W
COUNTY:	Washington
STATE:	Colorado
ELEVATION:	4820' GL; 4828' KB (surveyed by Billy Holloway, Powers Elevation Service)
SURFACE CASING:	Drilled 120' of 12 1/4" hole. Ran 3 joints, 120' of 8 5/8" 24# surface casing, set a 129' KB with 100 sacks class G regular cement, 3% Ca Cl
PRODUCTION CASING:	Ran 131 joints, 4 1/2" OD, 9.5# & 10.5#, 5046', set at 5036' KB with 175 sacks 50-50 poz mix, 2% gel, 10% salt, 3/4% CFR2
CORES:	None
DRILL STEM TESTS:	One straddle J Sand test
LOGS:	Ran Dresser Atlas Induction-Electrical log from 5006' to 132'; ran compensated Gamma Ray-Density log from 5006' to 4740'
DRILLING TIME CHARTS:	Star Recorder drilling time charts showing one foot penetration rate are on permanent file in operator's office
MUD PROGRAM:	Chemical gel drilling mud with following properties on morning of September 19: vis 75, wt 9.7, pH 9.0, filtrate 4.8, cake thickness 2/32
STATUS:	Production casing run; will attempt to complete as producing well
WELLSITE GELOGIST:	J. W. Nylund
DRILLING CONTRACTOR:	PEDCO Drilling Co., Inc., rig #18 Larry Pickner, toolpusher

CHRONOLOGICAL HISTORY

September 15, 1981	Moved in, rigged up, spudded at 3:00 PM, set surface casing. Plug down at 6:30 PM.
September 16	Drilling at 1044' with water; bit #1
September 17	Drilling at 4118' with water; bit #1
September 18	Drilling at 4618' with mud; bit #2
September 19	Drilling at 4986' with mud; bit #3. Drilled to TD of 5006'. Ran IES and Gamma Ray-Density logs. Went in with DST #1
September 20	Pulled DST #1; went in with drill pipe and drilled additional 30' of rat hole; conditioned hole, ran 4 1/2" production string. Plug down.

FORMATION TOPS

FORMATION	LOG TOPS	SEA LEVEL DATUM
Niobrara	3880'	
Ft. Hayes	4382'	
Carlile	4431'	
Greenhorn	4521'	
Bentonite Marker	4754'	
D Sand	4851'	-23
J Sand	4905'	-77
Total Depth	5006' driller; 5006' Dresser-Atlas	

BIT RECORD

RUN #	SIZE	MAKE	TYPE	DEPTH OUT	FOOTAGE	HOURS
1	7-7/8"	STC	SDS	4318'	4178'	30
2	7-7/8"	STC	DTJ	4910'	592'	19
3	7-7/8"	Reed	Y21	5006'	96'	12

DEVIATION SURVEYS

DEPTH	DEGRESS FROM VERTICAL
4318'	1°
4910'	1/2°

DRILL STEM TESTS

DST #1 - 4946' to 4962' (straddle test of J_3 Sand using 44' of anchor); open 25 minutes, shut-in 30 minutes, open 45 minutes, shut-in 60 minutes. Tool opened with weak blow, slowley increased to 5" flow in 25 minutes. Opened for second flow with weak blow, increased gradually to bottom of bucket in 35 minutes; started to decrease after 40 minutes.

RECOVERY (pipe)

486' gas
30' clean oil (42 gravity @ 60°)
153' mud cut oil

RECOVERY (sample chamber)

1000 cc oil
750 cc oil cut mud

PRESSURES (field)

Initial hydrostatic	2697 psi
Final hydrostatic	2573 psi
Initial flow #1	35 psi
Final flow #1	35 psi
Initial flow #2	71 psi
Final flow #2	89 psi
Initial shut-in	747 psi
Final shut-in	711 psi
Pressure below bottom packer bled to	904 psi

TEMPERATURE - 139°F

Liberty Testers engineer - Tom Michel
Test successful

SAMPLE DESCRIPTION

(Depths corrected to Dresser Atlas)

4851' - 57'	Top of D Sand. Sandstone, gray to buff, fine grained, tight, very argillaceous, medium soft, friable, shaley, slightly glauconitic, quartzitic in part, poorly sorted, sub-angular grains, two pieces had dull yellow-gold fluorescence with no stain, the balance had neither stain nor fluorescence.
4857' - 62'	Sandstone, white, fine grained, low to fair P&P, argillaceous in part, slightly shaley, hard in part, soft and friable in part, fair sorting, sub-angular grains, No Shows.
4862' - 77'	Sandstone, buff, becoming very silty and shaley in the bottom part of the interval.
4877' - 4905'	Shale, black, soft, fissile, pyritic, very bentonitic.
4905' - 4914'	Top of J Sand. Sandstone, gray, fine grained, tight to very low P&P, very argillaceous, silty, slightly glauconitic, medium hard, poorly sorted, sub-angular grains, No Shows.
4914' - 29'	Sandstone, gray, fine grained, low to fair P&P, very argillaceous, silty, slightly glauconitic, medium hard, poorly sorted, sub-angular grains, No Shows.
4929' - 4945'	Siltstone, gray, fine, hard, shaley arenaceous in part, locally grading into gray, tight, silty sandstone, No Shows.
4945' - 56'	Sandstone, tan to very light tan, fine grained, variably tight to low to fair P&P, very argillaceous in part, micaceous, glauconitic, soft, friable, well sorted, sub-rounded grains, even light oil stain, bright yellow fluorescence (a few pieces break with streamers).
4956' - 61'	Shale, black, soft, sandy.
4961' - 68'	Sandstone, gray, fine grained, low P&P, argillaceous, slightly shaley, medium hard, slightly friable, rounded to sub-rounded grains, No Shows.
4968' - 82'	Sandstone, gray, fine grained, low to fair P&P, pyritic, medium hard, fair sorting, rounded grains, No Shows.

4982' - 97'	Interbedded siltstone and shale, arenaceous in part.
4997' - 5006'	Sandstone, white, fine grained, fair P&P, argillaceous in part, few shale lamenations, medium soft, fair sorting, sub-rounded grains, No Shows.

Sample - quality is very good.